SOUTHERN CALIFORNIA EDISON®
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Wayne P. Allen
Principal Manager
Regulatory Support Services

Filed Electronically

March 2, 2021

Kimberly D. Bose, Secretary
Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
825 First Street, N.E.
Washington, D.C. 20426

Subject: **2021 Progress Report 1**
Bishop Creek Hydroelectric Project, FERC Project No. 1394

Dear Ms. Bose:

Southern California Edison Company (SCE) hereby files with the Federal Energy Regulatory Commission (FERC) its first Progress Report of 2021. SCE continues to implement the approved study plans supporting the relicensing of the Bishop Creek Hydroelectric Project (FERC Project 1394).

SCE will forward the "Acceptance for Filing" e-mail generated by FERC's e-filing service to all contacts on the distribution list either via e-mail or U.S. Mail, as appropriate. This filing will also be placed on SCE's Bishop Creek Relicensing Website (www.sce.com/bishopcreek) where it will be available for download and available for review by appointment at the Bishop Creek Hydro Headquarters Office – 4000 E. Bishop Creek Road, Bishop, CA 93514.

SCE looks forward to continuing to work with FERC and other interested parties on the Bishop Creek relicensing. Should there be any questions or concerns regarding this filing please contact Matthew Woodhall, Senior Regulatory Advisor, by phone at (626) 302-9596 or via e-mail at matthew.woodhall@sce.com.

Sincerely,

DocuSigned by:
Wayne Allen
106CF18A73D445F...

Wayne P. Allen
Principal Manager
Regulatory Support Services
Southern California Edison Company

Attachments:

- Progress Report 1 Memorandum and Appendix

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MEMORANDUM

TO:	Federal Energy Regulatory Commission Docket P-1394-080
FROM:	Bishop Creek Relicensing Team
CC:	Technical Work Groups FERC Distribution List
DATE:	March 3, 2021
RE:	Quarterly Study Progress Report No. 1

INTRODUCTION

On November 4, 2019 the Federal Energy Regulatory Commission (FERC) approved Southern California Edison's (SCE) Technical Study Plan (TSP) for the relicensing of the Bishop Creek Project (FERC No. 1394). As provided for in 18 Code of Federal Regulation (CFR) 5.11(b)(3), the TSP included provisions for periodic progress reports. These progress reports are to be distributed to the Technical Working Groups (TWG) and the Federal Energy Regulatory Commission (FERC) on a quarterly basis as required by the Study Plan Determination (SPD).[1] The progress reports are intended to be brief, technical memoranda that will at a minimum summarize work completed to date, any deviations from previously described methods, and any unforeseen issues that may warrant further stakeholder consultation. This memorandum serves as the first progress report for the Bishop Creek Project for 2021. The Initial Study Report (ISR) serve as the final quarterly progress report for 2020, which was filed October 30, 2020.

A virtual ISR meeting was held November 10, 2020 and the meeting summary was filed with FERC on November 23, 2020. One formal comment letter was received during the ISR comment period. The California State Water Resources Control Board filed a letter dated December 18, 2020 in support of the ongoing Bishop Creek water quality study program. No other comments were received.

PROGRESS REPORT

SCE completed or initiated several resource studies in 2019 as outlined in the revised TSP and SPD. As such, several studies conducted their second study season in 2020 and are now complete. Table 1 provides a summary of the field efforts conducted to date and a schedule for remaining studies and data analysis. Those studies impacted by the COVID-19 pandemic are identified in the table below. SCE is currently drafting technical reports for each study program. As discussed in the ISR Meeting, the first batch of these are being issued for TWG review concurrent with the filing of this Progress Report. An Annual Water Quality Report for work completed in 2020 is attached to this submittal.

Attachment:
Attachment 1 – Annual Water Quality Report

[1] Issued by FERC on November 4, 2019.

TABLE 1 BISHOP CREEK HYDRO RELICENSING PROJECT 2019 FIELD STUDY SUMMARY

STUDY NAME	STATUS	MODIFICATIONS TO METHODOLOGY AND/OR NEEDED CONSULTATION
TERRESTRIAL AND BOTANICAL STUDIES		
TERR 1 – Assessment of Bishop Creek Riparian Community	This survey effort is complete, and a technical report is being drafted to be finalized in 2021.	No changes or modifications to methodology and no additional field work is anticipated for the duration of this relicensing process.
TERR 2 – Invasive Plants	This survey effort is complete, and a technical report is being drafted to be finalized in 2021.	No changes or modifications to methodology and no additional field work is anticipated for the duration of this relicensing process.
TERR 3 – Assessment of Special Status Plants	This survey effort is complete, and a technical report is being drafted to be finalized in 2021.	No changes or modifications to methodology and no additional field work is anticipated for the duration of this relicensing process.
TERR 4 – Wildlife	This survey effort is complete, and a technical report is being drafted to be finalized in 2021.	No changes or modifications to methodology and no additional field work is anticipated for the duration of this relicensing process.
AQUATICS AND AQUATIC PROCESSES STUDY PLANS		
AQ 1 – Instream Flow Needs and Assessment	This survey effort is complete, and a technical report is being submitted to the Aquatics TWG for review.	No changes or modifications to methodology and no additional field work is anticipated for the duration of this relicensing process.
AQ 2 – Operations Model	The Operations Model has been configured and populated with historical data. The Relicensing Team continues to calibrate the model with SCE Operations.	No changes or modifications to methodology and no field work is anticipated for the duration of this relicensing process.
AQ 3 – Fish Distribution Baseline Study (Creek)	This survey effort is complete, and a technical report is being submitted to the Aquatics TWG for review.	No changes or modifications to methodology and no additional field work is anticipated for the duration of this relicensing process.
AQ 4 –Baseline Fish Distribution Study (Reservoirs)	This survey effort is complete, and a technical report is being submitted to the Aquatics TWG for review.	No changes or modifications to methodology and no additional field work is anticipated for the duration of this relicensing process.
AQ 5 – Water Quality	Water Quality sampling is being conducted at Lake Sabrina, South Lake, Intake No. 2 reservoir and locations along Bishop Creek throughout the summer of 2021 as outlined in the revised Water Quality Implementation Plan submitted to FERC in April 2020. An Interim Annual Report is included with this filing as Attachment 1.	No additional changes or modifications to methodology.
AQ 6 – Sediment and Geomorphology	Channel and substrate surveys were conducted in September 2019. Tracer rocks were deployed into Bishop Creek in August of 2020. SCE intends to complete this study and retrieve the rocks in the summer of 2021.	After a review of field conditions at bankfull flow, SCE does not believe the planned use of a bed-load sampler can be safely deployed or effectively implemented via wading, and notes that necessary infrastructure (bridges) for deployment of the sampler is not present for the desired sample reaches. To help resolve the question relating to sediment mobility that can't be answered by the bedload sampling that is not feasible, SCE proposed to perform a tracer rock study during higher flows to understand when various size substrates are mobilized. SCE discussed the change in methods with the TWG

STUDY NAME	STATUS	MODIFICATIONS TO METHODOLOGY AND/OR NEEDED CONSULTATION
		during review of the 2nd progress report in May 2020 and no concerns were raised.
HUMAN ENVIRONMENT AND COMMUNITY STUDY PLANS		
REC 1 – Recreation Use and Needs	Off-site recreation use surveys were implemented in 2020. SCE is currently working with stakeholders and the Recreation TWG on implementation of the remaining objectives of the REC 1 study during the 2021 recreation season. However, because of continued health concerns over in-person surveys, considerations for revised methods and/or schedules are being discussed with the Recreation TWG.	Due to road construction on the South Lake Road and travel restrictions relating to COVID-19, a revised implementation schedule for the REC 1 study plan was developed in consultation with the USFS which moved the general recreation field surveys to the 2021 recreation season. The Recreation TWG will be considering alternative methods and schedules to address the Recreation Use and Needs Study Objectives, which may result in the need for a study plan variance and/or modification with FERC. SCE will provide a timely request for a modification upon completion of consultation with the TWG.
REC 2 – Recreation Facilities Condition and Public Accessibility	This survey effort is complete, and a technical report is being drafted to be finalized in 2021.	No changes or modifications to methodology and no additional field work is anticipated for the duration of this relicensing process.
LAND 1 – Project Boundary and Lands	This study is underway and is being informed by the results of numerous surveys. The results of the study and its recommendations will be incorporated into the DLA for review.	No changes or modifications to methodology and no additional field work is anticipated for the duration of this relicensing process.
CULT 1 – Cultural Resources	Field surveys were delayed due to wildfires in the project area in the summer of 2020. Delayed studies were conducted in the fall of 2020. Snow in the higher elevations prevented recording of two archaeological sites. Additional architectural surveys and archaeological site evaluations are currently planned for the spring and summer of 2021.	No changes or modifications to methodology with the exception of submitting separate archaeological and architectural reports. The Relicensing Team will submit their ARPA permits to the INF and BLM Archaeologists in early spring 2021.
CULT 2 – Tribal Resources	This study will be implemented in 2021, when conditions warrant safe interview techniques. Work on background studies is continuing, although access to archives is creating some slowdown.	Due to COVID-19, the Relicensing Team has had difficulty scheduling interviews with tribes and conducting outreach to tribal councils. Background research has been initiated and no changes to methodology are expected.

BISHOP CREEK 2020 WATER QUALITY ANNUAL REPORT

BISHOP CREEK HYDROELECTRIC PROJECT (FERC PROJECT NO. 1394)

Prepared for:

SOUTHERN CALIFORNIA EDISON®

Energy for What's Ahead℠

Bishop, California

Prepared by:

Kleinschmidt

www.KleinschmidtGroup.com

February 2021

BISHOP CREEK HYDROELECTRIC PROJECT (FERC No. 1394)

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BISHOP CREEK HYDROELECTRIC PROJECT
(FERC NO. 1394)

SOUTHERN CALIFORNIA EDISON

1.0 INTRODUCTION

Southern California Edison Company (SCE) is the licensee, owner and operator of the Bishop Creek Hydroelectric Project (Project) (Federal Energy Regulatory Commission [FERC] Project No. 1394). The Project is located on Bishop Creek in Inyo County, California, approximately 5 miles southwest of the city of Bishop (Figure 1-1). The licensee operates the Project under a 30-year license issued by FERC on July 19, 1994. As the current license is due to expire on June 30, 2024, SCE has initiated the formal relicensing process utilizing the Integrated Licensing Process (ILP) by filing the Notification of Intent (NOI) and Pre-Application Document (PAD) with FERC on May 1, 2019.

During the TWG meetings, and in written comments, stakeholders identified the need to develop an understanding of water quality parameters in the Project area. Draft study plans were distributed with the PAD and revised after receiving comments pursuant to 18 CFR § 5.9. FERC approved the Revised Study Plan (RSP) with its Study Plan Determination on November 4, 2019. After filing the Initial Study Report (ISR) with FERC on October 30, 2020, SCE held an ISR meeting on November 10, 2020. Preliminary data on the water quality study program was presented in the ISR; this Water Quality Annual Report builds on that materials and presents the results of the 2020 monitoring program.

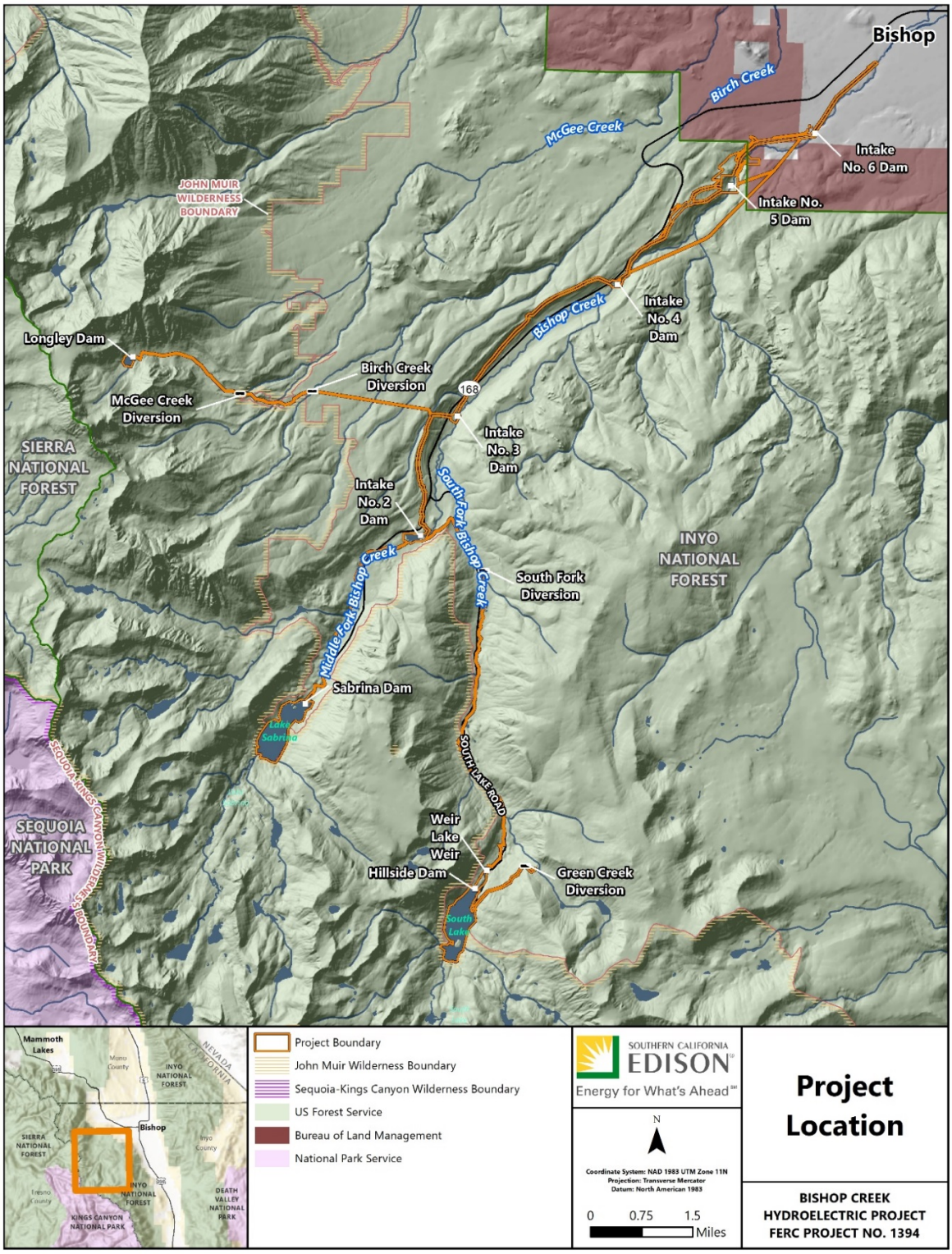


Figure 1-1 Project Location Map

2.0 PROJECT NEXUS

Although the Project is located in a relatively clean granitic watershed with limited factors to impact water quality, stakeholders expressed a need to establish baseline conditions to establish a baseline for the future. Water storage and diversion activities could affect water quality in Project waters or contribute to water quality issues downstream.

The goals and objectives of this study are:

- Monitor water quality[1] for 2 years on a regular basis at multiple monitoring sites:
    - Above-Project: establish reference baseline conditions of inflow from natural runoff in the watershed
    - In-Project: assess how/if water quality changes throughout various facilities within the Project Area (i.e., various depths and locations in South Lake and Lake Sabrina, powerhouse discharges)
    - Below-Project: assess any/all potential impacts Project operations may have on water quality that is leaving the Project Area
- Monitor water temperature for 2 years on a regular basis at multiple monitoring sites
    - Above-Project: establish reference baseline conditions of inflow from natural runoff in watershed
    - In-Project: assess how/if water temperature changes throughout various facilities within Project Area (various depths and locations in South Lake and Lake Sabrina, powerhouse discharges)
    - Below-Project: assess any/all impacts Project operations may have on water temperature that is leaving the Project Area
- Ensure that future Project facilities and operations are:
    - Consistent with the water quality goals and objectives for Bishop Creek in the Water Quality Control Plan (Basin Plan) for the Lahontan Region (LRWQCB 1995)
    - Consistent with the desired conditions described in the 2018 Land Management Plan for the Inyo National Forest for Social and Economic Sustainability and Multiple Uses with the desired conditions described in “Land Management Plan for the Inyo National Forest” (USDA, 2018) as they relate to ecological sustainability and diversity of plant and animal communities.

[1] For the purposes of this study, water quality is being monitored for dissolved oxygen (DO), water temperature, turbidity, conductivity, total dissolved solids, orthophosphate, nitrate, total nitrogen and E.coli.

3.0 REVIEW OF EXISTING INFORMATION

3.1. WATER QUALITY BENEFICIAL USES, OBJECTIVES, GOALS

The state of California has responsibility for maintaining water quality standards through the federal Clean Water Act (CWA). The SWRCB and Lahontan Regional Water Quality Control Board (LRWQCB) are responsible for the protection of beneficial uses of water resources within its jurisdiction and use planning, permitting, and enforcement authorities to meet this responsibility. Every water body within the LRWQCB jurisdiction is designated a set of beneficial uses that are protected by appropriate water quality objectives as described in the Basin Plan for the Lahontan Region ([Basin Plan], LRWQCB, 1995).

For smaller tributary streams in which beneficial uses are not specifically designated, they are granted with the same beneficial uses as the streams, lakes, or reservoirs to which they are a tributary. Table 3-1 lists the water bodies to which this Project drains and their beneficial use designations.

The Basin Plan defines the beneficial use abbreviations as the following:

- **Municipal and Domestic Supply (MUN) –** Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
- **Agricultural Supply (AGR) –** Beneficial uses of waters used for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, and support of vegetation for range grazing.
- **Industrial Process Supply (PRO)** – Uses of water for industrial activities that depend primarily on water quality.
- **Industrial Service Supply (IND) –** Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, geothermal energy production, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.
- **Ground Water Recharge (GWR)** - Beneficial uses of waters used for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.
- **Freshwater Replenishment (FRSH) -** Beneficial uses of waters used for natural or artificial maintenance of surface water quantity or quality (e.g., salinity).
- **Hydropower Generation (POW) –** Uses of water for hydroelectric power generation.
- **Water Contact Recreation (REC-1) –** Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, or use of natural hot springs.

- **Non-Contact Water Recreation (REC-2) –** Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.
- **Commercial and Sportfishing (COMM) -** Beneficial uses of waters used for commercial or recreational collection of fish or other organisms including, but not limited to, uses involving organisms intended for human consumption.
- **Cold Freshwater Habitat (COLD) –** Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- **Wildlife Habitat (WILD)** – Uses of water that support terrestrial or wetland ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- **Preservation of Biological Habitats of Special Significance (BIOL)** - Beneficial uses of waters that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, and Areas of Special Biological Significance (ASBS), where the preservation and enhancement of natural resources requires special protection.
- **Spawning, Reproduction, and/or Early Development (SPWN)** – Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.

The water quality objectives include both numeric and narrative standards for surface water that are based on criteria that protect both human health and aquatic life. If water quality is maintained at levels consistent with these objectives, beneficial uses are considered protected. Applicable water quality objectives and standards in the Basin Plan are provided in Table 3-2 and Table 3-3.

Table 3-1 Water Body Beneficial Use Designations

SURFACE WATER BODY	Beneficial Use																				
	MUN	AGR	PRO	IND	GWR	FRSH	NAV	POW	REC1	REC-2	COMM	AQUA	WARM	COLD	SAL	WILD	BIOL	RARE	MIGR	SPWN	WQE	FLD
	Municipal and Domestic Supply	Agricultural Supply	Industrial Process Supply	Industrial Service Supply	Groundwater Recharge	Freshwater Replenishment	Navigation	Hydropower Gen.	Water Contact Recreation	Non-Contact Water Recreation	Commercial and Sport Fishing	Aquaculture	Warm Freshwater Habitat	Cold Freshwater Habitat	Inland Saline Water Habitat	Wildlife Habitat	Special Biological Habitats	Rare, Threatened & Endangered Species	Migration of Aquatic Organisms	Spawning, Reproduction & Dev.	Water Quality Enhancement	Flood Peak Attenuation/Flood Water Storage
Upper Owens Hydrologic Area Hydrologic Unit 603.20																						
McGee Creek	X	X			X	X		X	X	X	X			X		X	X			X		
Bishop Creek (above intakes)	X	X						X	X	X	X			X		X				X		
Intake 2 Reservoir	X							X	X	X	X			X		X						
Bishop Creek (below intakes)	X							X	X	X	X			X		X				X		
Bishop Creek (below last Powerhouse)	X	X		X	X				X	X	X			X		X				X		

Table 3-2 Water Quality Objectives for Hydrologic Unit 603.20 - Upper Owens River Hydrologic Unit

CONSTITUENT/ PARAMETER	WATER QUALITY OBJECTIVE
Ammonia	Shall not exceed the values in Tables 3-1 to 3-4 in LRWQCB Basin Plan.
Bacteria	The fecal coliform concentration during any 30-day period shall not exceed a log mean of 20/100 milliliters (ml), nor shall more than 10 percent of all samples collected during any 30-day period exceed 40/100 ml.
Biostimulatory Substances	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses.
Chemical Constituents	Waters designated as MUN shall not contain concentrations of chemical constituents exceeding the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in Title 22.
Chlorine, total residual	For the protection of aquatic life, total chlorine residual shall not exceed either a median value of 0.002 mg/L or a maximum value of 0.003 mg/L. Median values shall be based on daily measurements taken within any 6-month period.
Color	Water shall be free of discoloration that causes nuisance or adversely affects beneficial uses.
Dissolved Oxygen (DO)	The DO concentration, as percent saturation, shall not be depressed by more than 10 percent, nor shall the minimum DO concentration be less than 80 percent of saturation. For waters with the beneficial uses of COLD, COLD with SPWN, WARM, and WARM with SPWN, the minimum DO concentration shall not be less than that specified in Table 3-6 of the LRWQCB Basin Plan.
Floating Material	Water shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
Oil & Grease	Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water that cause nuisance, or that otherwise adversely affect the water for beneficial uses.
pH	In fresh waters with designated beneficial uses of COLD or WARM, changes in normal ambient pH levels shall not exceed 0.5 pH units. For all other waters of the region, the pH shall not be depressed below 6.5 nor raised above 8.5.
Radioactivity	Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
Sediment	The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
Settleable Material	Waters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
Suspended Material	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
Tastes and Odors	Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish or other edible products of aquatic origin that cause nuisance, or that adversely affect the water for beneficial uses.

Temperature	The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Quality Control Board (RWQCB) that such alteration in temperature does not adversely affect beneficial uses.
Toxicity	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
Turbidity	Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent.

Source: LRWQCB 1995

Table 3-3 Water Quality Objectives for Certain Water Bodies in Upper Owens River Hydrologic Unit

SURFACE WATERS	OBJECTIVE (mg/L) [a,b]						
	TDS	Cl	F	B	NO_3-N	Total N	PO_4
Lake Sabrina	10 17	2.0 3.0	0.10 0.10	0.05 0.05	0.2 0.3	0.3 0.6	0.03 0.05
South Lake	12 20	3.7 4.3	0.10 0.10	0.02 0.02	0.1 0.1	0.1 0.4	0.03 0.04
Bishop Creek (Intake 2)	27 29	1.9 3.0	0.15 0.15	0.02 0.02	0.1 0.2	0.1 0.4	0.05 0.09

Source: LRWQCB, 1995

[a] Annual average value/90th percentile value.

[b] Objectives are in mg/L and are defined as follows:

B = Boron

Cl = Chloride

F = Fluoride

N = Nitrogen, Total

NO_3-N = Nitrate as Nitrogen

PO_4 = Orthophosphate, dissolved

TDS = Total Dissolved Solids (Total Filterable Residue)

3.2. PREVIOUS INVESTIGATIONS

3.2.1. BISHOP CREEK

In 1974, Environmental Science and Engineering (ESE 1975) in cooperation with the University of California at Los Angeles conducted an environmental baseline study of the water quality of Bishop Creek. The report concluded that the water quality of Bishop Creek was excellent and displayed the following characteristics:

- Total dissolved solids (TDS) remained very low throughout the summer, less than 30 mg/L

- Calcium (Ca) was the predominant cation in all sampled waters and surface water composition reflected the general geology of the drainage basin

- Nitrate and phosphate levels were low, generally less than 0.10 mg/1 and 0.05 mg/L, respectively

Water temperatures generally increased downstream; the report further stated that Ca was the dominant cation and that the North Fork of Bishop Creek had higher values than other drainages and appeared to be related to the geology (marble roof pendants) that is found in the upper reaches of the North Fork. In addition, the report noted that as flow decreased in Bishop Creek increases in various ions were noted and was attributed to groundwater providing a larger percentage of the baseflow of the stream. The groundwater generally has more contact time with the underlying bedrock resulting in higher concentrations of major ions (ESE, 1975).

The ESE report (1975) determined that similar water characteristics that were reported from previous investigations with increasing dissolved constituents coincides with decreasing elevation. The dominant anion was bicarbonate, and the dominant cations were Ca and sodium. In addition, the water quality of Bishop Creek at the furthest downstream site (below Powerhouse No. 6) had lower concentrations of alkalinity and dissolved constituents. The ESE report (1975) stated that the likely reason for the decrease was the routing of water for power generation purposes. Table 3-4 and Table 3-5 provides a summary of the water quality characteristics for the various watersheds sampled.

Minor amounts of boron, barium, aluminum, iron, and manganese were found in the various drainages with the highest levels generally found in Bishop Creek below the confluence with South Fork.

3.2.2. SOUTH LAKE AND LAKE SABRINA

In 1986, the University of California at Riverside conducted a water quality investigation of Bishop Creek and selected eastern Sierra Nevada lakes for SCE (Lund, n.d.). The following discussion presents the results of that investigation.

Like most Sierra reservoirs, South Lake and Lake Sabrina have very steep sides and considerable annual fluctuations in surface elevations which severely limit the production of littoral aquatic vegetation. There have been no comprehensive limnological studies of these lakes. Limited water quality profiling of the lakes was conducted from June 1986 until November 1987 and are presented in Table 3-6 and Table 3-7. Field measurements of water temperature, pH and DO was conducted at one location on each lake. In general, water temperature varied from lows of 32.3°F in March to 59.7°F in late August. Overall, water temperature decreased with increasing depth. DO ranged from 11.98 mg/L in early March to 2.44 mg/L in late August and was generally above 100 percent saturation except in August when DO values dropped to less than 38 percent saturation.

Table 3-4 Bishop Creek - Project No. 1394 Physical and Chemical Characteristics of North and Middle Forks of Bishop Creek June-November 1974

Parameter	Sample Location										
	S1	S2	S2A	S3	S4	S6	S6A	S7	S8	S19 Bishop Creek @ Hwy 395 (*)	
	Range	Range	Range	Range	Range	Range	Range	Range	Range	Spring	Fall
Ca (mg/L)	1.7-3.7	2.3-4.9	1.9-2.9	1.9-3.2	2.2-2.6	2.3-3.0	2.3-3.3	2.1-2.7	2.1-3.0	9.6	8.8
Magnesium (mg/L)	0.1-0.16	0.13-0.18	0.12-0.16	0.14-0.22	0.17-0.19	0.18-0.22	0.18-0.23	0.13-0.22	0.13-0.16	0.7	0.5
Sodium (mg/L)	0.4-0.8	0.8-1.1	0.6-1.0	0.5-1.0	0.6-0.8	0.80.8-1.1	0.7-1.1	0.8-1.2	0.6-0.7	4.5	3.4
Nitrate as N (mg/L)	0.03-0.11	0.08-0.13	0.05-0.12	0.05-0.1	0.05-0.12	0.05-0.13	0.06-0.12	0.06-0.12	0.06-0.1	0.3	0.8
Phosphate as P (mg/L)	0.03-0.04	0.02-0.05	0.02-0.05	0.02-0.04	0.02-0.05	0.02-0.03	0.01-0.03	0.01-0.04	0.01-0.03	--	--
TDS (mg/L)	6-27	8-26	7-20	8-21	9-16	11-21	20	11-21	8-10	--	--
Water Temperature (deg °C)	10.0-11.5	8.5-11.0	10.0-13.5	9.0-13.5	10.0-14.0	10.0-15.0	12.5-14.5	11.0-15.0	9.9-15.0	12.5	8.5
pH (units)	5.5-7.5	5.0-7.1	5.0-8.8	5.0-7.4	5.0-6.8	5.0-8.2	5.5-7.2	5.0-8.4	5.0-7.3	7.5	7.29
DO (mg/L)	6.6-8.1	6.7-9.4	6.8-9.1	6.8-8.8	6.8-7.5	6.4-8.6	6.3-7.7	7.46.6-8.1	6.2-7.8	9.2	9.3

Source: ESE, 1975

(*) Spring: May 1974; Fall: November 1974

(--) indicates analysis not performed.

Table 3-5 Physical and Chemical Characteristics of Middle and South Forks of Bishop Creek, McGee Creek and Birch Creek ([a, b]) May 1986 - December 1987

	WATERSHED/SAMPLE LOCATIONS (c)					
	MIDDLE FORK OF BISHOP CREEK	SOUTH FORK OF BISHOP CREEK	BISHOP CREEK BELOW SOUTH FORK	MCGEE CREEK	NORTH FORK OF BIRCH CREEK	SOUTH FORK OF BIRCH CREEK
PARAMETER	1, 2, 3, 4	1S, 2S, 3S, 4S	5, 6, 7, 8, 9, 10, 17	11, 12	13, 14,	15, 16
Calcium (mg/L)	1.3-10.0	2.5-47.3	4.1-20	2.58-10.3	5.5-13.9	13.8-15.3
Magnesium (mg/L)	0.1-0.9	0.3-5.7	0.4-4.9	0.20-0.77	0.3-0.5	1.34-1.59
Sodium (mg/L)	0.3-2.7	0.7-4.8	1.2-16.7	1.00-2.77	1.8-2.5	1.93-2.85
Potassium (mg/L)	0.04-1.0	0.4-3.3	0.1-2.0	0.50-1.67	0.6-1.3	1.38-1.56
ANC (µeq/L) (d)	122-447	146-2,532	235-1,537	153-651	321-789	893-1,006
Chloride (mg/L)	0.1-0.5	0.2-1.0	0.2-5.6	0.12-0.28	0.2-0.3	0.23-0.25
Nitrate (mg/L)	ND(e)-1.1	ND-0.8	ND-1.2	0.55-0.59	ND-0.5	ND
Sulfate (mg/L)	0.1-13.3	1.3-23.2	1.7-13.0	1.16-2.76	2.9-3.5	1.78-2.25
Silica (mg/L)	1.5-9.1	2.52-13.9	5.65-22.7	NS (f)	9.65-11.4	16.63-19.58
Boron (mg/L)	ND-0.01	ND-0.02	ND-0.04	NS	ND	ND
Barium (mg/L)	ND	ND-0.019	ND-0.054	NS	ND-0.003	0.001-0.005
Aluminum (mg/L)	ND-0.07	ND-0.09	ND-0.60	NS	ND-0.16	ND-0.15
Iron (mg/L)	ND-0.83	ND-0.19	ND-0.74	NS	ND-0.002	0.02-0.04
Manganese (mg/L)	ND-0.042	ND-0.035	ND-0.028	NS	ND	ND-0.002

Source: Lund, n.d.

[a] Derived from Lund undated.
[b] Values presented are estimated. Original values were reported in µmoles/L (Lund, n.d.) and converted to mg/L.
[c] ANC=Acid Neutralizing Capacity.
[d] ND=Not detected (no detection limit provided).
[e] NS=Not sampled.

Table 3-6 1986 Field Water Quality Depth Profiles for Lake Sabrina

DATE	DEPTH (meters)	WATER TEMPERATURE (deg °C)	pH (units)	DISSOLVED OXYGEN	
				mg/L	% Saturation
06/24/86	0.5	12.61	7.25	8.31	108.3
	2.5	11.16	7.26	8.72	110.1
	4.5	9.33	7.33	9.07	110.0
	6.5	8.64	7.34	9.31	111.3
	8.5	8.01	7.43	9.46	111.5
	10.3	7.50	7.46	9.59	111.8
08/19/86	0.5	15.41	7.27	7.93	109.9
	2.5	15.25	7.23	7.72	106.6
	4.5	15.23	7.25	7.63	105.3
	6.5	14.91	7.45	8.11	111.1
	8.5	14.50	7.71	8.23	111.8
	10.3	14.03	8.06	8.44	113.5
	12.5	12.81	7.89	8.45	110.6
	14.5	10.82	7.65	8.43	105.7
	16.5	10.05	7.30	6.97	85.9
10/27/86	0.5	7.29	6.81	9.33	108.3
	2.5	7.29	7.01	8.96	104.0
	4.5	7.31	7.09	8.91	103.4
	6.5	7.30	7.13	8.85	102.7
	8.5	7.26	7.15	8.82	102.3

Source: Lund, n.d.

Table 3-7 1987 Field Water Quality Depth Profiles for Lake Sabrina

Date	Depth (meters)	Water Temperature (deg °C)	pH (units)	Dissolved Oxygen	
				mg/L	% Saturation
03/18/87	0.5	0.14	7.14	11.98	114
	1.0	0.49	7.21	11.03	106
	2.0	1.66	7.26	10.45	105
	3.0	2.24	7.31	10.09	103
	4.0	2.80	7.35	9.70	100
	4.6	2.94	7.38	9.47	98
06/30/87	0.0	14.8	*	8.61	121
	0.5	14.5	*	8.70	122
	1.5	14.4	*	8.64	121
	2.5	14.4	*	8.62	120
	3.5	14.3	*	8.64	120
	4.5	14.3	*	8.64	120
	5.5	14.3	*	8.61	120
	6.5	14.2	*	8.74	122
	7.5	13.7	*	9.05	124
	8.5	13.1	*	9.26	126
	9.5	12.8	*	9.41	127
	10.5	12.1	*	9.64	128
	11.5	11.6	*	9.81	128
	12.5	10.5	*	10.41	133
08/24/87[1]	0.5	15.39	7.74	2.58	37
	2.5	15.42	7.69	2.44	35
	4.5	15.42	7.66	2.44	35
	6.5	15.41	7.66	2.44	35
	8.5	15.37	7.62	2.48	35
	10.5	14.91	7.62	2.55	36
	12.5	13.47	7.63	2.60	36
	14.5	12.25	7.78	2.71	36
	15.l	11.92	7.75	2.72	36
11/03/87	0.5	8.48	7.04	8.42	102
	2.5	8.50	7.23	8.25	100
	4.5	8.52	9.32	7.87	95
	6.5	8.51	7.55	8.34	101
	8.5	8.53	7.66	8.07	98
	10.5	8.42	7.40	7.82	95
	11.0	8.52	7.66	8.14	99

Source: Lund, n.d.

[1] Low DO readings do not appear to correspond with any reported fish-kill and may be suspect. However, the Lund report shows similar data at other lakes in the Sierras at the same time-period, include Gem and Waugh lakes

DO inversely followed water temperature and decreased values were observed as water temperatures increased. Values for pH ranged from 6.81 to 9.32; however, most values were between 7 and 8 pH units.

Measurements of the chemical characteristics of the lakes were taken in fall 1985 and are presented in Table 3-8. The chemical composition of these lake waters appears typical for reservoirs in the Sierra Nevada elevation and latitude. There are three basic factors which cause the high elevation reservoirs of this portion of the High Sierra to be mineral and nutrient-poor. First, the watersheds are generally undisturbed and support very little human habitation. Second, the substrates in these drainages are dominantly igneous intrusive rocks, and third, the drainages contain very shallow and poorly vegetated soils. The combination of these factors results in very little leaching of minerals and nutrients into waters entering the reservoirs.

Table 3-8 Chemical Characteristics for South Lake and Lake Sabrina[a]

Parameter	South Lake		Lake Sabrina	
	Surface	Bottom	Surface	Bottom
Calcium (mg/L)	1.98	1.98	1.94	1.88
Magnesium (mg/L)	0.16	0.16	0.11	0.11
Sodium (mg/L)	0.34	0.34	0.18	0.28
Potassium (mg/L)	0.98	0.98	0.78	0.78
Nitrate as N (mg/L)	0.035	0.026	0.016	0.013
Sulfate as S (mg/L)	0.438	0.399	0.136	0.138
Bicarbonate	---	---	---	---

Source: Lund, n.d.

Notes: [a] Samples collected September 1985.

As part of the California's Surface Water Ambient Monitoring Program (SWAMP) for perennial streams, the California SWRCB undertook a water quality monitoring program on Bishop Creek from 2013 to 2016. The results of the study are summarized in Table 3-9.

The water quality was similar to that observed in previous studies with Ca and sodium the dominant cations. TDS was low, ranging from 25 to 66 mg/L, but averaged above the Basin Plan value of 27 mg/L above Intake 2. Water temperature was generally less than 62.6°F. Two biological parameters detected were fecal coliform and *Escherichia coli* (E coli.) and ranged from 1 to 66 colony forming units (cfu) per100 ml and 1 cfu to 61 cfu per 100 ml, respectively; exceeding the basin standard of 20 cfu/100 ml for fecal coliform.

Samples collected over the 2-year period of 2015 and 2016 indicated non-detectable values for fecal coliform or *E. coli* for Bishop Creek (total of three samples) at the USFS boundary. Studies conducted by the LRWQCB for Bishop Creek concluded that the impaired portion of Bishop Creek was located below Powerhouse No. 6 and was likely

the result of cattle grazing in or near Bishop Creek and potentially leaking sanitary sewer systems in lower Bishop Creek (Knapp and Craig, 2016).

Table 3-9 Summary of Swamp Water Quality Sampling on Bishop Creek at National Forest Boundary (Station 603BSP111)

PARAMETER/CONSTITUENT (A)	UNITS	NO. OF SAMPLES	MAXIMUM	MINIMUM	MEAN	BASIN STANDARDS
Oxygen, dissolved	(mg/L)	1	10.7	10.7	'---	varies
Water Temperature	(deg °C)	12	16.4	2.2	9.84	NA
pH	(units)	12	**10.3**	7	7.97	6.5-8.5 (b)
Alkalinity (as calcium carbonate [$CaCO_3$])	(mg/L)	12	44	19	30.4	NA (c)
Turbidity	(NTU)	12	1.54	0.33	0.724	5 (d)
Specific Conductance	(µS/cm)	12	104.4	40.7	74.63	900-1,600 (d)
TDS	(mg/L)	12	**66**	25	**46.0**	27 (a)
Ca	(mg/L)	12	13.7	0.6	7.99	NA
Magnesium	(mg/L)	11	1.63	0.43	1.032	NA
Sodium	(mg/L)	11	4.82	1.1	3.085	NA
Potassium	(mg/L)	10	2.86	0.31	1.636	NA
Chloride	(mg/L)	12	1.6	0.36	0.884	1.9 (a)
Sulfate (as SO_4)	(mg/L)	12	9.55	3.15	6.157	250-500 (d)
Fluoride	(mg/L)	11	0.143	0.046	0.1014	0.15 (a)
Boron	(mg/L)	12	**0.481**	0.0058	0.1271	0.2 (a)
Nitrate and Nitrite (as N)	(mg/L)	11	0.0475	0.0065	0.01999	10 (e)
Nitrogen, Total	(mg/L)	12	**0.125**	0.049	0.0794	0.1 (a)
Phosphorus as P	(mg/L)	9	0.0094	0.0054	0.00752	NA
Orthophosphate as P	(mg/L)	12	0.0132	0.0051	0.00880	0.05 (a)
Fecal Coliform	cfu/100 ml(f)	27	**66**	**1**	**8.9**	20 (g)
E. coli	cfu/100 ml	24	**61**	**1**	**8.0**	100/320 (h)

Source: CEDEN, 2018

Notes:

[a] Basin Plan for Bishop Creek at Intake 2

[b] United States Environmental Protection Agency (USEPA) secondary standard for pH

[c] NA = Not Applicable – no current MCL

[d] California Drinking Water Program (CDWP) secondary MCL

[e] CDWP primary MCL.

[f] .cfu

[g] Lahontan Basin Plan

[h] Basin Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California

BOLD Equal to or above current MCLs or notification levels

4.0 STUDY AREA

Figure 4-1 below shows the proposed study area for the Bishop Creek Water Quality Study.

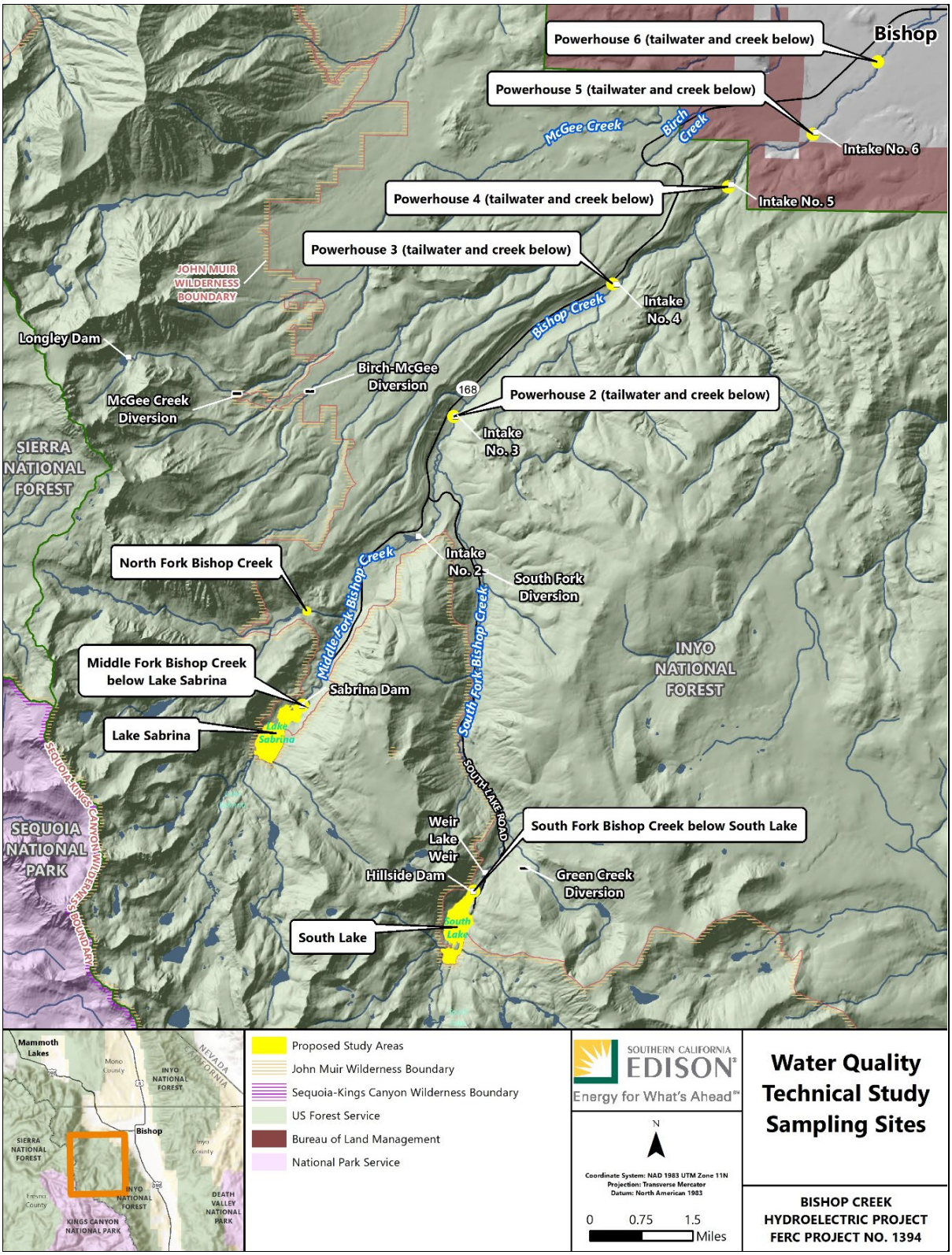


Figure 4-1 Water Quality Technical Study Area

5.0 METHODS

5.1. PARAMETERS MONITORED

The Study Plan identified the below parameters to be monitored:

- Water Temperature (in °C)
- TDS
- Dissolved Oxygen (DO) (in mg/l)
- Conductivity (in µmhos/cm)
- Total Dissolved Solids (TDS)
- Total Nitrogen
- Nitrate (NO_3) as Nitrogen
- Orthophosphate (PO_4) as P (dissolved)
- Turbidity
- Water Clarity (Secchi Disk)
- Escherichia coli (E. coli)

5.2. VERTICAL PROFILES OF DISSOLVED OXYGEN AND WATER TEMPERATURE

Vertical profiles of DO and temperature were collected at the deepest location(s) in South Lake and Lake Sabrina. The purpose of the survey is to identify the timing, extent and duration of any lake stratification. Vertical profiles of DO and temperature were taken monthly in June and ending in October 2020. The following schedule is proposed for collecting the vertical profiles for each year of the study:

- June, July, August, September, and October

The following sampling locations were proposed:

- Deepest point in Lake Sabrina (estimated at 220-feet-deep at full capacity)
- Deepest Point in South Lake (estimated at 220-feet-deep at full capacity)

When collecting DO and temperature profiles, the same sampling location was visited each time so that the relative change in the profile (DO and temperature) can be determined throughout the summer. DO and temperature readings were taken every meter from the water surface to the lake bottom. Lake surface elevation was also recorded during each sampling date.

5.3. BISHOP CREEK DISSOLVED OXYGEN AND TEMPERATURE SAMPLING

Bishop Creek DO and water temperature sampling was conducted during the same periods as the lake sampling, monthly in June and October and bi-monthly from early July and terminating in late September. DO and temperature measurements would be sampled mid-depth in the middle, if accessible, otherwise adjacent to the bank of the stream. DO and water temperature data were recorded using a calibrated hand-held digital instrument. The following sampling locations were sampled:

- North Fork Bishop Creek (background)
- Middle Fork Bishop Creek below Lake Sabrina
- South Fork Bishop Creek below South Lake
- Bishop Creek below Powerhouse No. 2
- Tailwater of Powerhouse No. 2
- Bishop Creek below Powerhouse No. 3
- Tailwater of Powerhouse No. 3
- Bishop Creek below Powerhouse No. 4
- Tailwater of Powerhouse No. 4
- Bishop Creek below Powerhouse No. 5
- Tailwater of Powerhouse No. 5
- Bishop Creek below Powerhouse No. 6
- Tailwater of Powerhouse No. 6

5.4. SAMPLING FOR SECCHI DISK, TURBIDITY, CONDUCTIVITY, TOTAL DISSOLVED SOLIDS, ORTHOPHOSPHATE, TOTAL NITROGEN, NITRATE AND E. COLI

5.4.1. SECCHI DISK READINGS

- Sampling Period: June, July, August, September and October

- Sampling Locations: within deepest portion of Lake Sabrina and South Lake at the same locations used for water temperature and DO profiles

- Sampling Protocol: One sample per site using the Secchi disk to approximate depth of the euphotic zone/light penetration

5.4.2. TURBIDITY, CONDUCTIVITY, TOTAL DISSOLVED SOLIDS, ORTHOPHOSPHATE, TOTAL NITROGEN AND NITRATE

- Sampling Frequency: a minimum of 1 per month during June, July, August and late September

- Sampling Locations

    - Lakes
        - Within a deep hole of Lake Sabrina and South Lake
        - Sampling was performed at two points: one above and one below the thermocline
    - Riverine Segment
        - North Fork Bishop Creek (background)
        - Middle Fork Bishop Creek below Lake Sabrina
        - South Fork Bishop Creek below South Lake
        - Bishop Creek below Powerhouse No. 2

- Bishop Creek below Powerhouse No. 3
- Bishop Creek below Powerhouse No. 4
- Bishop Creek below Powerhouse No. 5
- Bishop Creek below Powerhouse No. 6

- Sampling Protocol: U.S. Geological Survey (USGS) sampling protocol and procedures

5.4.3. E. COLI [2]

- Sampling Frequency: six separate sample events starting July 1 and ending August 15

- Sampling Locations:
  - South Lake and Lake Sabrina
    - Adjacent to the boat ramp
  - Intake #2 Forebay
    - Any easily accessible location adjacent to shore

5.4.4. GENERAL

At each of the creek sampling events the following information is being recorded:

- Streamflow (in cubic feet per second [cfs])
- Air temperature
- Wind speed and direction
- Percent cloud cover
- Date, duration and amount of most recent precipitation event (if known or obtainable)

The overall program is summarized in Table 5-1.

[2] [2] If any sample detects greater than 50 col/100 ml of E. coli, microbial source tracking methods (MST [qPCR]) were performed to assess if the E. coli originates from humans.

Table 5-1 Locations, Parameters and Sampling Frequency for Water Quality Study

LOCATION	PARAMETERS										
	Water Temperature	Dissolved Oxygen	Secchi Disk	Turbidity	Conductivity	Total Dissolved Solids	Total Kjeldahl Nitrogen (a)	Nitrite + Nitrate as N (a)	Nitrate as N	Orthophosphate as PO4	E. coli
LAKES											
Lake Sabrina											
Deepest Point	J, Jy, A, S, O (b, c)	J, Jy, A, S, O (b)	J, Jy, A, S, O	NA (d)	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	NA
Adjacent to Boat Ramp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	July 1-August 15 (e)
South Lake											
Deepest Point	J, Jy, A, S, O (b)	J, Jy, A, S, O (b)	J, Jy, A, S, O	NA	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	NA
Adjacent to Boat Ramp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	July 1-August 15 (e)
Intake # 2 Forebay	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	July 1-August 15 (e)
SURFACE FLOWS											
North Fork Bishop Creek (background)	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	NA
Middle Fork Bishop Creek below Lake Sabrina	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	NA
South Fork Bishop Creek below South Lake	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	NA
Bishop Creek below Powerhouse No. 2	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	NA
Bishop Creek below Powerhouse No. 3	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	NA
Bishop Creek below Powerhouse No. 4	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	NA
Bishop Creek below Powerhouse No. 5	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	NA
Bishop Creek below Powerhouse No. 6	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	J, Jy, A, S	NA
Tailwater of Powerhouse No. 2	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tailwater of Powerhouse No. 3	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tailwater of Powerhouse No. 4	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tailwater of Powerhouse No. 5	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tailwater of Powerhouse No. 6	J, 2Jy, 2A, 2S, O	J, 2Jy, 2A, 2S, O	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

(a) – Lab analysis parameters needed to calculate Total Nitrogen.

(b) –Vertical profile of dissolved oxygen and water temperature at the deepest point on the lake.

(c) – J=June, Jy=July, A=August, S=September, O=October. All locations indicated are sampled once per month unless month is preceded by a number which indicates the number of times samples were collected during that month.

(d) – NA=Not Applicable.

(e) – A total of 6 samples were collected and analyzed during the 45-day period,

6.0 SAMPLING PROCEDURES AND METHODS

This section specifies the procedures used for collecting surface water measurements and/or water quality samples for chemical analysis. Several methods for collecting surface water samples were used, depending on the type of surface water to be sampled (i.e., tailraces, streams, lakes).

6.1. LAKE SAMPLING PROCEDURES

Field measurements of dissolved oxygen and water temperature were collected at the deepest portion of the lake based on the 1980 bathymetric survey (see Bishop Creek Water Quality Implementation Plan [BCWQIP] [SCE, 2020]). The maximum depth for Lake Sabrina and South Lake was initially reported to be 78 feet and 130 feet, respectively. However, subsequent onsite measurements indicated that Lake Sabrina and South Lake were approximately 240 and 223 feet deep, respectively. Field measurements of DO and water temperature measurements were collected starting at 0.5 meter below the water surface and at 1 meter below water surface and continuing in 1 meter increments until the total depth of the lake was obtained. Measurements were recorded on the appropriate forms and/or field notebook. Copies of the field forms are included in Appendix A.

Secchi disk measurements were collected at the same location as the field measurements for DO and water temperature. The Secchi depth measurement procedures are summarized in Standard Operating Procedure (SOP) for surface water sampling (SW-001) in the BCWQIP (SCE, 2020).

If a thermocline[3] is identified from the monthly field measurements of water temperature and dissolved oxygen, water quality samples for laboratory analysis and field measurement of conductivity were collected at above and below the thermocline. If no thermocline is identified, water samples were collected at one-half of the Secchi depth and 80 percent of the total depth of the lake at the time of sampling.

Water samples for conductivity, TDS, orthophosphate, total nitrogen and nitrate were collected using either a peristaltic pump or discrete depth sampler (Kemmerer or Van Dorn bottle) in accordance with SOP for surface water sampling (SW-001) in BCWQIP (SCE, 2020). Water samples for E. coli and MST (qPCR) were collected near shore using a grab sampling method.

6.2. SURFACE WATER SAMPLING PROCEDURES

Surface water sampling refers to the collection of water samples for the purposes of field or laboratory testing of water collected from a flowing water site. A flowing water site can refer to streams and tailraces in which water flows unidirectionally.

[3] A thermocline is the horizontal plane in a thermally stratified lake located at the depth where water temperature decreases most rapidly (greater than 1 ºC per meter) with depth.

Field measurements of dissolved oxygen, turbidity, conductivity, and water temperature were collected from straight reaches having uniform flow, and having a uniform and stable bottom contour, and where constituents are well mixed along the cross-section. Field measurements were collected in accordance with SOP for surface water sampling (SW-001) in BCWQIP (SCE, 2020).

Water samples for laboratory testing were collected using either the grab sample method or swing sampler in accordance with SOP for surface water sampling (SW-001) in BCWQIP (SCE, 2020).

6.3. FIELD ANALYTICAL METHODS

Field measurements of dissolved oxygen, turbidity, conductivity, and water temperature were conducted using the methods indicated in Table 6-1 and with SOP for surface water sampling (SW-001) in BCWQIP (SCE, 2020).

Table 6-1 Field Methods

ANALYSIS	**METHOD**	**METHOD REPORTING LIMIT**
Dissolved Oxygen in mg/L	EPA 360.1	0.1 mg/L
Water Temperature in ºC	EPA 170.1	0.1 ºC
Conductivity in µmhos/cm @25 ºC	EPA 120.1	1 µS/cm
Turbidity in NTUs	EPA 180.1	varies
Notes: mg/L=milligrams per liter; ºC=degrees Centigrade; µmhos/cm=micro-mhos per centimeter; NTU=Nephelometric turbidity units.		

6.4. FIELD CALIBRATION METHODS

The equipment used in collecting field data includes a variety of instruments. Proper maintenance, calibration, and operation of each instrument are the responsibility of the individual assigned to each task. Instruments and equipment used during the study are maintained, calibrated, documented for calibration, and operated according to the manufacturers' guidelines and recommendations and SOP for field instrument calibration (SW-002) in BCWQIP (SCE, 2020).

6.5. Laboratory Methods

In general, the selected laboratory will adhere to those recommendations promulgated in Title 21, Code of Federal Regulations (CFR) Part 58, Good Laboratory Practices; and criteria described in Methods for Chemical Analysis of Water and Wastes (EPA, 1979; EPA-600/4-79-202). Water samples collected for chemical analysis during this Project were tested in accordance with the standard analytical procedures established by the EPA Methods for Chemical Analysis of Water and Wastes (EPA, 1979; EPA-600/4-79-

202), American Society for Testing and Materials, or Standard Methods for the Examination of Water and Wastewater and are indicated in Table 6-2.

Table 6-2 Laboratory Methods

ANALYSIS	**METHOD**	**METHOD REPORTING LIMIT (units)**	**HOLDING TIME**
Total Dissolved Solids	SM 2540C	10 mg/L	7 days
Total Nitrogen by calculation	calculation	---	---
Nitrite + Nitrate as N	EPA 353.2	0.20 mg/L	28 days
Total Kjeldahl Nitrogen	EPA 351.2	0.10 mg/L	28 days
Nitrate as N	EPA 300.0	0.11 mg/L	2 days
Orthophosphate as P	EPA 365.3	0.10 mg/L	2 days
E. coli	SM 9222G	20 col/100 ml	24 hours*
MST (qPCR)	BacHum or HF183	---	48 ours

Notes:

*- Per SWAMP guidelines for monitoring E. coli in ambient water.

SM=Standard Methods for the Examination of Water and Wastewater; EPA= Method for Chemical Analysis of Waters and Wastes, EPA-600/4-79-020; N=Nitrogen; P=Phosphorus.

The samples for each analytical parameter were collected and preserved in the appropriate sample containers as presented in Table 6-3. The sample containers provided by the analytical laboratories were new, pre-cleaned, pre-loaded with the appropriate preservative, and delivered in a clean cooler.

Table 6-3 Sampling Container and Preservation Requirements

ANALYSIS	METHOD	CONTAINER	PRESERVATION
Total Dissolved Solids	SM 2540C	500 ml -poly	<6ºC
Nitrite + Nitrate as N	EPA 353.2	250 ml - poly	<6ºC, H_2SO_4
Total Kjeldahl Nitrogen	EPA 351.2	250 ml - poly	<6ºC, H_2SO_4
Nitrate as N	EPA 300.0	60 ml - poly	<6ºC
Orthophosphate as P	EPA 365.3	250 ml - poly, filtered	<6ºC
E. coli	SM 9222G	100 ml, glass	<6ºC
MST (qPCR)	BacHum or HF183	1000 ml, polypropylene	<10ºC

Notes:
SM=Standard Methods for the Examination of Water and Wastewater; EPA= Method for Chemical Analysis of Waters and Wastes, EPA-600/4-79-020; N=Nitrogen; P=Phosphorus; poly=polyethylene; ml=milliliters; ºC= degrees centigrade; H_2SO_4=sulfuric acid.

6.6. SAMPLE LABELING AND CHAIN-OF-CUSTODY

Sample labels were completed for each sample using indelible ink. The labels include sample number and location, type of sample, date and time of sampling, sampler's name (or initials), preservation method, and analyses to be performed. The completed sample labels were affixed to each sample container.

A chain-of-custody record accompanied all samples. During transfer, individuals relinquishing and receiving the samples sign, date, and note the time on the record. The chain-of-custody form documents the sample custody transfer from the sampler, through a courier, to the laboratory.

All laboratory water quality samples were managed in accordance with SOP for Sample Management (SW-003) in BCWQIP (SCE, 2020). All laboratory reports for each sampling period are included in Appendix B.

6.7. MODIFICATION TO METHODS

The original Study Plan required the use of the Sierra Nevada Aquatic Research Laboratory (SNARL) to conduct the laboratory analysis of *E. coli* and MST (qPCR). Due to the Covid-19 pandemic, SNARL was not available to conduct the analyses. Weck Laboratories was engaged to conduct the *E. coli* analysis using Standard Method 9223B along with a holding time of 24-hours which followed the SWAMP guidelines for monitoring *E. coli* in ambient water. Source Molecular, in Florida, was engaged to conduct the MST (qPCR) analysis for any samples that exceeded 50 MPN/100 ml of *E. coli*. No

samples exceeded the 50 MPN/100 ml of *E. coli* so no MST (qPCR) analysis was performed.

Additionally, the total depth for both lakes was greater than was previously reported. Equipment used to collect vertical profiles of DO and water temperature were unable to obtain the maximum depth of the lakes during the June 2020 sampling period. Additional equipment was obtained to reach the bottom of the lakes in subsequent profiles conducted in July 2020 through October 2020. Reservoir depths will be verified with results of the bathymetry data collected as part of the Reservoir Fish Distribution Study and incorporated into the Final Technical Report to be completed after the 2021 field season.

7.0 RESULTS

7.1. SOUTH LAKE

7.1.1. DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILES

June 2020

A DO and water temperature profile was conducted on June 15, 2020 at the deepest point reachable in South Lake. DO ranged from 9.61 mg/L at a depth of 18 meters (59.1 feet) below water surface (BWS) to 0.13 mg/L at a depth of 50.5 meters (165.7 feet) BWS. In general, DO saturation was above 90 percent and often exceeded 100 percent in the upper portion of the lake. DO saturation declined sharply to less than 10 percent at 49 meters (160.8 feet) BWS (see Appendix C, Table C-1). No thermocline[4] was identified. **Figure** 7-1 presents a profile of DO and water temperature over the surveyed water column and Appendix C (Table C-1) presents the individual values recorded for each depth interval.

July 2020

The DO and water temperature profile was conducted on July 28, 2020 at the deepest point in South Lake. The maximum depth at the profile point on July 28, 2020 was 68 meters (223.1 feet) with a lake surface elevation of 9747.82 feet msl. DO ranged from 9.45 mg/L at a depth of 20 meters (65.6 feet) BWS and 0.00 mg/L at a depth of 57 meters (187.0 feet) BWS. In general, DO saturation was above 80 percent and often exceeded 100 percent in the upper portion of the lake. DO saturation declined sharply to less than 0 percent at 53 meters (173.9 feet) BWS (see Appendix C, Table C-2). No thermocline was identified. **Figure** 7-2 presents a profile of DO and water temperature over the surveyed water column and Appendix C (Table C-2) presents the individual values recorded for each depth interval.

August 2020

The DO and water temperature profile was conducted on August 25, 2020 at the deepest point in South Lake. The maximum depth at the profile point on August 25, 2020 was 64 meters (210 feet) with a lake surface elevation of 9741.96 feet msl. DO ranged from 9.12 mg/L at a depth of 28 meters (91.9 feet) BWS and 0.03 mg/L at a depth of 63 meters (206.7 feet) BWS. In general, DO saturation was above 80 percent and often exceeded 100 percent in the upper portion of the lake. DO saturation declined sharply to less than 5 percent at 50 meters (164.0 feet) BWS (see Appendix C, Table C-3). A thermocline was identified at approximately 17-18 meters (55.8 – 59.1 feet) BWS. Figure 7-3 presents a profile of DO and water temperature over the surveyed water column and Appendix C (Table C-3) presents the individual values recorded for each depth interval.

[4] A thermocline is defined as the horizontal plane in a thermally stratified lake located at the depth where water temperature decreases most rapidly (greater than 1 ºC per meter) with depth.

September 2020

The DO and water temperature profile was conducted on September 23, 2020 at the deepest point in South Lake. The maximum depth at the profile point on September 23, 2020 was 62.7 meters (205.7 feet) with a lake surface elevation of 9736.50 feet msl. DO ranged from 8.68 mg/L at a depth of 32 meters (105 feet) BWS and 0.01 mg/L at a depth of 62 meters (203.4 feet) BWS. In general, DO saturation was above 60 percent and often exceeded 100 percent in the upper portion of the lake. DO saturation declined sharply to less than 5 percent at 48 meters (157.5 feet) BWS (see Appendix C, Table C-4). A thermocline was identified at approximately 34 - 35 meters (111.5 – 114.8 feet) BWS. Figure 7-4 presents a profile of DO, water temperature and limited number of grab samples for conductivity over the surveyed water column and Appendix C (Table C-4) presents the individual values recorded for each depth interval.

October 2020

The DO and water temperature profile was conducted on October 5, 2020 at the deepest point in South Lake. The maximum depth at the profile point on October 5, 2020 was 60.5 meters (198.5 feet) with a lake surface elevation of 9734.02 feet msl. DO ranged from 8.25 mg/L at a depth of 32 meters (105 feet) BWS and 0.04 mg/L at a depth of 58 meters (190.3 feet) BWS. In general, DO saturation was above 60 percent and often exceeded 100 percent in the upper portion of the lake. DO saturation declined sharply to less than 5 percent at 48 meters (157.5 feet) BWS (see Appendix C, Table C-5). A thermocline was identified at approximately 28 - 29 meters (91.9 – 95.1 feet) BWS. Figure 7-5 presents a profile of DO and water temperature over the surveyed water column and Appendix C (Table C-5) presents the individual values recorded for each depth interval.

7.1.2. SUMMARY

The DO and water temperature profiles for South Lake were similar for each monitoring period throughout the summer and early fall. Each exhibited elevated DO readings in the upper two thirds of the lake and very low DO readings in the bottom portion of the lake (approximately 15 meters below the outlet). A comparison was made to see if the very low DO readings altered with lake elevation over the monitoring period and are presented in Figure 7-6. No major changes were noted with the location of the very low DO readings.

The very low DO readings, the rise in conductivity and water temperature in the lower portion of the lake (see Figure 7-4) is suggestive of a stratified lake. Boehrer and Schultze (2008) indicated that meromictic lakes can occur when chemically different bottom layer, called a monimolimnion, has continuously been present for a least one annual cycle. Higher concentrations of dissolved substances have increased density sufficiently to resist deep recirculation and the exchange rates with the mixolimnion (the freely circulating upper layer of a meromictic lake) are small enough that chemically different conditions are sustained continuously. Figure 7-7 presents an example of DO, water temperature and conductivity with depth in a meromictic lake observed in Germany's Former Mining Area of Merseburg-Ost. At the present time, it is unclear whether the stratification will remain into 2021 and the 2021 monitoring program should indicate if South Lake may be a meromictic lake.

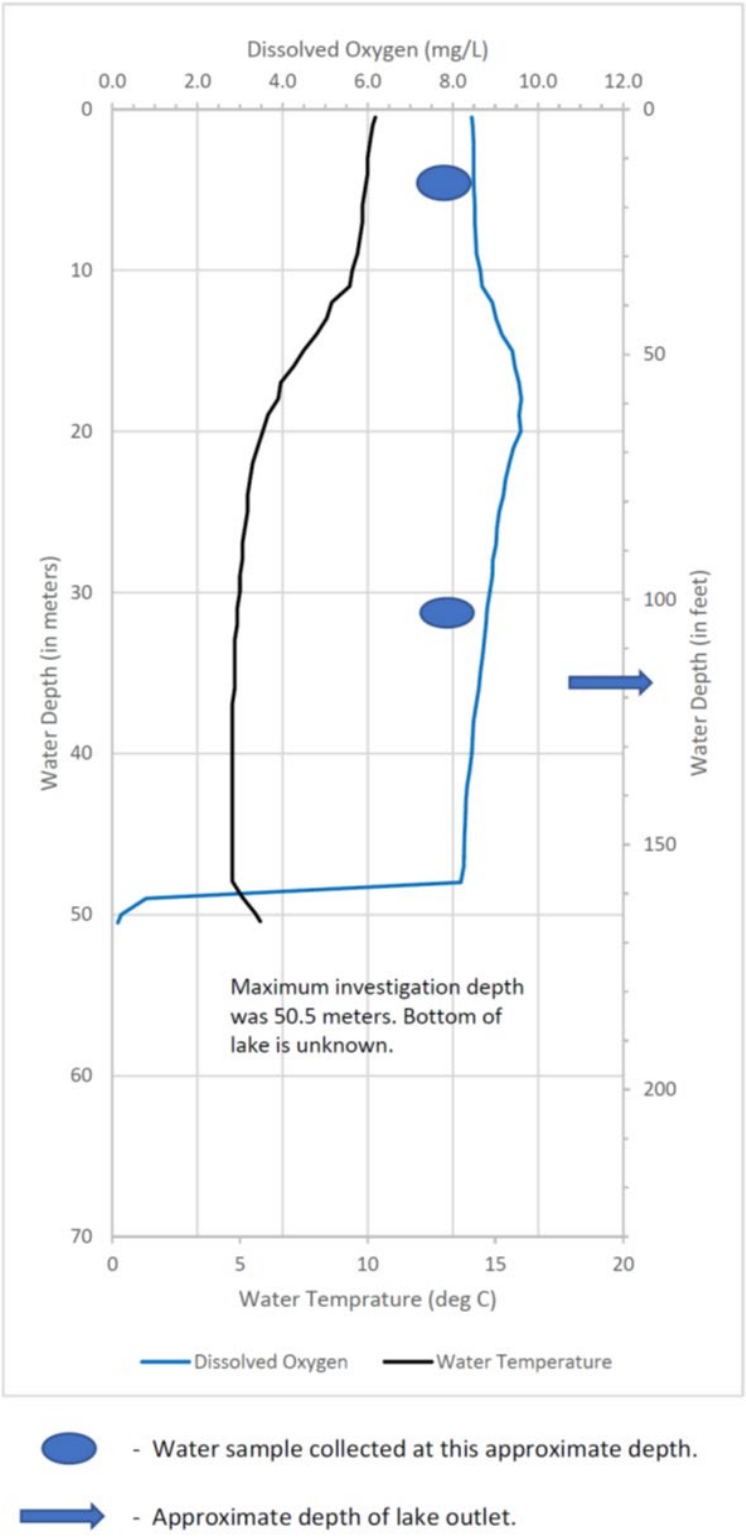


Figure 7-1 South Lake Dissolved Oxygen and Water Temperature Profile June 2020

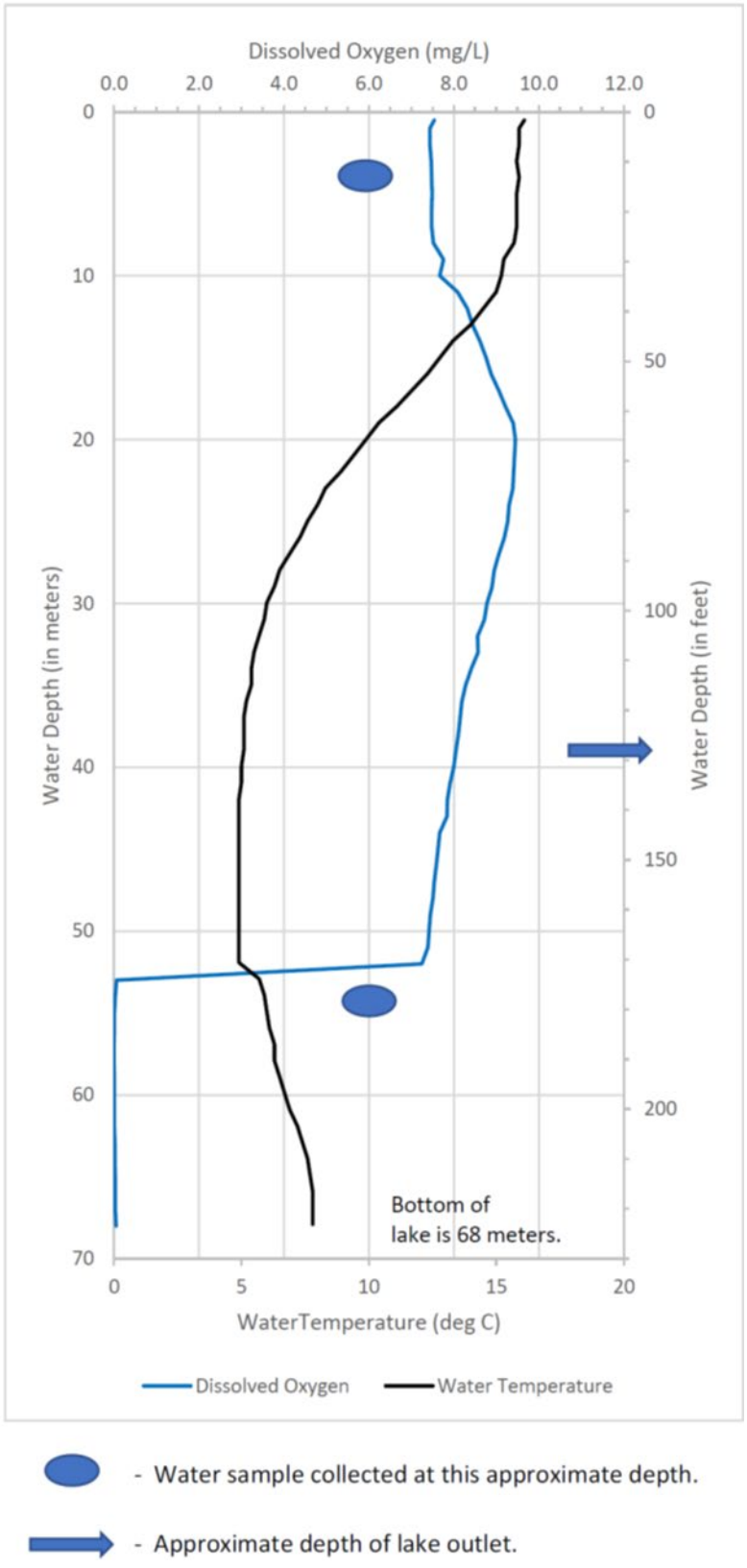


Figure 7-2 South Lake – Dissolved Oxygen and Water Temperature Profile – July 2020

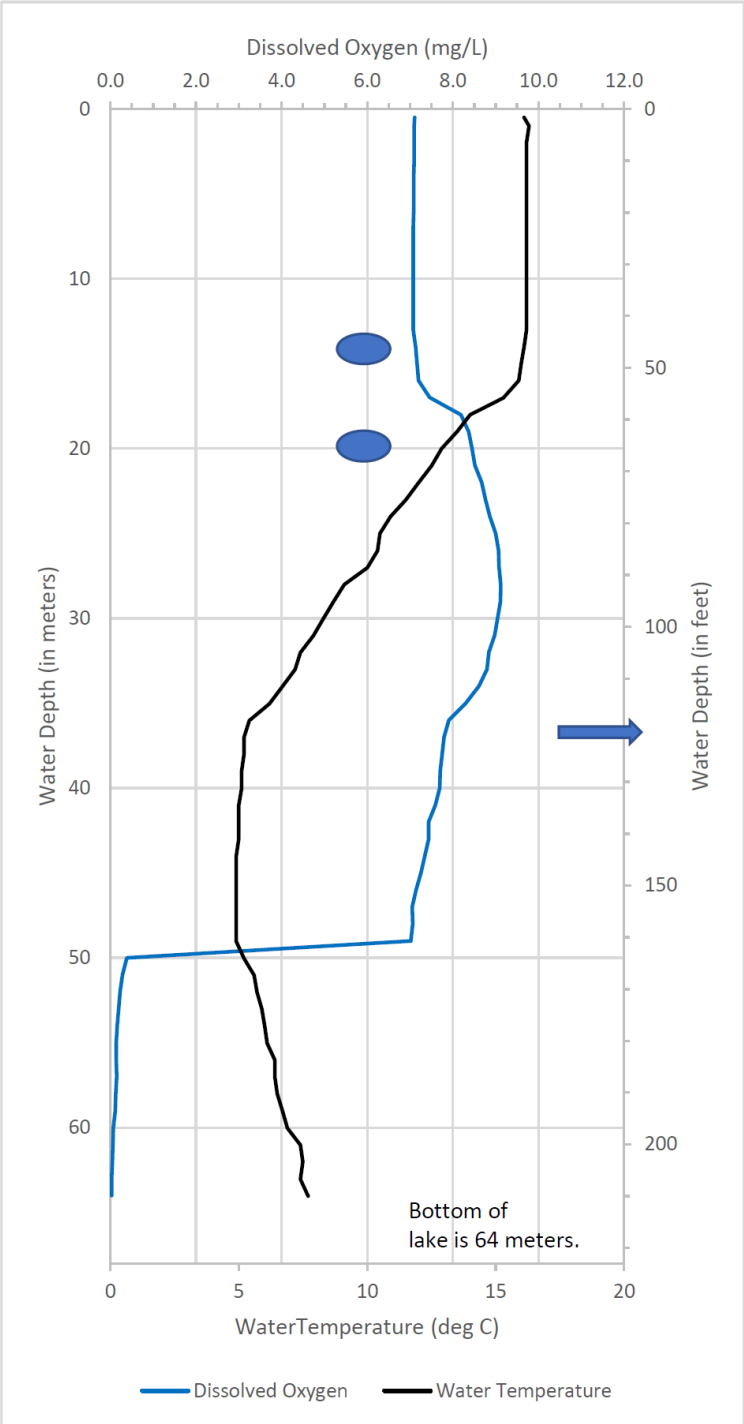


Figure 7-3 South Lake – Dissolved Oxygen and Water Temperature Profile – August 2020

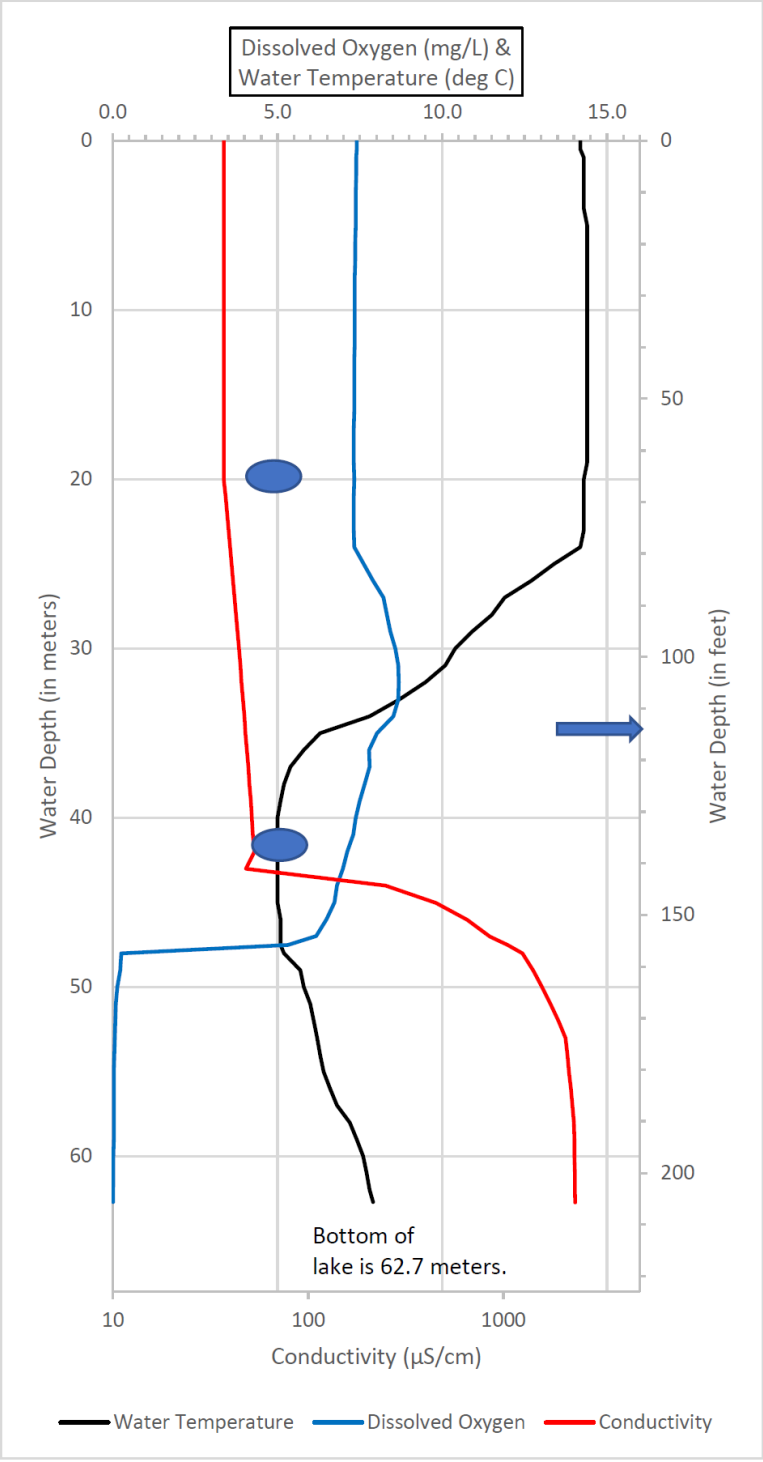


Figure 7-4 South Lake – Dissolved Oxygen, Conductivity and Water Temperature Profile – September 2020

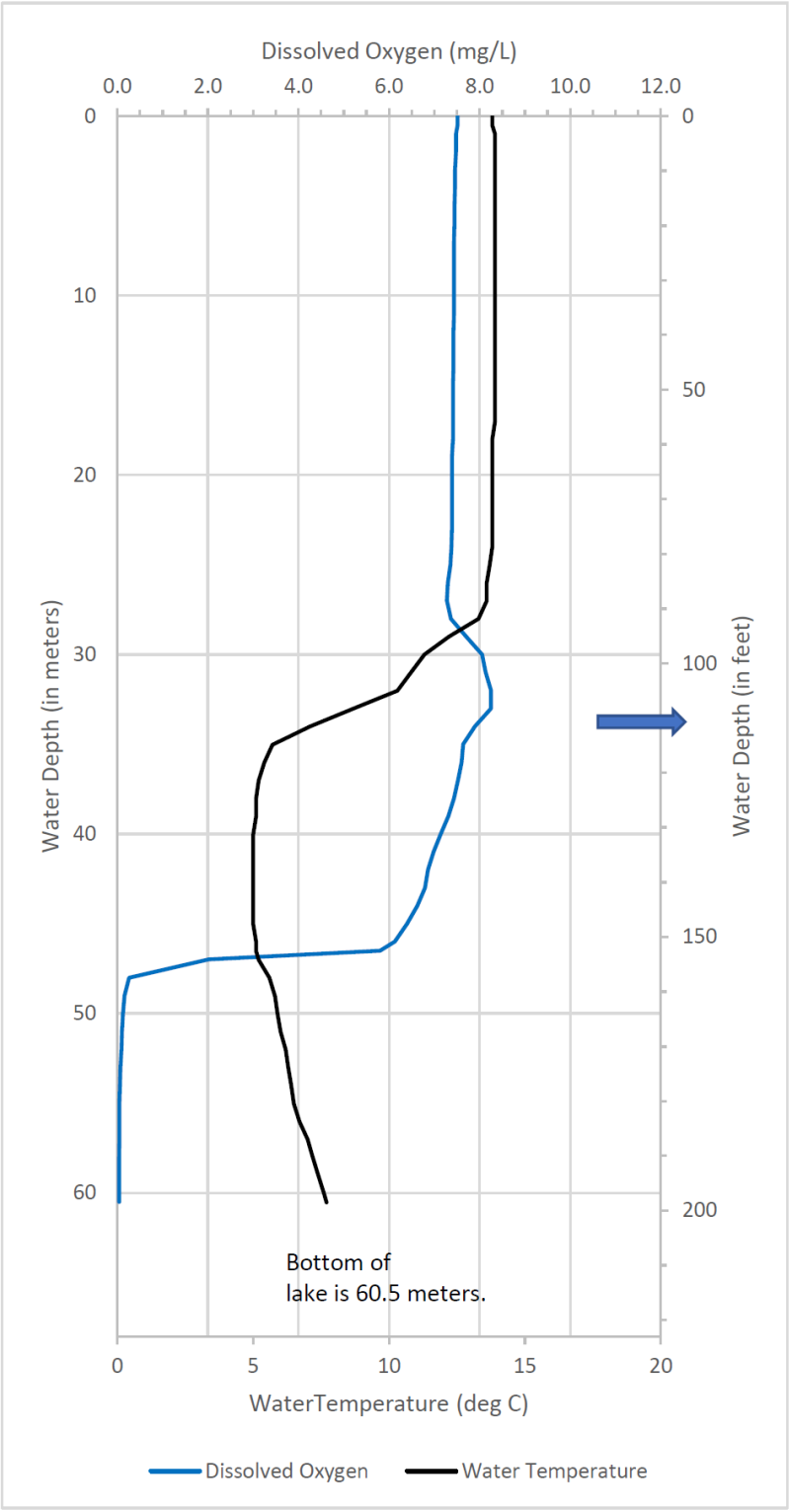


Figure 7-5 South Lake – Dissolved Oxygen and Water Temperature Profile – October 2020

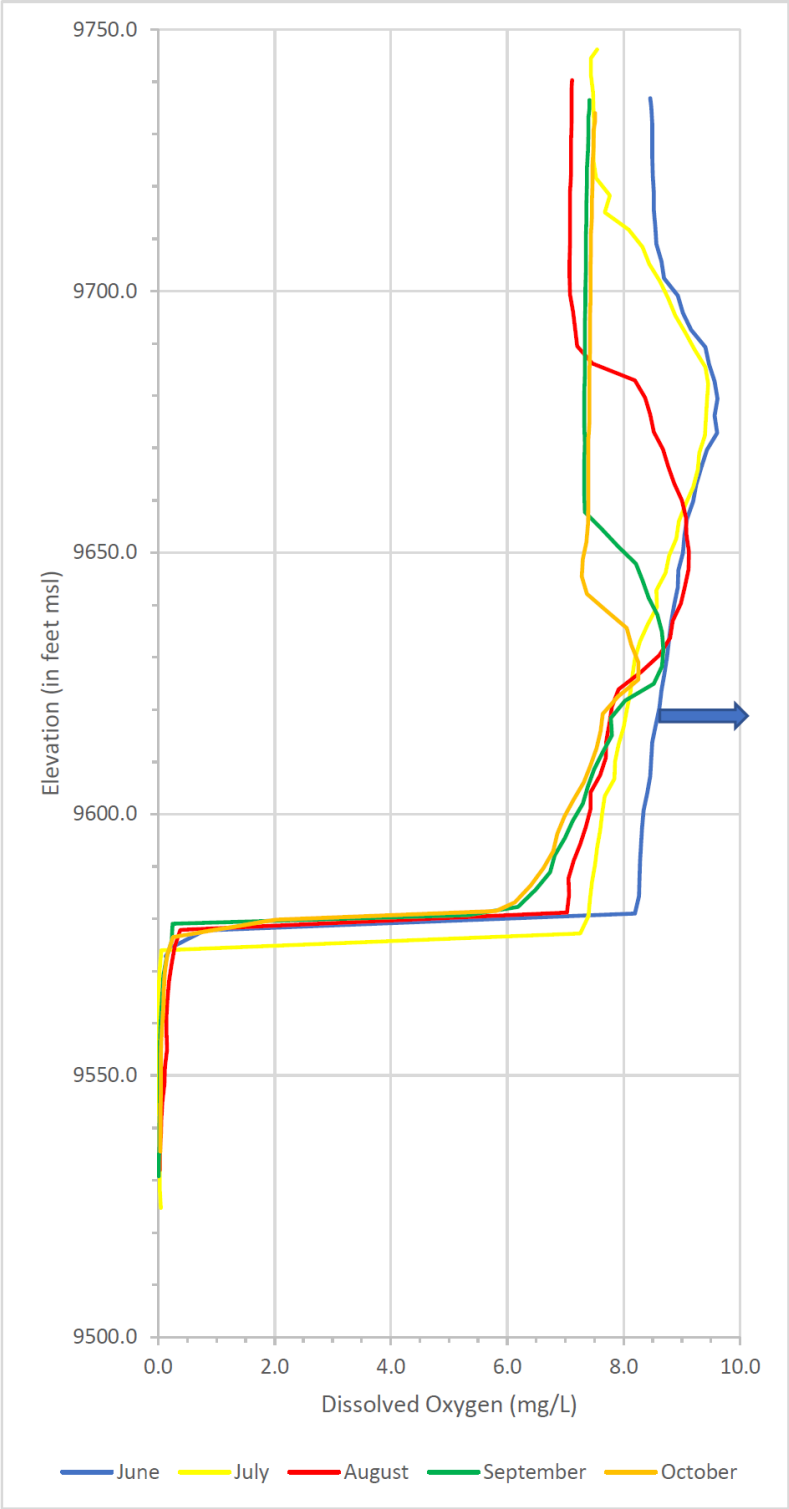
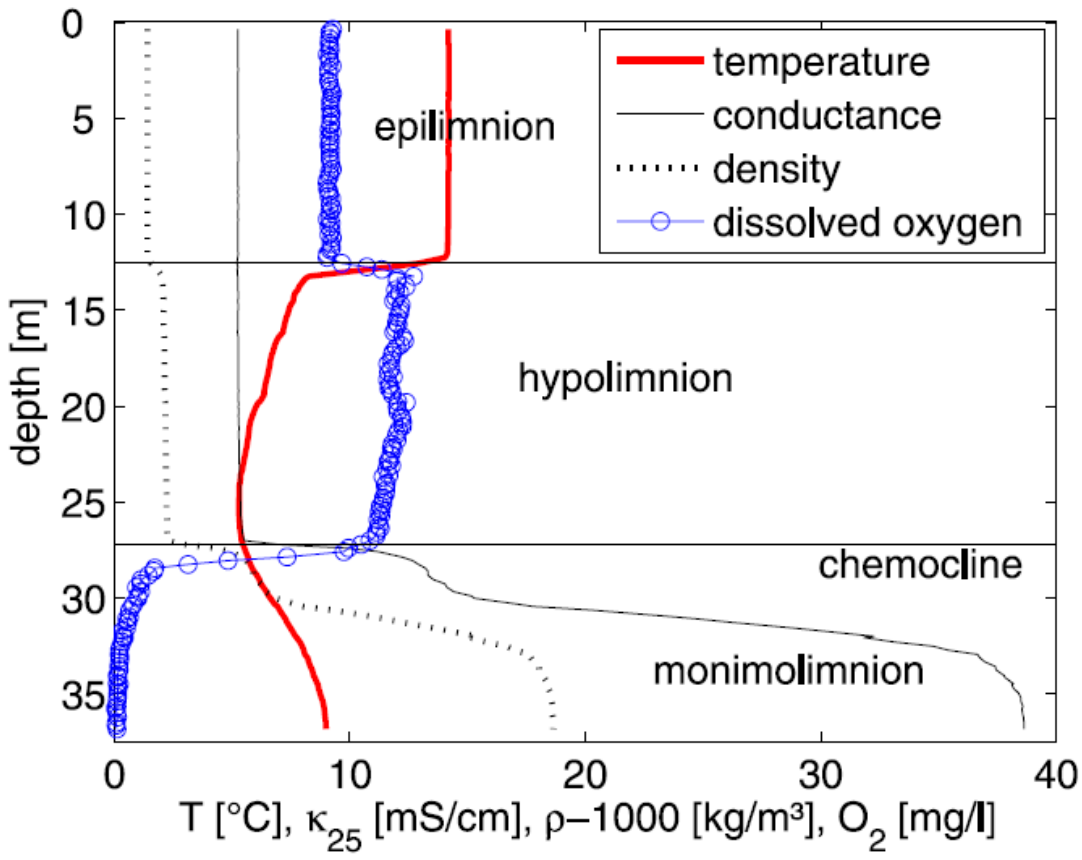


Figure 7-6 South Lake - Comparison of June-October Vertical DO Profiles with Lake Elevation



(Source: Boehrer & Schultze, 2008)

Figure 7-7 DO, Water Temperature and Conductivity in a Meromictic Lake in Rassnitzer in Former Mining Area Merseburg-Ost, Germany

7.1.3. GENERAL WATER QUALITY

Field water quality testing and laboratory water quality samples were collected during the same time periods that DO profiles were conducted and are presented in Table 7-1. Field measurements indicated Secchi disk depth ranged from 8.5 – 12 meters BWS between June and October sampling periods. Thermoclines were not identified in the June or July sampling periods however thermoclines were detected in the subsequent monitoring periods and ranged from 17 – 18 meters in the August period to 28 – 35 meters in the October sampling period. The following water quality measurements are based on collection of measurements above and below the observed thermoclines.

Conductivity ranged from 30 microSiemens/cm (µS/cm) to 40 µS/cm in the shallow sampling zone to 53 µS/cm to 1,880 µS/cm in the deeper sampling zone. Laboratory water quality analysis indicated values of TDS ranging from not detected (ND) <10 mg/L to 30 mg/L in the shallow sampling zone (above the thermocline) to 16 mg/L to 1,100 mg/L in the deeper sampling zone (below the thermocline).

Nitrate as Nitrogen (NO_3-N) was ND<0.110 for all samples collected in South Lake. Total nitrogen as N was detected once at 5.2 mg/L at a depth of 54 meters during the July sampling period. Orthophosphate as phosphorus (PO_4-P) ranged from ND<0.010 mg/L to 0.17 mg/L. Generally, the ND values of PO_4-P were collected in the shallow (4-5 meters BWS) water samples and detectable values of PO_4-P in the deeper (31.5-54 meters BWS) samples.

7.1.4. BACTERIOLOGICAL

Bacteriological samples were collected between July 1 and August 15, 2020 and analyzed for *E. coli*. A total of seven samples were collected and only one sample had a detectable value of *E. coli* with 1 most probable number in 100 milliliters (MPN/100ml). All other samples were non-detect at ND<1.0 MPN/100 ml and are presented in Table 7-2.

Table 7-1 Field Water Quality Measurements and Laboratory Results of Lake Samples, June - October 2020

LOCATION	SAMPLE DESIGNATION	DATE	TIME	LAKE SURFACE ELEVATION (b) (ft msl)	THERMO-CLINE	SAMPLE DEPTH (meters)	FIELD MEASUREMENTS (a)		LABORATORY ANALYSIS					
											Total Nitrogen			
							Secchi Disk Depth (meters)	Conductivity (µS/cm @25°C)	Total Dissolved Solids (mg/L)	Nitrate as N (mg/L)	Total Nitrogen (mg/L)	Nitrite + Nitrate as N (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Ortho phosphate as P (mg/L)
South Lake	SL-DP-5	6/15/2020	9:15	9738.50	No	5	10.5	30	15	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
	SL-DP-31.5	6/15/2020	9:00			31.5		110	16	ND<0.110	ND<0.30	ND<0.200	ND<0.10	0.011
	SL-DP-4	7/28/2020	10:30	9747.82	No	4	8.5	30	ND<10	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
	SL-DP-54	7/28/2020	10:05			54		1,880	1,100	ND<0.110	5.2	ND<0.200	5.2	0.17
	SL-DP-15	8/25/2020	12:20	9741.96	Yes, 17-18 meters	15	11.75	40	30	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
	SL-DP-20	8/25/2020	11:55			20		70	33	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
	SL-DP-20	9/23/2020	12:05	9736.50	Yes, 34-35 meters	20	9.75	37	10	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
	SL-DP-42	9/23/2020	12:50			42		53	31	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
	(c)	10/5/2020	(c)	9734.02	Yes, 28-35 meters	(c)	12.0	(c)						
Lake Sabrina	LS-DP-8	6/17/2020	9:00	9116.20	Yes, 11-12 meters	8	7.5	30	16	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
	LS-DP-15	6/17/2020	9:30			15		20	25	ND<0.110	0.30	ND<0.200	0.30	ND<0.010
	LS-DP-7	7/29/2020	11:25	9118.62	Yes, 9-14 meters	7	12.0	20	11	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
	LS-DP-16	7/29/2020	10:55			16		30	12	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
	LS-DP-8	8/24/2020	12:30	9115.53	Yes, 10-14 meters	8	10.0	30	31	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
	LS-DP-17	8/24/2020	12:05			17		40	39	ND<0.110	0.52	ND<0.200	0.52	ND<0.010
	LS-DP-7	9/21/2020	11:10	9111.89	Yes, 10-14 meters	7	10.25	23	20	ND<0.110	ND<0.30	ND<0.200	ND<0.10	0.022
	LS-DP-28	9/21/2020	11:50			28		39	25	ND<0.110	ND<0.30	ND<0.200	0.11	ND<0.010
	(c)	10/5/2020	(c)	9108.97	Yes, 10-13 meters	(c)	11.0	(c)						

Notes:
a - For dissolved oxygen and water temperature, see vertical profiles.
b - At time of sampling.
c – No laboratory water quality sample collected.
ND=Not detected at the indicated detection limit.

Table 7-2 Summary of Water Quality Analysis for *E. Coli* from Various Lakes in the Bishop Creek Watershed July 1 - August 15, 2020

DATE	*E. COLI* (MPN/100 ml)		
	South Lake Boat Ramp	Lake Sabrina Boat Ramp	Intake 2 Reservoir
7/13/2020	ND<1.0	ND<1.0	24
7/16/2020	1.0	ND<1.0	3.1
7/27/2020	ND<1.0	ND<1.0	18
7/30/2020	ND<1.0	ND<1.0	6.3
7/31/2020	ND<1.0	ND<1.0	6.3
8/3/2020	ND<1.0	ND<1.0	ND<1.0
8/5/2020	ND<1.0	3.1	1.0

7.2. LAKE SABRINA

7.2.1. DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILES

June 2020

A DO and water temperature profile was conducted on June 17, 2020 at the deepest point reachable in Lake Sabrina. The maximum depth achieved at the profile point on June 17, 2020 was 50 meters (164.0 feet) with a lake surface elevation of 9116.20 feet msl. DO ranged from 9.80 mg/L at a depth of 14 meters (45.9 feet) BWS and 7.90 mg/L at a depth of 50 meters (164 feet) BWS. A thermocline was identified between 11-12 meters (36.1 feet and 39.4 feet) BWS. Figure 7-8 presents a profile of DO and water temperature over the surveyed water column and Appendix C (Table C-6) presents the individual values recorded for each depth interval.

July 2020

The DO and water temperature profile was conducted on July 29, 2020 at the deepest point in Lake Sabrina. The maximum depth at the profile point on July 29, 2020 was 71 meters (232.9 feet) with a lake surface elevation of 9118.62 feet msl. DO ranged from 9.47 mg/L at a depth of 15 meters (49.2 feet) BWS and 1.85 mg/L at a depth of 71 meters (232.9 feet) BWS. In general, DO saturation was above 80 percent and often exceeded 100 percent in the upper portion of the lake. DO saturation gradually declined to less than 20 percent at 71 meters (232.9 feet) BWS (see Appendix C, Table C-7). A thermocline was identified between 9 – 14 meters (29.5 feet and 45.9 feet) BWS. Figure 7-9 presents a profile of DO and water temperature over the surveyed water column and Appendix C (Table C-7) presents the individual values recorded for each depth interval.

August 2020

A DO and water temperature profile was conducted on August 24, 2020 at the deepest point in Lake Sabrina. The maximum depth at the profile point on August 24, 2020 was 73 meters (239.5 feet) with a lake surface elevation of 9115.53 feet msl. DO ranged from 9.70 mg/L at a depth of 14 meters (45.9 feet) BWS and 0.05 mg/L at a depth of 73 meters (239.5 feet) BWS. In general, DO saturation was above 80 percent and often exceeded 100 percent in the upper portion of the lake. DO saturation gradually declined to less than 10 percent at 70 meters (229.7 feet) BWS (see Appendix C, Table C-8). A thermocline was identified between 10 – 14 meters (32.8 – 45.9 feet) BWS. Figure 7-10 presents a profile of DO and water temperature over the surveyed water column and Appendix C (Table C-8) presents the individual values recorded for each depth interval.

September 2020

A DO and water temperature profile was conducted on September 21, 2020 at the deepest point in Lake Sabrina. The maximum depth at the profile point on September 21, 2020 was 72 meters (236.2 feet) with a lake surface elevation of 9111.89 feet msl. DO ranged from 9.97 mg/L at a depth of 14 meters (45.9 feet) BWS and 0.80 mg/L at a depth of 72 meters (236.2 feet) BWS. In general, DO saturation was above 80 percent and often exceeded 100 percent in the upper portion of the lake. DO saturation gradually declined to less than 10 percent at 72 meters (236.2 feet) BWS (see Appendix C, Table C-9). A thermocline was identified between 10 – 14 meters (32.8 feet and 45.9 feet) BWS. Figure 7-11 presents a profile of DO and water temperature over the surveyed water column and Appendix C (Table C-9) presents the individual values recorded for each depth interval.

October 2020

A DO and water temperature profile was conducted on October 5, 2020 at the deepest point in Lake Sabrina. The maximum depth at the profile point on October 5, 2020 was 69.5 meters (228 feet) with a lake surface elevation of 9108.97 feet msl. DO ranged from 10.03 mg/L at a depth of 13 meters (42.7 feet) BWS and 0.27 mg/L at a depth of 69.5 meters (228.0 feet) BWS. In general, DO saturation was above 80 percent and often exceeded 100 percent in the upper portion of the lake. DO saturation gradually declined to less than 10 percent at 69 meters (226.4 feet) BWS (see Appendix C, Table C-10). A thermocline was identified between 10 – 13 meters (32.8 feet and 42.7 feet) BWS. Figure 7-12 presents a profile of DO and water temperature over the surveyed water column and Appendix C (Table C-10) presents the individual values recorded for each depth interval.

7.2.2. SUMMARY

The DO and water temperature profiles for Lake Sabrina were similar for each monitoring period throughout the summer and early fall. Each exhibited elevated DO readings in the upper two thirds of the lake and a gradual decline in DO near the bottom portion of the lake (well below the lake outlet). A comparison was made to see if the DO readings altered with lake elevation over the monitoring period and are presented in Figure 7-13. No major changes were noted between the monthly monitoring periods.

7.2.3. GENERAL WATER QUALITY

Field water quality testing and laboratory water quality samples were collected during the same time periods that DO profiles were conducted and are presented in Table 7-1. Field measurements indicated Secchi disk depth of 7.5 – 12.0 meters between June and October sampling periods.

Thermoclines were identified during all sampling periods and ranged from 9-14 meters in the July sampling period and 10 – 14 meters during the September sampling period. The following measurements are based on collection of measurements above and below the observed thermoclines. Conductivity ranged from 20 - 30 µS/cm in the shallow zone (above the thermocline) to 20 – 40 µS/cm in the deeper zone (below the thermocline).

Laboratory water quality analysis for June and July sampling periods indicated very low values of TDS ranging from 11 mg/L to 39 mg/L with generally the higher values in the deeper zone.

NO_3-N was ND<0.110 for all samples collected in Lake Sabrina. Total nitrogen as N was detected twice, once at 0.30 mg/L at a depth of 15 meters during the June sampling period at and 0.52 mg/L at 17 meters during the August sampling period. PO_4-P was detected once at 0.022 mg/L at 7 meters during the September sampling period. All other samples in Lake Sabrina were ND<0.010 mg/L for PO_4-P.

7.2.4. BACTERIOLOGICAL

Bacteriological samples were collected between July 1 and August 15, 2020 and analyzed for *E. coli.* A total of seven samples were collected and only one sample (collected on August 5, 2020) had a detectable value of *E. coli* at 3.1 MPN/100ml. All other samples were non-detect at ND<1.0 MPN/100 ml. Table 7-2 summarizes the results for *E. coli* for Lake Sabrina.

7.3. INTAKE 2 RESERVOIR

7.3.1. BACTERIOLOGICAL

A total of seven samples were collected for *E. coli* and ranged from ND<1.0 MPN/100 ml to 24 MPN/100 ml. Only one sample, collected on August 3, 2020 had a non-detectable value of *E. coli* at ND<1.0 MPN/100 ml. Table 7-2 summarizes the results for *E. coli* for Intake 2 Reservoir.

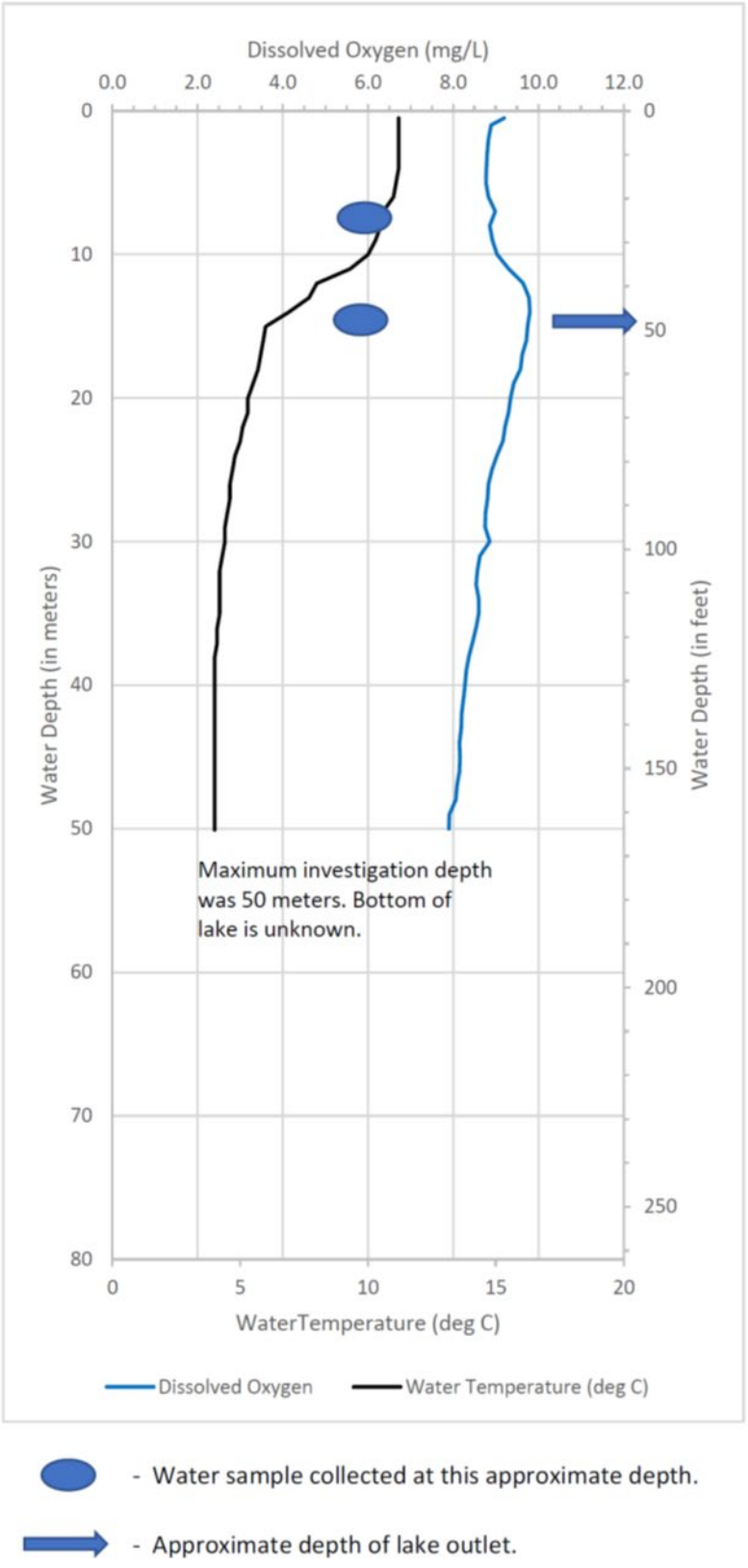


Figure 7-8 Lake Sabrina Dissolved Oxygen and Water Temperature Profile – June 2020

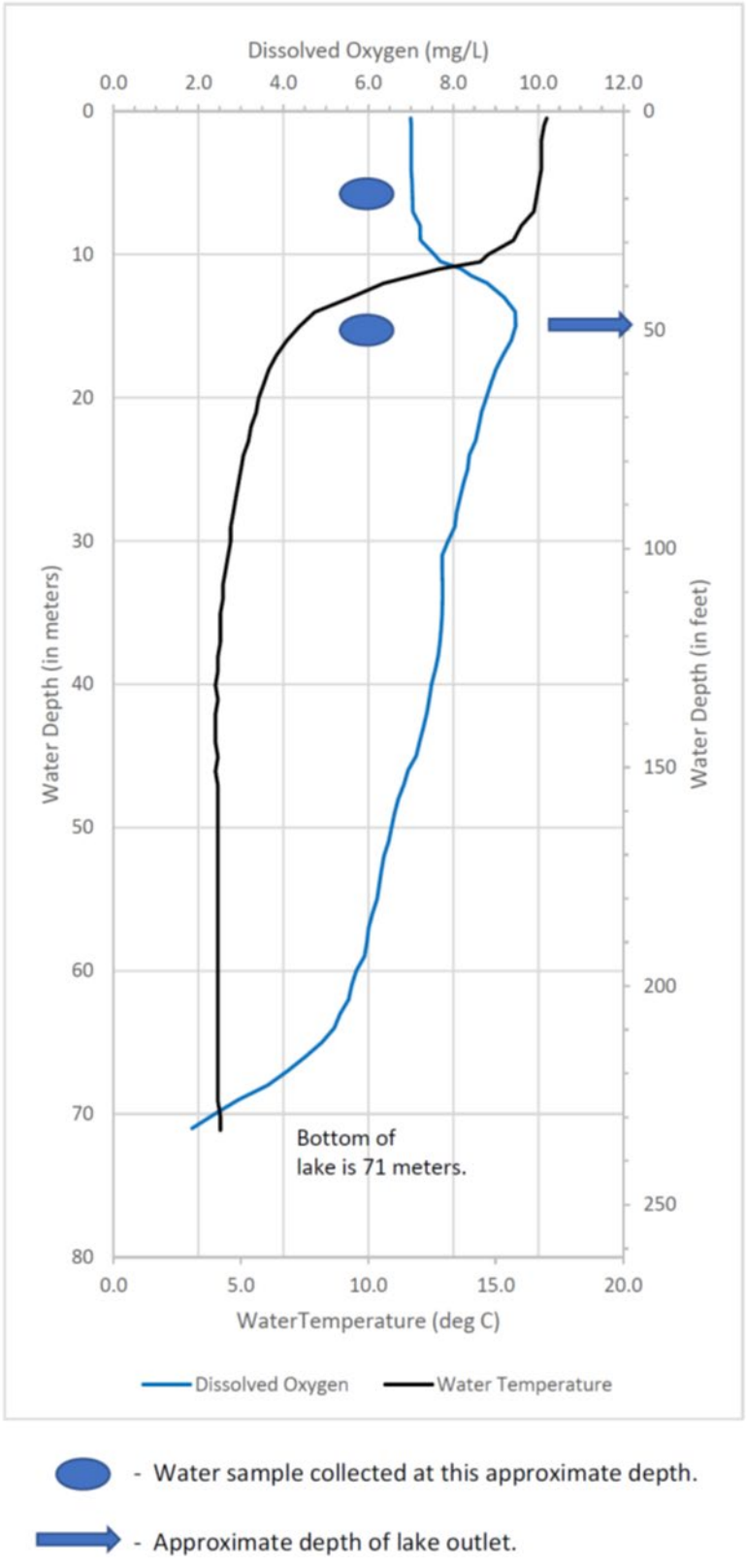


Figure 7-9 Lake Sabrina Dissolved Oxygen and Water Temperature Profile – July 2020

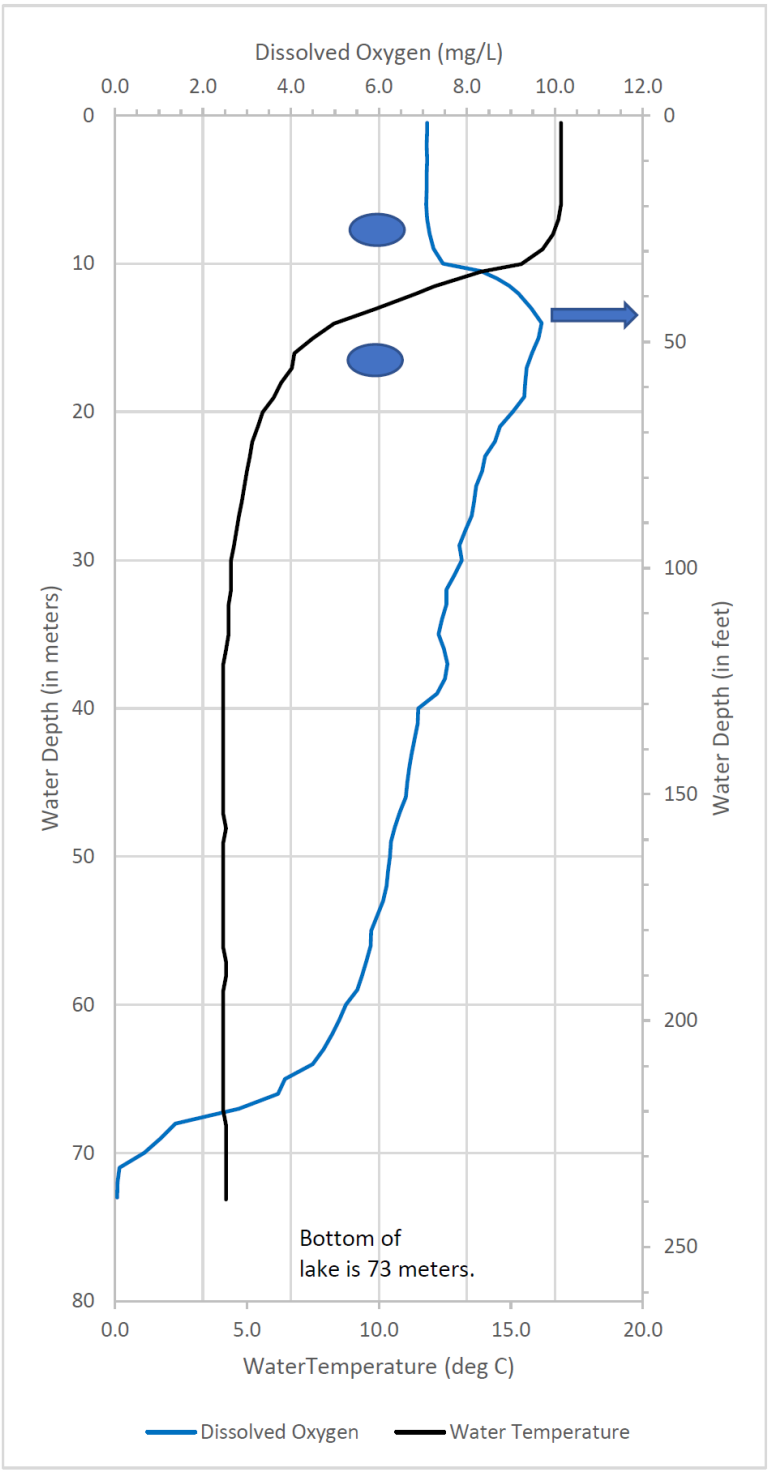


Figure 7-10 Lake Sabrina Dissolved Oxygen and Water Temperature Profile – August 2020

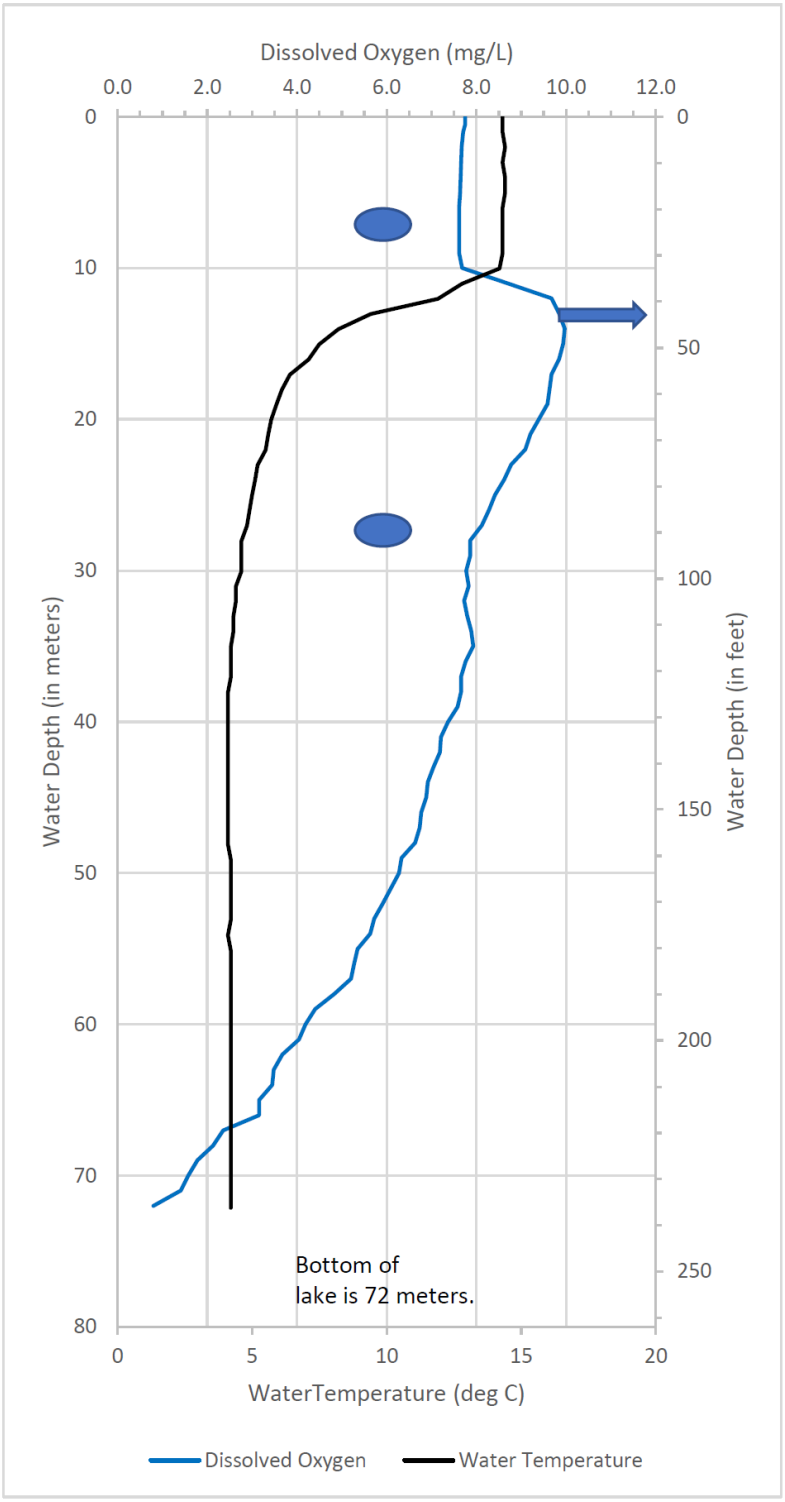


Figure 7-11 Lake Sabrina – Dissolved Oxygen and Water Temperature Profile – September 2020

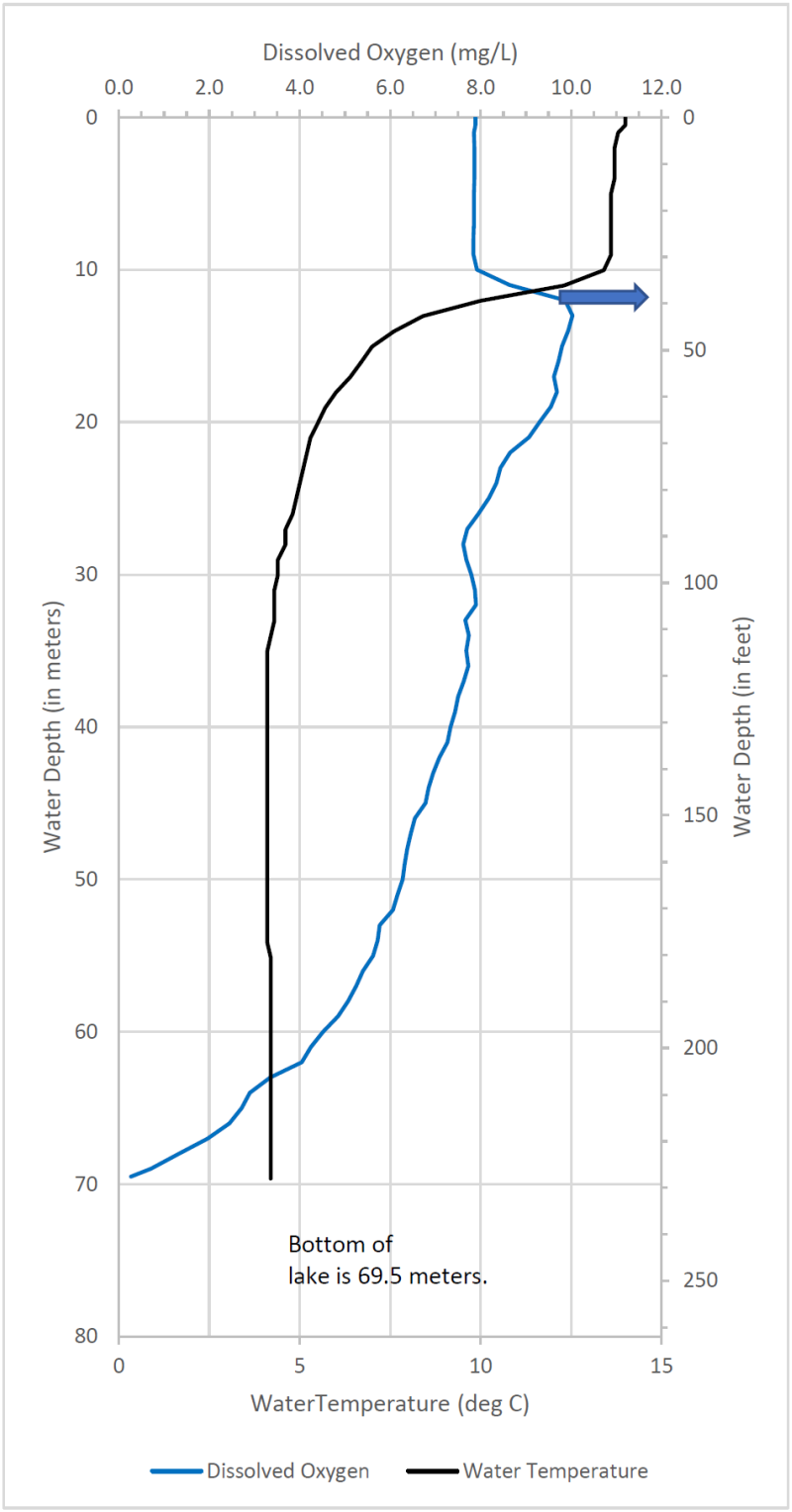
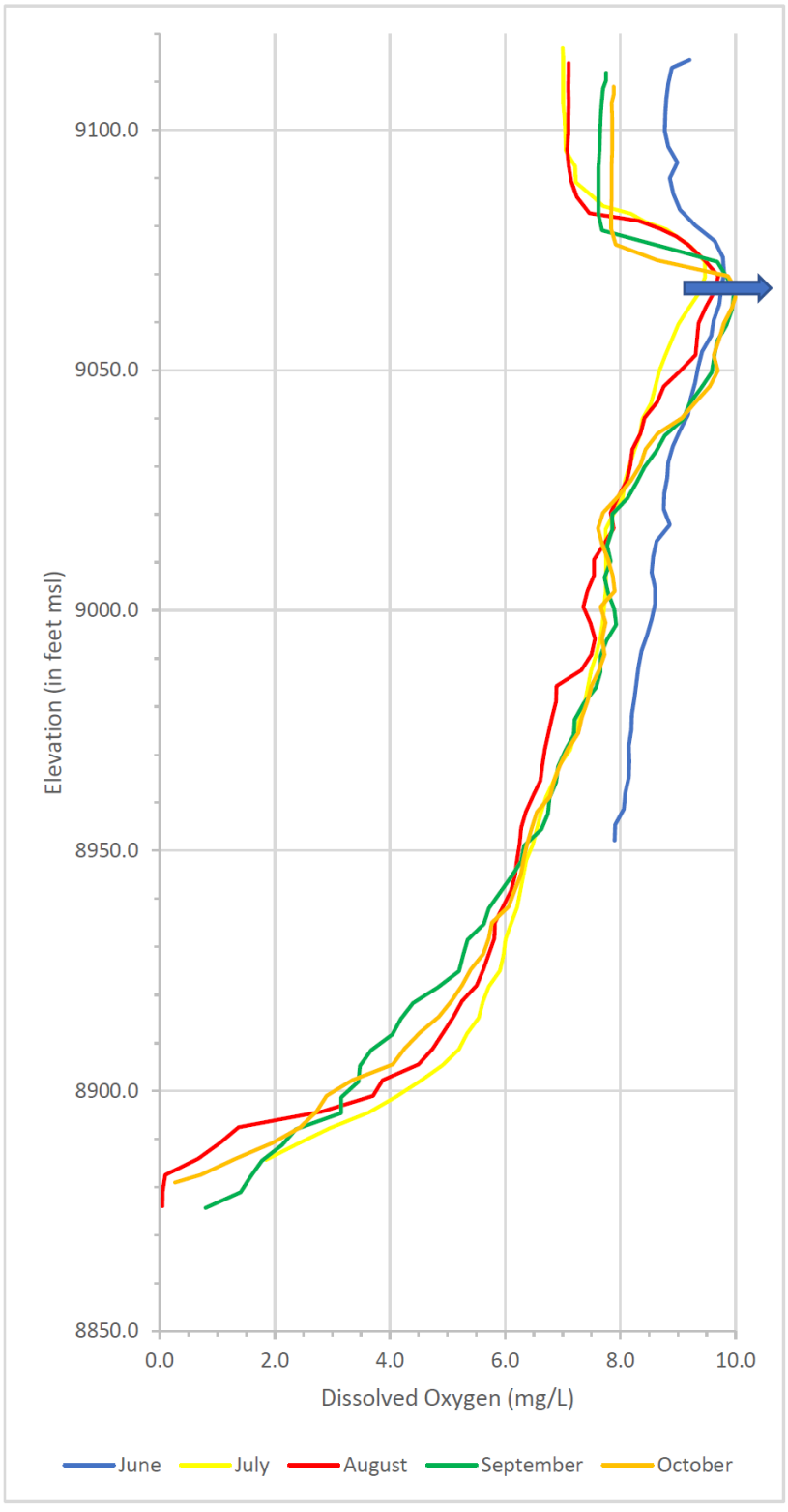


Figure 7-12 Lake Sabrina – Dissolved Oxygen and Water Temperature Profile – October 2020



- Approximate depth of lake outlet.

Figure 7-13 Lake Sabrina - Comparison of June-October Vertical DO Profiles with Lake Elevation

7.4. BISHOP CREEK

7.4.1. DISSOLVED OXYGEN AND WATER TEMPERATURE

Water temperature ranged from 6.9 °C to 17.8 °C with the lower values occurring near the upper reaches of Bishop Creek and the higher values generally occurring in the lower reaches of Bishop Creek. DO occurred in a narrow range from 7.12 mg/L to 9.68 mg/L. The oxygen saturation level for the observed water temperature and air pressure was generally above 98 percent and often exceeded 100 percent for all monitored reaches of Bishop Creek.

Table 7-3 presents the DO and water temperature values obtained during the June-October 2020 monitoring period.

7.4.2. GENERAL WATER QUALITY

Field and laboratory water quality samples were collected along Bishop Creek in June, July, August and September 2020 and are summarized in Table 7-4. Turbidity ranged from 0.36 to 69.6 NTU with the highest concentration at Bishop Creek below Powerhouse No. 3 during the June sampling period. Generally, Bishop Creek had values of turbidity below 5 NTU for all locations and all sampling periods. Conductivity ranged from 20 to 78 µS/cm@25°C with the highest concentration observed at South Fork of Bishop Creek below South Lake during the September sampling period. Generally, conductivity increased in value as you progressed downstream in the Bishop Creek watershed.

TDS ranged from 11 mg/L to 41 mg/L with the highest concentration occurring below Powerhouse No. 4 and below Powerhouse No. 6 in September 2020.

NO_3-N was reported to below the detection limit (ND<0.110 mg/L) in all samples. Total Nitrogen was detected in only three samples at 1.1 mg/l in the South Fork of Bishop Creek below South Lake in June 2020 and at 0.41 mg/L in the Middle Fork of Bishop Creek below Lake Sabrina in June 2020, and 0.37 mg/L in Bishop Creek below Powerhouse No. 5 in September 2020. All other samples reported Total Nitrogen below the detection limit of ND<0.30 mg/L.

PO_4-P was detected in only five samples (out of a total of 32 samples) and ranged from ND<0.010 mg/L to 0.044 mg/L. The highest concentration was detected in North Fork of Bishop Creek in July 2020.

Table 7-3 Dissolved Oxygen and Water Temperature Measurements for Bishop Creek June - October 2020

LOCATION	STATION DESIGNATION	DATE	TIME	MEAN DAILY DISCHARGE * (cfs)	FIELD MEASUREMENTS					Calculated DO Saturation ** (%)
					Air Temperature		Water Temperature (deg C)	Dissolved Oxygen (mg/L)	Barometric Pressure (in Hg)	
					Measured (deg F)	Calculated (deg C)				
North Fork of Bishop Creek	BC-NF-1	6/16/2020	7:40	24	50	10.0	9.1	8.71	---	---
		7/13/2020	14:40	17	88	31.1	17.8	8.08	21.60	116.1%
		7/31/2020	9:00	14	61	16.1	13.8	7.63	21.65	100.6%
		8/6/2020	10:20	14	62	16.7	15.4	8.29	21.43	115.8%
		8/26/2020	11:40	12	69	20.6	14.5	8.23	21.50	112.5%
		9/20/2020	12:50	8.4	66	18.9	14.2	8.95	21.51	122.3%
		9/22/2020	11:45	8.5	64	17.8	11.3	9.02	21.59	124.9%
		10/6/2020	9:45	7.2	58	14.4	9.2	9.02	21.50	109.9%
South Fork of Bishop Creek below South Lake	BC-blw-SL	6/15/2020	12:30	16	60	15.6	7.1	9.23	---	---
		7/13/2020	16:00	22	86	30.0	7.0	8.86	21.30	102.8%
		7/31/2020	10:00	33	68	20.0	6.9	9.00	21.30	101.8%
		8/6/2020	12:00	35	66	18.9	8.9	8.62	21.15	104.0%
		8/25/2020	12:45	34	67	19.4	8.0	8.62	21.25	104.0%
		9/20/2020	11:45	22	64	17.8	10.5	8.17	21.24	103.4%
		9/22/2020	8:55	22	53	11.7	8.9	8.65	21.30	102.9%
		10/5/2020	10:50	20	60	15.6	9.7	8.16	21.25	100.8%
Middle Fork of Bishop Creek below Lake Sabrina	BC-blw-LS	6/16/2020	7:00	40	50	10.0	10.7	8.09	---	---
		7/13/2020	15:05	42	85	29.4	15.4	7.58	21.70	104.4%
		7/31/2020	9:20	36	61	16.1	15.7	7.16	21.79	98.6%
		8/6/2020	10:45	34	62	16.7	17.0	7.22	21.58	103.8%
		8/24/2020	12:55	36	73	22.8	17.2	7.12	21.78	102.3%
		9/20/2020	12:15	19	65	18.3	15.3	7.42	21.63	102.2%
		9/22/2020	11:00	20	63	17.2	14.9	7.55	21.70	101.7%
		10/5/2020	13:45	33	71	21.7	14.2	7.49	21.60	100.9%
Bishop Creek below Powerhouse No. 2	BC-blw-PH2	6/16/2020	9:30	14	64	17.8	10.6	8.94	---	---
		7/14/2020	10:30	14	78	25.6	13.5	8.30	23.20	102.3%
		7/30/2020	10:15	14	80	26.7	12.9	8.41	23.27	101.3%
		8/6/2020	9:45	14	68	20.0	14.0	8.17	23.15	103.0%
		8/26/2020	10:15	14	76	24.4	11.9	8.67	23.17	112.3%
		9/20/2020	11:15	15	72	22.2	11.6	8.74	23.21	113.2%
		9/22/2020	12:20	15	---	---	13.9	8.53	23.28	105.1%
		10/6/2020	9:25	15	62	16.7	9.5	9.10	23.20	102.2%
Bishop Creek below Powerhouse No. 3	BC-blw-PH3	6/16/2020	10:40	5.9	70	21.1	12.1	8.97	---	---
		7/14/2020	9:50	6	80	26.7	14.6	8.31	23.90	102.1%
		7/30/2020	9:40	5.9	80	26.7	14.7	8.28	23.96	100.4%
		8/6/2020	9:20	6	73	22.8	13.5	8.44	23.84	101.4%
		8/26/2020	9:40	5.7	75	23.9	12.9	8.66	23.86	101.7%
		9/20/2020	10:55	6.5	71	21.7	11.8	8.93	23.91	112.7%
		9/22/2020	12:55	6.4	74	23.3	13.2	8.78	23.97	104.2%

LOCATION	STATION DESIGNATION	DATE	TIME	MEAN DAILY DISCHARGE * (cfs)	FIELD MEASUREMENTS					Calculated DO Saturation ** (%)
					Air Temperature		Water Temperature (deg C)	Dissolved Oxygen (mg/L)	Barometric Pressure (in Hg)	
					Measured (deg F)	Calculated (deg C)				
		10/6/2020	9:05	6.9	63	17.2	10.5	9.15	23.90	102.6%
Bishop Creek below Powerhouse No. 4	BC-blw-PH4	6/16/2020	11:55	20	79	26.1	13.0	9.13	---	---
		7/14/2020	8:55	20	80	26.7	14.8	8.60	24.90	100.5%
		7/30/2020	9:00	20	83	28.3	14.7	9.01	24.92	105.3%
		8/6/2020	8:42	21	71	21.7	13.6	8.88	24.79	102.8%
		8/26/2020	8:40	20	69	20.6	13.3	8.98	24.81	103.9%
		9/20/2020	10:20	21	72	22.2	11.3	9.44	24.91	113.4%
		9/24/2020	9:40	21	64	17.8	10.9	9.50	24.92	101.4%
		10/6/2020	8:45	19	57	13.9	10.7	9.50	24.90	101.4%
Bishop Creek below Powerhouse No. 5	BC-blw-PH5	6/16/2020	12:25	0.52	79	26.1	16.1	9.01	---	---
		7/14/2020	8:20	2.9	79	26.1	15.0	8.47	25.20	100.0%
		7/30/2020	8:30	2.1	79	26.1	14.7	8.54	25.29	98.6%
		8/6/2020	8:20	2.4	71	21.7	13.8	8.68	25.13	98.1%
		8/26/2020	8:15	2.2	67	19.4	13.7	8.67	25.19	98.0%
		9/20/2020	10:00	1.8	68	20.0	12.5	9.04	25.25	99.9%
		9/24/2020	8:50	1.8	61	16.1	11.1	9.23	25.30	109.6%
		10/6/2020	8:25	3.0	55	12.8	10.8	9.29	25.25	98.0%
Bishop Creek below Powerhouse No. 6	BC-blw-PH6	6/16/2020	13:00	115	81	27.2	14.4	9.15	---	---
		7/14/2020	7:45	108	78	25.6	15.3	8.73	25.40	103.1%
		7/30/2020	7:45	110	71	21.7	16.6	8.34	25.53	99.4%
		8/6/2020	8:05	106	71	21.7	14.5	8.84	25.36	102.1%
		8/26/2020	7:35	105	65	18.3	13.8	8.99	25.43	100.4%
		9/20/2020	9:35	69	67	19.4	12.2	9.28	25.47	101.3%
		9/24/2020	8:05	69	59	15.0	11.0	9.59	---	---
		10/6/2020	8:00	73	55	12.8	10.7	9.68	25.50	100.9%
				Maximum	88	31.1	17.8	9.68	25.53	124.9%
				Minimum	50	10.0	6.9	7.12	21.15	98.0%

Notes:
* - Instantaneous measurements made on North Fork of Bishop Creek. All other values were calculated on a mean daily average discharge.
** - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

Table 7-4 Field Water Quality Measurements and Laboratory Results of Bishop Creek Samples for Bishop Creek June - September 2020

LOCATION	STATION DESIGNATION	DATE	TIME	MEAN DAILY DISCHARGE (cfs) (b)	FIELD MEASUREMENTS (a)				LABORATORY MEASUREMENTS					
											Total Nitrogen			
					Water Temperature (deg C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Conductivity (µS/cm@25C)	TDS (mg/L)	NO_3 as N (mg/L)	Total Nitrogen (mg/L)	$NO_2 + NO_3$ as N (mg/L)	TKN (mg/L)	PO_4 as P (mg/L)
North Fork of Bishop Creek	BC-NF-1	6/16/2020	8:00	24	9.1	8.71	1.92	30	21	ND<0.110	ND<0.30	ND<0.200	0.16	ND<0.010
		7/31/2020	9:00	14	13.8	7.63	1.38	30	28	ND<0.110	ND<0.30	ND<0.200	0.12	0.044
		8/26/2020	11:40	12	14.5	8.23	0.68	40	11	ND<0.110	ND<0.30	ND<0.200	0.10	ND<0.010
		9/22/2020	11:45	8.5	11.3	9.02	2.95	40	21	ND<0.110	ND<0.30	ND<0.200	0.23	ND<0.010
South Fork of Bishop Creek below South Lake	BC-blw-SL	6/15/2020	12:30	16	7.1	9.23	0.43	30	33	ND<0.110	1.1	ND<0.200	1.1	0.013
		7/31/2020	10:00	33	6.9	9.00	1.11	40	17	ND<0.110	ND<0.30	ND<0.200	ND<0.10	0.043
		8/25/2020	12:45	34	8.0	8.62	3.45	40	31	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		9/22/2020	8:55	22	8.9	8.65	1.49	78	ND<10	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
Middle Fork of Bishop Creek below Lake Sabrina	BC-blw-LS	6/16/2020	7:15	40	10.7	8.09	4.16	20	25	ND<0.110	0.41	ND<0.200	0.41	0.010
		7/31/2020	9:20	36	15.7	7.16	1.44	20	12	ND<0.110	ND<0.30	ND<0.200	ND<0.10	0.017
		8/24/2020	12:55	36	17.2	7.12	5.06	30	30	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		9/22/2020	11:00	22	14.9	7.55	2.52	37	10	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
Bishop Creek below Powerhouse No. 2	BC-blw-PH2	6/16/2020	9:30	14	10.6	8.94	2.72	40	28	ND<0.110	ND<0.30	ND<0.200	0.11	ND<0.010
		7/30/2020	10:15	14	12.9	8.41	0.68	40	20	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		8/26/2020	10:15	14	11.9	8.67	1.63	46	14	ND<0.110	ND<0.30	ND<0.200	0.13	ND<0.010
		9/22/2020	12:20	15	13.9	8.53	1.65	50	24	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
Bishop Creek below Powerhouse No. 3	BC-blw-PH3	6/16/2020	10:40	5.9	12.1	8.97	69.6	40	27	ND<0.110	ND<0.30	ND<0.200	0.11	ND<0.010
		7/30/2020	9:40	5.9	14.7	8.28	0.60	50	35	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010

		8/26/2020	9:40	5.7	12.9	8.66	1.37	50	20	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		9/22/2020	12:55	6.4	13.2	8.78	1.88	52	28	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
Bishop Creek below Powerhouse No. 4	BC-blw-PH4	6/16/2020	11:55	20	13.0	9.13	1.55	50	35	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		7/30/2020	9:00	20	14.7	9.01	0.76	50	27	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		8/26/2020	8:40	20	13.3	8.98	1.14	53	23	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		9/24/2020	9:40	21	10.9	9.50	3.69	58	41	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
Bishop Creek below Powerhouse No. 5	BC-blw-PH5	6/16/2020	12:25	0.52	16.1	9.01	1.27	60	37	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		7/30/2020	8:30	2.1	14.7	8.54	0.36	50	26	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		8/26/2020	8:15	2.2	13.7	8.67	2.14	58	15	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		9/24/2020	8:50	1.8	11.1	9.23	4.15	59	37	ND<0.110	0.37	ND<0.200	0.37	ND<0.010
Bishop Creek below Powerhouse No. 6	BC-blw-PH6	6/16/2020	13:00	115	14.4	9.15	2.03	50	35	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		7/30/2020	7:45	110	16.6	8.34	1.10	50	38	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		8/26/2020	7:35	105	13.8	8.99	3.04	66	27	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
		9/24/2020	8:05	69	11.0	9.59	4.15	58	41	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010
				Maximum	(c)	(c)	69.60	78	41	ND<0.110	1.10	ND<0.200	1.10	0.04
				Minimum	(c)	(c)	0.36	20	ND<10	ND<0.110	ND<0.30	ND<0.200	ND<0.10	ND<0.010

Notes:
[a] Concurrent measurements when laboratory samples were collected.
[b] Instantaneous measurements made on North Fork of Bishop Creek. All other values were calculated on a mean daily average discharge.
[c] See Table 7-3 for DO and water temperature values.
NO2=Nitrite; NO3=Nitrate, PO4=Orthophosphate; TDS=Total Dissolved Solids; TKN=Total Kjeldahl.

7.5. POWERHOUSE TAILWATER

7.5.1. FIELD WATER TEMPERATURE AND DISSOLVED OXYGEN

Water temperature ranged from 10.5 °C to 15.4 °C with generally the lower values occurring in tailwater in the powerhouses in the upper reaches of Bishop Creek and the higher values generally occurring in the powerhouse tailraces from the lower reach of Bishop Creek. DO occurred in a very narrow range from 8.17 mg/L to 9.64 mg/L. The oxygen saturation level for the observed water temperature and air pressure at each of the tailraces was generally above 96 percent and often exceeded 100 percent for the monitored tailraces of each of the powerhouses.

Table 7-5 presents the field DO and water temperature values obtained from the various tailraces during the June-August 2020 monitoring period.

Table 7-5 Field Water Quality Measurements for Powerhouse Tailwater June - August 2020

LOCATION	STATION DESIGNATION	DATE	TIME	FIELD MEASUREMENTS					Calculated DO Saturation * (%)
				Air Temperature		Water Temperature (deg C)	Dissolved Oxygen (mg/L)	Barometric Pressure (in Hg)	
				Measured (deg F)	Calculated (deg C)				
Tailwater at Powerhouse No. 2	TW@PH2	6/16/2020	9:15	64	17.8	11.3	8.85	---	---
		7/14/2020	10:10	79	26.1	13.8	8.17	23.20	100.7%
		7/30/2020	10:00	80	26.7	13.8	8.21	23.27	101.2%
		8/6/2020	9:32	70	21.1	13.8	8.26	23.11	101.8%
		8/26/2020	10:05	76	24.4	12.7	8.43	23.17	101.6%
		9/20/2020	11:05	72	22.2	11.6	8.72	23.22	112.9%
		9/22/2020	12:35	72	22.2	12.4	8.71	23.28	105.0%
		10/6/2020	9:15	62	16.7	10.8	8.87	23.20	102.1%
Tailwater at Powerhouse No. 3	TW@PH3	6/16/2020	10:25	69	20.6	11.4	8.84	---	---
		7/14/2020	9:30	80	26.7	14.2	8.41	23.90	103.3%
		7/30/2020	9:20	80	26.7	13.7	8.42	23.96	99.9%
		8/6/2020	9:10	73	22.8	13.5	8.47	23.81	101.8%
		8/26/2020	9:25	75	23.9	12.9	8.62	23.86	101.2%
		9/20/2020	10:40	71	21.7	11.4	9.04	23.90	114.1%
		9/22/2020	12:45	74	23.3	12.2	8.88	23.97	103.0%
		10/6/2020	8:55	63	17.2	10.5	9.20	23.90	103.2%
Tailwater at Powerhouse No. 4	TW@PH4	6/16/2020	11:35	79	26.1	12.4	9.07	---	---
		7/14/2020	8:40	80	26.7	14.7	8.58	24.90	100.3%
		7/30/2020	8:45	82	27.8	14.7	8.60	24.92	100.5%
		8/6/2020	8:37	71	21.7	13.9	8.72	24.77	100.9%
		8/26/2020	8:30	69	20.6	13.2	8.90	24.81	103.0%
		9/20/2020	10:10	72	22.2	11.7	9.29	24.89	111.6%
		9/24/2020	9:25	64	17.8	11.4	9.44	24.92	113.4%
		10/6/2020	8:40	57	13.9	10.6	9.49	24.85	101.3%
Tailwater at Powerhouse No. 5	TW@PH5	6/16/2020	12:15	79	26.1	13.0	9.09	---	---
		7/14/2020	8:10	79	26.1	15.0	8.52	25.20	100.6%
		7/30/2020	8:15	76	24.4	14.9	8.42	25.29	97.3%
		8/6/2020	8:16	71	21.7	13.8	8.58	25.13	96.9%
		8/26/2020	8:00	67	19.4	13.4	8.65	25.19	97.7%
		9/20/2020	9:50	68	20.0	11.7	8.88	25.26	105.4%
		9/24/2020	8:40	61	16.1	11.3	8.99	25.30	106.7%
		10/6/2020	8:15	55	12.8	10.9	9.06	25.25	95.6%

LOCATION	STATION DESIGNATION	DATE	TIME	FIELD MEASUREMENTS					Calculated DO Saturation * (%)
				Air Temperature		Water Temperature (deg C)	Dissolved Oxygen (mg/L)	Barometric Pressure (in Hg)	
				Measured (deg F)	Calculated (deg C)				
Tailwater at Powerhouse No. 6	TW@PH6	6/16/2020	12:50	81	27.2	14.6	8.88	---	---
		7/14/2020	7:15	77	25.0	15.4	8.30	25.40	98.0%
		7/30/2020	7:30	70	21.1	15.1	8.80	25.50	102.7%
		8/6/2020	7:58	71	21.7	14.0	8.82	25.38	101.9%
		8/26/2020	7:15	65	18.3	14.1	8.90	25.43	101.6%
		9/20/2020	9:20	67	19.4	12.2	9.64	25.51	105.2%
		9/24/2020	7:40	59	15.0	11.7	9.46	25.54	111.0%
		10/6/2020	7:45	55	12.8	10.9	9.58	25.50	99.8%
			Maximum	82	27.8	15.4	9.64	25.54	114.1%
			Minimum	55	12.8	10.5	8.17	23.11	95.6%

Notes:
* - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

7.6. DISCUSSION

The Water Quality Study has completed the first year of the proposed 2-year investigation. Preliminary data has been collected on water quality of upstream lakes and creeks as well as Project facilities. Continuation of the program will assist in achieving current characteristics of the upstream and downstream water quality and will assist in establishing baseline conditions and assist in assessing any impacts that the Project operations may have on the existing water quality. In addition, the water quality data will assist in assuring Project facilities and operations are consistent with the current water quality goals and objectives for Bishop Creek in the Water Quality Control Plan.

7.7. CONSULTATION SUMMARY

- SCE distributed three periodic progress reports on the following schedule:
- Progress Report 1: December 19, 2019
- Progress Report 2: April 14, 2020
- Progress Report 3: July 24, 2020
- Initial Study Report: October 30, 2020
- Initial Study Report Meeting: November 10, 2020

Eight technical memoranda summarizing the 2019 study implementation were submitted with Progress Report 2. Following that filing, SCE hosted a TWG meeting on May 7, 2020 to discuss the 2019 study season, work completed to date and the technical memoranda. After the meeting, TWG members submitted comments on the technical memoranda and SCE provided a general response to those comments as part of Progress Report 3.

The Initial Study Report (ISR) was filed with FERC on October 30, 2020 and a virtual ISR Meeting was held on November 10, 2020. The State Water Resources Control Board filed a comment letter during the comment period offering support for the ongoing study program with no requested changes or modifications. No other comments were received from TWG members or stakeholders on the ISR materials or on the previously provided responses to comments.

8.0 PROJECT SCHEDULE

The projected schedule for implementation of the water quality study is presented in Table 8-1.

Table 8-1 Bishop Creek Water Quality Study Plan Schedule

ANALYSIS	RESPONSIBLE ENTITY	SCHEDULE MILESTONES
File NOI/PAD with FERC along with Final Study Plans	SCE	05/01/19
FERC Holds Scoping and Site Visit	FERC	05/30/19 – 06/29/19
FERC Director's Study Plan Determination	FERC	01/10/20 - 02/09/20
First Field Season	SCE	2020
Second Field Season	SCE	2021
Final Study Report	SCE	2022
License Application	SCE	June 2022

9.0 REFERENCES

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APPENDIX A

COMPLETED FIELD FORMS

Field Data Forms

June 2020

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 6/15/20 TIME: 8:25am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see prof. 6 (ºF or ºC) Dissolved Oxygen: see prof. 6 (mg/L)

Conductivity: see below (µmhos/cm@25 ºC) ~~Stream or~~ Lake ~~gage reading~~ Elevation: 9,738.5 feet (amsl)

Turbidity: Secchi disk (NTUs) Air Temperature 53 (ºF or ºC) Baro. Pressure ____ (in Hg)

Winds 5-6 (mph) gusts 10-15 Cloud cover 0 (%) Precipitation – Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 11 meters Depth of Reappearance: 10 meters

Secchi Depth: 10.5 meters

Visual Condition of Stream (check all that apply):

Clear ____ Cloudy ____ Colored ____

Floating Material ____ Other: ____

Remarks: Sunny, clear, calm weather

Site Drawing

Sample depths: no thermocline observed.

- 5m; Cond. = 30 µS
- 31.5m; Cond = 110 µS

Lake level elevation of 9,738.5' amsl provided by Paul Schmidt, SCE operations

WATER QUALITY SAMPLE DATA

Sample No. SL-DP-5 SL-DP-31.5 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 x 2 = 8 Preservatives: H_2SO_4 in 2 bottles

REMARKS

SIGNED BY: M Bean REVIEWED BY: ____

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: South Lake 6/15/20

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
0.5	10.3	8.45	31	4.9	8.81
1	10.2	8.47	32	4.9	8.78
2	10.1	8.49	33	4.8	8.74
3	10.0	8.49	34	4.8	8.70
4	10.0	8.49	35	4.8	8.65
5	9.9	8.50	36	4.8	8.61
6	9.8	8.52	37	4.7	8.55
7	9.8	8.52	38	4.7	8.49
8	9.7	8.54	39	4.7	8.47
9	9.6	8.56	40	4.7	8.45
10	9.4	8.65	41	4.7	8.40
11	9.3	8.69	42	4.7	8.34
12	8.6	8.93	43	4.7	8.31
13	8.4	9.02	44	4.7	8.30
14	8.0	9.16	45	4.7	8.28
15	7.5	9.40	46	4.7	8.27
16	7.1	9.46	47	4.7	8.26
17	6.6	9.56	48	4.7	8.19
18	6.5	9.61	49	5.1	0.8
19	6.1	9.56	50	5.6	0.21
20	5.9	9.60	50.5	5.8	0.13
21	5.7	9.43	52		
22	5.5	9.33	53		
23	5.4	9.24	54		
24	5.3	9.19	55		
25	5.3	9.09	56		
26	5.2	9.04	57		
27	5.1	9.02	58		
28	5.1	8.94	59		
29	5.0	8.93	60		
30	5.0	8.87	61		

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Fork DATE: 6/15/20 TIME: 12:30 pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 7.1 (ºF or (ºC)) Dissolved Oxygen: 9.23 (mg/L)

Conductivity: 30 (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 0.43 (NTUs) Air Temperature 60 (ºF or ºC) Baro. Pressure _____ (in Hg)

Winds 4-5 (mph) Cloud cover 90 (%) Precipitation – Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-SL Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Middle Fork DATE: 6/16/20 TIME: 7:00 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.7 (ºF or (ºC)) Dissolved Oxygen: 8.09 (mg/L)

Conductivity: 20 (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 4.16 (NTUs) Air Temperature 50 ((ºF) or °C) Baro. Pressure _____ (in Hg)

Winds 1-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail _____Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-LS Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: North ForK DATE: 6/16/20 TIME: 7:40am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 9.1 (ºF or ºC) Dissolved Oxygen: 8.71 (mg/L)

Conductivity: 30 (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 1.92 (NTUs) Air Temperature 50 (ºF or ºC) Baro. Pressure_____ (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation – Fog ___ Rain ___Sleet ___Hail _____Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

Flow at North ForK location measured at: 24 cfs

WATER QUALITY SAMPLE DATA

Sample No. BC-NF-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: MBay REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH #2 DATE: 6/16/20 TIME: 9:15 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.3 (ºF or (ºC)) Dissolved Oxygen: 8.85 (mg/L)

Conductivity: NA (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: NA (NTUs) Air Temperature 64 (ºF) or °C) Baro. Pressure_____ (in Hg)

Winds 3-4 (mph) Cloud cover 0 (%) Precipitation — Fog ___ Rain ___Sleet ___Hail _____Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: M Bean REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH #2 DATE: 6/16/20 TIME: 9:30am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.6 (ºF or ºC) Dissolved Oxygen: 8.94 (mg/L)

Conductivity: 40 (µmhos/cm@25 ºC) Stream ~~or lake~~ gage reading: 1.6 feet at weir gauge

Turbidity: 2.72 (NTUs) Air Temperature 64 (ºF or °C) Baro. Pressure ____ (in Hg)

Winds 1/2 (mph) Cloud cover 0 (%) Precipitation — Fog ___ Rain ___ Sleet ___ Hail ___ Snow

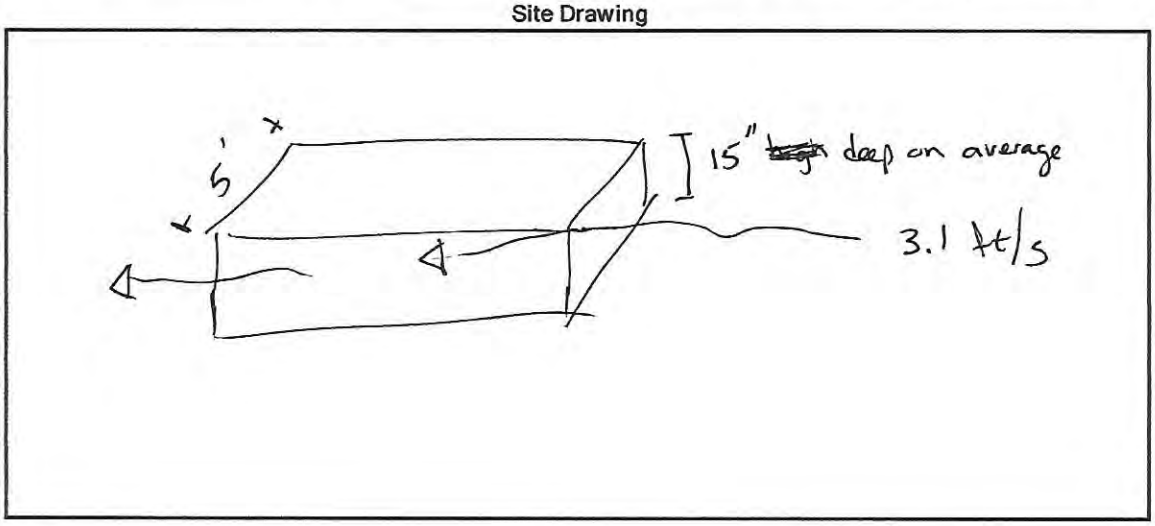
Secchi Disk: NA Depth of Disappear: ____ meters Depth of Reappearance: ____ meters

Secchi Depth: ____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy ____ Colored ____
Floating Material ____ Other: ____

Remarks: ~1 ft sediment/rocks collecting in weir at gauge, velocity = 3.1 ft/s

Site Drawing



WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH2 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: [signature] REVIEWED BY: ____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH # 3 DATE: 6/16/20 TIME: 10:25a

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.4 (ºF or (ºC)) Dissolved Oxygen: 8.84 (mg/L)

Conductivity: NA (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: NA (NTUs) Air Temperature 69 (ºF or °C) Baro. Pressure _____ (in Hg)

Winds 4-8 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail _____Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

_____

_____

_____

_____

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH #3 DATE: 6/16/20 TIME: 10:40am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 12.1 (ºF or (ºC)) Dissolved Oxygen: 8.97 (mg/L)

Conductivity: 40 (µmhos/cm@25 ºC) Stream ~~or Lake~~ gage reading: 0.6 ft at weir gage

Turbidity: 69.6 (NTUs) Air Temperature 70 ((ºF) or °C) Baro. Pressure____ (in Hg)

Winds 1-2 (mph) Cloud cover 0 (%) Precipitation – Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: Low flow in creek

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH3 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH #4 DATE: 6/16/20 TIME: 11:35am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 12.4 (ºF or (ºC)) Dissolved Oxygen: 9.07 (mg/L)

Conductivity: NA (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: NA (NTUs) Air Temperature 79 ((ºF) or ºC) Baro. Pressure_____ (in Hg)

Winds 4 (mph) Cloud cover 0 (%) Precipitation – Fog ___ Rain ___Sleet ___Hail _____Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: Tim Bear REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH #4 DATE: 6/16/20 TIME: 11:55am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.0 (ºF or (ºC)) Dissolved Oxygen: 9.13 (mg/L)

Conductivity: 50 (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 1.55 (NTUs) Air Temperature 79 (ºF) or °C) Baro. Pressure _____ (in Hg)

Winds 3 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ____Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw. PH4 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: M Bean REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH #5 DATE: 6/16/20 TIME: 12:15pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.0 (ºF or (ºC)) Dissolved Oxygen: 9.09 (mg/L)

Conductivity: NA (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: NA (NTUs) Air Temperature 79 ((ºF) or °C) Baro. Pressure_____ (in Hg)

Winds 4 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail _____Snow

Secchi Disk: NA Depth of Disappear:_____meters Depth of Reappearance: _____meters

Secchi Depth: _____meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

_____

_____

_____

_____

SIGNED BY: M Bea REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH #5 DATE: 6/16/20 TIME: 12:25pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 16.1 (ºF or (ºC)) Dissolved Oxygen: 9.01 (mg/L)

Conductivity: 60 (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 1.27 (NTUs) Air Temperature 79 (ºF) or ºC) Baro. Pressure _____ (in Hg)

Winds 1-4 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ____Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material X Other: _____

Remarks: ↳ some leaf litter

Site Drawing

Low flow from forebay into creek downstream. Calm pool below dam and low flow in creek below.

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH5 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: JM Bean REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH #6 DATE: 6/16/20 TIME: 12:50 pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.6 (ºF or (ºC)) Dissolved Oxygen: 8.88 (mg/L)

Conductivity: NA (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: NA (NTUs) Air Temperature 81 (ºF or ºC) Baro. Pressure_____ (in Hg)

Winds 3-8 (mph) Cloud cover 0 (%) Precipitation – Fog ___ Rain ___Sleet ___Hail _____Snow

Secchi Disk: NA Depth of Disappear:_____meters Depth of Reappearance: _____meters

Secchi Depth: _____meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH #6 DATE: 6/16/20 TIME: 1:00 pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.4 (ºF or ºC) Dissolved Oxygen: 9.15 (mg/L)

Conductivity: 50 (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 2.03 (NTUs) Air Temperature 81 (ºF or ºC) Baro. Pressure_____ (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation – Fog ___ Rain ___Sleet ___Hail _____Snow

Secchi Disk: NA Depth of Disappear:_____meters Depth of Reappearance: _____meters

Secchi Depth: _____meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH6 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: M Bem REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 6/17/20 TIME: 7:50 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see profile (ºF or ºC) Dissolved Oxygen: see profile (mg/L)

Conductivity: see below (µmhos/cm@25 ºC) ~~Stream or~~ Lake ~~gage reading~~ Elevation: 9116.2 feet (amsl)

Turbidity: Secchi (NTUs) Air Temperature 42 (ºF) or °C) Baro. Pressure ____ (in Hg)

Winds 4-6 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 8 meters Depth of Reappearance: 7 meters

Secchi Depth: 7.5 meters

Visual Condition of Stream (check all that apply):
Clear ____ Cloudy ____ Colored ____
Floating Material ____ Other: ____

Remarks: Sunny, clear, calm w/ light winds

Site Drawing

Sample depths: Thermocline ~ 11-12m depth. (see profile)
- 8m; Cond. = 30 µS
- 15m; Cond. = 20 µS

Lake elevation of 9,116.2' amsl provided by Paul Schmidt, SCE operations

WATER QUALITY SAMPLE DATA

Sample No. LS-DP-8 / LS-DP-15 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 x 2 = 8 Preservatives: $HgSO_4$ in 2 bottles

REMARKS

SIGNED BY: [signature] REVIEWED BY: ____

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: Lake Sabrina 6/17/20 8:20 am start

243'

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
0.5	11.2	9.20	31	4.3	8.63
1	11.2	8.89	32	4.2	8.57
2	11.2	8.83	33	4.2	8.54
3	11.2	8.80	34	4.2	8.60
4	11.2	8.78	35	4.2	8.60
5	11.2	8.77	36	4.1	8.54
6	11.0	8.83	37	4.1	8.46
7	10.6	8.99	38	4.0	8.37
8	10.5	8.86	39	4.0	8.31
9	10.3	8.92	40	4.0	8.28
10	10.0	9.03	41	4.0	8.24
11	9.3	9.30	42	4.0	8.20
12	8.0	9.64	43	4.0	8.19
13	7.7	9.78	44	4.0	8.15
14	6.9	9.80	45	4.0	8.16
15	6.0	9.75	46	4.0	8.15
16	5.9	9.72	47	4.0	8.09
17	5.8	9.62	48	4.0	8.06
18	5.7	9.58	49	4.0	7.91
19	5.5	9.42	50	4.0	7.90
20	5.3	9.35	51		
21	5.3	9.30	52		
22	5.1	9.22	53		
23	5.0	9.17	54		
24	4.8	9.03	55		
25	4.7	8.91	56		
26	4.6	8.83	57		
27	4.6	8.81	58		
28	4.5	8.76	59		
29	4.4	8.75	60		
30	4.4	8.86	61		

243'

241'

moved 227' = 242'

243'

242'

241' moved 242'

(4.3 @ 14)

242'

Field Data Forms

July 2020

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 7/13/20 TIME: 11:05am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: - (ºF or ºC) Dissolved Oxygen: - (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 64 (ºF) or ºC) Baro. Pressure 21.2 (in Hg)

Winds 8-15 (mph) Cloud cover 0 (%) Precipitation — Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Lake was higher than in June trip

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. SL-BR-1 Sample Method: Grab Preservatives: Ice ✓

No. of Sample Bottles 2 Preservatives: none

REMARKS

1 Weck bacti
1 Source Molecular
Took sample off of ramp.

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 7/13/20 TIME: 11:55am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading:

Turbidity: — (NTUs) Air Temperature 72 (ºF or ºC) Baro. Pressure 21.6 (in Hg)

Winds 4-10 (mph) Cloud cover (%) Precipitation Fog Rain Sleet Hail Snow

Secchi Disk: NA Depth of Disappear: meters Depth of Reappearance: meters

Secchi Depth: meters

Visual Condition of Stream (check all that apply):
Clear Cloudy Colored
Floating Material Other:

Remarks: Lake is a little higher than June trip

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. LS-BR-1 Sample Method: Grab Preservatives: Ice ✓

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 week bacti
1 Source Molecular
sampled at end of boat ramp dock.

SIGNED BY: [redacted] REVIEWED BY:

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Intake 2 Res. DATE: 7/13/20 TIME: 12:25 pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 78 (ºF or ºC) Baro. Pressure 22.5 (in Hg)

Winds 1-2 (mph) Cloud cover _____ (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. INT2-RES-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Weck bacti
1 Source Molecular
Sampled shoreline across from parking area, just west of dock

SIGNED BY: MBa REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: North Fork DATE: 7/13/20 TIME: 2:40pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 17.8 (ºF or (ºC)) Dissolved Oxygen: 8.08 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: 17 cfs

Turbidity: - (NTUs) Air Temperature 88 (ºF or ºC) Baro. Pressure 21.6 (in Hg)

Winds 0-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

Flow measured in field @ 17 cfs.

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Middle Fork DATE: 7/13/20 TIME: 3:05 pm

DRAINAGE: Bishop Creek INVESTIGATORS: JB TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 15.4 (ºF or ºC) Dissolved Oxygen: 7.58 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature 85 (ºF or ºC) Baro. Pressure 21.7 (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Fork DATE: 7/13/20 TIME: 4:00 pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 70 (ºF or ºC) Dissolved Oxygen: 8.86 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature 86 (ºF or ºC) Baro. Pressure 21.3 (in Hg)

Winds 0-5 (mph) Cloud cover 10 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: PH6 Tailwater DATE: 7/14/20 TIME: 7:15am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 15.4 (ºF or (ºC)) Dissolved Oxygen: 8.3 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 77 (ºF or ºC) Baro. Pressure 25.4 (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear ✓ Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

_____

_____

_____

_____

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC Below PH 6 DATE: 7/14/20 TIME: 7:45 am

DRAINAGE: Bishop Creek INVESTIGATORS: FB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 15.53 (ºF or (ºC)) Dissolved Oxygen: 8.73 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 78 (ºF or ºC) Baro. Pressure 25.4 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: PH5 Tailwater DATE: 7/14/20 TIME: 8:10 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 15.0 (ºF or (ºC)) Dissolved Oxygen: 8.52 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature 79 ((ºF) or ºC) Baro. Pressure 25.2 (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH5 DATE: 7/14/20 TIME: 8:20am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 15.0 (ºF or ºC) Dissolved Oxygen: 8.47 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature: 79 (ºF or ºC) Baro. Pressure 25.2 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: PH4 Tailwater DATE: 7/14/20 TIME: 8:40 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.7 (ºF or (ºC)) Dissolved Oxygen: 8.58 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature 80 (ºF or °C) Baro. Pressure 24.9 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH 4 DATE: 7/14/20 TIME: 8:55 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.8 (ºF or ºC) Dissolved Oxygen: 8.60 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 80 (ºF or ºC) Baro. Pressure 24.9 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: PH3 Tailwash DATE: 7/14/20 TIME: 9:30 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.2 (ºF or ºC) Dissolved Oxygen: 8.41 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 80 (ºF or ºC) Baro. Pressure 23.9 (in Hg)

Winds 1-3 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH 3 DATE: 7/14/20 TIME: 9:50am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.6 (ºF or ºC) Dissolved Oxygen: 8.31 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: 0.7' at weir gage

Turbidity: – (NTUs) Air Temperature 80 (ºF or ºC) Baro. Pressure 23.9 (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: PH 2 Tailwater DATE: 7/14/20 TIME: 10:10 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.8 (ºF or ºC) Dissolved Oxygen: 8.17 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature: 79 (ºF or ºC) Baro. Pressure 23.2 (in Hg)

Winds 1-3 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH 2 DATE: 7/14/20 TIME: 10:30 am

DRAINAGE: Bishop Creek INVESTIGATORS: JB TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.5 (ºF or ºC) Dissolved Oxygen: 8.3 (mg/L)

Conductivity: ~ (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: ~ (NTUs) Air Temperature 78 (ºF or ºC) Baro. Pressure 23.2 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 7/16/20 TIME: 11:00a

DRAINAGE: Bishop Creek INVESTIGATORS: JB/TR

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 74 (ºF or ºC) Baro. Pressure 21.19 (in Hg)

Winds 0-5 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: WIND FROM NE GUSTS TO 11 MPH

Site Drawing

Lake W.L. @ Spillway Elev ~ 7-
@ 9747.56' per SCE
MSL

WATER QUALITY SAMPLE DATA

Sample No. SLB-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Weck Bacti

1 Source Molecular

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 7/16/20 TIME: 12:00 pm

DRAINAGE: Bishop Creek INVESTIGATORS: JB TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: - (ºF or ºC) Dissolved Oxygen: - (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 80 (ºF or ºC) Baro. Pressure 21.67 (in Hg)

Winds 0-5 (N) (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Winds From North

Site Drawing

LAKE W.L. @ 9119.52' per SCE MSL

WATER QUALITY SAMPLE DATA

Sample No. LS-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Wack Bacti

1 Source Molecular

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Intake 2 Res. DATE: 7/16/20 TIME: 12:30pm

DRAINAGE: Bishop Creek INVESTIGATORS: JB TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 82 (ºF or ºC) Baro. Pressure 22.46 (in Hg)

Winds 4 (mph) Cloud cover _____(%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail _____Snow

Secchi Disk: NA Depth of Disappear:_____meters Depth of Reappearance:_____meters

Secchi Depth:_____meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Inlet Stream -

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. INT2-RBS-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Week Bacti

1 Source Molecular

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 7/27/20 TIME: 11:15 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JD

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: - (ºF or ºC) Dissolved Oxygen: - (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 65 (°F or °C) Baro. Pressure 21.21 (in Hg)

Winds 2-4 (mph) Cloud cover 20 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ____Snow

Secchi Disk: NA Depth of Disappear:_____meters Depth of Reappearance:_____meters

Secchi Depth:_____meters

Visual Condition of Stream (check all that apply):
Clear ☒ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks:_____

Site Drawing

11:15 am **WATER QUALITY SAMPLE DATA**

Sample No. SL-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Weck Bact;
1 Source Molecular

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 7/27/20 TIME: 12:05pm

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 67 (ºF or ºC) Baro. Pressure 21.68 (in Hg)

Winds 2-6 gusts to 11 (mph) Cloud cover 40 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ___Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear _____ Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

12:05pm **WATER QUALITY SAMPLE DATA**

Sample No. LS-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: none

REMARKS

1 Weck Bacti

1 Source Molecular

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Intake 2 Reservoir DATE: 7/27/20 TIME: 12:35 pm

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: – (ºF or ºC) Dissolved Oxygen: – (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature 68 (ºF or ºC) Baro. Pressure 22.5 (in Hg)

Winds 0-2 gusts to 6 (mph) Cloud cover 40 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ____Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

12:35 pm **WATER QUALITY SAMPLE DATA**

Sample No. INT2-RES-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: none

REMARKS

1 Week Bacti

1 Source Molecular

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 7/28/20 TIME: 10:05am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see profile (ºF or ºC) Dissolved Oxygen: see profile (mg/L)

Conductivity: 1.88 mS (µmhos/cm@25 ºC) ~~Stream or~~ Lake gage reading: 9747.82 ft

Turbidity: Secchi (NTUs) Air Temperature 62 (ºF or °C) Baro. Pressure 21.21 (in Hg)

Winds 3-8 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 9 meters Depth of Reappearance: 8 meters

Secchi Depth: 8.5 meters

Visual Condition of Stream (check all that apply):

Clear ___ Cloudy ___ Colored ___

Floating Material ___ Other: ___

Remarks: Lake level 9747.82 feet per Paul Schmidt - SCE

Site Drawing

10:05am **WATER QUALITY SAMPLE DATA**

Sample No. SL-DP-54 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

Anoxic zone starts between 52-53 m depth. Sample taken at 54 m. Sample was cloudy (organics?) and smelled of decay? No thermocline

SIGNED BY: [signature] REVIEWED BY: ___

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 7/28/20 TIME: 10:30am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see profile (°F or °C) Dissolved Oxygen: see profile (mg/L)

Conductivity: 0.03 mS (µmhos/cm@25 °C) ~~Stream or~~ Lake gage reading: 9747.82 ft

Turbidity: Secchi (NTUs) Air Temperature 64 (°F) or °C) Baro. Pressure 21.21 (in Hg)

Winds 3-8 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 9 meters Depth of Reappearance: 8 meters

Secchi Depth: 8.5 meters

Visual Condition of Stream (check all that apply):

Clear ___ Cloudy ___ Colored ___

Floating Material ___ Other: ___

Remarks: Lake level 9747.82 feet per Paul Schmidt - SCE

Site Drawing

10:30 am **WATER QUALITY SAMPLE DATA**

Sample No. SL-DP-4 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

No thermocline - took ~~rest~~ samples at ½ secchi depth and 80% total lake depth per protocol.

Deepest Point of Lake = 220 ft × 0.8 = 176 ft = ~54m

Secchi depth = 8.5 m × 0.5 = 4.25m

SIGNED BY: [signature] REVIEWED BY: ___

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: South Lake 7/28/20

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
0.5	16.1	7.54	31	5.9	8.72
1	15.9	7.44	32	5.7	8.56
2	15.9	7.44	33	5.5	8.51
3	15.8	7.47	34	5.4	8.41
4	15.8	7.48	35	5.4	8.28
5	15.8	7.49	36	5.2	8.19
6	15.8	7.48	37	5.1	8.15
7	15.8	7.48	38	5.1	8.11
8	15.7	7.52	39	5.1	8.05
9	15.3	7.76	40	5.0	8.00
10	15.2	7.67	41	5.0	7.91
11	15.0	8.09	42	4.9	7.85
12	14.5	8.32	43	4.9	7.84
13	14.2	8.44	44	4.9	7.67
14	13.3	8.62	45	4.9	7.63
15	12.8	8.76	46	4.9	7.59
16	12.3	8.88	47	4.9	7.54
17	11.7	9.06	48	4.9	7.51
18	11.1	9.22	49	4.9	7.45
19	10.4	9.40	50	4.9	7.42
20	9.9	9.45	51	4.9	7.39
21	9.4	9.43	52	4.9	7.25
22	8.9	9.41	53	5.7	0.06
23	8.3	9.39	54	5.9	0.03
24	8.0	9.30	55	6.0	0.01
25	7.6	9.27	56	6.1	0.01
26	7.3	9.19	57	6.3	0.00
27	6.9	9.06	58	6.3	0.00
28	6.5	8.95	59	6.5	0.01
29	6.3	8.90	60	6.7	0.01
30	6.0	8.78	61	6.9	0.01

220' 219' 220' 219' 220' 225'

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: South Lake 7/28/20

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
62	~~7.2~~ 7.2	0.01	91		
63	7.4	0.02	92		
64	7.6	0.02	93		
65	7.7	0.03	94		
66	7.8	0.03	95		
67	7.8	0.03	96		
68	7.8	0.05	97		
69			98		
70			99		
71			100		
72			101		
73			102		
74			103		
75			104		
76			105		
77			106		
78			107		
79			108		
80			109		
81			110		
82			111		
83			112		
84			113		
85			114		
86			115		
87			116		
88			117		
89			118		
90			119		

225'

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 7/29/20 TIME: 10:55am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see profile (°F or °C) Dissolved Oxygen: see profile (mg/L)

Conductivity: 0.03 mS (µmhos/cm@25 °C) ~~Stream or~~ Lake gage reading: 9118.62

Turbidity: Secchi (NTUs) Air Temperature 72 (°F) or °C) Baro. Pressure 21.72 (in Hg)

Winds 2-4 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 12.5 meters Depth of Reappearance: 11.5 meters

Secchi Depth: 12 meters

Visual Condition of Stream (check all that apply):
Clear ___ Cloudy ___ Colored ___
Floating Material ___ Other: ___

Remarks: Lake is 9118.62 feet elev per Paul Schmidt - SCE

Site Drawing

10:55am **WATER QUALITY SAMPLE DATA**

Sample No. LS-DP-16 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

Sample collected below thermocline at 11m depth
Thermocline @ ~ 9-14m depth.

SIGNED BY: [signature] REVIEWED BY: ___

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 7/29/20 TIME: 11:25am

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see profile (°F or °C) Dissolved Oxygen: see profile (mg/L)

Conductivity: 0.02 mS (µmhos/cm@25 °C) ~~Stream or~~ Lake gage reading: 9118.62'

Turbidity: Secchi (NTUs) Air Temperature 72 (°F) or °C) Baro. Pressure 21.72 (in Hg)

Winds 2-4 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 12.5 meters Depth of Reappearance: 11.5 meters

Secchi Depth: 12 meters

Visual Condition of Stream (check all that apply):
Clear ___ Cloudy ___ Colored ___
Floating Material ___ Other: ___

Remarks: Lake elev. is 9118.62 ft per Paul Schmidt-SCE

Site Drawing

11:25am **WATER QUALITY SAMPLE DATA**

Sample No. LS-DP-7 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

Sample collected above thermocline at 7m depth.
Thermocline @ ~ 9-14 m depth

SIGNED BY: JM Beer REVIEWED BY: ___

WATER TEMPERATURE AND DISSOLVED OXYGEN LAKE PROFILE DATA FORM

Location: Lake Sabrina 7/29/20

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
0.5	17.0	7.00	31	4.5	7.74
1	16.9	7.01	32	4.4	7.74
2	16.8	7.01	33	4.3	7.75
3	16.8	7.01	34	4.3	7.75
4	16.8	7.01	35	4.2	7.74
5	16.7	7.03	36	4.2	7.72
6	16.6	7.04	37	4.2	7.69
7	16.5	7.05	38	4.1	7.65
8	16.0	7.22	39	4.1	7.58
9	15.7	7.23	40	4.0	7.49
10	14.7	7.55	41	4.1	7.44
11	12.8	8.18	42	4.0	7.38
12	10.6	8.80	43	4.0	7.30
13	9.3	9.20	44	4.0	7.21
14	7.9	9.46	45	4.1	7.13
15	7.3	9.47	46	4.0	6.94
16	6.8	9.37	47	4.1	6.84
17	6.4	9.18	48	4.1	6.71
18	6.1	9.01	49	4.1	6.62
19	5.9	8.89	50	4.1	6.55
20	5.7	8.78	51	4.1	6.48
21	5.6	8.67	52	4.1	6.37
22	5.4	8.60	53	4.1	6.31
23	5.3	8.53	54	4.1	6.26
24	5.1	8.38	55	4.1	6.21
25	5.0	8.34	56	4.1	6.10
26	4.9	8.24	57	4.1	6.01
27	4.8	8.16	58	4.1	5.97
28	4.7	8.08	59	4.1	5.91
29	4.6	8.04	60	4.1	5.72
30	4.6	7.88	61	4.1	5.61

10.5' 14.4 C 7.70

11.5' 11.8 C 8.43

24.4'

7 16 13

WATER TEMPERATURE AND DISSOLVED OXYGEN LAKE PROFILE DATA FORM

Location: Lake Sabrina 7/29/20

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
62	4.1	5.54	91		
63	4.1	5.34	92		
64	4.1	5.20	93		
65	4.1	4.91	94		
66	4.1	4.52	95		
67	4.1	4.10	96		
68	4.1	3.63	97		
69	4.1	2.95	98		
70	4.2	2.39	99		
71	4.2	1.85	100		
72			101		
73			102		
74			103		
75			104		
76			105		
77			106		
78			107		
79			108		
80			109		
81			110		
82			111		
83			112		
84			113		
85			114		
86			115		
87			116		
88			117		
89			118		
90			119		

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: PH6 Tailwater DATE: 7/30/20 TIME: 7:30am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 15.1 (ºF or (ºC)) Dissolved Oxygen: 8.80 (mg/L)

Conductivity: 0.05 mS (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 70 (ºF or °C) Baro. Pressure 25.5 (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail _____Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance:_____ meters

Secchi Depth:_____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC-blw PH6 DATE: 7/30/20 TIME: 7:45 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 16.6 (ºF or ºC) Dissolved Oxygen: 8.34 (mg/L)

Conductivity: 0.05 mS (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 1.10 (NTUs) Air Temperature 71 (ºF or ºC) Baro. Pressure _____ (in Hg) → 25.53 in Hg

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH6 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwtr PH 5 DATE: 7/30/20 TIME: 8:15a

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.9 (ºF or ºC) Dissolved Oxygen: 8.42 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature ~~73~~ 76 (ºF or ºC) Baro. Pressure 12.42 psi = 25.29 in Hg

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC-blw. PH5 DATE: 7/30/20 TIME: 8:30a

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.7 (ºF or (ºC)) Dissolved Oxygen: 8.54 (mg/L)

Conductivity: 0.05 mS (µmhos/cm@25 ºC) Stream or Lake gage reading:

Turbidity: 0.36 (NTUs) Air Temperature 79 (ºF or (ºC)) Baro. Pressure 12.42 psi = 25.29 in Hg (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: ___ meters Depth of Reappearance: ___ meters

Secchi Depth: ___ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy ___ Colored ___
Floating Material ___ Other: ___

Remarks: ___

Site Drawing

BC-blw-PH5 **WATER QUALITY SAMPLE DATA**

Sample No. ___, ___ Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: [signature] REVIEWED BY: ___

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwat PH4 DATE: 7/30/20 TIME: 8:45a

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.7 (ºF or (ºC)) Dissolved Oxygen: 8.60 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature: 82 (ºF or ~~ºC~~) Baro. Pressure 12.24 psi = 24.92 in Hg (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: N/A Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

_____

_____

_____

_____

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC blw PH4 DATE: 7/30/20 TIME: 9:00am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.7 (ºF or ºC) Dissolved Oxygen: 9.01 (mg/L)

Conductivity: 0.05 mS (µmhos/cm@25 ºC) Stream or Lake gage reading: = 24.92

Turbidity: 0.76 (NTUs) Air Temperature 83 (F) or C), Baro. Pressure 12.24 psi (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear:_____meters Depth of Reappearance:_____meters

Secchi Depth:_____meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks:_____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH4 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH 3 DATE: 7/30/20 TIME: 9:20am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.7 (ºF or ºC) Dissolved Oxygen: 8.42 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading:

Turbidity: — (NTUs) Air Temperature 80 (ºF or ºC) Baro. Pressure 11.77 psi = 23.96 in Hg (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC blw PH3 DATE: 7/30/20 TIME: 9:40 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS

Water Temperature: 14.7 (ºF or ºC)

Conductivity: 0.05 mS (µmhos/cm@25 ºC)

Turbidity: 0.60 (NTUs)

WEATHER CONDITIONS

Dissolved Oxygen: 8.28 (mg/L)

Stream ~~or lake~~ gage reading: 0.65' 11.677 psi = 23.96 in Hg

Air Temperature 80 (ºF or ºC) Baro. Pressure ____ (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: ____ meters Depth of Reappearance: ____ meters

Secchi Depth: ____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy ____ Colored ____

Floating Material ____ Other: ____

Remarks: Gage at weir reads 0.65 feet

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH3 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: [signature] REVIEWED BY: ____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH 2 DATE: 7/30/20 TIME: 10:00 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.8 (ºF or ºC) Dissolved Oxygen: 8.21 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading:

Turbidity: — (NTUs) Air Temperature 80 (ºF or ºC) Baro. Pressure 11.43 psi = 23.27 in Hg (in Hg)

Winds 1-5 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance:_____ meters

Secchi Depth:_____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks:_____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives:_____

REMARKS

SIGNED BY: [signature] REVIEWED BY:

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC blw PH2 DATE: 7/30/20 TIME: 10:15am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 12.9 (ºF or (ºC)) Dissolved Oxygen: 8.41 (mg/L)

Conductivity: 0.04 mS (µmhos/cm@25 ºC) Stream or Lake gage reading: 1.75'

Turbidity: 0.68 (NTUs) Air Temperature 80 ((ºF) or ºC) Baro. Pressure 11.43 (in Hg) = 23.27 in Hg

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH2 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 7/30/20 TIME: 11:00 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading:

Turbidity: — (NTUs) Air Temperature 78 (ºF or ºC) Baro. Pressure 10.41 psi = 21.19 in Hg (in Hg)

Winds 2-6 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: ____ meters Depth of Reappearance: ____ meters

Secchi Depth: ____ meters

Visual Condition of Stream (check all that apply):
Clear ____ Cloudy ____ Colored ____
Floating Material ____ Other: ____

Remarks: ____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. SL-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: none

REMARKS

1 Week bacti

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SIGNED BY: [signature] REVIEWED BY: ____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 7/30/20 TIME: 11:40am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: – (ºF or ºC) Dissolved Oxygen: – (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature 77 (ºF or ºC) Baro. Pressure 10.65 psi = 21.68 in Hg (in Hg)

Winds 4-10 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. LS-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Week bacti

1 Sowce Molecular

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Intake 2 Res. DATE: 7/30/20 TIME: 12:00 pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: - (ºF or ºC) Dissolved Oxygen: - (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading:

Turbidity: - (NTUs) Air Temperature 78 (ºF or ºC) Baro. Pressure 11.05 psi = 22.5 in Hg (in Hg)

Winds 1-3 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: N/A Depth of Disappear:_____meters Depth of Reappearance:_____meters

Secchi Depth:_____meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks:_____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. INT2-RES-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Week bacti

1 Sonde Molecular

SIGNED BY: [signature] REVIEWED BY:

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: North Fork DATE: 7/31/20 TIME: 9:00am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.8 (ºF or ºC) Dissolved Oxygen: 7.63 (mg/L)

Conductivity: 0.03mS (µmhos/cm@25 ºC) Stream ~~or Lake gage reading~~ Flow: 14 cfs

Turbidity: 1.38 (NTUs) Air Temperature 60 (ºF or ºC) Baro. Pressure 21.65 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: ~~NA~~ Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: NF flow measured at 14 cfs.

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-NF-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Middle Fork DATE: 7/31/20 TIME: 9:20am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 15.7 (ºF or ºC) Dissolved Oxygen: 7.16 (mg/L)

Conductivity: 0.02 mS (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 1.44 (NTUs) Air Temperature 61 (ºF or ºC) Baro. Pressure _____ (in Hg) 21.79 in Hg

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-LS Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: $HgSO_4$ in 1 bottle

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Fork DATE: 7/31/2 TIME: 10:00 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS

Water Temperature: 6.9 (ºF or ºC) Dissolved Oxygen: 9.0 (mg/L)

Conductivity: 0.04 mS (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 1.11 (NTUs)

WEATHER CONDITIONS

Air Temperature 68 (ºF or ºC) Baro. Pressure 21.3 (in Hg)

Winds 1-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-SL Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in 1 bottle

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 7/31/20 TIME: 11:00 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: - (ºF or ºC) Dissolved Oxygen: - (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 68 (ºF or ºC) Baro. Pressure 21.25 (in Hg)

Winds 4-12 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: N/A Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. SL-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Wack badi

1 Source Molecula

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 7/31/20 TIME: 11:35 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 75 (ºF or ºC) Baro. Pressure 21.7 (in Hg)

Winds 1-5 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. LS-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Week bacti

1 Source Molecular

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Intake 2 Res. DATE: 7/31/20 TIME: 11:50 am

DRAINAGE: Bishop Creek INVESTIGATORS: TD JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading:

Turbidity: — (NTUs) Air Temperature 77 (ºF or ºC) Baro. Pressure 22.51 (in Hg)

Winds 0-3 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: ___ meters Depth of Reappearance: ___ meters

Secchi Depth: ___ meters

Visual Condition of Stream (check all that apply):
Clear ___ Cloudy ___ Colored ___
Floating Material ___ Other: ___

Remarks: ___

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. INT2-RES-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Week bact
1 Source Molecular

SIGNED BY: [signature] REVIEWED BY:

Field Data Forms

August 2020

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 8/3/20 TIME: 11:00 am

DRAINAGE: Bishop Creek INVESTIGATORS: JB TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: ____

Turbidity: — (NTUs) Air Temperature 77 (ºF or ºC) Baro. Pressure 21.24 (in Hg)

Winds 0-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: — meters Depth of Reappearance: — meters

Secchi Depth: — meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy ____ Colored ____
Floating Material ____ Other: ____

Remarks: Sunny

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. SL-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Week bacti

1 Source molecular

SIGNED BY: [signature] REVIEWED BY: ____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 8/3/20 TIME: 11:25a

DRAINAGE: Bishop Creek INVESTIGATORS: JB TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: – (ºF or ºC) Dissolved Oxygen: – (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature 76 (ºF or ºC) Baro. Pressure 21.70 (in Hg)

Winds 2-4 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Sunny

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. LS-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Week bacti

1 Source Molecular

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Intake 2 Reservoir DATE: 8/3/20 TIME: 11:45am

DRAINAGE: Bishop Creek INVESTIGATORS: JB TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: 22.51

Turbidity: — (NTUs) Air Temperature 77 (ºF or °C) Baro. Pressure ____ (in Hg)

Winds 0-4 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ____Snow

Secchi Disk: NA Depth of Disappear: ____ meters Depth of Reappearance: ____ meters

Secchi Depth: ____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy ____ Colored ____

Floating Material ____ Other: ____

Remarks: Sunny

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. INT2-RES-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 Week bacti

1 Source Molecular

SIGNED BY: [signature] REVIEWED BY: ____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 8/5/2020 TIME: 11:00AM

DRAINAGE: Bishop Creek INVESTIGATORS: JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 72 (ºF or ºC) Baro. Pressure 21.06 (in Hg)

Winds 4-6 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

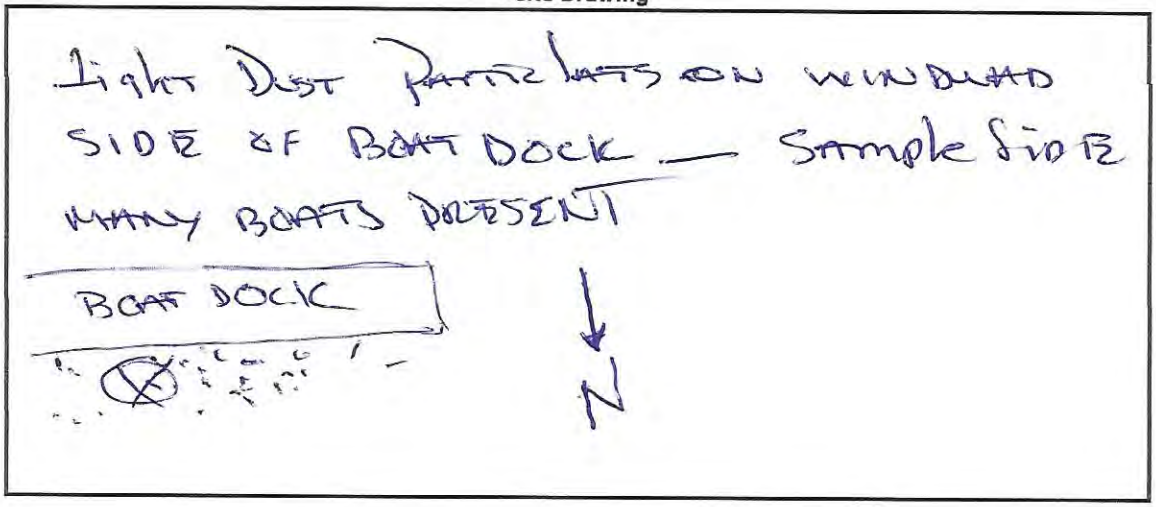
Secchi Disk: Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material X Other: _____

Remarks: SUNNY - CLEAR

Site Drawing



WATER QUALITY SAMPLE DATA

Sample No. SL-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 WECK, 1 SOURCE MOLECULAR

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 8/5/2020 TIME: 11:40AM

DRAINAGE: Bishop Creek INVESTIGATORS: JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: —

Turbidity: — (NTUs) Air Temperature 75 (ºF or ºC) Baro. Pressure 21.55 (in Hg)

Winds 5-10 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. *LS-BR-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 WEEK, 1 SOURCE MOLECULAR

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Intake 2 Res. DATE: 8/5/2020 TIME: 12:00 PM

DRAINAGE: Bishop Creek INVESTIGATORS: JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: — (ºF or ºC) Dissolved Oxygen: — (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: —

Turbidity: — (NTUs) Air Temperature ____ (ºF or ºC) Baro. Pressure 22.36 (in Hg)

Winds 0-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: SUNNY / FEW PEOPLE TODAY

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. INT2-RES-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 2 Preservatives: None

REMARKS

1 WECK, 1 SOURCE MOLECULAR

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH 6 DATE: 8/6/2020 TIME: 7:58AM

DRAINAGE: Bishop Creek INVESTIGATORS: KD & TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.0 (ºF or ºC) Dissolved Oxygen: 8.82 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 71 (ºF or ºC) Baro. Pressure 25.38 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ~ Fog ~ Rain ~ Sleet ~ Hail ~ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC Below PH6 DATE: 8/6/20 TIME: 8:05

DRAINAGE: Bishop Creek INVESTIGATORS: KO & TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.5 (ºF or ºC) Dissolved Oxygen: 8.84 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: —

Turbidity: — (NTUs) Air Temperature 71 (ºF or ºC) Baro. Pressure 25.36 (in Hg)

Winds 1-1 (mph) Cloud cover 0 (%) Precipitation — Fog — Rain — Sleet — Hail — Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH5 DATE: 8/6/20 TIME: 8:16

DRAINAGE: Bishop Creek INVESTIGATORS: KD & TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.8 (ºF or (ºC)) Dissolved Oxygen: 8.58 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: —

Turbidity: — (NTUs) Air Temperature 71 (ºF) or ºC) Baro. Pressure 25.13 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation - Fog - Rain - Sleet - Hail - Snow

Secchi Disk: NA Depth of Disappear: ____ meters Depth of Reappearance: ____ meters

Secchi Depth: ____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy ____ Colored ____
Floating Material ____ Other: ____

Remarks: ____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: ____

REMARKS

SIGNED BY: [signature] REVIEWED BY: ____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC Below PH 5 DATE: 8/6/20 TIME: 8:20

DRAINAGE: Bishop Creek INVESTIGATORS: KD & TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.8 (ºF or ºC) Dissolved Oxygen: 8.68 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: —

Turbidity: — (NTUs) Air Temperature 71 (ºF or ºC) Baro. Pressure 25.13 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation / Fog / Rain / Sleet / Hail / Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH4 DATE: 8/6/20 TIME: 8:37 am

DRAINAGE: Bishop Creek INVESTIGATORS: KD + TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.9 (ºF or ºC) Dissolved Oxygen: 8.72 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: -

Turbidity: _____ (NTUs) Air Temperature 71 (ºF or ºC) Baro. Pressure 24.11 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ✓ Fog ✓ Rain ✓ Sleet ✓ Hail ✓ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC Below PH 4 DATE: 8/6/2020 TIME: 8:42am

DRAINAGE: Bishop Creek INVESTIGATORS: KD & TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.6 (ºF or ºC) Dissolved Oxygen: 8.88 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: –

Turbidity: – (NTUs) Air Temperature 71 (ºF or ºC) Baro. Pressure 24.79 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation – Fog ✓ Rain – Sleet – Hail – Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH3 DATE: 8/6/2020 TIME: 9:16 AM

DRAINAGE: Bishop Creek INVESTIGATORS: KD + TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.5 (ºF or ºC) Dissolved Oxygen: 8.47 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 75 (ºF or ºC) Baro. Pressure 23.81 (in Hg)

Winds 2.2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC Below PH3 DATE: 8/6/20 TIME: 9:20 am

DRAINAGE: Bishop Creek INVESTIGATORS: KD + TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.5 (ºF or (ºC)) Dissolved Oxygen: 8.44 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream ~~or Lake~~ gage reading: 0.65 ft

Turbidity: - (NTUs) Air Temperature 73 (ºF or ºC) Baro. Pressure 23.84 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation – Fog – Rain – Sleet – Hail – Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear ✓ Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: Stream gauge at weir = 0.65 feet depth

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH 2 DATE: 8/6/2020 TIME: 9:32am

DRAINAGE: Bishop Creek INVESTIGATORS: KD + TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 68 (ºF or ºC) Dissolved Oxygen: 8.26 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: -

Turbidity: - (NTUs) Air Temperature 70 (ºF or ºC) Baro. Pressure 23.11 (in Hg)

Winds 0 to 6 (mph) Cloud cover 0 (%) Precipitation - Fog - Rain - Sleet - Hail - Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC Below PHL DATE: 8/6/2020 TIME: 9:45 AM

DRAINAGE: Bishop Creek INVESTIGATORS: KD + TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.0 (ºF or ºC) Dissolved Oxygen: 8.17 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: 0.75 ft

Turbidity: - (NTUs) Air Temperature 68 (ºF or ºC) Baro. Pressure 23.15 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation - Fog - Rain - Sleet - Hail - Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Weir gauge at 0.75 feet depth

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: North Fork DATE: 8/6/20 TIME: 10:20am

DRAINAGE: Bishop Creek INVESTIGATORS: TB + KD

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 15.4 (ºF or ºC) Dissolved Oxygen: 8.29 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream ~~or Lake gage~~ Flow reading: 14 cfs

Turbidity: — (NTUs) Air Temperature 62 (ºF or ºC) Baro. Pressure 21.43 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ~ Fog ~ Rain ~ Sleet ~ Hail ~ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: NF flow measured at 14 cfs

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Middle Fork DATE: 8/6/2020 TIME: 10:45AM

DRAINAGE: Bishop Creek INVESTIGATORS: KP + TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 17 (ºF or ºC) Dissolved Oxygen: 7.22 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: —

Turbidity: — (NTUs) Air Temperature 62 (ºF or ºC) Baro. Pressure 21.5 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation — Fog — Rain — Sleet — Hail — Snow

Secchi Disk: N/A Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. N/A Sample Method: Grab Preservatives: Ice

No. of Sample Bottles N/A Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South fork DATE: 8/6/2020 TIME: 12:00 pm

DRAINAGE: Bishop Creek INVESTIGATORS: KD + TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 8.9 (ºF or ºC) Dissolved Oxygen: 8.62 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: —

Turbidity: ~ (NTUs) Air Temperature 66 (ºF or ºC) Baro. Pressure 21.15 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation — Fog — Rain — Sleet — Hail — Snow

Secchi Disk: N/A Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear ✓ Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles NA Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 8/24/20 TIME: 12:05pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see profile (ºF or ºC) Dissolved Oxygen: see profile (mg/L)

Conductivity: 0.04 mS (µmhos/cm@25 ºC) Stream or Lake gage reading: 9115.53'

Turbidity: Secchi (NTUs) Air Temperature 68 (ºF or ºC) Baro. Pressure 21.67 (in Hg)

Winds 0-3 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 11 meters Depth of Reappearance: 9 meters

Secchi Depth: 10 meters

Visual Condition of Stream (check all that apply):
Clear ___ Cloudy ___ Colored ___
Floating Material ___ Other: ___

Remarks: Lake Elev = 9115.53 feet per Paul Schmidt @ SCE

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. LS-DP-17 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: [signature] REVIEWED BY: ___

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 8/24/20 TIME: 12:30pm

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: See pg. 6 (ºF or ºC) Dissolved Oxygen: See pg. 6 (mg/L)

Conductivity: 0.03 mS (µmhos/cm@25 ºC) ~~Stream~~ or Lake gage reading: 9115.53'

Turbidity: Secchi (NTUs) Air Temperature 69 (ºF) or ºC) Baro. Pressure 21.67 (in Hg)

Winds 0-5 (mph) Cloud cover 60 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 11 meters Depth of Reappearance: 9 meters

Secchi Depth: 10 meters

Visual Condition of Stream (check all that apply):
Clear ___ Cloudy ___ Colored ___
Floating Material ___ Other: ___

Remarks: Lake elev. = 9115.53 feet per Paul Schmidt @ SCE

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. LS-DP-8 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: [signature] REVIEWED BY: ___

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

TB/JB

Location: Lake Sabrina 8/24/20

GARMIN
TD = 239 FT

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
0.5	16.9	7.1	31	4.4	7.72
1	16.9	7.1	32	4.4	7.54
2	16.9	7.09	33	4.3	7.54
3	16.9	7.1	34	4.3	7.43
4	16.9	7.09	35	4.3	7.36
5	16.9	7.09	36	4.2	7.48
6	16.9	7.08	37	4.1	7.56
7	16.8	7.1	38	4.1	7.50
8	16.6	7.15	39	4.1	7.32
9	16.2	7.24	40	4.1	6.89
10	15.4	7.46	41	4.1	6.88
11 (10.5)	13.9 13.0	8.31 8.69	42	4.1	6.81
12 (11.5)	12.1 11.4	8.97 9.17	43	4.1	6.75
13	9.9	9.46	44	4.1	6.69
14	8.3	9.7	45	4.1	6.65
15	7.5	9.63	46	4.1	6.61
16	6.8	9.48	47	4.1	6.48
17	6.7	9.36	48	4.2	6.36
18	6.3	9.33	49	4.1	6.28
19	6.0	9.31	50	4.1	6.25
20	5.6	9.04	51	4.1	6.21
21	5.4	8.75	52	4.1	6.17
22	5.2	8.64	53	4.1	6.10
23	5.1	8.42	54	4.1	5.96
24	5.0	8.35	55	4.1	5.82
25	4.9	8.21	56	4.1	5.81
26	4.8	8.17	57	4.2	5.72
27	4.7	8.11	58	4.2	5.62
28	4.6	7.96	59	4.1	5.51
29	4.5	7.83	60	4.1	5.25
30	4.4	7.88	61	4.1	5.10

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: LAKE SABRINA (AUG 24, 2020)

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
62	4.1	4.93	91		
63	4.1	4.74	92		
64	4.1	4.50	93		
65	4.1	3.87	94		
66	4.1	3.71	95		
67	4.1	2.82	96		
68	4.2	1.37	97		
69	4.2	1.05	98		
70	4.2	0.67	99		
71	4.2	0.10	100		
72	4.2	0.06	101		
73	4.2	0.05	102		
74			103		
75			104		
76			105		
77			106		
78			107		
79			108		
80			109		
81			110		
82			111		
83			112		
84			113		
85			114		
86			115		
87			116		
88			117		
89			118		
90			119		

RAINE ~0930 ↓

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Middle Fork DATE: 8/24/20 TIME: 12:55 pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 17.2 (ºF or (ºC)) Dissolved Oxygen: 7.12 (mg/L)

Conductivity: 0.03 mS (µmhos/cm@25 ºC) Stream or Lake gage reading: -

Turbidity: 5.06 (NTUs) Air Temperature 73 (ºF) or ºC) Baro. Pressure 21.78 (in Hg)

Winds 0 (mph) Cloud cover 75 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-LS Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 8/25/20 TIME: 11:55 am

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see prof 6 (ºF or ºC) Dissolved Oxygen: see prof 6 (mg/L)

Conductivity: 0.07 mS (µmhos/cm@25 ºC) ~~Stream or~~ Lake gage reading: 9741.96'

Turbidity: Secchi (NTUs) Air Temperature 65 (ºF or ºC) Baro. Pressure 21.14 (in Hg)

Winds 3-12 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 12 meters Depth of Reappearance: 11.5 meters

Secchi Depth: 11.75 meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Lake elev = 9741.96 feet per Paul Schmidt-SCE

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. SL-DP-20 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 2/25/20 TIME: 12:20 pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see profile (ºF or ºC) Dissolved Oxygen: see profile (mg/L)

Conductivity: 0.04 mS (µmhos/cm@25 ºC) ~~Stream or~~ Lake gage reading: 9741.96'

Turbidity: Secchi (NTUs) Air Temperature 65 (ºF or ºC) Baro. Pressure 21.14 (in Hg)

Winds 3-12 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 12 meters Depth of Reappearance: 11.5 meters

Secchi Depth: 11.75 meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Lake Elev = 9741.96 feet per Paul Schmidt - SCE

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. SL-DP-15 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

WATER TEMPERATURE AND DISSOLVED OXYGEN LAKE PROFILE DATA FORM

TB/JB

Location: South Lake 8/25/20

GARMIN TD = 21.6'

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
0.5	16.1	7.11	31	7.9	8.98
1	16.3	7.1	32	7.4	8.84
2	16.2	7.1	33	7.2	8.80
3	16.2	7.1	34	6.7	8.61
4	16.2	7.09	35	6.2	8.30
5	16.2	7.09	36	5.4	7.91
6	16.2	7.09	37	5.2	7.80
7	16.2	7.08	38	5.2	7.75
8	16.2	7.08	39	5.1	7.70
9	16.2	7.08	40	5.1	7.69
10	16.2	7.08	41	5.0	7.59 ⇐
11	16.2	7.07	42	5.0	7.43
12	16.2	7.07	43	5.0	7.43
13	16.2	7.08	44	4.9	7.35
14	16.1	7.13	45	4.9	7.25
15 e	16.0	7.16	46	4.9	7.14
16	15.9	7.20	47	4.9	7.05
17	15.3	7.46	48	4.9	7.06
18 ✱	14.0	8.19	49	4.9	7.02 △
19	13.5	8.37	50	5.2	0.38
20 ✱	12.9	8.45	51	5.6	0.28
21	12.5	8.52	52	5.7	0.23
22	12.0	8.67	53	5.9	0.19
23	11.5	8.76	54	6.0	0.16
24	10.9	8.87	55	6.1	0.14
25	10.5	9.00	56	6.4	0.14 ⇐
26	10.4	9.07	57	6.4	0.15
27	10.0	9.08	58	6.5	0.12
28	9.1	9.12	59	6.7	0.11
29	8.7	9.11	60	6.9	0.07
30	8.3	9.05	61	7.4	0.06

thermocline ✱

WATER TEMPERATURE AND DISSOLVED OXYGEN LAKE PROFILE DATA FORM

Location: South Lake

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
62	7.5	0.05	91		
63	7.4	0.03	92		
64	7.7	0.03	93		
65			94		
66			95		
67			96		
68			97		
69			98		
70			99		
71			100		
72			101		
73			102		
74			103		
75			104		
76			105		
77			106		
78			107		
79			108		
80			109		
81			110		
82			111		
83			112		
84			113		
85			114		
86			115		
87			116		
88			117		
89			118		
90			119		

=> BOTTOM

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Fork DATE: 8/25/20 TIME: 12:45 pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 8.0 (ºF or (ºC)) Dissolved Oxygen: 8.62 (mg/L)

Conductivity: 0.04mS (µmhos/cm@25 ºC) Stream or Lake gage reading: -

Turbidity: 3.45 (NTUs) Air Temperature 60 (ºF or ºC) Baro. Pressure 21.25 (in Hg)

Winds 0-4 (mph) Cloud cover 5 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-SL Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH6 DATE: 8/26/20 TIME: 7:15am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.1 (ºF or (ºC)) Dissolved Oxygen: 8.90 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: -

Turbidity: - (NTUs) Air Temperature 65 (ºF or ºC) Baro. Pressure 25.43 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: ___ meters Depth of Reappearance: ___ meters

Secchi Depth: ___ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy ___ Colored ___
Floating Material ___ Other: ___

Remarks: ___

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles ___ Preservatives: ___

REMARKS

SIGNED BY: [signature] REVIEWED BY: ___

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC blw PH6 DATE: 8/26/20 TIME: 7:35am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.8 (°F or (°C)) Dissolved Oxygen: 8.99 (mg/L)

Conductivity: 66 (µmhos/cm@25 °C) Stream or Lake gage reading: 0.4

Turbidity: 3.04 (NTUs) Air Temperature 65 (°F or °C) Baro. Pressure 25.43 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance:_____ meters

Secchi Depth:_____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks:_____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH6 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH5 DATE: 8/26/20 TIME: 8:00 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.4 (ºF or (ºC)) Dissolved Oxygen: 8.65 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: –

Turbidity: – (NTUs) Air Temperature 67 (ºF or ºC) Baro. Pressure 25.19 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: ___ meters Depth of Reappearance: ___ meters

Secchi Depth: ___ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy ___ Colored ___
Floating Material ___ Other: ___

Remarks: ___

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles ___ Preservatives: ___

REMARKS

SIGNED BY: [signature] REVIEWED BY: ___

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC blw PH5 DATE: 8/26/20 TIME: 8:15am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.7 (ºF or (ºC)) Dissolved Oxygen: 8.67 (mg/L)

Conductivity: 58 (µmhos/cm@25 ºC) Stream or Lake gage reading: -

Turbidity: 2.14 (NTUs) Air Temperature 67 ((ºF) or °C) Baro. Pressure 25.19 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance:_____ meters

Secchi Depth:_____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks:_____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH5 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in ow

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH4 DATE: 8/26/20 TIME: 8:30am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.2 (ºF or (ºC)) Dissolved Oxygen: 8.90 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: –

Turbidity: – (NTUs) Air Temperature 69 (ºF) or ºC) Baro. Pressure 24.81 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC blw PH4 DATE: 8/26/20 TIME: 8:40 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.3 (°F or (°C)) Dissolved Oxygen: 8.98 (mg/L)

Conductivity: 53 (µmhos/cm@25 °C) Stream or Lake gage reading: -

Turbidity: 1.14 (NTUs) Air Temperature 69 (°F) or °C) Baro. Pressure 24.21 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH4 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH3 DATE: 8/26/20 TIME: 9:25am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 12.9 (ºF or ºC) Dissolved Oxygen: 8.62 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 75 (ºF or ºC) Baro. Pressure 23.86 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC blw PH3 DATE: 8/26/20 TIME: 9:40 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 12.9 (ºF or (ºC)) Dissolved Oxygen: 8.66 (mg/L)

Conductivity: 50 (µmhos/cm@25 ºC) Stream or Lake gage reading: 0.64'

Turbidity: 1.37 (NTUs) Air Temperature 75 (ºF or ºC) Baro. Pressure 23.86 (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: N/A Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear _____ Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: Weir at 0.64 feet

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH3 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH2 DATE: 8/26/20 TIME: 10:05am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 12.7 (ºF or (C)) Dissolved Oxygen: 8.43 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: -

Turbidity: - (NTUs) Air Temperature 76 ((F) or °C) Baro. Pressure 23.17 (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance:_____ meters

Secchi Depth:_____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks:_____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives:_____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC blw PH2 DATE: 8/26/20 TIME: 10:15am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.9 (ºF or (ºC)) Dissolved Oxygen: 8.67 (mg/L)

Conductivity: 46 (µmhos/cm@25 ºC) Stream ~~or Lake~~ gage reading: 1.8'

Turbidity: 1.63 (NTUs) Air Temperature 76 (ºF) or ºC) Baro. Pressure 23.17 (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: 1.2' H_2O 0.6' debris in bottom at weir

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH2 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: North Fork DATE: 8/26/20 TIME: 11:40am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.5 (ºF or (ºC)) Dissolved Oxygen: 8.23 (mg/L)

Conductivity: 40 (µmhos/cm@25 ºC) Stream ~~or lake~~ gage reading: 12 cfs

Turbidity: 0.68 (NTUs) Air Temperature 69 ((ºF) or ºC) Baro. Pressure 21.50 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear x Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: Cross-sectional flow calculated at ~ 12 cfs

Site Drawing

Total X-sectional area = 6.7 ft^2

Ave. vel. ≈ 1.8 ft/s

WATER QUALITY SAMPLE DATA

Sample No. BC-NF-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

Field Data Forms

September 2020

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tail Water PH #6 DATE: 9/20/2020 TIME: 0920

DRAINAGE: Bishop Creek INVESTIGATORS: JB / TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 12.2 ~~(F)~~ or (ºC) Dissolved Oxygen: 9.64 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 67 (~~ºF~~ or ºC) Baro. Pressure 25.51 mm Hg ~~(in. Hg)~~

Winds 2-4 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: SMOKEY / HAZY

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

S/E Winds

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC BELOW PH #6 DATE: 9/20/2020 TIME: 0935

DRAINAGE: Bishop Creek INVESTIGATORS: JB/TB

PHYSICAL WATER QUALITY PARAMETERS — WEATHER CONDITIONS

Water Temperature: 12.2 (ºF or (ºC)) Dissolved Oxygen: 9.28 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature 67 (ºF or ºC) Baro. Pressure 25.47 (in Hg)

Winds 0-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: Smokey Haze

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

EAST WINDS / SOUTH WINDS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: ~~TAILWATER PH #5~~ DATE: 9/20/2020 TIME: 0950

DRAINAGE: Bishop Creek INVESTIGATORS: JB/TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.7 (ºF or (ºC)) Dissolved Oxygen: 8.88 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 68 (ºF or ºC) Baro. Pressure 25.26 (in Hg)

Winds 0-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: SMOKEY / HAZY (TR#2)

Site Drawing

No flow from Tail Race #1 (used in previous visits) so water taken from Tail Race #2 (TR#2)

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

~~EAST~~ Winds

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC BELOW PH#5 DATE: 9/20/2020 TIME: 1000

DRAINAGE: Bishop Creek INVESTIGATORS: JB/TB

PHYSICAL WATER QUALITY PARAMETERS — WEATHER CONDITIONS

Water Temperature: 12.5 (ºF or (ºC)) Dissolved Oxygen: 9.04 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature 68 (ºF or (ºC)) Baro. Pressure 25.25 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ____Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: SMOKEY / HAZY SKY

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

STREAM SHALLOW - DIRECT SUNLIGHT

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: TAILWATER PH #4 DATE: 9/20/2020 TIME: 1010

DRAINAGE: Bishop Creek INVESTIGATORS: JB | TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.7 (ºF or (ºC)) Dissolved Oxygen: 9.29 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 72 (ºF) or ºC) Baro. Pressure 24.89 (in Hg)

Winds 2-4 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: SLIGHT HAZE (TR#2)

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

EAST WINDS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC BELOW PH #4 DATE: 9/20/2020 TIME: 1020

DRAINAGE: Bishop Creek INVESTIGATORS: JB / TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.3 (ºF or ºC) Dissolved Oxygen: 9.44 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: ~ (NTUs) Air Temperature 72 (ºF or ºC) Baro. Pressure 24.91 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: SLIGHT HAZE

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: TAILWATER PH #3 DATE: 9/20/2020 TIME: 1040

DRAINAGE: Bishop Creek INVESTIGATORS: JB / TB

PHYSICAL WATER QUALITY PARAMETERS — WEATHER CONDITIONS

Water Temperature: 11.4 (ºF or (ºC)) Dissolved Oxygen: 9.04 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 71 (ºF or ºC) Baro. Pressure 23.90 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: SLIGHT HAZE

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC BELOW PH #3 DATE: 9/20/2020 TIME: 1055

DRAINAGE: Bishop Creek INVESTIGATORS: JB/TB

PHYSICAL WATER QUALITY PARAMETERS

Water Temperature: 11.8 (ºF or ºC) Dissolved Oxygen: 8.93 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream ~~or Lake~~ gage reading: 0.7'

Turbidity: – (NTUs)

WEATHER CONDITIONS

Air Temperature 71 (ºF or ºC) Baro. Pressure 23.91 (in Hg)

Winds 0-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: SLIGHT HAZE

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

EAST WINDS

USGS WEIR 0.70' BOTTOM CLEAR OF DEBRIS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: ~~TAI~~ WATER PH #2 DATE: 9/20/2020 TIME: 1105

DRAINAGE: Bishop Creek INVESTIGATORS: JB / TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.6 (ºF or (ºC)) Dissolved Oxygen: 8.72 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: – (NTUs) Air Temperature 72 (ºF or ºC) Baro. Pressure 23.22 (in Hg)

Winds 0-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: SLIGHT HAZE

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC BELOW PH #2 DATE: 9/20/2020 TIME: 1115

DRAINAGE: Bishop Creek INVESTIGATORS: JB / TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.6 (ºF or ºC) Dissolved Oxygen: 8.74 (mg/L)

Conductivity: – (µmhos/cm@25 ºC) Stream ~~or Lake~~ gage reading: 1.8'

Turbidity: – (NTUs) Air Temperature 72 (ºF or ºC) Baro. Pressure 23.21 (in Hg)

Winds 0-2 (mph) Cloud cover ? (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: SLIGHT HAZE

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

WEIR 1.8' w Ø.6' SED IMBLA IN WEIR CHANNEL

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Fork DATE: 9/20/2020 TIME: 1145

DRAINAGE: Bishop Creek INVESTIGATORS: JB / TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.5 (ºF or (ºC)) Dissolved Oxygen: 8.17 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 64 (ºF or ºC) Baro. Pressure 21.24 (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: Very Minor Haze - Low Flow

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

South Winds

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: MIDDLE FORK DATE: 9/20/2020 TIME: 1215

DRAINAGE: Bishop Creek INVESTIGATORS: JB/TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 15.3 (ºF or ºC) Dissolved Oxygen: 7.42 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 65 (ºF or ºC) Baro. Pressure 21.63 (in Hg)

Winds 4-8 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ____Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: SLIGHT HAZE

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

EAST WINDS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: North Fork DATE: 9/20/2020 TIME: 1250

DRAINAGE: Bishop Creek INVESTIGATORS: JB/TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.2 (ºF or (ºC)) Dissolved Oxygen: 8.95 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream ~~or lake~~ gage reading: 8.4 cfs

Turbidity: - (NTUs) Air Temperature 66 (ºF) or ºC) Baro. Pressure 21.51 (in Hg)

Winds 3-5 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: NF flow field measured at 8.4 cfs

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

Flow measurement completed

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 9/21/20 TIME: 11:10 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: See profile (ºF or ºC) Dissolved Oxygen: see profile (mg/L)

Conductivity: 23 (µmhos/cm@25 ºC) ~~Stream or~~ Lake gage reading: 9111.89 feet msl

Turbidity: Secchi (NTUs) Air Temperature 63 (ºF or ºC) Baro. Pressure 21.65 (in Hg)

Winds 4-6 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 11 meters Depth of Reappearance: 9.5 meters

Secchi Depth: 10.25 meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: smoky after ~ 11 am

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. LS-DP-7 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Lake Sabrina DATE: 9/21/20 TIME: 11:50am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS

Water Temperature: see profile (ºF or ºC) Dissolved Oxygen: see profile (mg/L)

Conductivity: 39 (µmhos/cm@25 ºC) ~~Stream or~~ Lake gage reading: 9111.89 feet msl 21.65

Turbidity: Secchi (NTUs)

WEATHER CONDITIONS

Air Temperature 63 (ºF or ºC) Baro. Pressure ____ (in Hg)

Winds 4-6 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 11 meters Depth of Reappearance: 9.5 meters

Secchi Depth: 10.25 meters

Visual Condition of Stream (check all that apply):

Clear _____ Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: smoky after ~ 11:00am

Site Drawing

WATER QUALITY SAMPLE DATA

LS13

Sample No. LS-DP-28 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

Lake Sabrina 9/21/20 : EC/pH readings from bottom

	Depth	EC	pH	
	68m	38 µs	8.09	
	63m	36	7.72	
LS-14	58m	29	7.54	234'
	53m	27	7.45	
	7m	23	7.38	

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: Lake Sabrina 9/21/20 8:30 am

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
0.5	14.3	7.75	31	4.4	7.83
1	14.3	7.70	32	4.4	7.73
2	14.4	7.67	33	4.3	7.79
3	14.3	7.66	34	4.3	7.89
4	14.4	7.65	35	4.2	7.93
5	14.4	7.64	36	4.2	7.76
6	14.3	7.62	37	4.2	7.66
(7)	14.3	7.62	38	4.1	7.66
8	14.3	7.62	39	4.1	7.58
9	14.3	7.62	40	4.1	7.37
10	14.2	7.68	41	4.1	7.21
11	12.8	8.69	42	4.1	7.19
12	11.9	9.68	43	4.1	7.04
13	9.4	9.85	44	4.1	6.92
14	8.2	9.97	45	4.1	6.88
15	7.5	9.94	46	4.1	6.77
16	7.1	9.84	47	4.1	6.74
17	6.4	9.68	48	4.1	6.63
18	6.1	9.63	49	4.2	6.33
19	5.9	9.59	50	4.2	6.28
20	5.7	9.40	51	4.2	6.10
21	5.6	9.20	52	4.2	5.91
22	5.5	9.09	53	4.2	5.72
23	5.2	8.77	54	4.1	5.63
24	5.1	8.62	55	4.2	5.35
25	5.0	8.42	56	4.2	5.27
26	4.9	8.28	57	4.2	5.20
27	4.8	8.12	58	4.2	4.83
(28)	4.6	7.86	59	4.2	4.40
29	4.6	7.86	60	4.2	4.19
30	4.6	7.77	61	4.2	4.04

234'

Thermo-

move 230'

LS6

LS7

236'

LS8

37.20333 -118.62176

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: Lake Sabrina 9/21/20

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
62	4.2	3.67	91		
63	4.2	3.48	92		
64	4.2	3.45	93		
65	4.2	3.15	94		
66	4.2	3.15	95		
67	4.2	2.36	96		
68	4.2	2.13	97		
69	4.2	1.78	98		
70	4.2	1.58	99		
71	4.2	1.41	100		
72	4.2	0.80	101		
73			102		
74			103		
75			104		
76			105		
77			106		
78			107		
79			108		
80			109		
81			110		
82			111		
83			112		
84			113		
85			114		
86			115		
87			116		
88			117		
89			118		
90			119		

LS9 – LS10, 238'

LS11 234'

LS12

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Fork DATE: 9/22/20 TIME: 8:55 am

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 8.9 (ºF or (ºC)) Dissolved Oxygen: 8.65 (mg/L)

Conductivity: 78 (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 1.49 (NTUs) Air Temperature 53 (ºF) or ºC) Baro. Pressure 21.30 (in Hg)

Winds 0-2 (mph) Cloud cover 50 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-SL Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Middle Fork DATE: 9/22/20 TIME: 11:00 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.9 (ºF or (ºC)) Dissolved Oxygen: 7.55 (mg/L)

Conductivity: 37 (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 2.52 (NTUs) Air Temperature 63 (ºF or ºC) Baro. Pressure 21.70 (in Hg)

Winds 2-4 (mph) Cloud cover 25 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-LS Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: North Fork DATE: 9/22/20 TIME: 11:45am

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.3 (ºF or (ºC)) Dissolved Oxygen: 9.02 (mg/L)

Conductivity: 40 (µmhos/cm@25 ºC) Stream ~~or Lake~~ gage reading: 8.5 cfs

Turbidity: 2.95 (NTUs) Air Temperature 64 ((ºF) or ºC) Baro. Pressure 21.59 (in Hg)

Winds 0 (mph) Cloud cover 20 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: NF flow field measured at 8.5 cfs

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-NF-1 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH2 DATE: 9/22/20 TIME: 12:20pm

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.9 (ºF or (ºC)) Dissolved Oxygen: 8.53 (mg/L)

Conductivity: 50 (µmhos/cm@25 ºC) Stream or Lake gage reading: 1.8'

Turbidity: 1.65 (NTUs) Air Temperature ____ (ºF or ºC) Baro. Pressure 23.28 (in Hg)

Winds 1-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: ~6"-8" sediment bottom of weir

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH2 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH 2 DATE: 9/22/20 TIME: 12:35pm

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 12.4 (ºF or (ºC)) Dissolved Oxygen: 8.71 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 72 (ºF or ºC) Baro. Pressure 23.28 (in Hg)

Winds 1-2 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH3 DATE: 9/22/20 TIME: 12:45pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 12.2 (ºF or (ºC)) Dissolved Oxygen: 8.28 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 74 (ºF or ºC) Baro. Pressure 23.97 (in Hg)

Winds 1-2 (mph) Cloud cover _____ (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH3 DATE: 9/22/20 TIME: 12:55 pm

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 13.2 (ºF or (ºC)) Dissolved Oxygen: 8.78 (mg/L)

Conductivity: 52 (µmhos/cm@25 ºC) Stream or Lake gage reading: 0.70'

Turbidity: 1.88 (NTUs) Air Temperature 74 (ºF or ºC) Baro. Pressure 23.97 (in Hg)

Winds 2-4 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH3 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 9/23/20 TIME: 12:05 pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see profile (ºF or ºC) Dissolved Oxygen: see profile (mg/L)

Conductivity: 37 (µmhos/cm@25 ºC) ~~Stream or~~ Lake gage reading: 9736.50'

Turbidity: secchi (NTUs) Air Temperature 64 (ºF or ºC) Baro. Pressure 21.26 (in Hg)

Winds 1-5 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 10 meters Depth of Reappearance: 9.5 meters

Secchi Depth: 9.75 meters

Visual Condition of Stream (check all that apply):
Clear _____ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Lake Elev = 9736.5 feet per Paul Schmidt (SCE)

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. SL-DP-20 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 9/23/20 TIME: 12:50pm

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see prof. b (ºF or ºC) Dissolved Oxygen: see prof. b (mg/L)

Conductivity: 53 (µmhos/cm@25 ºC) ~~Stream or~~ Lake gage reading: 9736.50

Turbidity: Secchi (NTUs) Air Temperature 64 (ºF or ºC) Baro. Pressure 21.26 (in Hg)

Winds 1-5 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 10 meters Depth of Reappearance: 9.5 meters

Secchi Depth: 9.75 meters

Visual Condition of Stream (check all that apply):

Clear _____ Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: Lake elev = 9736.50 feet per Paul Schmidt (SCE)

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. SL-DP-42 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

South Lake 9/23/20

Depth	cond	pH
bottom ~ 62.7m	~~2031 μS~~	~~6.38~~
{ bottom	2331	6.43
58 m	2303	6.40
53	2080	6.36
48	1255	6.35
43	54	6.82
	46	6.48
	48	6.40

Getting windy 8 - 13 mph

SL ~~at~~ in HD

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: South Lake 9/23/20

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
0.5	14.2	7.41	31	10.1	8.66
1	14.3	7.39	32	9.5	8.68
2	14.3	7.39	33	8.7	8.66
3	14.3	7.38	34	7.8	8.52
4	14.3	7.37	35	6.3	8.02
5	14.4	7.37	36	5.8	7.78
6	14.4	7.36	37	5.4	7.80
7	14.4	7.36	38	5.2	7.64
8	14.4	7.35	39	5.1	7.49
9	14.4	7.35	40	5.0	7.38
10	14.4	7.35	41	5.0	7.30
11	14.4	7.34	42 ★	5.0	7.12
12	14.4	7.34	43	5.0	6.99
13	14.4	7.33	44	5.0	6.81
14	14.4	7.33	45	5.0	6.73
15	14.4	7.33	46	5.1	6.49
16	14.4	7.33	47	5.1	6.18
17	14.4	7.32	48	5.2	0.25
18	14.4	7.32	49	5.7	0.23
19	14.4	7.32	50	5.8	0.14
20 ★	14.3	7.32	51	6.0	0.09
21	14.3	7.32	52	6.1	0.07
22	14.3	7.32	53	6.2	0.06
23	14.3	7.32	54	6.3	0.04
24	14.2	7.33	55	6.4	0.03
25	13.4	7.62	56	6.6	0.03
26	12.7	7.90	57	6.8	0.03
27	11.9	8.21	58	7.2	0.03
28	11.5	8.32	59	7.4	0.03
29	10.9	8.43	60	7.6	0.02
30	10.4	8.58	61	7.7	0.02

SL#2 21.4'

SL#3 21.4'

SL#4 21.4'

-Thermo

5.32

47.5 5.1

SL#5 65.4m

SL#6 65.3m

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: South Lake 9/23/20

SL#7 BOTTOM 65.2 M

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
62	7.8	0.01	91		
~~62~~ 62.7	7.9	0.01	92		
64			93		
65			94		
66			95		
67			96		
68			97		
69			98		
70			99		
71			100		
72			101		
73			102		
74			103		
75			104		
76			105		
77			106		
78			107		
79			108		
80			109		
81			110		
82			111		
83			112		
84			113		
85			114		
86			115		
87			116		
88			117		
89			118		
90			119		

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH6 DATE: 9/24/20 TIME: 7:40am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.7 (ºF or (ºC)) Dissolved Oxygen: 9.46 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 59 (ºF or ºC) Baro. Pressure 25.54 (in Hg)

Winds 0-1 (mph) Cloud cover smoky (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Thick smoke, Air index ~250

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC Below PH 6 DATE: 9/24/20 TIME: 8:05am

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.0 (ºF or (ºC)) Dissolved Oxygen: 9.59 (mg/L)

Conductivity: 58 (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 4.15 (NTUs) Air Temperature 59 (ºF) or ºC) Baro. Pressure _____ (in Hg)

Winds 0-1 (mph) Cloud cover smoke (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Arr smokey

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH6 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH5 DATE: 9/24/20 TIME: 8:40 am

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.3 (ºF or (ºC)) Dissolved Oxygen: 8.99 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 61 (ºF or ºC) Baro. Pressure 25.30 (in Hg)

Winds 0 (mph) Cloud cover smoke (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: Tailrace #2, no flow from #1 (used in previous visits)

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC Below PH5 DATE: 9/24/20 TIME: 8:50 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.1 (ºF or ºC) Dissolved Oxygen: 9.23 (mg/L)

Conductivity: 59 (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: 4.15 (NTUs) Air Temperature 61 (ºF or ºC) Baro. Pressure 25.3 (in Hg)

Winds 0 (mph) Cloud cover smoke (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-PH5 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH4 DATE: 9/24/20 TIME: 9:25 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 11.4 (ºF or (ºC)) Dissolved Oxygen: 9.44 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 64 ((ºF) or ºC) Baro. Pressure 24.92 (in Hg)

Winds 1-2 (mph) Cloud cover Smoke (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC Below pH4 DATE: 9/24/20 TIME: 9:40 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.9 (°F or (°C)) Dissolved Oxygen: 9.50 (mg/L)

Conductivity: 58 (µmhos/cm@25 °C) Stream or Lake gage reading: _____

Turbidity: 3.69 (NTUs) Air Temperature 64 (°F or °C) Baro. Pressure 24.92 (in Hg)

Winds 0 (mph) Cloud cover smoke (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: _____

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. BC-blw-pH4 Sample Method: Grab Preservatives: Ice

No. of Sample Bottles 4 Preservatives: H_2SO_4 in one

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

Field Data Forms

October 2020

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Lake DATE: 10/5/22 TIME: 0930

DRAINAGE: Bishop Creek INVESTIGATORS: JB/TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see profile (ºF or ºC) Dissolved Oxygen: see profile (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: 9734.02'

Turbidity: Secchi (NTUs) Air Temperature 50 (ºF or ºC) Baro. Pressure 21.10 (in Hg)

Winds 0-6 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 12.5 meters Depth of Reappearance: 11.5 meters

Secchi Depth: 12 meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy ___ Colored ___

Floating Material ___ Other: ___

Remarks: SMOKEY - HAZY / NORTH WINDS

Site Drawing

Lake elev. @ 9,734.02 feet per Paul Schmidt-SCE

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles ___ Preservatives: ___

REMARKS

SIGNED BY: [signature] REVIEWED BY: ___

WATER TEMPERATURE AND DISSOLVED OXYGEN LAKE PROFILE DATA FORM

Location: South Lake (JB/TB) ~ 0930 am 10/5/20

GPS (SL10) 60m

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	
0.5	13.8	7.51	31	10.8	8.13	
1	13.9	7.49	32	10.3	8.25	*
2	13.9	7.48	33	8.7	8.25	*
3	13.9	7.46	34	7.1	7.90	
4	13.9	7.46	35	5.7	7.64	
5	13.9	7.45	36	5.4	7.60	
6	13.9	7.45	37	5.2	7.53	
7	13.9	7.44	38	5.1	7.43	
8	13.9	7.44	39	5.1	7.31	(SL11)
9	13.9	7.43	40	5.0	7.14	
10	13.9	7.43	41	5.0	6.98	
11	13.9	7.43	42	5.0	6.86	
12	13.9	7.42	43	5.0	6.79	
13	13.9	7.42	44	5.0	6.62	
14	13.9	7.42	45	5.0	6.40	
15	13.9	7.41	46 5.1	5.1	6.13	5.80
16	13.9	7.41	46.5 47	5.2	2.02	
17	13.9	7.41	48	5.6	0.26	
18	13.8	7.41	49	5.8	0.16	
19	13.8	7.39	50	5.9	0.12	
20	13.8	7.39	51	6.0	0.10	
21	13.8	7.39	52	6.2	0.09	
22	13.8	7.39	53	6.3	0.07	
23	13.8	7.39	54	6.4	0.06	
24	13.8	7.38	55	6.5	0.05	
25	13.7	7.36	56	6.7	0.05	
26	13.6	7.30	57	7.0	0.05	
27	13.6	7.28	58	7.2	0.04	
28	13.3	7.37	59	7.4	0.04	
29	12.2	7.70	60	7.6	0.04	
30	11.3	8.05	60.5	7.7	0.04	BOTTOM

* Thermo

end of data

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: South Fork DATE: 10/5/20 TIME: 10:50am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JJ

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 9.7 (ºF or (ºC)) Dissolved Oxygen: 8.16 (mg/L)

Conductivity: — (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: — (NTUs) Air Temperature 60 (ºF or ºC) Baro. Pressure 21.25 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Algae on rocks

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: LAKE SABRINA DATE: 10/5/2020 TIME: 12:00

DRAINAGE: Bishop Creek INVESTIGATORS: JB / TB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: see profile (ºF or ºC) Dissolved Oxygen: see profile (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: 9108.97'

Turbidity: Secchi (NTUs) Air Temperature (ºF or ºC) Baro. Pressure 21.60 (in Hg)

Winds 4-7 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: Depth of Disappear: 10.5 meters Depth of Reappearance: 11.5 meters

Secchi Depth: 11 meters

Visual Condition of Stream (check all that apply):

Clear _____ Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: SMOKEY - MODERATE / NORTH WINDS

Site Drawing

Lake elev. @ 9,108.97' per Paul Schmidt - SCE

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: LAKE SABRINA (FB/TB) 1200pm 10/5/20

(LS#13)

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
0.5	14.0	7.88	31	4.3	7.87
1	13.8	7.85	32	4.3	7.90
2	13.7	7.86	33	4.3	7.66
3	13.7	7.86	34	4.2	7.74
4	13.7	7.86	35	4.1	7.68
5	13.6	7.85	36	4.1	7.73
6	13.6	7.85	37	4.1	7.63
7	13.6	7.85	38	4.1	7.50
8	13.6	7.84	39	4.1	7.43
9	13.6	7.89	40	4.1	7.33
10	13.4	7.92	41	4.1	7.27
11	12.3	8.64	42	4.1	7.09
12	10.0	9.87	43	4.1	6.95
13	8.4	10.03	44	4.1	6.85
14	7.6	9.94	45	4.1	6.78
15	7.0	9.80	46	4.1	6.55
16	6.7	9.72	47	4.1	6.46
17	6.4	9.62	48	4.1	6.38
18	6.0	9.69	49	4.1	6.32
19	5.7	9.55	50	4.1	6.27
20	5.5	9.31	51	4.1	6.16
21	5.3	9.07	52	4.1	6.06
22	5.2	8.65	53	4.1	5.77
23	5.1	8.44	54	4.1	5.72
24	5.0	8.35	55	4.2	5.62
25	4.9	8.18	56	4.2	5.40
26	4.8	7.95	57	4.2	5.25
27	4.6	7.70	58	4.2	5.07
28	4.6	7.61	59	4.2	4.85
29	4.4	7.68	60	4.2	4.52
30	4.4	7.79	61	4.2	4.25

Thermo * * *

WATER TEMPERATURE AND DISSOLVED OXYGEN
LAKE PROFILE DATA FORM

Location: Lake Sabrina (JB / TB) 10/5/20

DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)	DEPTH FROM WATER SURFACE (meters)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN (mg/L)
62	4.2	4.05	91		
63	4.2	3.35	92		
64	4.2	2.90	93		
65	4.2	2.72	94		
66	4.2	2.44	95		
67	4.2	1.96	96		
68	4.2	1.32	97		
69	4.2	0.71	98		
BOTTOM ~~70~~ 69.5	4.2	0.27	99		
71			100		
72			101		
73			102		
74			103		
75			104		
76			105		
77			106		
78			107		
79			108		
80			109		
81			110		
82			111		
83			112		
84			113		
85			114		
86			115		
87			116		
88			117		
89			118		
90			119		

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Middle Fork DATE: 10/5/20 TIME: 1:45 pm

DRAINAGE: Bishop Creek INVESTIGATORS: JB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 14.2 (°F or (°C)) Dissolved Oxygen: 7.49 (mg/L)

Conductivity: ~ (µmhos/cm@25 °C) Stream or Lake gage reading: _____

Turbidity: ~ (NTUs) Air Temperature 71 (°F or °C) Baro. Pressure 21.60 (in Hg)

Winds 1-3 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear K Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: smokey

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH6 DATE: 10/6/20 TIME: 7:45am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.9 (ºF or (ºC)) Dissolved Oxygen: 9.58 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 55 ((ºF) or ºC) Baro. Pressure 25.50 (in Hg)

Winds 0-1 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: Smoky

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH6 DATE: 10/6/20 TIME: 8:00 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.7 (ºF or (ºC)) Dissolved Oxygen: 9.68 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 55 (ºF or ºC) Baro. Pressure 25.50 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: Smoky

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH5 DATE: 10/6/20 TIME: 8:15am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.9 (°F or (°C)) Dissolved Oxygen: 9.06 (mg/L)

Conductivity: - (µmhos/cm@25 °C) Stream or Lake gage reading:

Turbidity: - (NTUs) Air Temperature 55 (°F) or °C) Baro. Pressure 25.25 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance:_____ meters

Secchi Depth:_____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: smokey TR #2

Site Drawing

Tailrace previously sampled was not flowing, so took sample from other tailrace (TR2)

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH5 DATE: 10/6/20 TIME: 8:25am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.8 (ºF or (ºC)) Dissolved Oxygen: 9.29 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 55 (ºF or ºC) Baro. Pressure 25.25 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear X Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: smoky

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH 4 DATE: 10/6/20 TIME: 8:40 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.6 (°F or (°C)) Dissolved Oxygen: 9.49 (mg/L)

Conductivity: - (µmhos/cm@25 °C) Stream or Lake gage reading:

Turbidity: - (NTUs) Air Temperature 57 (°F or °C) Baro. Pressure 24.85 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation Fog Rain Sleet Hail Snow

Secchi Disk: NA Depth of Disappear: meters Depth of Reappearance: meters

Secchi Depth: meters

Visual Condition of Stream (check all that apply):
Clear x Cloudy Colored
Floating Material Other:

Remarks: smokey TB #2

Site Drawing

Tailrace previously sampled was not flowing, so took sample from other tailrace (TR2)

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles Preservatives:

REMARKS

SIGNED BY: REVIEWED BY:

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH4 DATE: 10/6/20 TIME: 8:45 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.7 (ºF or (ºC)) Dissolved Oxygen: 9.50 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 57 (ºF or ºC) Baro. Pressure 24.90 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: _____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):
Clear ✓ Cloudy _____ Colored _____
Floating Material _____ Other: _____

Remarks: smoky

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: [signature] REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH3 DATE: 10/6/20 TIME: 8:55 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS WEATHER CONDITIONS

Water Temperature: 10.5 (ºF or (ºC)) Dissolved Oxygen: 9.20 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: _____

Turbidity: - (NTUs) Air Temperature 63 (ºF or ºC) Baro. Pressure 23.90 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ____Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: smoky

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH3 DATE: 10/6/20 TIME: 9:05am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 10.5 (ºF or (ºC)) Dissolved Oxygen: 9.15 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: 0.7'

Turbidity: - (NTUs) Air Temperature 63 (ºF) or °C) Baro. Pressure 23.90 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ___Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: smoky, weir was clear of debris

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: Tailwater PH2 DATE: 10/6/20 TIME: 9:15am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS WEATHER CONDITIONS

Water Temperature: 10.8 (ºF or (ºC)) Dissolved Oxygen: 8.87 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: ____ ____

Turbidity: - (NTUs) Air Temperature 62 ((ºF) or ºC) Baro. Pressure 23.20 (in Hg)

Winds 2-4 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___ Sleet ___ Hail ___ Snow

Secchi Disk: NA Depth of Disappear: ____ meters Depth of Reappearance: ____ meters

Secchi Depth: ____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy ____ Colored ____

Floating Material ____ Other: ____

Remarks: smoky

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles ____ Preservatives: ____

REMARKS

SIGNED BY: [signature] REVIEWED BY: ____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: BC below PH2 DATE: 10/6/20 TIME: 9:25 am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS WEATHER CONDITIONS

Water Temperature: 9.5 (ºF or (ºC)) Dissolved Oxygen: 9.10 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: 1.72'

Turbidity: - (NTUs) Air Temperature 63 (ºF) or °C) Baro. Pressure 23.20 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ____Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: smoky;

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

BISHOP CREEK WATER QUALITY STUDY
FIELD FORM

SITE NAME: North Fork DATE: 10/6/20 TIME: 9:45am

DRAINAGE: Bishop Creek INVESTIGATORS: TB JB

PHYSICAL WATER QUALITY PARAMETERS **WEATHER CONDITIONS**

Water Temperature: 9.2 (ºF or (ºC)) Dissolved Oxygen: 9.02 (mg/L)

Conductivity: - (µmhos/cm@25 ºC) Stream or Lake gage reading: 7.2 cfs

Turbidity: - (NTUs) Air Temperature 58 (ºF or ºC) Baro. Pressure 21.50 (in Hg)

Winds 0 (mph) Cloud cover 0 (%) Precipitation ___ Fog ___ Rain ___Sleet ___Hail ___Snow

Secchi Disk: NA Depth of Disappear:_____ meters Depth of Reappearance: _____ meters

Secchi Depth: _____ meters

Visual Condition of Stream (check all that apply):

Clear X Cloudy _____ Colored _____

Floating Material _____ Other: _____

Remarks: less smokey; Flow at NF measured @ 7.2 cfs

Site Drawing

WATER QUALITY SAMPLE DATA

Sample No. NA Sample Method: Grab Preservatives: Ice

No. of Sample Bottles _____ Preservatives: _____

REMARKS

SIGNED BY: _____ REVIEWED BY: _____

APPENDIX B

LABORATORY REPORTS

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders:	0F16038	**Report Date:**	6/29/2020
		Received Date:	6/16/2020
Project:	2KLE010101	**Turnaround Time:**	Normal
		Phones:	(714) 751-7373
		Fax:	(714) 545-8883
Attn:	Michael P. Donavan	**P.O. #:**	
Client:	Psomas - Santa Ana, CA 3 Hutton Centre Dr., Ste. 200 Santa Ana, CA 92707	**Billing Code:**	

ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Michael P. Donavan,

Enclosed are the results of analyses for samples received 6/16/20 with the Chain-of-Custody document. The samples were received in good condition, at 8.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Chris Samatmanakit
Project Manager

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634

www.wecklabs.com

Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported:
06/29/2020 16:47

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
SL-DP-5	Jim Burton, Todd Bear	0F16038-01	Water	06/15/20 09:15	
SL-DP-31.5	Jim Burton, Todd Bear	0F16038-02	Water	06/15/20 09:00	
BC-blw-SL	Jim Burton, Todd Bear	0F16038-03	Water	06/15/20 12:30	

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Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:47

Sample Results

Sample: SL-DP-5 — Sampled: 06/15/20 9:15 by Jim Burton, Todd Bear

0F16038-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F0975 **Instr:** LC12 **Prepared:** 06/16/20 09:23 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/17/20 02:53	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/19/20 16:46 **Analyst:** sar						
Nitrogen, Total	ND	0.30	mg/l	1	06/22/20	
Method: EPA 351.2 **Batch ID:** W0F1291 **Instr:** AA06 **Prepared:** 06/19/20 16:46 **Analyst:** ymt						
TKN	ND	0.10	mg/l	1	06/22/20	
Method: EPA 365.3 **Batch ID:** W0F1057 **Instr:** UVVIS04 **Prepared:** 06/16/20 15:32 **Analyst:** sbn						
o-Phosphate as P	ND	0.010	mg/l	1	06/16/20 16:14	
Method: SM 2540C **Batch ID:** W0F1124 **Instr:** OVEN01 **Prepared:** 06/17/20 12:24 **Analyst:** blg						
Total Dissolved Solids	**15**	10	mg/l	1	06/17/20	

Sample: SL-DP-5 — Sampled: 06/15/20 9:15 by Jim Burton, Todd Bear

0F16038-01RE1 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: EPA 353.2 **Batch ID:** W0F0997 **Instr:** AA01 **Prepared:** 06/16/20 10:36 **Analyst:** sar						
NO2+NO3 as N	ND	200	ug/l	1	06/16/20	

Sample: SL-DP-31.5 — Sampled: 06/15/20 9:00 by Jim Burton, Todd Bear

0F16038-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F0975 **Instr:** LC12 **Prepared:** 06/16/20 09:23 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/17/20 03:47	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/16/20 17:10 **Analyst:** YMT						
Nitrogen, Total	ND	0.30	mg/l	1	06/18/20	
Method: EPA 351.2 **Batch ID:** W0F1074 **Instr:** AA06 **Prepared:** 06/16/20 17:10 **Analyst:** YMT						
TKN	ND	0.10	mg/l	1	06/18/20	
Method: EPA 353.2 **Batch ID:** W0F0997 **Instr:** AA01 **Prepared:** 06/16/20 10:36 **Analyst:** sar						
NO2+NO3 as N	ND	200	ug/l	1	06/16/20	
Method: EPA 365.3 **Batch ID:** W0F1057 **Instr:** UVVIS04 **Prepared:** 06/16/20 15:32 **Analyst:** sbn						
o-Phosphate as P	**0.011**	0.010	mg/l	1	06/16/20 16:17	
Method: SM 2540C **Batch ID:** W0F1124 **Instr:** OVEN01 **Prepared:** 06/17/20 12:24 **Analyst:** blg						
Total Dissolved Solids	**16**	10	mg/l	1	06/17/20	

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Santa Ana, CA 92707

Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported:
06/29/2020 16:47

Sample Results

(Continued)

Sample: BC-blw-SL
0F16038-03 (Water)

Sampled: 06/15/20 12:30 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F0975 **Instr:** LC12 **Prepared:** 06/16/20 09:23 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/17/20 04:05	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/16/20 17:10 **Analyst:** YMT						
Nitrogen, Total	**1.1**	0.30	mg/l	1	06/18/20	
Method: EPA 351.2 **Batch ID:** W0F1074 **Instr:** AA06 **Prepared:** 06/16/20 17:10 **Analyst:** YMT						
TKN	**1.1**	0.10	mg/l	1	06/18/20	
Method: EPA 353.2 **Batch ID:** W0F0997 **Instr:** AA01 **Prepared:** 06/16/20 10:36 **Analyst:** sar						
NO2+NO3 as N	ND	200	ug/l	1	06/16/20	
Method: EPA 365.3 **Batch ID:** W0F1057 **Instr:** UVVIS04 **Prepared:** 06/16/20 15:32 **Analyst:** sbn						
o-Phosphate as P	**0.013**	0.010	mg/l	1	06/16/20 16:17	
Method: SM 2540C **Batch ID:** W0F1124 **Instr:** OVEN01 **Prepared:** 06/17/20 12:24 **Analyst:** blg						
Total Dissolved Solids	**33**	10	mg/l	1	06/17/20	

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Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:47

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0F0975 - EPA 300.0										
Blank (W0F0975-BLK1)				**Prepared & Analyzed: 06/16/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0F0975-BS1)				**Prepared & Analyzed: 06/16/20**						
Nitrate as N	2070	110	ug/l	2000		104	90-110			
Matrix Spike (W0F0975-MS1)	**Source: 0F15037-04**			**Prepared: 06/16/20 Analyzed: 06/17/20**						
Nitrate as N	20700	1100	ug/l	20000	330	102	84-115			
Matrix Spike (W0F0975-MS2)	**Source: 0F15037-08**			**Prepared: 06/16/20 Analyzed: 06/17/20**						
Nitrate as N	20600	1100	ug/l	20000	230	102	84-115			
Matrix Spike Dup (W0F0975-MSD1)	**Source: 0F15037-04**			**Prepared: 06/16/20 Analyzed: 06/17/20**						
Nitrate as N	20900	1100	ug/l	20000	330	103	84-115	0.7	20	
Matrix Spike Dup (W0F0975-MSD2)	**Source: 0F15037-08**			**Prepared: 06/16/20 Analyzed: 06/17/20**						
Nitrate as N	20800	1100	ug/l	20000	230	103	84-115	0.9	20	

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0F0997 - EPA 353.2										
Blank (W0F0997-BLK1)				**Prepared & Analyzed: 06/16/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0F0997-BS1)				**Prepared & Analyzed: 06/16/20**						
NO2+NO3 as N	982	200	ug/l	1000		98	90-110			
Matrix Spike (W0F0997-MS1)	**Source: 0F12010-02**			**Prepared & Analyzed: 06/16/20**						
NO2+NO3 as N	9810	200	ug/l	2000	7930	94	90-110			
Matrix Spike (W0F0997-MS2)	**Source: 0F15090-01**			**Prepared & Analyzed: 06/16/20**						
NO2+NO3 as N	5260	200	ug/l	2000	3290	98	90-110			
Matrix Spike Dup (W0F0997-MSD1)	**Source: 0F12010-02**			**Prepared & Analyzed: 06/16/20**						
NO2+NO3 as N	9910	200	ug/l	2000	7930	99	90-110	1	20	
Matrix Spike Dup (W0F0997-MSD2)	**Source: 0F15090-01**			**Prepared & Analyzed: 06/16/20**						
NO2+NO3 as N	5330	200	ug/l	2000	3290	102	90-110	1	20	
Batch: W0F1057 - EPA 365.3										
Blank (W0F1057-BLK1)				**Prepared & Analyzed: 06/16/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0F1057-BS1)				**Prepared & Analyzed: 06/16/20**						
o-Phosphate as P	0.192	0.010	mg/l	0.200		96	88-111			
Matrix Spike (W0F1057-MS1)	**Source: 0F16038-01**			**Prepared & Analyzed: 06/16/20**						
o-Phosphate as P	0.200	0.010	mg/l	0.200	0.00700	96	85-112			
Matrix Spike Dup (W0F1057-MSD1)	**Source: 0F16038-01**			**Prepared & Analyzed: 06/16/20**						
o-Phosphate as P	0.203	0.010	mg/l	0.200	0.00700	98	85-112	1	20	

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Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:47

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0F1074 - EPA 351.2										
Blank (W0F1074-BLK1)				**Prepared: 06/16/20 Analyzed: 06/18/20**						
TKN	ND	0.10	mg/l							
Blank (W0F1074-BLK2)				**Prepared: 06/16/20 Analyzed: 06/18/20**						
TKN	ND	0.10	mg/l							
LCS (W0F1074-BS1)				**Prepared: 06/16/20 Analyzed: 06/18/20**						
TKN	0.992	0.10	mg/l	1.00		99	90-110			
LCS (W0F1074-BS2)				**Prepared: 06/16/20 Analyzed: 06/18/20**						
TKN	0.936	0.10	mg/l	1.00		94	90-110			
Duplicate (W0F1074-DUP1)	**Source: 0F09093-01**			**Prepared: 06/16/20 Analyzed: 06/18/20**						
TKN	0.0862	0.10	mg/l		0.0892			3	10	
Matrix Spike (W0F1074-MS1)	**Source: 0F10057-01**			**Prepared: 06/16/20 Analyzed: 06/18/20**						
TKN	1.26	0.10	mg/l	1.00	0.164	109	90-110			
Matrix Spike (W0F1074-MS2)	**Source: 0F10057-02**			**Prepared: 06/16/20 Analyzed: 06/18/20**						
TKN	1.14	0.10	mg/l	1.00	0.139	101	90-110			
Matrix Spike Dup (W0F1074-MSD1)	**Source: 0F10057-01**			**Prepared: 06/16/20 Analyzed: 06/18/20**						
TKN	1.25	0.10	mg/l	1.00	0.164	109	90-110	0.5	10	
Matrix Spike Dup (W0F1074-MSD2)	**Source: 0F10057-02**			**Prepared: 06/16/20 Analyzed: 06/18/20**						
TKN	1.23	0.10	mg/l	1.00	0.139	109	90-110	7	10	
Batch: W0F1124 - SM 2540C										
Blank (W0F1124-BLK1)				**Prepared & Analyzed: 06/17/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0F1124-BS1)				**Prepared & Analyzed: 06/17/20**						
Total Dissolved Solids	840	10	mg/l	824		102	96-102			
Duplicate (W0F1124-DUP1)	**Source: 0F16082-02**			**Prepared & Analyzed: 06/17/20**						
Total Dissolved Solids	400	10	mg/l		396			1	10	
Duplicate (W0F1124-DUP2)	**Source: 0F08011-06**			**Prepared & Analyzed: 06/17/20**						
Total Dissolved Solids	528	10	mg/l		525			0.6	10	
Batch: W0F1291 - EPA 351.2										
Blank (W0F1291-BLK1)				**Prepared: 06/19/20 Analyzed: 06/22/20**						
TKN	ND	0.10	mg/l							
LCS (W0F1291-BS1)				**Prepared: 06/19/20 Analyzed: 06/22/20**						
TKN	0.979	0.10	mg/l	1.00		98	90-110			
Matrix Spike (W0F1291-MS1)	**Source: 0F17081-09**			**Prepared: 06/19/20 Analyzed: 06/22/20**						
TKN	1.19	0.10	mg/l	1.00	0.207	98	90-110			
Matrix Spike Dup (W0F1291-MSD1)	**Source: 0F17081-09**			**Prepared: 06/19/20 Analyzed: 06/22/20**						
TKN	1.17	0.10	mg/l	1.00	0.207	96	90-110	2	10	

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Santa Ana, CA 92707

Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported:
06/29/2020 16:47

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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14859 Clark Ave
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CA 91745

EXAMPLE

OF16038

3 Hutton Centre Drive, Suite 200, Santa Ana, CA 92707 (714) 751-7373 FAX (714) 545-8883

CHAIN OF CUSTODY FORM

Page 1 of 1

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010101
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN	(714) 751-7373
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
SL-DP-5	water	60 ml Poly	1	6/15/20	9:15a	None	X						
SL-DP-5	water	250 ml Poly	1			None		X					Filtered with 0.45µ
SL-DP-5	water	500 ml Poly	1			None			X				
SL-DP-5	water	250 ml Poly	1			H2SO4				X	X	X	
SL-DP-31.5	water	60 ml Poly	1		9:00a	None	X						
SL-DP-31.5	water	250 ml Poly	1			None		X					Filtered with 0.45µ
SL-DP-31.5	water	500 ml Poly	1			None			X				
SL-DP-31.5	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-SL	water	60 ml Poly	1		12:30p	None	X						
BC-blw-SL	water	250 ml Poly	1			None		X					Filtered with 0.45µ
BC-blw-SL	water	500 ml Poly	1			None			X				
BC-blw-SL	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	

Relinquished By:	Date /Time: 6/15/20	Received by: Date /Time:
Relinquished By: Fedex	Date /Time:	Received by: Date /Time: 6/16/20 10:20
Relinquished By:	Date /Time:	Received in Lab By: Date /Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ____ On Ice ✓

8.9° C

T-0222

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders:	0F17031
Project:	2KLE010101
Attn:	Michael P. Donavan
Client:	Psomas - Santa Ana, CA 3 Hutton Centre Dr., Ste. 200 Santa Ana, CA 92707

Report Date:	6/29/2020
Received Date:	6/17/2020
Turnaround Time:	Normal
Phones:	(714) 751-7373
Fax:	(714) 545-8883
P.O. #:	
Billing Code:	

ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Michael P. Donavan,

Enclosed are the results of analyses for samples received 6/17/20 with the Chain-of-Custody document. The samples were received in good condition, at 4.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Chris Samatmanakit
Project Manager

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Santa Ana, CA 92707

Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported:
06/29/2020 16:49

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
BC-NF-1	Client	0F17031-01	Water	06/16/20 08:00	
BC-b/w-L5	Client	0F17031-02	Water	06/16/20 07:15	
BC-b/w-PH2	Client	0F17031-03	Water	06/16/20 09:30	
BC-b/w-PH3	Client	0F17031-04	Water	06/16/20 10:40	
BC-b/w-PH4	Client	0F17031-05	Water	06/16/20 11:55	
BC-b/w-PH5	Client	0F17031-06	Water	06/16/20 12:25	
BC-b/w-PH6	Client	0F17031-07	Water	06/16/20 13:00	

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Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:49

Sample Results

Sample: BC-NF-1 — Sampled: 06/16/20 8:00 by Client

0F17031-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F1084 **Instr:** LC12 **Prepared:** 06/17/20 09:15 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/17/20 23:20	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/20/20 12:47 **Analyst:** ymt						
Nitrogen, Total	ND	0.30	mg/l	1	06/24/20	
Method: EPA 351.2 **Batch ID:** W0F1297 **Instr:** AA06 **Prepared:** 06/20/20 12:47 **Analyst:** ymt						
TKN	**0.16**	0.10	mg/l	1	06/24/20	
Method: EPA 353.2 **Batch ID:** W0F1138 **Instr:** AA01 **Prepared:** 06/17/20 14:36 **Analyst:** sar						
NO2+NO3 as N	ND	200	ug/l	1	06/18/20	
Method: EPA 365.3 **Batch ID:** W0F1129 **Instr:** UVVIS04 **Prepared:** 06/17/20 12:45 **Analyst:** sbn						
o-Phosphate as P	ND	0.010	mg/l	1	06/17/20 13:40	
Method: SM 2540C **Batch ID:** W0F1187 **Instr:** OVEN01 **Prepared:** 06/18/20 10:19 **Analyst:** blg						
Total Dissolved Solids	**21**	10	mg/l	1	06/18/20	

Sample: BC-b/w-L5 — Sampled: 06/16/20 7:15 by Client

0F17031-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F1084 **Instr:** LC12 **Prepared:** 06/17/20 09:15 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/17/20 23:38	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/20/20 12:47 **Analyst:** ymt						
Nitrogen, Total	**0.41**	0.30	mg/l	1	06/24/20	
Method: EPA 351.2 **Batch ID:** W0F1297 **Instr:** AA06 **Prepared:** 06/20/20 12:47 **Analyst:** ymt						
TKN	**0.41**	0.10	mg/l	1	06/24/20	
Method: EPA 353.2 **Batch ID:** W0F1138 **Instr:** AA01 **Prepared:** 06/17/20 14:36 **Analyst:** sar						
NO2+NO3 as N	ND	200	ug/l	1	06/18/20	
Method: EPA 365.3 **Batch ID:** W0F1129 **Instr:** UVVIS04 **Prepared:** 06/17/20 12:45 **Analyst:** sbn						
o-Phosphate as P	**0.010**	0.010	mg/l	1	06/17/20 13:41	
Method: SM 2540C **Batch ID:** W0F1187 **Instr:** OVEN01 **Prepared:** 06/18/20 10:19 **Analyst:** blg						
Total Dissolved Solids	**25**	10	mg/l	1	06/18/20	

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Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:49

Sample Results

(Continued)

Sample: BC-b/w-PH2 — Sampled: 06/16/20 9:30 by Client

0F17031-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F1084 **Instr:** LC12 **Prepared:** 06/17/20 09:15 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/18/20 00:32	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/20/20 12:47 **Analyst:** ymt						
Nitrogen, Total	ND	0.30	mg/l	1	06/24/20	
Method: EPA 351.2 **Batch ID:** W0F1297 **Instr:** AA06 **Prepared:** 06/20/20 12:47 **Analyst:** ymt						
TKN	**0.11**	0.10	mg/l	1	06/24/20	
Method: EPA 353.2 **Batch ID:** W0F1138 **Instr:** AA01 **Prepared:** 06/17/20 14:36 **Analyst:** sar						
NO2+NO3 as N	ND	200	ug/l	1	06/18/20	
Method: EPA 365.3 **Batch ID:** W0F1129 **Instr:** UVVIS04 **Prepared:** 06/17/20 12:45 **Analyst:** sbn						
o-Phosphate as P	ND	0.010	mg/l	1	06/17/20 13:42	
Method: SM 2540C **Batch ID:** W0F1187 **Instr:** OVEN01 **Prepared:** 06/18/20 10:19 **Analyst:** blg						
Total Dissolved Solids	**28**	10	mg/l	1	06/18/20	

Sample: BC-b/w-PH3 — Sampled: 06/16/20 10:40 by Client

0F17031-04 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F1084 **Instr:** LC12 **Prepared:** 06/17/20 09:15 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/18/20 00:50	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/20/20 12:47 **Analyst:** ymt						
Nitrogen, Total	ND	0.30	mg/l	1	06/24/20	
Method: EPA 351.2 **Batch ID:** W0F1297 **Instr:** AA06 **Prepared:** 06/20/20 12:47 **Analyst:** ymt						
TKN	**0.11**	0.10	mg/l	1	06/24/20	
Method: EPA 353.2 **Batch ID:** W0F1138 **Instr:** AA01 **Prepared:** 06/17/20 14:36 **Analyst:** sar						
NO2+NO3 as N	ND	200	ug/l	1	06/18/20	
Method: EPA 365.3 **Batch ID:** W0F1129 **Instr:** UVVIS04 **Prepared:** 06/17/20 12:45 **Analyst:** sbn						
o-Phosphate as P	ND	0.010	mg/l	1	06/17/20 13:43	
Method: SM 2540C **Batch ID:** W0F1187 **Instr:** OVEN01 **Prepared:** 06/18/20 10:19 **Analyst:** blg						
Total Dissolved Solids	**27**	10	mg/l	1	06/18/20	

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Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:49

Sample Results

(Continued)

Sample: BC-b/w-PH4 — Sampled: 06/16/20 11:55 by Client

0F17031-05 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F1084 **Instr:** LC12 **Prepared:** 06/17/20 09:15 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/18/20 01:08	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/20/20 12:47 **Analyst:** ymt						
Nitrogen, Total	ND	0.30	mg/l	1	06/24/20	
Method: EPA 351.2 **Batch ID:** W0F1297 **Instr:** AA06 **Prepared:** 06/20/20 12:47 **Analyst:** ymt						
TKN	ND	0.10	mg/l	1	06/24/20	
Method: EPA 353.2 **Batch ID:** W0F1138 **Instr:** AA01 **Prepared:** 06/17/20 14:36 **Analyst:** sar						
NO2+NO3 as N	ND	200	ug/l	1	06/18/20	
Method: EPA 365.3 **Batch ID:** W0F1129 **Instr:** UVVIS04 **Prepared:** 06/17/20 12:45 **Analyst:** sbn						
o-Phosphate as P	ND	0.010	mg/l	1	06/17/20 13:44	
Method: SM 2540C **Batch ID:** W0F1187 **Instr:** OVEN01 **Prepared:** 06/18/20 10:19 **Analyst:** blg						
Total Dissolved Solids	**35**	10	mg/l	1	06/18/20	

Sample: BC-b/w-PH5 — Sampled: 06/16/20 12:25 by Client

0F17031-06 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F1084 **Instr:** LC12 **Prepared:** 06/17/20 09:15 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/18/20 01:26	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/19/20 16:46 **Analyst:** ymt						
Nitrogen, Total	ND	0.30	mg/l	1	06/22/20	
Method: EPA 351.2 **Batch ID:** W0F1291 **Instr:** AA06 **Prepared:** 06/19/20 16:46 **Analyst:** ymt						
TKN	ND	0.10	mg/l	1	06/22/20	
Method: EPA 353.2 **Batch ID:** W0F1138 **Instr:** AA01 **Prepared:** 06/17/20 14:36 **Analyst:** sar						
NO2+NO3 as N	ND	200	ug/l	1	06/18/20	
Method: EPA 365.3 **Batch ID:** W0F1129 **Instr:** UVVIS04 **Prepared:** 06/17/20 12:45 **Analyst:** sbn						
o-Phosphate as P	ND	0.010	mg/l	1	06/17/20 13:44	
Method: SM 2540C **Batch ID:** W0F1187 **Instr:** OVEN01 **Prepared:** 06/18/20 10:19 **Analyst:** blg						
Total Dissolved Solids	**37**	10	mg/l	1	06/18/20	

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Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported:
06/29/2020 16:49

Sample Results

(Continued)

Sample: BC-b/w-PH6
0F17031-07 (Water)

Sampled: 06/16/20 13:00 by Client

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F1084 **Instr:** LC12		**Prepared:** 06/17/20 09:15			**Analyst:** jna	
Nitrate as N	ND	110	ug/l	1	06/18/20 01:44	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC]		**Prepared:** 06/19/20 16:46			**Analyst:** ymt	
Nitrogen, Total	ND	0.30	mg/l	1	06/22/20	
Method: EPA 351.2 **Batch ID:** W0F1291 **Instr:** AA06		**Prepared:** 06/19/20 16:46			**Analyst:** ymt	
TKN	ND	0.10	mg/l	1	06/22/20	
Method: EPA 353.2 **Batch ID:** W0F1138 **Instr:** AA01		**Prepared:** 06/17/20 14:36			**Analyst:** sar	
NO2+NO3 as N	ND	200	ug/l	1	06/18/20	
Method: EPA 365.3 **Batch ID:** W0F1129 **Instr:** UVVIS04		**Prepared:** 06/17/20 12:45			**Analyst:** sbn	
o-Phosphate as P	ND	0.010	mg/l	1	06/17/20 13:45	
Method: SM 2540C **Batch ID:** W0F1187 **Instr:** OVEN01		**Prepared:** 06/18/20 10:19			**Analyst:** blg	
Total Dissolved Solids	**35**	10	mg/l	1	06/18/20	

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Santa Ana, CA 92707

Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:49

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0F1084 - EPA 300.0										
Blank (W0F1084-BLK1)				**Prepared & Analyzed: 06/17/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0F1084-BS1)				**Prepared & Analyzed: 06/17/20**						
Nitrate as N	2090	110	ug/l	2000		104	90-110			
Matrix Spike (W0F1084-MS1)	**Source: 0F08011-01**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
Nitrate as N	23700	1100	ug/l	20000	4050	98	84-115			
Matrix Spike (W0F1084-MS2)	**Source: 0F08011-03**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
Nitrate as N	21000	1100	ug/l	20000	786	101	84-115			
Matrix Spike Dup (W0F1084-MSD1)	**Source: 0F08011-01**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
Nitrate as N	23800	1100	ug/l	20000	4050	99	84-115	0.5	20	
Matrix Spike Dup (W0F1084-MSD2)	**Source: 0F08011-03**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
Nitrate as N	20900	1100	ug/l	20000	786	100	84-115	0.6	20	

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0F1129 - EPA 365.3										
Blank (W0F1129-BLK1)				**Prepared & Analyzed: 06/17/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0F1129-BS1)				**Prepared & Analyzed: 06/17/20**						
o-Phosphate as P	0.201	0.010	mg/l	0.200		100	88-111			
Matrix Spike (W0F1129-MS1)	**Source: 0F17031-01**			**Prepared & Analyzed: 06/17/20**						
o-Phosphate as P	0.207	0.010	mg/l	0.200	0.00500	101	85-112			
Matrix Spike Dup (W0F1129-MSD1)	**Source: 0F17031-01**			**Prepared & Analyzed: 06/17/20**						
o-Phosphate as P	0.206	0.010	mg/l	0.200	0.00500	100	85-112	0.5	20	
Batch: W0F1138 - EPA 353.2										
Blank (W0F1138-BLK1)				**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0F1138-BS1)				**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	960	200	ug/l	1000		96	90-110			
Matrix Spike (W0F1138-MS1)	**Source: 0E29004-01**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	2010	200	ug/l	2000	ND	100	90-110			
Matrix Spike (W0F1138-MS2)	**Source: 0F01006-01RE1**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	3190	200	ug/l	2000	1220	98	90-110			
Matrix Spike Dup (W0F1138-MSD1)	**Source: 0E29004-01**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	2010	200	ug/l	2000	ND	100	90-110	0	20	
Matrix Spike Dup (W0F1138-MSD2)	**Source: 0F01006-01RE1**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	3190	200	ug/l	2000	1220	98	90-110	0	20	

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Santa Ana, CA 92707

Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:49

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0F1187 - SM 2540C										
Blank (W0F1187-BLK1)				**Prepared & Analyzed: 06/18/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0F1187-BS1)				**Prepared & Analyzed: 06/18/20**						
Total Dissolved Solids	828	10	mg/l	824		100	96-102			
Duplicate (W0F1187-DUP1)	**Source: 0F01006-01**			**Prepared & Analyzed: 06/18/20**						
Total Dissolved Solids	4760	10	mg/l		4680			2	10	
Duplicate (W0F1187-DUP2)	**Source: 0F16039-01**			**Prepared & Analyzed: 06/18/20**						
Total Dissolved Solids	36200	10	mg/l		36300			0.5	10	
Batch: W0F1291 - EPA 351.2										
Blank (W0F1291-BLK1)				**Prepared: 06/19/20 Analyzed: 06/22/20**						
TKN	ND	0.10	mg/l							
LCS (W0F1291-BS1)				**Prepared: 06/19/20 Analyzed: 06/22/20**						
TKN	0.979	0.10	mg/l	1.00		98	90-110			
Matrix Spike (W0F1291-MS1)	**Source: 0F17081-09**			**Prepared: 06/19/20 Analyzed: 06/22/20**						
TKN	1.19	0.10	mg/l	1.00	0.207	98	90-110			
Matrix Spike Dup (W0F1291-MSD1)	**Source: 0F17081-09**			**Prepared: 06/19/20 Analyzed: 06/22/20**						
TKN	1.17	0.10	mg/l	1.00	0.207	96	90-110	2	10	
Batch: W0F1297 - EPA 351.2										
Blank (W0F1297-BLK1)				**Prepared: 06/20/20 Analyzed: 06/24/20**						
TKN	ND	0.10	mg/l							
LCS (W0F1297-BS1)				**Prepared: 06/20/20 Analyzed: 06/24/20**						
TKN	0.988	0.10	mg/l	1.00		99	90-110			
Matrix Spike (W0F1297-MS1)	**Source: 0F17081-07**			**Prepared: 06/20/20 Analyzed: 06/24/20**						
TKN	1.23	0.10	mg/l	1.00	0.214	102	90-110			
Matrix Spike Dup (W0F1297-MSD1)	**Source: 0F17081-07**			**Prepared: 06/20/20 Analyzed: 06/24/20**						
TKN	1.24	0.10	mg/l	1.00	0.214	103	90-110	0.9	10	

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Santa Ana, CA 92707

Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported:
06/29/2020 16:49

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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City of Industry, CA
91745

OF17031

EXAMPLE

3 Hutton Centre Drive, Suite 200, Santa Ana, CA 92707 (714) 751-7373 FAX (714) 545-8883

CHAIN OF CUSTODY FORM

Page 1 of 2

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010101
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN	(714) 751-7373
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Analysis Required: Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
BC-NF-1	water	60 ml Poly	1	6/16/20	8:00a	None	X						
"	water	250 ml Poly	1	"	"	None		X					Filtered with 0.45µ
"	water	500 ml Poly	1	"	"	None			X				
"	water	250 ml Poly	1	"	"	H2SO4				X	X	X	
BC-blw-LS	water	60 ml Poly	1	6/16/20	7:15a	None	X						
"	water	250 ml Poly	1	"	"	None		X					Filtered with 0.45µ
"	water	500 ml Poly	1	"	"	None			X				
"	water	250 ml Poly	1	"	"	H2SO4				X	X	X	
BC-blw-PH2	water	60 ml Poly	1	6/16/20	9:30a	None	X						
"	water	250 ml Poly	1	"	"	None		X					Filtered with 0.45µ
"	water	500 ml Poly	1	"	"	None			X				
"	water	250 ml Poly	1	"	"	H2SO4				X	X	X	
BC-blw-PH3	water	60 ml Poly	1	6/16/20	10:40a	None	X						
"	water	250 ml Poly	1	"	"	None		X					Filtered with 0.45µ
"	water	500 ml Poly	1	"	"	None			X				
"	water	250 ml Poly	1	"	"	H2SO4				X	X	X	
BC-blw-PH4	water	60 ml Poly	1	6/16/20	11:55a	None	X						
"	water	250 ml Poly	1	"	"	None		X					Filtered with 0.45µ
"	water	500 ml Poly	1	"	"	None			X				
"	water	250 ml Poly	1	"	"	H2SO4				X	X	X	

Relinquished By: [signature]	Date/Time: 6/16/20 1:30pm	Received by: [signature]	Date/Time:
Relinquished By: Fedex	Date/Time: 6-17-20	Received by: [signature]	Date/Time: 10:20
Relinquished By:	Date/Time:	Received in Lab by:	Date/Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact X On Ice X

4.8°C T-0239

OF17031

EXAMPLE

3 Hutton Centre Drive, Suite 200, Santa Ana, CA 92707 (714) 751-7373 FAX (714) 545-8883

CHAIN OF CUSTODY FORM

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010101
Project Manager: MICHAEL P. DONOVAN	Phone Number: (714) 751-7373
Sampler: Jim Burton, Todd Bear	Fax Number: 714.545.8883

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
BC-blw-PH5	water	60 ml Poly	1	6/16/20	12:25p	None	X						
BC-blw-PH5	water	250 ml Poly	1	|	|	None		X					Filtered with 0.45µ
BC-blw-PH5	water	500 ml Poly	1	|	|	None			X				
BC-blw-PH5	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH6	water	60 ml Poly	1	6/16/20	1:00p	None	X						
BC-blw-PH6	water	250 ml Poly	1	|	|	None		X					Filtered with 0.45µ
BC-blw-PH6	water	500 ml Poly	1	|	|	None			X				
BC-blw-PH6	water	250 ml Poly	1	|	|	H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	

Relinquished By:	Date /Time:	Received by:	Date /Time:
[signature]	6/16/20 1:30pm		
Relinquished By: Fedex	Date /Time: 6-17-20	Received by: [signature]	Date /Time: 10:20
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ______ 72 Hours ______
24 Hours ______ 5 Days ______
48 Hours ______ Normal X

Sample Integrity: (Check)
Intact X On Ice X

4.6°C T0289

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders:	0F18018	**Report Date:**	6/29/2020
		Received Date:	6/18/2020
Project:	2KLE010101	**Turnaround Time:**	Normal
		Phones:	(714) 751-7373
		Fax:	(714) 545-8883
Attn:	Michael P. Donavan	**P.O. #:**	
Client:	Psomas - Santa Ana, CA 3 Hutton Centre Dr., Ste. 200 Santa Ana, CA 92707	**Billing Code:**	

ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Michael P. Donavan,

Enclosed are the results of analyses for samples received 6/18/20 with the Chain-of-Custody document. The samples were received in good condition, at 7.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Chris Samatmanakit
Project Manager

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Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported:
06/29/2020 16:53

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
LS-DP-8	Jim Burton, Todd Bear	0F18018-01	Water	06/17/20 09:00	
LS-DP-15	Jim Burton, Todd Bear	0F18018-02	Water	06/17/20 09:30	

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Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:53

Sample Results

Sample: LS-DP-8 — Sampled: 06/17/20 9:00 by Jim Burton, Todd Bear

0F18018-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F1161 **Instr:** LC12 **Prepared:** 06/18/20 12:03 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/19/20 00:34	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/24/20 17:54 **Analyst:** ymt						
Nitrogen, Total	ND	0.30	mg/l	1	06/26/20	
Method: EPA 351.2 **Batch ID:** W0F1522 **Instr:** AA06 **Prepared:** 06/24/20 17:54 **Analyst:** ymt						
TKN	ND	0.10	mg/l	1	06/26/20	
Method: EPA 353.2 **Batch ID:** W0F1138 **Instr:** AA01 **Prepared:** 06/17/20 14:36 **Analyst:** sar						
NO2+NO3 as N	ND	200	ug/l	1	06/18/20	
Method: EPA 365.3 **Batch ID:** W0F1218 **Instr:** UVVIS04 **Prepared:** 06/18/20 13:32 **Analyst:** sbn						
o-Phosphate as P	ND	0.010	mg/l	1	06/18/20 14:29	
Method: SM 2540C **Batch ID:** W0F1331 **Instr:** OVEN01 **Prepared:** 06/22/20 10:24 **Analyst:** blg						
Total Dissolved Solids	**16**	10	mg/l	1	06/23/20	

Sample: LS-DP-15 — Sampled: 06/17/20 9:30 by Jim Burton, Todd Bear

0F18018-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0 **Batch ID:** W0F1161 **Instr:** LC12 **Prepared:** 06/18/20 12:03 **Analyst:** jna						
Nitrate as N	ND	110	ug/l	1	06/19/20 00:52	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC] **Batch ID:** [CALC] **Instr:** [CALC] **Prepared:** 06/24/20 17:54 **Analyst:** ymt						
Nitrogen, Total	**0.30**	0.30	mg/l	1	06/26/20	
Method: EPA 351.2 **Batch ID:** W0F1522 **Instr:** AA06 **Prepared:** 06/24/20 17:54 **Analyst:** ymt						
TKN	**0.30**	0.10	mg/l	1	06/26/20	
Method: EPA 353.2 **Batch ID:** W0F1346 **Instr:** AA01 **Prepared:** 06/22/20 12:27 **Analyst:** aa01						
NO2+NO3 as N	ND	200	ug/l	1	06/23/20	
Method: EPA 365.3 **Batch ID:** W0F1218 **Instr:** UVVIS04 **Prepared:** 06/18/20 13:32 **Analyst:** sbn						
o-Phosphate as P	ND	0.010	mg/l	1	06/18/20 14:32	
Method: SM 2540C **Batch ID:** W0F1331 **Instr:** OVEN01 **Prepared:** 06/22/20 10:24 **Analyst:** blg						
Total Dissolved Solids	**25**	10	mg/l	1	06/23/20	

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Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:53

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0F1161 - EPA 300.0										
Blank (W0F1161-BLK1)				**Prepared & Analyzed: 06/18/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0F1161-BS1)				**Prepared & Analyzed: 06/18/20**						
Nitrate as N	2080	110	ug/l	2000		104	90-110			
Matrix Spike (W0F1161-MS1)	**Source: 0F18018-01**			**Prepared: 06/18/20 Analyzed: 06/19/20**						
Nitrate as N	20000	1100	ug/l	20000	ND	100	84-115			
Matrix Spike Dup (W0F1161-MSD1)	**Source: 0F18018-01**			**Prepared: 06/18/20 Analyzed: 06/19/20**						
Nitrate as N	20300	1100	ug/l	20000	ND	102	84-115	1	20	

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0F1138 - EPA 353.2										
Blank (W0F1138-BLK1)				**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0F1138-BS1)				**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	960	200	ug/l	1000		96	90-110			
Matrix Spike (W0F1138-MS1)	**Source: 0E29004-01**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	2010	200	ug/l	2000	ND	100	90-110			
Matrix Spike (W0F1138-MS2)	**Source: 0F01006-01RE1**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	3190	200	ug/l	2000	1220	98	90-110			
Matrix Spike Dup (W0F1138-MSD1)	**Source: 0E29004-01**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	2010	200	ug/l	2000	ND	100	90-110	0	20	
Matrix Spike Dup (W0F1138-MSD2)	**Source: 0F01006-01RE1**			**Prepared: 06/17/20 Analyzed: 06/18/20**						
NO2+NO3 as N	3190	200	ug/l	2000	1220	98	90-110	0	20	
Batch: W0F1218 - EPA 365.3										
Blank (W0F1218-BLK1)				**Prepared & Analyzed: 06/18/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0F1218-BS1)				**Prepared & Analyzed: 06/18/20**						
o-Phosphate as P	0.192	0.010	mg/l	0.200		96	88-111			
Matrix Spike (W0F1218-MS1)	**Source: 0F18018-01**			**Prepared & Analyzed: 06/18/20**						
o-Phosphate as P	0.196	0.010	mg/l	0.200	ND	98	85-112			
Matrix Spike Dup (W0F1218-MSD1)	**Source: 0F18018-01**			**Prepared & Analyzed: 06/18/20**						
o-Phosphate as P	0.202	0.010	mg/l	0.200	ND	101	85-112	3	20	
Batch: W0F1331 - SM 2540C										
Blank (W0F1331-BLK1)				**Prepared: 06/22/20 Analyzed: 06/23/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0F1331-BS1)				**Prepared: 06/22/20 Analyzed: 06/23/20**						

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Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported: 06/29/2020 16:53

Quality Control Results (Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0F1331 - SM 2540C (Continued)										
LCS (W0F1331-BS1)				**Prepared: 06/22/20**	**Analyzed: 06/23/20**					
Total Dissolved Solids	808	10	mg/l	824		98	96-102			
Duplicate (W0F1331-DUP1)	**Source: 0F17012-04**			**Prepared: 06/22/20**	**Analyzed: 06/23/20**					
Total Dissolved Solids	16900	10	mg/l		16300			3	10	
Batch: W0F1346 - EPA 353.2										
Blank (W0F1346-BLK1)				**Prepared: 06/22/20**	**Analyzed: 06/23/20**					
NO2+NO3 as N	ND	50	ug/l							
LCS (W0F1346-BS1)				**Prepared: 06/22/20**	**Analyzed: 06/23/20**					
NO2+NO3 as N	991	50	ug/l	1000		99	90-110			
Matrix Spike (W0F1346-MS1)	**Source: 0F19017-02**			**Prepared: 06/22/20**	**Analyzed: 06/23/20**					
NO2+NO3 as N	9940	50	ug/l	2000	7900	102	90-110			
Matrix Spike (W0F1346-MS2)	**Source: 0F22026-01**			**Prepared: 06/22/20**	**Analyzed: 06/23/20**					
NO2+NO3 as N	5550	50	ug/l	2000	3590	98	90-110			
Matrix Spike Dup (W0F1346-MSD1)	**Source: 0F19017-02**			**Prepared: 06/22/20**	**Analyzed: 06/23/20**					
NO2+NO3 as N	9940	50	ug/l	2000	7900	102	90-110	0	20	
Matrix Spike Dup (W0F1346-MSD2)	**Source: 0F22026-01**			**Prepared: 06/22/20**	**Analyzed: 06/23/20**					
NO2+NO3 as N	5540	50	ug/l	2000	3590	98	90-110	0.2	20	
Batch: W0F1522 - EPA 351.2										
Blank (W0F1522-BLK1)				**Prepared: 06/24/20**	**Analyzed: 06/26/20**					
TKN	ND	0.10	mg/l							
Blank (W0F1522-BLK2)				**Prepared: 06/24/20**	**Analyzed: 06/26/20**					
TKN	ND	0.10	mg/l							
LCS (W0F1522-BS1)				**Prepared: 06/24/20**	**Analyzed: 06/26/20**					
TKN	0.982	0.10	mg/l	1.00		98	90-110			
LCS (W0F1522-BS2)				**Prepared: 06/24/20**	**Analyzed: 06/26/20**					
TKN	0.952	0.10	mg/l	1.00		95	90-110			
Matrix Spike (W0F1522-MS1)	**Source: 0F17081-01**			**Prepared: 06/24/20**	**Analyzed: 06/26/20**					
TKN	1.25	0.10	mg/l	1.00	0.181	107	90-110			
Matrix Spike (W0F1522-MS2)	**Source: 0F17081-02**			**Prepared: 06/24/20**	**Analyzed: 06/26/20**					
TKN	1.21	0.10	mg/l	1.00	0.225	99	90-110			
Matrix Spike Dup (W0F1522-MSD1)	**Source: 0F17081-01**			**Prepared: 06/24/20**	**Analyzed: 06/26/20**					
TKN	1.23	0.10	mg/l	1.00	0.181	105	90-110	1	10	
Matrix Spike Dup (W0F1522-MSD2)	**Source: 0F17081-02**			**Prepared: 06/24/20**	**Analyzed: 06/26/20**					
TKN	1.19	0.10	mg/l	1.00	0.225	96	90-110	2	10	

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Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Project Number: 2KLE010101

Project Manager: Michael P. Donavan

Reported:
06/29/2020 16:53

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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Weck Labs
14859 Clark Ave.
City of Industry, CA
91745

EXAMPLE

3 Hutton Centre Drive, Suite 200, Santa Ana, CA 92707 (714) 751-7373 FAX (714) 545-8883

CHAIN OF CUSTODY FORM

0F18019

Page ______ of ______

Client Name/Address:
PSOMAS
3 HUTTON CENTRE DRIVE, SUITE 200
SANTA ANA, CA 92707

Project/PO Number: 2KLE010101

Project Manager: MICHAEL P. DONOVAN

Phone Number: (714) 751-7373

Sampler: Jim Burton, Todd Bear

Fax Number: 714.545.8883

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation						Special Instructions
LS-DP-8	water	60 ml Poly	1	6/17/20	9:00a	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45μ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
LS-DP-15	water	60 ml Poly	1	6/17/20	9:30a	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45μ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45μ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45μ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45μ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						

Relinquished By:	Date /Time:	Received by:	Date /Time:
[signature]	6/17/20 12:10p		
Relinquished By: FedEx	Date /Time: 6/18/20	Received by: [signature]	Date /Time: 10:20
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ______ 72 Hours ______
24 Hours ______ 5 Days ______
48 Hours ______ Normal X

Sample Integrity: (Check)
Intact ______ On Ice ______

T2239 7.0°C

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0G29029

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/06/2020
Received Date: 7/29/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 7/29/20 with the Chain-of-Custody document. The samples were received in good condition, at 4.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: SL-DP-54
0G29029-01 (Water)
Sampled: 07/28/20 10:05 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 07/31/20 16:03				**Analyst:** YMT
Nitrogen, Total	**5.2**	0.40	mg/l	2	08/04/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1515 **Preparation:** _NONE (LC)		**Prepared:** 07/29/20 09:45				**Analyst:** jna
Nitrate as N	ND	110	ug/l	1	07/29/20 19:59	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0G1518 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/29/20 09:47				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	07/29/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1523 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/29/20 10:29				**Analyst:** sbn
o-Phosphate as P	**0.17**	0.010	mg/l	1	07/29/20 16:03	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0G1659 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:31				**Analyst:** ism
Total Dissolved Solids	**1100**	10	mg/l	1	07/31/20	

Sample: SL-DP-54
0G29029-01RE1 (Water)
Sampled: 07/28/20 10:05 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0G1676 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 16:03				**Analyst:** YMT
TKN	**5.2**	0.20	mg/l	2	08/04/20	

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Sample Results

(Continued)

Sample: SL-DP-4 — Sampled: 07/28/20 10:30 by Jim Burton, Todd Bear

0G29029-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 07/31/20 16:03				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/04/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1515 **Preparation:** _NONE (LC)		**Prepared:** 07/29/20 09:45				**Analyst:** jna
Nitrate as N	ND	110	ug/l	1	07/29/20 20:53	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0G1518 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/29/20 09:47				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	07/29/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1523 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/29/20 10:29				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/29/20 16:07	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0G1659 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:31				**Analyst:** ism
Total Dissolved Solids	ND	10	mg/l	1	07/31/20	

Sample: SL-DP-4 — Sampled: 07/28/20 10:30 by Jim Burton, Todd Bear

0G29029-02RE1 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0G1676 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 16:03				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/04/20	

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Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0G1515 - _NONE (LC)										
Blank (W0G1515-BLK1)				**Prepared & Analyzed: 07/29/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0G1515-BS1)				**Prepared & Analyzed: 07/29/20**						
Nitrate as N	2200	110	ug/l	2000		110	90-110			
Matrix Spike (W0G1515-MS1)	**Source: 0G20008-01**			**Prepared & Analyzed: 07/29/20**						
Nitrate as N	23100	1100	ug/l	20000	*2290*	104	84-115			
Matrix Spike (W0G1515-MS2)	**Source: 0G20008-02**			**Prepared & Analyzed: 07/29/20**						
Nitrate as N	21500	1100	ug/l	20000	*356*	106	84-115			
Matrix Spike Dup (W0G1515-MSD1)	**Source: 0G20008-01**			**Prepared & Analyzed: 07/29/20**						
Nitrate as N	23000	1100	ug/l	20000	*2290*	104	84-115	0.04	20	
Matrix Spike Dup (W0G1515-MSD2)	**Source: 0G20008-02**			**Prepared & Analyzed: 07/29/20**						
Nitrate as N	21500	1100	ug/l	20000	*356*	106	84-115	0.05	20	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0G1518 - _NONE (WETCHEM)										
Blank (W0G1518-BLK1)				**Prepared & Analyzed: 07/29/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0G1518-BS1)				**Prepared & Analyzed: 07/29/20**						
NO2+NO3 as N	1040	200	ug/l	1000		104	90-110			
Matrix Spike (W0G1518-MS1)	**Source: 0G28104-02**			**Prepared & Analyzed: 07/29/20**						
NO2+NO3 as N	2110	200	ug/l	2000	*ND*	106	90-110			
Matrix Spike Dup (W0G1518-MSD1)	**Source: 0G28104-02**			**Prepared & Analyzed: 07/29/20**						
NO2+NO3 as N	2100	200	ug/l	2000	*ND*	105	90-110	0.5	20	
Batch: W0G1523 - _NONE (WETCHEM)										
Blank (W0G1523-BLK1)				**Prepared & Analyzed: 07/29/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0G1523-BS1)				**Prepared & Analyzed: 07/29/20**						
o-Phosphate as P	0.191	0.010	mg/l	0.200		96	88-111			
Matrix Spike (W0G1523-MS1)	**Source: 0G28048-01**			**Prepared & Analyzed: 07/29/20**						
o-Phosphate as P	0.304	0.010	mg/l	0.200	*0.104*	100	85-112			
Matrix Spike Dup (W0G1523-MSD1)	**Source: 0G28048-01**			**Prepared & Analyzed: 07/29/20**						
o-Phosphate as P	0.302	0.010	mg/l	0.200	*0.104*	99	85-112	0.7	20	
Batch: W0G1659 - _NONE (WETCHEM)										
Blank (W0G1659-BLK1)				**Prepared & Analyzed: 07/31/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0G1659-BS1)				**Prepared & Analyzed: 07/31/20**						
Total Dissolved Solids	804	10	mg/l	824		98	96-102			
Duplicate (W0G1659-DUP1)	**Source: 0G28101-05**			**Prepared & Analyzed: 07/31/20**						
Total Dissolved Solids	2190	10	mg/l		*2160*			1	10	
Duplicate (W0G1659-DUP2)	**Source: 0G28110-01**			**Prepared & Analyzed: 07/31/20**						
Total Dissolved Solids	1710	10	mg/l		*1760*			3	10	

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0G1676 - _NONE (WETCHEM)										
Blank (W0G1676-BLK1)				**Prepared: 07/31/20**	**Analyzed: 08/04/20**					
TKN	ND	0.10	mg/l							
Blank (W0G1676-BLK2)				**Prepared: 07/31/20**	**Analyzed: 08/04/20**					
TKN	ND	0.10	mg/l							
LCS (W0G1676-BS1)				**Prepared: 07/31/20**	**Analyzed: 08/04/20**					
TKN	0.926	0.10	mg/l	1.00		93	90-110			
LCS (W0G1676-BS2)				**Prepared: 07/31/20**	**Analyzed: 08/04/20**					
TKN	0.911	0.10	mg/l	1.00		91	90-110			
Matrix Spike (W0G1676-MS1)	**Source: 0G27075-01**			**Prepared: 07/31/20**	**Analyzed: 08/04/20**					
TKN	1.24	0.10	mg/l	1.00	*0.246*	99	90-110			
Matrix Spike (W0G1676-MS2)	**Source: 0G27075-02**			**Prepared: 07/31/20**	**Analyzed: 08/04/20**					
TKN	1.26	0.10	mg/l	1.00	*0.269*	99	90-110			
Matrix Spike Dup (W0G1676-MSD1)	**Source: 0G27075-01**			**Prepared: 07/31/20**	**Analyzed: 08/04/20**					
TKN	1.24	0.10	mg/l	1.00	*0.246*	99	90-110	0.08	10	
Matrix Spike Dup (W0G1676-MSD2)	**Source: 0G27075-02**			**Prepared: 07/31/20**	**Analyzed: 08/04/20**					
TKN	1.33	0.10	mg/l	1.00	*0.269*	106	90-110	5	10	

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Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Reviewed by:

Chris Samatmanakit
Project Manager

ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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(626) 336-2139

0G29029

CHAIN OF CUSTODY FORM

Page 1 of 1

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager: MICHAEL P. DONOVAN (mpdonovn@cox.net)	Phone Number: (714) 328-5234
Sampler: Jim Burton, Todd Bear	Fax Number: 714.545.8883

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
SL-DP-54	water	60 ml Poly	1	7/28/20	10:05 am	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
SL-DP-4	water	60 ml Poly	1	7/28/20	10:30 am	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	

Relinquished By:	Date /Time:	Received by:	Date /Time:
[signature]	7/28/20 1:30 pm	FedEx	
FedEx		Jane [signature]	7/29/20 0905
		Received in Lab by:	

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ✓ On Ice ✓

4.0°C T0234

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0G30036

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/06/2020
Received Date: 7/29/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 7/29/20 with the Chain-of-Custody document. The samples were received in good condition, at 13.7 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: LS-DP-16
0G30036-01 (Water)

Sampled: 07/29/20 10:55 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 07/31/20 16:03				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/04/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1577 **Preparation:** _NONE (LC)		**Prepared:** 07/30/20 16:24				**Analyst:** jna
Nitrate as N	ND	110	ug/l	1	07/30/20 17:37	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0G1676 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 16:03				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/04/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0G1562 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/29/20 16:42				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	07/30/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1632 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/30/20 16:14				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/30/20 16:51	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0G1659 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:31				**Analyst:** ism
Total Dissolved Solids	**12**	10	mg/l	1	07/31/20	

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Sample Results

(Continued)

Sample: LS-DP-7 Sampled: 07/29/20 11:25 by Jim Burton, Todd Bear

0G30036-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 07/31/20 16:03				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/04/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1577 **Preparation:** _NONE (LC)		**Prepared:** 07/30/20 16:24				**Analyst:** jna
Nitrate as N	ND	110	ug/l	1	07/30/20 17:55	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0G1676 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 16:03				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/04/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0G1562 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/29/20 16:42				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	07/30/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1632 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/30/20 16:14				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/30/20 16:53	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0G1659 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:31				**Analyst:** ism
Total Dissolved Solids	**11**	10	mg/l	1	07/31/20	

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Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0G1577 - _NONE (LC)										
Blank (W0G1577-BLK1)				**Prepared & Analyzed: 07/30/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0G1577-BS1)				**Prepared & Analyzed: 07/30/20**						
Nitrate as N	2130	110	ug/l	2000		107	90-110			
Matrix Spike (W0G1577-MS1)	**Source: 0G27001-01**			**Prepared: 07/30/20 Analyzed: 07/31/20**						
Nitrate as N	20400	1100	ug/l	20000	*ND*	102	84-115			
Matrix Spike (W0G1577-MS2)	**Source: 0G27001-02**			**Prepared: 07/30/20 Analyzed: 07/31/20**						
Nitrate as N	61500	1100	ug/l	20000	*ND*	308	84-115			MS-01
Matrix Spike Dup (W0G1577-MSD1)	**Source: 0G27001-01**			**Prepared: 07/30/20 Analyzed: 07/31/20**						
Nitrate as N	20500	1100	ug/l	20000	*ND*	102	84-115	0.5	20	
Matrix Spike Dup (W0G1577-MSD2)	**Source: 0G27001-02**			**Prepared: 07/30/20 Analyzed: 07/31/20**						
Nitrate as N	61400	1100	ug/l	20000	*ND*	307	84-115	0.2	20	MS-01

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0G1562 - _NONE (WETCHEM)										
Blank (W0G1562-BLK1)				**Prepared: 07/29/20 Analyzed: 07/30/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0G1562-BS1)				**Prepared: 07/29/20 Analyzed: 07/30/20**						
NO2+NO3 as N	995	200	ug/l	1000		100	90-110			
Matrix Spike (W0G1562-MS1)	**Source: 0G27001-05**			**Prepared: 07/29/20 Analyzed: 07/30/20**						
NO2+NO3 as N	3460	200	ug/l	2000	*1400*	103	90-110			
Matrix Spike (W0G1562-MS2)	**Source: 0G28002-04**			**Prepared: 07/29/20 Analyzed: 07/30/20**						
NO2+NO3 as N	4940	200	ug/l	2000	*2910*	102	90-110			
Matrix Spike Dup (W0G1562-MSD1)	**Source: 0G27001-05**			**Prepared: 07/29/20 Analyzed: 07/30/20**						
NO2+NO3 as N	3460	200	ug/l	2000	*1400*	103	90-110	0	20	
Matrix Spike Dup (W0G1562-MSD2)	**Source: 0G28002-04**			**Prepared: 07/29/20 Analyzed: 07/30/20**						
NO2+NO3 as N	4930	200	ug/l	2000	*2910*	101	90-110	0.2	20	
Batch: W0G1632 - _NONE (WETCHEM)										
Blank (W0G1632-BLK1)				**Prepared & Analyzed: 07/30/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0G1632-BS1)				**Prepared & Analyzed: 07/30/20**						
o-Phosphate as P	0.194	0.010	mg/l	0.200		97	88-111			
Matrix Spike (W0G1632-MS1)	**Source: 0G30036-01**			**Prepared & Analyzed: 07/30/20**						
o-Phosphate as P	0.195	0.010	mg/l	0.200	*ND*	97	85-112			
Matrix Spike Dup (W0G1632-MSD1)	**Source: 0G30036-01**			**Prepared & Analyzed: 07/30/20**						
o-Phosphate as P	0.197	0.010	mg/l	0.200	*ND*	98	85-112	1	20	
Batch: W0G1659 - _NONE (WETCHEM)										
Blank (W0G1659-BLK1)				**Prepared & Analyzed: 07/31/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0G1659-BS1)				**Prepared & Analyzed: 07/31/20**						
Total Dissolved Solids	804	10	mg/l	824		98	96-102			

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0G1659 - _NONE (WETCHEM) (Continued)										
Duplicate (W0G1659-DUP1)	**Source: 0G28101-05**			**Prepared & Analyzed: 07/31/20**						
Total Dissolved Solids	2190	10	mg/l		*2160*			1	10	
Duplicate (W0G1659-DUP2)	**Source: 0G28110-01**			**Prepared & Analyzed: 07/31/20**						
Total Dissolved Solids	1710	10	mg/l		*1760*			3	10	
Batch: W0G1676 - _NONE (WETCHEM)										
Blank (W0G1676-BLK1)				**Prepared: 07/31/20 Analyzed: 08/04/20**						
TKN	ND	0.10	mg/l							
Blank (W0G1676-BLK2)				**Prepared: 07/31/20 Analyzed: 08/04/20**						
TKN	ND	0.10	mg/l							
LCS (W0G1676-BS1)				**Prepared: 07/31/20 Analyzed: 08/04/20**						
TKN	0.926	0.10	mg/l	1.00		93	90-110			
LCS (W0G1676-BS2)				**Prepared: 07/31/20 Analyzed: 08/04/20**						
TKN	0.911	0.10	mg/l	1.00		91	90-110			
Matrix Spike (W0G1676-MS1)	**Source: 0G27075-01**			**Prepared: 07/31/20 Analyzed: 08/04/20**						
TKN	1.24	0.10	mg/l	1.00	*0.246*	99	90-110			
Matrix Spike (W0G1676-MS2)	**Source: 0G27075-02**			**Prepared: 07/31/20 Analyzed: 08/04/20**						
TKN	1.26	0.10	mg/l	1.00	*0.269*	99	90-110			
Matrix Spike Dup (W0G1676-MSD1)	**Source: 0G27075-01**			**Prepared: 07/31/20 Analyzed: 08/04/20**						
TKN	1.24	0.10	mg/l	1.00	*0.246*	99	90-110	0.08	10	
Matrix Spike Dup (W0G1676-MSD2)	**Source: 0G27075-02**			**Prepared: 07/31/20 Analyzed: 08/04/20**						
TKN	1.33	0.10	mg/l	1.00	*0.269*	106	90-110	5	10	

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Notes and Definitions

Item	Definition
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Reviewed by:

Chris Samatmanakit
Project Manager

ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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OG30036

CHAIN OF CUSTODY FORM

Page 1 of 1

Client Name/Address: PSOMAS, 3 HUTTON CENTRE DRIVE, SUITE 200, SANTA ANA, CA 92707

Project/PO Number: 2KLE010102

Project Manager: MICHAEL P. DONOVAN (mpdonovn@cox.net)

Phone Number: (714) 328-5234

Sampler: Jim Burton, Todd Bear

Fax Number: 714.545.8883

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation						Special Instructions
LS-DP-16	water	60 ml Poly	1	7/29/20	10:55 am	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
LS-DP-7	water	60 ml Poly	1	7/29/20	11:25 am	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						

Relinquished By: [signature]	Date /Time: 7/29/20 1:00pm	Received by: FedEx	Date /Time:
Relinquished By: FedEx	Date /Time:	Received by: [signature]	Date /Time: 7/30/20 13:34
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ______ 72 Hours ______
24 Hours ______ 5 Days ______
48 Hours ______ Normal X

Sample Integrity: (Check)
Intact ______ On Ice ______

13.7°C T0234

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0G31035

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/20/2020

Received Date: 7/31/2020

Turnaround Time: Normal

Phones: (714) 751-7373

Fax: (714) 545-8883

P.O. #:

Billing Code:

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 7/31/20 with the Chain-of-Custody document. The samples were received in good condition, at 2.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Chris Samatmanakit
Project Manager

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Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
BC-Blw-Ph6	Jim Burton, Todd Bear	0G31035-01	Water	07/30/20 07:45	
BC-Blw-Ph5	Jim Burton, Todd Bear	0G31035-02	Water	07/30/20 08:30	
BC-Blw-Ph4	Jim Burton, Todd Bear	0G31035-03	Water	07/30/20 09:00	
BC-Blw-Ph3	Jim Burton, Todd Bear	0G31035-04	Water	07/30/20 09:40	
BC-Blw-Ph2	Jim Burton, Todd Bear	0G31035-05	Water	07/30/20 10:15	
SL-BR-1	Jim Burton, Todd Bear	0G31035-06	Water	07/30/20 11:00	
LS-BR-1	Jim Burton, Todd Bear	0G31035-07	Water	07/30/20 11:40	
INT2-RES-1	Jim Burton, Todd Bear	0G31035-08	Water	07/30/20 12:00	

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9223B in Water			
E. coli		✓	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Results

Sample: BC-Blw-Ph6
0G31035-01 (Water)

Sampled: 07/30/20 7:45 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1662 **Preparation:** _NONE (LC)		**Prepared:** 07/31/20 12:21				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	07/31/20 19:40	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/13/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/13/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** SAR
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1660 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:32				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/31/20 12:16	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**38**	10	mg/l	1	08/04/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Results

(Continued)

Sample: BC-Blw-Ph5
0G31035-02 (Water)

Sampled: 07/30/20 8:30 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1662 **Preparation:** _NONE (LC)		**Prepared:** 07/31/20 12:21				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	07/31/20 19:58	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/13/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/13/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** SAR
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1660 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:32				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/31/20 12:21	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**26**	10	mg/l	1	08/04/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Results

(Continued)

Sample: BC-Blw-Ph4
0G31035-03 (Water)

Sampled: 07/30/20 9:00 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1662 **Preparation:** _NONE (LC)		**Prepared:** 07/31/20 12:21				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	07/31/20 20:16	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/13/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/13/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** SAR
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1660 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:32				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/31/20 12:22	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**27**	10	mg/l	1	08/04/20	

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Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Results

(Continued)

Sample: BC-Blw-Ph3
0G31035-04 (Water)

Sampled: 07/30/20 9:40 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1662 **Preparation:** _NONE (LC)		**Prepared:** 07/31/20 12:21				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	07/31/20 20:34	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/13/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/13/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** SAR
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1660 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:32				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/31/20 12:23	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**35**	10	mg/l	1	08/04/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported: 08/20/2020 16:23

Sample Results

(Continued)

Sample: BC-Blw-Ph2 — Sampled: 07/30/20 10:15 by Jim Burton, Todd Bear

0G31035-05 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1662 **Preparation:** _NONE (LC)		**Prepared:** 07/31/20 12:21				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	07/31/20 20:52	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/13/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/13/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** SAR
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1660 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:32				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/31/20 12:25	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**20**	10	mg/l	1	08/04/20	

Sample: SL-BR-1 — Sampled: 07/30/20 11:00 by Jim Burton, Todd Bear

0G31035-06 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/31/20 10:52				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	08/01/20	

Sample: LS-BR-1 — Sampled: 07/30/20 11:40 by Jim Burton, Todd Bear

0G31035-07 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/31/20 10:52				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	08/01/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Results

(Continued)

Sample: INT2-RES-1
0G31035-08 (Water)

Sampled: 07/30/20 12:00 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321	**Preparation:** _NONE (MICROBIOLOGY)	**Prepared:** 07/31/20 10:52				**Analyst:** amc
E. coli	**6.3**	1.0	MPN/100ml	1	08/01/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported: 08/20/2020 16:23

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0G1662 - EPA 300.0										
Blank (W0G1662-BLK1)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0G1662-BS1)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
LCS (W0G1662-BS2)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
LCS (W0G1662-BS3)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
LCS (W0G1662-BS4)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
LCS (W0G1662-BS5)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
Matrix Spike (W0G1662-MS1)	**Source: 0G31002-01**			**Prepared & Analyzed: 07/31/20**						
Nitrate as N	20900	1100	ug/l	20000	ND	105	84-115			
Matrix Spike Dup (W0G1662-MSD1)	**Source: 0G31002-01**			**Prepared & Analyzed: 07/31/20**						
Nitrate as N	20800	1100	ug/l	20000	ND	104	84-115	0.6	20	

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0G1660 - EPA 365.3										
Blank (W0G1660-BLK1)				**Prepared & Analyzed: 07/31/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0G1660-BS1)				**Prepared & Analyzed: 07/31/20**						
o-Phosphate as P	0.203	0.010	mg/l	0.200		102	88-111			
Matrix Spike (W0G1660-MS1)	**Source: 0G31035-01**			**Prepared & Analyzed: 07/31/20**						
o-Phosphate as P	0.201	0.010	mg/l	0.200	0.00500	98	85-112			
Matrix Spike Dup (W0G1660-MSD1)	**Source: 0G31035-01**			**Prepared & Analyzed: 07/31/20**						
o-Phosphate as P	0.199	0.010	mg/l	0.200	0.00500	97	85-112	1	20	
Batch: W0H0004 - EPA 353.2										
Blank (W0H0004-BLK1)				**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0H0004-BS1)				**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	1010	200	ug/l	1000		101	90-110			
Matrix Spike (W0H0004-MS1)	**Source: 0G31035-01**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110			
Matrix Spike (W0H0004-MS2)	**Source: 0G31035-02**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110			

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0004 - EPA 353.2 (Continued)										
Matrix Spike Dup (W0H0004-MSD1)	**Source: 0G31035-01**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110	0	20	
Matrix Spike Dup (W0H0004-MSD2)	**Source: 0G31035-02**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110	0	20	
Batch: W0H0065 - SM 2540C										
Blank (W0H0065-BLK1)				**Prepared: 08/03/20 Analyzed: 08/04/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0H0065-BS1)				**Prepared: 08/03/20 Analyzed: 08/04/20**						
Total Dissolved Solids	809	10	mg/l	824		98	96-102			
Duplicate (W0H0065-DUP1)	**Source: 0G27001-02**			**Prepared: 08/03/20 Analyzed: 08/04/20**						
Total Dissolved Solids	1470	10	mg/l		1500			2	10	
Duplicate (W0H0065-DUP2)	**Source: 0G27001-04**			**Prepared: 08/03/20 Analyzed: 08/04/20**						
Total Dissolved Solids	7230	10	mg/l		7220			0.07	10	
Batch: W0H0415 - EPA 351.2										
Blank (W0H0415-BLK1)				**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	ND	0.10	mg/l							
Blank (W0H0415-BLK2)				**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	ND	0.10	mg/l							
LCS (W0H0415-BS1)				**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	0.958	0.10	mg/l	1.00		96	90-110			
LCS (W0H0415-BS2)				**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	0.951	0.10	mg/l	1.00		95	90-110			
Matrix Spike (W0H0415-MS1)	**Source: 0H05087-01**			**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	1.20	0.10	mg/l	1.00	0.173	103	90-110			
Matrix Spike (W0H0415-MS2)	**Source: 0H05087-02**			**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	1.19	0.10	mg/l	1.00	0.234	95	90-110			
Matrix Spike Dup (W0H0415-MSD1)	**Source: 0H05087-01**			**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	1.19	0.10	mg/l	1.00	0.173	102	90-110	1	10	
Matrix Spike Dup (W0H0415-MSD2)	**Source: 0H05087-02**			**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	1.23	0.10	mg/l	1.00	0.234	100	90-110	4	10	

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Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0321 - SM 9223B										
Blank (W0H0321-BLK2)				**Prepared: 07/25/20 Analyzed: 07/26/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK3)				**Prepared & Analyzed: 07/27/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK4)				**Prepared: 07/28/20 Analyzed: 07/29/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK6)				**Prepared: 07/31/20 Analyzed: 08/01/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK7)				**Prepared: 08/01/20 Analyzed: 08/02/20**						
E. coli	ND	1.0	MPN/100ml							

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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OG31035

CHAIN OF CUSTODY FORM

Page 1 of 2

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
BC-blw-PH6	water	60 ml Poly	1	7/30/20	7:45a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH5	water	60 ml Poly	1	7/30/20	8:30a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH4	water	60 ml Poly	1	7/30/20	9:00a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH3	water	60 ml Poly	1	7/30/20	9:40a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH2	water	60 ml Poly	1	7/30/20	10:15a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	

Relinquished By: Todd Bear	Date /Time: 7/30/20 1:30pm	Received by: FedEx	Date /Time:
Relinquished By:	Date /Time:	Received by: Jamalam	Date /Time: 7/31/20 1030
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ____ On Ice ____

2.8°C T0230

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CHAIN OF CUSTODY FORM

Page 2 of 2

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	Fax Number: 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Escherichia coli (E. coli) by SM 9223B	Special Instructions
SL-BR-1	water	125 ml poly	1	7/30/20	11:00a	Sterile- None	X	24-Hour Hold time*
LS-BR-1	water	125 ml poly	1	"	11:40a	Sterile- None	X	24-Hour Hold time*
INT2-RES-1	water	125 ml poly	1	"	12:00p	Sterile- None	X	24-Hour Hold time*

Relinquished By:	Date /Time:	Received by:	Date /Time:
[signature]	7/30/20 1:30pm	FedEx	
Relinquished By: FedEx	Date /Time:	Received by: [signature]	Date /Time: 7/31/20 1030
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
~~24 Hours~~ ____ ~~5 Days~~ ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ____ On Ice ____

2.9°C T0230

* Per Lohantan Surface Water Ambient Monitoring Program (SWAMP) for ambient water

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0H03016

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/20/2020

Received Date: 8/1/2020

Turnaround Time: Normal

Phones: (714) 751-7373

Fax: (714) 545-8883

P.O. #:

Billing Code:

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 8/01/20 with the Chain-of-Custody document. The samples were received in good condition, at 2.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Chris Samatmanakit
Project Manager

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Psomas - Santa Ana, CA
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Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
BC-NF-1	Jim Burton, Todd Bear	0H03016-01	Water	07/31/20 09:00	
BC-blw-LS	Jim Burton, Todd Bear	0H03016-02	Water	07/31/20 09:20	
BC-blw-SL	Jim Burton, Todd Bear	0H03016-03	Water	07/31/20 10:00	
SL-BR-1	Jim Burton, Todd Bear	0H03016-04	Water	07/31/20 11:00	
LS-BR-1	Jim Burton, Todd Bear	0H03016-05	Water	07/31/20 11:35	
INT2-RES-1	Jim Burton, Todd Bear	0H03016-06	Water	07/31/20 11:50	

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9223B in Water			
E. coli		✓	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Sample Results

Sample: BC-NF-1
0H03016-01 (Water)

Sampled: 07/31/20 9:00 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H0036 **Preparation:** _NONE (LC)		**Prepared:** 08/03/20 12:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/03/20 17:36	O-14
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/17/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0714 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
TKN	**0.12**	0.10	mg/l	1	08/17/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H0002 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 14:32				**Analyst:** sar
o-Phosphate as P	**0.044**	0.010	mg/l	1	08/01/20 15:15	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**28**	10	mg/l	1	08/04/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Sample Results

(Continued)

Sample: BC-blw-LS
0H03016-02 (Water)

Sampled: 07/31/20 9:20 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H0036 **Preparation:** _NONE (LC)		**Prepared:** 08/03/20 12:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/03/20 18:32	O-14
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/17/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0714 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/17/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H0002 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 14:32				**Analyst:** sar
o-Phosphate as P	**0.017**	0.010	mg/l	1	08/01/20 15:15	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**12**	10	mg/l	1	08/04/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported: 08/20/2020 16:28

Sample Results

(Continued)

Sample: BC-blw-SL — Sampled: 07/31/20 10:00 by Jim Burton, Todd Bear

0H03016-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H0036 **Preparation:** _NONE (LC)		**Prepared:** 08/03/20 12:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/03/20 20:02	O-14
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/17/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0714 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/17/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H0002 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 14:32				**Analyst:** sar
o-Phosphate as P	**0.043**	0.010	mg/l	1	08/01/20 15:15	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**17**	10	mg/l	1	08/04/20	

Sample: SL-BR-1 — Sampled: 07/31/20 11:00 by Jim Burton, Todd Bear

0H03016-04 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 08/01/20 09:33				**Analyst:** atd
E. coli	ND	1.0	MPN/100ml	1	08/02/20	

Sample: LS-BR-1 — Sampled: 07/31/20 11:35 by Jim Burton, Todd Bear

0H03016-05 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 08/01/20 09:33				**Analyst:** atd
E. coli	ND	1.0	MPN/100ml	1	08/02/20	

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Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Sample Results

(Continued)

Sample: INT2-RES-1
0H03016-06 (Water)

Sampled: 07/31/20 11:50 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321	**Preparation:** _NONE (MICROBIOLOGY)	**Prepared:** 08/01/20 09:33				**Analyst:** atd
E. coli	**6.3**	1.0	MPN/100ml	1	08/02/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported: 08/20/2020 16:28

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0036 - EPA 300.0										
Blank (W0H0036-BLK1)				**Prepared & Analyzed: 08/03/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0H0036-BS1)				**Prepared & Analyzed: 08/03/20**						
Nitrate as N	2150	110	ug/l	2000		108	90-110			
Matrix Spike (W0H0036-MS1)	**Source: 0H03026-03**			**Prepared & Analyzed: 08/03/20**						
Nitrate as N	29500	1100	ug/l	20000	8200	106	84-115			
Matrix Spike (W0H0036-MS2)	**Source: 0H03026-04**			**Prepared & Analyzed: 08/03/20**						
Nitrate as N	29600	1100	ug/l	20000	8140	107	84-115			
Matrix Spike Dup (W0H0036-MSD1)	**Source: 0H03026-03**			**Prepared & Analyzed: 08/03/20**						
Nitrate as N	29500	1100	ug/l	20000	8200	107	84-115	0.2	20	
Matrix Spike Dup (W0H0036-MSD2)	**Source: 0H03026-04**			**Prepared & Analyzed: 08/03/20**						
Nitrate as N	29600	1100	ug/l	20000	8140	107	84-115	0.03	20	

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0002 - EPA 365.3										
Blank (W0H0002-BLK1)				**Prepared & Analyzed: 08/01/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0H0002-BS1)				**Prepared & Analyzed: 08/01/20**						
o-Phosphate as P	0.211	0.010	mg/l	0.200		106	88-111			
Matrix Spike (W0H0002-MS1)	**Source: 0H03016-01**			**Prepared & Analyzed: 08/01/20**						
o-Phosphate as P	0.251	0.010	mg/l	0.200	0.0440	104	85-112			
Matrix Spike Dup (W0H0002-MSD1)	**Source: 0H03016-01**			**Prepared & Analyzed: 08/01/20**						
o-Phosphate as P	0.251	0.010	mg/l	0.200	0.0440	104	85-112	0	20	
Batch: W0H0004 - EPA 353.2										
Blank (W0H0004-BLK1)				**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0H0004-BS1)				**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	1010	200	ug/l	1000		101	90-110			
Matrix Spike (W0H0004-MS1)	**Source: 0G31035-01**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110			
Matrix Spike (W0H0004-MS2)	**Source: 0G31035-02**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110			
Matrix Spike Dup (W0H0004-MSD1)	**Source: 0G31035-01**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110	0	20	
Matrix Spike Dup (W0H0004-MSD2)	**Source: 0G31035-02**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110	0	20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported: 08/20/2020 16:28

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0065 - SM 2540C										
Blank (W0H0065-BLK1)				**Prepared: 08/03/20**	**Analyzed: 08/04/20**					
Total Dissolved Solids	ND	10	mg/l							
LCS (W0H0065-BS1)				**Prepared: 08/03/20**	**Analyzed: 08/04/20**					
Total Dissolved Solids	809	10	mg/l	824		98	96-102			
Duplicate (W0H0065-DUP1)	**Source: 0G27001-02**			**Prepared: 08/03/20**	**Analyzed: 08/04/20**					
Total Dissolved Solids	1470	10	mg/l		1500			2	10	
Duplicate (W0H0065-DUP2)	**Source: 0G27001-04**			**Prepared: 08/03/20**	**Analyzed: 08/04/20**					
Total Dissolved Solids	7230	10	mg/l		7220			0.07	10	
Batch: W0H0714 - EPA 351.2										
Blank (W0H0714-BLK1)				**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	ND	0.10	mg/l							
Blank (W0H0714-BLK2)				**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	ND	0.10	mg/l							
LCS (W0H0714-BS1)				**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	0.992	0.10	mg/l	1.00		99	90-110			
LCS (W0H0714-BS2)				**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	0.974	0.10	mg/l	1.00		97	90-110			
Matrix Spike (W0H0714-MS1)	**Source: 0H11101-01**			**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	1.28	0.10	mg/l	1.00	0.221	105	90-110			
Matrix Spike (W0H0714-MS2)	**Source: 0H11101-02**			**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	1.21	0.10	mg/l	1.00	0.239	97	90-110			
Matrix Spike Dup (W0H0714-MSD1)	**Source: 0H11101-01**			**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	1.24	0.10	mg/l	1.00	0.221	102	90-110	3	10	
Matrix Spike Dup (W0H0714-MSD2)	**Source: 0H11101-02**			**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	1.30	0.10	mg/l	1.00	0.239	106	90-110	7	10	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0321 - SM 9223B										
Blank (W0H0321-BLK2)				**Prepared: 07/25/20 Analyzed: 07/26/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK3)				**Prepared & Analyzed: 07/27/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK4)				**Prepared: 07/28/20 Analyzed: 07/29/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK6)				**Prepared: 07/31/20 Analyzed: 08/01/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK7)				**Prepared: 08/01/20 Analyzed: 08/02/20**						
E. coli	ND	1.0	MPN/100ml							

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Notes and Definitions

Item	Definition
O-14	This analysis was requested by the client after the holding time was exceeded.
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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CHAIN OF CUSTODY FORM

OH03016

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Analysis Required: Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation						Special Instructions
BC-NF-1	water	60 ml Poly	1	7/31/20	9:00a	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
BC-blw-LS	water	60 ml Poly	1	7/31/20	9:20a	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
BC-blw-SL	water	60 ml Poly	1	7/31/20	10:00a	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check)
[signature]	7/31/20 1:35pm	KVM	8/1/20 9:17 T-0230 2.1°C	Same Day ____ 72 Hours ____
Relinquished By:	Date /Time:	Received by:	Date /Time:	24 Hours ____ 5 Days ____
				48 Hours ____ Normal X
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:	Sample Integrity: (Check)
				Intact ____ On Ice ____

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OH030116

CHAIN OF CUSTODY FORM

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Escherichia coli (E. coli) by SM 9223B										Special Instructions
							Analysis Required										
SL-BR-1	water	125 ml poly	1	7/31/20	11:00a	Sterile- None	X										24-Hour Hold time*
LS-BR-1	water	125 ml poly	1	1	11:35a	Sterile- None	X										24-Hour Hold time*
INT2-RES-1	water	125 ml poly	1	1	11:50a	Sterile- None	X										24-Hour Hold time*

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check)
[signature]	7/31/20 1:35pm	KM	8/1/20 9:17 2.1°C T-0230	Same Day ____ 72 Hours ____
Relinquished By:	Date /Time:	Received by:	Date /Time:	24 Hours ____ 5 Days ____
				48 Hours ____ Normal X
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:	Sample Integrity: (Check)
				Intact ____ On Ice ____

* Per Lohantan Surface Water Ambient Monitoring Program (SWAMP) for ambient water

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0H25045

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 9/10/2020
Received Date: 8/25/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 8/25/20 with the Chain-of-Custody document. The samples were received in good condition, at 3.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: LS-DP-17
0H25045-01 (Water)

Sampled: 08/24/20 12:05 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
Nitrogen, Total	**0.52**	0.30	mg/l	1	08/31/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1379 **Preparation:** _NONE (LC)		**Prepared:** 08/25/20 10:53				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/25/20 15:38	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H1560 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
TKN	**0.52**	0.10	mg/l	1	08/31/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1403 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/25/20 13:01				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/25/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/25/20 15:58				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/25/20 17:41	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1499 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 17:38				**Analyst:** ism
Total Dissolved Solids	**39**	10	mg/l	1	08/27/20	

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Sample Results

(Continued)

Sample: LS-DP-8 — Sampled: 08/24/20 12:30 by Jim Burton, Todd Bear

0H25045-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/31/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1379 **Preparation:** _NONE (LC)		**Prepared:** 08/25/20 10:53				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/25/20 15:56	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H1560 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/31/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1477 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 12:24				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/26/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/25/20 15:58				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/25/20 17:41	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1499 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 17:38				**Analyst:** ism
Total Dissolved Solids	**31**	10	mg/l	1	08/27/20	

Sample: BC-Blw-LS — Sampled: 08/24/20 12:55 by Jim Burton, Todd Bear

0H25045-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/31/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1379 **Preparation:** _NONE (LC)		**Prepared:** 08/25/20 10:53				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/25/20 16:14	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H1560 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/31/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1477 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 12:24				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/26/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/25/20 15:58				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/25/20 17:41	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1499 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 17:38				**Analyst:** ism
Total Dissolved Solids	**30**	10	mg/l	1	08/27/20	

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Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H1379 - _NONE (LC)										
Blank (W0H1379-BLK1)				**Prepared & Analyzed: 08/25/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0H1379-BS1)				**Prepared & Analyzed: 08/25/20**						
Nitrate as N	2080	110	ug/l	2000		104	90-110			
Matrix Spike (W0H1379-MS1)	**Source: 0H21063-04**			**Prepared & Analyzed: 08/25/20**						
Nitrate as N	20800	1100	ug/l	20000	*250*	103	84-115			
Matrix Spike (W0H1379-MS2)	**Source: 0H24027-04**			**Prepared & Analyzed: 08/25/20**						
Nitrate as N	21600	1100	ug/l	20000	*270*	107	84-115			
Matrix Spike Dup (W0H1379-MSD1)	**Source: 0H21063-04**			**Prepared & Analyzed: 08/25/20**						
Nitrate as N	20800	1100	ug/l	20000	*250*	103	84-115	0.05	20	
Matrix Spike Dup (W0H1379-MSD2)	**Source: 0H24027-04**			**Prepared: 08/25/20 Analyzed: 08/26/20**						
Nitrate as N	21700	1100	ug/l	20000	*270*	107	84-115	0.3	20	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H1403 - _NONE (WETCHEM)										
Blank (W0H1403-BLK1)				**Prepared & Analyzed: 08/25/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0H1403-BS1)				**Prepared & Analyzed: 08/25/20**						
NO2+NO3 as N	931	200	ug/l	1000		93	90-110			
Matrix Spike (W0H1403-MS1)	**Source: 0H17010-07**			**Prepared & Analyzed: 08/25/20**						
NO2+NO3 as N	6030	200	ug/l	2000	*4210*	91	90-110			
Matrix Spike (W0H1403-MS2)	**Source: 0H17018-07**			**Prepared & Analyzed: 08/25/20**						
NO2+NO3 as N	7600	200	ug/l	2000	*5870*	86	90-110			MS-02
Matrix Spike Dup (W0H1403-MSD1)	**Source: 0H17010-07**			**Prepared & Analyzed: 08/25/20**						
NO2+NO3 as N	6020	200	ug/l	2000	*4210*	90	90-110	0.2	20	
Matrix Spike Dup (W0H1403-MSD2)	**Source: 0H17018-07**			**Prepared & Analyzed: 08/25/20**						
NO2+NO3 as N	7590	200	ug/l	2000	*5870*	86	90-110	0.1	20	MS-02
Batch: W0H1415 - _NONE (WETCHEM)										
Blank (W0H1415-BLK1)				**Prepared & Analyzed: 08/25/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0H1415-BS1)				**Prepared & Analyzed: 08/25/20**						
o-Phosphate as P	0.204	0.010	mg/l	0.200		102	88-111			
Matrix Spike (W0H1415-MS1)	**Source: 0H24055-01**			**Prepared & Analyzed: 08/25/20**						
o-Phosphate as P	0.314	0.010	mg/l	0.200	*0.114*	100	85-112			
Matrix Spike Dup (W0H1415-MSD1)	**Source: 0H24055-01**			**Prepared & Analyzed: 08/25/20**						
o-Phosphate as P	0.314	0.010	mg/l	0.200	*0.114*	100	85-112	0	20	
Batch: W0H1477 - _NONE (WETCHEM)										
Blank (W0H1477-BLK1)				**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0H1477-BS1)				**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	1020	200	ug/l	1000		102	90-110			

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H1477 - _NONE (WETCHEM) (Continued)										
Matrix Spike (W0H1477-MS1)	**Source: 0H26046-01**			**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	3000	200	ug/l	2000	*945*	103	90-110			
Matrix Spike (W0H1477-MS2)	**Source: 0H26046-02**			**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	2910	200	ug/l	2000	*773*	107	90-110			
Matrix Spike Dup (W0H1477-MSD1)	**Source: 0H26046-01**			**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	3000	200	ug/l	2000	*945*	103	90-110	0	20	
Matrix Spike Dup (W0H1477-MSD2)	**Source: 0H26046-02**			**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	2890	200	ug/l	2000	*773*	106	90-110	0.7	20	
Batch: W0H1499 - _NONE (WETCHEM)										
Blank (W0H1499-BLK1)				**Prepared: 08/26/20 Analyzed: 08/27/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0H1499-BS1)				**Prepared: 08/26/20 Analyzed: 08/27/20**						
Total Dissolved Solids	836	10	mg/l	824		101	96-102			
Duplicate (W0H1499-DUP1)	**Source: 0H26090-01**			**Prepared: 08/26/20 Analyzed: 08/27/20**						
Total Dissolved Solids	1320	10	mg/l		*1280*			3	10	
Duplicate (W0H1499-DUP2)	**Source: 0H26090-05**			**Prepared: 08/26/20 Analyzed: 08/27/20**						
Total Dissolved Solids	1390	10	mg/l		*1370*			1	10	
Batch: W0H1560 - _NONE (WETCHEM)										
Blank (W0H1560-BLK1)				**Prepared: 08/27/20 Analyzed: 08/31/20**						
TKN	ND	0.10	mg/l							
Blank (W0H1560-BLK2)				**Prepared: 08/27/20 Analyzed: 08/31/20**						
TKN	ND	0.10	mg/l							
LCS (W0H1560-BS1)				**Prepared: 08/27/20 Analyzed: 08/31/20**						
TKN	0.983	0.10	mg/l	1.00		98	90-110			
LCS (W0H1560-BS2)				**Prepared: 08/27/20 Analyzed: 08/31/20**						
TKN	0.978	0.10	mg/l	1.00		98	90-110			
Matrix Spike (W0H1560-MS1)	**Source: 0H24091-04**			**Prepared: 08/27/20 Analyzed: 08/31/20**						
TKN	1.28	0.10	mg/l	1.00	*0.293*	99	90-110			
Matrix Spike (W0H1560-MS2)	**Source: 0H24091-05**			**Prepared: 08/27/20 Analyzed: 08/31/20**						
TKN	1.29	0.10	mg/l	1.00	*0.262*	103	90-110			
Matrix Spike Dup (W0H1560-MSD1)	**Source: 0H24091-04**			**Prepared: 08/27/20 Analyzed: 08/31/20**						
TKN	1.29	0.10	mg/l	1.00	*0.293*	100	90-110	0.6	10	
Matrix Spike Dup (W0H1560-MSD2)	**Source: 0H24091-05**			**Prepared: 08/27/20 Analyzed: 08/31/20**						
TKN	1.29	0.10	mg/l	1.00	*0.262*	102	90-110	0.2	10	

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Notes and Definitions

Item	Definition
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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OH25045

CHAIN OF CUSTODY FORM

Page 1 of 1

Client Name/Address:
PSOMAS
3 HUTTON CENTRE DRIVE, SUITE 200
SANTA ANA, CA 92707

Project/PO Number:
2KLE010102

Project Manager:
MICHAEL P. DONOVAN (mpdonovn@cox.net)

Phone Number:
(714) 328-5234

Sampler: Jim Burton, Todd Bear

Fax Number: 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Analysis Required: Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation					Special Instructions
LS-DP-17	water	60 ml Poly	1	8/24/20	12:05p	None	X										
	water	250 ml Poly	1			None		X									Filtered with 0.45µ
	water	500 ml Poly	1			None			X								
	water	250 ml Poly	1			H2SO4				X	X	X					
LS-DP-8	water	60 ml Poly	1	8/24/20	12:30p	None	X										
	water	250 ml Poly	1			None		X									Filtered with 0.45µ
	water	500 ml Poly	1			None			X								
	water	250 ml Poly	1			H2SO4				X	X	X					
BC-blw-LS	water	60 ml Poly	1	8/24/20	12:55p	None	X										
	water	250 ml Poly	1			None		X									Filtered with 0.45µ
	water	500 ml Poly	1			None			X								
	water	250 ml Poly	1			H2SO4				X	X	X					
	water	60 ml Poly	1			None	X										
	water	250 ml Poly	1			None		X									Filtered with 0.45µ
	water	500 ml Poly	1			None			X								
	water	250 ml Poly	1			H2SO4				X	X	X					
	water	60 ml Poly	1			None	X										
	water	250 ml Poly	1			None		X									Filtered with 0.45µ
	water	500 ml Poly	1			None			X								
	water	250 ml Poly	1			H2SO4				X	X	X					

Relinquished By: [signature] Date /Time: 8/24/20 1:30pm
Received by: Date /Time:

Relinquished By: Feder Date /Time:
Received by: [signature] Date /Time: 8/25/20 9:55

Relinquished By: Date /Time:
Received in Lab by: Date /Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ____ On Ice ✓

3.5°C

T-0134

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0H26029

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 9/10/2020
Received Date: 8/26/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 8/26/20 with the Chain-of-Custody document. The samples were received in good condition, at 2.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: SL-DP-20
0H26029-01 (Water)

Sampled: 08/25/20 11:55 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/31/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1443 **Preparation:** _NONE (LC)		**Prepared:** 08/26/20 10:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/26/20 18:22	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H1560 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/31/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1477 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 12:24				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/26/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1483 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 12:53				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/26/20 13:23	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1499 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 17:38				**Analyst:** ism
Total Dissolved Solids	**33**	10	mg/l	1	08/27/20	

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Sample Results

(Continued)

Sample: SL-DP-15 — Sampled: 08/25/20 12:20 by Jim Burton, Todd Bear

0H26029-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/31/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1443 **Preparation:** _NONE (LC)		**Prepared:** 08/26/20 10:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/26/20 18:40	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H1560 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/31/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1477 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 12:24				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/26/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1483 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 12:53				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/26/20 13:24	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1499 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 17:38				**Analyst:** ism
Total Dissolved Solids	**30**	10	mg/l	1	08/27/20	

Sample: BC-BLW-SL — Sampled: 08/25/20 12:45 by Jim Burton, Todd Bear

0H26029-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/31/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1443 **Preparation:** _NONE (LC)		**Prepared:** 08/26/20 10:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/26/20 18:58	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H1560 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 16:37				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/31/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1477 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 12:24				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/26/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1483 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 12:53				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/26/20 13:24	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1499 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/26/20 17:38				**Analyst:** ism
Total Dissolved Solids	**31**	10	mg/l	1	08/27/20	

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Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H1443 - _NONE (LC)										
Blank (W0H1443-BLK1)				**Prepared & Analyzed: 08/26/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0H1443-BS1)				**Prepared & Analyzed: 08/26/20**						
Nitrate as N	2090	110	ug/l	2000		105	90-110			
Matrix Spike (W0H1443-MS1)	**Source: 0H25084-01**			**Prepared & Analyzed: 08/26/20**						
Nitrate as N	24000	1100	ug/l	20000	*2970*	105	84-115			
Matrix Spike (W0H1443-MS2)	**Source: 0H25084-02**			**Prepared & Analyzed: 08/26/20**						
Nitrate as N	23700	1100	ug/l	20000	*3000*	103	84-115			
Matrix Spike Dup (W0H1443-MSD1)	**Source: 0H25084-01**			**Prepared & Analyzed: 08/26/20**						
Nitrate as N	24000	1100	ug/l	20000	*2970*	105	84-115	0.04	20	
Matrix Spike Dup (W0H1443-MSD2)	**Source: 0H25084-02**			**Prepared & Analyzed: 08/26/20**						
Nitrate as N	23600	1100	ug/l	20000	*3000*	103	84-115	0.4	20	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H1477 - _NONE (WETCHEM)										
Blank (W0H1477-BLK1)				**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0H1477-BS1)				**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	1020	200	ug/l	1000		102	90-110			
Matrix Spike (W0H1477-MS1)	**Source: 0H26046-01**			**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	3000	200	ug/l	2000	*945*	103	90-110			
Matrix Spike (W0H1477-MS2)	**Source: 0H26046-02**			**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	2910	200	ug/l	2000	*773*	107	90-110			
Matrix Spike Dup (W0H1477-MSD1)	**Source: 0H26046-01**			**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	3000	200	ug/l	2000	*945*	103	90-110	0	20	
Matrix Spike Dup (W0H1477-MSD2)	**Source: 0H26046-02**			**Prepared & Analyzed: 08/26/20**						
NO2+NO3 as N	2890	200	ug/l	2000	*773*	106	90-110	0.7	20	
Batch: W0H1483 - _NONE (WETCHEM)										
Blank (W0H1483-BLK1)				**Prepared & Analyzed: 08/26/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0H1483-BS1)				**Prepared & Analyzed: 08/26/20**						
o-Phosphate as P	0.200	0.010	mg/l	0.200		100	88-111			
Matrix Spike (W0H1483-MS1)	**Source: 0H25061-01**			**Prepared & Analyzed: 08/26/20**						
o-Phosphate as P	0.304	0.010	mg/l	0.200	*0.108*	98	85-112			
Matrix Spike Dup (W0H1483-MSD1)	**Source: 0H25061-01**			**Prepared & Analyzed: 08/26/20**						
o-Phosphate as P	0.307	0.010	mg/l	0.200	*0.108*	100	85-112	1	20	
Batch: W0H1499 - _NONE (WETCHEM)										
Blank (W0H1499-BLK1)				**Prepared: 08/26/20 Analyzed: 08/27/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0H1499-BS1)				**Prepared: 08/26/20 Analyzed: 08/27/20**						
Total Dissolved Solids	836	10	mg/l	824		101	96-102			

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H1499 - _NONE (WETCHEM) (Continued)										
Duplicate (W0H1499-DUP1)	**Source: 0H26090-01**			**Prepared: 08/26/20**	**Analyzed: 08/27/20**					
Total Dissolved Solids	1320	10	mg/l		*1280*			3	10	
Duplicate (W0H1499-DUP2)	**Source: 0H26090-05**			**Prepared: 08/26/20**	**Analyzed: 08/27/20**					
Total Dissolved Solids	1390	10	mg/l		*1370*			1	10	
Batch: W0H1560 - _NONE (WETCHEM)										
Blank (W0H1560-BLK1)				**Prepared: 08/27/20**	**Analyzed: 08/31/20**					
TKN	ND	0.10	mg/l							
Blank (W0H1560-BLK2)				**Prepared: 08/27/20**	**Analyzed: 08/31/20**					
TKN	ND	0.10	mg/l							
LCS (W0H1560-BS1)				**Prepared: 08/27/20**	**Analyzed: 08/31/20**					
TKN	0.983	0.10	mg/l	1.00		98	90-110			
LCS (W0H1560-BS2)				**Prepared: 08/27/20**	**Analyzed: 08/31/20**					
TKN	0.978	0.10	mg/l	1.00		98	90-110			
Matrix Spike (W0H1560-MS1)	**Source: 0H24091-04**			**Prepared: 08/27/20**	**Analyzed: 08/31/20**					
TKN	1.28	0.10	mg/l	1.00	*0.293*	99	90-110			
Matrix Spike (W0H1560-MS2)	**Source: 0H24091-05**			**Prepared: 08/27/20**	**Analyzed: 08/31/20**					
TKN	1.29	0.10	mg/l	1.00	*0.262*	103	90-110			
Matrix Spike Dup (W0H1560-MSD1)	**Source: 0H24091-04**			**Prepared: 08/27/20**	**Analyzed: 08/31/20**					
TKN	1.29	0.10	mg/l	1.00	*0.293*	100	90-110	0.6	10	
Matrix Spike Dup (W0H1560-MSD2)	**Source: 0H24091-05**			**Prepared: 08/27/20**	**Analyzed: 08/31/20**					
TKN	1.29	0.10	mg/l	1.00	*0.262*	102	90-110	0.2	10	

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Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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CHAIN OF CUSTODY FORM

OH26029

Page 1 of 1

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Analysis Required: Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
SL-DP-20	water	60 ml Poly	1	8/25/20	11:55a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
SL-DP-15	water	60 ml Poly	1	8/25/20	12:20p	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-SL	water	60 ml Poly	1	8/25/20	12:45p	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	

Relinquished By:	Date /Time: 8/25/20 1:35pm	Received by:	Date /Time:
Relinquished By:	Date /Time: 8/26/20	Received by:	Date /Time: 10:05
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact X On Ice X

2° Temp

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0H27029

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 9/10/2020
Received Date: 8/27/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 8/27/20 with the Chain-of-Custody document. The samples were received in good condition, at 3.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: BC-blw-PH6
0H27029-01 (Water)

Sampled: 08/26/20 7:35 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/28/20 17:07				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/31/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1556 **Preparation:** _NONE (LC)		**Prepared:** 08/27/20 12:00				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/28/20 00:25	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H1621 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/28/20 17:07				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/31/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1543 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:08				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/27/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1546 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:44				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/27/20 14:09	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1653 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/31/20 09:23				**Analyst:** ism
Total Dissolved Solids	**27**	10	mg/l	1	08/31/20	

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Sample Results

(Continued)

Sample: BC-blw-PH5 — Sampled: 08/26/20 8:15 by Jim Burton, Todd Bear

0H27029-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/28/20 17:07				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/31/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1556 **Preparation:** _NONE (LC)		**Prepared:** 08/27/20 12:00				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/28/20 00:43	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H1621 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/28/20 17:07				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/31/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1543 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:08				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/27/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1546 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:44				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/27/20 14:12	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1653 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/31/20 09:23				**Analyst:** ism
Total Dissolved Solids	**15**	10	mg/l	1	08/31/20	

Sample: BC-blw-PH4 — Sampled: 08/26/20 8:40 by Jim Burton, Todd Bear

0H27029-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/01/20 15:56				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/03/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1556 **Preparation:** _NONE (LC)		**Prepared:** 08/27/20 12:00				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/28/20 01:01	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I0084 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/01/20 15:56				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	09/03/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1543 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:08				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/27/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1546 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:44				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/27/20 14:12	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1653 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/31/20 09:23				**Analyst:** ism
Total Dissolved Solids	**23**	10	mg/l	1	08/31/20	

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Sample Results

(Continued)

Sample: BC-blw-PH3 — Sampled: 08/26/20 9:40 by Jim Burton, Todd Bear

0H27029-04 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/01/20 15:56				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/03/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1556 **Preparation:** _NONE (LC)		**Prepared:** 08/27/20 12:00				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/28/20 01:19	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I0084 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/01/20 15:56				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	09/03/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1543 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:08				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/27/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1546 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:44				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/27/20 14:13	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1653 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/31/20 09:23				**Analyst:** ism
Total Dissolved Solids	**20**	10	mg/l	1	08/31/20	

Sample: BC-blw-PH2 — Sampled: 08/26/20 10:15 by Jim Burton, Todd Bear

0H27029-05 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/01/20 15:56				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/03/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1556 **Preparation:** _NONE (LC)		**Prepared:** 08/27/20 12:00				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/28/20 01:37	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I0084 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/01/20 15:56				**Analyst:** YMT
TKN	**0.13**	0.10	mg/l	1	09/03/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1543 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:08				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/27/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1546 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:44				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/27/20 14:14	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1653 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/31/20 09:23				**Analyst:** ism
Total Dissolved Solids	**14**	10	mg/l	1	08/31/20	

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Sample Results

(Continued)

Sample: BC-NF-1 — Sampled: 08/26/20 11:40 by Jim Burton, Todd Bear

0H27029-06 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/01/20 15:56				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/03/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H1556 **Preparation:** _NONE (LC)		**Prepared:** 08/27/20 12:00				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/28/20 01:55	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I0084 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/01/20 15:56				**Analyst:** YMT
TKN	**0.10**	0.10	mg/l	1	09/03/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H1543 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:08				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/27/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H1546 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/27/20 12:44				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	08/27/20 14:14	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H1653 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/31/20 09:23				**Analyst:** ism
Total Dissolved Solids	**11**	10	mg/l	1	08/31/20	

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Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H1556 - _NONE (LC)										
Blank (W0H1556-BLK1)				**Prepared & Analyzed: 08/27/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0H1556-BS1)				**Prepared: 08/27/20 Analyzed: 08/28/20**						
Nitrate as N	2120	110	ug/l	2000		106	90-110			
Matrix Spike (W0H1556-MS1)	**Source: 0H14010-01**			**Prepared: 08/27/20 Analyzed: 08/28/20**						
Nitrate as N	21900	1100	ug/l	20000	*ND*	110	84-115			
Matrix Spike (W0H1556-MS2)	**Source: 0H14010-02**			**Prepared: 08/27/20 Analyzed: 08/28/20**						
Nitrate as N	22100	1100	ug/l	20000	*ND*	110	84-115			
Matrix Spike Dup (W0H1556-MSD1)	**Source: 0H14010-01**			**Prepared: 08/27/20 Analyzed: 08/28/20**						
Nitrate as N	22000	1100	ug/l	20000	*ND*	110	84-115	0.2	20	
Matrix Spike Dup (W0H1556-MSD2)	**Source: 0H14010-02**			**Prepared: 08/27/20 Analyzed: 08/28/20**						
Nitrate as N	22100	1100	ug/l	20000	*ND*	110	84-115	0.1	20	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H1543 - _NONE (WETCHEM)										
Blank (W0H1543-BLK1)				**Prepared & Analyzed: 08/27/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0H1543-BS1)				**Prepared & Analyzed: 08/27/20**						
NO2+NO3 as N	1030	200	ug/l	1000		103	90-110			
Matrix Spike (W0H1543-MS1)	**Source: 0H26109-03**			**Prepared & Analyzed: 08/27/20**						
NO2+NO3 as N	3970	200	ug/l	2000	*1800*	108	90-110			
Matrix Spike (W0H1543-MS2)	**Source: 0H26109-06**			**Prepared & Analyzed: 08/27/20**						
NO2+NO3 as N	5750	200	ug/l	2000	*3620*	106	90-110			
Matrix Spike Dup (W0H1543-MSD1)	**Source: 0H26109-03**			**Prepared & Analyzed: 08/27/20**						
NO2+NO3 as N	3980	200	ug/l	2000	*1800*	109	90-110	0.3	20	
Matrix Spike Dup (W0H1543-MSD2)	**Source: 0H26109-06**			**Prepared & Analyzed: 08/27/20**						
NO2+NO3 as N	5760	200	ug/l	2000	*3620*	107	90-110	0.2	20	
Batch: W0H1546 - _NONE (WETCHEM)										
Blank (W0H1546-BLK1)				**Prepared & Analyzed: 08/27/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0H1546-BS1)				**Prepared & Analyzed: 08/27/20**						
o-Phosphate as P	0.197	0.010	mg/l	0.200		98	88-111			
Matrix Spike (W0H1546-MS1)	**Source: 0H26086-01**			**Prepared & Analyzed: 08/27/20**						
o-Phosphate as P	0.283	0.010	mg/l	0.200	*0.0900*	96	85-112			
Matrix Spike Dup (W0H1546-MSD1)	**Source: 0H26086-01**			**Prepared & Analyzed: 08/27/20**						
o-Phosphate as P	0.288	0.010	mg/l	0.200	*0.0900*	99	85-112	2	20	
Batch: W0H1621 - _NONE (WETCHEM)										
Blank (W0H1621-BLK1)				**Prepared: 08/28/20 Analyzed: 08/31/20**						
TKN	ND	0.10	mg/l							
Blank (W0H1621-BLK2)				**Prepared: 08/28/20 Analyzed: 08/31/20**						
TKN	ND	0.10	mg/l							

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H1621 - _NONE (WETCHEM) (Continued)										
LCS (W0H1621-BS1)				**Prepared: 08/28/20**	**Analyzed: 08/31/20**					
TKN	1.00	0.10	mg/l	1.00		100	90-110			
LCS (W0H1621-BS2)				**Prepared: 08/28/20**	**Analyzed: 08/31/20**					
TKN	0.976	0.10	mg/l	1.00		98	90-110			
Matrix Spike (W0H1621-MS1)	**Source: 0H25093-01**			**Prepared: 08/28/20**	**Analyzed: 08/31/20**					
TKN	1.40	0.10	mg/l	1.00	*0.318*	108	90-110			
Matrix Spike (W0H1621-MS2)	**Source: 0H25093-02**			**Prepared: 08/28/20**	**Analyzed: 08/31/20**					
TKN	1.24	0.10	mg/l	1.00	*0.251*	99	90-110			
Matrix Spike Dup (W0H1621-MSD1)	**Source: 0H25093-01**			**Prepared: 08/28/20**	**Analyzed: 08/31/20**					
TKN	1.37	0.10	mg/l	1.00	*0.318*	105	90-110	2	10	
Matrix Spike Dup (W0H1621-MSD2)	**Source: 0H25093-02**			**Prepared: 08/28/20**	**Analyzed: 08/31/20**					
TKN	1.25	0.10	mg/l	1.00	*0.251*	100	90-110	0.3	10	
Batch: W0H1653 - _NONE (WETCHEM)										
Blank (W0H1653-BLK1)				**Prepared & Analyzed: 08/31/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0H1653-BS1)				**Prepared & Analyzed: 08/31/20**						
Total Dissolved Solids	817	10	mg/l	824		99	96-102			
Duplicate (W0H1653-DUP1)	**Source: 0H26099-01**			**Prepared & Analyzed: 08/31/20**						
Total Dissolved Solids	2300	10	mg/l		*2310*			0.3	10	
Duplicate (W0H1653-DUP2)	**Source: 0H26099-02**			**Prepared & Analyzed: 08/31/20**						
Total Dissolved Solids	2340	10	mg/l		*2310*			0.9	10	
Batch: W0I0084 - _NONE (WETCHEM)										
Blank (W0I0084-BLK1)				**Prepared: 09/01/20**	**Analyzed: 09/03/20**					
TKN	ND	0.10	mg/l							
Blank (W0I0084-BLK2)				**Prepared: 09/01/20**	**Analyzed: 09/03/20**					
TKN	ND	0.10	mg/l							
LCS (W0I0084-BS1)				**Prepared: 09/01/20**	**Analyzed: 09/03/20**					
TKN	0.985	0.10	mg/l	1.00		98	90-110			
LCS (W0I0084-BS2)				**Prepared: 09/01/20**	**Analyzed: 09/03/20**					
TKN	0.982	0.10	mg/l	1.00		98	90-110			
Matrix Spike (W0I0084-MS1)	**Source: 0H27029-04**			**Prepared: 09/01/20**	**Analyzed: 09/03/20**					
TKN	1.07	0.10	mg/l	1.00	*0.0791*	99	90-110			
Matrix Spike (W0I0084-MS2)	**Source: 0H27029-05**			**Prepared: 09/01/20**	**Analyzed: 09/03/20**					
TKN	1.13	0.10	mg/l	1.00	*0.128*	100	90-110			
Matrix Spike Dup (W0I0084-MSD1)	**Source: 0H27029-04**			**Prepared: 09/01/20**	**Analyzed: 09/03/20**					
TKN	1.03	0.10	mg/l	1.00	*0.0791*	95	90-110	4	10	
Matrix Spike Dup (W0I0084-MSD2)	**Source: 0H27029-05**			**Prepared: 09/01/20**	**Analyzed: 09/03/20**					
TKN	1.11	0.10	mg/l	1.00	*0.128*	98	90-110	2	10	

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Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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City of Industry, CA 91745
(626) 336-2139

CHAIN OF CUSTODY FORM

OH27029

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Analysis Required: Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
BC-blw-PH6	water	60 ml Poly	1	8/26/20	7:35a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH5	water	60 ml Poly	1	8/26/20	8:15a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH4	water	60 ml Poly	1	8/26/20	8:40a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH3	water	60 ml Poly	1	8/26/20	9:40a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH2	water	60 ml Poly	1	8/26/20	10:15a	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	

Relinquished By:	Date /Time: 8/26/20 1:25pm	Received by:	Date /Time:
Relinquished By: Fedex	Date /Time: 8/27/20	Received by:	Date /Time: 10:30
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact X On Ice YES

3Y - TOM Y

Weck Laboratories
14859 Clark Avenue
City of Industry, CA 91745
(626) 336-2139

CHAIN OF CUSTODY FORM   OH27029

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager: MICHAEL P. DONOVAN (mpdonovn@cox.net)	Phone Number: (714) 328-5234
Sampler: Jim Burton, Todd Bear	Fax Number: 714.545.8883

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
BC-NF-1	water	60 ml Poly	1	8/26/20	11:40am	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check)
M Bear	8/26/20 1:25p			Same Day ____ 72 Hours ____
Relinquished By:	Date /Time:	Received by:	Date /Time:	24 Hours ____ 5 Days ____ 48 Hours ____ Normal X
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:	Sample Integrity: (Check) Intact ____ On Ice ____

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0I22063

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 10/05/2020
Received Date: 9/22/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 9/22/20 with the Chain-of-Custody document. The samples were received in good condition, at 2.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: LS-DP-7
0I22063-01 (Water)

Sampled: 09/21/20 11:10 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/24/20 16:11				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/28/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1210 **Preparation:** _NONE (LC)		**Prepared:** 09/22/20 11:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/22/20 21:55	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1374 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/24/20 16:11				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	09/28/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1182 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/22/20 12:44				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/23/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1174 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/22/20 12:07				**Analyst:** sbn
o-Phosphate as P	**0.022**	0.010	mg/l	1	09/22/20 13:00	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1259 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 11:28				**Analyst:** ism
Total Dissolved Solids	**20**	10	mg/l	1	09/23/20	

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Sample Results

(Continued)

Sample: LS-DP-28 Sampled: 09/21/20 11:50 by Jim Burton, Todd Bear

0I22063-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/24/20 16:11				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/28/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1210 **Preparation:** _NONE (LC)		**Prepared:** 09/22/20 11:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/22/20 22:13	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1374 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/24/20 16:11				**Analyst:** YMT
TKN	**0.11**	0.10	mg/l	1	09/28/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1182 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/22/20 12:44				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/23/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1174 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/22/20 12:07				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	09/22/20 13:00	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1259 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 11:28				**Analyst:** ism
Total Dissolved Solids	**25**	10	mg/l	1	09/23/20	

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Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1210 - _NONE (LC)										
Blank (W0I1210-BLK1)				**Prepared & Analyzed: 09/22/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0I1210-BS1)				**Prepared & Analyzed: 09/22/20**						
Nitrate as N	2110	110	ug/l	2000		105	90-110			
Matrix Spike (W0I1210-MS1)	**Source: 0I14007-01**			**Prepared: 09/22/20 Analyzed: 09/23/20**						
Nitrate as N	24700	1100	ug/l	20000	*2140*	113	84-115			
Matrix Spike (W0I1210-MS2)	**Source: 0I14007-02**			**Prepared: 09/22/20 Analyzed: 09/23/20**						
Nitrate as N	22000	1100	ug/l	20000	*427*	108	84-115			
Matrix Spike Dup (W0I1210-MSD1)	**Source: 0I14007-01**			**Prepared: 09/22/20 Analyzed: 09/23/20**						
Nitrate as N	24700	1100	ug/l	20000	*2140*	113	84-115	0.2	20	
Matrix Spike Dup (W0I1210-MSD2)	**Source: 0I14007-02**			**Prepared: 09/22/20 Analyzed: 09/23/20**						
Nitrate as N	22000	1100	ug/l	20000	*427*	108	84-115	0	20	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1174 - _NONE (WETCHEM)										
Blank (W0I1174-BLK1)				**Prepared & Analyzed: 09/22/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0I1174-BS1)				**Prepared & Analyzed: 09/22/20**						
o-Phosphate as P	0.198	0.010	mg/l	0.200		99	88-111			
Matrix Spike (W0I1174-MS1)	**Source: 0I21091-01**			**Prepared & Analyzed: 09/22/20**						
o-Phosphate as P	0.203	0.010	mg/l	0.200	*0.00700*	98	85-112			
Matrix Spike Dup (W0I1174-MSD1)	**Source: 0I21091-01**			**Prepared & Analyzed: 09/22/20**						
o-Phosphate as P	0.207	0.010	mg/l	0.200	*0.00700*	100	85-112	2	20	
Batch: W0I1182 - _NONE (WETCHEM)										
Blank (W0I1182-BLK1)				**Prepared: 09/22/20 Analyzed: 09/23/20**						
NO2+NO3 as N	ND	50	ug/l							
LCS (W0I1182-BS1)				**Prepared: 09/22/20 Analyzed: 09/23/20**						
NO2+NO3 as N	1030	50	ug/l	1000		103	90-110			
Matrix Spike (W0I1182-MS1)	**Source: 0I22063-01**			**Prepared: 09/22/20 Analyzed: 09/23/20**						
NO2+NO3 as N	2140	50	ug/l	2000	*ND*	107	90-110			
Matrix Spike (W0I1182-MS2)	**Source: 0I22063-02**			**Prepared: 09/22/20 Analyzed: 09/23/20**						
NO2+NO3 as N	2180	50	ug/l	2000	*83.5*	105	90-110			
Matrix Spike Dup (W0I1182-MSD1)	**Source: 0I22063-01**			**Prepared: 09/22/20 Analyzed: 09/23/20**						
NO2+NO3 as N	2130	50	ug/l	2000	*ND*	106	90-110	0.5	20	
Matrix Spike Dup (W0I1182-MSD2)	**Source: 0I22063-02**			**Prepared: 09/22/20 Analyzed: 09/23/20**						
NO2+NO3 as N	2180	50	ug/l	2000	*83.5*	105	90-110	0	20	
Batch: W0I1259 - _NONE (WETCHEM)										
Blank (W0I1259-BLK1)				**Prepared & Analyzed: 09/23/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0I1259-BS1)				**Prepared & Analyzed: 09/23/20**						
Total Dissolved Solids	836	10	mg/l	824		101	96-102			

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1259 - _NONE (WETCHEM) (Continued)										
Duplicate (W0I1259-DUP1)	**Source: 0I22120-01**			**Prepared & Analyzed: 09/23/20**						
Total Dissolved Solids	3070	10	mg/l		*3100*			1	10	
Duplicate (W0I1259-DUP2)	**Source: 0I22103-01**			**Prepared & Analyzed: 09/23/20**						
Total Dissolved Solids	36500	100	mg/l		*37000*			1	10	
Batch: W0I1374 - _NONE (WETCHEM)										
Blank (W0I1374-BLK1)				**Prepared: 09/24/20**	**Analyzed: 09/28/20**					
TKN	ND	0.10	mg/l							
Blank (W0I1374-BLK2)				**Prepared: 09/24/20**	**Analyzed: 09/28/20**					
TKN	ND	0.10	mg/l							
LCS (W0I1374-BS1)				**Prepared: 09/24/20**	**Analyzed: 09/28/20**					
TKN	0.966	0.10	mg/l	1.00		97	90-110			
LCS (W0I1374-BS2)				**Prepared: 09/24/20**	**Analyzed: 09/28/20**					
TKN	0.962	0.10	mg/l	1.00		96	90-110			
Matrix Spike (W0I1374-MS1)	**Source: 0I22063-01**			**Prepared: 09/24/20**	**Analyzed: 09/28/20**					
TKN	1.07	0.10	mg/l	1.00	*0.0637*	100	90-110			
Matrix Spike (W0I1374-MS2)	**Source: 0I22063-02**			**Prepared: 09/24/20**	**Analyzed: 09/28/20**					
TKN	1.09	0.10	mg/l	1.00	*0.109*	98	90-110			
Matrix Spike Dup (W0I1374-MSD1)	**Source: 0I22063-01**			**Prepared: 09/24/20**	**Analyzed: 09/28/20**					
TKN	1.07	0.10	mg/l	1.00	*0.0637*	101	90-110	0.7	10	
Matrix Spike Dup (W0I1374-MSD2)	**Source: 0I22063-02**			**Prepared: 09/24/20**	**Analyzed: 09/28/20**					
TKN	1.08	0.10	mg/l	1.00	*0.109*	97	90-110	0.8	10	

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Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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City of Industry, CA 91745
(626) 336-2139

OI22063

CHAIN OF CUSTODY FORM

Page 1 of 1

Client Name/Address:
PSOMAS
3 HUTTON CENTRE DRIVE, SUITE 200
SANTA ANA, CA 92707

Project/PO Number: 2KLE010102

Project Manager: MICHAEL P. DONOVAN (mpdonovn@cox.net)

Phone Number: (714) 328-5234

Sampler: Jim Burton, Todd Bear

Fax Number: 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation						Special Instructions
LS-DP-7	water	60 ml Poly	1	9/21/20	11:10am	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
LS-DP-28	water	60 ml Poly	1	9/21/20	11:50am	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						

Relinquished By: [signature] Date/Time: 9/21/20 1:30pm
Received by:
Date/Time:

Relinquished By: FedEx Date/Time:
Received by: [signature]
Date/Time: 9/22/20 11:15

Relinquished By: Date/Time:
Received in Lab by:
Date/Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ____ On Ice yes

2.6°C T0234

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0I23024

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 10/05/2020
Received Date: 9/23/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 9/23/20 with the Chain-of-Custody document. The samples were received in good condition, at 2.2 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: BC-blw-SL
0I23024-01 (Water)
Sampled: 09/22/20 8:55 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/25/20 17:38				**Analyst:** sar
Nitrogen, Total	ND	0.30	mg/l	1	09/28/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1257 **Preparation:** _NONE (LC)		**Prepared:** 09/23/20 12:56				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/23/20 13:57	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1435 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	09/28/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1287 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 15:31				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	09/23/20 16:30	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1463 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/27/20 13:28				**Analyst:** blg
Total Dissolved Solids	ND	10	mg/l	1	09/27/20	

Sample: BC-blw-SL
0I23024-01RE1 (Water)
Sampled: 09/22/20 8:55 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1275 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 12:40				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/23/20	

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Sample Results

(Continued)

Sample: BC-blw-LS — Sampled: 09/22/20 11:00 by Jim Burton, Todd Bear

0I23024-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/28/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1257 **Preparation:** _NONE (LC)		**Prepared:** 09/23/20 12:56				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/23/20 14:15	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1435 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	09/28/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1275 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 12:40				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/23/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1287 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 15:31				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	09/23/20 16:33	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1463 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/27/20 13:28				**Analyst:** blg
Total Dissolved Solids	**10**	10	mg/l	1	09/27/20	

Sample: BC-NF-1 — Sampled: 09/22/20 11:45 by Jim Burton, Todd Bear

0I23024-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/28/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1257 **Preparation:** _NONE (LC)		**Prepared:** 09/23/20 12:56				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/23/20 14:33	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1435 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
TKN	**0.23**	0.10	mg/l	1	09/28/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1275 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 12:40				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/23/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1287 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 15:31				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	09/23/20 16:34	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1463 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/27/20 13:28				**Analyst:** blg
Total Dissolved Solids	**21**	10	mg/l	1	09/27/20	

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Sample Results

(Continued)

Sample: BC-Blw-PH2 — Sampled: 09/22/20 12:20 by Jim Burton, Todd Bear

0I23024-04 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/28/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1257 **Preparation:** _NONE (LC)		**Prepared:** 09/23/20 12:56				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/23/20 14:51	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1435 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	09/28/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1275 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 12:40				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/23/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1287 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 15:31				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	09/23/20 16:36	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1463 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/27/20 13:28				**Analyst:** blg
Total Dissolved Solids	**24**	10	mg/l	1	09/27/20	

Sample: BC-Blw-PH3 — Sampled: 09/22/20 12:55 by Jim Burton, Todd Bear

0I23024-05 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/28/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1257 **Preparation:** _NONE (LC)		**Prepared:** 09/23/20 12:56				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/23/20 15:09	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1435 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	09/28/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1275 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 12:40				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/23/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1287 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/23/20 15:31				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	09/23/20 16:37	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1463 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/27/20 13:28				**Analyst:** blg
Total Dissolved Solids	**28**	10	mg/l	1	09/27/20	

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Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1257 - _NONE (LC)										
Blank (W0I1257-BLK1)				**Prepared & Analyzed: 09/23/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0I1257-BS1)				**Prepared & Analyzed: 09/23/20**						
Nitrate as N	2150	110	ug/l	2000		108	90-110			
Matrix Spike (W0I1257-MS1)	**Source: 0I23020-01**			**Prepared & Analyzed: 09/23/20**						
Nitrate as N	23600	1100	ug/l	20000	*2060*	108	84-115			
Matrix Spike (W0I1257-MS2)	**Source: 0I14016-01**			**Prepared & Analyzed: 09/23/20**						
Nitrate as N	31100	1100	ug/l	20000	*8050*	115	84-115			
Matrix Spike Dup (W0I1257-MSD1)	**Source: 0I23020-01**			**Prepared & Analyzed: 09/23/20**						
Nitrate as N	23800	1100	ug/l	20000	*2060*	109	84-115	0.5	20	
Matrix Spike Dup (W0I1257-MSD2)	**Source: 0I14016-01**			**Prepared & Analyzed: 09/23/20**						
Nitrate as N	31100	1100	ug/l	20000	*8050*	115	84-115	0	20	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1275 - _NONE (WETCHEM)										
Blank (W0I1275-BLK1)				**Prepared & Analyzed: 09/23/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0I1275-BS1)				**Prepared & Analyzed: 09/23/20**						
NO2+NO3 as N	1010	200	ug/l	1000		101	90-110			
Matrix Spike (W0I1275-MS1)	**Source: 0I23020-01**			**Prepared & Analyzed: 09/23/20**						
NO2+NO3 as N	3860	200	ug/l	2000	*1830*	102	90-110			
Matrix Spike (W0I1275-MS2)	**Source: 0I23037-01**			**Prepared & Analyzed: 09/23/20**						
NO2+NO3 as N	2140	200	ug/l	2000	*94.6*	102	90-110			
Matrix Spike Dup (W0I1275-MSD1)	**Source: 0I23020-01**			**Prepared & Analyzed: 09/23/20**						
NO2+NO3 as N	3860	200	ug/l	2000	*1830*	102	90-110	0	20	
Matrix Spike Dup (W0I1275-MSD2)	**Source: 0I23037-01**			**Prepared & Analyzed: 09/23/20**						
NO2+NO3 as N	2130	200	ug/l	2000	*94.6*	102	90-110	0.5	20	
Batch: W0I1287 - _NONE (WETCHEM)										
Blank (W0I1287-BLK1)				**Prepared & Analyzed: 09/23/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0I1287-BS1)				**Prepared & Analyzed: 09/23/20**						
o-Phosphate as P	0.194	0.010	mg/l	0.200		97	88-111			
Matrix Spike (W0I1287-MS1)	**Source: 0I22120-01**			**Prepared & Analyzed: 09/23/20**						
o-Phosphate as P	0.232	0.010	mg/l	0.200	*0.0300*	101	85-112			
Matrix Spike Dup (W0I1287-MSD1)	**Source: 0I22120-01**			**Prepared & Analyzed: 09/23/20**						
o-Phosphate as P	0.229	0.010	mg/l	0.200	*0.0300*	100	85-112	1	20	
Batch: W0I1435 - _NONE (WETCHEM)										
Blank (W0I1435-BLK1)				**Prepared: 09/25/20 Analyzed: 09/28/20**						
TKN	ND	0.10	mg/l							
Blank (W0I1435-BLK2)				**Prepared: 09/25/20 Analyzed: 09/28/20**						
TKN	ND	0.10	mg/l							

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1435 - _NONE (WETCHEM) (Continued)										
LCS (W0I1435-BS1)				**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	0.963	0.10	mg/l	1.00		96	90-110			
LCS (W0I1435-BS2)				**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	0.944	0.10	mg/l	1.00		94	90-110			
Duplicate (W0I1435-DUP1)	**Source: 0I23024-01**			**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	0.0422	0.10	mg/l		*0.0310*			30	10	R-03
Matrix Spike (W0I1435-MS1)	**Source: 0I21109-01**			**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	1.03	0.10	mg/l	1.00	*ND*	103	90-110			
Matrix Spike (W0I1435-MS2)	**Source: 0I21109-02**			**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	0.931	0.10	mg/l	1.00	*ND*	93	90-110			
Matrix Spike Dup (W0I1435-MSD1)	**Source: 0I21109-01**			**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	0.979	0.10	mg/l	1.00	*ND*	98	90-110	5	10	
Matrix Spike Dup (W0I1435-MSD2)	**Source: 0I21109-02**			**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	1.02	0.10	mg/l	1.00	*ND*	102	90-110	9	10	
Batch: W0I1463 - _NONE (WETCHEM)										
Blank (W0I1463-BLK1)				**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0I1463-BS1)				**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	828	10	mg/l	824		100	96-102			
Duplicate (W0I1463-DUP1)	**Source: 0I23001-02**			**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	1560	10	mg/l		*1530*			2	10	
Duplicate (W0I1463-DUP2)	**Source: 0I23001-04**			**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	8110	10	mg/l		*8020*			1	10	

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Notes and Definitions

Item	Definition
R-03	The RPD is not applicable for result below the reporting limit (either ND or J value).
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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(626) 336-2139

CHAIN OF CUSTODY FORM

OI28024

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Analysis Required: Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
BC-blw-SL	water	60 ml Poly	1	9/22/20	8:55am	None	X						
↓	water	250 ml Poly	1	↓	↓	None		X					Filtered with 0.45µ
↓	water	500 ml Poly	1	↓	↓	None			X				
↓	water	250 ml Poly	1	↓	↓	H2SO4				X	X	X	
BC-blw-LS	water	60 ml Poly	1	9/22/20	11:00am	None	X						
↓	water	250 ml Poly	1	↓	↓	None		X					Filtered with 0.45µ
↓	water	500 ml Poly	1	↓	↓	None			X				
↓	water	250 ml Poly	1	↓	↓	H2SO4				X	X	X	
BC-NF-1	water	60 ml Poly	1	9/22/20	11:45am	None	X						
↓	water	250 ml Poly	1	↓	↓	None		X					Filtered with 0.45µ
↓	water	500 ml Poly	1	↓	↓	None			X				
↓	water	250 ml Poly	1	↓	↓	H2SO4				X	X	X	
BC-blw-PH2	water	60 ml Poly	1	9/22/20	12:20pm	None	X						
↓	water	250 ml Poly	1	↓	↓	None		X					Filtered with 0.45µ
↓	water	500 ml Poly	1	↓	↓	None			X				
↓	water	250 ml Poly	1	↓	↓	H2SO4				X	X	X	
BC-blw-PH3	water	60 ml Poly	1	9/22/20	12:55pm	None	X						
↓	water	250 ml Poly	1	↓	↓	None		X					Filtered with 0.45µ
↓	water	500 ml Poly	1	↓	↓	None			X				
↓	water	250 ml Poly	1	↓	↓	H2SO4				X	X	X	

Relinquished By:	Date /Time: 9/22/20 1:55pm	Received by:	Date /Time:
Relinquished By: Fedex	Date /Time: 9/23/20	Received by:	Date /Time: 10:35
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ____ On Ice X

7039 2.2°C

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0I24028

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 10/05/2020
Received Date: 9/24/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 9/24/20 with the Chain-of-Custody document. The samples were received in good condition, at 2.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: SL-DP-20
0I24028-01 (Water)

Sampled: 09/23/20 12:05 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/28/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1314 **Preparation:** _NONE (LC)		**Prepared:** 09/24/20 10:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/24/20 15:36	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1435 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	09/28/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1376 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/24/20 16:13				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/26/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1327 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/24/20 10:06				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	09/24/20 13:21	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1463 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/27/20 13:28				**Analyst:** blg
Total Dissolved Solids	**10**	10	mg/l	1	09/27/20	

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Sample Results

(Continued)

Sample: SL-DP-42 Sampled: 09/23/20 12:50 by Jim Burton, Todd Bear

0I24028-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	09/28/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1314 **Preparation:** _NONE (LC)		**Prepared:** 09/24/20 10:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/24/20 15:54	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1435 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/25/20 17:38				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	09/28/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1376 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/24/20 16:13				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/26/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1327 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/24/20 10:06				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	09/24/20 13:22	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1463 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/27/20 13:28				**Analyst:** blg
Total Dissolved Solids	**31**	10	mg/l	1	09/27/20	

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Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1314 - _NONE (LC)										
Blank (W0I1314-BLK1)				**Prepared & Analyzed: 09/24/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0I1314-BS1)				**Prepared & Analyzed: 09/24/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
Matrix Spike (W0I1314-MS1)	**Source: 0I23041-01**			**Prepared & Analyzed: 09/24/20**						
Nitrate as N	21200	1100	ug/l	20000	*165*	105	84-115			
Matrix Spike (W0I1314-MS2)	**Source: 0I23044-04**			**Prepared & Analyzed: 09/24/20**						
Nitrate as N	22200	1100	ug/l	20000	*280*	109	84-115			
Matrix Spike Dup (W0I1314-MSD1)	**Source: 0I23041-01**			**Prepared & Analyzed: 09/24/20**						
Nitrate as N	21600	1100	ug/l	20000	*165*	107	84-115	2	20	
Matrix Spike Dup (W0I1314-MSD2)	**Source: 0I23044-04**			**Prepared & Analyzed: 09/24/20**						
Nitrate as N	22100	1100	ug/l	20000	*280*	109	84-115	0.1	20	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1327 - _NONE (WETCHEM)										
Blank (W0I1327-BLK1)				**Prepared & Analyzed: 09/24/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0I1327-BS1)				**Prepared & Analyzed: 09/24/20**						
o-Phosphate as P	0.200	0.010	mg/l	0.200		100	88-111			
Matrix Spike (W0I1327-MS1)	**Source: 0I23080-01**			**Prepared & Analyzed: 09/24/20**						
o-Phosphate as P	0.234	0.010	mg/l	0.200	*0.0390*	98	85-112			
Matrix Spike Dup (W0I1327-MSD1)	**Source: 0I23080-01**			**Prepared & Analyzed: 09/24/20**						
o-Phosphate as P	0.237	0.010	mg/l	0.200	*0.0390*	99	85-112	1	20	
Batch: W0I1376 - _NONE (WETCHEM)										
Blank (W0I1376-BLK1)				**Prepared: 09/24/20 Analyzed: 09/26/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0I1376-BS1)				**Prepared: 09/24/20 Analyzed: 09/26/20**						
NO2+NO3 as N	1000	200	ug/l	1000		100	90-110			
Matrix Spike (W0I1376-MS1)	**Source: 0I25062-01**			**Prepared: 09/24/20 Analyzed: 09/26/20**						
NO2+NO3 as N	19700	800	ug/l	8000	*11200*	106	90-110			
Matrix Spike Dup (W0I1376-MSD1)	**Source: 0I25062-01**			**Prepared: 09/24/20 Analyzed: 09/26/20**						
NO2+NO3 as N	19700	800	ug/l	8000	*11200*	106	90-110	0	20	
Batch: W0I1435 - _NONE (WETCHEM)										
Blank (W0I1435-BLK1)				**Prepared: 09/25/20 Analyzed: 09/28/20**						
TKN	ND	0.10	mg/l							
Blank (W0I1435-BLK2)				**Prepared: 09/25/20 Analyzed: 09/28/20**						
TKN	ND	0.10	mg/l							
LCS (W0I1435-BS1)				**Prepared: 09/25/20 Analyzed: 09/28/20**						
TKN	0.963	0.10	mg/l	1.00		96	90-110			
LCS (W0I1435-BS2)				**Prepared: 09/25/20 Analyzed: 09/28/20**						
TKN	0.944	0.10	mg/l	1.00		94	90-110			

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1435 - _NONE (WETCHEM) (Continued)										
Duplicate (W0I1435-DUP1)	**Source: 0I23024-01**			**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	0.0422	0.10	mg/l		*0.0310*			30	10	R-03
Matrix Spike (W0I1435-MS1)	**Source: 0I21109-01**			**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	1.03	0.10	mg/l	1.00	*ND*	103	90-110			
Matrix Spike (W0I1435-MS2)	**Source: 0I21109-02**			**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	0.931	0.10	mg/l	1.00	*ND*	93	90-110			
Matrix Spike Dup (W0I1435-MSD1)	**Source: 0I21109-01**			**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	0.979	0.10	mg/l	1.00	*ND*	98	90-110	5	10	
Matrix Spike Dup (W0I1435-MSD2)	**Source: 0I21109-02**			**Prepared: 09/25/20**	**Analyzed: 09/28/20**					
TKN	1.02	0.10	mg/l	1.00	*ND*	102	90-110	9	10	
Batch: W0I1463 - _NONE (WETCHEM)										
Blank (W0I1463-BLK1)				**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0I1463-BS1)				**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	828	10	mg/l	824		100	96-102			
Duplicate (W0I1463-DUP1)	**Source: 0I23001-02**			**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	1560	10	mg/l		*1530*			2	10	
Duplicate (W0I1463-DUP2)	**Source: 0I23001-04**			**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	8110	10	mg/l		*8020*			1	10	

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Notes and Definitions

Item	Definition
R-03	The RPD is not applicable for result below the reporting limit (either ND or J value).
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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CHAIN OF CUSTODY FORM

OI 24090

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager: MICHAEL P. DONOVAN (mpdonovn@cox.net)	Phone Number: (714) 328-5234
Sampler: Jim Burton, Todd Bear	Fax Number: 714.545.8883

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
SL-DP-20	water	60 ml Poly	1	9/23/20	12:05pm	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
SL-DP-42	water	60 ml Poly	1	9/23/20	12:50pm	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	

Relinquished By:	Date /Time:	Received by:	Date /Time:
[signature]	9/23/20 1:45pm		
Relinquished By: [signature]	Date /Time: 9·24·20	Received by: [signature]	Date /Time: 11:00
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ____ On Ice ∅

2° TR30

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0I25019

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 10/05/2020
Received Date: 9/25/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 9/25/20 with the Chain-of-Custody document. The samples were received in good condition, at 1.2 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: BC-blw-PH6
0I25019-01 (Water)

Sampled: 09/24/20 8:05 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/29/20 18:01				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	10/02/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1410 **Preparation:** _NONE (LC)		**Prepared:** 09/25/20 11:37				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/25/20 15:10	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1643 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/29/20 18:01				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	10/02/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1376 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/24/20 16:13				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/26/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1414 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/25/20 12:21				**Analyst:** ymt
o-Phosphate as P	ND	0.010	mg/l	1	09/25/20 17:04	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1463 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/27/20 13:28				**Analyst:** blg
Total Dissolved Solids	**41**	10	mg/l	1	09/27/20	

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Sample Results

(Continued)

Sample: BC-blw-PH5 — Sampled: 09/24/20 8:50 by Jim Burton, Todd Bear

0I25019-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/29/20 18:01				**Analyst:** YMT
Nitrogen, Total	**0.37**	0.30	mg/l	1	10/02/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1410 **Preparation:** _NONE (LC)		**Prepared:** 09/25/20 11:37				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/25/20 15:28	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1643 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/29/20 18:01				**Analyst:** YMT
TKN	**0.37**	0.10	mg/l	1	10/02/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1376 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/24/20 16:13				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/26/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1414 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/25/20 12:21				**Analyst:** ymt
o-Phosphate as P	ND	0.010	mg/l	1	09/25/20 17:04	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1463 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/27/20 13:28				**Analyst:** blg
Total Dissolved Solids	**37**	10	mg/l	1	09/27/20	

Sample: BC-blw-PH4 — Sampled: 09/24/20 9:40 by Jim Burton, Todd Bear

0I25019-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 09/29/20 18:01				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	10/02/20	
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0I1410 **Preparation:** _NONE (LC)		**Prepared:** 09/25/20 11:37				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	09/25/20 15:46	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0I1643 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/29/20 18:01				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	10/02/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0I1376 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/24/20 16:13				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	09/26/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0I1414 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/25/20 12:21				**Analyst:** ymt
o-Phosphate as P	ND	0.010	mg/l	1	09/25/20 17:04	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0I1463 **Preparation:** _NONE (WETCHEM)		**Prepared:** 09/27/20 13:28				**Analyst:** blg
Total Dissolved Solids	**41**	10	mg/l	1	09/27/20	

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Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1410 - _NONE (LC)										
Blank (W0I1410-BLK1)				**Prepared & Analyzed: 09/25/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0I1410-BS1)				**Prepared & Analyzed: 09/25/20**						
Nitrate as N	2180	110	ug/l	2000		109	90-110			
Matrix Spike (W0I1410-MS1)	**Source: 0I25065-02**			**Prepared & Analyzed: 09/25/20**						
Nitrate as N	26300	1100	ug/l	20000	*4340*	110	84-115			
Matrix Spike (W0I1410-MS2)	**Source: 0I25065-03**			**Prepared & Analyzed: 09/25/20**						
Nitrate as N	25700	1100	ug/l	20000	*4440*	106	84-115			
Matrix Spike Dup (W0I1410-MSD1)	**Source: 0I25065-02**			**Prepared & Analyzed: 09/25/20**						
Nitrate as N	26400	1100	ug/l	20000	*4340*	110	84-115	0.5	20	
Matrix Spike Dup (W0I1410-MSD2)	**Source: 0I25065-03**			**Prepared & Analyzed: 09/25/20**						
Nitrate as N	25700	1100	ug/l	20000	*4440*	106	84-115	0.2	20	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1376 - _NONE (WETCHEM)										
Blank (W0I1376-BLK1)				**Prepared: 09/24/20 Analyzed: 09/26/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0I1376-BS1)				**Prepared: 09/24/20 Analyzed: 09/26/20**						
NO2+NO3 as N	1000	200	ug/l	1000		100	90-110			
Matrix Spike (W0I1376-MS1)	**Source: 0I25062-01**			**Prepared: 09/24/20 Analyzed: 09/26/20**						
NO2+NO3 as N	19700	800	ug/l	8000	*11200*	106	90-110			
Matrix Spike Dup (W0I1376-MSD1)	**Source: 0I25062-01**			**Prepared: 09/24/20 Analyzed: 09/26/20**						
NO2+NO3 as N	19700	800	ug/l	8000	*11200*	106	90-110	0	20	
Batch: W0I1414 - _NONE (WETCHEM)										
Blank (W0I1414-BLK1)				**Prepared & Analyzed: 09/25/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0I1414-BS1)				**Prepared & Analyzed: 09/25/20**						
o-Phosphate as P	0.215	0.010	mg/l	0.200		108	88-111			
Matrix Spike (W0I1414-MS1)	**Source: 0I25019-01**			**Prepared & Analyzed: 09/25/20**						
o-Phosphate as P	0.206	0.010	mg/l	0.200	*0.00300*	102	85-112			
Matrix Spike Dup (W0I1414-MSD1)	**Source: 0I25019-01**			**Prepared & Analyzed: 09/25/20**						
o-Phosphate as P	0.210	0.010	mg/l	0.200	*0.00300*	104	85-112	2	20	
Batch: W0I1463 - _NONE (WETCHEM)										
Blank (W0I1463-BLK1)				**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0I1463-BS1)				**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	828	10	mg/l	824		100	96-102			
Duplicate (W0I1463-DUP1)	**Source: 0I23001-02**			**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	1560	10	mg/l		*1530*			2	10	
Duplicate (W0I1463-DUP2)	**Source: 0I23001-04**			**Prepared & Analyzed: 09/27/20**						
Total Dissolved Solids	8110	10	mg/l		*8020*			1	10	

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0I1643 - _NONE (WETCHEM)										
Blank (W0I1643-BLK1)				**Prepared: 09/29/20**	**Analyzed: 10/02/20**					
TKN	ND	0.10	mg/l							
Blank (W0I1643-BLK2)				**Prepared: 09/29/20**	**Analyzed: 10/02/20**					
TKN	ND	0.10	mg/l							
LCS (W0I1643-BS1)				**Prepared: 09/29/20**	**Analyzed: 10/02/20**					
TKN	1.08	0.10	mg/l	1.00		108	90-110			
LCS (W0I1643-BS2)				**Prepared: 09/29/20**	**Analyzed: 10/02/20**					
TKN	1.06	0.10	mg/l	1.00		106	90-110			
Matrix Spike (W0I1643-MS1)	**Source: 0I28100-01**			**Prepared: 09/29/20**	**Analyzed: 10/02/20**					
TKN	1.21	0.10	mg/l	1.00	*0.255*	96	90-110			
Matrix Spike (W0I1643-MS2)	**Source: 0I28100-02**			**Prepared: 09/29/20**	**Analyzed: 10/02/20**					
TKN	1.42	0.10	mg/l	1.00	*0.425*	100	90-110			
Matrix Spike Dup (W0I1643-MSD1)	**Source: 0I28100-01**			**Prepared: 09/29/20**	**Analyzed: 10/02/20**					
TKN	1.20	0.10	mg/l	1.00	*0.255*	95	90-110	0.8	10	
Matrix Spike Dup (W0I1643-MSD2)	**Source: 0I28100-02**			**Prepared: 09/29/20**	**Analyzed: 10/02/20**					
TKN	1.39	0.10	mg/l	1.00	*0.425*	97	90-110	2	10	

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Notes and Definitions

Item	Definition
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Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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CHAIN OF CUSTODY FORM

OI85019

Page 1 of 1

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation	Special Instructions
BC-blw-PH6	water	60 ml Poly	1	9/24/20	8:05 am	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH5	water	60 ml Poly	1	9/24/20	8:50 am	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
BC-blw-PH4	water	60 ml Poly	1	9/24/20	9:40 am	None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	
	water	60 ml Poly	1			None	X						
	water	250 ml Poly	1			None		X					Filtered with 0.45µ
	water	500 ml Poly	1			None			X				
	water	250 ml Poly	1			H2SO4				X	X	X	

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check)
[signature]	9/24/20 11:30 am			Same Day ____ 72 Hours ____
Relinquished By: Fedex	Date /Time: 9/25/20	Received by: [signature]	Date /Time: 1057	24 Hours ____ 5 Days ____
				48 Hours ____ Normal X
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:	Sample Integrity: (Check)
				Intact ____ On Ice ____

1.2°C D235

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0G14035

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/06/2020
Received Date: 7/14/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan :

Enclosed are the results of analyses for samples received 7/14/2020 with the Chain-of-Custody document. The samples were received in good condition, at 17.4 °C and on ice. All analysis met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Case Narrative

Samples were received outside of method temperature range.

Sample Results

Sample: SL-BR-1 — Sampled: 07/13/20 11:05 by Jim Burton, Todd Bear
0G14035-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0G0955 — **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/14/20 11:14				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	07/15/20	

Sample: LS-BR-1 — Sampled: 07/13/20 11:55 by Jim Burton, Todd Bear
0G14035-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0G0955 — **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/14/20 11:14				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	07/15/20	

Sample: Int2-RES-1 — Sampled: 07/13/20 12:25 by Jim Burton, Todd Bear
0G14035-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0G0955 — **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/14/20 11:14				**Analyst:** amc
E. coli	**24**	1.0	MPN/100ml	1	07/15/20	

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Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9223B in Water			
E. coli		✓	

Reviewed by:

Chris Samatmanakit
Project Manager

ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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City of Industry, CA 91745

OG14035

CHAIN OF CUSTODY FORM

Page 1 of 1

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Escherichia coli (E. coli) by SM 9223B											Special Instructions
SL-BR-1	water	125 ml poly	1	7/13/20	11:05a	Sterile- None	X											24-Hour Hold time*
LS-BR-1	water	125 ml poly	1	"	11:55a	Sterile- None	X											24-Hour Hold time*
Int2-RES-1	water	125 ml poly	1	"	12:25p	Sterile- None	X											24-Hour Hold time*

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check)
				Same Day ____ 72 Hours ____
Relinquished By: Fedex	Date /Time: 7/14/20	Received by: [signature] 17.4°	Date /Time: 10:37	24 Hours ____ 5 Days ____
				48 Hours ____ Normal __X__
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:	Sample Integrity: (Check)
				Intact ____ On Ice ____

* Per Lohantan Surface Water Ambient Monitoring Program (SWAMP) for ambient water

* ice packs were not frozen - LKA 7/14

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0G17046

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/12/2020
Received Date: 7/17/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan :

Enclosed are the results of analyses for samples received 7/17/2020 with the Chain-of-Custody document. The samples were received in good condition, at 5.3 °C and on ice. All analysis met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: SL-BR-1 — Sampled: 07/16/20 11:00 by Jim Burton, Todd Bear
0G17046-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0G0955 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/17/20 11:20				**Analyst:** amc
E. coli	**1.0**	1.0	MPN/100ml	1	07/18/20	

Sample: LS-BR-1 — Sampled: 07/16/20 12:00 by Jim Burton, Todd Bear
0G17046-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0G0955 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/17/20 11:20				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	07/18/20	

Sample: Int2-RES-1 — Sampled: 07/16/20 12:30 by Jim Burton, Todd Bear
0G17046-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0G0955 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/17/20 11:20				**Analyst:** amc
E. coli	**3.1**	1.0	MPN/100ml	1	07/18/20	

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Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9223B in Water			
E. coli		✓	

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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CHAIN OF CUSTODY FORM

0617046

Page 1 of 1

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Analysis Required: Escherichia coli (E. coli) by SM 9223B	Special Instructions
SL-BR-1	water	125 ml poly	1	7/16/20	11:00a	Sterile- None	X	24-Hour Hold time*
LS-BR-1	water	125 ml poly	1	"	12:00p	Sterile- None	X	24-Hour Hold time*
Int2-RES-1	water	125 ml poly	1	"	12:30p	Sterile- None	X	24-Hour Hold time*

Relinquished By: Todd Bear	Date /Time: 7/16/20	Received by: FedEx	Date /Time:
Relinquished By: FedEx	Date /Time:	Received by: Jamalynn	Date /Time: 7/17/20 1020
Relinquished By:	Date /Time:	Received In Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ____ On Ice ____

* Per Lohantan Surface Water Ambient Monitoring Program (SWAMP) for ambient water

5.3°C T023Y

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0G28078

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/12/2020
Received Date: 7/28/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan :

Enclosed are the results of analyses for samples received 7/28/2020 with the Chain-of-Custody document. The samples were received in good condition, at 4.3 °C and on ice. All analysis met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: SL-BR-1 — Sampled: 07/27/20 11:15 by Jim Burton, Todd Bear
0G28078-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/28/20 09:51				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	07/29/20	

Sample: LS-BR-1 — Sampled: 07/27/20 12:05 by Jim Burton, Todd Bear
0G28078-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/28/20 09:51				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	07/29/20	

Sample: Int2-RES-1 — Sampled: 07/27/20 12:35 by Jim Burton, Todd Bear
0G28078-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/28/20 09:51				**Analyst:** amc
E. coli	**18**	1.0	MPN/100ml	1	07/29/20	

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Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9223B in Water			
E. coli		✓	

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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(626) 336-2139

CHAIN OF CUSTODY FORM 0728078

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Escherichia coli (E. coli) by SM 9223B	Special Instructions
SL-BR-1	water	125 ml poly	1	7/27/20	11:15a	Sterile- None	X	24-Hour Hold time*
LS-BR-1	water	125 ml poly	1	"	12:05p	Sterile- None	X	24-Hour Hold time*
INT2-BES-1	water	125 ml poly	1	"	12:35p	Sterile- None	X	24-Hour Hold time*

Relinquished By: MBurton	Date /Time: 7/27/20 1:00pm	Received by:	Date /Time:
Relinquished By: Tcdes	Date /Time:	Received by:	Date /Time:
Relinquished By:	Date /Time:	Received in Lab by: 7/28/20	Date /Time: 9:15

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
24 Hours ____ 5 Days ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ✓ On Ice ✓

4.3°C T-0134

* Per Lohantan Surface Water Ambient Monitoring Program (SWAMP) for ambient water

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0G31035

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/20/2020

Received Date: 7/31/2020

Turnaround Time: Normal

Phones: (714) 751-7373

Fax: (714) 545-8883

P.O. #:

Billing Code:

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 7/31/20 with the Chain-of-Custody document. The samples were received in good condition, at 2.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Chris Samatmanakit
Project Manager

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Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
BC-Blw-Ph6	Jim Burton, Todd Bear	0G31035-01	Water	07/30/20 07:45	
BC-Blw-Ph5	Jim Burton, Todd Bear	0G31035-02	Water	07/30/20 08:30	
BC-Blw-Ph4	Jim Burton, Todd Bear	0G31035-03	Water	07/30/20 09:00	
BC-Blw-Ph3	Jim Burton, Todd Bear	0G31035-04	Water	07/30/20 09:40	
BC-Blw-Ph2	Jim Burton, Todd Bear	0G31035-05	Water	07/30/20 10:15	
SL-BR-1	Jim Burton, Todd Bear	0G31035-06	Water	07/30/20 11:00	
LS-BR-1	Jim Burton, Todd Bear	0G31035-07	Water	07/30/20 11:40	
INT2-RES-1	Jim Burton, Todd Bear	0G31035-08	Water	07/30/20 12:00	

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9223B in Water			
E. coli		✓	

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Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Results

Sample: BC-Blw-Ph6
0G31035-01 (Water)

Sampled: 07/30/20 7:45 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1662 **Preparation:** _NONE (LC)		**Prepared:** 07/31/20 12:21				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	07/31/20 19:40	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/13/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/13/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** SAR
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1660 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:32				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/31/20 12:16	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**38**	10	mg/l	1	08/04/20	

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Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Results

(Continued)

Sample: BC-Blw-Ph5
0G31035-02 (Water)

Sampled: 07/30/20 8:30 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1662 **Preparation:** _NONE (LC)		**Prepared:** 07/31/20 12:21				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	07/31/20 19:58	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/13/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/13/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** SAR
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1660 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:32				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/31/20 12:21	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**26**	10	mg/l	1	08/04/20	

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Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Results

(Continued)

Sample: BC-Blw-Ph4
0G31035-03 (Water)

Sampled: 07/30/20 9:00 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1662 **Preparation:** _NONE (LC)		**Prepared:** 07/31/20 12:21				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	07/31/20 20:16	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/13/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/13/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** SAR
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1660 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:32				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/31/20 12:22	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**27**	10	mg/l	1	08/04/20	

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Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Results

(Continued)

Sample: BC-Blw-Ph3
0G31035-04 (Water)

Sampled: 07/30/20 9:40 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1662 **Preparation:** _NONE (LC)		**Prepared:** 07/31/20 12:21				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	07/31/20 20:34	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/13/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/13/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** SAR
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1660 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:32				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/31/20 12:23	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**35**	10	mg/l	1	08/04/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported: 08/20/2020 16:23

Sample Results

(Continued)

Sample: BC-Blw-Ph2 — Sampled: 07/30/20 10:15 by Jim Burton, Todd Bear

0G31035-05 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0G1662 **Preparation:** _NONE (LC)		**Prepared:** 07/31/20 12:21				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	07/31/20 20:52	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
Nitrogen, Total	ND	0.30	mg/l	1	08/13/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0415 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/07/20 16:24				**Analyst:** ymt
TKN	ND	0.10	mg/l	1	08/13/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** SAR
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0G1660 **Preparation:** _NONE (WETCHEM)		**Prepared:** 07/31/20 11:32				**Analyst:** sbn
o-Phosphate as P	ND	0.010	mg/l	1	07/31/20 12:25	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**20**	10	mg/l	1	08/04/20	

Sample: SL-BR-1 — Sampled: 07/30/20 11:00 by Jim Burton, Todd Bear

0G31035-06 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/31/20 10:52				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	08/01/20	

Sample: LS-BR-1 — Sampled: 07/30/20 11:40 by Jim Burton, Todd Bear

0G31035-07 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 07/31/20 10:52				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	08/01/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Sample Results

(Continued)

Sample: INT2-RES-1
0G31035-08 (Water)

Sampled: 07/30/20 12:00 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321	**Preparation:** _NONE (MICROBIOLOGY)	**Prepared:** 07/31/20 10:52				**Analyst:** amc
E. coli	**6.3**	1.0	MPN/100ml	1	08/01/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported: 08/20/2020 16:23

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0G1662 - EPA 300.0										
Blank (W0G1662-BLK1)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0G1662-BS1)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
LCS (W0G1662-BS2)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
LCS (W0G1662-BS3)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
LCS (W0G1662-BS4)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
LCS (W0G1662-BS5)				**Prepared & Analyzed: 07/31/20**						
Nitrate as N	2160	110	ug/l	2000		108	90-110			
Matrix Spike (W0G1662-MS1)	**Source: 0G31002-01**			**Prepared & Analyzed: 07/31/20**						
Nitrate as N	20900	1100	ug/l	20000	ND	105	84-115			
Matrix Spike Dup (W0G1662-MSD1)	**Source: 0G31002-01**			**Prepared & Analyzed: 07/31/20**						
Nitrate as N	20800	1100	ug/l	20000	ND	104	84-115	0.6	20	

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0G1660 - EPA 365.3										
Blank (W0G1660-BLK1)				**Prepared & Analyzed: 07/31/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0G1660-BS1)				**Prepared & Analyzed: 07/31/20**						
o-Phosphate as P	0.203	0.010	mg/l	0.200		102	88-111			
Matrix Spike (W0G1660-MS1)	**Source: 0G31035-01**			**Prepared & Analyzed: 07/31/20**						
o-Phosphate as P	0.201	0.010	mg/l	0.200	0.00500	98	85-112			
Matrix Spike Dup (W0G1660-MSD1)	**Source: 0G31035-01**			**Prepared & Analyzed: 07/31/20**						
o-Phosphate as P	0.199	0.010	mg/l	0.200	0.00500	97	85-112	1	20	
Batch: W0H0004 - EPA 353.2										
Blank (W0H0004-BLK1)				**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0H0004-BS1)				**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	1010	200	ug/l	1000		101	90-110			
Matrix Spike (W0H0004-MS1)	**Source: 0G31035-01**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110			
Matrix Spike (W0H0004-MS2)	**Source: 0G31035-02**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110			

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported: 08/20/2020 16:23

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0004 - EPA 353.2 (Continued)										
Matrix Spike Dup (W0H0004-MSD1)	**Source: 0G31035-01**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110	0	20	
Matrix Spike Dup (W0H0004-MSD2)	**Source: 0G31035-02**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110	0	20	
Batch: W0H0065 - SM 2540C										
Blank (W0H0065-BLK1)				**Prepared: 08/03/20 Analyzed: 08/04/20**						
Total Dissolved Solids	ND	10	mg/l							
LCS (W0H0065-BS1)				**Prepared: 08/03/20 Analyzed: 08/04/20**						
Total Dissolved Solids	809	10	mg/l	824		98	96-102			
Duplicate (W0H0065-DUP1)	**Source: 0G27001-02**			**Prepared: 08/03/20 Analyzed: 08/04/20**						
Total Dissolved Solids	1470	10	mg/l		1500			2	10	
Duplicate (W0H0065-DUP2)	**Source: 0G27001-04**			**Prepared: 08/03/20 Analyzed: 08/04/20**						
Total Dissolved Solids	7230	10	mg/l		7220			0.07	10	
Batch: W0H0415 - EPA 351.2										
Blank (W0H0415-BLK1)				**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	ND	0.10	mg/l							
Blank (W0H0415-BLK2)				**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	ND	0.10	mg/l							
LCS (W0H0415-BS1)				**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	0.958	0.10	mg/l	1.00		96	90-110			
LCS (W0H0415-BS2)				**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	0.951	0.10	mg/l	1.00		95	90-110			
Matrix Spike (W0H0415-MS1)	**Source: 0H05087-01**			**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	1.20	0.10	mg/l	1.00	0.173	103	90-110			
Matrix Spike (W0H0415-MS2)	**Source: 0H05087-02**			**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	1.19	0.10	mg/l	1.00	0.234	95	90-110			
Matrix Spike Dup (W0H0415-MSD1)	**Source: 0H05087-01**			**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	1.19	0.10	mg/l	1.00	0.173	102	90-110	1	10	
Matrix Spike Dup (W0H0415-MSD2)	**Source: 0H05087-02**			**Prepared: 08/07/20 Analyzed: 08/13/20**						
TKN	1.23	0.10	mg/l	1.00	0.234	100	90-110	4	10	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0321 - SM 9223B										
Blank (W0H0321-BLK2)				**Prepared: 07/25/20 Analyzed: 07/26/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK3)				**Prepared & Analyzed: 07/27/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK4)				**Prepared: 07/28/20 Analyzed: 07/29/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK6)				**Prepared: 07/31/20 Analyzed: 08/01/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK7)				**Prepared: 08/01/20 Analyzed: 08/02/20**						
E. coli	ND	1.0	MPN/100ml							

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:23

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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CHAIN OF CUSTODY FORM

Page 2 of 2

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	Fax Number: 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Escherichia coli (E. coli) by SM 9223B	Special Instructions
SL-BR-1	water	125 ml poly	1	7/30/20	11:00a	Sterile- None	X	24-Hour Hold time*
LS-BR-1	water	125 ml poly	1	"	11:40a	Sterile- None	X	24-Hour Hold time*
INT2-RES-1	water	125 ml poly	1	"	12:00p	Sterile- None	X	24-Hour Hold time*

Relinquished By:	Date /Time:	Received by:	Date /Time:
[signature]	7/30/20 1:30pm	FedEx	
Relinquished By: FedEx	Date /Time:	Received by: [signature]	Date /Time: 7/31/20 1030
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day ____ 72 Hours ____
~~24 Hours~~ ____ ~~5 Days~~ ____
48 Hours ____ Normal X

Sample Integrity: (Check)
Intact ____ On Ice ____

2.9°C T0230

* Per Lohantan Surface Water Ambient Monitoring Program (SWAMP) for ambient water

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0H03016

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/20/2020

Received Date: 8/1/2020

Turnaround Time: Normal

Phones: (714) 751-7373

Fax: (714) 545-8883

P.O. #:

Billing Code:

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Michael P. Donovan,

Enclosed are the results of analyses for samples received 8/01/20 with the Chain-of-Custody document. The samples were received in good condition, at 2.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Chris Samatmanakit
Project Manager

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
BC-NF-1	Jim Burton, Todd Bear	0H03016-01	Water	07/31/20 09:00	
BC-blw-LS	Jim Burton, Todd Bear	0H03016-02	Water	07/31/20 09:20	
BC-blw-SL	Jim Burton, Todd Bear	0H03016-03	Water	07/31/20 10:00	
SL-BR-1	Jim Burton, Todd Bear	0H03016-04	Water	07/31/20 11:00	
LS-BR-1	Jim Burton, Todd Bear	0H03016-05	Water	07/31/20 11:35	
INT2-RES-1	Jim Burton, Todd Bear	0H03016-06	Water	07/31/20 11:50	

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9223B in Water			
E. coli		✓	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Sample Results

Sample: BC-NF-1
0H03016-01 (Water)

Sampled: 07/31/20 9:00 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H0036 **Preparation:** _NONE (LC)		**Prepared:** 08/03/20 12:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/03/20 17:36	O-14
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/17/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0714 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
TKN	**0.12**	0.10	mg/l	1	08/17/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H0002 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 14:32				**Analyst:** sar
o-Phosphate as P	**0.044**	0.010	mg/l	1	08/01/20 15:15	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**28**	10	mg/l	1	08/04/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Sample Results

(Continued)

Sample: BC-blw-LS
0H03016-02 (Water)

Sampled: 07/31/20 9:20 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H0036 **Preparation:** _NONE (LC)		**Prepared:** 08/03/20 12:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/03/20 18:32	O-14
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/17/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0714 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/17/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H0002 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 14:32				**Analyst:** sar
o-Phosphate as P	**0.017**	0.010	mg/l	1	08/01/20 15:15	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**12**	10	mg/l	1	08/04/20	

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Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported: 08/20/2020 16:28

Sample Results

(Continued)

Sample: BC-blw-SL — Sampled: 07/31/20 10:00 by Jim Burton, Todd Bear

0H03016-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0						
Method: EPA 300.0		**Instr:** LC12				
Batch ID: W0H0036 **Preparation:** _NONE (LC)		**Prepared:** 08/03/20 12:30				**Analyst:** jan
Nitrate as N	ND	110	ug/l	1	08/03/20 20:02	O-14
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: [CALC]		**Instr:** [CALC]				
Batch ID: [CALC] **Preparation:** [CALC]		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
Nitrogen, Total	ND	0.30	mg/l	1	08/17/20	
Method: EPA 351.2		**Instr:** AA06				
Batch ID: W0H0714 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/12/20 17:08				**Analyst:** YMT
TKN	ND	0.10	mg/l	1	08/17/20	
Method: EPA 353.2		**Instr:** AA01				
Batch ID: W0H0004 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 10:50				**Analyst:** sar
NO2+NO3 as N	ND	200	ug/l	1	08/01/20	
Method: EPA 365.3		**Instr:** UVVIS04				
Batch ID: W0H0002 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/01/20 14:32				**Analyst:** sar
o-Phosphate as P	**0.043**	0.010	mg/l	1	08/01/20 15:15	
Method: SM 2540C		**Instr:** OVEN01				
Batch ID: W0H0065 **Preparation:** _NONE (WETCHEM)		**Prepared:** 08/03/20 15:48				**Analyst:** ism
Total Dissolved Solids	**17**	10	mg/l	1	08/04/20	

Sample: SL-BR-1 — Sampled: 07/31/20 11:00 by Jim Burton, Todd Bear

0H03016-04 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 08/01/20 09:33				**Analyst:** atd
E. coli	ND	1.0	MPN/100ml	1	08/02/20	

Sample: LS-BR-1 — Sampled: 07/31/20 11:35 by Jim Burton, Todd Bear

0H03016-05 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 08/01/20 09:33				**Analyst:** atd
E. coli	ND	1.0	MPN/100ml	1	08/02/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Sample Results

(Continued)

Sample: INT2-RES-1
0H03016-06 (Water)

Sampled: 07/31/20 11:50 by Jim Burton, Todd Bear

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods						
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0321	**Preparation:** _NONE (MICROBIOLOGY)	**Prepared:** 08/01/20 09:33				**Analyst:** atd
E. coli	**6.3**	1.0	MPN/100ml	1	08/02/20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported: 08/20/2020 16:28

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0036 - EPA 300.0										
Blank (W0H0036-BLK1)				**Prepared & Analyzed: 08/03/20**						
Nitrate as N	ND	110	ug/l							
LCS (W0H0036-BS1)				**Prepared & Analyzed: 08/03/20**						
Nitrate as N	2150	110	ug/l	2000		108	90-110			
Matrix Spike (W0H0036-MS1)	**Source: 0H03026-03**			**Prepared & Analyzed: 08/03/20**						
Nitrate as N	29500	1100	ug/l	20000	8200	106	84-115			
Matrix Spike (W0H0036-MS2)	**Source: 0H03026-04**			**Prepared & Analyzed: 08/03/20**						
Nitrate as N	29600	1100	ug/l	20000	8140	107	84-115			
Matrix Spike Dup (W0H0036-MSD1)	**Source: 0H03026-03**			**Prepared & Analyzed: 08/03/20**						
Nitrate as N	29500	1100	ug/l	20000	8200	107	84-115	0.2	20	
Matrix Spike Dup (W0H0036-MSD2)	**Source: 0H03026-04**			**Prepared & Analyzed: 08/03/20**						
Nitrate as N	29600	1100	ug/l	20000	8140	107	84-115	0.03	20	

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0002 - EPA 365.3										
Blank (W0H0002-BLK1)				**Prepared & Analyzed: 08/01/20**						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W0H0002-BS1)				**Prepared & Analyzed: 08/01/20**						
o-Phosphate as P	0.211	0.010	mg/l	0.200		106	88-111			
Matrix Spike (W0H0002-MS1)	**Source: 0H03016-01**			**Prepared & Analyzed: 08/01/20**						
o-Phosphate as P	0.251	0.010	mg/l	0.200	0.0440	104	85-112			
Matrix Spike Dup (W0H0002-MSD1)	**Source: 0H03016-01**			**Prepared & Analyzed: 08/01/20**						
o-Phosphate as P	0.251	0.010	mg/l	0.200	0.0440	104	85-112	0	20	
Batch: W0H0004 - EPA 353.2										
Blank (W0H0004-BLK1)				**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	ND	200	ug/l							
LCS (W0H0004-BS1)				**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	1010	200	ug/l	1000		101	90-110			
Matrix Spike (W0H0004-MS1)	**Source: 0G31035-01**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110			
Matrix Spike (W0H0004-MS2)	**Source: 0G31035-02**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110			
Matrix Spike Dup (W0H0004-MSD1)	**Source: 0G31035-01**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110	0	20	
Matrix Spike Dup (W0H0004-MSD2)	**Source: 0G31035-02**			**Prepared & Analyzed: 08/01/20**						
NO2+NO3 as N	2110	200	ug/l	2000	ND	106	90-110	0	20	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

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Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0065 - SM 2540C										
Blank (W0H0065-BLK1)				**Prepared: 08/03/20**	**Analyzed: 08/04/20**					
Total Dissolved Solids	ND	10	mg/l							
LCS (W0H0065-BS1)				**Prepared: 08/03/20**	**Analyzed: 08/04/20**					
Total Dissolved Solids	809	10	mg/l	824		98	96-102			
Duplicate (W0H0065-DUP1)	**Source: 0G27001-02**			**Prepared: 08/03/20**	**Analyzed: 08/04/20**					
Total Dissolved Solids	1470	10	mg/l		1500			2	10	
Duplicate (W0H0065-DUP2)	**Source: 0G27001-04**			**Prepared: 08/03/20**	**Analyzed: 08/04/20**					
Total Dissolved Solids	7230	10	mg/l		7220			0.07	10	
Batch: W0H0714 - EPA 351.2										
Blank (W0H0714-BLK1)				**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	ND	0.10	mg/l							
Blank (W0H0714-BLK2)				**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	ND	0.10	mg/l							
LCS (W0H0714-BS1)				**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	0.992	0.10	mg/l	1.00		99	90-110			
LCS (W0H0714-BS2)				**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	0.974	0.10	mg/l	1.00		97	90-110			
Matrix Spike (W0H0714-MS1)	**Source: 0H11101-01**			**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	1.28	0.10	mg/l	1.00	0.221	105	90-110			
Matrix Spike (W0H0714-MS2)	**Source: 0H11101-02**			**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	1.21	0.10	mg/l	1.00	0.239	97	90-110			
Matrix Spike Dup (W0H0714-MSD1)	**Source: 0H11101-01**			**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	1.24	0.10	mg/l	1.00	0.221	102	90-110	3	10	
Matrix Spike Dup (W0H0714-MSD2)	**Source: 0H11101-02**			**Prepared: 08/12/20**	**Analyzed: 08/17/20**					
TKN	1.30	0.10	mg/l	1.00	0.239	106	90-110	7	10	

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Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W0H0321 - SM 9223B										
Blank (W0H0321-BLK2)				**Prepared: 07/25/20 Analyzed: 07/26/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK3)				**Prepared & Analyzed: 07/27/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK4)				**Prepared: 07/28/20 Analyzed: 07/29/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK6)				**Prepared: 07/31/20 Analyzed: 08/01/20**						
E. coli	ND	1.0	MPN/100ml							
Blank (W0H0321-BLK7)				**Prepared: 08/01/20 Analyzed: 08/02/20**						
E. coli	ND	1.0	MPN/100ml							

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Santa Ana, CA 92707

Project Number: 2KLE010102

Project Manager: Michael P. Donovan

Reported:
08/20/2020 16:28

Notes and Definitions

Item	Definition
O-14	This analysis was requested by the client after the holding time was exceeded.
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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CHAIN OF CUSTODY FORM

OH03016

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Analysis Required: Nitrate-N EPA Method 300.0	Orthophosphae-OPO4 EPA Method 365.3	Total Dissolved Solids SM2540C	Total Kjeldahl Nitrogenby EPA Method 351.2	NO2+NO3 as N - EPA Method 353.2	Total Nitrogen by calculation						Special Instructions
BC-NF-1	water	60 ml Poly	1	7/31/20	9:00a	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
BC-blw-LS	water	60 ml Poly	1	7/31/20	9:20a	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
BC-blw-SL	water	60 ml Poly	1	7/31/20	10:00a	None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						
	water	60 ml Poly	1			None	X											
	water	250 ml Poly	1			None		X										Filtered with 0.45µ
	water	500 ml Poly	1			None			X									
	water	250 ml Poly	1			H2SO4				X	X	X						

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check)
[signature]	7/31/20 1:35pm	KVM	8/1/20 9:17 T-0230 2.1°C	Same Day ____ 72 Hours ____
Relinquished By:	Date /Time:	Received by:	Date /Time:	24 Hours ____ 5 Days ____
				48 Hours ____ Normal X
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:	Sample Integrity: (Check)
				Intact ____ On Ice ____

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OH030116

CHAIN OF CUSTODY FORM

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Escherichia coli (E. coli) by SM 9223B										Special Instructions
							Analysis Required										
SL-BR-1	water	125 ml poly	1	7/31/20	11:00a	Sterile- None	X										24-Hour Hold time*
LS-BR-1	water	125 ml poly	1	1	11:35a	Sterile- None	X										24-Hour Hold time*
INT2-RES-1	water	125 ml poly	1	1	11:50a	Sterile- None	X										24-Hour Hold time*

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check)
[signature]	7/31/20 1:35pm	KM	8/1/20 9:17 2.1°C T-0230	Same Day ____ 72 Hours ____
Relinquished By:	Date /Time:	Received by:	Date /Time:	24 Hours ____ 5 Days ____
				48 Hours ____ Normal X
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:	Sample Integrity: (Check)
				Intact ____ On Ice ____

* Per Lohantan Surface Water Ambient Monitoring Program (SWAMP) for ambient water

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0H04045

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/20/2020

Received Date: 8/4/2020

Turnaround Time: Normal

Phones: (714) 751-7373

Fax: (714) 545-8883

P.O. #:

Billing Code:

Dear Michael P. Donovan :

Enclosed are the results of analyses for samples received 8/4/2020 with the Chain-of-Custody document. The samples were received in good condition, at 4.3 °C and on ice. All analysis met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: SL-BR-1 — Sampled: 08/03/20 11:00 by Jim Burton, Todd Bear

0H04045-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0997	**Preparation:** _NONE (MICROBIOLOGY)	**Prepared:** 08/04/20 10:56				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	08/05/20	

Sample: LS-BR-1 — Sampled: 08/03/20 11:25 by Jim Burton, Todd Bear

0H04045-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0997	**Preparation:** _NONE (MICROBIOLOGY)	**Prepared:** 08/04/20 10:56				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	08/05/20	

Sample: Int2-RES-1 — Sampled: 08/03/20 11:45 by Jim Burton, Todd Bear

0H04045-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0997	**Preparation:** _NONE (MICROBIOLOGY)	**Prepared:** 08/04/20 10:56				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	08/05/20	

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Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9223B in Water			
E. coli		✓	

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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CHAIN OF CUSTODY FORM

OH04045 Page 1 of 1

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	**Fax Number:** 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Analysis Required: Escherichia coli (E. coli) by SM 9223B	Special Instructions
SL-BR-1	water	125 ml poly	1	8/3/20	11:00a	Sterile- None	X	24-Hour Hold time*
LS-BR-1	water	125 ml poly	1	"	11:25a	Sterile- None	X	24-Hour Hold time*
INT2-RES-1	water	125 ml poly	1	"	11:45a	Sterile- None	X	24-Hour Hold time*

Relinquished By: [signature]	Date /Time: 8/3/20 1:25 pm	Received by:	Date /Time:
Relinquished By: [signature]	Date /Time: 8/4/20	Received by: [signature]	Date /Time: 10:30
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:

Turnaround Time: (Check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 Days _____
48 Hours _____ Normal X

Sample Integrity: (Check)
Intact _____ On Ice _____

* Per Lohantan Surface Water Ambient Monitoring Program (SWAMP) for ambient water

TO23 4.3°C

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Certificate of Analysis

FINAL REPORT

Work Orders: 0H06028

Project: 2KLE010102

Attn: Michael P. Donovan

Client: Psomas - Santa Ana, CA
3 Hutton Centre Dr., Ste. 200
Santa Ana, CA 92707

Report Date: 8/20/2020
Received Date: 8/6/2020
Turnaround Time: Normal
Phones: (714) 751-7373
Fax: (714) 545-8883
P.O. #:
Billing Code:

Dear Michael P. Donovan :

Enclosed are the results of analyses for samples received 8/6/2020 with the Chain-of-Custody document. The samples were received in good condition, at 3.8 °C and on ice. All analysis met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: SL-BR-1 — Sampled: 08/05/20 11:00 by Jim Burton, Todd Bear
0H06028-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0997 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 08/06/20 10:48				**Analyst:** amc
E. coli	ND	1.0	MPN/100ml	1	08/07/20	

Sample: LS-BR-1 — Sampled: 08/05/20 11:40 by Jim Burton, Todd Bear
0H06028-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0997 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 08/06/20 10:48				**Analyst:** amc
E. coli	**3.1**	1.0	MPN/100ml	1	08/07/20	

Sample: Int2-RES-1 — Sampled: 08/05/20 12:00 by Jim Burton, Todd Bear
0H06028-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: SM 9223B		**Instr:** INC12				
Batch ID: W0H0997 **Preparation:** _NONE (MICROBIOLOGY)		**Prepared:** 08/06/20 10:48				**Analyst:** amc
E. coli	**1.0**	1.0	MPN/100ml	1	08/07/20	

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Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9223B in Water			
E. coli		✓	

Reviewed by:

Chris Samatmanakit
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

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CHAIN OF CUSTODY FORM

OH06028 Page 1 of 1

Client Name/Address:	Project/PO Number:
PSOMAS 3 HUTTON CENTRE DRIVE, SUITE 200 SANTA ANA, CA 92707	2KLE010102
Project Manager:	**Phone Number:**
MICHAEL P. DONOVAN (mpdonovn@cox.net)	(714) 328-5234
Sampler: Jim Burton, Todd Bear	Fax Number: 714.545.8883

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Time	Preservation	Analysis Required: Escherichia coli (E. coli) by SM 9223B	Special Instructions
SL-BR-1	water	125 ml poly	1	8/5/2020	11:00 AM	Sterile- None	X	24-Hour Hold time*
LS-BR-1	water	125 ml poly	1	8/5/2020	11:40 AM	Sterile- None	X	24-Hour Hold time*
INT2-RES-1	water	125 ml poly	1	8/5/2020	12:00 PM	Sterile- None	X	24-Hour Hold time*

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check)	
	8/5/2020 1:30 PM			Same Day ____	72 Hours ____
Relinquished By: Fedex	Date /Time: 8/6/20	Received by:	Date /Time: 10:23	24 Hours ____	5 Days ____
				48 Hours ____	Normal X
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:	Sample Integrity: (Check)	
				Intact ____	On Ice 10

* Per Lohantan Surface Water Ambient Monitoring Program (SWAMP) for ambient water

3.5°C 70634

APPENDIX C

LAKE VERTICAL PROFILE DATA SHEETS

TABLE C-1

SOUTH LAKE DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 6/15/2020

Lake Surface Elevation: 9738.5

Outlet Pipe Elevation (ft/msl): 9621

Estimated Barometric Pressure (in Hg) 21.2

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)	Dissolved Oxygen (mg/L)	% O_2 Saturation*	
	Feet	Meters					
9738.5	0.0	0	---	---	---	---	
9736.9	1.6	0.5	10.3	---	8.45	106.9%	
9735.2	3.3	1	10.2	0.1	8.47	107.2%	
9731.9	6.6	2	10.1	0.1	8.49	107.4%	
9728.7	9.8	3	10.0	0.1	8.49	107.4%	
9725.4	13.1	4	10.0	0.0	8.49	107.4%	
9722.1	16.4	5	9.9	0.1	8.50	105.1%	
9718.8	19.7	6	9.8	0.1	8.52	105.3%	
9715.5	23.0	7	9.8	0.0	8.52	105.3%	
9712.3	26.2	8	9.7	0.1	8.54	105.5%	
9709.0	29.5	9	9.6	0.1	8.56	105.8%	
9705.7	32.8	10	9.4	0.2	8.65	106.9%	
9702.4	36.1	11	9.3	0.1	8.69	107.4%	
9699.1	39.4	12	8.6	0.7	8.93	107.7%	
9695.8	42.7	13	8.4	0.2	9.02	108.8%	
9692.6	45.9	14	8.0	0.4	9.16	110.5%	
9689.3	49.2	15	7.5	0.5	9.40	110.6%	
9686.0	52.5	16	7.1	0.4	9.46	111.3%	
9682.7	55.8	17	6.6	0.5	9.56	109.7%	
9679.4	59.1	18	6.5	0.1	9.61	110.3%	
9676.2	62.3	19	6.1	0.4	9.56	109.7%	
9672.9	65.6	20	5.9	0.2	9.60	107.4%	
9669.6	68.9	21	5.7	0.2	9.43	105.5%	
9666.3	72.2	22	5.5	0.2	9.33	104.4%	
9663.0	75.5	23	5.4	0.1	9.24	103.4%	
9659.8	78.7	24	5.3	0.1	9.19	102.8%	
9656.5	82.0	25	5.3	0.0	9.09	101.7%	
9653.2	85.3	26	5.2	0.1	9.04	101.1%	
9649.9	88.6	27	5.1	0.1	9.02	100.9%	
9646.6	91.9	28	5.1	0.0	8.94	100.0%	
9643.4	95.1	29	5.0	0.1	8.93	99.9%	
9640.1	98.4	30	5.0	0.0	8.87	99.2%	
9636.8	101.7	31	4.9	0.1	8.81	96.0%	
9633.5	105.0	32	4.9	0.0	8.78	95.7%	
9630.2	108.3	33	4.8	0.1	8.74	95.3%	
9627.0	111.5	34	4.8	0.0	8.70	94.8%	
9623.7	114.8	35	4.8	0.0	8.65	94.3%	
9620.4	118.1	36	4.8	0.0	8.61	93.8%	<<Outlet

TABLE C-1

SOUTH LAKE DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 6/15/2020

Lake Surface Elevation: 9738.5

Outlet Pipe Elevation (ft/msl): 9621

Estimated Barometric Pressure (in Hg) 21.2

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)	Dissolved Oxygen (mg/L)	% O_2 Saturation*
	Feet	Meters				
9617.1	121.4	37	4.7	0.1	8.55	93.2%
9613.8	124.7	38	4.7	0.0	8.49	92.5%
9610.5	128.0	39	4.7	0.0	8.47	92.3%
9607.3	131.2	40	4.7	0.0	8.45	92.1%
9604.0	134.5	41	4.7	0.0	8.40	91.6%
9600.7	137.8	42	4.7	0.0	8.34	90.9%
9597.4	141.1	43	4.7	0.0	8.31	90.6%
9594.1	144.4	44	4.7	0.0	8.30	90.5%
9590.9	147.6	45	4.7	0.0	8.28	90.2%
9587.6	150.9	46	4.7	0.0	8.27	90.1%
9584.3	154.2	47	4.7	0.0	8.26	90.0%
9581.0	157.5	48	4.7	0.0	8.19	89.3%
9577.7	160.8	49	5.1	-0.4	0.80	8.9%
9574.5	164.0	50	5.6	-0.5	0.21	2.3%
9572.8	165.7	50.5	5.8	-0.2	0.13	1.5%
		Maximum	**10.30**	**---**	**9.61**	**111.3%**
		Minimum	**4.70**	**---**	**0.13**	**1.5%**

* - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

TABLE C-2

SOUTH LAKE DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 7/28/2020
Lake Surface Elevation: 9747.82
Outlet Pipe Elevation (ft/msl): 9621

Barometric Pressure (in Hg) 21.21

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)	Dissolved Oxygen (mg/L)	% O_2 Saturation *
	Feet	Meters				
9747.82	---	---	---	---	---	---
9746.2	1.6	0.5	16.1	---	7.54	109.1%
9744.5	3.3	1	15.9	0.2	7.44	105.4%
9741.3	6.6	2	15.9	0.0	7.44	105.4%
9738.0	9.8	3	15.8	0.1	7.47	105.8%
9734.7	13.1	4	15.8	0.0	7.48	106.0%
9731.4	16.4	5	15.8	0.0	7.49	106.1%
9728.1	19.7	6	15.8	0.0	7.48	106.0%
9724.9	23.0	7	15.8	0.0	7.48	106.0%
9721.6	26.2	8	15.7	0.1	7.52	106.5%
9718.3	29.5	9	15.3	0.4	7.76	109.9%
9715.0	32.8	10	15.2	0.1	7.67	108.7%
9711.7	36.1	11	15.0	0.2	8.09	114.6%
9708.5	39.4	12	14.5	0.5	8.32	115.3%
9705.2	42.7	13	14.0	0.5	8.44	117.0%
9701.9	45.9	14	13.3	0.7	8.62	116.9%
9698.6	49.2	15	12.8	0.5	8.76	116.1%
9695.3	52.5	16	12.3	0.5	8.88	117.7%
9692.0	55.8	17	11.7	0.6	9.06	129.1%
9688.8	59.1	18	11.1	0.6	9.22	131.4%
9685.5	62.3	19	10.4	0.7	9.40	119.0%
9682.2	65.6	20	9.9	0.5	9.45	116.8%
9678.9	68.9	21	9.4	0.5	9.43	116.5%
9675.6	72.2	22	8.9	0.5	9.41	113.5%
9672.4	75.5	23	8.3	0.6	9.39	113.3%
9669.1	78.7	24	8.0	0.3	9.30	112.2%
9665.8	82.0	25	7.6	0.4	9.27	109.1%
9662.5	85.3	26	7.3	0.3	9.19	108.2%
9659.2	88.6	27	6.9	0.4	9.06	104.0%
9656.0	91.9	28	6.5	0.4	8.95	102.7%
9652.7	95.1	29	6.3	0.2	8.90	102.1%
9649.4	98.4	30	6.0	0.3	8.78	100.8%
9646.1	101.7	31	5.9	0.1	8.72	97.6%
9642.8	105.0	32	5.7	0.2	8.56	95.8%
9639.6	108.3	33	5.5	0.2	8.57	95.9%
9636.3	111.5	34	5.4	0.1	8.41	94.1%
9633.0	114.8	35	5.4	0.0	8.28	92.6%

TABLE C-2

SOUTH LAKE DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 7/28/2020
Lake Surface Elevation: 9747.82
Outlet Pipe Elevation (ft/msl): 9621

Barometric Pressure (in Hg) 21.21

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)	Dissolved Oxygen (mg/L)	% O_2 Saturation *	
	Feet	Meters					
9629.7	118.1	36	5.2	0.2	8.19	91.6%	
9626.4	121.4	37	5.1	0.1	8.15	91.2%	
9623.1	124.7	38	5.1	0.0	8.11	90.7%	
9619.9	128.0	39	5.1	0.0	8.05	90.1%	<<Outlet
9616.6	131.2	40	5.0	0.1	8.00	89.5%	
9613.3	134.5	41	5.0	0.0	7.91	88.5%	
9610.0	137.8	42	4.9	0.1	7.85	85.6%	
9606.7	141.1	43	4.9	0.0	7.84	85.5%	
9603.5	144.4	44	4.9	0.0	7.67	83.6%	
9600.2	147.6	45	4.9	0.0	7.63	83.2%	
9596.9	150.9	46	4.9	0.0	7.59	82.7%	
9593.6	154.2	47	4.9	0.0	7.54	82.2%	
9590.3	157.5	48	4.9	0.0	7.51	81.9%	
9587.1	160.8	49	4.9	0.0	7.45	81.2%	
9583.8	164.0	50	4.9	0.0	7.42	80.9%	
9580.5	167.3	51	4.9	0.0	7.39	80.5%	
9577.2	170.6	52	4.9	0.0	7.25	79.0%	
9573.9	173.9	53	5.7	-0.8	0.06	0.7%	
9570.7	177.2	54	5.9	-0.2	0.03	0.3%	
9567.4	180.4	55	6.0	-0.1	0.01	0.1%	
9564.1	183.7	56	6.1	-0.1	0.01	0.1%	
9560.8	187.0	57	6.3	-0.2	0.00	0.0%	
9557.5	190.3	58	6.3	0.0	0.00	0.0%	
9554.3	193.6	59	6.5	-0.2	0.01	0.1%	
9551.0	196.8	60	6.7	-0.2	0.01	0.1%	
9547.7	200.1	61	6.9	-0.2	0.01	0.1%	
9544.4	203.4	62	7.2	-0.3	0.01	0.1%	
9541.1	206.7	63	7.4	-0.2	0.02	0.2%	
9537.8	210.0	64	7.6	-0.2	0.02	0.2%	
9534.6	213.3	65	7.7	-0.1	0.03	0.4%	
9531.3	216.5	66	7.8	-0.1	0.03	0.4%	
9528.0	219.8	67	7.8	0.0	0.03	0.4%	
9524.7	223.1	68	7.8	0.0	0.05	0.6%	
		Maximum	**16.10**	**---**	**9.45**	**131.4%**	
		Minimum	**4.90**	**---**	**0.00**	**0.0%**	

* - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

TABLE C-3

SOUTH LAKE DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 8/25/2020
Lake Surface Elevation: 9741.96
Outlet Pipe Elevation (ft/msl): 9621

Barometric Pressure (in Hg) 21.14

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **
	Feet	Meters				
9741.96	0.0	0	---	---	---	---
9740.3	1.6	0.5	16.1	---	7.11	102.9%
9738.7	3.3	1	16.3	-0.2	7.10	102.8%
9735.4	6.6	2	16.2	0.1	7.10	102.8%
9732.1	9.8	3	16.2	0.0	7.10	102.8%
9728.8	13.1	4	16.2	0.0	7.09	102.6%
9725.6	16.4	5	16.2	0.0	7.09	102.6%
9722.3	19.7	6	16.2	0.0	7.09	102.6%
9719.0	23.0	7	16.2	0.0	7.08	102.5%
9715.7	26.2	8	16.2	0.0	7.08	102.5%
9712.4	29.5	9	16.2	0.0	7.08	102.5%
9709.2	32.8	10	16.2	0.0	7.08	102.5%
9705.9	36.1	11	16.2	0.0	7.07	102.3%
9702.6	39.4	12	16.2	0.0	7.07	102.3%
9699.3	42.7	13	16.2	0.0	7.08	102.5%
9696.0	45.9	14	16.1	0.1	7.13	103.2%
9692.7	49.2	15	16.0	0.1	7.16	103.6%
9689.5	52.5	16	15.9	0.1	7.20	102.0%
9686.2	55.8	17	15.3	0.6	7.46	105.7%
9682.9	59.1	18	14.0	**1.3**	8.19	113.5%
9679.6	62.3	19	13.5	0.5	8.37	113.5%
9676.3	65.6	20	12.9	0.6	8.45	112.0%
9673.1	68.9	21	12.5	0.4	8.52	112.9%
9669.8	72.2	22	12.0	0.5	8.67	114.9%
9666.5	75.5	23	11.5	0.5	8.76	124.8%
9663.2	78.7	24	10.9	0.6	8.87	112.3%
9659.9	82.0	25	10.5	0.4	9.00	113.9%
9656.7	85.3	26	10.4	0.1	9.07	114.8%
9653.4	88.6	27	10.0	0.4	9.08	114.9%
9650.1	91.9	28	9.1	0.9	9.12	112.7%
9646.8	95.1	29	8.7	0.4	9.11	109.9%
9643.5	98.4	30	8.3	0.4	9.05	109.2%
9640.3	101.7	31	7.9	0.4	8.98	105.7%
9637.0	105.0	32	7.4	0.5	8.84	104.0%
9633.7	108.3	33	7.2	0.2	8.80	103.6%
9630.4	111.5	34	6.7	0.5	8.61	98.8%
9627.1	114.8	35	6.2	0.5	8.30	95.3%
9623.9	118.1	36	5.4	0.8	7.91	88.5%

TABLE C-3

SOUTH LAKE DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 8/25/2020
Lake Surface Elevation: 9741.96
Outlet Pipe Elevation (ft/msl): 9621

Barometric Pressure (in Hg) **21.14**

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **	
	Feet	Meters					
9620.6	121.4	37	5.2	0.2	7.80	87.3%	<<Outlet
9617.3	124.7	38	5.2	0.0	7.75	86.7%	
9614.0	128.0	39	5.1	0.1	7.70	86.1%	
9610.7	131.2	40	5.1	0.0	7.69	86.0%	
9607.4	134.5	41	5.0	0.1	7.59	84.9%	
9604.2	137.8	42	5.0	0.0	7.43	83.1%	
9600.9	141.1	43	5.0	0.0	7.43	83.1%	
9597.6	144.4	44	4.9	0.1	7.35	80.1%	
9594.3	147.6	45	4.9	0.0	7.25	79.0%	
9591.0	150.9	46	4.9	0.0	7.14	77.8%	
9587.8	154.2	47	4.9	0.0	7.05	76.8%	
9584.5	157.5	48	4.9	0.0	7.06	76.9%	
9581.2	160.8	49	4.9	0.0	7.02	76.5%	
9577.9	164.0	50	5.2	-0.3	0.38	4.3%	
9574.6	167.3	51	5.6	-0.4	0.28	3.1%	
9571.4	170.6	52	5.7	-0.1	0.23	2.6%	
9568.1	173.9	53	5.9	-0.2	0.19	2.1%	
9564.8	177.2	54	6.0	-0.1	0.16	1.8%	
9561.5	180.4	55	6.1	-0.1	0.14	1.6%	
9558.2	183.7	56	6.4	-0.3	0.14	1.6%	
9555.0	187.0	57	6.4	0.0	0.15	1.7%	
9551.7	190.3	58	6.5	-0.1	0.12	1.4%	
9548.4	193.6	59	6.7	-0.2	0.11	1.3%	
9545.1	196.8	60	6.9	-0.2	0.07	0.8%	
9541.8	200.1	61	7.4	-0.5	0.06	0.7%	
9538.5	203.4	62	7.5	-0.1	0.05	0.6%	
9535.3	206.7	63	7.4	0.1	0.03	0.4%	
9532.0	210.0	64	7.7	-0.3	0.03	0.4%	
		Maximum	**16.30**	**---**	**9.12**	**124.8%**	
		Minimum	**4.90**	**---**	**0.03**	**0.4%**	

* - **Bold** values indicate thermocline (1 deg change in one meter).

** - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

TABLE C-4

SOUTH LAKE DISSOLVED OXYGEN, WATER TEMPERATURE AND CONDUCTIVITY PROFILE

Date of Profile: 9/23/2020
Lake Surface Elevation: 9736.5
Outlet Pipe Elevation (ft/msl): 9621

Barometric Pressure (in Hg) **21.26**

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	Conductivity (µS/cm)**	% O_2 Saturation ***	
	Feet	Meters						
9736.5	0.0	0	14.2	---	7.41	*37*	---	
9734.9	1.6	0.5	14.2	---	7.41	*37*	101.3%	
9733.2	3.3	1	14.3	-0.1	7.39	*37*	101.0%	
9729.9	6.6	2	14.3	0.0	7.39	*37*	101.0%	
9726.7	9.8	3	14.3	0.0	7.38	*37*	100.9%	
9723.4	13.1	4	14.3	0.0	7.37	*37*	100.7%	
9720.1	16.4	5	14.4	-0.1	7.37	*37*	100.7%	
9716.8	19.7	6	14.4	0.0	7.36	*37*	100.6%	
9713.5	23.0	7	14.4	0.0	7.36	*37*	100.6%	
9710.3	26.2	8	14.4	0.0	7.35	*37*	100.4%	
9707.0	29.5	9	14.4	0.0	7.35	*37*	100.4%	
9703.7	32.8	10	14.4	0.0	7.35	*37*	100.4%	
9700.4	36.1	11	14.4	0.0	7.34	*37*	100.3%	
9697.1	39.4	12	14.4	0.0	7.34	*37*	100.3%	
9693.8	42.7	13	14.4	0.0	7.33	*37*	100.2%	
9690.6	45.9	14	14.4	0.0	7.33	*37*	100.2%	
9687.3	49.2	15	14.4	0.0	7.33	*37*	100.2%	
9684.0	52.5	16	14.4	0.0	7.33	*37*	100.2%	
9680.7	55.8	17	14.4	0.0	7.32	*37*	100.0%	
9677.4	59.1	18	14.4	0.0	7.32	*37*	100.0%	
9674.2	62.3	19	14.4	0.0	7.32	*37*	100.0%	
9670.9	65.6	20	14.3	0.1	7.33	37	100.2%	
9667.6	68.9	21	14.3	0.0	7.32	*38*	100.0%	
9664.3	72.2	22	14.3	0.0	7.32	*38*	100.0%	
9661.0	75.5	23	14.3	0.0	7.32	*39*	100.0%	
9657.8	78.7	24	14.2	0.1	7.33	*40*	100.2%	
9654.5	82.0	25	13.4	0.8	7.62	*41*	101.9%	
9651.2	85.3	26	12.7	0.7	7.90	*41*	103.2%	
9647.9	88.6	27	11.9	0.8	8.21	*42*	115.3%	
9644.6	91.9	28	11.5	0.4	8.32	*43*	116.9%	
9641.4	95.1	29	10.9	0.6	8.43	*44*	105.2%	
9638.1	98.4	30	10.4	0.5	8.58	*44*	107.1%	
9634.8	101.7	31	10.1	0.3	8.66	*45*	108.1%	
9631.5	105.0	32	9.5	0.6	8.68	*46*	105.8%	
9628.2	108.3	33	8.7	0.8	8.66	*46*	103.0%	
9625.0	111.5	34	7.8	0.9	8.52	*47*	98.9%	
9621.7	114.8	35	6.3	**1.5**	8.02	*48*	90.8%	<<Outlet
9618.4	118.1	36	5.8	0.5	7.78	*49*	85.8%	
9615.1	121.4	37	5.4	0.4	7.80	*49*	86.0%	
9611.8	124.7	38	5.2	0.2	7.64	*50*	84.3%	
9608.5	128.0	39	5.1	0.1	7.49	*51*	82.6%	
9605.3	131.2	40	5.0	0.1	7.38	*52*	81.4%	
9602.0	134.5	41	5.0	0.0	7.30	*52*	80.5%	
9598.7	137.8	42	5.0	0.0	7.12	53	78.5%	
9595.4	141.1	43	5.0	0.0	6.99	48	77.1%	
9592.1	144.4	44	5.0	0.0	6.81	*249*	75.1%	

TABLE C-4

SOUTH LAKE DISSOLVED OXYGEN, WATER TEMPERATURE AND CONDUCTIVITY PROFILE

Date of Profile: 9/23/2020
Lake Surface Elevation: 9736.5
Outlet Pipe Elevation (ft/msl): 9621

Barometric Pressure (in Hg) 21.26

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	Conductivity (µS/cm)**	% O_2 Saturation ***
	Feet	Meters					
9588.9	147.6	45	5.0	0.0	6.73	*450*	74.2%
9585.6	150.9	46	5.1	-0.1	6.49	*652*	71.6%
9582.3	154.2	47	5.1	0.0	6.18	*853*	68.2%
9580.7	155.8	47.5	5.1	0.0	5.32	*1054*	58.7%
9579.0	157.5	48	5.2	-0.1	0.25	1255	2.8%
9575.7	160.8	49	5.7	-0.5	0.23	*1420*	2.5%
9572.5	164.0	50	5.8	-0.1	0.14	*1585*	1.5%
9569.2	167.3	51	6.0	-0.2	0.09	*1750*	1.0%
9565.9	170.6	52	6.1	-0.1	0.07	*1915*	0.8%
9562.6	173.9	53	6.2	-0.1	0.06	2080	0.7%
9559.3	177.2	54	6.3	-0.1	0.04	*2125*	0.5%
9556.1	180.4	55	6.4	-0.1	0.03	*2169*	0.3%
9552.8	183.7	56	6.6	-0.2	0.03	*2214*	0.3%
9549.5	187.0	57	6.8	-0.2	0.03	*2258*	0.3%
9546.2	190.3	58	7.2	-0.4	0.03	2303	0.3%
9542.9	193.6	59	7.4	-0.2	0.03	*2309*	0.3%
9539.7	196.8	60	7.6	-0.2	0.02	*2314*	0.2%
9536.4	200.1	61	7.7	-0.1	0.02	*2320*	0.2%
9533.1	203.4	62	7.8	-0.1	0.01	*2325*	0.1%
9530.8	205.7	62.7	7.9	-0.1	0.01	2331	0.1%
		Maximum	**14.40**	---	**8.68**	---	**116.9%**
		Minimum	**5.00**	---	**0.01**	---	**0.1%**

* - **Bold** values indicate thermocline (1 deg change in one meter).

** - *Italized* values are extropolated values for plotting purposes.

*** - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

TABLE C-5

SOUTH LAKE DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 10/5/2020
Lake Surface Elevation: 9734.02
Outlet Pipe Elevation (ft/msl): 9621

Barometric Pressure (in Hg) **21.10**

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **	
	Feet	Meters					
9734.02	0.0	0	13.8	---	7.51	---	
9732.4	1.6	0.5	13.8	---	7.51	101.8%	
9730.7	3.3	1	13.9	-0.1	7.48	101.4%	
9727.5	6.6	2	13.9	0.0	7.48	101.4%	
9724.2	9.8	3	13.9	0.0	7.46	101.1%	
9720.9	13.1	4	13.9	0.0	7.46	101.1%	
9717.6	16.4	5	13.9	0.0	7.45	101.0%	
9714.3	19.7	6	13.9	0.0	7.45	101.0%	
9711.1	23.0	7	13.9	0.0	7.44	100.9%	
9707.8	26.2	8	13.9	0.0	7.44	100.9%	
9704.5	29.5	9	13.9	0.0	7.43	100.7%	
9701.2	32.8	10	13.9	0.0	7.43	100.7%	
9697.9	36.1	11	13.9	0.0	7.43	100.7%	
9694.7	39.4	12	13.9	0.0	7.42	100.6%	
9691.4	42.7	13	13.9	0.0	7.42	100.6%	
9688.1	45.9	14	13.9	0.0	7.42	100.6%	
9684.8	49.2	15	13.9	0.0	7.41	100.5%	
9681.5	52.5	16	13.9	0.0	7.41	100.5%	
9678.2	55.8	17	13.9	0.0	7.41	100.5%	
9675.0	59.1	18	13.8	0.1	7.41	100.5%	
9671.7	62.3	19	13.8	0.0	7.39	100.2%	
9668.4	65.6	20	13.8	0.0	7.39	100.2%	
9665.1	68.9	21	13.8	0.0	7.39	100.2%	
9661.8	72.2	22	13.8	0.0	7.39	100.2%	
9658.6	75.5	23	13.8	0.0	7.39	100.2%	
9655.3	78.7	24	13.8	0.0	7.38	100.1%	
9652.0	82.0	25	13.7	0.1	7.36	99.8%	
9648.7	85.3	26	13.6	0.1	7.30	99.0%	
9645.4	88.6	27	13.6	0.0	7.28	98.7%	
9642.2	91.9	28	13.3	0.3	7.37	99.9%	
9638.9	95.1	29	12.2	**1.1**	7.70	102.1%	
9635.6	98.4	30	11.3	0.9	8.05	114.7%	
9632.3	101.7	31	10.8	0.5	8.13	102.9%	
9629.0	105.0	32	10.3	0.5	8.25	104.4%	
9625.8	108.3	33	8.7	**1.6**	8.25	99.5%	
9622.5	111.5	34	7.1	**1.6**	7.90	93.0%	<<Outlet

TABLE C-5

SOUTH LAKE DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 10/5/2020

Lake Surface Elevation: 9734.02

Outlet Pipe Elevation (ft/msl): 9621

Barometric Pressure (in Hg): 21.10

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **
	Feet	Meters				
9619.2	114.8	35	5.7	**1.4**	7.64	85.5%
9615.9	118.1	36	5.4	0.3	7.60	85.0%
9612.6	121.4	37	5.2	0.2	7.53	84.2%
9609.3	124.7	38	5.1	0.1	7.43	83.1%
9606.1	128.0	39	5.1	0.0	7.31	81.8%
9602.8	131.2	40	5.0	0.1	7.14	79.9%
9599.5	134.5	41	5.0	0.0	6.98	78.1%
9596.2	137.8	42	5.0	0.0	6.86	76.7%
9592.9	141.1	43	5.0	0.0	6.79	76.0%
9589.7	144.4	44	5.0	0.0	6.62	74.1%
9586.4	147.6	45	5.0	0.0	6.40	71.6%
9583.1	150.9	46	5.1	-0.1	6.13	68.6%
9581.5	152.6	46.5	5.1	0.0	5.80	64.9%
9579.8	154.2	47	5.2	0.0	2.02	22.6%
9576.5	157.5	48	5.6	-0.1	0.26	2.9%
9573.3	160.8	49	5.8	-0.4	0.16	1.8%
9570.0	164.0	50	5.9	-0.2	0.12	1.3%
9566.7	167.3	51	6.0	-0.1	0.10	1.1%
9563.4	170.6	52	6.2	-0.1	0.09	1.0%
9560.1	173.9	53	6.3	-0.2	0.07	0.8%
9556.9	177.2	54	6.4	-0.1	0.06	0.7%
9553.6	180.4	55	6.5	-0.1	0.05	0.6%
9550.3	183.7	56	6.7	-0.1	0.05	0.6%
9547.0	187.0	57	7.0	-0.2	0.05	0.6%
9543.7	190.3	58	7.2	-0.3	0.04	0.5%
9540.5	193.6	59	7.4	-0.2	0.04	0.5%
9537.2	196.8	60	7.6	-0.2	0.04	0.5%
9535.5	198.5	60.5	7.7	-0.2	0.04	0.5%
		Maximum	**13.90**	**---**	**8.25**	**114.7%**
		Minimum	**5.00**	**---**	**0.04**	**0.5%**

* - **Bold** values indicate thermocline (1 deg change in one meter).

** - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

TABLE C-6

LAKE SABRINA DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 6/17/2020

Lake Surface Elevation: 9116.2

Outlet Pipe Elevation (ft/msl): 9068

Estimated Barometric Pressure (in Hg) **21.7**

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **	
	Feet	Meters					
9116.2	0.0	0	---	---	---	---	
9114.6	1.6	0.5	11.2	---	9.20	127.4%	
9112.9	3.3	1	11.2	0.0	8.89	123.1%	
9109.6	6.6	2	11.2	0.0	8.83	122.3%	
9106.4	9.8	3	11.2	0.0	8.80	121.9%	
9103.1	13.1	4	11.2	0.0	8.78	121.6%	
9099.8	16.4	5	11.1	0.1	8.77	121.5%	
9096.5	19.7	6	11.0	0.1	8.83	122.3%	
9093.2	23.0	7	10.6	0.4	8.99	110.6%	
9090.0	26.2	8	10.5	0.1	8.86	109.0%	
9086.7	29.5	9	10.3	0.2	8.92	109.8%	
9083.4	32.8	10	10.0	0.3	9.03	111.1%	
9080.1	36.1	11	9.3	0.7	9.30	111.7%	
9076.8	39.4	12	8.0	**1.3**	9.64	113.1%	
9073.5	42.7	13	7.7	0.3	9.78	111.9%	
9070.3	45.9	14	6.9	0.8	9.80	109.4%	
9067.0	49.2	15	6.0	0.9	9.75	108.8%	<<Outlet
9063.7	52.5	16	5.9	0.1	9.72	105.7%	
9060.4	55.8	17	5.8	0.1	9.62	104.6%	
9057.1	59.1	18	5.7	0.1	9.58	104.2%	
9053.9	62.3	19	5.5	0.2	9.42	102.5%	
9050.6	65.6	20	5.3	0.2	9.35	101.7%	
9047.3	68.9	21	5.3	0.0	9.30	101.1%	
9044.0	72.2	22	5.1	0.2	9.22	100.3%	
9040.7	75.5	23	5.0	0.1	9.17	99.7%	
9037.5	78.7	24	4.8	0.2	9.03	95.7%	
9034.2	82.0	25	4.7	0.1	8.91	94.4%	
9030.9	85.3	26	4.6	0.1	8.83	93.6%	
9027.6	88.6	27	4.6	0.0	8.81	93.4%	
9024.3	91.9	28	4.5	0.1	8.76	92.8%	
9021.1	95.1	29	4.4	0.1	8.75	92.7%	
9017.8	98.4	30	4.4	0.0	8.86	93.9%	
9014.5	101.7	31	4.3	0.1	8.63	91.4%	
9011.2	105.0	32	4.2	0.1	8.57	90.8%	
9007.9	108.3	33	4.2	0.0	8.54	90.5%	
9004.7	111.5	34	4.2	0.0	8.60	91.1%	
9001.4	114.8	35	4.2	0.0	8.60	91.1%	
8998.1	118.1	36	4.1	0.1	8.54	90.5%	

TABLE C-6

LAKE SABRINA DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 6/17/2020

Lake Surface Elevation: 9116.2

Outlet Pipe Elevation (ft/msl): 9068

Estimated Barometric Pressure (in Hg) 21.7

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **
	Feet	Meters				
8994.8	121.4	37	4.1	0.0	8.46	89.6%
8991.5	124.7	38	4.0	0.1	8.37	88.7%
8988.2	128.0	39	4.0	0.0	8.31	88.1%
8985.0	131.2	40	4.0	0.0	8.28	87.7%
8981.7	134.5	41	4.0	0.0	8.24	87.3%
8978.4	137.8	42	4.0	0.0	8.20	86.9%
8975.1	141.1	43	4.0	0.0	8.19	86.8%
8971.8	144.4	44	4.0	0.0	8.15	86.4%
8968.6	147.6	45	4.0	0.0	8.16	86.5%
8965.3	150.9	46	4.0	0.0	8.15	86.4%
8962.0	154.2	47	4.0	0.0	8.09	85.7%
8958.7	157.5	48	4.0	0.0	8.06	85.4%
8955.4	160.8	49	4.0	0.0	7.91	83.8%
8952.2	164.0	50	4.0	0.0	7.90	83.7%
		Maximum	**11.2**	**---**	**9.80**	**127.4%**
		Minimum	**4.0**	**---**	**7.90**	**83.7%**

* - **Bold** values indicate thermocline (1 deg change in one meter).

** - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

TABLE C-7

LAKE SABRINA DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 7/29/2020
Lake Surface Elevation: 9118.62
Outlet Pipe Elevation (ft/msl): 9068

Barometric Pressure (in Hg) **21.72**

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **	
	Feet	Meters					
9118.62	0.0	0	---	---	---	---	
9117.0	1.6	0.5	17.0	---	7.00	100.6%	
9115.3	3.3	1	16.9	0.1	7.01	98.6%	
9112.1	6.6	2	16.8	0.1	7.01	98.6%	
9108.8	9.8	3	16.8	0.0	7.01	98.6%	
9105.5	13.1	4	16.8	0.0	7.01	98.6%	
9102.2	16.4	5	16.7	0.1	7.03	98.9%	
9098.9	19.7	6	16.6	0.1	7.04	99.1%	
9095.7	23.0	7	16.5	0.1	7.05	99.2%	
9092.4	26.2	8	16.0	0.5	7.22	101.6%	
9089.1	29.5	9	15.7	0.3	7.23	99.6%	
9085.8	32.8	10	14.7	**1.0**	7.55	101.7%	
9084.2	34.4	10.5	14.4	0.3	7.70	103.8%	
9082.5	36.1	11	12.8	**1.6**	8.18	105.4%	
9080.9	37.7	11.5	11.7	**1.1**	8.43	116.8%	
9079.3	39.4	12	10.6	**1.1**	8.80	108.3%	
9076.0	42.7	13	9.3	**1.3**	9.20	110.5%	
9072.7	45.9	14	7.9	**1.4**	9.46	108.2%	
9069.4	49.2	15	7.3	0.6	9.47	108.4%	<<Outlet
9066.1	52.5	16	6.8	0.5	9.37	104.6%	
9062.8	55.8	17	6.4	0.4	9.18	102.4%	
9059.6	59.1	18	6.1	0.3	9.01	100.5%	
9056.3	62.3	19	5.9	0.2	8.89	96.7%	
9053.0	65.6	20	5.7	0.2	8.78	95.5%	
9049.7	68.9	21	5.6	0.1	8.67	94.3%	
9046.4	72.2	22	5.4	0.2	8.60	93.5%	
9043.2	75.5	23	5.3	0.1	8.53	92.8%	
9039.9	78.7	24	5.1	0.2	8.38	91.1%	
9036.6	82.0	25	5.0	0.1	8.34	90.7%	
9033.3	85.3	26	4.9	0.1	8.24	87.3%	
9030.0	88.6	27	4.8	0.1	8.16	86.5%	
9026.8	91.9	28	4.7	0.1	8.08	85.6%	
9023.5	95.1	29	4.6	0.1	8.04	85.2%	
9020.2	98.4	30	4.6	0.0	7.88	83.5%	
9016.9	101.7	31	4.5	0.1	7.74	82.0%	
9013.6	105.0	32	4.4	0.1	7.74	82.0%	
9010.4	108.3	33	4.3	0.1	7.75	82.1%	
9007.1	111.5	34	4.3	0.0	7.75	82.1%	
9003.8	114.8	35	4.2	0.1	7.74	82.0%	
9000.5	118.1	36	4.2	0.0	7.72	81.8%	
8997.2	121.4	37	4.2	0.0	7.69	81.5%	

TABLE C-7

LAKE SABRINA DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 7/29/2020

Lake Surface Elevation: 9118.62

Outlet Pipe Elevation (ft/msl): 9068

Barometric Pressure (in Hg): 21.72

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **
	Feet	Meters				
8993.9	124.7	38	4.1	0.1	7.65	81.1%
8990.7	128.0	39	4.1	0.0	7.58	80.3%
8987.4	131.2	40	4.0	0.1	7.49	79.4%
8984.1	134.5	41	4.1	-0.1	7.44	78.8%
8980.8	137.8	42	4.0	0.1	7.38	78.2%
8977.5	141.1	43	4.0	0.0	7.30	77.4%
8974.3	144.4	44	4.0	0.0	7.21	76.4%
8971.0	147.6	45	4.1	-0.1	7.13	75.6%
8967.7	150.9	46	4.0	0.1	6.94	73.5%
8964.4	154.2	47	4.1	-0.1	6.84	72.5%
8961.1	157.5	48	4.1	0.0	6.71	71.1%
8957.9	160.8	49	4.1	0.0	6.62	70.1%
8954.6	164.0	50	4.1	0.0	6.55	69.4%
8951.3	167.3	51	4.1	0.0	6.48	68.7%
8948.0	170.6	52	4.1	0.0	6.37	67.5%
8944.7	173.9	53	4.1	0.0	6.31	66.9%
8941.5	177.2	54	4.1	0.0	6.26	66.3%
8938.2	180.4	55	4.1	0.0	6.21	65.8%
8934.9	183.7	56	4.1	0.0	6.10	64.6%
8931.6	187.0	57	4.1	0.0	6.01	63.7%
8928.3	190.3	58	4.1	0.0	5.97	63.3%
8925.1	193.6	59	4.1	0.0	5.91	62.6%
8921.8	196.8	60	4.1	0.0	5.72	60.6%
8918.5	200.1	61	4.1	0.0	5.61	59.4%
8915.2	203.4	62	4.1	0.0	5.54	58.7%
8911.9	206.7	63	4.1	0.0	5.34	56.6%
8908.6	210.0	64	4.1	0.0	5.20	55.1%
8905.4	213.3	65	4.1	0.0	4.91	52.0%
8902.1	216.5	66	4.1	0.0	4.52	47.9%
8898.8	219.8	67	4.1	0.0	4.10	43.4%
8895.5	223.1	68	4.1	0.0	3.63	38.5%
8892.2	226.4	69	4.1	0.0	2.95	31.3%
8889.0	229.7	70	4.2	-0.1	2.39	25.3%
8885.7	232.9	71	4.2	0.0	1.85	19.6%
		Maximum	**17.0**	**---**	**9.47**	**116.8%**
		Minimum	**4.0**	**---**	**1.85**	**19.6%**

* - **Bold** values indicate thermocline (1 deg change in one meter).

** - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

TABLE C-8

LAKE SABRINA DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 8/24/2020
Lake Surface Elevation: 9115.53
Outlet Pipe Elevation (ft msl): 9068

Barometric Pressure (in Hg) **21.67**

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **	
	Feet	Meters					
9115.53	0.0	0	---	---	---	---	
9113.9	1.6	0.5	16.9	---	7.10	99.9%	
9112.2	3.3	1	16.9	0.0	7.10	99.9%	
9109.0	6.6	2	16.9	0.0	7.09	99.8%	
9105.7	9.8	3	16.9	0.0	7.10	99.9%	
9102.4	13.1	4	16.9	0.0	7.09	99.8%	
9099.1	16.4	5	16.9	0.0	7.09	99.8%	
9095.8	19.7	6	16.9	0.0	7.08	99.6%	
9092.6	23.0	7	16.8	0.1	7.10	99.9%	
9089.3	26.2	8	16.6	0.2	7.15	100.6%	
9086.0	29.5	9	16.2	0.4	7.24	101.9%	
9082.7	32.8	10	15.4	0.8	7.46	102.7%	
9081.1	34.4	10.5	13.9	**1.5**	8.31	109.5%	
9079.4	36.1	11	13.0	0.9	8.69	114.5%	
9077.8	37.7	11.5	12.1	0.9	8.97	115.6%	
9076.2	39.4	12	11.4	0.7	9.17	127.0%	
9072.9	42.7	13	9.9	**1.5**	9.46	113.7%	
9069.6	45.9	14	8.3	**1.6**	9.70	113.8%	<<Outlet
9066.3	49.2	15	7.5	0.8	9.63	110.2%	
9063.0	52.5	16	6.8	0.7	9.48	105.8%	
9059.8	55.8	17	6.7	0.1	9.36	104.4%	
9056.5	59.1	18	6.3	0.4	9.33	104.1%	
9053.2	62.3	19	6.0	0.3	9.31	103.9%	
9049.9	65.6	20	5.6	0.4	9.04	98.3%	
9046.6	68.9	21	5.4	0.2	8.75	95.2%	
9043.4	72.2	22	5.2	0.2	8.64	94.0%	
9040.1	75.5	23	5.1	0.1	8.42	91.6%	
9036.8	78.7	24	5.0	0.1	8.35	90.8%	
9033.5	82.0	25	4.9	0.1	8.21	87.0%	
9030.2	85.3	26	4.8	0.1	8.17	86.6%	
9026.9	88.6	27	4.7	0.1	8.11	85.9%	
9023.7	91.9	28	4.6	0.1	7.96	84.3%	
9020.4	95.1	29	4.5	0.1	7.83	83.0%	
9017.1	98.4	30	4.4	0.1	7.88	83.5%	
9013.8	101.7	31	4.4	0.0	7.72	81.8%	
9010.5	105.0	32	4.4	0.0	7.54	79.9%	
9007.3	108.3	33	4.3	0.1	7.54	79.9%	
9004.0	111.5	34	4.3	0.0	7.43	78.7%	
9000.7	114.8	35	4.3	0.0	7.36	78.0%	
8997.4	118.1	36	4.2	0.1	7.48	79.3%	
8994.1	121.4	37	4.1	0.1	7.56	80.1%	

TABLE C-8

LAKE SABRINA DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 8/24/2020
Lake Surface Elevation: 9115.53
Outlet Pipe Elevation (ft msl): 9068

Barometric Pressure (in Hg): 21.67

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **
	Feet	Meters				
8990.9	124.7	38	4.1	0.0	7.50	79.5%
8987.6	128.0	39	4.1	0.0	7.32	77.6%
8984.3	131.2	40	4.1	0.0	6.89	73.0%
8981.0	134.5	41	4.1	0.0	6.88	72.9%
8977.7	137.8	42	4.1	0.0	6.81	72.2%
8974.5	141.1	43	4.1	0.0	6.75	71.5%
8971.2	144.4	44	4.1	0.0	6.69	70.9%
8967.9	147.6	45	4.1	0.0	6.65	70.5%
8964.6	150.9	46	4.1	0.0	6.61	70.0%
8961.3	154.2	47	4.1	0.0	6.48	68.7%
8958.1	157.5	48	4.2	-0.1	6.36	67.4%
8954.8	160.8	49	4.1	0.1	6.28	66.5%
8951.5	164.0	50	4.1	0.0	6.25	66.2%
8948.2	167.3	51	4.1	0.0	6.21	65.8%
8944.9	170.6	52	4.1	0.0	6.17	65.4%
8941.6	173.9	53	4.1	0.0	6.10	64.6%
8938.4	177.2	54	4.1	0.0	5.96	63.2%
8935.1	180.4	55	4.1	0.0	5.82	61.7%
8931.8	183.7	56	4.1	0.0	5.81	61.6%
8928.5	187.0	57	4.2	-0.1	5.72	60.6%
8925.2	190.3	58	4.2	0.0	5.62	59.6%
8922.0	193.6	59	4.1	0.1	5.51	58.4%
8918.7	196.8	60	4.1	0.0	5.25	55.6%
8915.4	200.1	61	4.1	0.0	5.10	54.0%
8912.1	203.4	62	4.1	0.0	4.93	52.2%
8908.8	206.7	63	4.1	0.0	4.74	50.2%
8905.6	210.0	64	4.1	0.0	4.50	47.7%
8902.3	213.3	65	4.1	0.0	3.87	41.0%
8899.0	216.5	66	4.1	0.0	3.71	39.3%
8895.7	219.8	67	4.1	0.0	2.82	29.9%
8892.4	223.1	68	4.2	-0.1	1.37	14.5%
8889.2	226.4	69	4.2	0.0	1.05	11.1%
8885.9	229.7	70	4.2	0.0	0.67	7.1%
8882.6	232.9	71	4.2	0.0	0.10	1.1%
8879.3	236.2	72	4.2	0.0	0.06	0.6%
8876.0	239.5	73	4.2	0.0	0.05	0.5%
		Maximum	**16.9**	**---**	**9.70**	**127.0%**
		Minimum	**4.1**	**---**	**0.05**	**0.5%**

* - **Bold** values indicate thermocline (1 deg change in one meter).

** - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

TABLE C-9

LAKE SABRINA DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 9/21/2020
Lake Surface Elevation: 9111.89
Outlet Pipe Elevation (ft msl): 9068

Barometric Pressure (in Hg) 21.65

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **	
	Feet	Meters					
9111.89	0.0	0	14.3	---	7.75	---	
9110.2	1.6	0.5	14.3	---	7.75	104.4%	
9108.6	3.3	1	14.3	0.0	7.70	103.8%	
9105.3	6.6	2	14.4	-0.1	7.67	103.4%	
9102.0	9.8	3	14.3	0.1	7.66	103.2%	
9098.8	13.1	4	14.4	-0.1	7.65	103.1%	
9095.5	16.4	5	14.4	0.0	7.64	103.0%	
9092.2	19.7	6	14.3	0.1	7.62	102.7%	
9088.9	23.0	7	14.3	0.0	7.62	102.7%	
9085.6	26.2	8	14.3	0.0	7.62	102.7%	
9082.4	29.5	9	14.3	0.0	7.62	102.7%	
9079.1	32.8	10	14.2	0.1	7.68	103.5%	
9075.8	36.1	11	12.8	**1.4**	8.69	112.0%	
9072.5	39.4	12	11.9	0.9	9.68	134.1%	
9069.2	42.7	13	9.4	**2.5**	9.85	118.4%	<<Outlet
9066.0	45.9	14	8.2	**1.2**	9.97	116.9%	
9062.7	49.2	15	7.5	0.7	9.94	113.7%	
9059.4	52.5	16	7.1	0.4	9.84	112.6%	
9056.1	55.8	17	6.4	0.7	9.68	108.0%	
9052.8	59.1	18	6.1	0.3	9.63	107.5%	
9049.6	62.3	19	5.9	0.2	9.59	104.3%	
9046.3	65.6	20	5.7	0.2	9.40	102.2%	
9043.0	68.9	21	5.6	0.1	9.20	100.1%	
9039.7	72.2	22	5.5	0.1	9.09	98.9%	
9036.4	75.5	23	5.2	0.3	8.77	95.4%	
9033.2	78.7	24	5.1	0.1	8.62	93.8%	
9029.9	82.0	25	5.0	0.1	8.42	91.6%	
9026.6	85.3	26	4.9	0.1	8.28	87.7%	
9023.3	88.6	27	4.8	0.1	8.12	86.0%	
9020.0	91.9	28	4.6	0.2	7.86	83.3%	
9016.7	95.1	29	4.6	0.0	7.86	83.3%	
9013.5	98.4	30	4.6	0.0	7.77	82.3%	
9010.2	101.7	31	4.4	0.2	7.83	83.0%	
9006.9	105.0	32	4.4	0.0	7.73	81.9%	
9003.6	108.3	33	4.3	0.1	7.79	82.5%	
9000.3	111.5	34	4.3	0.0	7.89	83.6%	
8997.1	114.8	35	4.2	0.1	7.93	84.0%	
8993.8	118.1	36	4.2	0.0	7.76	82.2%	
8990.5	121.4	37	4.2	0.0	7.66	81.2%	
8987.2	124.7	38	4.1	0.1	7.66	81.2%	
8983.9	128.0	39	4.1	0.0	7.58	80.3%	

TABLE C-9

LAKE SABRINA DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 9/21/2020

Lake Surface Elevation: 9111.89

Outlet Pipe Elevation (ft msl): 9068

Barometric Pressure (in Hg): 21.65

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **
	Feet	Meters				
8980.7	131.2	40	4.1	0.0	7.37	78.1%
8977.4	134.5	41	4.1	0.0	7.21	76.4%
8974.1	137.8	42	4.1	0.0	7.19	76.2%
8970.8	141.1	43	4.1	0.0	7.04	74.6%
8967.5	144.4	44	4.1	0.0	6.92	73.3%
8964.3	147.6	45	4.1	0.0	6.88	72.9%
8961.0	150.9	46	4.1	0.0	6.77	71.7%
8957.7	154.2	47	4.1	0.0	6.74	71.4%
8954.4	157.5	48	4.1	0.0	6.63	70.3%
8951.1	160.8	49	4.2	-0.1	6.33	67.1%
8947.8	164.0	50	4.2	0.0	6.28	66.5%
8944.6	167.3	51	4.2	0.0	6.10	64.6%
8941.3	170.6	52	4.2	0.0	5.91	62.6%
8938.0	173.9	53	4.2	0.0	5.72	60.6%
8934.7	177.2	54	4.1	0.1	5.63	59.7%
8931.4	180.4	55	4.2	-0.1	5.35	56.7%
8928.2	183.7	56	4.2	0.0	5.27	55.8%
8924.9	187.0	57	4.2	0.0	5.20	55.1%
8921.6	190.3	58	4.2	0.0	4.83	51.2%
8918.3	193.6	59	4.2	0.0	4.40	46.6%
8915.0	196.8	60	4.2	0.0	4.19	44.4%
8911.8	200.1	61	4.2	0.0	4.04	42.8%
8908.5	203.4	62	4.2	0.0	3.67	38.9%
8905.2	206.7	63	4.2	0.0	3.48	36.9%
8901.9	210.0	64	4.2	0.0	3.45	36.6%
8898.6	213.3	65	4.2	0.0	3.15	33.4%
8895.4	216.5	66	4.2	0.0	3.15	33.4%
8892.1	219.8	67	4.2	0.0	2.36	25.0%
8888.8	223.1	68	4.2	0.0	2.13	22.6%
8885.5	226.4	69	4.2	0.0	1.78	18.9%
8882.2	229.7	70	4.2	0.0	1.58	16.7%
8879.0	232.9	71	4.2	0.0	1.41	14.9%
8875.7	236.2	72	4.2	0.0	0.80	8.5%
		Maximum	**14.4**	**---**	**9.97**	**134.1%**
		Minimum	**4.1**	**---**	**0.80**	**8.5%**

* - **Bold** values indicate thermocline (1 deg change in one meter).

** - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.

TABLE C-10

LAKE SABRINA DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 10/5/2020
Lake Surface Elevation: 9108.97
Outlet Pipe Elevation (ft/msl): 9068

Barometric Pressure (in Hg) 21.60

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **	
	Feet	Meters					
9108.97	0.0	0	14	---	7.88	---	
9107.3	1.6	0.5	14.0	---	7.88	106.2%	
9105.7	3.3	1	13.8	0.2	7.85	103.5%	
9102.4	6.6	2	13.7	0.1	7.86	103.6%	
9099.1	9.8	3	13.7	0.0	7.86	103.6%	
9095.8	13.1	4	13.7	0.0	7.86	103.6%	
9092.6	16.4	5	13.6	0.1	7.85	103.5%	
9089.3	19.7	6	13.6	0.0	7.85	103.5%	
9086.0	23.0	7	13.6	0.0	7.85	103.5%	
9082.7	26.2	8	13.6	0.0	7.84	103.3%	
9079.4	29.5	9	13.6	0.0	7.84	103.3%	
9076.2	32.8	10	13.4	0.2	7.92	104.4%	
9072.9	36.1	11	12.3	**1.1**	8.64	111.3%	
9069.6	39.4	12	10.0	**2.3**	9.87	121.4%	<<Outlet
9066.3	42.7	13	8.4	**1.6**	10.03	117.6%	
9063.0	45.9	14	7.6	0.8	9.94	113.7%	
9059.8	49.2	15	7.0	0.6	9.80	112.1%	
9056.5	52.5	16	6.7	0.3	9.72	108.5%	
9053.2	55.8	17	6.4	0.3	9.62	107.3%	
9049.9	59.1	18	6.0	0.4	9.69	108.1%	
9046.6	62.3	19	5.7	0.3	9.55	103.9%	
9043.4	65.6	20	5.5	0.2	9.31	101.3%	
9040.1	68.9	21	5.3	0.2	9.07	98.6%	
9036.8	72.2	22	5.2	0.1	8.65	94.1%	
9033.5	75.5	23	5.1	0.1	8.44	91.8%	
9030.2	78.7	24	5.0	0.1	8.35	90.8%	
9026.9	82.0	25	4.9	0.1	8.18	86.7%	
9023.7	85.3	26	4.8	0.1	7.95	84.2%	
9020.4	88.6	27	4.6	0.2	7.70	81.6%	
9017.1	91.9	28	4.6	0.0	7.61	80.6%	
9013.8	95.1	29	4.4	0.2	7.68	81.4%	
9010.5	98.4	30	4.4	0.0	7.79	82.5%	
9007.3	101.7	31	4.3	0.1	7.87	83.4%	
9004.0	105.0	32	4.3	0.0	7.90	83.7%	
9000.7	108.3	33	4.3	0.0	7.66	81.2%	
8997.4	111.5	34	4.2	0.1	7.74	82.0%	
8994.1	114.8	35	4.1	0.1	7.68	81.4%	
8990.9	118.1	36	4.1	0.0	7.73	81.9%	
8987.6	121.4	37	4.1	0.0	7.63	80.9%	
8984.3	124.7	38	4.1	0.0	7.50	79.5%	
8981.0	128.0	39	4.1	0.0	7.43	78.7%	

TABLE C-10

LAKE SABRINA DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILE

Date of Profile: 10/5/2020
Lake Surface Elevation: 9108.97
Outlet Pipe Elevation (ft/msl): 9068

Barometric Pressure (in Hg) 21.60

Water Surface Elevation (ft msl)	Depth of Measurement		Water Temperature (deg C)	Change in Water Temperature (deg C)*	Dissolved Oxygen (mg/L)	% O_2 Saturation **
	Feet	Meters				
8977.7	131.2	40	4.1	0.0	7.33	77.7%
8974.5	134.5	41	4.1	0.0	7.27	77.0%
8971.2	137.8	42	4.1	0.0	7.09	75.1%
8967.9	141.1	43	4.1	0.0	6.95	73.6%
8964.6	144.4	44	4.1	0.0	6.85	72.6%
8961.3	147.6	45	4.1	0.0	6.78	71.8%
8958.1	150.9	46	4.1	0.0	6.55	69.4%
8954.8	154.2	47	4.1	0.0	6.46	68.5%
8951.5	157.5	48	4.1	0.0	6.38	67.6%
8948.2	160.8	49	4.1	0.0	6.32	67.0%
8944.9	164.0	50	4.1	0.0	6.27	66.4%
8941.6	167.3	51	4.1	0.0	6.16	65.3%
8938.4	170.6	52	4.1	0.0	6.06	64.2%
8935.1	173.9	53	4.1	0.0	5.77	61.1%
8931.8	177.2	54	4.1	0.0	5.72	60.6%
8928.5	180.4	55	4.2	-0.1	5.62	59.6%
8925.2	183.7	56	4.2	0.0	5.40	57.2%
8922.0	187.0	57	4.2	0.0	5.25	55.6%
8918.7	190.3	58	4.2	0.0	5.07	53.7%
8915.4	193.6	59	4.2	0.0	4.85	51.4%
8912.1	196.8	60	4.2	0.0	4.52	47.9%
8908.8	200.1	61	4.2	0.0	4.25	45.0%
8905.6	203.4	62	4.2	0.0	4.05	42.9%
8902.3	206.7	63	4.2	0.0	3.35	35.5%
8899.0	210.0	64	4.2	0.0	2.90	30.7%
8895.7	213.3	65	4.2	0.0	2.72	28.8%
8892.4	216.5	66	4.2	0.0	2.44	25.9%
8889.2	219.8	67	4.2	0.0	1.96	20.8%
8885.9	223.1	68	4.2	0.0	1.32	14.0%
8882.6	226.4	69	4.2	0.0	0.71	7.5%
8881.0	228.0	69.5	4.2	0.0	0.27	2.9%
		Maximum	**14.0**	**---**	**10.03**	**121.4%**
		Minimum	**4.1**	**---**	**0.27**	**2.9%**

* - **Bold** values indicate thermocline (1 deg change in one meter).

** - Saturation based on calculated DO saturation at reported water temperature and ambient barometric pressure.