Water Quality Study Report

Stevens Creek Hydroelectric Project

FERC No. 2535

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EXECUTIVE SUMMARY

Water quality data were collected at the Stevens Creek Project (Federal Energy Regulatory Commission [FERC] Project No. 2535) at five continuously monitored sites and one periodic monitoring site from February 2021 through February 2022 as part of the FERC Project relicensing process. These data, in addition to data collected through license compliance monitoring performed by the United States Geological Survey and data provided by the United States Army Corps of Engineers at J. Strom Thurmond Dam (Thurmond Dam) for the study period, were compiled to provide an understanding of water quality within and downstream of the Project boundary to assess Project-related effects. Water temperatures at all sites during the study were below the standard 90ºF (32.2ºC), except for one excursion. There were several dissolved oxygen excursions throughout the study period, particularly at the following sites: Above Powerhouse, Above Spillway, and the Thurmond Dam tailrace. All dissolved oxygen excursions occurred above the Stevens Creek Dam; pH stayed within the standard range throughout the study. Ammonia and orthophosphate were only detected on two occasions during the study period. Phosphorous was detected at the Stevens Creek Monitoring Site during the summer and was equal to, or above, the standard set by South Carolina. Nitrate-nitrite and total Kjeldahl nitrogen were consistently detected across all sites throughout the study period, with the highest concentrations detected at the Stevens Creek Site. The data discussed in this report indicate that the Stevens Creek Project does not negatively impact water quality downstream of the Stevens Creek Reservoir but rather positively impacts the water being released from the Thurmond Dam, particularly with regard to dissolved oxygen.

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ACRONYMS, ABBREVIATIONS, AND DEFINITIONS

C	
cfs	cubic feet per second
Commission	Federal Energy Regulatory Commission
Conductivity	a measure of the ability of water to pass an electrical current; impacted by the presence of inorganic dissolved solids as well as temperature
CWA	Clean Water Act
D	
°C	degrees Celsius
°F	degrees Fahrenheit
DESC	Dominion Energy South Carolina Inc.; Licensee for the Stevens Creek Project
DO	dissolved oxygen
E	
EL	elevation
F	
FERC	Federal Energy Regulatory Commission
FNU	Formazin Nephelometric Units
G	
GADNR	Georgia Department of Natural Resources
GAEPD	Georgia Environmental Protection Division
H	
HOBO	brand of water quality data logger
L	
Licensee	Dominion Energy South Carolina, Inc.
M	
mg/L	milligram per liter; used as a unit of measurement for DO and, in this case, ammonia, nitrate-nitrite, orthophosphate, phosphorus, and TKN
MW	megawatt
N	
NGO	Non-Governmental Organization

NMFS	National Marine Fisheries Service, housed within the U.S. Department of Commerce's National Oceanic and Atmospheric Administration
NTU	Nephelometric Turbidity Units
P	
pH	a term used to indicate the alkalinity or acidity of a substance as ranked on a scale from 1.0 to 14.0
Project	Stevens Creek Hydroelectric Project, FERC No. 2535
R	
RCG	Resource Conservation Group
S	
SCDHEC	South Carolina Department of Health and Environmental Control
SCDNR	South Carolina Department of Natural Resources
Study Plan	Stevens Creek Water Quality Study Plan
T	
Thurmond Dam	J. Strom Thurmond Dam; also known as Clarks Hill Dam; built and managed by USACE
TKN	total Kjeldahl nitrogen; the total concentration of organic nitrogen and ammonia
turbidity	the measurement of water clarity
U	
µS/cm	microsiemens per centimeter; unit of measurement for conductivity
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
Y	
YSI	Yellow Springs Instrument; brand of water quality monitor

1.0 INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC; Licensee) is the Licensee of the Stevens Creek Hydroelectric Project (FERC No. 2535; Project). The Project has an installed capacity of 17.28 megawatts (MW) and is located in Edgefield and McCormick counties, South Carolina, and Columbia County, Georgia, at the confluence of Stevens Creek and the Savannah River. The Project's dam (Stevens Creek Dam) is located approximately 1 river mile (RM) upstream of the Augusta Diversion Dam and approximately 13 RMs downstream of the U.S. Army Corps of Engineers (USACE) J. Storm Thurmond Dam (Thurmond Dam). The Stevens Creek Reservoir is approximately 25 RMs long, extending upstream on the Savannah River for 13 RMs to the Thurmond Dam and 12 RMs upstream on Stevens Creek. The reservoir's surface area at normal full pond level (elevation of 187.5 feet) is 2,400 acres. The Project drainage area is approximately 7,173 square miles.

DESC operates the Project to generate clean, renewable energy and re-regulate highly variable river flows discharged by the USACE from the Thurmond Dam. The Stevens Creek Project is operated in accordance with an Operating Plan on file with the Federal Energy Regulatory Commission (FERC or Commission; Order issued June 22, 2018). The plan was developed in consultation with the USACE, United States Fish and Wildlife, Georgia Department of Natural Resources (GADNR), South Carolina Department of Natural Resources (SCDNR), and the city of Augusta. The normal operating target range for the Stevens Creek Project is to provide an hourly discharge of ±15 percent of the scheduled daily average discharge from the Thurmond Dam, if the actual discharge from the Thurmond Dam is within 500 cubic feet per second (cfs) of the scheduled discharge.

On November 22, 1995, FERC issued a 30-year license for the Project which is scheduled to expire on October 31, 2025. DESC intends to file an application for a new license with FERC on or before October 31, 2023. DESC is currently conducting the relicensing process for the Project which involves cooperation and collaboration between DESC, as Licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. DESC established a Water Quality, Fish and Wildlife Resource Conservation Group (RCG) with interested stakeholders to address potential Project resource issues related to aquatic and terrestrial resources. The RCG determined there was a need for supplemental water quality data at the Project, particularly dissolved oxygen (DO) and temperature. Requests were also made from GADNR, SCDNR, and the National Marine Fisheries Service (NMFS) to

collect additional water quality data in the Project area. To address these requests, the RCG developed the Stevens Creek Water Quality Study Plan (Study Plan) which guided this study.

1.1 Goals and Objectives

The objective of this study was to assess the water quality of the Savannah River immediately downstream of the Project and in the Stevens Creek and Savannah River arms of Stevens Creek Reservoir.

1.2 Background Water Quality Information

While there are many ways to evaluate the health of a river or lake, this report focuses on a few common water quality indicators: water temperature, dissolved oxygen (DO), conductivity, and pH, among others, to best describe the health of the Project waters. General information on the parameters utilized in this report, along with an explanation of why they are commonly used water quality indicators, is included below.

Dissolved Oxygen

Oxygen found in water is measured in its dissolved form as dissolved oxygen. DO in water is consumed by aquatic animals, decomposition of organic matter, and various other chemical reactions, making it a vital resource within lakes, streams, and rivers. DO levels fluctuate seasonally, as well as diurnally. Aquatic biota can be vulnerable to low DO levels which naturally occur in early mornings of hot summer days, when stream flows are low, water temperatures are high and aquatic plants have not been producing oxygen since sunset the day before (USEPA 1997).

Conductivity

As defined by the United States Environmental Protection Agency (USEPA), conductivity is a measure of the ability of water to pass an electrical current and is affected by the presence of inorganic dissolved solids, such as chloride, nitrate, sulfate, and phosphate anions or sodium, magnesium, calcium, iron, and aluminum cations. Temperature also influences conductivity, where the warmer the water, the higher the conductivity, which is why conductivity is typically reported at 25℃. The geology of the area through which the river flows will have a large impact on the conductivity of the water. A range of 50 to 1500 microsiemens per centimeter (µS/cm) is typical of rivers throughout the United States. Waters with a conductivity measurement outside of this range may indicate that the river is not suitable for various species of fish and macroinvertebrates (USEPA 1997).

pH

Another indicator of water quality is pH, a term used to indicate the alkalinity or acidity of a substance as ranked on a scale from 1.0 to 14.0. As the acidity in a water sample increases, the pH decreases. The pH for pure water is 7.0. The pH of a river or lake affects many chemical and biological processes occurring in the water, allowing for different organisms to flourish or deteriorate within different pH ranges. Typically, most aquatic animals prefer a pH range of 6.5-8.0. Low pH can allow for toxic elements and compounds to become available for uptake by aquatic plants and animals, producing lethal conditions for many species (USEPA 1997).

Turbidity

The measurement of water clarity is known as turbidity. Materials suspended in water, such as soil particles, algae, plankton, and microbes typically ranging in size from 0.004 mm to 1.0 mm, can decrease the passage of light through water. Since the suspended particles may absorb heat, high turbidity could increase water temperatures, and thus influence DO concentrations (the solubility of oxygen in water decreases as temperature increases). High turbidity may also inhibit photosynthesis and the production of DO. The reduction of light penetration as a result of increased turbidity also has a potential effect in mediating algal blooms. Suspended materials that might cause high turbidity can also clog fish gills, reducing a fish's ability to resist disease, as well as lowering fish growth rates and negatively affecting egg and larval development (USEPA 1997).

Nitrogen, Phosphorus, and Orthophosphate

Nitrogen is found in several different forms in aquatic ecosystems, including ammonia, nitrates (NO_3) and nitrites (NO_2). Phosphorus usually exists in nature as part of a phosphate molecule (PO_4) and is found in aquatic systems as organic and inorganic phosphate. While nitrogen and phosphorus in their various forms are essential plant nutrients, excessive amounts can cause significant water quality issues. When combined with phosphorus, nitrates in excess amounts can accelerate eutrophication, which causes increases in aquatic plant and algal growth and changes in the types of plants, algae, and animals that inhabit a body of water. Dissolved oxygen, temperature, and other water quality indicators are also affected (USEPA 1997). Orthophosphate is a member of the phosphate family. Increasingly, orthophosphate is added to water systems to delay corrosion of metal pipes and prevent heavy metals like lead from leaching into the water. In high concentrations, however, orthophosphate can cause rapid algae growth in surface waters, which can deplete sunlight and oxygen levels.

2.0 GEOGRAPHIC AND TEMPORAL SCOPE

Water quality was monitored at six sites from February 2021 through February 2022 within the Project boundary and downstream of the Project, including five sites in the Savannah River and one site in Stevens Creek. The monitoring site above the powerhouse (Above Powerhouse) was placed in Stevens Creek Reservoir upstream of the hydro station. The monitoring site below the powerhouse (Below Powerhouse) is located directly downstream of Stevens Creek Dam. Monitoring sites below and above the spillway are located downstream and upstream of the east end of Stevens Creek Dam, respectively. The Stevens Creek Monitoring Site is located in Stevens Creek near Woodlawn Road, approximately 4.5 RMs upstream of its confluence with the Savannah River at Stevens Creek Dam. The Deep Step Monitoring Site is located in the Savannah River arm of Stevens Creek Reservoir, just upstream of the confluence with Stevens Creek. Monitoring data collected in the Thurmond Dam tailrace by the USACE as well as data collected by the United States Geological Survey (USGS) was also incorporated into the study report. The monitoring sites are shown in Figure 2.1.

Table 2.1 Water Quality Site Coordinates

Site Name	Depth (m)	Latitude	Longitude
Thurmond Dam Tailrace	---	33.660043	-82.197483
Deep Step	1	33.572000	-82.056044
Stevens Creek	1.5	33.606346	-82.025751
Above Powerhouse	2.5	33.562968	-82.052020
Above Spillway	1.5	33.567010	-82.046794
Below Powerhouse	2.2	33.561938	-82.051037
Below Spillway	1.5	33.564470	-82.045679
USGS Site 6	3	33.603400	-82.152537
USGS Site 1	3	33.592861	-82.123222
USGS Site 5	5	33.611111	-82.028611
USGS Site 4	5	33.582797	-82.042206
USGS Site 2	5	33.562974	-82.051882
USGS Site 3	3	33.560696	-82.049848

"---" = no data

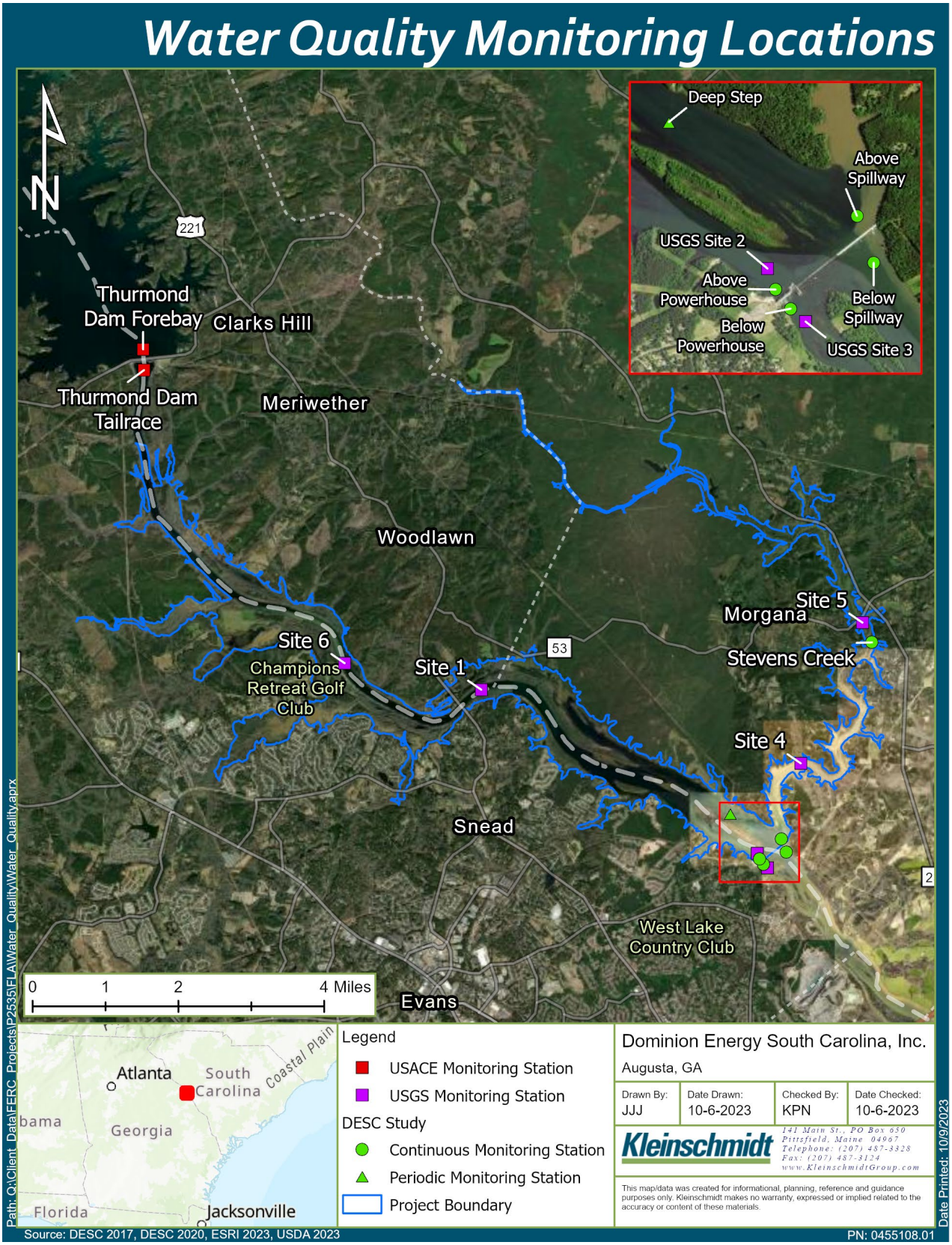

Figure 2.1 Stevens Creek Hydroelectric Project Water Quality Study Sites

3.0 DATA COLLECTION METHODS AND ANALYSIS

3.1 Data Collection Methods

3.1.1 Continuous Monitoring

Water quality was continuously monitored at the following monitoring sites: Stevens Creek, Above Powerhouse, Above Spillway, Below Powerhouse, and Below Spillway, as shown in Figure 2.1. Measurements of water temperature, DO, pH, conductivity, and turbidity were recorded using YSI EXO3 multiparameter sondes. The instruments were calibrated according to the manufacturer's specifications and set to record measurements at hourly intervals.

Table 3.1 Specifications of Probes on YSI EXO3 Multiparameter Sondes

Parameter	Specifications
Water Temperature	-5 to 50 °C; ± 0.2 °C
Dissolved Oxygen	0 to 20 mg/L; ± 0.1 mg/L or 1% of reading, whichever is greater 0 to 200%: ±1% of reading or 1% saturation, whichever is greater
Specific Conductance	0 to 100: ±0.5% of reading or 0.001 mS/cm; 100 to 200: ±1% of reading
pH	0 to 14 units; ± 0.1 pH units within ± 10 °C of calibration temperature; 0.2 pH units for entire temp range
Turbidity	0 to 999 FNU, ± 0.3 FNU or 2% of reading, whichever is greater

The instruments were cleaned, checked for accuracy, and downloaded a minimum of once per month. A separate, calibrated meter was used to record DO, water temperature, pH, conductivity, and turbidity readings during each maintenance visit to the sites to compare to data from the deployed instruments as an accuracy check and for use in post-processing and correction of any fouling or calibration drift.

3.1.2 Periodic Monitoring

Water quality was monitored periodically at the Deep Step Monitoring Site (Figure 2.1 Figure 4.3) for temperature, DO, and pH during the summer months for 24-48 hour periods using a combination of a YSI EXO3 and a HOBO U26 Temperature and DO

continuous water quality monitoring instruments. This periodic monitoring was requested by SCDNR to better understand water quality dynamics in this area which is a popular location for anglers. Periodic data were collected June through October. The instruments were calibrated according to the manufacturer's specifications and set to record measurements at hourly intervals.

A separate, calibrated meter was used to record DO and water temperature readings during each deployment and retrieval visit to the Deep Step Monitoring Site to check accuracy and gather data for use in post-processing and correction of any fouling or calibration drift.

3.1.3 Nutrient Sampling

Water samples were collected monthly at the Stevens Creek, Above Powerhouse, Above Spillway, Below Powerhouse, and Below Spillway monitoring sites, and at the Deep Step Monitoring Site during periodic sampling. The samples were submitted to a certified laboratory for analysis of ammonia, nitrate-nitrite, Tnitrogen (TKN), orthophosphate, and total phosphorus.

3.1.4 Existing Monitoring Data

Data collected by the USGS in 2021 and 2022 as required by Article 404 of the existing license is summarized as part of this study. USGS collects vertical profiles of temperature, DO, specific conductance, and pH at six sites within the Project boundary (Table 3.2). Profile data are collected by USGS on two consecutive days, once daily in each month from November to May. Profiles are collected diurnally (morning and afternoon) twice a month on two consecutive days from June through October. In addition, the USACE collects vertical profiles of DO and temperature in the Thurmond Dam forebay and conducts continuous monitoring of DO and water temperature in the tailrace (Savannah River below Thurmond Dam).

3.2 GAEPD Water Quality Standards for Freshwaters

The Georgia Environmental Protection Division (GAEPD) monitors water quality as outlined in Chapter 391-3-6-.03 of Georgia's Rules and Regulations for Water Quality Control (GAEPD 2021). Designated use is the first component of the water quality standards, and it assigns the environmental use of the waterbody into one of six classifications: drinking water supplies, recreation, fishing, wild river, scenic river, and coastal fishing. The Savannah River within the vicinity of the Project is classified as drinking

water (GAEPD 2021). Table 3.2 describes the water quality standards for a drinking water designated river. The criterion for turbidity is based on a visual assessment of the waterbody rather than a numeric value. Essentially, the upstream appearance of the waterbody should be compared to a point which is located sufficiently downstream from the Project so as to provide an appropriate mixing zone. The upstream and downstream point should be visually similar (GAEPD 2021). The GAEPD does not currently have standards for the nutrients analyzed in this study: ammonia-nitrogen, nitrate-nitrite, TKN, total phosphorus, and total orthophosphate. However, GAEPD has developed a plan (GAEPD 2013) to adopt water quality standards for nutrients based on the USEPA guidance in the National Strategy for the Development of Regional Nutrient Criteria (USEPA 1998). The USEPA's current standard for nitrate-nitrite is < 10 milligrams per liter (mg/L) (USEPA 1980). As a guideline, total phosphorus should not exceed 0.1 mg/L in streams or 0.05 mg/L in lakes and reservoirs (USEPA 1988).

Table 3.2 GAEPD Water Quality Standards for Drinking Water Designated River

Parameter	Standard
Temperature	Not to exceed 90ºF (32.2ºC); No increase > 5ºF above intake temperature
pH	6.0 – 8.5
Dissolved Oxygen (warm water species)	Daily average of 5.0 mg/L; not < 4.0 mg/L
Turbidity (reservoirs only)	All waters shall be free from turbidity which results in a substantial visual contrast in a water body due to a man-made activity.
Turbidity (excluding reservoirs)	

Source: GAEPD 2021

3.3 SCDHEC Water Quality Standards for Freshwaters

South Carolina's water quality standards are published in S.C. Regulation 61-69 in *Water Classifications and Standards* (SCDHEC 2020). The regulation assigns classifications to water bodies in the state and establishes water quality standards for those classifications. The South Carolina Department of Health and Environmental Control (SCDHEC) developed the water quality standards as set forth in the Clean Water Act (CWA). The Savannah River from the headwaters of Lake Russel down to the Seaboard Coastline Railroad located just north of Port Wentworth, Georgia is classified as freshwaters (SCDHEC 2020) (Table 3.3).

Table 3.3 SCDHEC Water Quality Standards for Freshwaters

Parameter	Standard
Temperature	The water temperature of all freshwaters which are free flowing shall not be increased more than 5ºF (2.8ºC) above natural temperature conditions and shall not exceed a maximum of 90ºF (32.2ºC) as a result of the discharge of heated liquids unless a different site-specific temperature standard as provided in C.12. has been established, a mixing zone as provided in C.10. has been established, or a Section 316(a) determination under the Federal Clean Water Act has been completed.
pH	Between 6.0 and 8.5.
Dissolved Oxygen	Daily average not less than 5.0 mg/L with a low of 4.0 mg/L.
Turbidity (reservoirs only)	Not to exceed 25 NTUs provided existing uses are maintained.
Turbidity (excluding reservoirs)	Not to exceed 50 NTUs provided existing uses are maintained.

Table 3.4 SCDHEC Nutrient Criteria for Waters in the Piedmont and Southeastern Plains Ecosystem

Parameter	Criteria
Ammonia – Nitrogen (NH3)	pH, temperature, and life-stage dependent; The one-hour average concentration of total ammonia-nitrogen (in mg N/L) does not exceed, more than once every three years on average, the criterion maximum concentration calculated using the following equation: $CMC = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$
Total Nitrogen	≤ 1.5 mg/L
Total Phosphorus	≤ 0.06 mg/L

4.0 RESULTS

Box plots were utilized to summarize the hourly measurements of water temperature, dissolved oxygen, specific conductance, pH, and turbidity. Since some readers may be unfamiliar with this type of plot, the figure provided below describes what each component of the boxplot represents statistically.

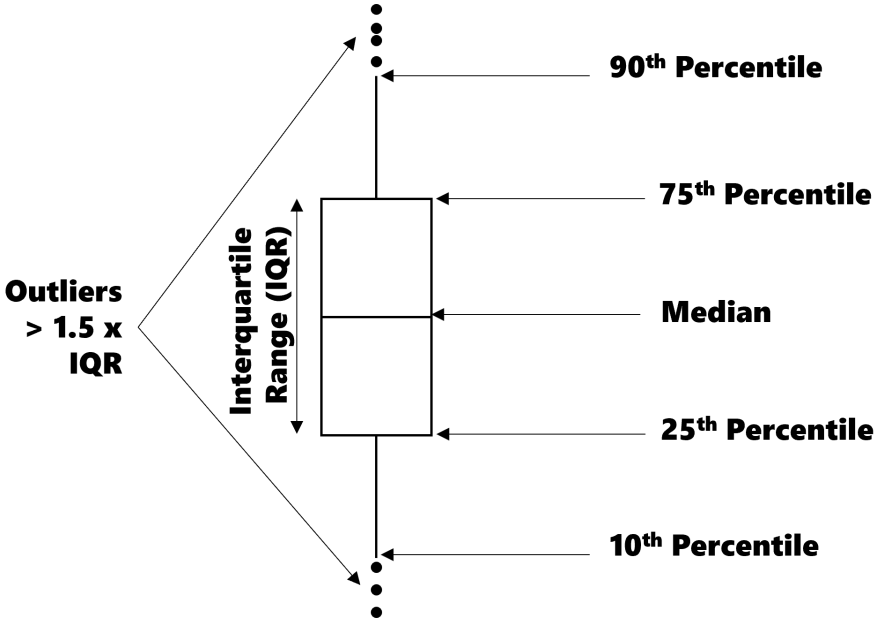

Figure 4.1 Key to Boxplot Charts

4.1 Water Temperature

4.1.1 Continuous Monitoring Data

Table 4.1 provides a summary of water temperature measurements by month for each site. Sections that follow include results for individual sites.

Table 4.1 Monthly Water Temperature (°C) by Site – Average (Min - Max)

Month	Deep Step	Stevens Creek	Above Powerhouse	Above Spillway	Below Powerhouse	Below Spillway
2021-01		9.8 (7.5 - 13.7)	10.2 (9.8 - 10.8)	9.6 (7.1 - 12.6)	10.2 (9.8 - 10.8)	10.0 (9.6 - 10.8)
2021-02		14.7 (9.9 - 19.6)	9.9 (9.1 - 11.0)	13.3 (9.8 - 19.1)	9.8 (8.7 - 10.9)	9.6 (7.0 - 12.4)
2021-03		18.6 (14.0 - 23.1)	11.6 (9.8 - 13.9)	16.3 (12.7 - 22.8)	11.4 (9.8 - 13.5)	13.1 (9.8 - 19.1)
2021-04		20.9 (17.6 - 23.6)	13.9 (12.2 - 17.3)	18.7 (15.0 - 22.6)	---	15.8 (12.7 - 19.5)
2021-05		---	16.0 (14.4 - 18.4)	21.5 (16.7 - 26.2)	---	18.5 (14.8 - 21.4)
2021-06	20.0 (17.6 - 30.6)	29.5 (28.3 - 31.5)	17.4 (15.7 - 19.7)	22.4 (17.9 - 27.1)	18.0 (16.3 - 20.8)	20.3 (17.1 - 24.0)
2021-07	20.8 (19.7 - 25.3)	28.2 (25.2 - 31.8)	18.9 (17.3 - 21.0)	23.4 (19.3 - 27.6)	19.2 (17.4 - 21.8)	21.5 (18.2 - 26.1)
2021-08	22.2 (20.2 - 25.1)	24.9 (21.4 - 28.6)	20.5 (18.9 - 22.6)	23.2 (21.4 - 25.4)	20.6 (18.9 - 22.9)	22.7 (19.3 - 25.9)
2021-09	21.8 (21.3 - 23.6)	20.7 (16.0 - 24.3)	21.8 (20.9 - 23.1)	22.3 (18.9 - 25.4)	21.9 (21.0 - 23.1)	22.9 (21.3 - 25.2)
2021-10	21.4 (20.9 - 22.1)	12.7 (9.0 - 17.3)	22.2 (20.7 - 23.0)	17.1 (12.1 - 21.4)	22.2 (20.3 - 23.0)	22.2 (19.2 - 24.3)
2021-11		11.1 (8.1 - 15.9)	18.0 (15.2 - 21.4)	14.3 (10.5 - 16.2)	18.0 (15.2 - 21.4)	18.2 (15.0 - 21.5)
2021-12		8.5 (4.9 - 16.9)	14.7 (13.1 - 16.0)	10.7 (6.1 - 16.9)	14.7 (13.0 - 16.0)	
2022-01		8.3 (5.0 - 12.3)	12.2 (9.6 - 15.3)	10.2 (7.3 - 12.4)	12.2 (9.5 - 15.6)	
2022-02			10.4 (9.7 - 11.4)		10.5 (9.8 - 11.4)	

"---" = no data

4.1.1.1 USACE Thurmond Dam Tailrace

The USACE conducted continuous monitoring in the Thurmond Dam tailrace from January 1, 2021 through December 31, 2021. No data was recovered at the site from August 17 through August 25 due to equipment malfunction. The USACE noted that flows to the sampling well were impacted by lower tailwater elevations at Thurmond Dam during Stevens Creek Dam maintenance work. No exceedances of 32.2°C were recorded at the site during the study period. Monthly average, maximum, and minimum temperatures measured at the site can be found in Table 4.2. A boxplot of monthly temperature data can be found in Figure 4.2. A time series plot of temperature can be found in Appendix A.

Table 4.2 Monthly Water Temperature at Thurmond Dam Tailrace

Month	Monthly Temperature (°C) Average (Min – Max)
2021-01	11.6 (10.4 - 12.8)
2021-02	10.5 (9.7 - 15.4)
2021-03	11.8 (10.2 - 14.5)
2021-04	14.2 (12.5 - 18.5)
2021-05	18.7 (10.7 - 26.2)
2021-06	20.0 (15.4 - 28.2)
2021-07	18.8 (17.2 - 23.0)
2021-08*	22.1 (19.7 - 26.0)
2021-09	21.6 (19.1 - 26.0)
2021-10	22.4 (21.8 - 23.6)
2021-11	18.8 (16.2 - 21.9)
2021-12	15.1 (14.2 - 16.4)

*Data was not collected from August 17-25, 2021 due to equipment malfunction.

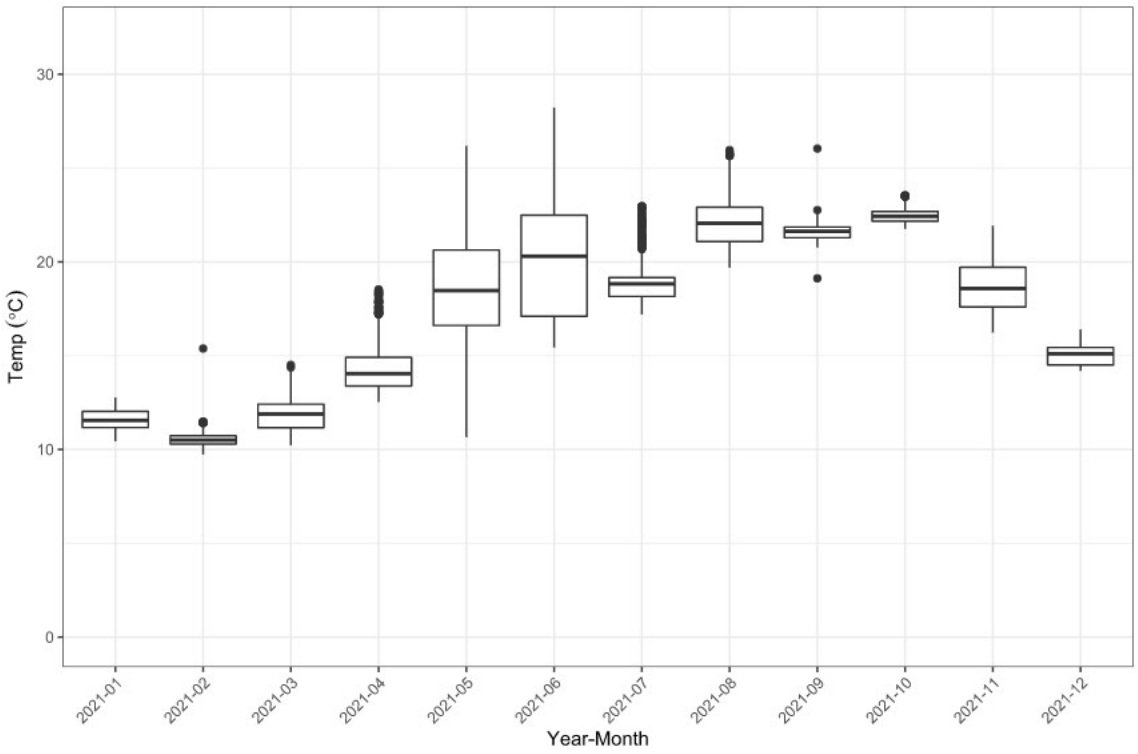

Figure 4.2 Monthly Water Temperature at Thurmond Dam Tailrace

4.1.1.2 Deep Step Monitoring Site – Periodic

Periodic monitoring was conducted at the Deep Step Monitoring Site from June 14, 2021 through October 29, 2022. No exceedances of 32.2°C were recorded at the site during the study period. Monthly average, maximum, and minimum temperatures measured at the site can be found in Table 4.1. A boxplot of monthly temperature data can be found in Figure 4.3. A time series plot of temperature can be found in Appendix A.

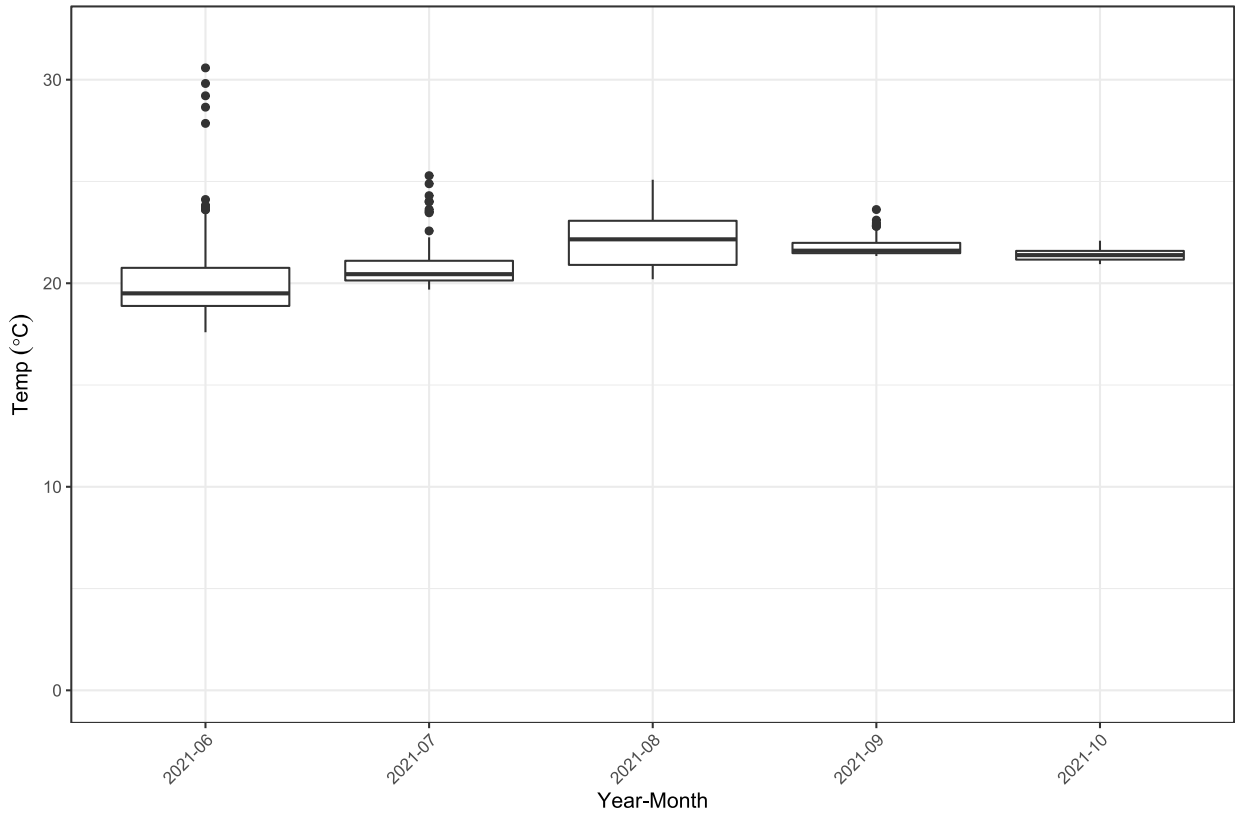

Figure 4.3 Monthly Water Temperature at the Deep Step Site

4.1.1.3 Stevens Creek Monitoring Site

Continuous monitoring was conducted at the Stevens Creek Monitoring Site from February 9, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from May 21 through July 26. Monthly average, maximum, and minimum temperatures measured at the site can be found in Table 4.1. A boxplot of monthly temperature data can be found in Figure 4.4. A time series plot of temperature can be found in Appendix A.

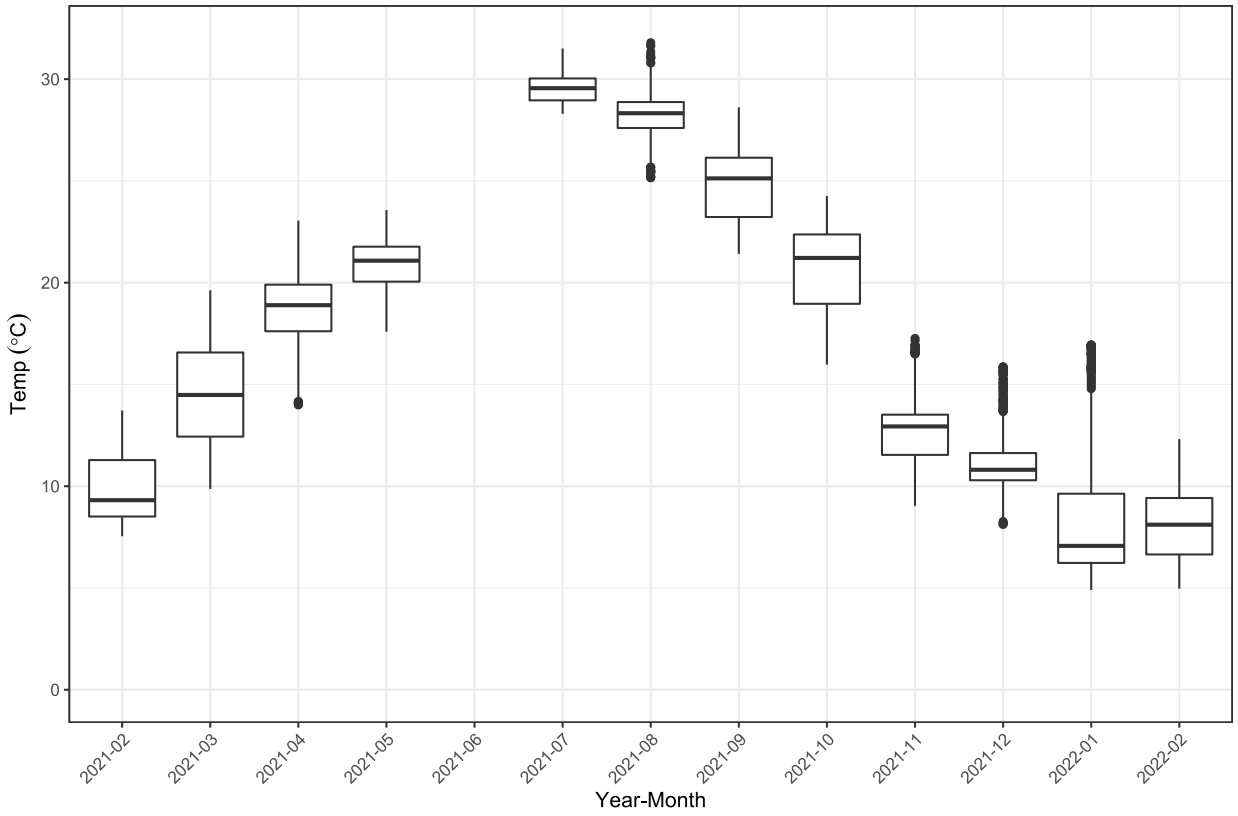

Figure 4.4 Monthly Water Temperature at the Stevens Creek Site

4.1.1.4 Above Powerhouse Monitoring Site

Continuous monitoring was conducted at the Above Powerhouse Monitoring Site from January 29, 2021 through February 10, 2022. No exceedances of 32.2°C occurred at the site during the study period. Monthly average, maximum, and minimum temperatures measured at the site can be found in Table 4.1. A boxplot of monthly temperature data can be found in Figure 4.5. A time series plot of temperature can be found in Appendix A.

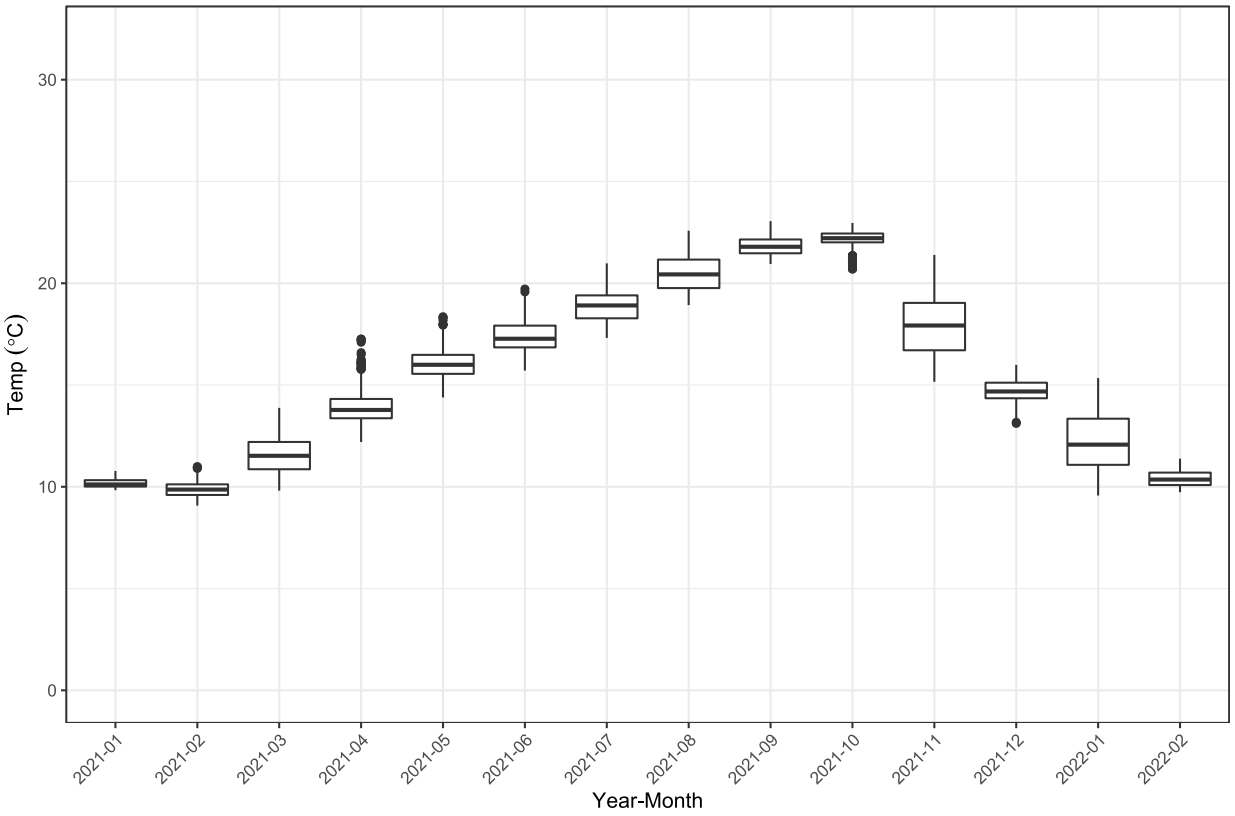

Figure 4.5 Monthly Water Temperature at the Above Powerhouse Site

4.1.1.5 Above Spillway Monitoring Site

Continuous monitoring was conducted at the Above Spillway Monitoring Site from February 3, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from May 21 through June 14. No exceedances of 32.2°C were recorded at the site during the study period. Monthly average, maximum, and minimum temperatures measured at the site can be found in Table 4.1. A boxplot of monthly temperature data can be found in Figure 4.6. A time series plot of temperature can be found in Appendix A.

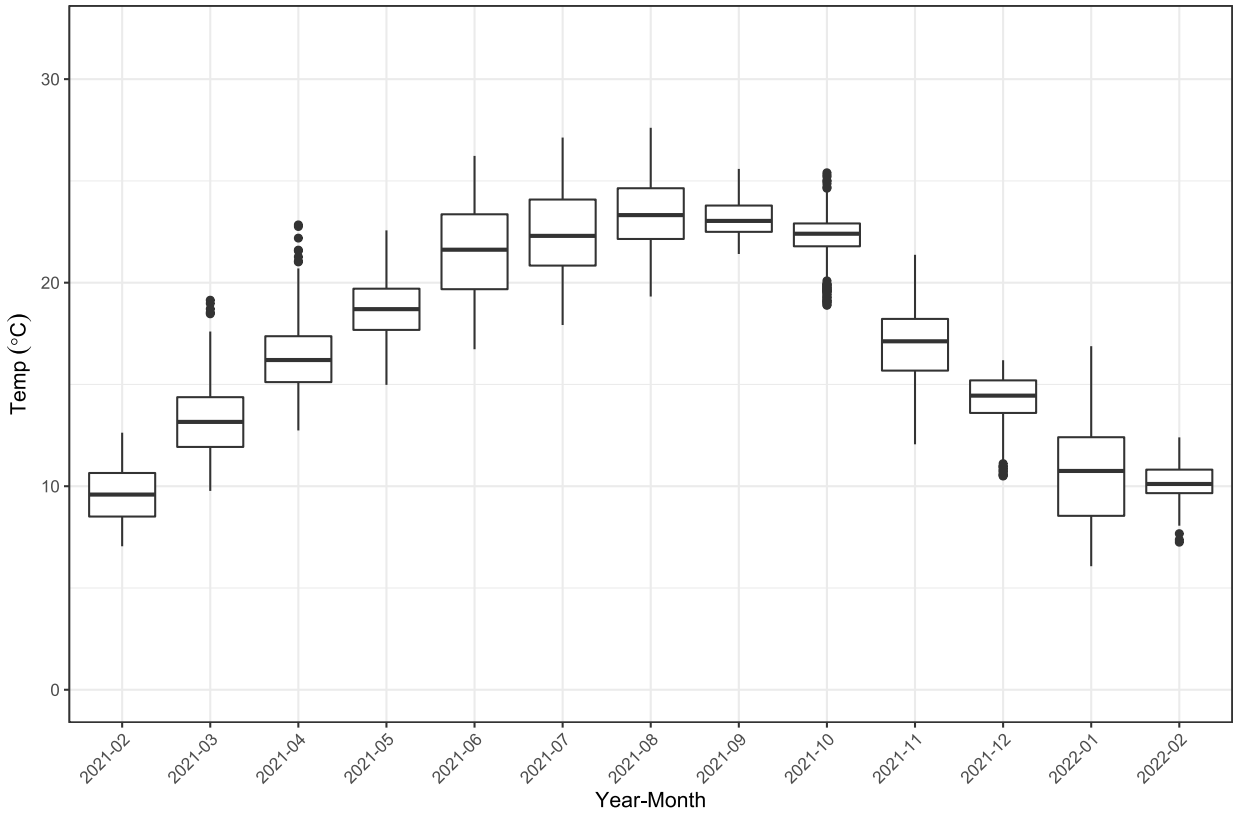

Figure 4.6 Monthly Water Temperature at the Above Spillway Site

4.1.1.6 Below Powerhouse Monitoring Site

Continuous monitoring was conducted at the Below Powerhouse Monitoring Site from January 29, 2021 through February 10, 2022. No data was recovered at the site from March 26 through June 14 due to equipment malfunction. No exceedances of 32.2°C were recorded during the study period. Monthly average, maximum, and minimum temperatures measured at the site can be found in Table 4.1. A boxplot of monthly temperature data can be found in Figure 4.7. A time series plot of temperature can be found in Appendix A.

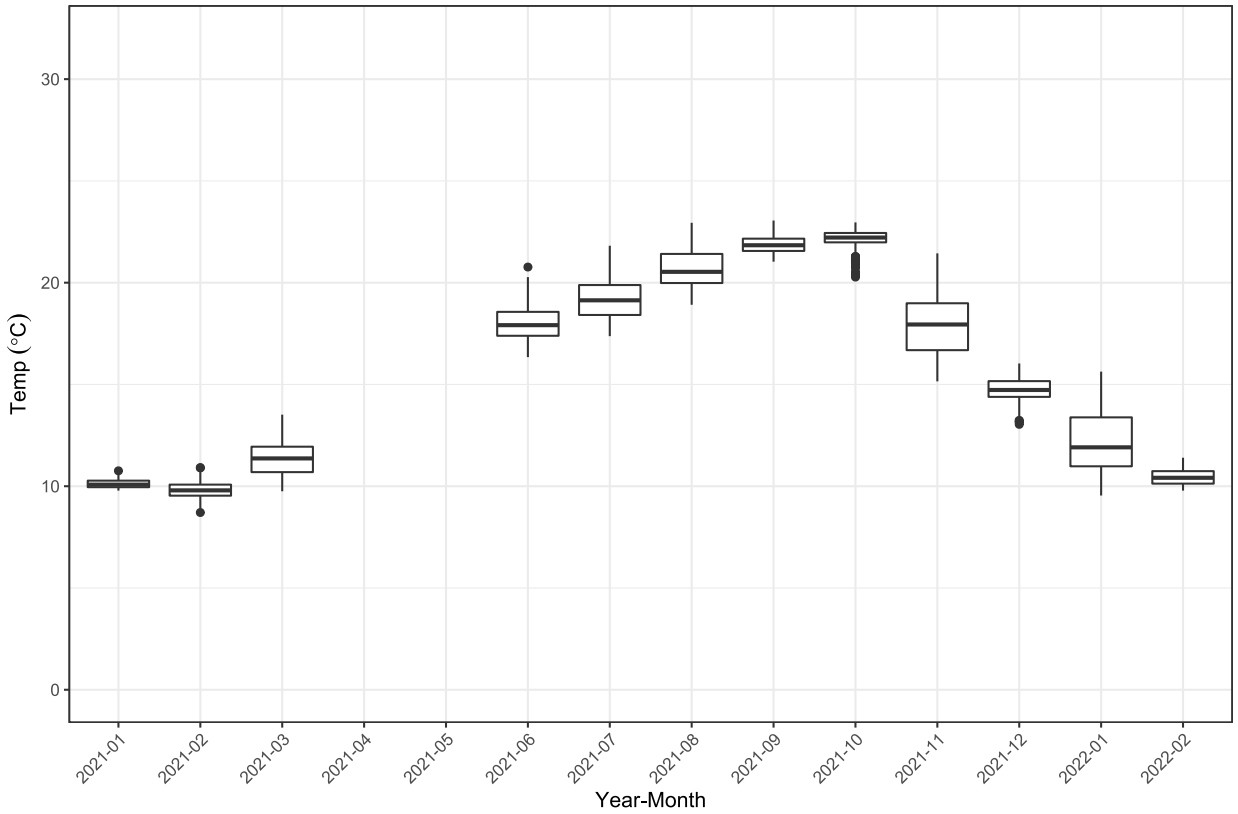

Figure 4.7 Monthly Water Temperature at the Below Powerhouse Site

4.1.1.7 Below Spillway Monitoring Site

Continuous monitoring was conducted at the Below Spillway Monitoring Site from January 29, 2021 through November 22, 2022. The sonde was lost after the November sampling event, likely due to high flows damaging the anchoring system. The loss was discovered at the attempted December sampling event and a replacement sonde was not able to be obtained for deployment prior to the scheduled conclusion of sampling. No exceedances of 32.2°C were recorded at the site during the study period. Monthly average, maximum, and minimum temperatures measured at the site can be found in Table 4.1. A boxplot of monthly temperature data can be found in Figure 4.8. A time series plot of temperature can be found in Appendix A.

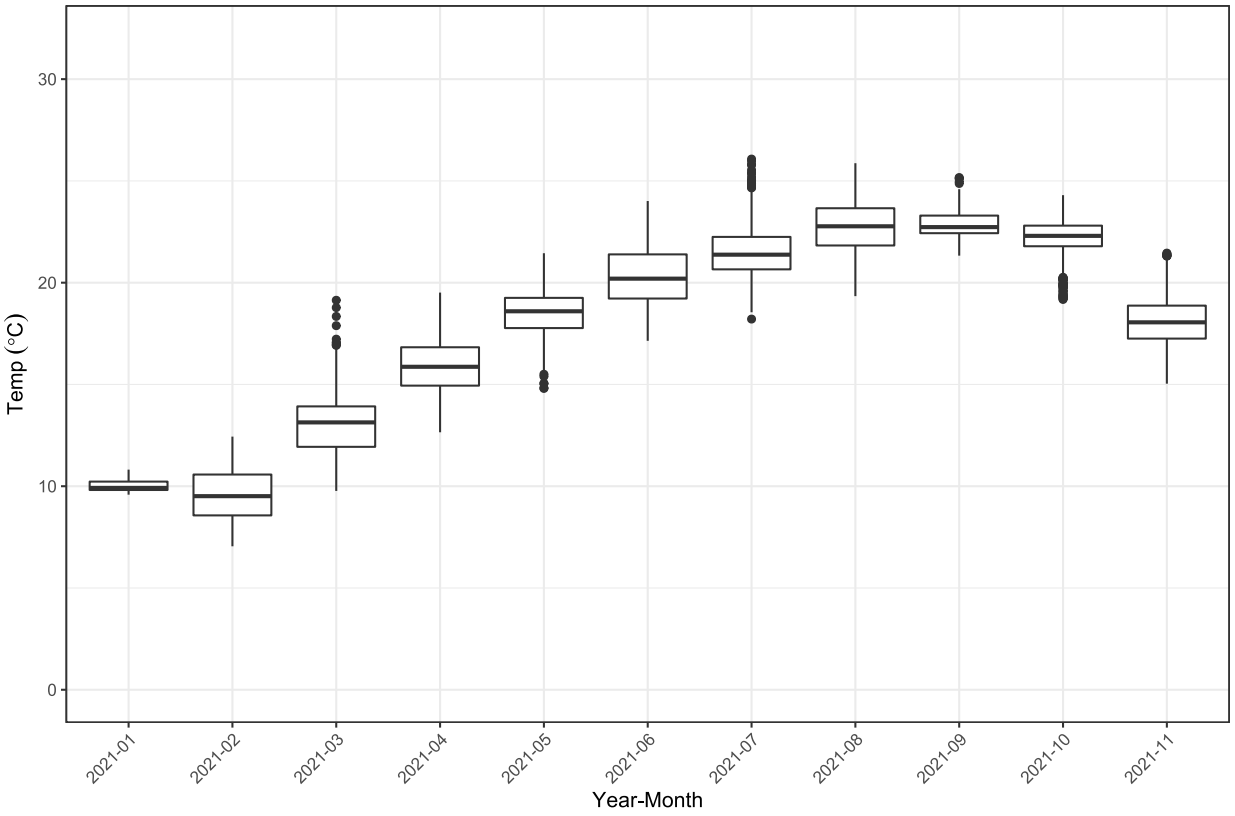

Figure 4.8 Monthly Water Temperature at the Below Spillway Site

4.1.2 USGS Data

Periodic water temperature data were collected at the USGS sampling sites 1-6 (Figure 4.109 – Figure 4.914). No exceedances of 32.2°C were recorded at any of the sites during the study period. Vertical profile data for temperature was filed with FERC as part of the Licensee's Article 404 and Article 405 requirements and is included in Appendix F.

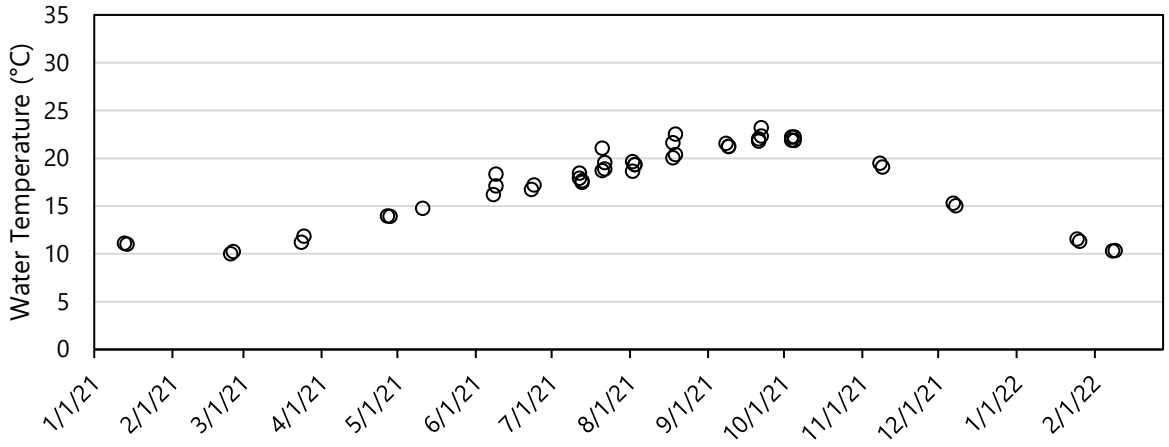

Figure 4.9 Periodic Water Temperature at USGS Site 6

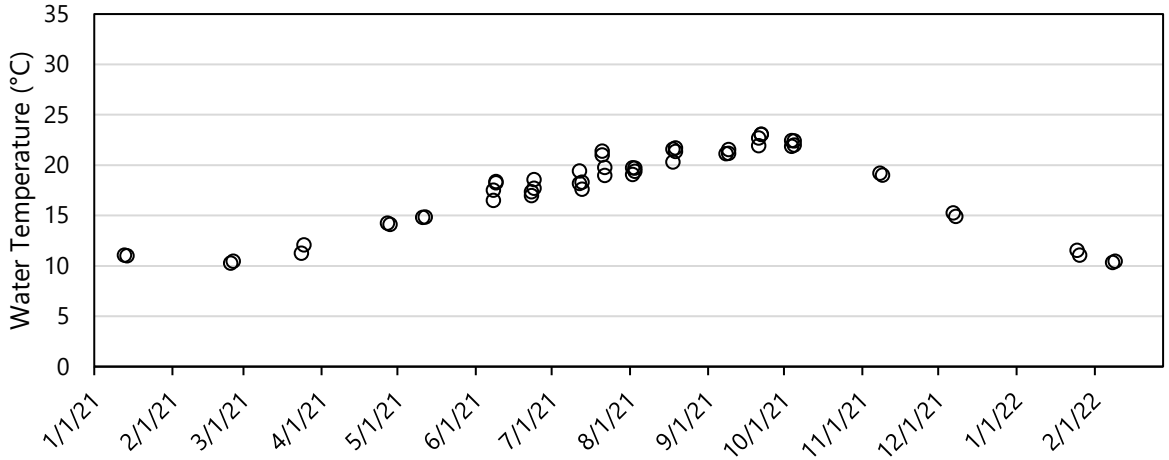

Figure 4.10 Periodic Water Temperature at USGS Site 1

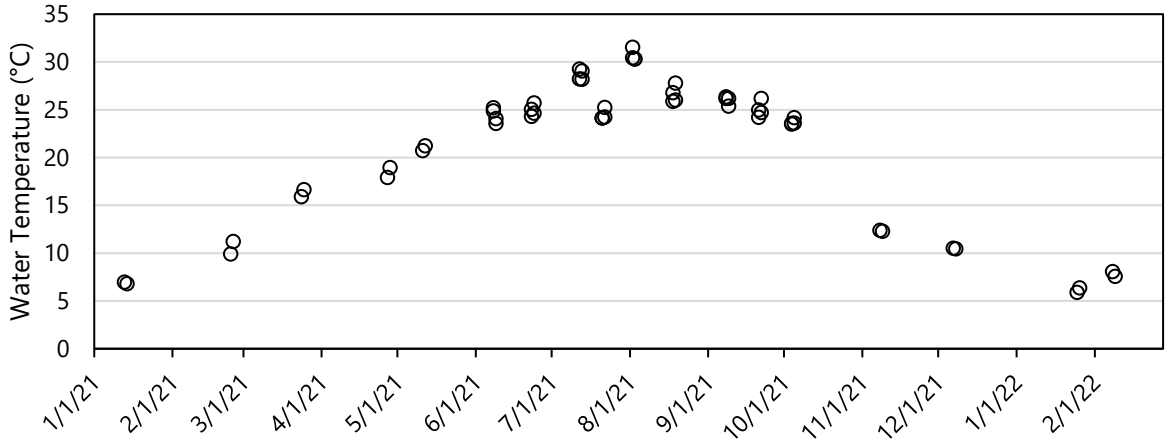

Figure 4.11 Periodic Water Temperature at USGS Site 5

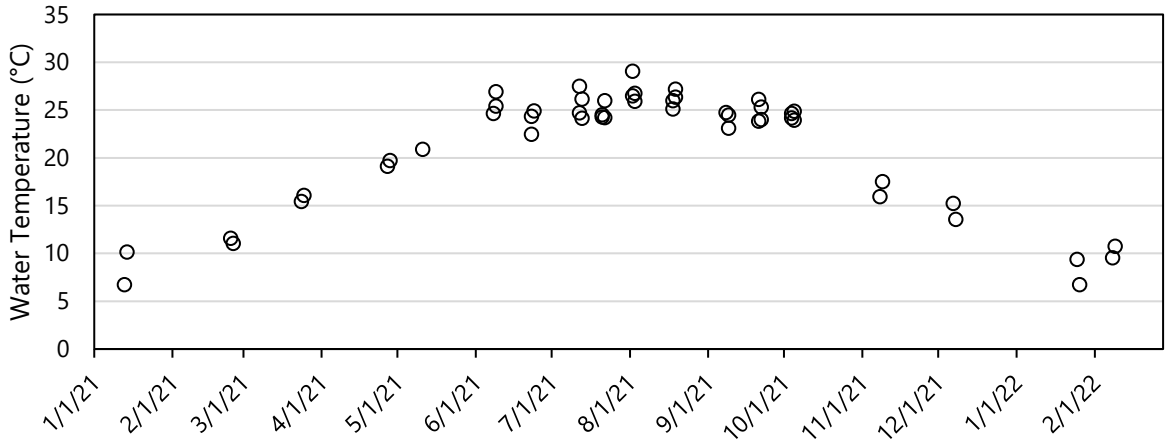

Figure 4.12 Periodic Water Temperature at USGS Site 4

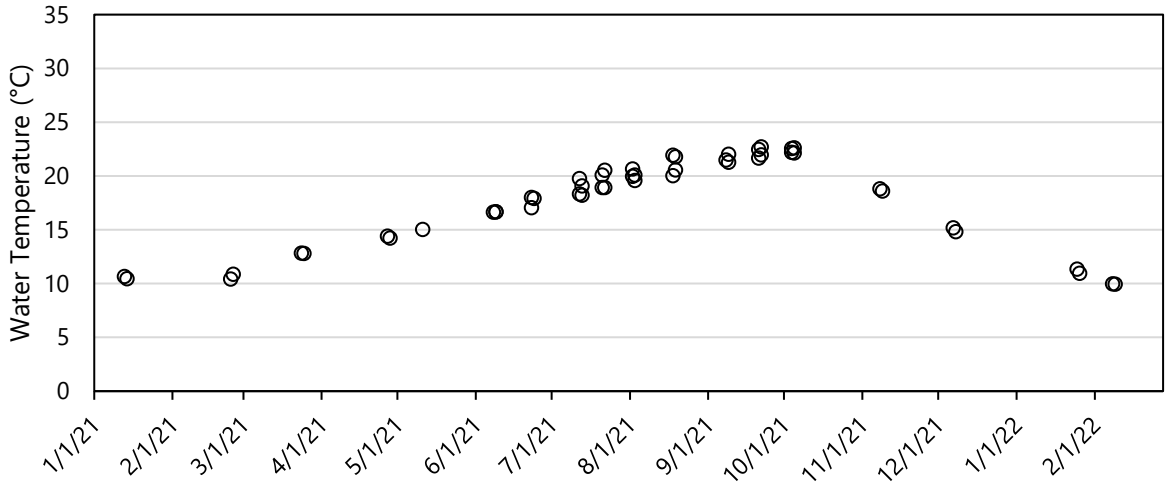

Figure 4.13 Periodic Water Temperature at USGS Site 2

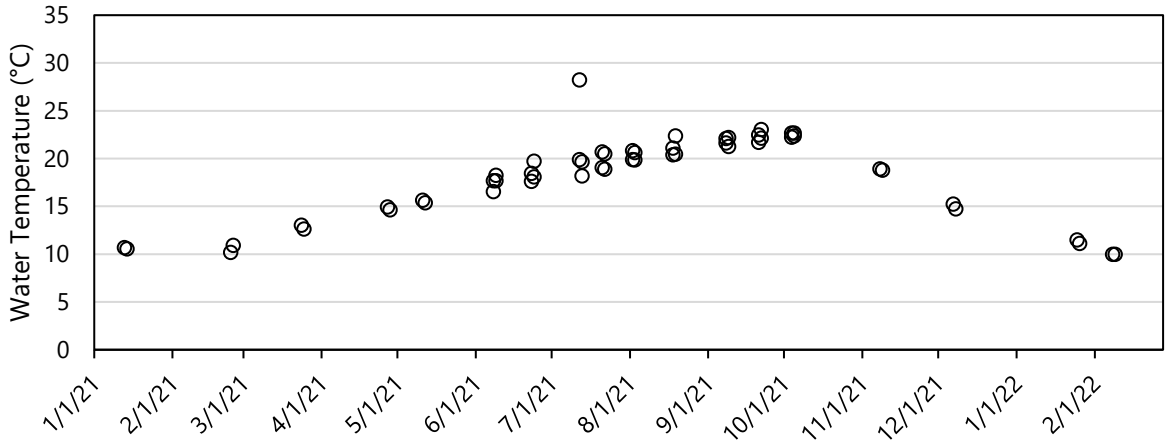

Figure 4.14 Periodic Water Temperature at USGS Site 3

4.2 Dissolved Oxygen

4.2.1 Continuous Monitoring Data

Table 4.3 provides a summary of dissolved oxygen measurements by month for each site. Sections that follow include results for individual sites.

Table 4.3 Monthly Dissolved Oxygen (mg/L) by Site – Average (Min - Max)

Month	Deep Step	Stevens Creek	Above Powerhouse	Above Spillway	Below Powerhouse	Below Spillway
2021-01		10.6 (9.3 - 11.5)	10.5 (10.2 - 10.7)	10.5 (8.7 - 12.1)	11.0 (10.8 - 11.2)	10.7 (9.3 - 11.3)
2021-02		8.7 (6.3 - 10.3)	10.7 (10.0 - 11.2)	9.5 (6.7 - 12.2)	11.3 (10.4 - 11.8)	11.0 (10.1 - 11.7)
2021-03		6.9 (5.1 - 8.6)	10.5 (9.2 - 11.1)	9.3 (6.1 - 12.0)	11.2 (9.6 - 11.8)	10.2 (8.7 - 11.4)
2021-04		5.5 (3.4 - 7.3)	9.8 (8.4 - 11.0)	8.0 (4.7 - 11.3)	---	9.5 (7.9 - 10.6)
2021-05		---	8.0 (6.6 - 9.5)	6.7 (3.6 - 9.8)	---	9.0 (7.2 - 9.8)
2021-06	8.5 (6.4 - 11.8)	4.1 (3.2 - 6.0)	7.0 (5.8 - 9.0)	6.1 (4.0 - 8.5)	7.3 (6.3 - 8.5)	8.6 (6.0 - 9.7)
2021-07	5.9 (4.8 - 9.1)	3.8 (2.5 - 5.9)	5.7 (4.7 - 7.4)	5.8 (3.6 - 7.8)	6.4 (5.1 - 7.8)	7.9 (4.9 - 9.2)
2021-08	5.3 (3.8 - 9.0)	4.3 (2.4 - 6.6)	4.9 (4.1 - 6.1)	5.4 (3.6 - 7.8)	5.7 (4.6 - 6.8)	7.4 (4.9 - 9.0)
2021-09	5.2 (4.2 - 6.7)	4.3 (2.3 - 7.1)	4.8 (3.9 - 5.8)	5.3 (0.4 - 7.9)	5.6 (4.8 - 6.4)	7.0 (5.0 - 8.7)
2021-10		7.2 (3.9 - 9.1)	4.8 (3.7 - 6.5)	8.4 (5.2 - 10.4)	5.9 (4.6 - 8.1)	8.1 (5.2 - 9.2)
2021-11		10.0 (8.2 - 12.2)	8.4 (5.9 - 9.4)	8.9 (7.1 - 11.0)	8.8 (6.5 - 9.7)	9.1 (6.7 - 10.2)
2021-12		12.3 (9.6 - 13.4)	9.1 (8.4 - 9.9)	9.8 (7.1 - 11.3)	9.7 (9.0 - 10.5)	
2022-01		12.1 (11.0 - 12.9)	10.2 (8.8 - 11.4)	10.2 (8.6 - 11.4)	10.7 (9.4 - 12.0)	
2022-02			11.1 (10.8 - 11.5)		11.6 (11.2 - 12.1)	

"---" = no data

4.2.1.1 USACE Thurmond Dam Tailrace

Continuous monitoring was conducted in the Thurmond Dam tailrace from January 1, 2021 through December 31, 2021. Equipment malfunction led to no data recovery at the site from August 17 through August 25. The USACE noted that flows to the sampling well were impacted by lower tailwater elevations at Thurmond Dam during Stevens Creek Dam maintenance work. There were 157 excursions, or 44 percent of monitored days, that below Thurmond Dam were below the daily average DO threshold of 5 mg/L during the study period. There were 9,251 instantaneous measurements, or 27 percent of instantaneous measurements, were below the instantaneous DO minimum of 4 mg/L. Instantaneous measurements below Thurmond Dam were taken at 15-minute intervals. Monthly average, maximum, and minimum DO measurements at the site can be found in Table 4.4. A summary of the low DO events is presented in Table 4.5. A boxplot of monthly DO data can be found in Figure 4.15. A time series plot of DO can be found in Appendix B.

Table 4.4 Monthly DO in Thurmond Dam Tailrace

Month	Monthly DO (mg/L) Average (Min – Max)
2021-01	9.8 (8.4 - 11.5)
2021-02	10.8 (9.1 - 11.9)
2021-03	10.2 (8.2 - 12.5)
2021-04	7.9 (6.0 - 9.5)
2021-05	4.5 (0.4 - 8.8)
2021-06	3.6 (0.4 - 7.3)
2021-07	4.0 (2.2 - 6.9)
2021-08*	3.2 (0.5 - 5.4)
2021-09	3.8 (1.9 - 9.1)
2021-10	4.0 (1.8 - 6.9)
2021-11	6.9 (4.4 - 8.6)
2021-12	7.9 (6.7 - 9.5)

*Data was not recorded at the site from August 17-25, 2021 due to equipment malfunction.

Table 4.5 Summary of 2021 Dissolved Oxygen Excursions in the Thurmond Dam Tailrace

Month	Number of Days Daily Average DO <5.0 mg/L	Events with DO <4.0 mg/L			
		Events	Minimum DO (mg/L)	Average DO (mg/L)	Average Duration (hours)
May	20	35	0.38	3.18	8.19
Jun	26	49	0.43	3.57	8.46
Jul	30	58	1.53	3.32	6.22
Aug	23	36	0.45	3.46	17.26
Sep	30	71	1.98	3.55	5.37
Oct	28	105	1.78	3.65	3.58

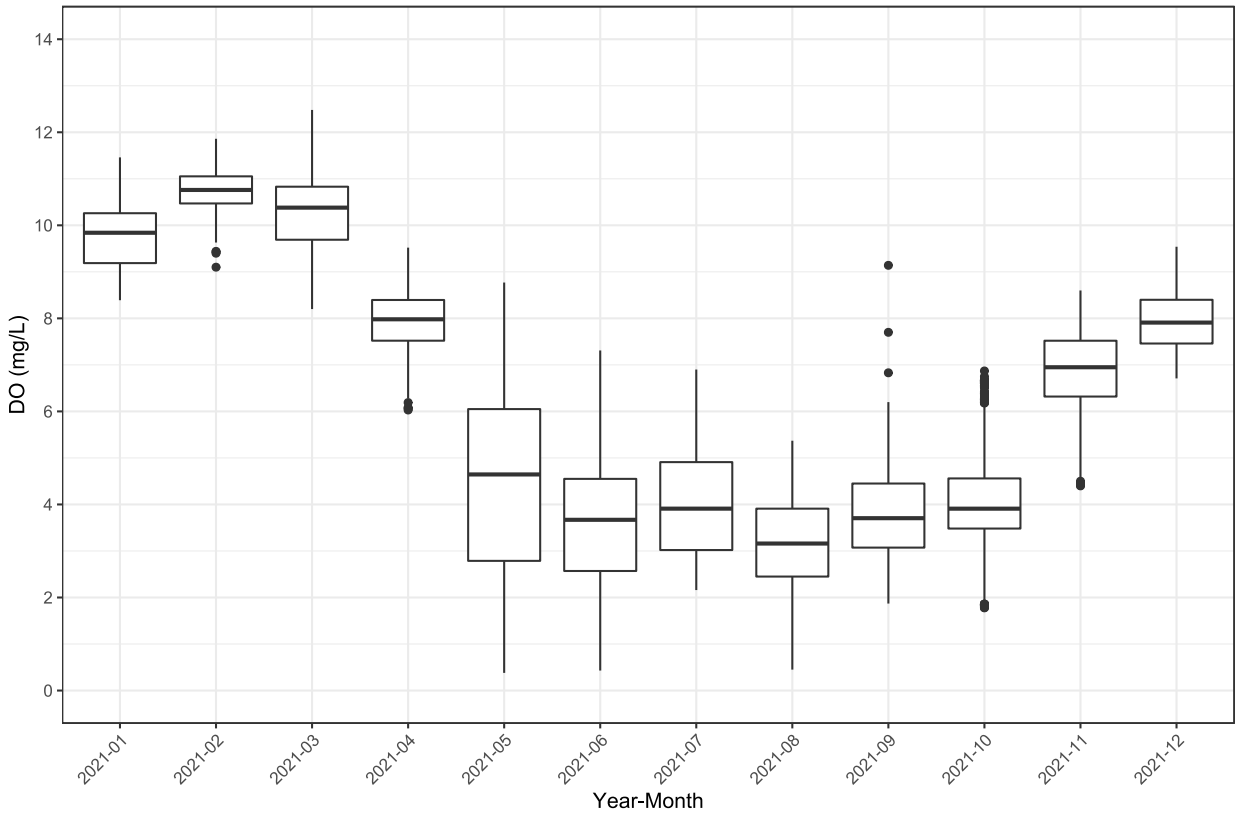

Figure 4.15 Monthly DO in Thurmond Dam Tailrace

4.2.1.2 Deep Step Monitoring Site – Periodic

Periodic monitoring was conducted at the Deep Step Monitoring Site from June 14, 2021 through October 29, 2022. There were three excursions, or 10 percent of monitored days,

that were below the daily average DO threshold of 5 mg/L during the study period, including 2 days in August and one in September. There were 14 instantaneous measurements, or 1 percent of instantaneous measurements, that were below the instantaneous DO minimum of 4 mg/L in August. Two of these events were single measurements of 3.98 mg/L on August 24 and 3.99 mg/L on August 26. One event on August 22 had a duration of 3 hours with average and minimum DO values of 3.97 mg/L and 3.96 mg/L. The other event on August 23 had a duration of 4 hours with average and minimum DO values of 3.86 mg/L and 3.79 mg/L. Monthly average, maximum, and minimum DO measurements at the site can be found in Table 4.3. A boxplot of monthly DO data can be found in Figure 4.16. A time series plot of DO can be found in Appendix B.

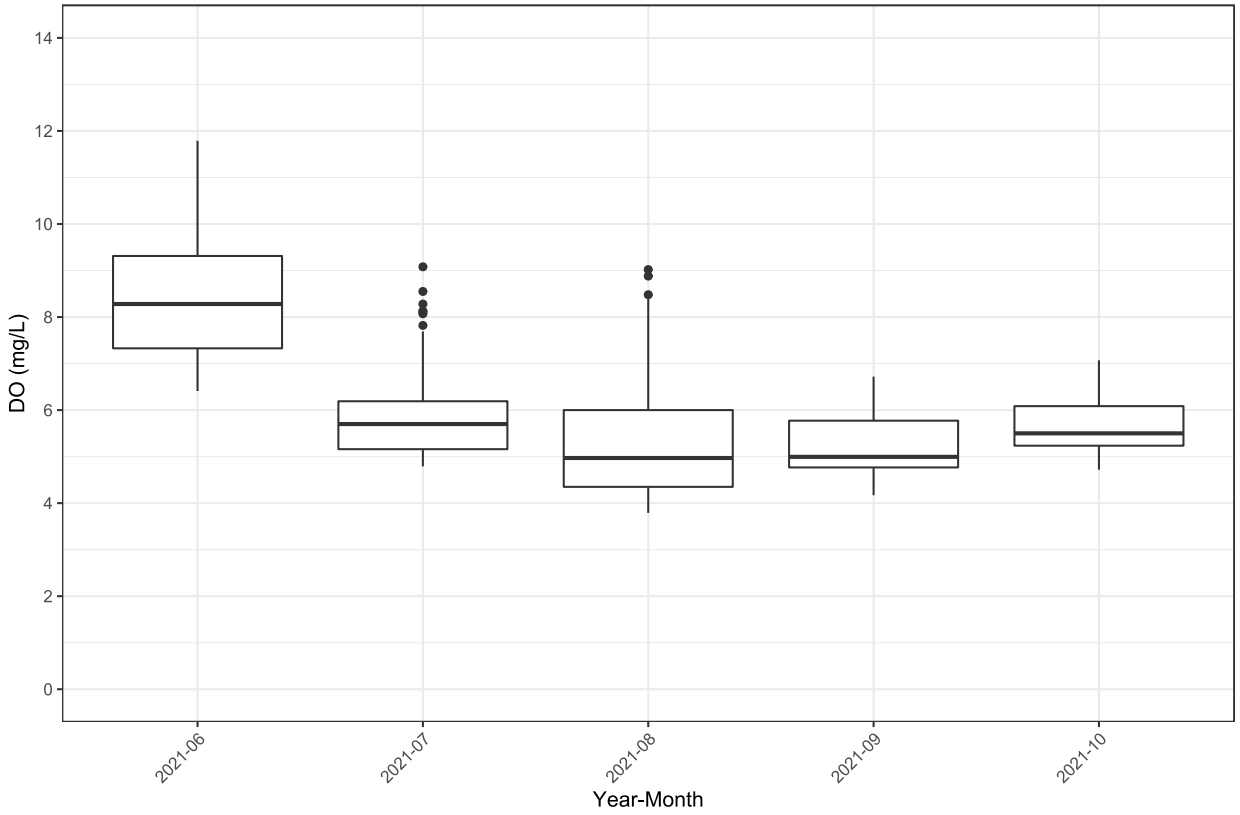

Figure 4.16 Monthly DO at the Deep Step Site

4.2.1.3 Stevens Creek Monitoring Site

Continuous monitoring was conducted at the Stevens Creek Monitoring Site from February 9, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from May 21 through July 26. There were 89 excursions within the recorded data set, or 29 percent of monitored days, that the Stevens Creek Site failed to reach the daily average DO threshold of 5 mg/L during the study period. There were 1,133

instantaneous measurements, or 15 percent of hourly measurements, that failed to reach the instantaneous DO minimum of 4 mg/L. Monthly average, maximum, and minimum DO measurements at the site can be found in Table 4.3. A summary of low DO events is presented in Table 4.6. A boxplot of monthly DO data can be found in Figure 4.17. A time series plot of DO can be found in Appendix B.

Table 4.6 Summary of 2021 Dissolved Oxygen Excursions at the Stevens Creek Monitoring Site

Month	Number of Days Daily Average DO <5.0 mg/L	Events with DO <4.0 mg/L			
		Events	Minimum DO (mg/L)	Average DO (mg/L)	Average Duration (hours)
May	7	3	3.42	3.87	0.67
Jun	N/A	N/A	N/A	N/A	N/A
Jul	6	8	2.80	3.71	8.50
Aug	28	21	2.40	3.47	26.24
Sep	21	9	2.79	3.74	15.89
Oct	26	24	2.32	3.70	12.58
Nov	2	2	3.96	3.96	0.00

N/A = Not Applicable

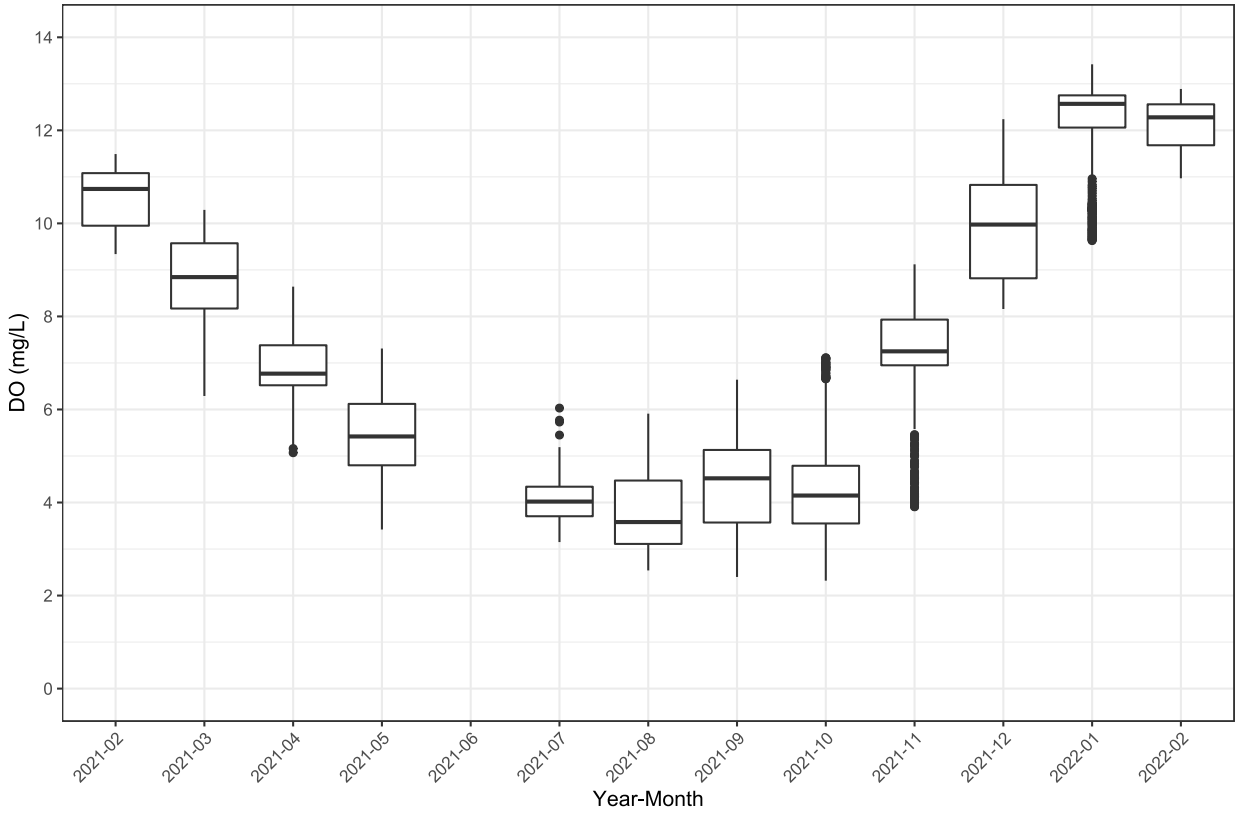

Figure 4.17 Monthly DO at the Stevens Creek Site

4.2.1.4 Above Powerhouse Monitoring Site

Continuous monitoring was conducted at the Above Powerhouse Monitoring Site from January 29, 2021 through February 10, 2022. There were 61 excursions (16 percent of monitored days) when the Above Powerhouse Site fell below the daily average DO threshold of 5 mg/L during the study period. All the daily average excursions were recorded from August through October. There were 19 instantaneous measurements, or 0.22 percent of hourly measurements, that fell below the DO minimum of 4 mg/L. Monthly average, maximum, and minimum DO measurements at the site can be found in Table 4.3. A summary of low DO events is presented in Table 4.7. A boxplot of monthly DO data can be found in Figure 4.18. A time series plot of DO can be found in Appendix B.

Table 4.7 Summary of 2021 Dissolved Oxygen Excursions at the Above Powerhouse Monitoring Site

Month	Number of Days Daily Average DO <5.0 mg/L	Events with DO <4.0 mg/L			
		Events	Minimum DO (mg/L)	Average DO (mg/L)	Average Duration (hours)
May	0	0	N/A	N/A	N/A
Jun	0	0	N/A	N/A	N/A
Jul	0	0	N/A	N/A	N/A
Aug	18	0	N/A	N/A	N/A
Sep	28	1	3.93	3.94	2.00
Oct	15	3	3.70	3.92	4.33

N/A = Not Applicable

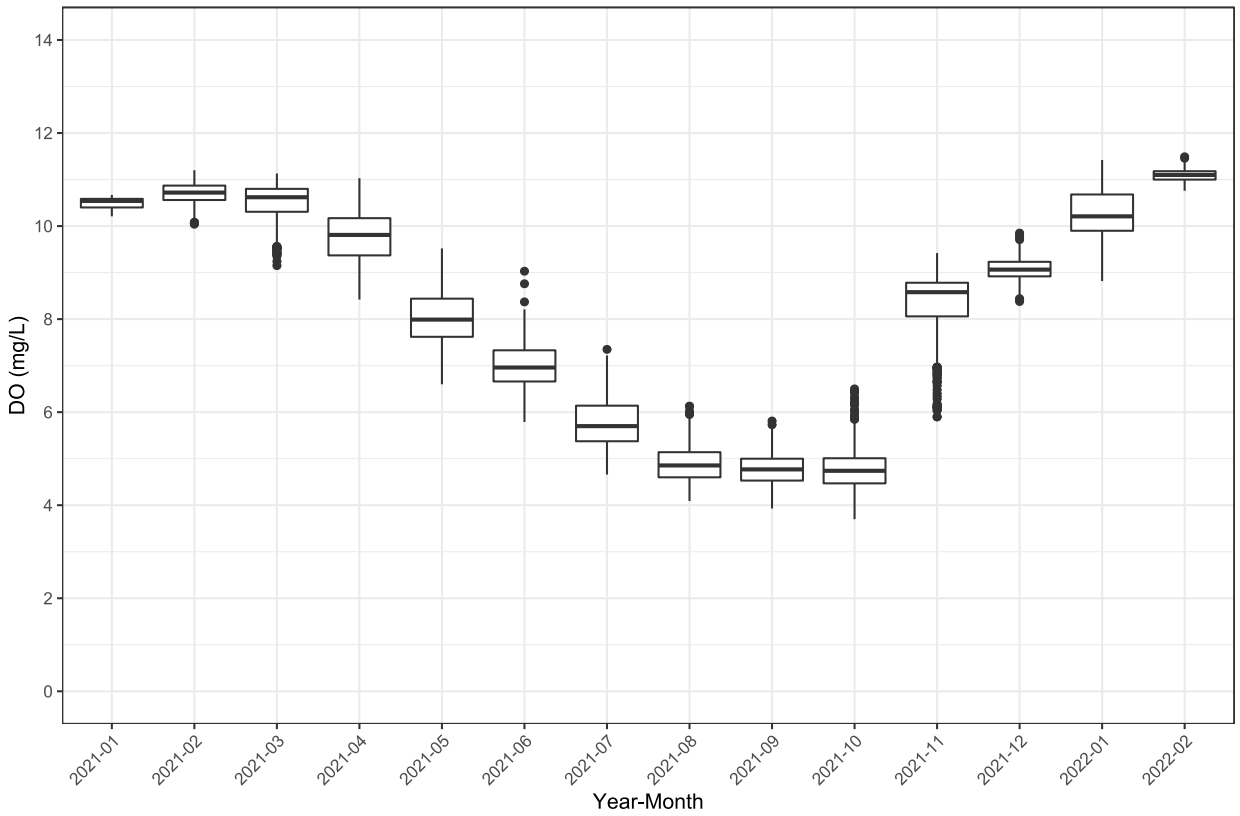

Figure 4.18 Monthly DO at the Above Powerhouse Site

4.2.1.5 Above Spillway Monitoring Site

Continuous monitoring was conducted at the Above Spillway Monitoring Site from February 3, 2021 through February 10, 2022. No data was recovered at the site from May 21 through June 14 due to equipment malfunction. There were 14 excursions within

the recorded data set, or 4 percent of monitored days, that the Above Spillway Site fell below the daily average DO threshold of 5 mg/L during the study period. All daily average excursions occurred from late July through October. There were 64 instantaneous measurements, or 0.77 percent of hourly measurements, that fell below the instantaneous DO minimum of 4 mg/L. Monthly average, maximum, and minimum DO measurements at the site can be found in Table 4.3. A summary of low DO events is presented in Table 4.8. A boxplot of monthly DO data can be found in Figure 4.19. A time series plot of DO can be found in Appendix B.

Table 4.8 Summary of Dissolved Oxygen Excursions at the Above Spillway Monitoring Site

Month	Number of Days Daily Average DO <5.0 mg/L	Events with DO <4.0 mg/L			
		Events	Minimum DO (mg/L)	Average DO (mg/L)	Average Duration (hours)
May	0	0	N/A	N/A	N/A
Jun	0	1	3.60	3.75	3.00
Jul	2	1	3.95	3.97	3.00
Aug	2	3	3.60	3.87	2.67
Sep	2	3	3.62	3.86	3.67
Oct	8	8	0.37	3.07	2.88

N/A = Not Applicable

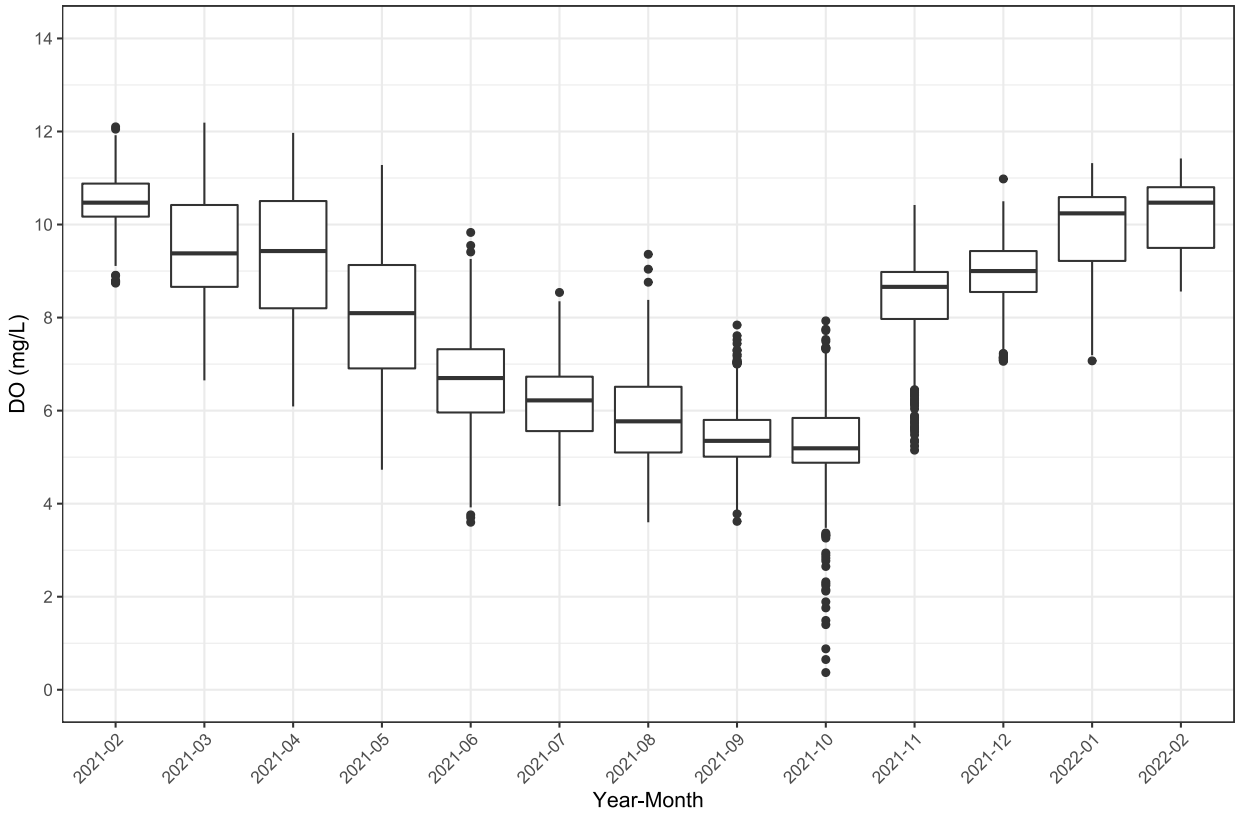

Figure 4.19 Monthly DO at the Above Spillway Site

4.2.1.6 Below Powerhouse Monitoring Site

Continuous monitoring was conducted at the Below Powerhouse Monitoring Site from January 29, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from March 26 through June 14. There were zero daily average or instantaneous DO excursions at the Below Powerhouse Site during the monitoring period. Monthly average, maximum, and minimum DO measurements at the site can be found in Table 4.3. A boxplot of monthly DO data can be found in Figure 4.20. A time series plot of DO can be found in Appendix B.

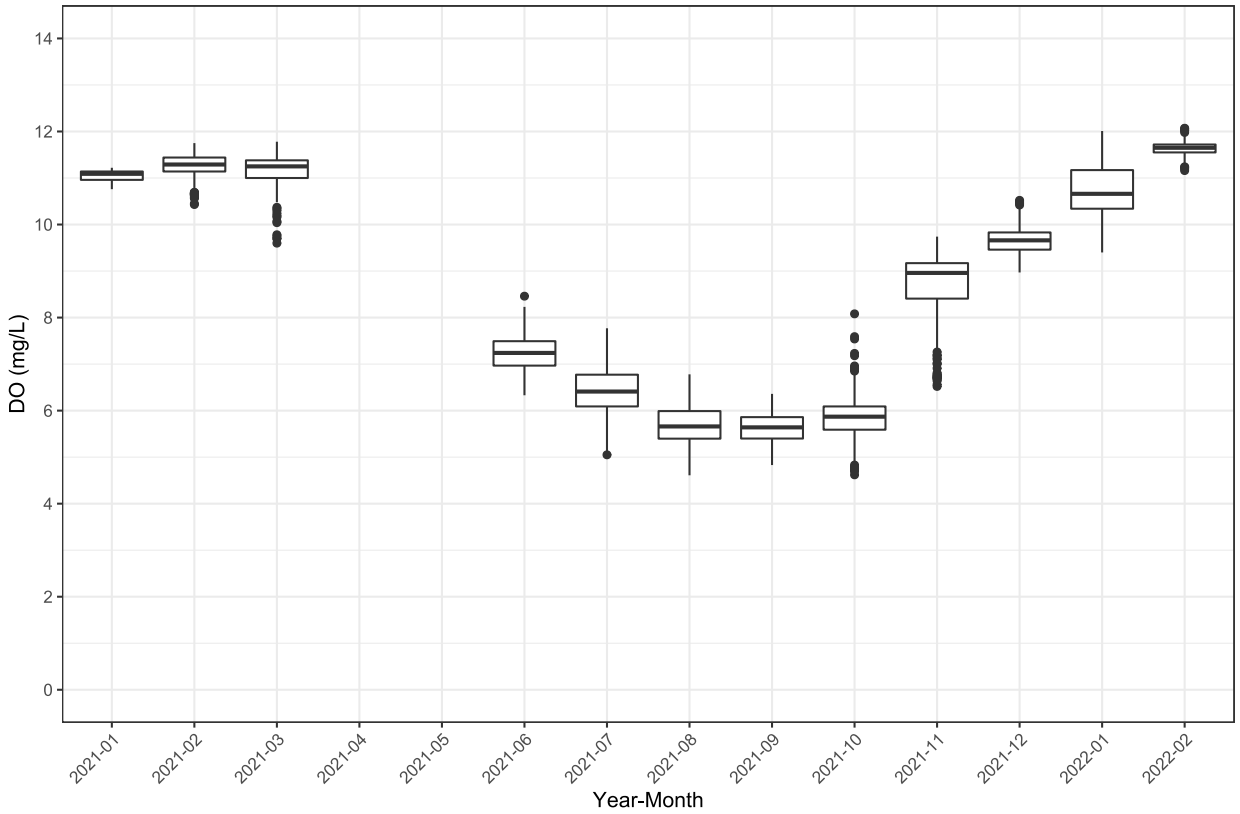

Figure 4.20 Monthly DO at the Below Powerhouse Site

4.2.1.7 Below Spillway Monitoring Site

Continuous monitoring was conducted at the Below Spillway Monitoring Site from January 29, 2021 through November 22, 2022. The sonde was lost after the November data retrieval event, likely due to high flows damaging the sonde anchoring system. The loss was discovered at the attempted December sampling event and a replacement sonde was not able to be obtained for deployment prior to the scheduled conclusion of sampling. There were zero daily average or instantaneous DO excursions recorded at the Below Spillway Site during the monitoring period. Monthly average, maximum, and minimum DO measured at the site can be found in Table 4.3. A boxplot of monthly DO data can be found in Figure 4.21. A time series plot of DO can be found in Appendix B.

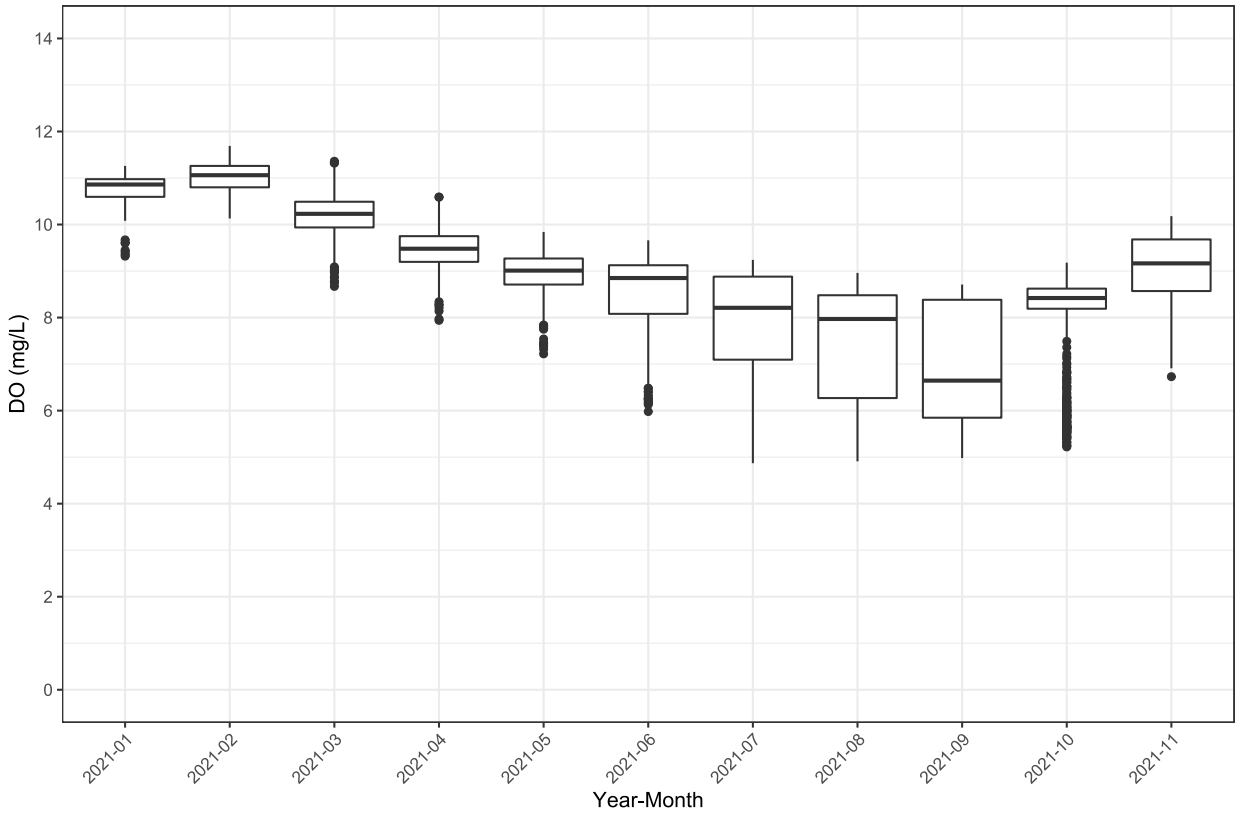

Figure 4.21 Monthly DO at the Below Spillway Site

4.2.2 USGS Data

Periodic DO data was collected at the USGS Sites 1-6 (Figure 4.232 – Figure 4.227). All sites except USGS Site 2 had instantaneous DO measurements that were at or below 4 mg/L. USGS Site 4 had several instances of DO levels below 4 mg/L, which occurred from August to October 2021 (Figure 4.25). Vertical profile data for dissolved oxygen was filed with FERC as part of the Licensee's requirement under Articles 404 and 405 and is included in Appendix F.

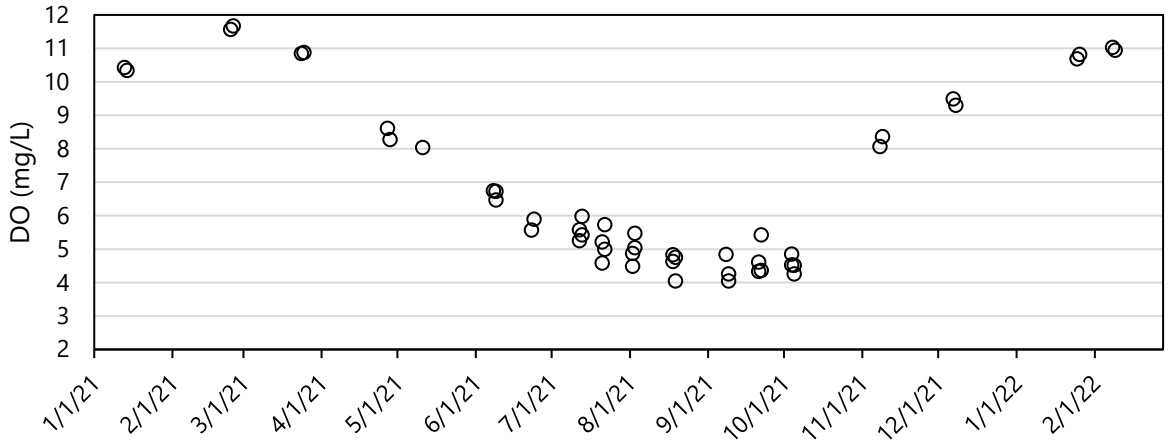

Figure 4.22 Periodic DO at USGS Site 6

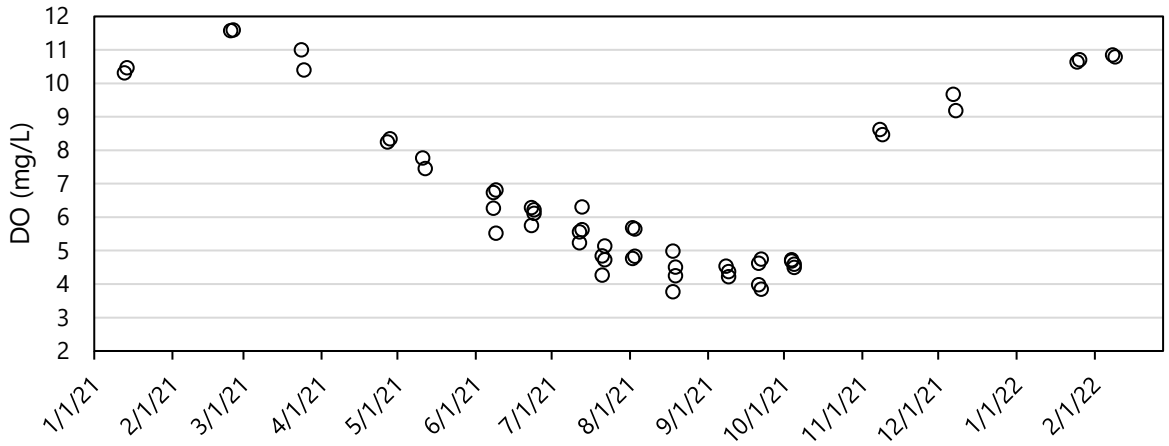

Figure 4.23 Periodic DO at USGS Site 1

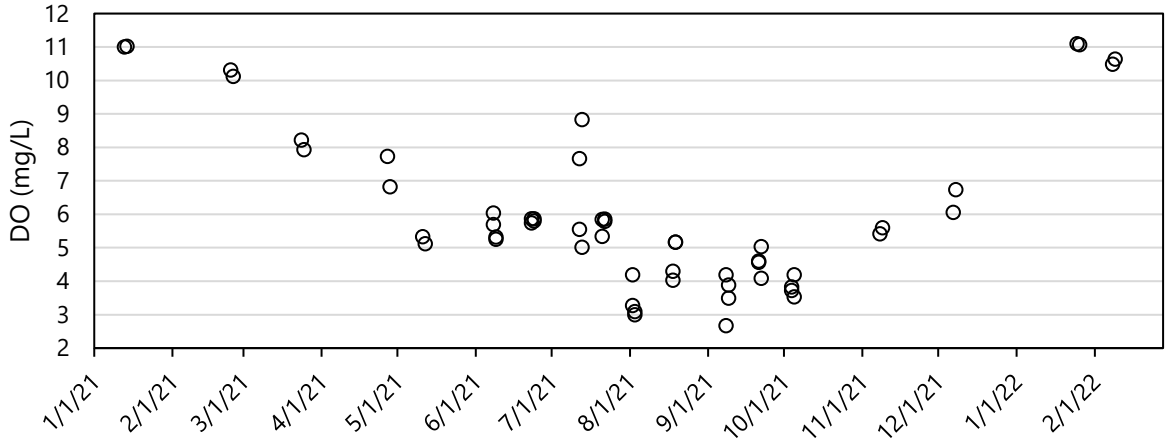

Figure 4.24 Periodic DO at USGS Site 5

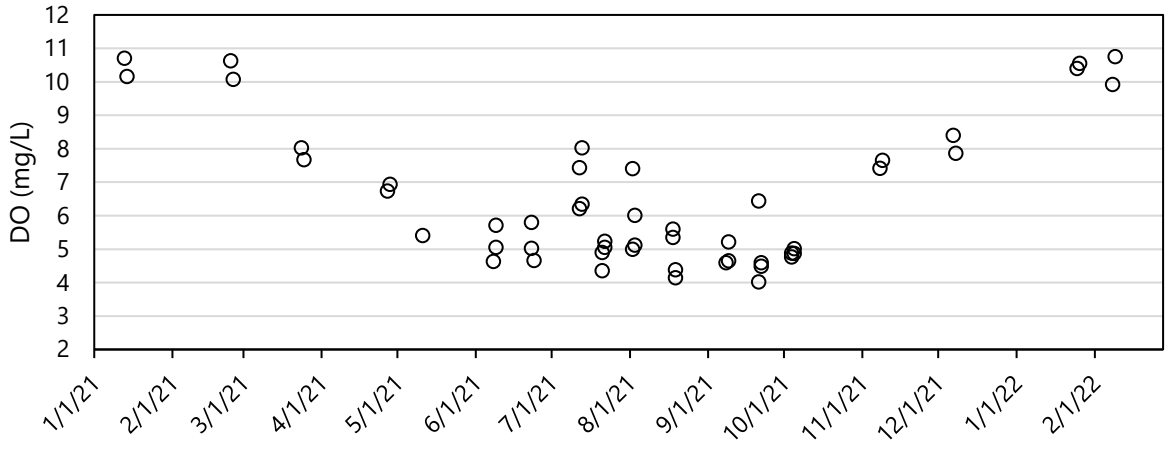

Figure 4.25 Periodic DO at USGS Site 4

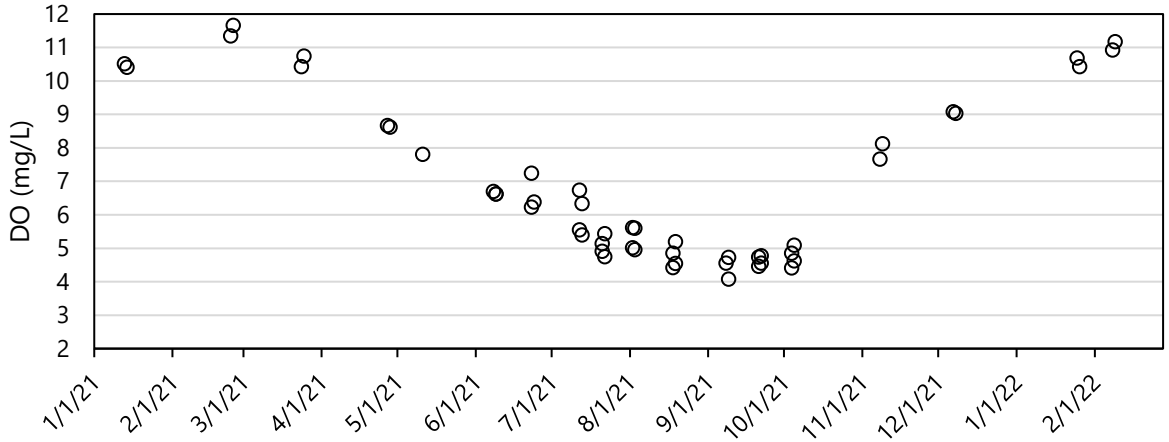

Figure 4.26 Periodic DO at USGS Site 2

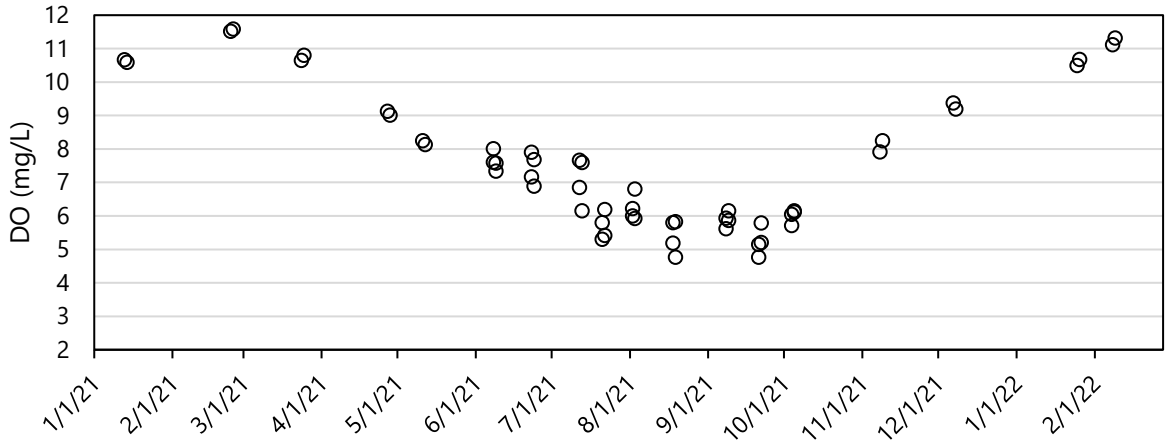

Figure 4.27 Periodic DO at USGS Site 3

4.3 Specific Conductance

4.3.1 Continuous Monitoring Data

Table 4.9 provides a summary of specific conductance measurements by month for each site. Sections that follow include results for individual sites.

Table 4.9 Monthly Specific Conductance (µS/cm) by Site – Average (Min - Max)

Month	Stevens Creek	Above Powerhouse	Above Spillway	Below Powerhouse	Below Spillway
2021-01	62 (20 - 93)	44.6 (43.6 - 47.0)	52 (37 - 90)	44.9 (43.9 - 47.1)	58 (44 - 91)
2021-02	77 (20 - 112)	44.8 (43.1 - 48.8)	58 (36 - 101)	45.1 (43.3 - 68.7)	52 (37 - 92)
2021-03	101 (47 - 131)	44.3 (42.8 - 75.7)	58 (43 - 113)	44.8 (31.1 - 74.9)	55 (36 - 98)
2021-04	102 (82 - 109)	45.0 (43.7 - 48.6)	60 (43 - 95)	---	53 (44 - 104)
2021-05	---	43.9 (42.3 - 48.6)	55 (41 - 89)	---	52 (43 – 87)
2021-06	77 (70 - 88)	43.1 (41.1 - 48.6)	51 (41 - 82)	44.4 (42.5 - 49.5)	50 (41 - 80)
2021-07	82 (46 - 96)	44.8 (43.2 - 49.2)	51 (44 – 79)	45.5 (43.5 - 53.8)	48 (43 - 80)
2021-08	83 (44 - 100)	47.0 (45.8 - 50.6)	52 (44 - 79)	47.4 (45.9 - 53.2)	49 (45 - 69)
2021-09	83 (34 - 105)	48.1 (46.0 - 51.8)	49 (43 - 98)	48.4 (46.9 - 55.1)	50 (44 -76)
2021-10	108 (96 - 121)	47.9 (46.0 - 51.8)	50 (46 - 83)	48.0 (46.9 - 55.1)	49 (44 - 93)
2021-11	107 (62 - 124)	48.7 (47.9 - 50.2)	56 (45 - 109)	47.6 (46.7 - 51.5)	49 (47 - 61)
2021-12	79 (55 - 103)	48.0 (43.9 - 52.5)	58 (45 - 99)	47.1 (45.2 - 54.4)	
2022-01	79 (57 - 116)	48.1 (46.5 - 52.6)	58 (46 -107)	47.4 (45.3 - 63.3)	
2022-02		47.6 (46.7 - 49.8)		46.8 (45.7 - 60.6)	

"---" = no data

4.3.1.1 USACE Thurmond Dam Tailrace

Continuous monitoring was conducted by USACE in the Thurmond Dam tailrace from January 1, 2021 through December 31, 2021. Equipment malfunction led to no data recovery at the site from August 17 through August 25. The USACE noted that flows to the sampling well were impacted by lower tailwater elevations at Thurmond Dam during Stevens Creek Dam maintenance work. Monthly average, maximum, and minimum specific conductance measurements at the site can be found in Table 4.10. A boxplot of monthly specific conductance data can be found in Figure 4.28. A time series plot of specific conductance can be found in Appendix C.

Table 4.10 Monthly Specific Conductance at Thurmond Dam Tailrace

Month	Monthly Specific Conductance (µS/cm) Average (Min – Max)
2021-01	42 (41 – 43)
2021-02	42 (0 – 43)
2021-03	42 (41 – 43)
2021-04	43 (42 – 49)
2021-05	44 (42 – 49)
2021-06	44 (39 – 55)
2021-07	43 (41 – 48)
2021-08*	46 (44 – 50)
2021-09	46 (0 – 49)
2021-10	47 (45 – 49)
2021-11	48 (47 – 49)
2021-12	46 (45 – 49)

*Data was not recorded at the site from August 17-25, 2021 due to equipment malfunction.

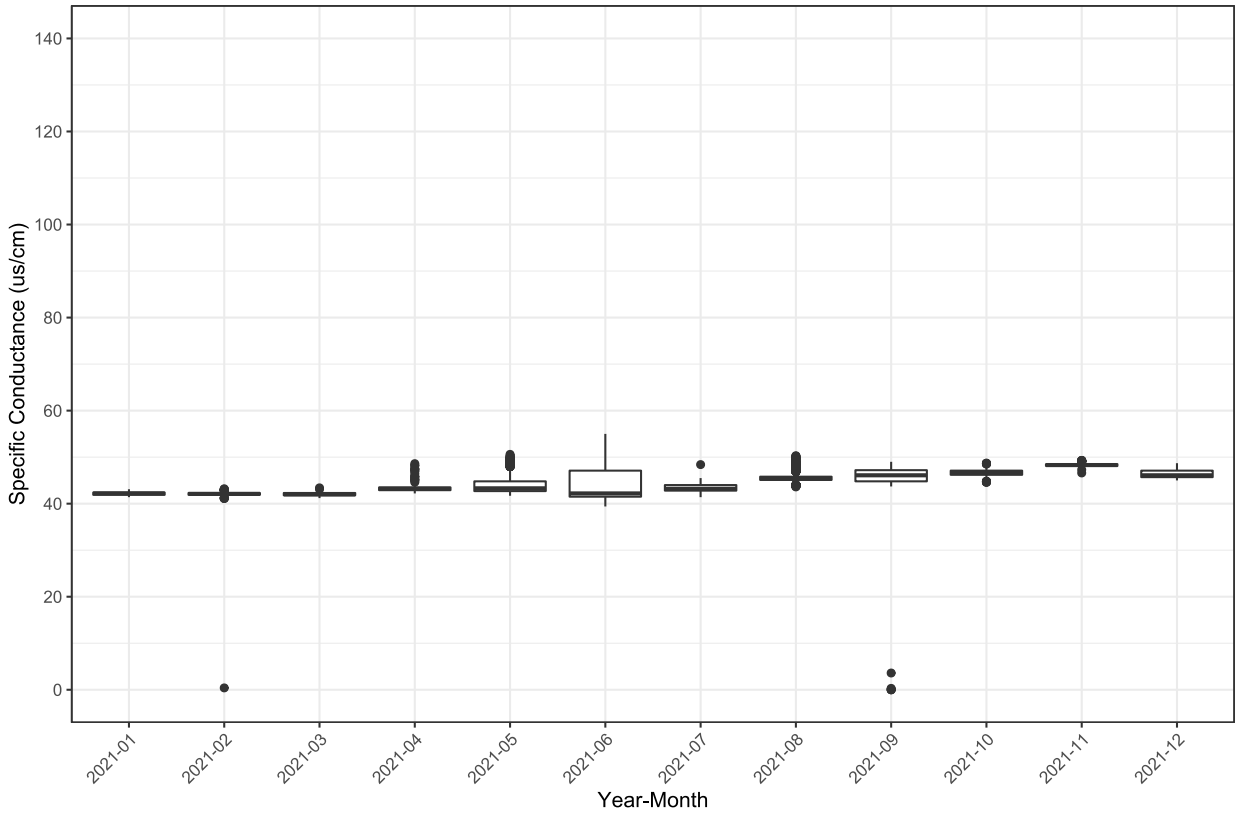

Figure 4.28 Monthly Specific Conductance at Thurmond Dam Tailrace

4.3.1.2 Stevens Creek Monitoring Site

Continuous monitoring was conducted at the Stevens Creek Monitoring Site from February 9, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from May 21 through July 26. Monthly average, maximum, and minimum specific conductance measurements at the site can be found in Table 4.9. A boxplot of monthly specific conductance data can be found in Figure 4.29. A time series plot of specific conductance can be found in Appendix C.

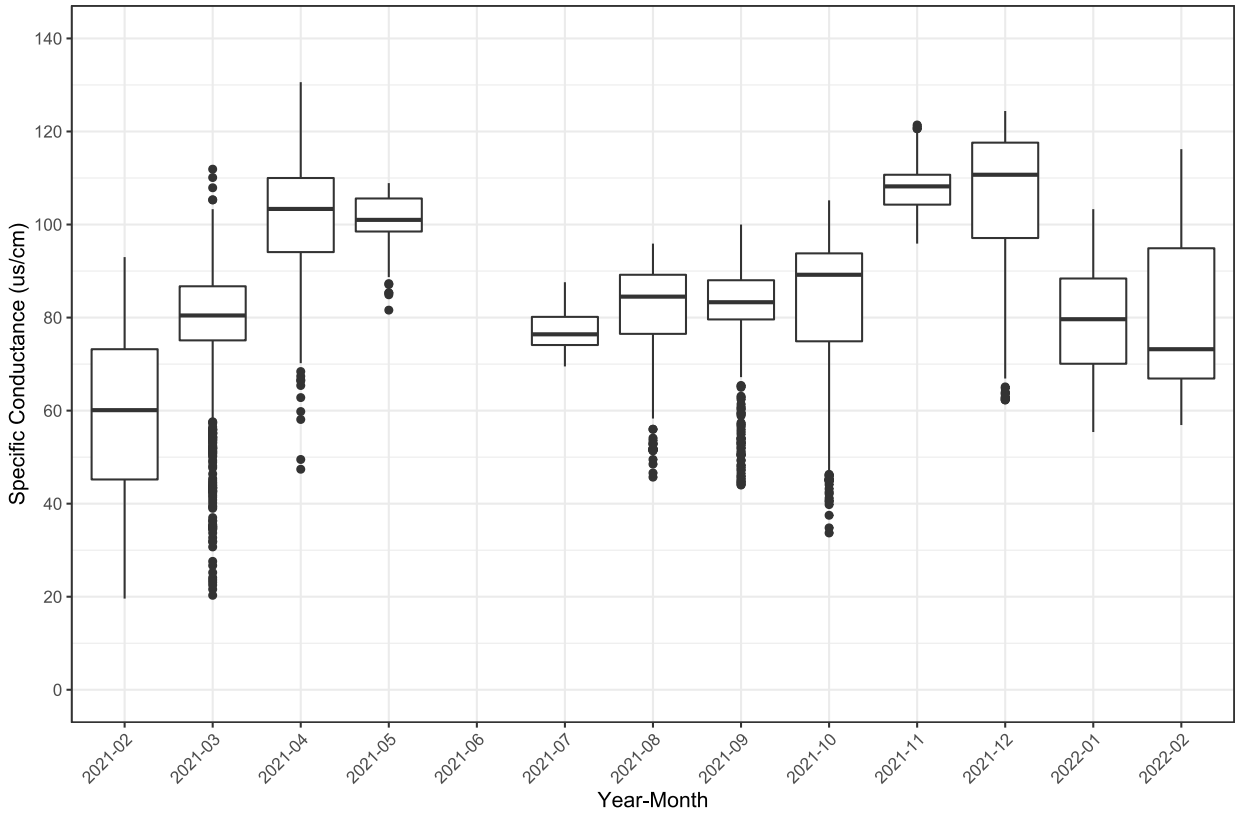

Figure 4.29 Monthly Specific Conductance at the Stevens Creek Site

4.3.1.3 Above Powerhouse Monitoring Site

Continuous monitoring was conducted at the Above Powerhouse Monitoring Site from January 29, 2021 through February 10, 2022. Monthly average, maximum, and minimum specific conductance measurements at the site can be found in Table 4.9. A boxplot of monthly specific conductance data can be found in Figure 4.30. A time series plot of specific conductance can be found in Appendix C.

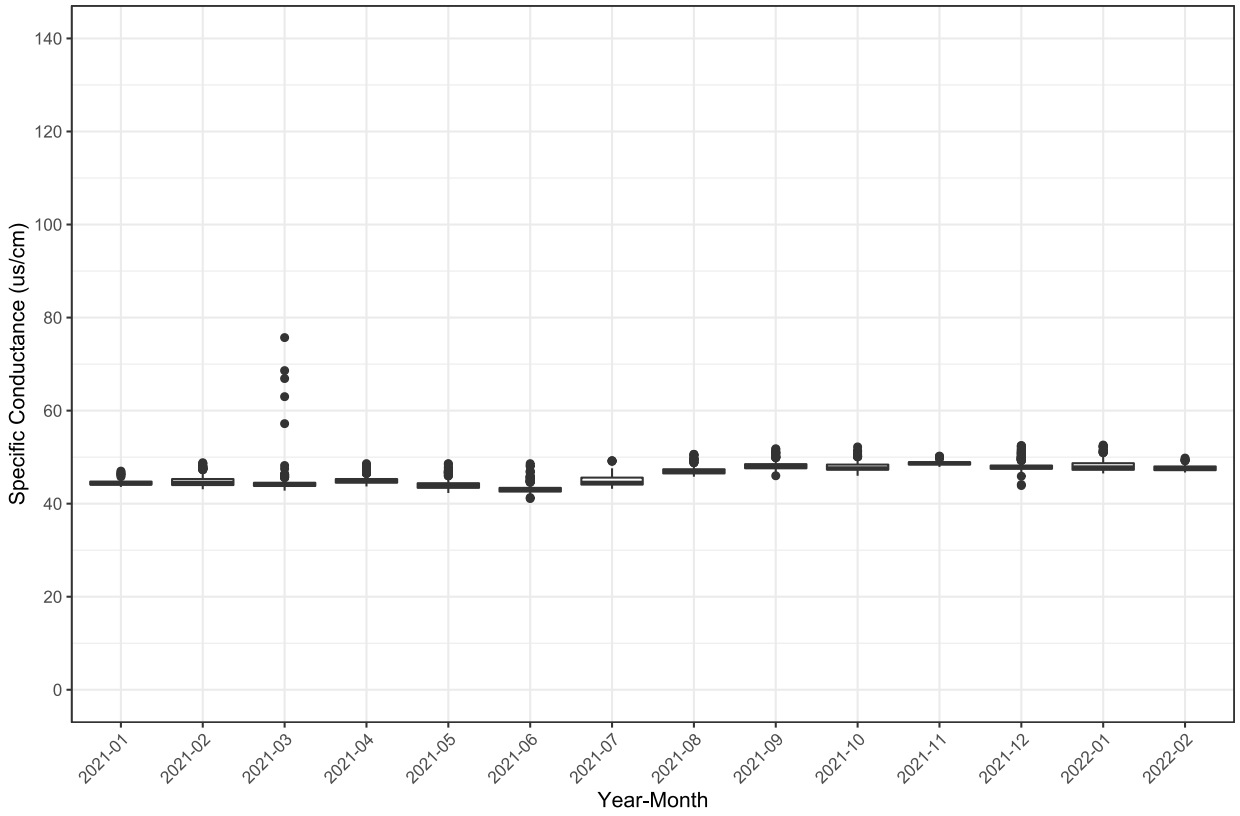

Figure 4.30 Monthly Specific Conductance at the Above Powerhouse Site

4.3.1.4 Above Spillway Monitoring Site

Continuous monitoring was conducted at the Above Spillway Monitoring Site from February 3, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from May 21 through June 14. Monthly average, maximum, and minimum specific conductance measurements at the site can be found in Table 4.9. A boxplot of monthly specific conductance data can be found in Figure 4.31. A time series plot of specific conductance can be found in Appendix C.

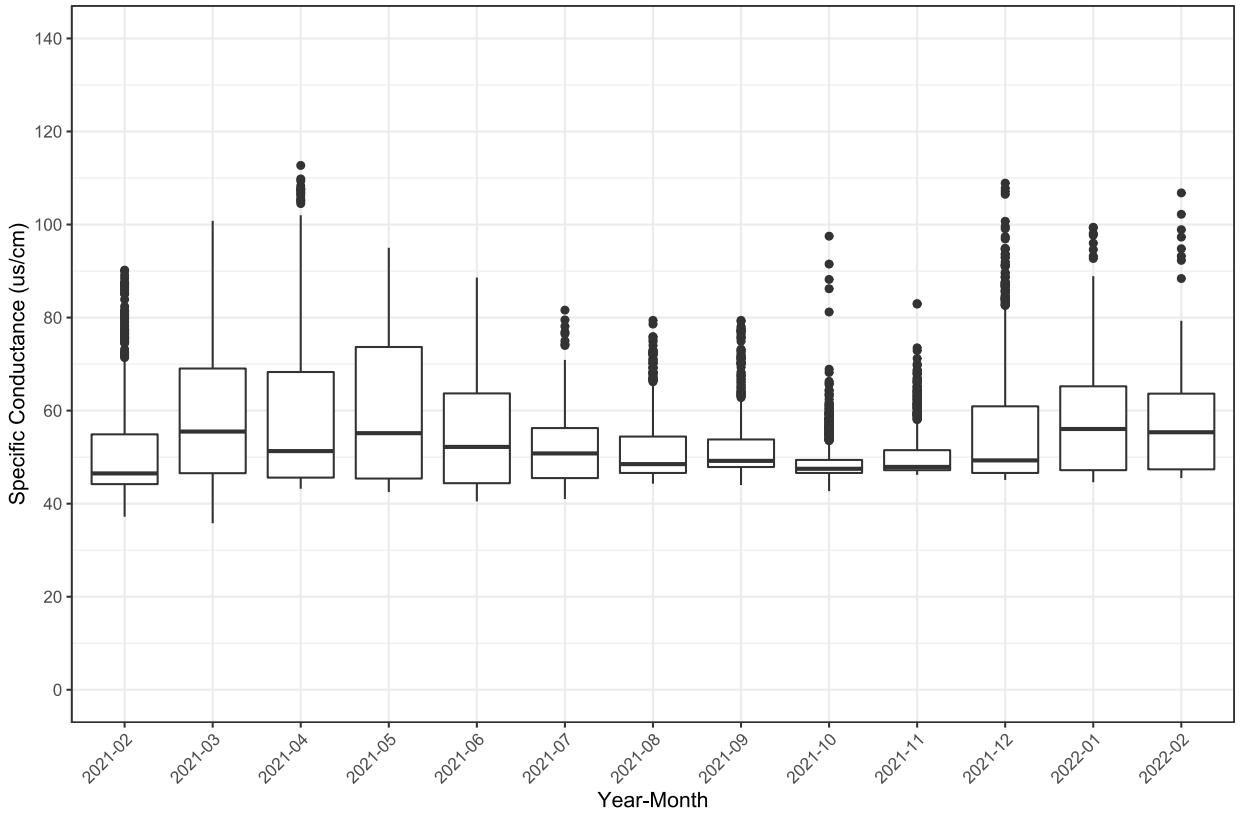

Figure 4.31 Monthly Specific Conductance at the Above Spillway Site

4.3.1.5 Below Powerhouse Monitoring Site

Continuous monitoring was conducted at the Below Powerhouse Monitoring Site from January 29, 2021 through February 10, 2022. No data was recovered at the site from March 26 through June 14 due to equipment malfunction. Monthly average, maximum, and minimum specific conductance measurements at the site can be found in Table 4.9. A boxplot of monthly specific conductance data can be found in Figure 4.32. A time series plot of specific conductance can be found in Appendix C.

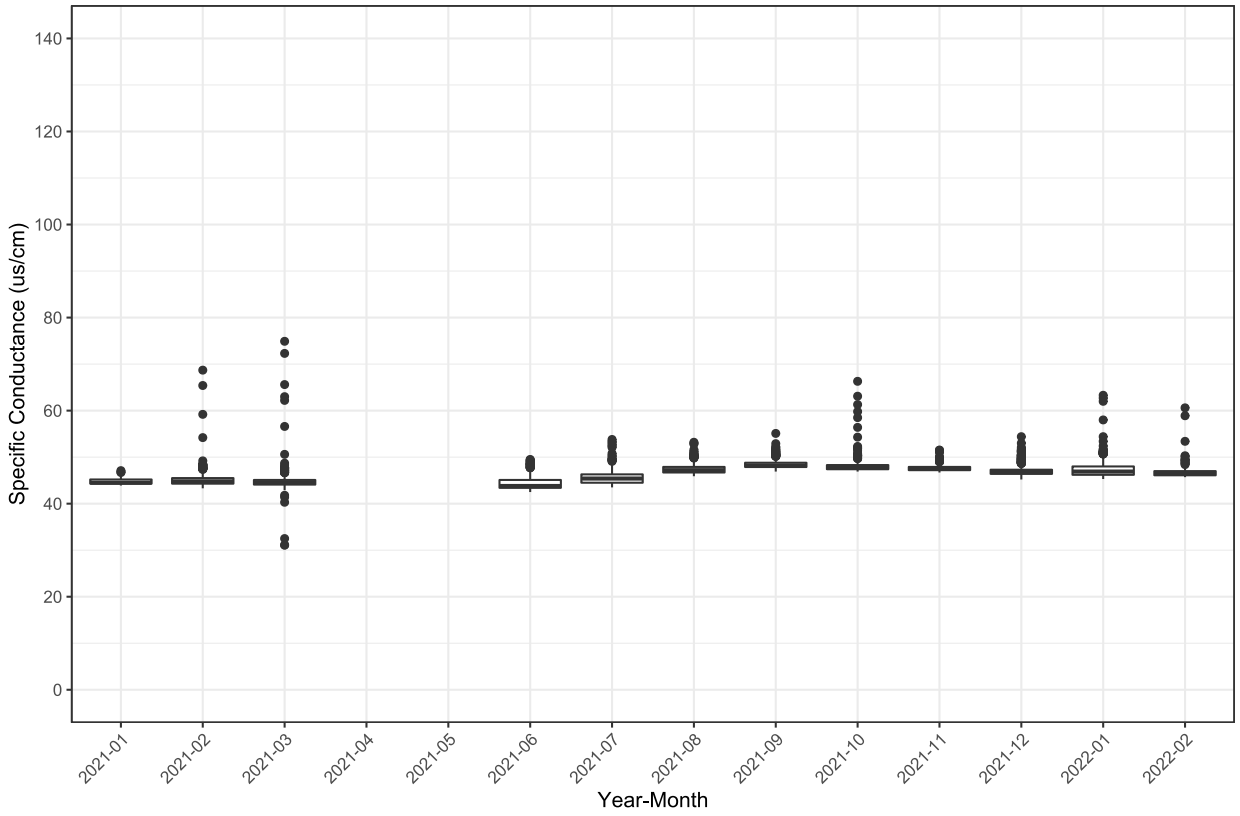

Figure 4.32 Monthly Specific Conductance at the Below Powerhouse Site

4.3.1.6 Below Spillway Monitoring Site

Continuous monitoring was conducted at the Below Spillway Monitoring Site from January 29, 2021 through November 22, 2022. The sonde was lost sometime during December, likely due to high flows damaging the sonde anchoring system. The loss was discovered at the attempted December sampling event and a replacement sonde was not able to be obtained for deployment prior to the scheduled conclusion of sampling. Monthly average, maximum, and minimum specific conductance measurements at the site can be found in Table 4.9. A boxplot of monthly specific conductance data can be found in Figure 4.33. A time series plot of specific conductance can be found in Appendix C.

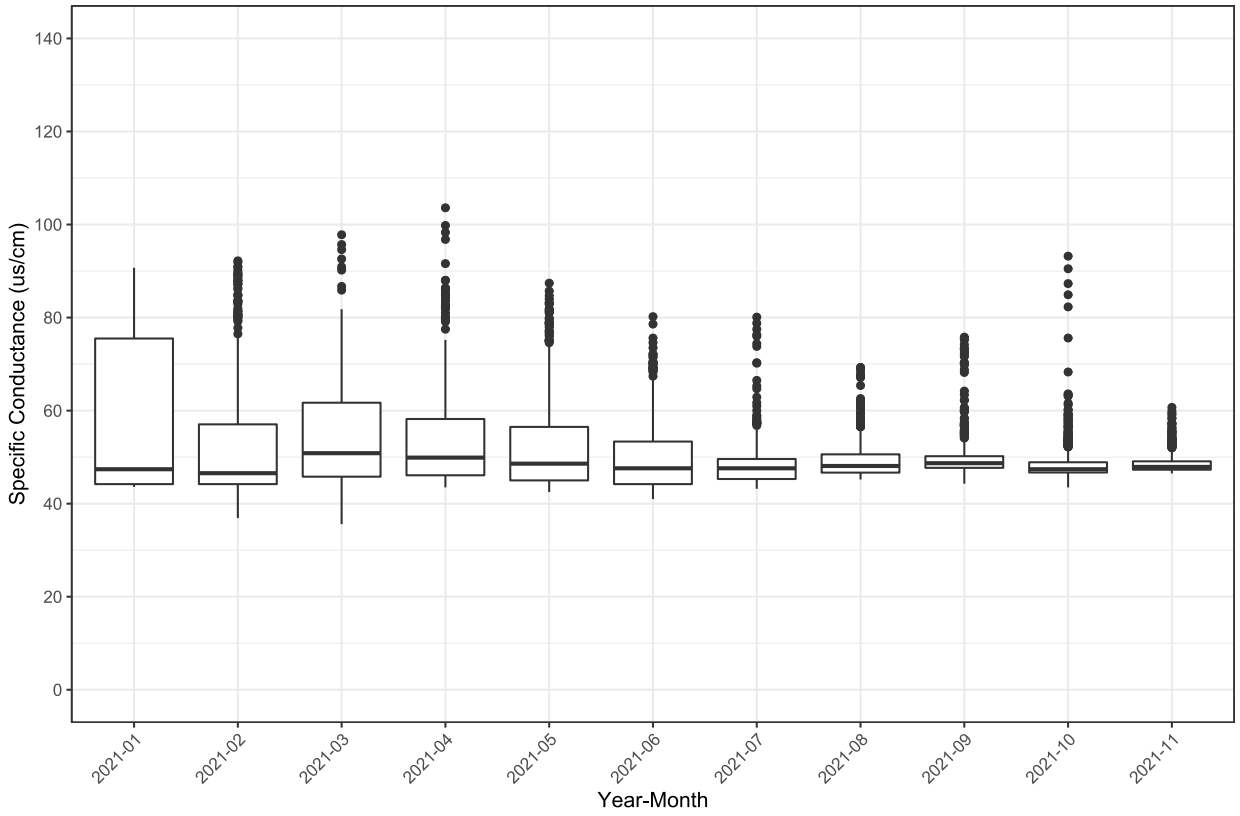

Figure 4.33 Monthly Specific Conductance at the Below Spillway Site

4.3.2 USGS Data

Periodic specific conductivity data was collected at the USGS Sites 1-6 (Figure 4.354 – Figure 4.349). Vertical profile data for specific conductivity was filed with FERC as part of DESC's requirement under Articles 404 and 405 and is included in Appendix F.

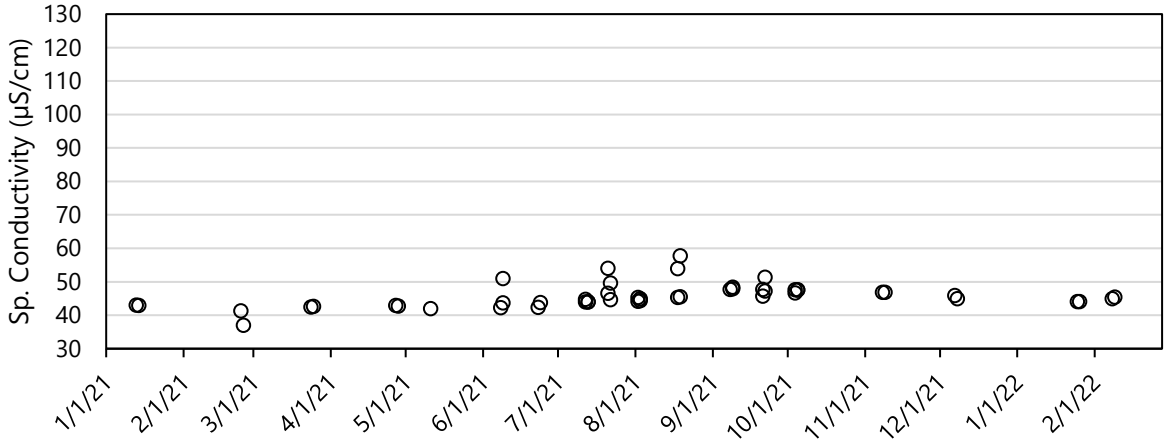

Figure 4.34 Periodic Specific Conductance at USGS Site 6

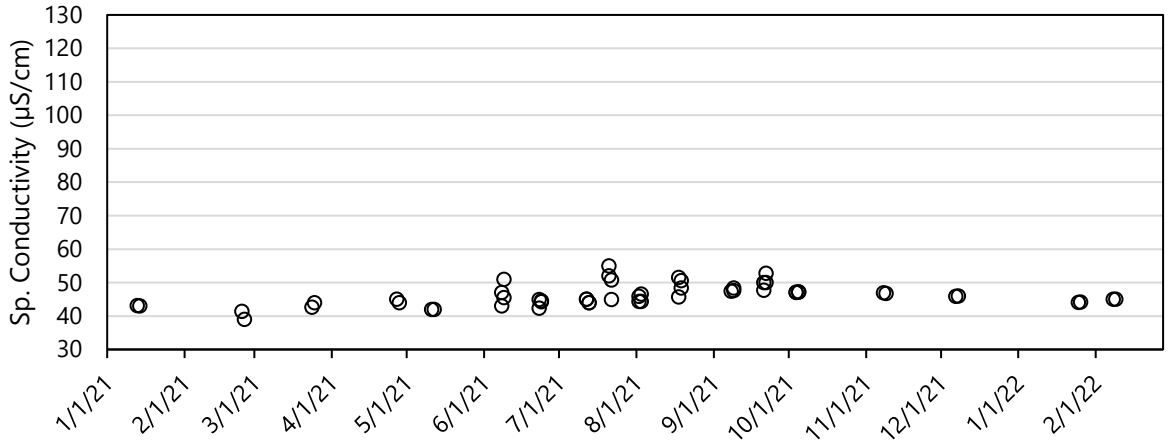

Figure 4.35 Periodic Specific Conductance at USGS Site 1

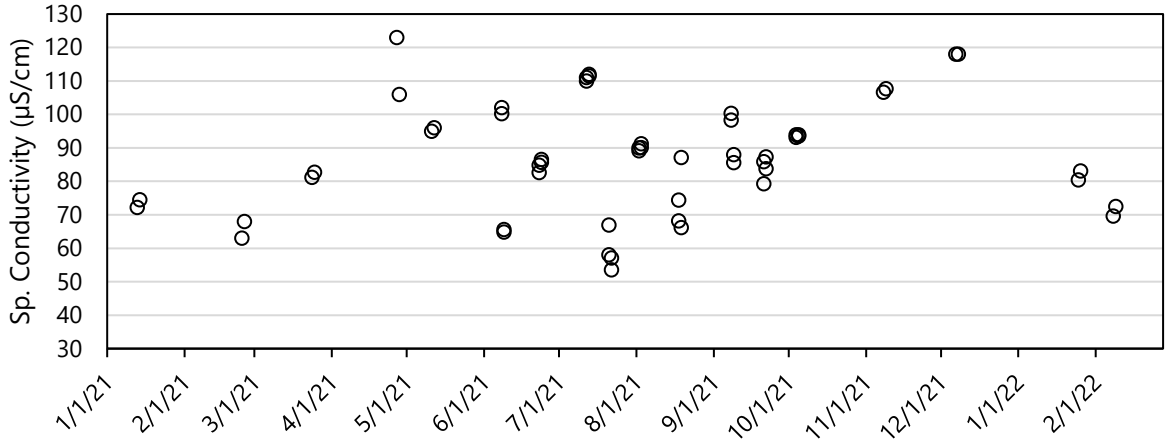

Figure 4.36 Periodic Specific Conductance at USGS Site 5

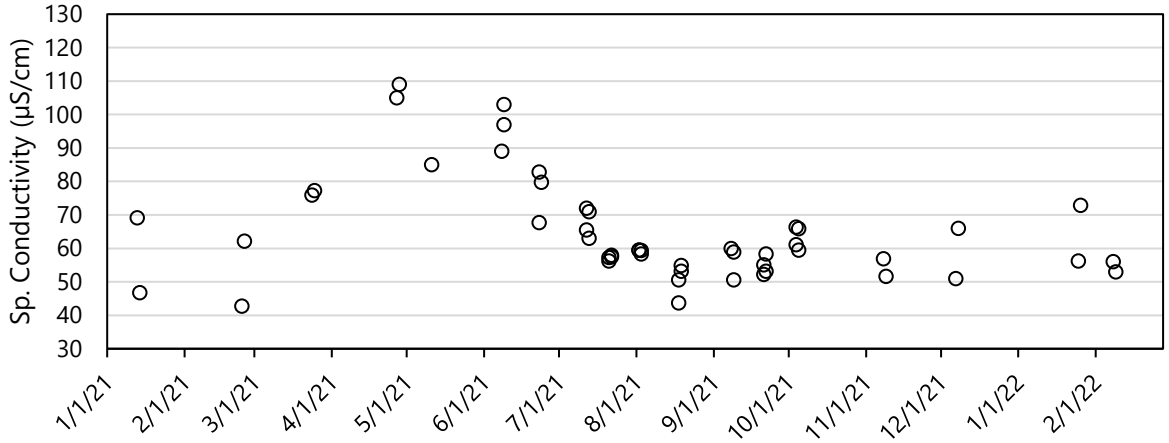

Figure 4.37 Periodic Specific Conductance at USGS Site 4

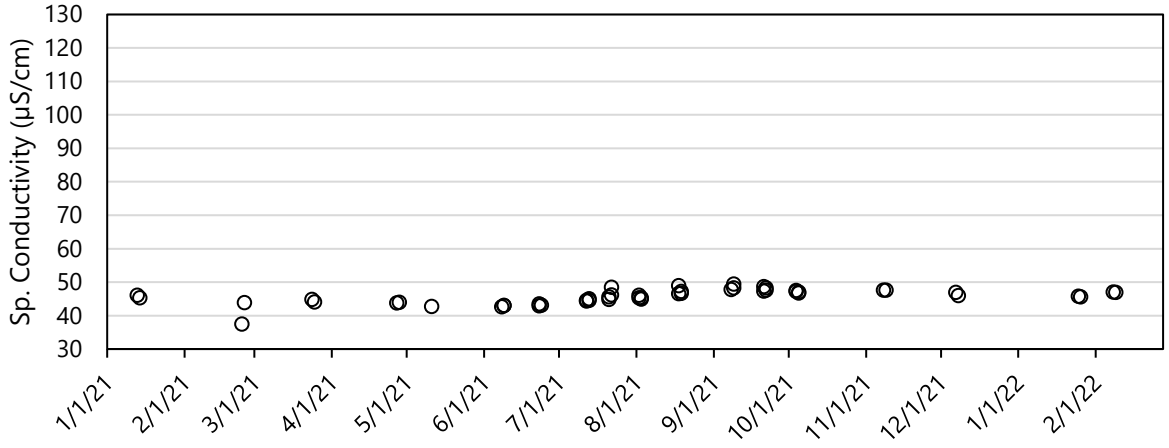

Figure 4.38 Periodic Specific Conductance at USGS Site 2

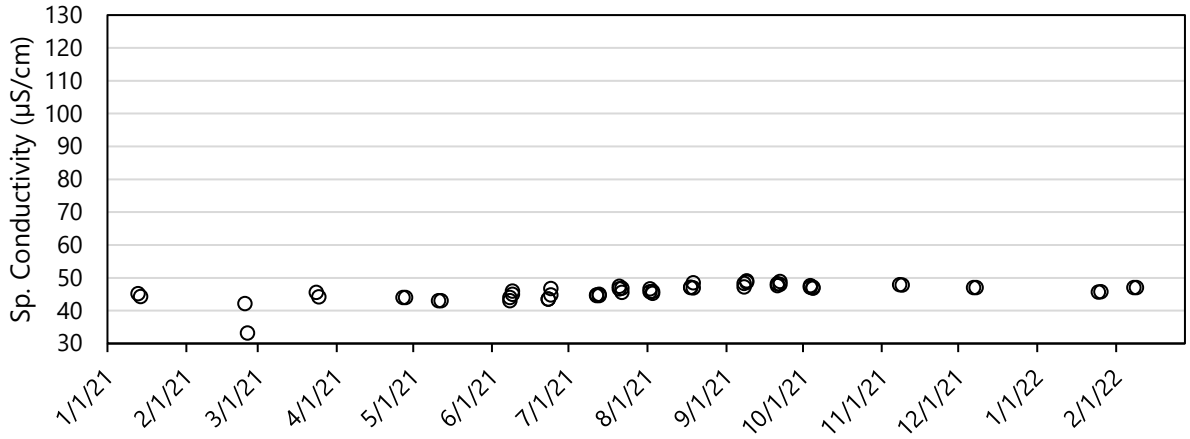

Figure 4.39 Periodic Specific Conductance at USGS Site 3

4.4 pH

4.4.1 Continuous Data

Provides a summary of pH measurements by month for each site. Sections that follow include results for individual sites.

Table 4.11 Monthly pH by Site – Average (Min - Max)

Month	Deep Step	Stevens Creek	Above Powerhouse	Above Spillway	Below Powerhouse	Below Spillway
2021-01		6.9 (6.6 - 7.2)	7.3 (7.2 - 7.4)	7.1 (6.6 - 7.6)	7.3 (7.2 - 7.4)	7.4 (7.3 - 7.5)
2021-02		6.9 (6.4 - 7.2)	7.3 (7.0 - 7.4)	7.0 (6.5 - 7.9)	7.3 (7.0 - 7.5)	7.3 (6.7 - 7.6)
2021-03		7.0 (6.9 - 7.2)	7.1 (6.8 - 7.3)	7.2 (6.8 - 8.4)	7.2 (6.9 - 7.4)	7.3 (6.7 - 7.9)
2021-04		6.9 (6.8 - 7.0)	6.9 (6.7 - 7.2)	7.0 (6.6 - 8.2)	---	7.3 (7.0 - 7.8)
2021-05		---	6.7 (6.3 - 7.0)	6.8 (6.4 - 7.1)	---	7.2 (6.9 - 7.8)
2021-06	7.18 (6.67 – 9.07)	6.7 (6.7 - 6.9)	6.6 (6.4 - 6.8)	6.6 (6.2 - 7.0)	6.6 (6.5 -6.8)	7.1 (6.5 - 8.2)
2021-07	7.26 (6.93 – 7.84)	6.7 (6.3 - 6.9)	6.5 (6.1 - 6.7)	6.6 (6.2 - 6.8)	6.5 (6.4 - 6.8)	6.9 (6.5 - 7.3)
2021-08	---	6.8 (6.5 - 6.9)	6.5 (6.0 - 6.6)	6.6 (6.3 - 6.9)	6.6 (6.4 - 6.8)	6.9 (6.2 - 7.4)
2021-09	---	6.7 (6.4 - 6.9)	6.5 (6.0 - 6.7)	6.6 (6.3 - 6.9)	6.7 (6.6 - 6.9)	6.8 (6.4 - 7.3)
2021-10	---	6.9 (6.6 - 7.1)	6.6 (6.1 - 6.9)	7.0 (6.7 - 7.4)	6.7 (6.6 - 7.0)	6.8 (6.4 - 7.3)
2021-11		7.0 (6.9 - 7.1)	7.1 (6.7 - 7.2)	7.1 (6.9 - 7.3)	7.1 (6.8 - 7.4)	7.3 (6.8 - 7.5)
2021-12		7.0 (6.9 - 7.2)	7.1 (7.0 - 7.2)	7.1 (6.8 - 7.4)	7.0 (6.8 - 7.4)	
2022-01		7.1 (7.0 - 7.2)	7.3 (7.0 - 7.5)	7.1 (6.9 - 7.5)	7.1 (6.9 - 7.2)	
2022-02			7.3 (7.3 - 7.4)		7.1 (7.0 - 7.3)	

"---" = no data

4.4.1.1 Deep Step Study Site

Periodic monitoring was conducted at the Deep Step Study Site from June 14, 2021 through October 29, 2022. However, due to equipment issues at other continuous monitoring sites, an instrument capable of measuring pH was not available between August and October. Monthly average, maximum, and minimum pH measurements at the site can be found in Table 4.11. A boxplot of monthly pH data can be found in Figure 4.40. A time series plot of pH can be found in Appendix D.

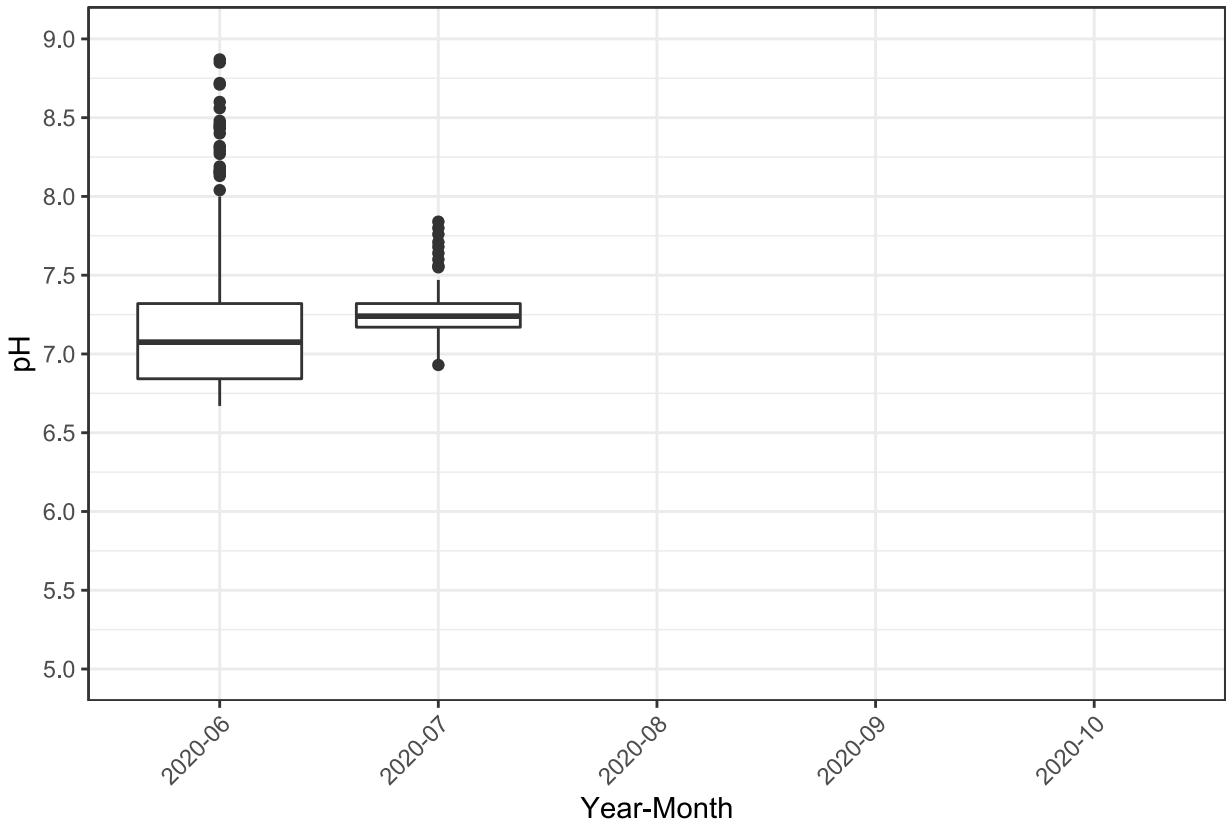

Figure 4.40 Monthly pH at the Deep Step Study Site

4.4.1.2 Stevens Creek Monitoring Site

Continuous monitoring was conducted at the Stevens Creek Monitoring Site from February 9, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from May 21 through July 26. Monthly average, maximum, and minimum pH measurements at the site can be found in Table 4.11. A boxplot of monthly pH data can be found in Figure 4.41. A time series plot of pH can be found in Appendix D.

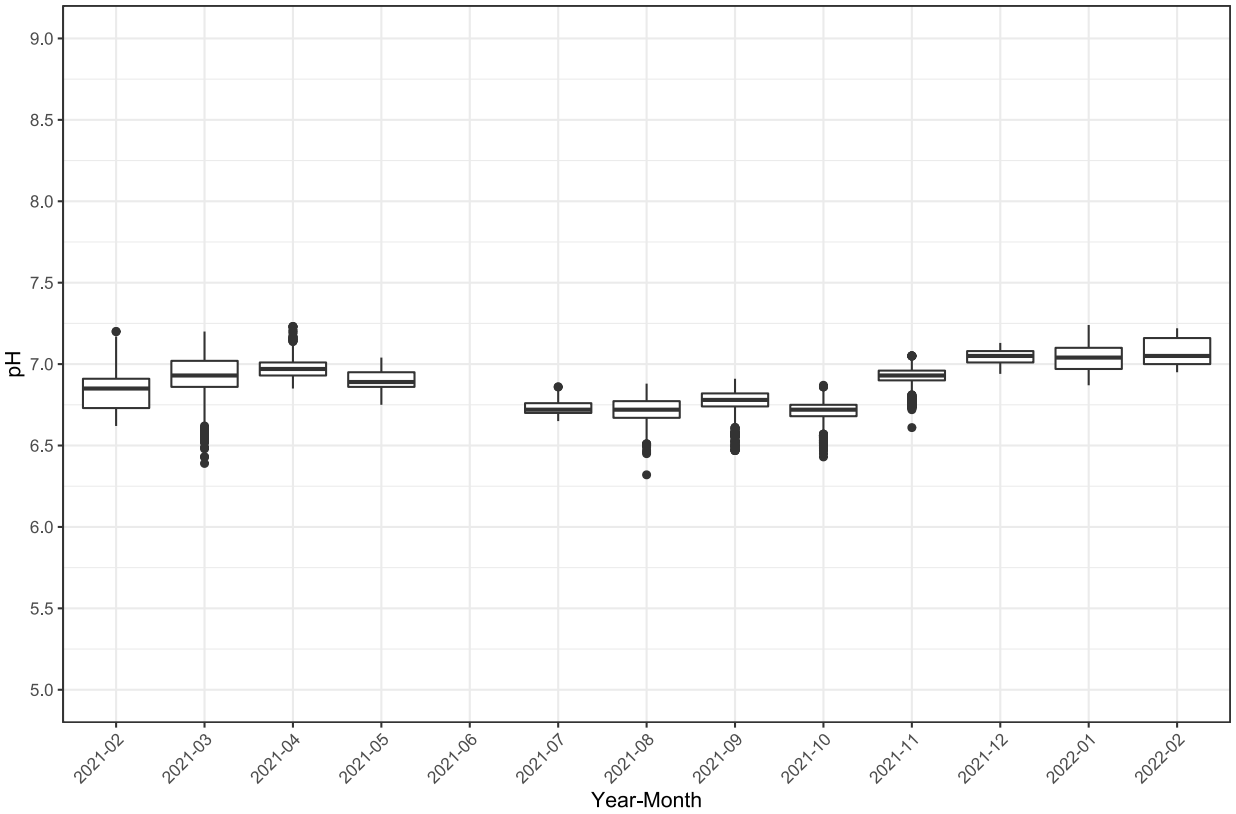

Figure 4.41 Monthly pH at the Stevens Creek Site

4.4.1.3 Above Powerhouse Monitoring Site

Continuous monitoring was conducted at the Above Powerhouse Monitoring Site from January 29, 2021 through February 10, 2022. Monthly average, maximum, and minimum pH measurements at the site can be found in Table 4.11. A boxplot of monthly pH data can be found in Figure 4.42. A time series plot of pH can be found in Appendix D.

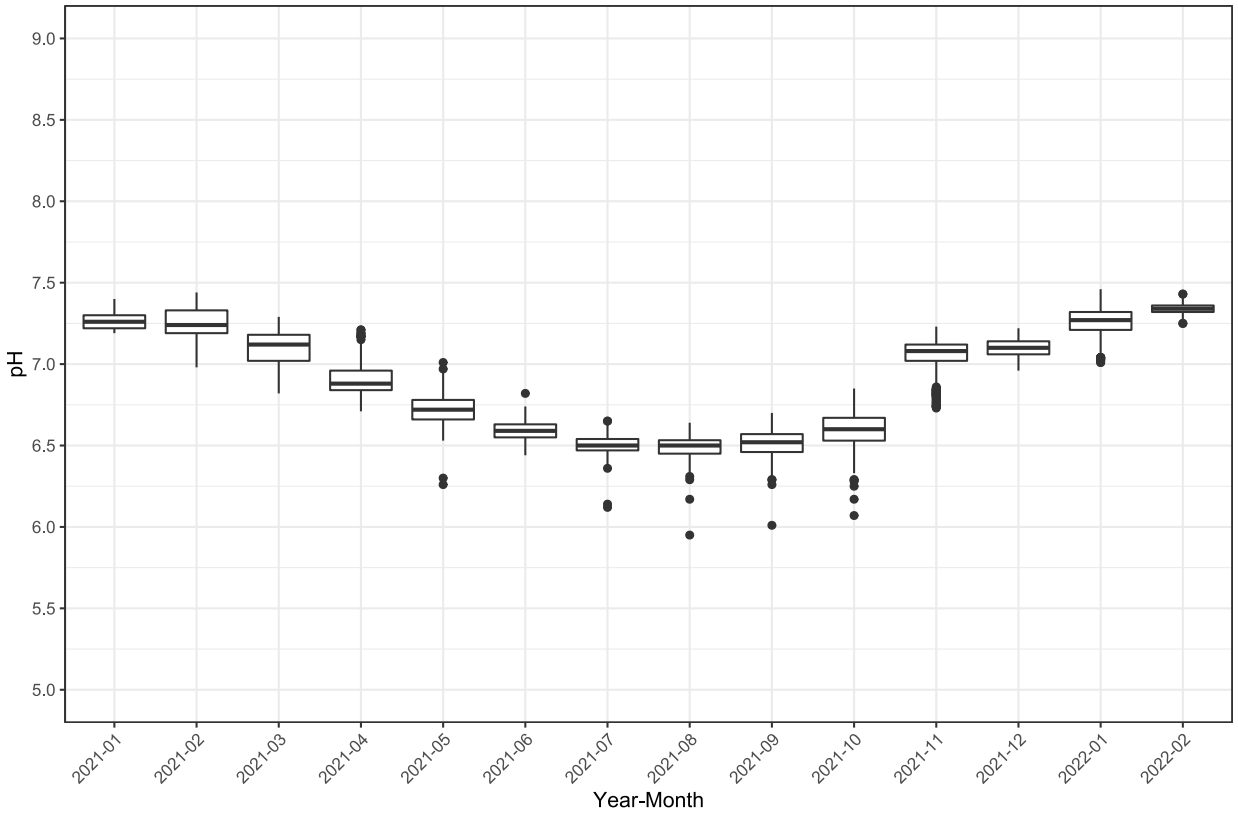

Figure 4.42 Monthly pH at the Above House Site

4.4.1.4 Above Spillway Monitoring Site

Continuous monitoring was conducted at the Above Spillway Monitoring Site from February 3, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from May 21 through June 14. Monthly average, maximum, and minimum pH measurements at the site can be found in Table 4.11. A boxplot of monthly pH data can be found in Figure 4.43. A time series plot of pH can be found in Appendix D.

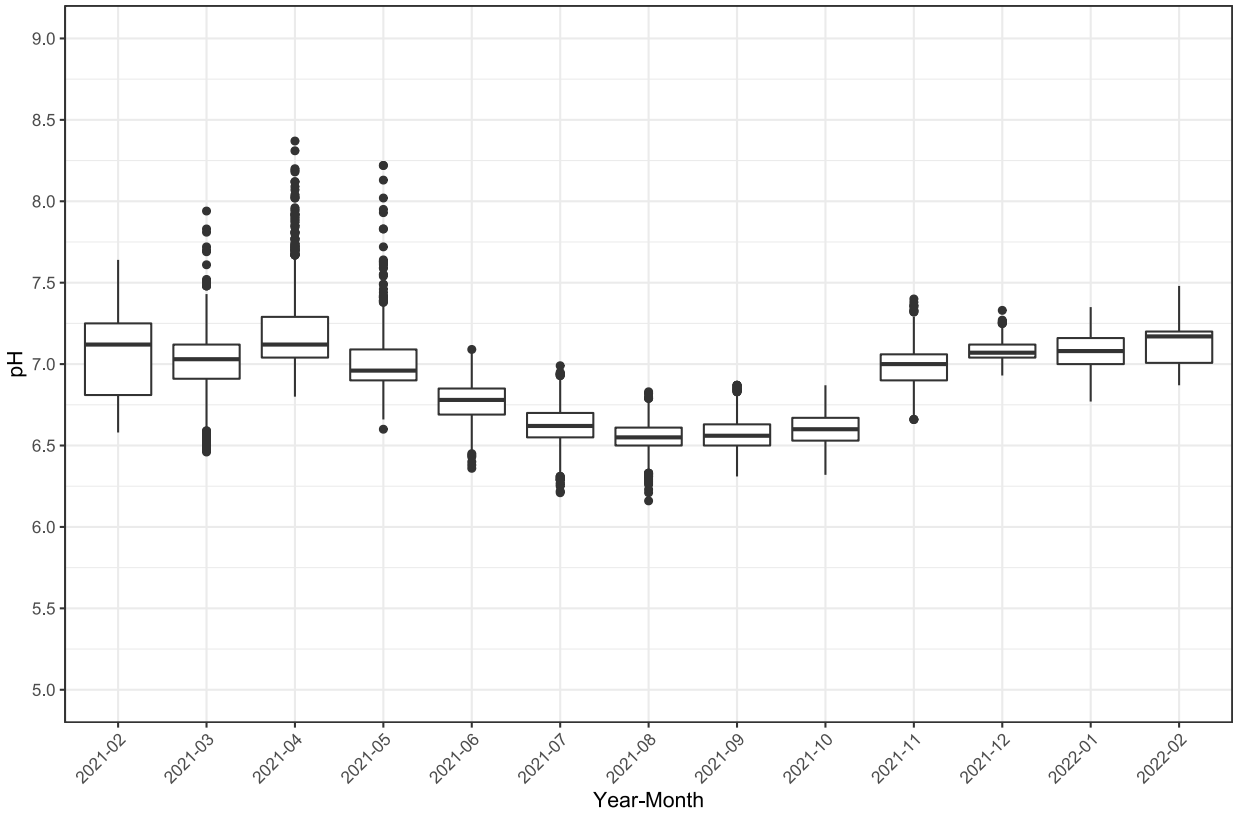

Figure 4.43 Monthly pH at the Above Spillway Site

4.4.1.5 Below Powerhouse Monitoring Site

Continuous monitoring was conducted at the Below Powerhouse Monitoring Site from January 29, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from March 26 through June 14. Monthly average, maximum, and minimum pH measurements at the site can be found in Table 4.11. A boxplot of monthly pH data can be found in Figure 4.44. A time series plot of pH can be found in Appendix D.

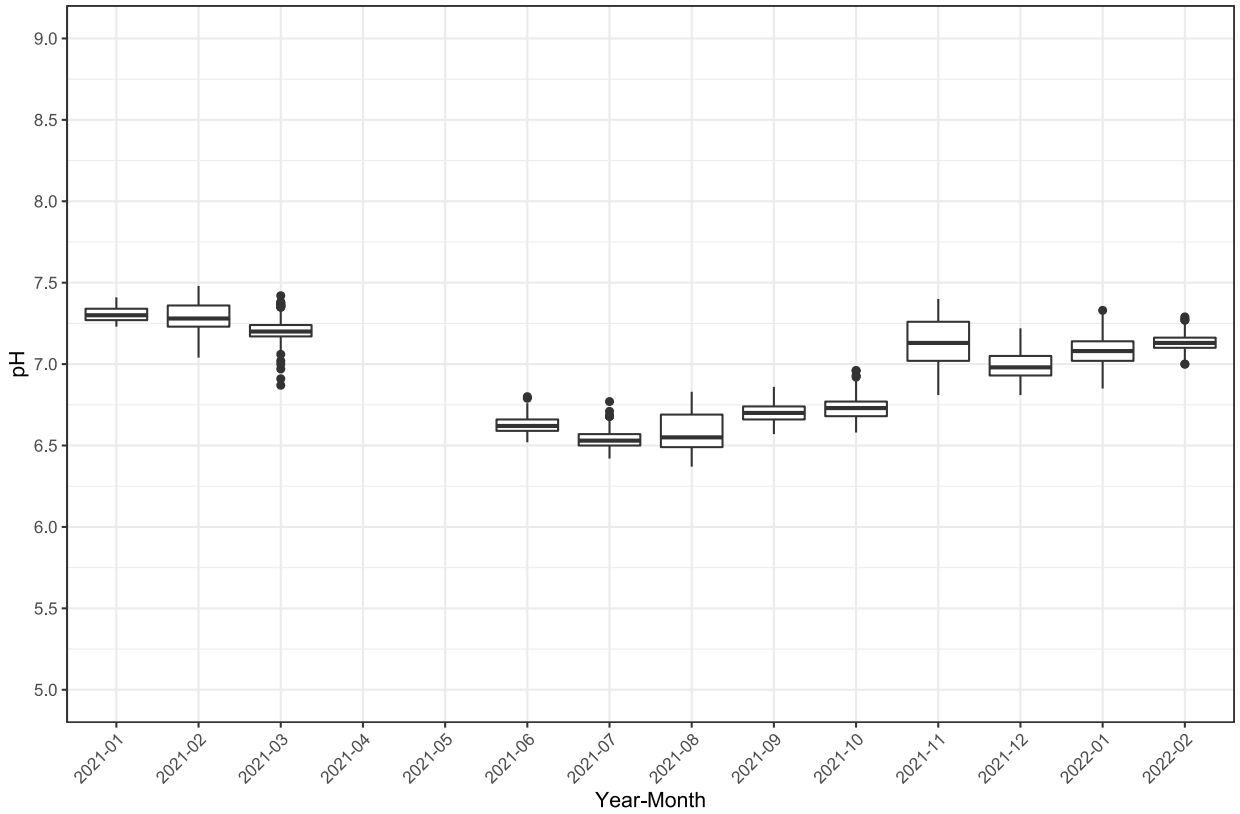

Figure 4.44 Monthly pH at the Below Powerhouse Site

4.4.1.6 Below Spillway Monitoring Site

Continuous monitoring was conducted at the Below Spillway Monitoring Site from January 29, 2021 through November 22, 2022. The sonde was lost sometime during December, likely due to high flows damaging the sonde anchoring system. The loss was discovered at the attempted December sampling event and a replacement sonde was not able to be obtained for deployment prior to the scheduled conclusion of sampling. Monthly average, maximum, and minimum pH measurements at the site can be found in Table 4.11. A boxplot of monthly pH data can be found in Figure 4.45. A time series plot of pH can be found in Appendix D.

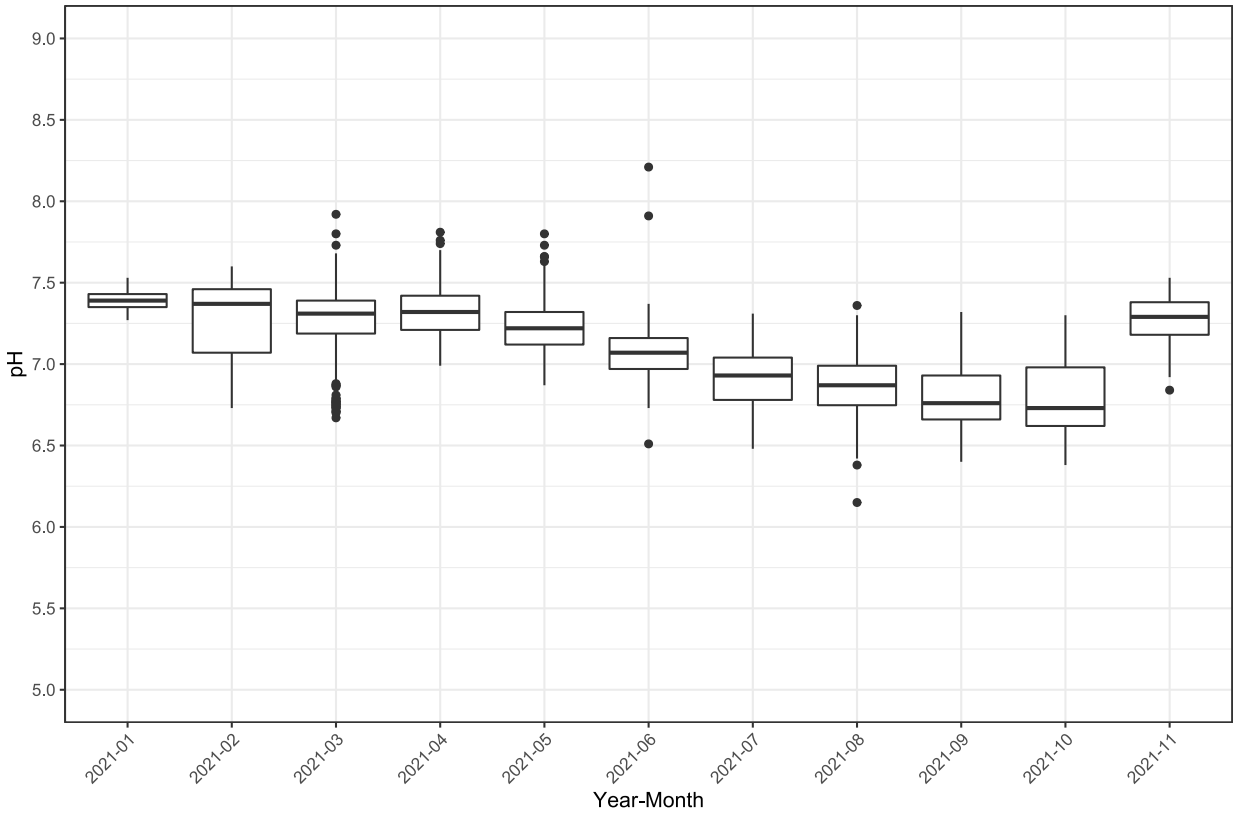

Figure 4.45 Monthly pH at the Below Spillway Site

4.4.2 USGS Data

Periodic pH measurements were recorded at the USGS Sites 1-6 (Figure 4.47 – Figure 4.46). At sites 6, 1, and 2, pH was more acidic than the standard of 6.0 on a single occasion in July. Vertical profile data for pH was filed with FERC as part of the Licensee's Articles 404 and 405 requirement and is included in Appendix F.

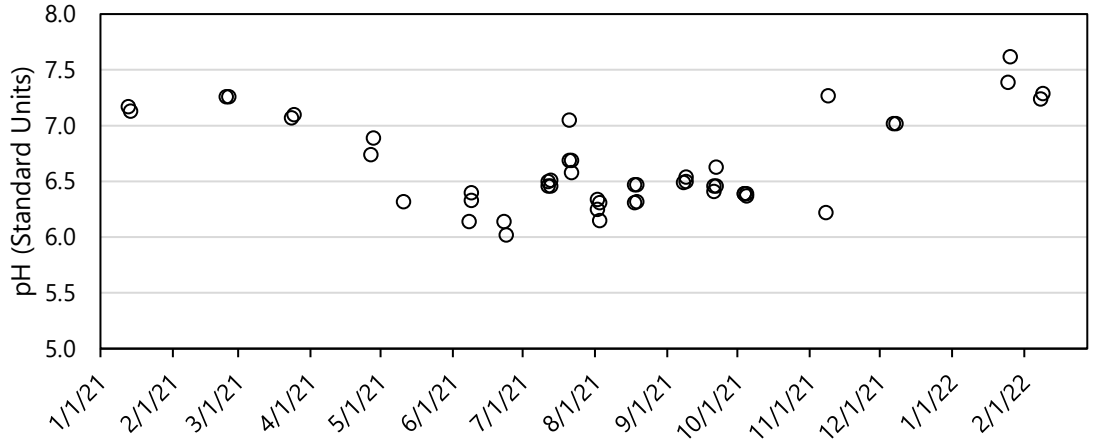

Figure 4.46 Periodic pH at USGS Site 6

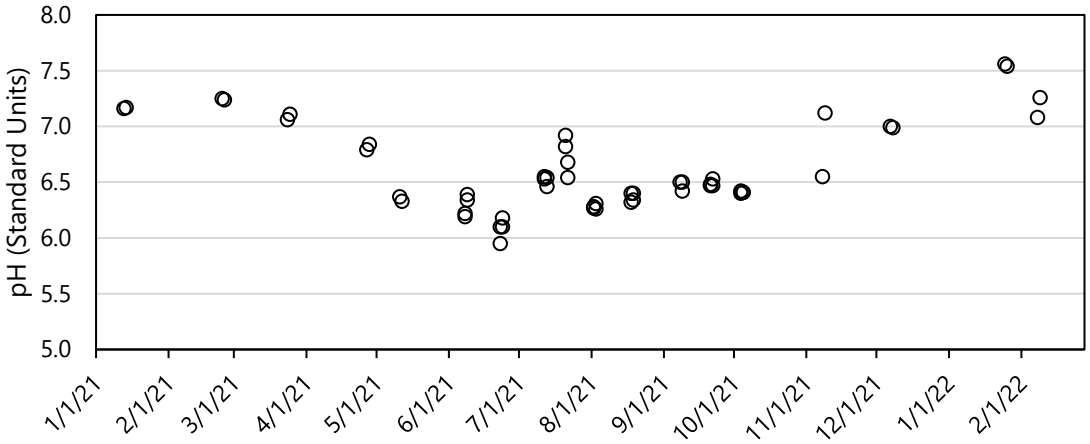

Figure 4.47 Periodic pH at USGS Site 1

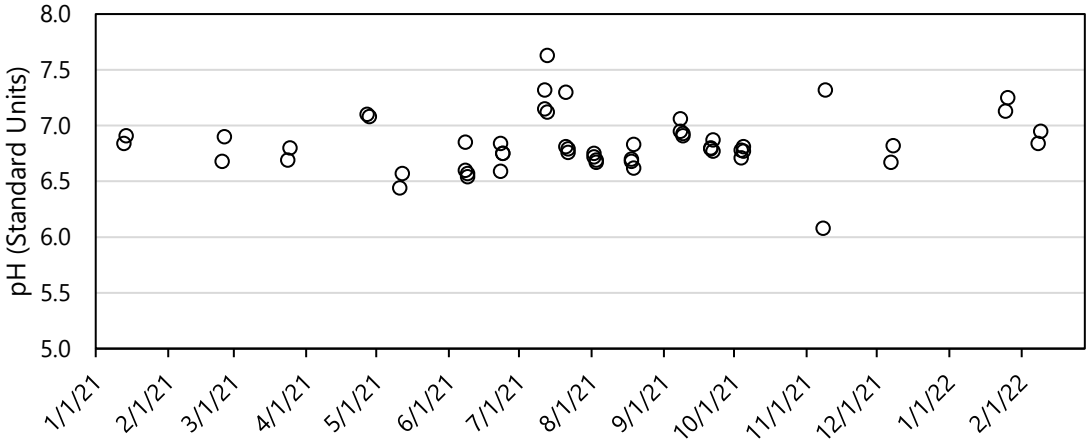

Figure 4.48 Periodic pH at USGS Site 5

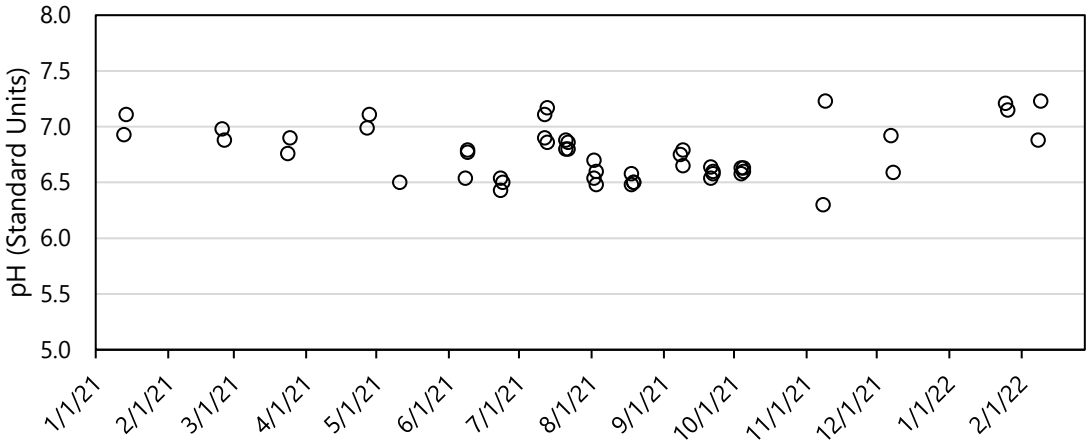

Figure 4.49 Periodic pH at USGS Site 4

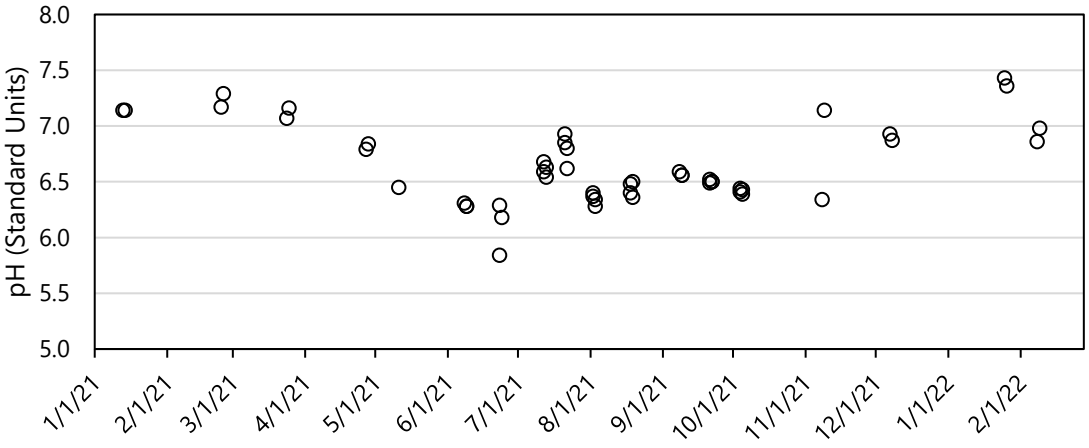

Figure 4.50 Periodic pH at USGS Site 2

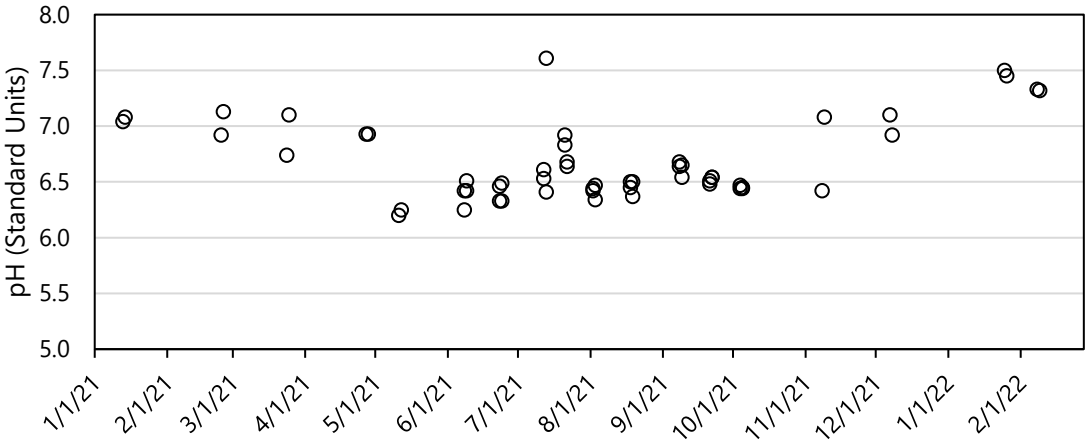

Figure 4.51 Periodic pH at USGS Site 3

4.5 Turbidity

4.5.1 Continuous Monitoring Data

Table 4.12 provides a summary of specific conductance measurements by month for each site. Sections that follow include results for individual sites.

Table 4.12 Monthly Turbidity (FNU) by Site – Average (Min - Max)

Month	Stevens Creek	Above Powerhouse	Above Spillway	Below Powerhouse	Below Spillway
2021-01	46 (14 – 197)	2.8 (2.0 - 4.3)	33 (2 - 136)	2.8 (2.0 - 4.5)	7 (2 - 18)
2021-02	33 (9 - 183)	5.7 (1.6 - 42.6)	18 (2 - 155)	6.0 (1.7 - 40.5)	30 (2 - 114)
2021-03	30 (10 - 185)	2.1 (1.2 - 12.8)	4 (0 - 20)	3.2 (1.4 - 63.7)	15 (2 - 138)
2021-04	39 (14 - 153)	1.9 (1.4 - 4.0)	5 (0 - 24)	---	4 (2 - 21)
2021-05	---	1.4 (0.7 - 17.8)	6 (0 - 37)	---	4 (1 - 14)
2021-06	17 (13 - 24)	1.3 (0.6 - 84.3)	8 (0 - 94)	0.9 (0 – 5.5)	4 (1 - 20)
2021-07	21 (7 - 145)	1.7 (0.5 - 59.3)	4 (0 - 78)	1.6 (0 – 32.9)	6 (1 - 94)
2021-08	24 (11 - 124)	1.4 (0.5 - 8.9)	6 (0 - 95)	0.8 (0 – 10.6)	4 (1 - 50)
2021-09	22 (10 - 189)	2.3 (0.5 - 175.5)	4 (0 - 111)	0.8 (0 – 6.2)	4 (1 - 55)
2021-10	11 (6 - 16)	2.0 (0.3 - 160.4)	0 (0 - 4)	1.1 (0 – 22.4)	5 (1 - 112)
2021-11	16 (4 - 128)	1.6 (0.9 - 12.2)	6 (0 - 86)	0.4 (0 – 2.2)	2 (1 - 4)
2021-12	33 (14 - 179)	2.3 (1.0 - 45.0)	20 (0 - 94)	1.1 (0 – 19.5)	
2022-01	39 (12 - 155)	3.0 (1.1 - 20.1)	23 (0 - 85)	2.3 (0 – 16.8)	
2022-02		1.6 (1.1 - 9.5)		0.9 (0 – 16.0)	

"---" = no data

4.5.1.1 Stevens Creek Monitoring Site

Continuous monitoring was conducted at the Stevens Creek Monitoring Site from February 9, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from May 21 through July 26. Monthly average, maximum, and minimum turbidity measurements at the site, reported in Formazin Nephelometric Units (FNU), can be found in Table 4.12. A boxplot of monthly turbidity data can be found in Figure 4.52. A time series plot of turbidity can be found in Appendix E.

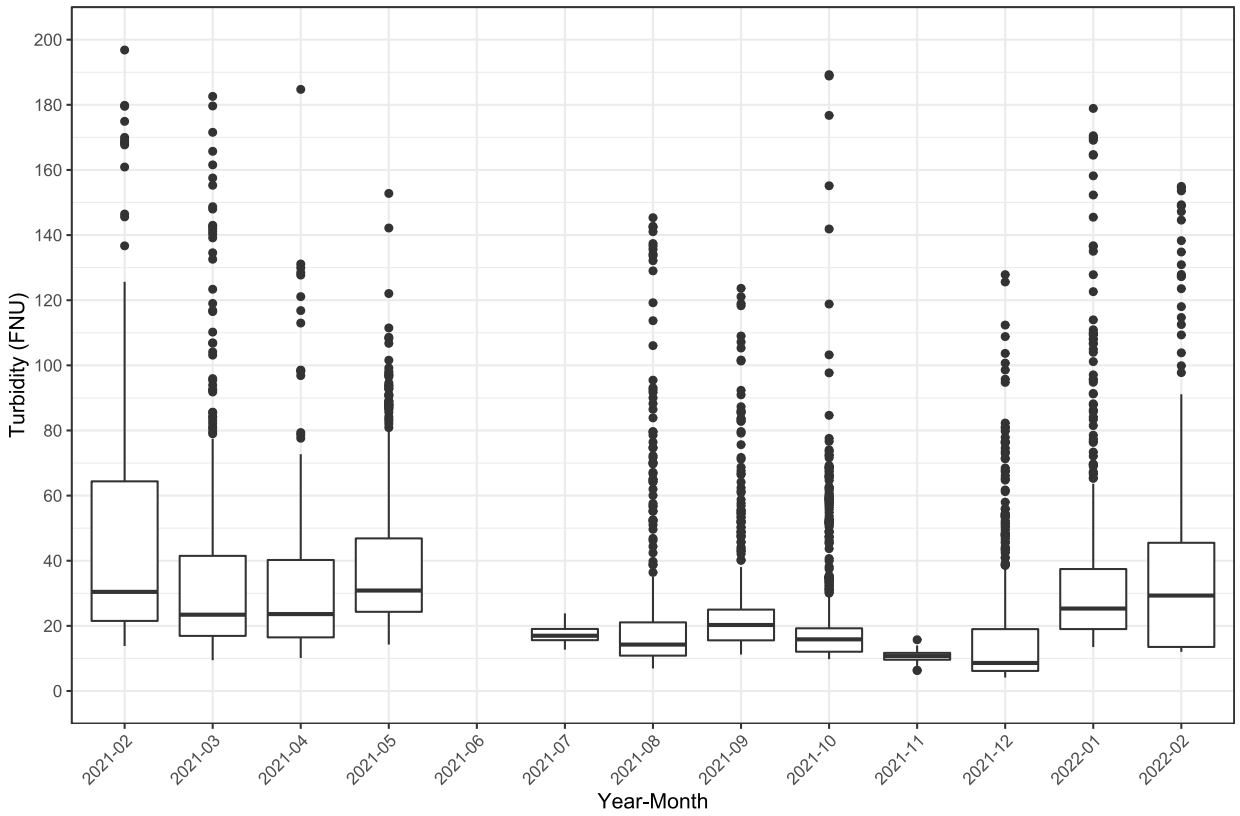

Figure 4.52 Monthly Turbidity at the Stevens Creek Site

4.5.1.2 Above Powerhouse Monitoring Site

Continuous monitoring was conducted at the Above Powerhouse Monitoring Site from January 29, 2021 through February 10, 2022. Monthly average, maximum, and minimum turbidity measurements at the site can be found in Table 4.12. A boxplot of monthly turbidity data can be found in Figure 4.53. A time series plot of turbidity can be found in Appendix E.

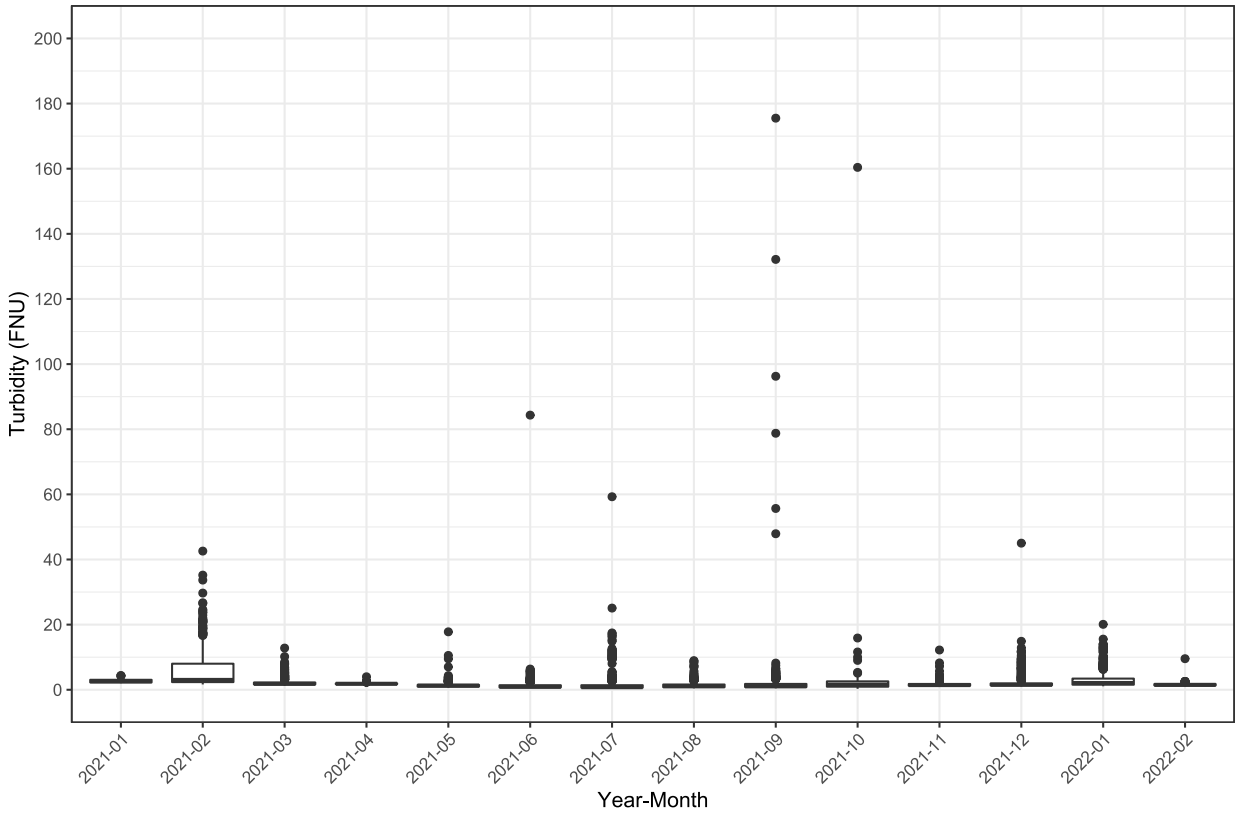

Figure 4.53 Monthly Turbidity at the Above Powerhouse Site

4.5.1.3 Above Spillway Monitoring Site

Continuous monitoring was conducted at the Above Spillway Monitoring Site from February 3, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from May 21 through June 14. Monthly average, maximum, and minimum turbidity measurements at the site can be found in Table 4.12. A boxplot of monthly turbidity data can be found in Figure 4.54. A time series plot of turbidity can be found in Appendix E.

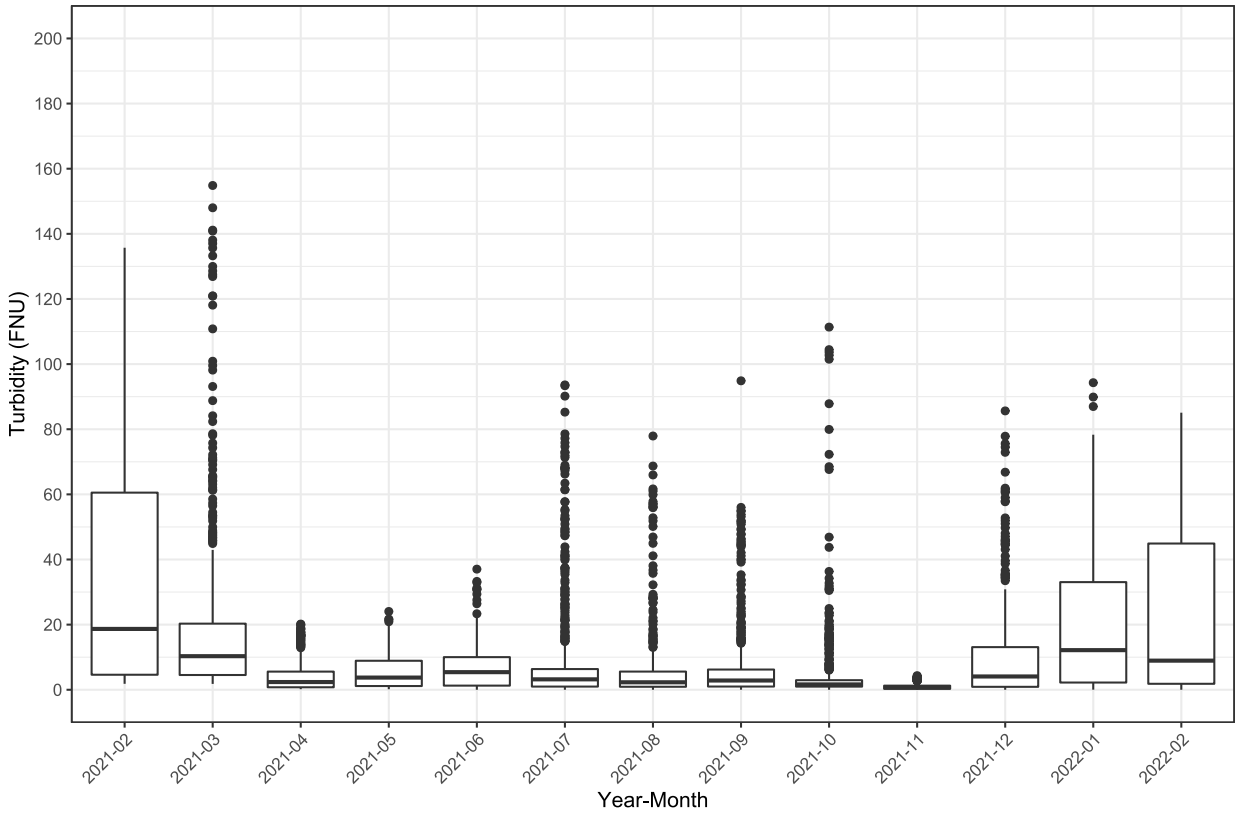

Figure 4.54 Monthly Turbidity at the Above Spillway Site

4.5.1.4 Below Powerhouse Monitoring Site

Continuous monitoring was conducted at the Below Powerhouse Monitoring Site from January 29, 2021 through February 10, 2022. Equipment malfunction led to no data recovery at the site from March 26 through June 14. Monthly average, maximum, and minimum turbidity measurements at the site can be found in Table 4.12. A boxplot of monthly turbidity data can be found in Figure 4.55. A time series plot of turbidity can be found in Appendix E.

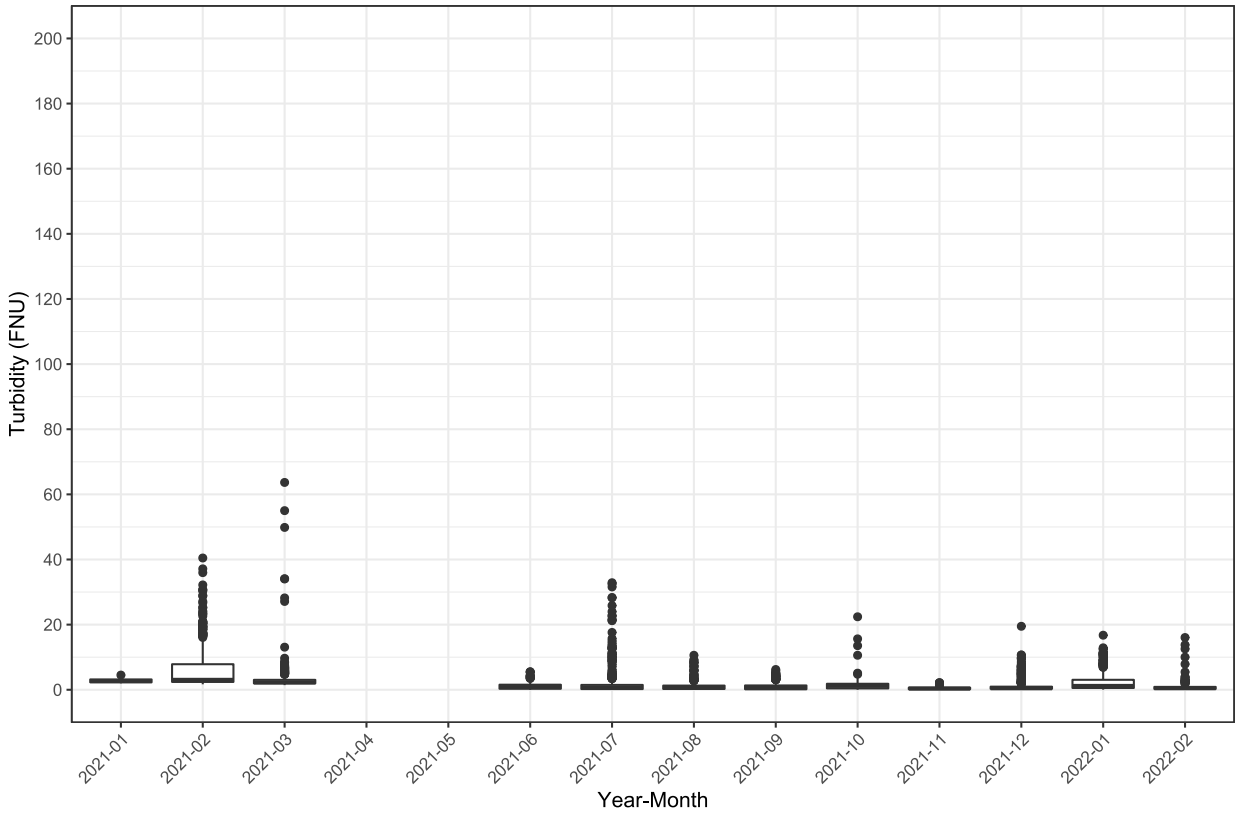

Figure 4.55 Monthly Turbidity at the Below Powerhouse Site

4.5.1.5 Below Spillway Monitoring Site

Continuous monitoring was conducted at the Below Spillway Monitoring Site from January 29, 2021 through November 22, 2022. The sonde was lost sometime during December, likely due to high flows damaging the sonde anchoring system. The loss was discovered at the attempted December sampling event and a replacement sonde was not able to be obtained for deployment prior to the scheduled conclusion of sampling. Monthly average, maximum, and minimum turbidity measurements at the site can be found in Table 4.12. A boxplot of monthly turbidity data can be found in Figure 4.56. A time series plot of turbidity can be found in Appendix E.

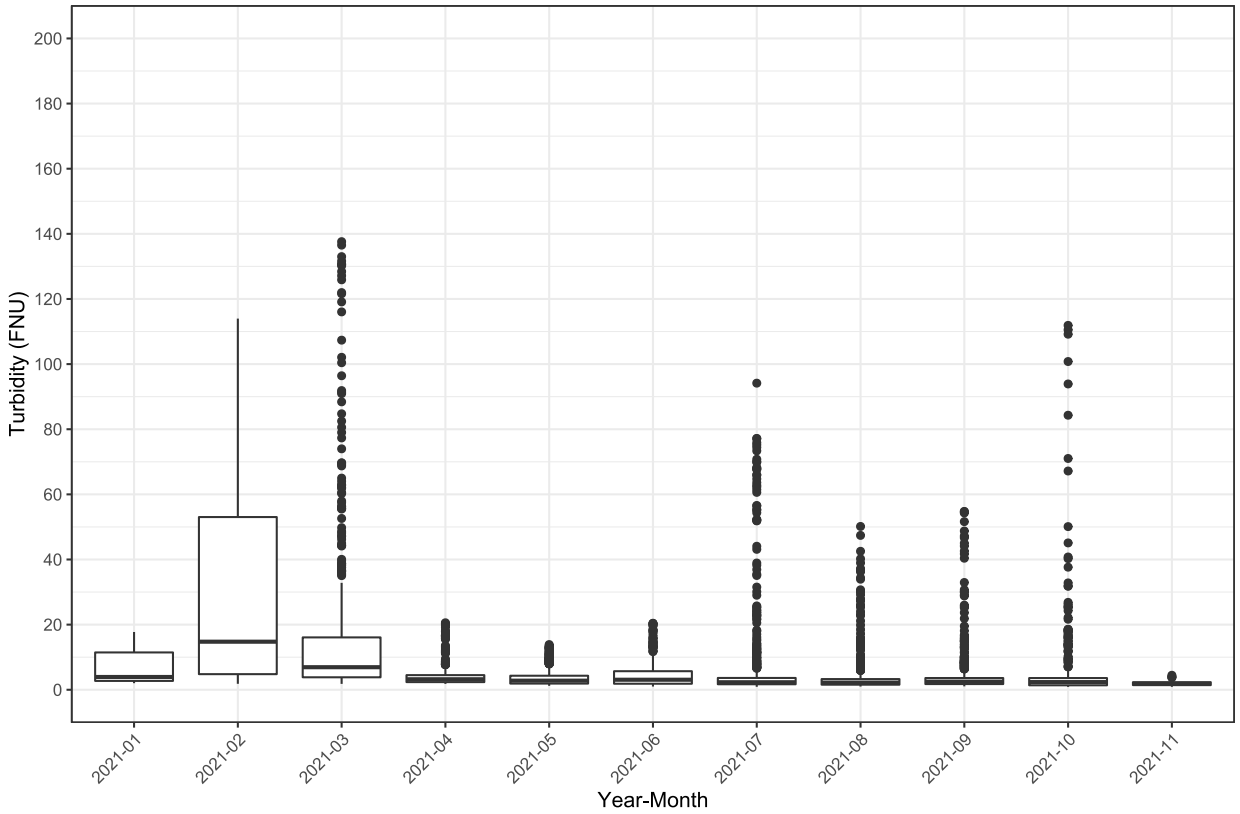

Figure 4.56 Monthly Turbidity at Study Site 3

4.6 DESC Discrete Samples Data

The results from the discrete samples collected each month are summarized in Table 4.13. In general, ammonia and orthophosphate were only detected on two occasions at the Project: ammonia at the Below Spillway Site in July and orthophosphate at the Below Powerhouse and Stevens Creek sites in May and October, respectively. Phosphorous was only detected at the Stevens Creek Site and only during the warmer months. Nitrate-nitrite and TKN were consistently detected across all sites every month. Nitrate-nitrite ranged from 0.032 to 0.41 mg/L across the Project; TKN ranged from 0.110 to 0.930 mg/L. Both nutrients were typically highest at the Stevens Creek Site.

Table 4.13 Summary of Results from Discrete Samples

Parameter		Deep Step	Stevens Creek	Above Powerhouse	Above Spillway	Below Powerhouse	Below Spillway
Ammonia (mg/L)		N/D	N/D	N/D	N/D	N/D	0.68
Nitrate-Nitrite (mg/L)	Min	0.10	0.03	0.09	0.09	0.10	0.09
	Avg	0.18	0.19	0.16	0.19	0.17	0.18
	Max	0.30	0.41	0.24	0.34	0.35	0.34
Orthophosphate (mg/L)		N/D	0.16	N/D	N/D	0.19	N/D
Phosphorus (mg/L)	Min	NA	0.055	N/A	N/A	N/A	N/A
	Avg	N/D	0.062	N/D	N/D	N/D	N/D
	Max	N/A	0.066	N/A	N/A	N/A	N/A
TKN (mg/L)	Min	0.11	0.24	0.11	0.12	0.15	0.17
	Avg	0.24	0.59	0.21	0.41	0.27	0.34
	Max	0.31	0.93	0.41	0.65	0.66	0.61

N/D = Not Detected
N/A = Not Applicable

Table 4.14 Summary of Discrete Samples by Month – Deep Step Monitoring Site

Month	Ammonia (mg/L)	Nitrate-Nitrite (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)	TKN (mg/L)
2021-06	N/D	0.15	N/D	N/D	0.31
2021-07	N/D	0.3	N/D*	N/D	N/D
2021-08	N/D	0.19	N/D	N/D	0.29
2021-09	N/D	0.096	N/D	N/D	0.11

N/D = Not Detected

* Results flagged as potentially unreliable by analytical laboratory

Table 4.15 Summary of Discrete Samples by Month - Stevens Creek Monitoring Site

Month	Ammonia (mg/L)	Nitrate-Nitrite (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)	TKN (mg/L)
2021-04	N/D	0.096	N/D	N/D	0.5
2021-05	N/D	0.3	0.16	N/D	0.45
2021-06	N/D	0.41	N/D	0.055	0.88
2021-07	N/D	0.31	N/D*	0.064	0.66
2021-08	N/D	0.23	N/D*	0.066	0.64
2021-09	N/D	0.14	N/D	N/D	0.93
2021-10	---	0.032	N/D	N/D	0.65
2021-11	N/D	0.055	N/D	N/D	0.24
2021-12	N/D	0.078	N/D*	N/D	0.28
2022-01	N/D	0.14	N/D	N/D	0.55

N/D = Not Detected

"---" = no data

* Results flagged as potentially unreliable by analytical laboratory

Table 4.16 Summary of Discrete Samples by Month - Above Powerhouse Monitoring Site

Month	Ammonia (mg/L)	Nitrate-Nitrite (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)	TKN (mg/L)
2021-04	N/D	0.14	N/D*	N/D	0.22
2021-05	N/D	0.21	N/D	N/D	0.22
2021-06	N/D	0.24	N/D*	N/D	0.41
2021-07	N/D	0.17	N/D*	N/D	0.13*
2021-08	N/D	0.22	N/D	N/D	0.11*
2021-09	N/D	0.092	N/D	N/D	0.33
2021-10	---	0.11	N/D	N/D	0.24
2021-11	N/D	0.14	N/D	N/D	0.11
2021-12	N/D	0.15	N/D	N/D	0.21
2022-01	N/D	0.13	N/D	N/D	0.13

N/D = Not Detected

"---" = no data

* Results flagged as potentially unreliable by analytical laboratory

Table 4.17 Summary of Discrete Samples by Month – Above Spillway Monitoring Site

Month	Ammonia (mg/L)	Nitrate-Nitrite (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)	TKN (mg/L)
2021-04	N/D	0.15	N/D	N/D	0.24
2021-05	N/D	0.32	N/D*	N/D	0.33
2021-06	N/D	0.34	N/D	N/D	0.65
2021-07	N/D	0.29	N/D*	N/D	0.64
2021-08	N/D	0.14	N/D	N/D	0.60
2021-09	N/D	0.089	N/D	N/D	0.35
2021-10	---	0.14	N/D*	N/D	0.33
2021-11	N/D	0.12	N/D	N/D	N/D
2021-12	N/D	0.13	N/D	N/D	0.22
2022-01	N/D	0.11	N/D*	N/D	0.12

N/D = Not Detected

"---" = no data

* Results flagged as potentially unreliable by analytical laboratory

Table 4.18 Summary of Discrete Samples by Month - Below Powerhouse Monitoring Site

Month	Ammonia (mg/L)	Nitrate-Nitrite (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)	TKN (mg/L)
2021-04	N/D	0.16	N/D	N/D	0.23*
2021-05	N/D	0.2	N/D	N/D	0.17
2021-06	N/D	0.35	N/D	N/D	0.34
2021-07	N/D	0.17	N/D*	N/D	0.23
2021-08	N/D	0.22	N/D	N/D	0.23
2021-09	N/D	0.1	N/D	N/D	0.17
2021-10	---	0.1	0.19	N/D	0.23
2021-11	N/D	0.12	N/D*	N/D	0.25*
2021-12	N/D	0.16	N/D	N/D	0.66
2022-01	N/D	0.13	N/D	N/D	0.15

N/D = Not Detected

"---" = no data

* Results flagged as potentially unreliable by analytical laboratory

Table 4.19 Summary of Discrete Samples by Month – Below Spillway Monitoring Site

Month	Ammonia (mg/L)	Nitrate-Nitrite (mg/L)	Orthophosphate (mg/L)	Phosphorus (mg/L)	TKN (mg/L)
2021-04	N/D	0.12	N/D	N/D	0.44
2021-05	N/D	0.2	N/D	N/D	0.44
2021-06	N/D	0.34	N/D	N/D	0.59
2021-07	0.68*	0.32	N/D*	N/D	0.23
2021-08	N/D	0.15	N/D	N/D	0.61
2021-09	N/D	0.091	N/D	N/D	0.18
2021-10	----	0.13	N/D	N/D	0.21
2021-11	N/D	0.11	N/D	N/D	N/D
2021-12	N/D	0.15	N/D	N/D	0.31
2022-01	N/D	0.099	N/D	N/D	0.17

N/D = Not Detected

"---" = no data

* Results flagged as potentially unreliable by analytical laboratory

4.7 Additional Data

A depiction of daily average discharge from Thurmond Dam and Stevens Creek powerhouse is provided in Figure 4.57. Daily average discharge from Thurmond Dam ranged from a minimum of 3,745 cubic feet per second (cfs) to a maximum of 22,160 cfs and averaged 8,525 cfs in 2021. Estimated daily average discharge from the Stevens Creek powerhouse ranged from a minimum of 1,490 cfs to a maximum of 10,000 cfs and averaged 7,022 cfs in 2021.

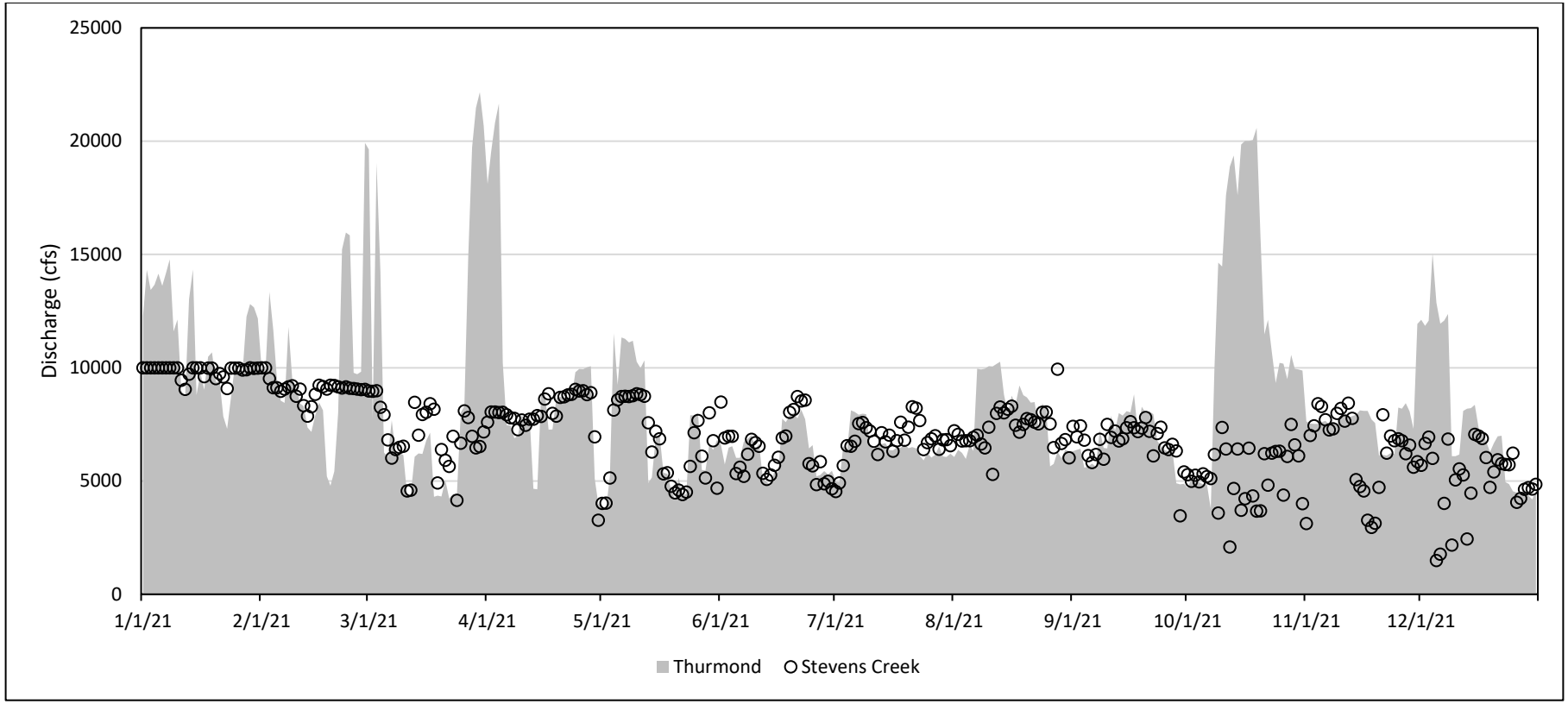

Figure 4.57 Daily Average Discharge through Thurmond Dam and the Stevens Creek Project Powerhouse

5.0 ANALYSIS AND DISCUSSION

The objective of this study was to assess the water quality in the Stevens Creek arm and Savannah River arm of Stevens Creek Reservoir and of the Savannah River, immediately downstream of the Stevens Creek Hydroelectric Project. Water quality was monitored at six sites within Stevens Creek Reservoir, including five sites in the Savannah River and one site in Stevens Creek. The Above Powerhouse Monitoring Site was used as a control and was placed in the Stevens Creek Reservoir upstream of the hydro station. The Below Powerhouse Monitoring Site was located directly downstream of the Stevens Creek Dam. The Below Spillway and Above Spillway monitoring sites were located downstream and upstream of the east end of Stevens Creek Dam, respectively. The Stevens Creek Monitoring Site was located in Stevens Creek near Woodlawn Road, approximately 4.5 RMs upstream of its confluence with the Savannah River at Stevens Creek Dam. The Deep Step Monitoring Site was located in the Savannah River arm of Stevens Creek Reservoir, just upstream of the confluence with Stevens Creek in an area commonly referred to as Deep Step Creek.

YSI EXO3 sondes were deployed continuously for one year from February 2021 to February 2022 at Sites 1-5. A combination of a YSI EXO3 and a HOBO U26 Temperature and DO logger were deployed at the Deep Step Site periodically from June through October. Due to equipment malfunction or loss, periods of data were lost at the following sites: Stevens Creek, Above Spillway, Below Powerhouse, and Below Spillway.

Equipment malfunction at the Stevens Creek, Above Spillway, and Below Powerhouse sites appear to have been related to the YSI handheld initially used to offload data and field calibrate the deployed sondes. While it is not completely clear what caused the error, the data from the sondes appears to have been corrupted upon transfer to the handheld during monthly monitoring events. Initial conversations with YSI tech support noted that that the data was likely recoverable via a different handheld and that the sonde would continue to log data if it was in the deployed state. After failed attempts to recover the missing data utilizing alternate equipment, the sondes were temporarily pulled from service during the June monitoring event and reset. The combined reset and use of a PC connection to offload data resulted in no more corrupted data losses. Data loss from June 14th to July 26th at the Stevens Creek Site was related to battery failure shortly after redeployment. The Below Spillway Site sonde was lost prior to the December sample, seemingly due to damage to the anchoring system during high flows. Supply chain

constraints and YSI repair turn-around times did not allow for deployment of a replacement prior to the study period concluding.

The Stevens Creek, Above Powerhouse, Above Spillway sites, and below Thurmond Dam presented the most excursions from state standards for DO. DO excursions were most prevalent below Thurmond Dam and at the Stevens Creek Site, with the Above Powerhouse Site having the third most excursions at the Project. During the critical period from May to October, daily average DO values were less than 5 mg/L for 90 percent of monitored days below Thurmond Dam, 74 percent of monitored days at the Stevens Creek Monitoring Site, 35 percent of monitored days at the Above Powerhouse Monitoring Site, and 9 percent of monitored days at the Above Spillway Monitoring Site. Additionally, during the critical period (May-October), 57.3 percent of measurements at the Thurmond Dam site, 38.4 percent at the Stevens Creek site, 35 percent at the Above Powerhouse site, and 9 percent at the Above Spillway site were less than 4 mg/L.

Notably, there were no DO excursions at monitoring sites below Stevens Creek Dam. Given upstream excursions within Stevens Creek and below Thurmond Dam, study results indicate that DO levels improve as water passes through the Project powerhouse and spillway, benefitting downstream resources. Low occurrence rates for DO excursions at the Deep Step Site suggests that water quality is not being overly impacted despite heavy aquatic vegetation growth within that portion of the reservoir.

A wealth of water quality data has been collected at the Stevens Creek Project through the term of the existing license and through this relicensing study. 2021 study results are consistent with monitoring results collected at the Project over the past 23 years, with continuous monitoring conducted in 2021 providing increased resolution of low DO conditions. As expanded upon in the Pre-Application Document, results summarized from 2010 to 2019 revealed that DO levels in the Thurmond Dam and Stevens Creek reservoirs generally remain above the instantaneous state standard of 4 mg/L during the winter and spring. The J. Strom Thurmond Reservoir begins to stratify annually in early summer, resulting in decreased DO levels near the Thurmond Dam low-level turbine intakes. DO levels typically become hypoxic/anoxic by mid-August within the hypolimnion of the J. Strom Thurmond forebay. DO levels in discharges from the Thurmond Dam are typically below 4 mg/L starting in early July and continuing through October. DO excursions within Stevens Creek Reservoir have been documented during this timeframe; however, water quality improvement in downstream reaches has been demonstrated after the 2011 USACE installation of an oxygen diffuser system in the Thurmond Dam Reservoir. When

considering project nexus in the context of a relicensing, it is important to consider the connection between the project operations and the potential effects on the resource in question. Water quality within Stevens Creek arm and Savannah River arm of Stevens Creek Reservoir is significantly influenced by external sources outside of DESC's control; nevertheless, water quality monitoring data demonstrate that re-oxygenation occurs as water passes through Stevens Creek Reservoir, the Stevens Creek powerhouse and over the Stevens Creek spillway, benefitting aquatic resources within the Savannah River downstream of the Project.

6.0 REFERENCES

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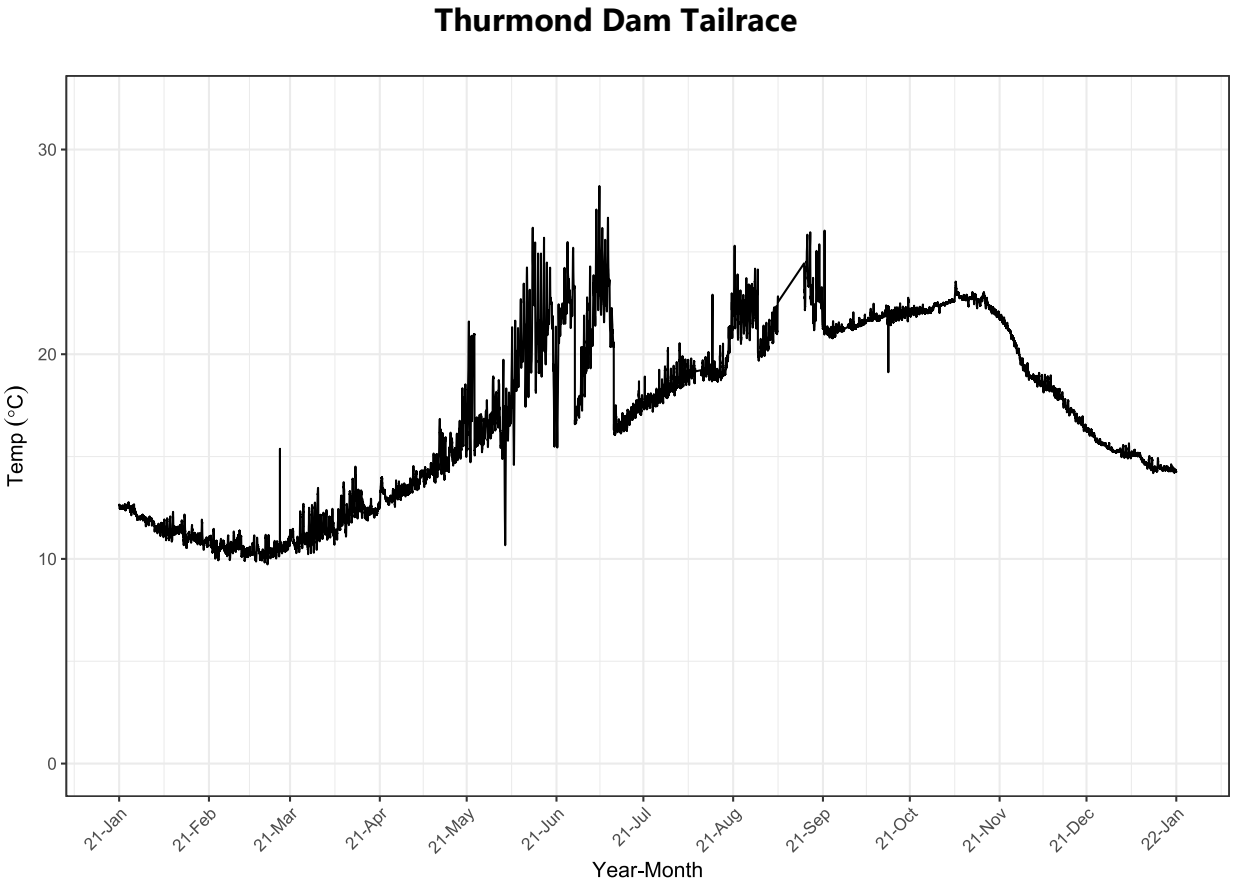
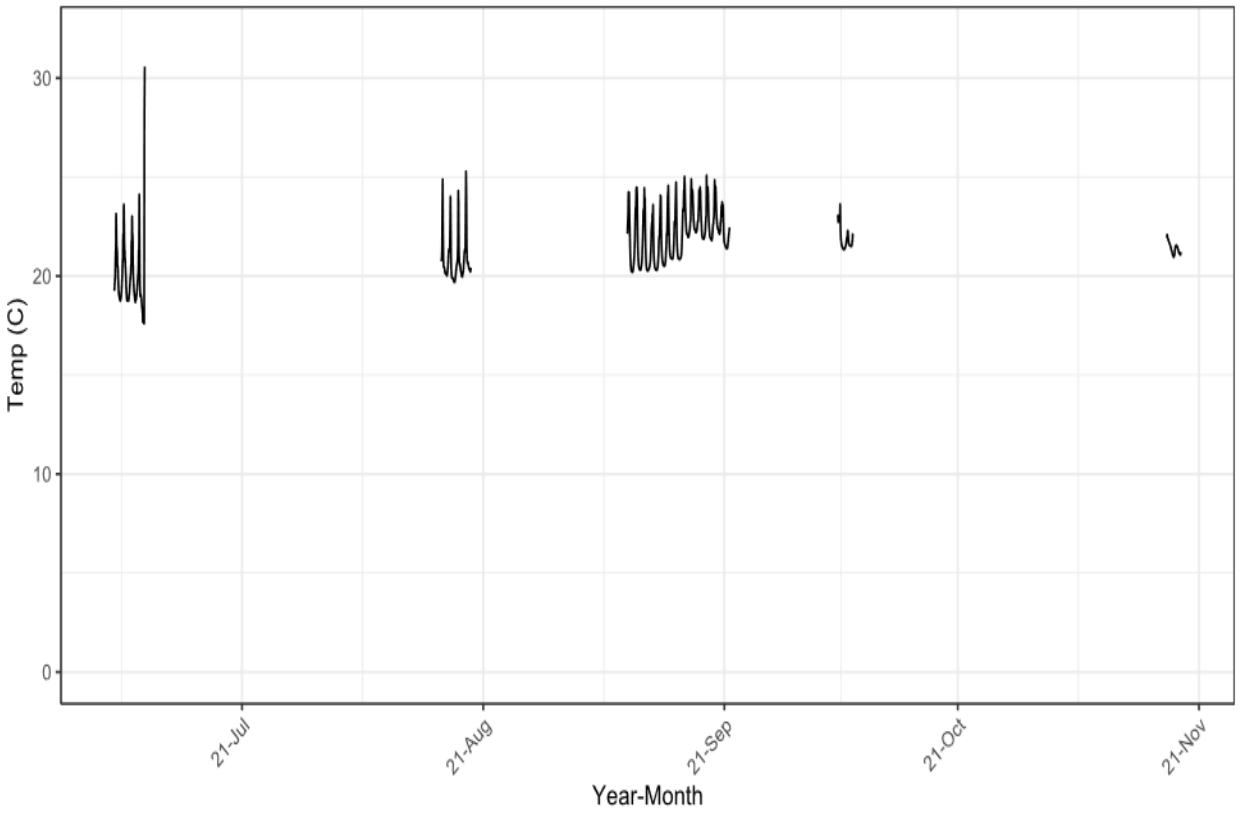
South Carolina Department of Environmental Control (SCDHEC). 2020. Regulation 61-69, Classified Waters. SCDHEC 4885-44-6. June 2020.

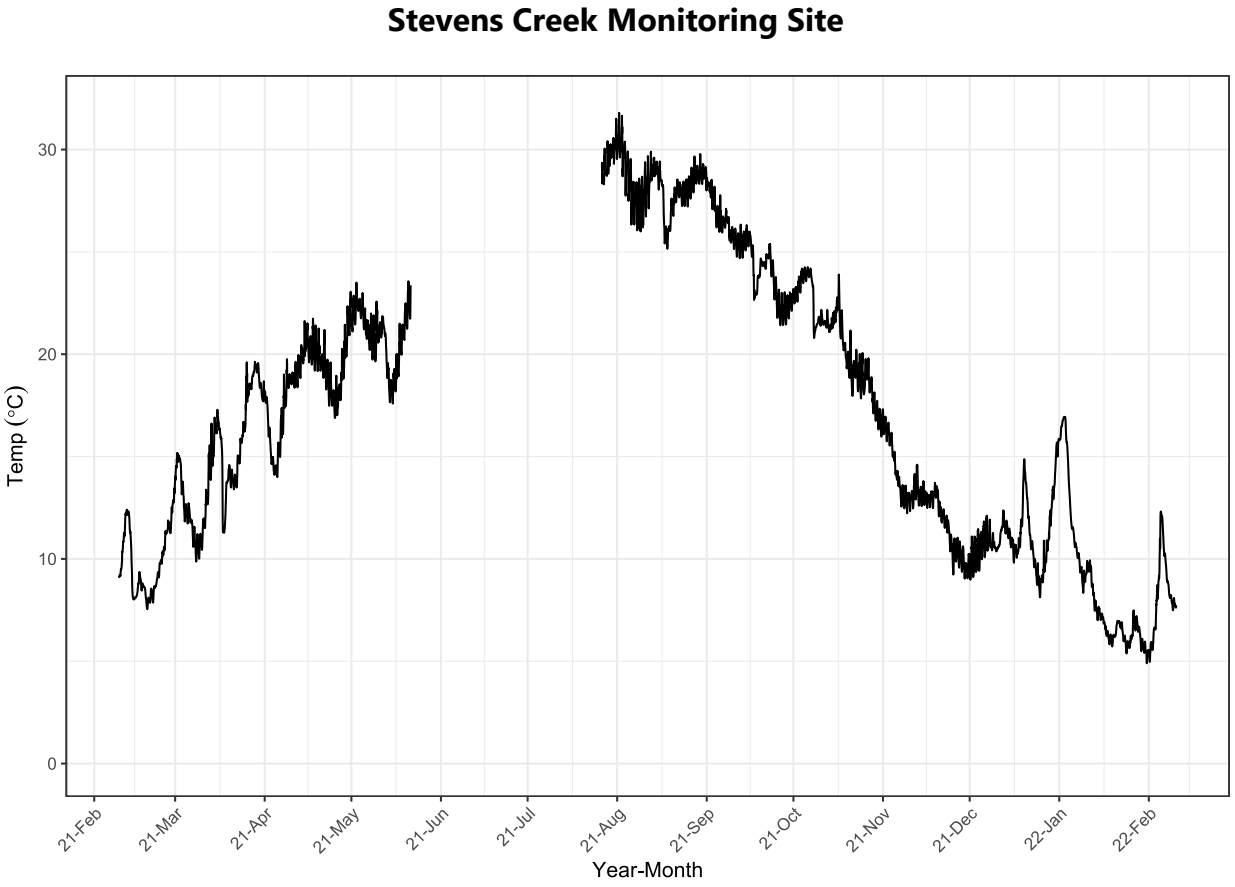
APPENDIX A

TEMPERATURE SERIES PLOTS

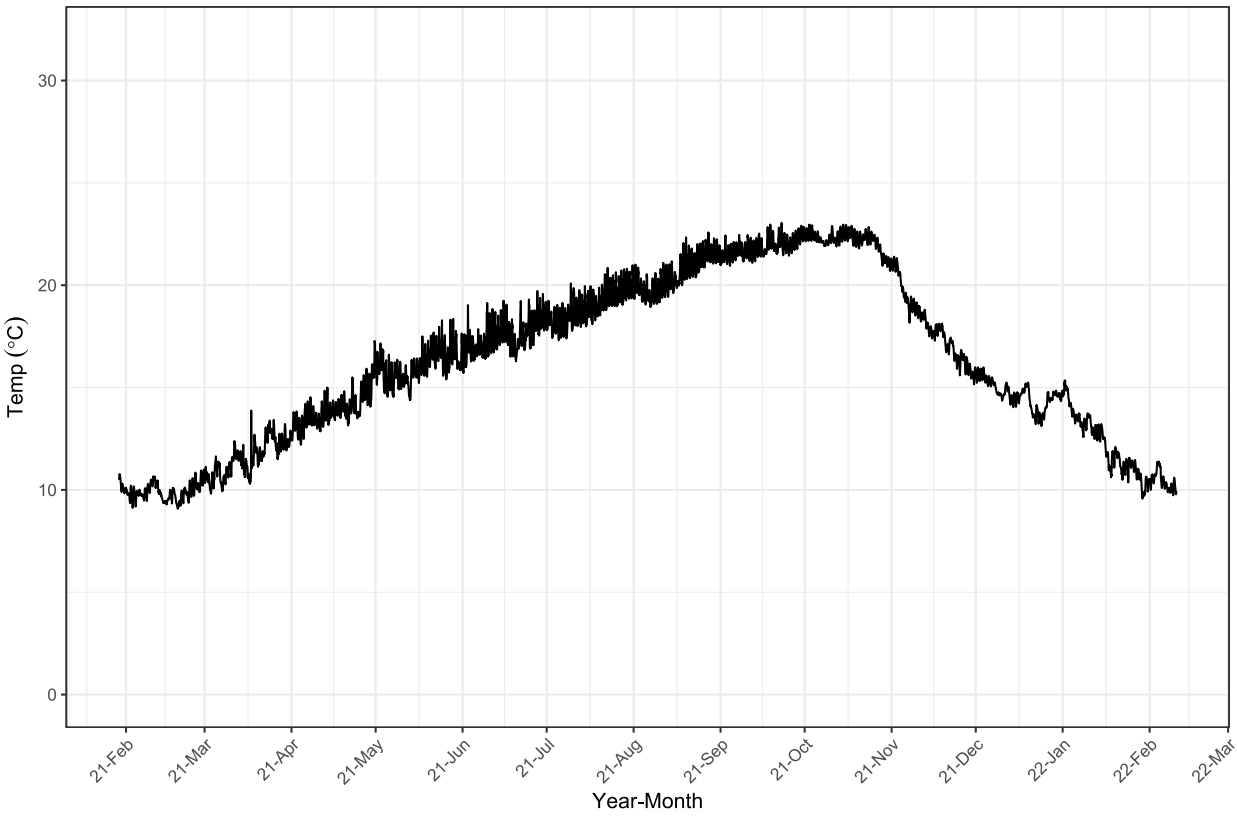

Thurmond Dam Tailrace
Temp (°C)
30
20
10
0
21-Jan
21-Feb
21-Mar
21-Apr
21-May
21-Jun
21-Jul
21-Aug
21-Sep
21-Oct
21-Nov
21-Dec
22-Jan
Year-Month

Deep Step Monitoring Site

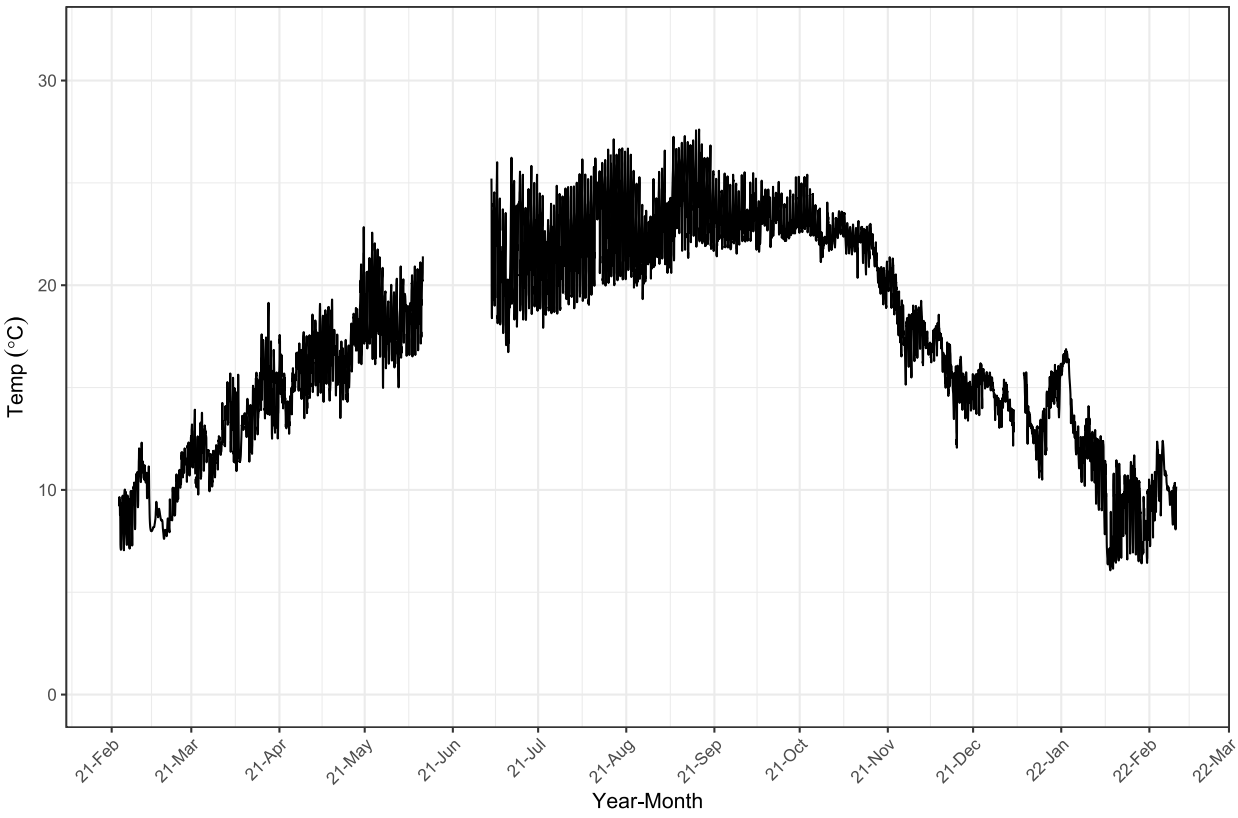



Stevens Creek Monitoring Site
Temp (°C)
30
20
10
0
21-Feb
21-Mar
21-Apr
21-May
21-Jun
21-Jul
21-Aug
21-Sep
21-Oct
21-Nov
21-Dec
22-Jan
22-Feb
Year-Month

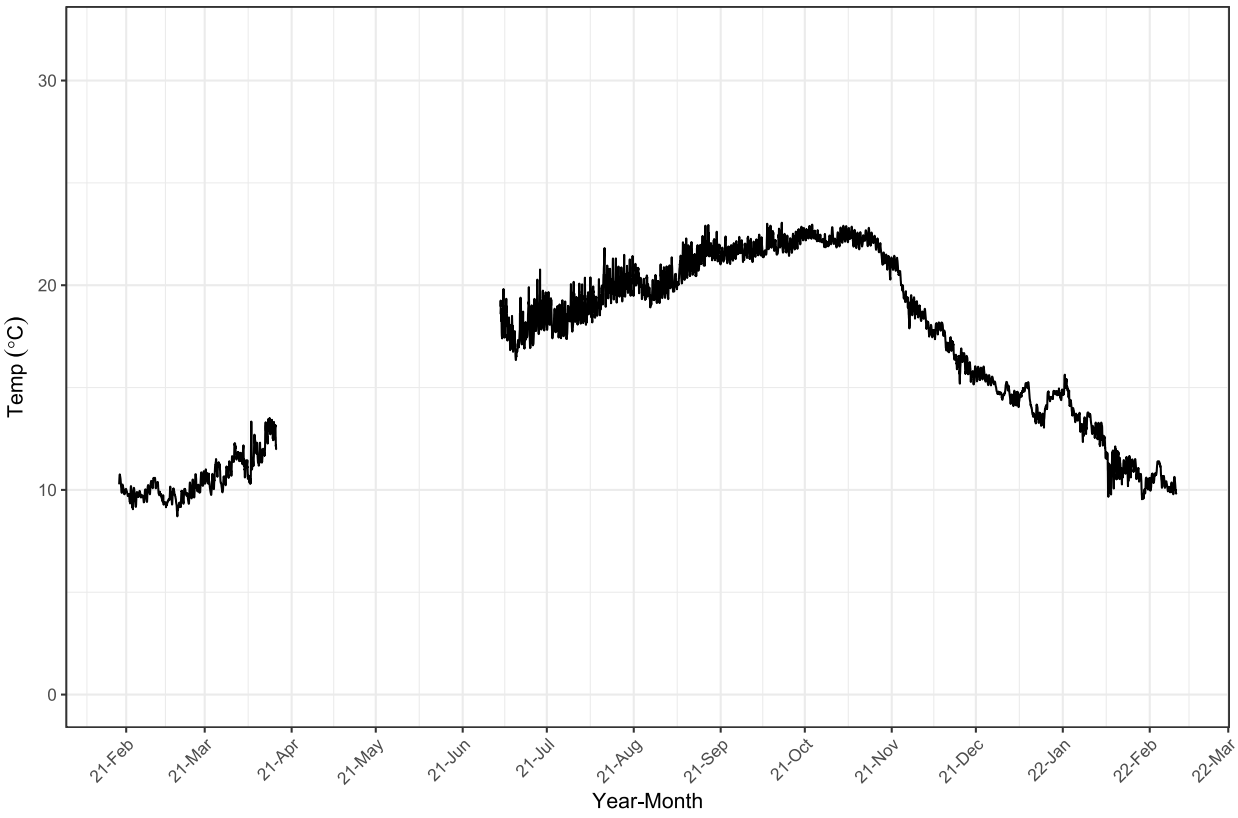
Above Powerhouse Monitoring Site



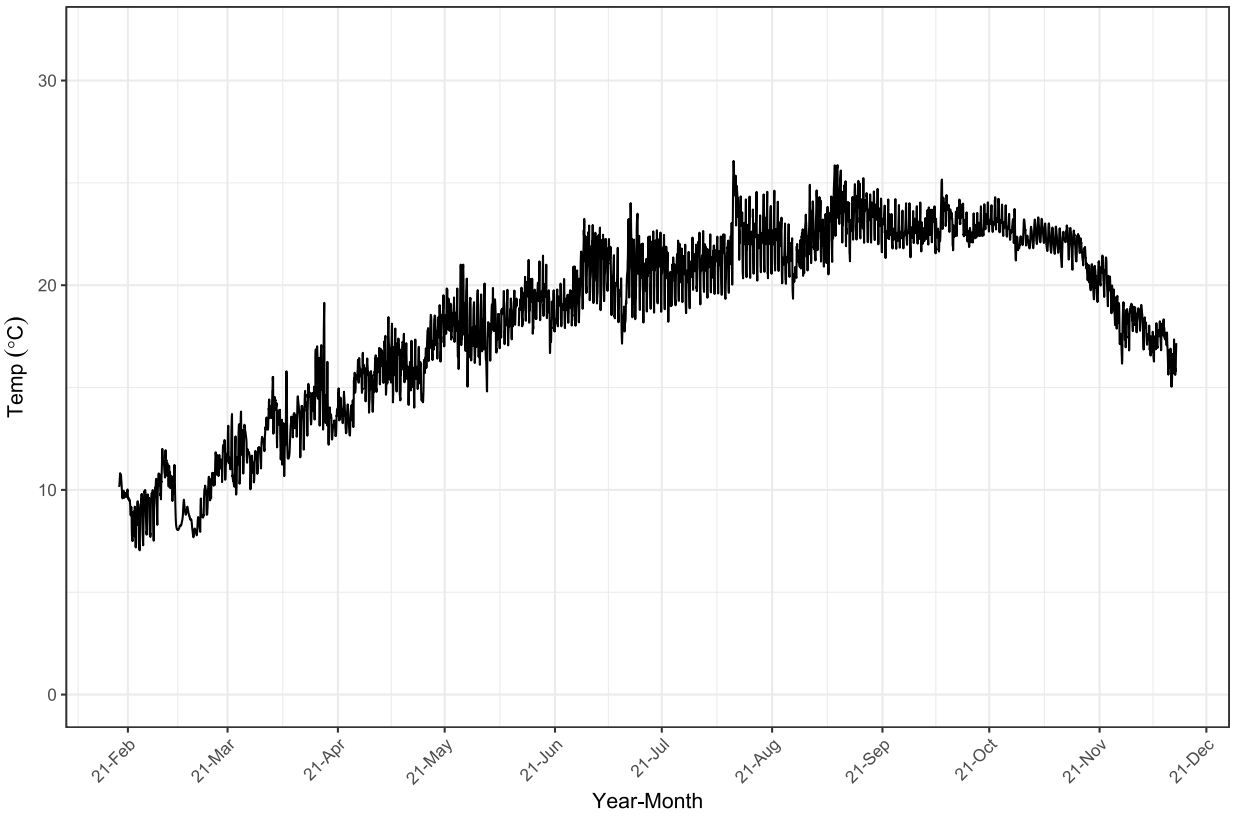
Above Spillway Monitoring Site



Below Powerhouse Monitoring Site

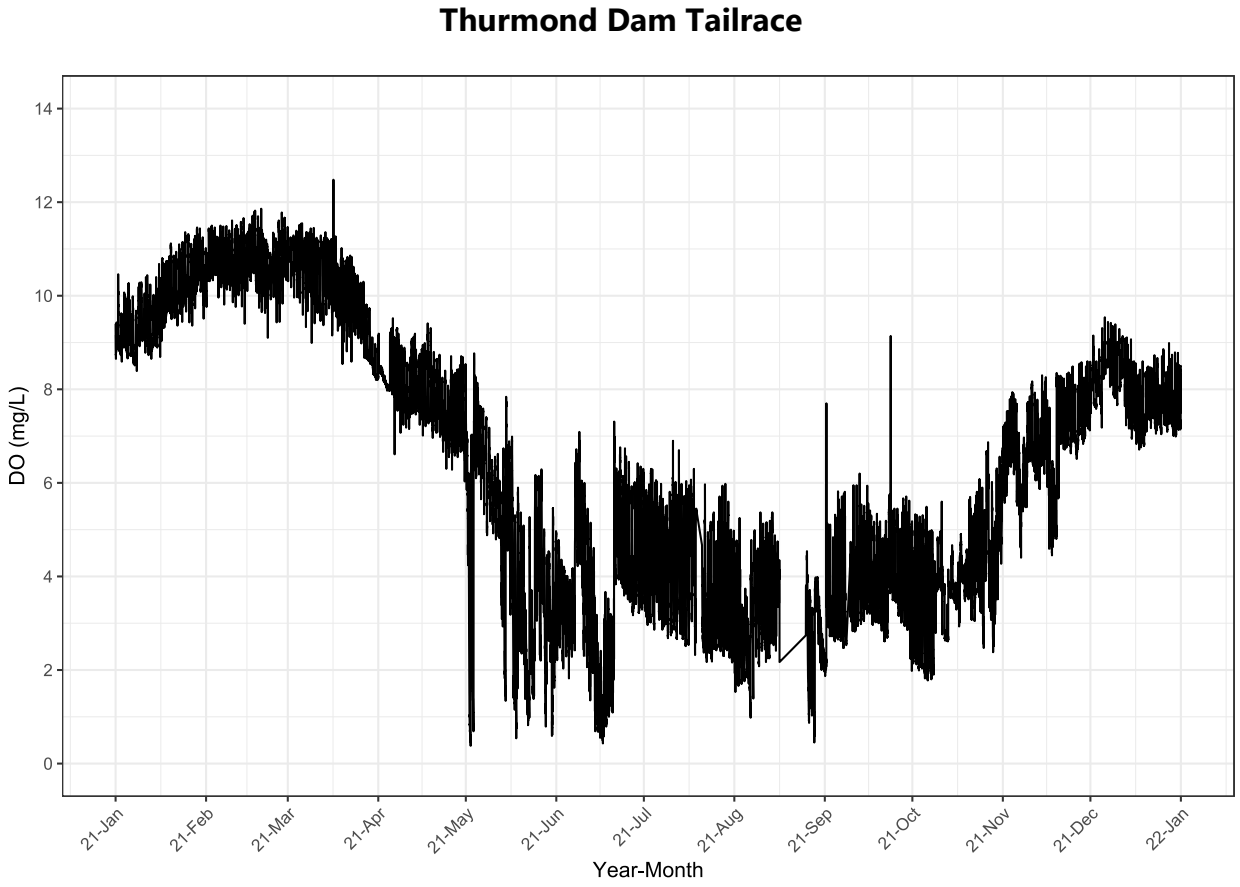


Below Spillway Monitoring Site

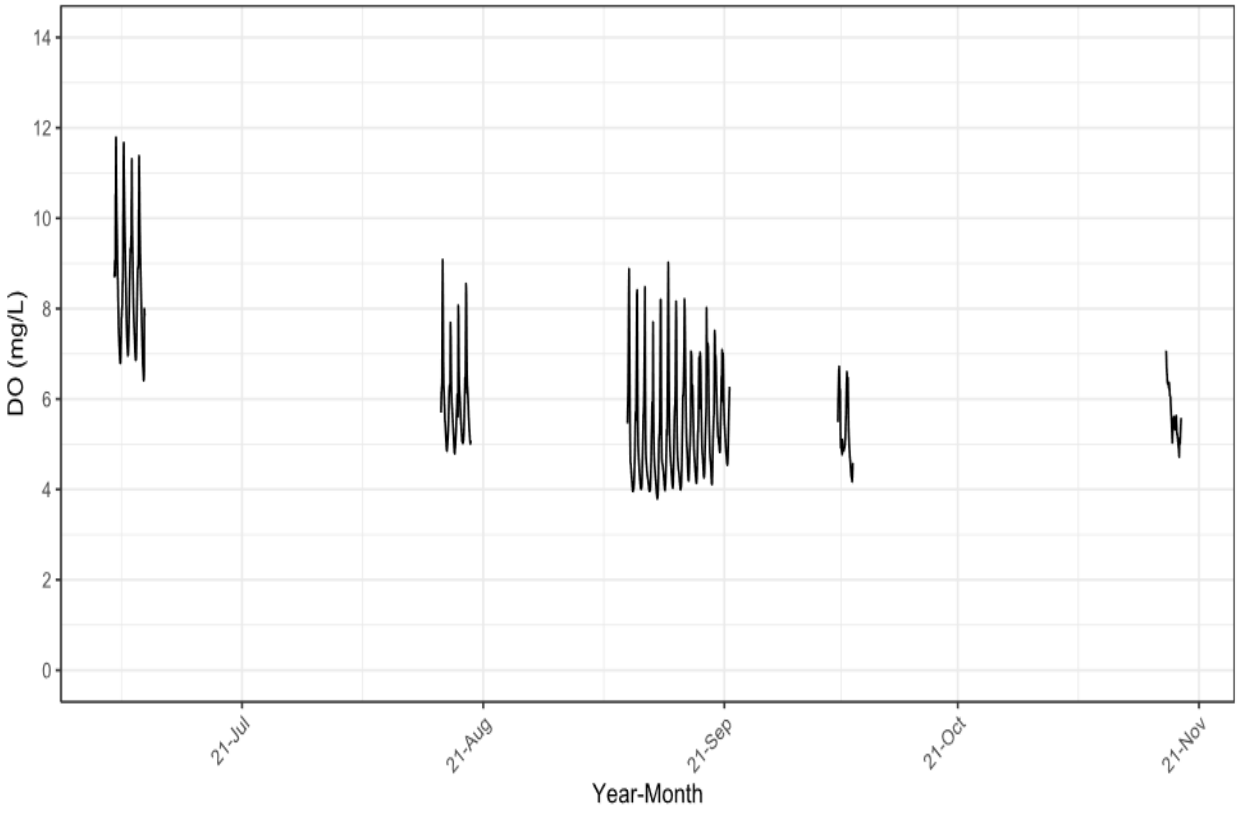


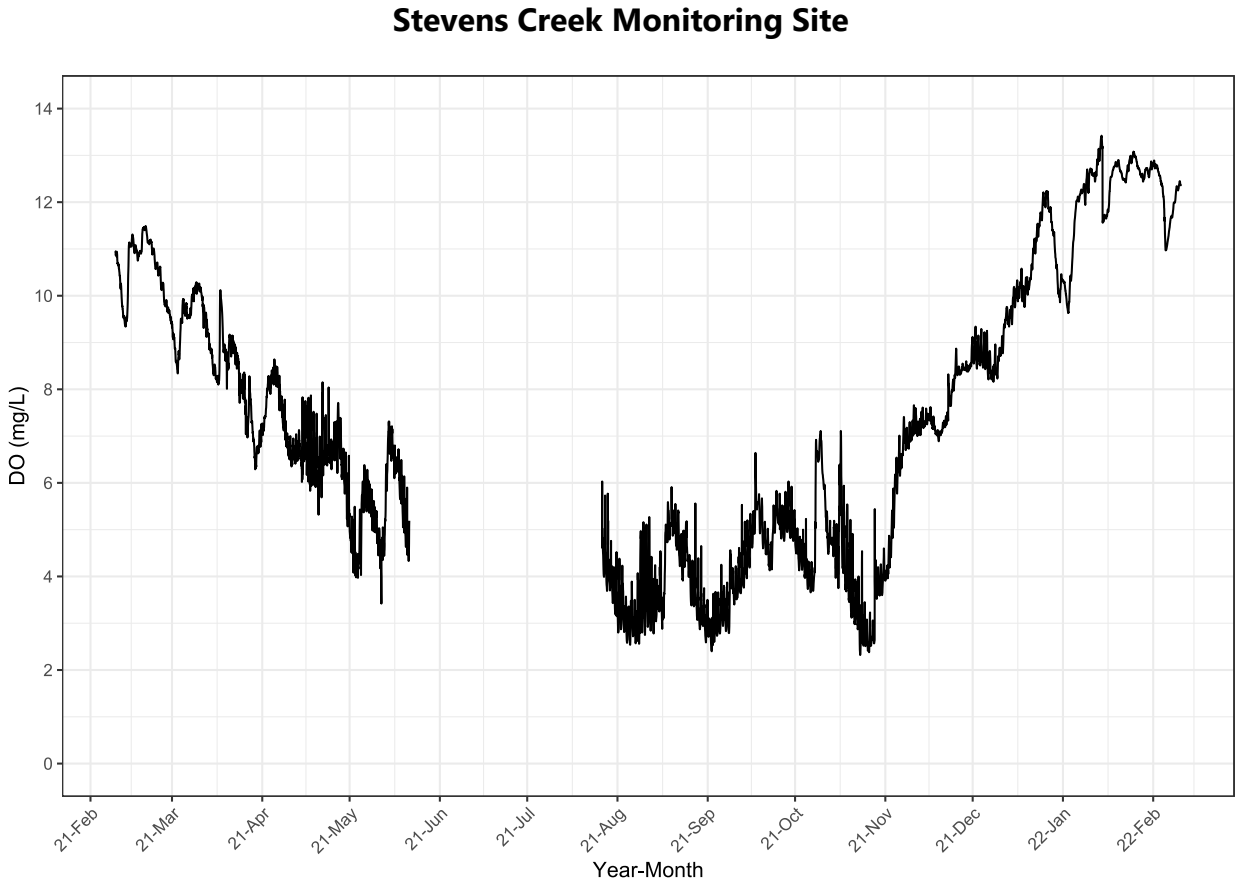
APPENDIX B

DISSOLVED OXYGEN SERIES PLOTS

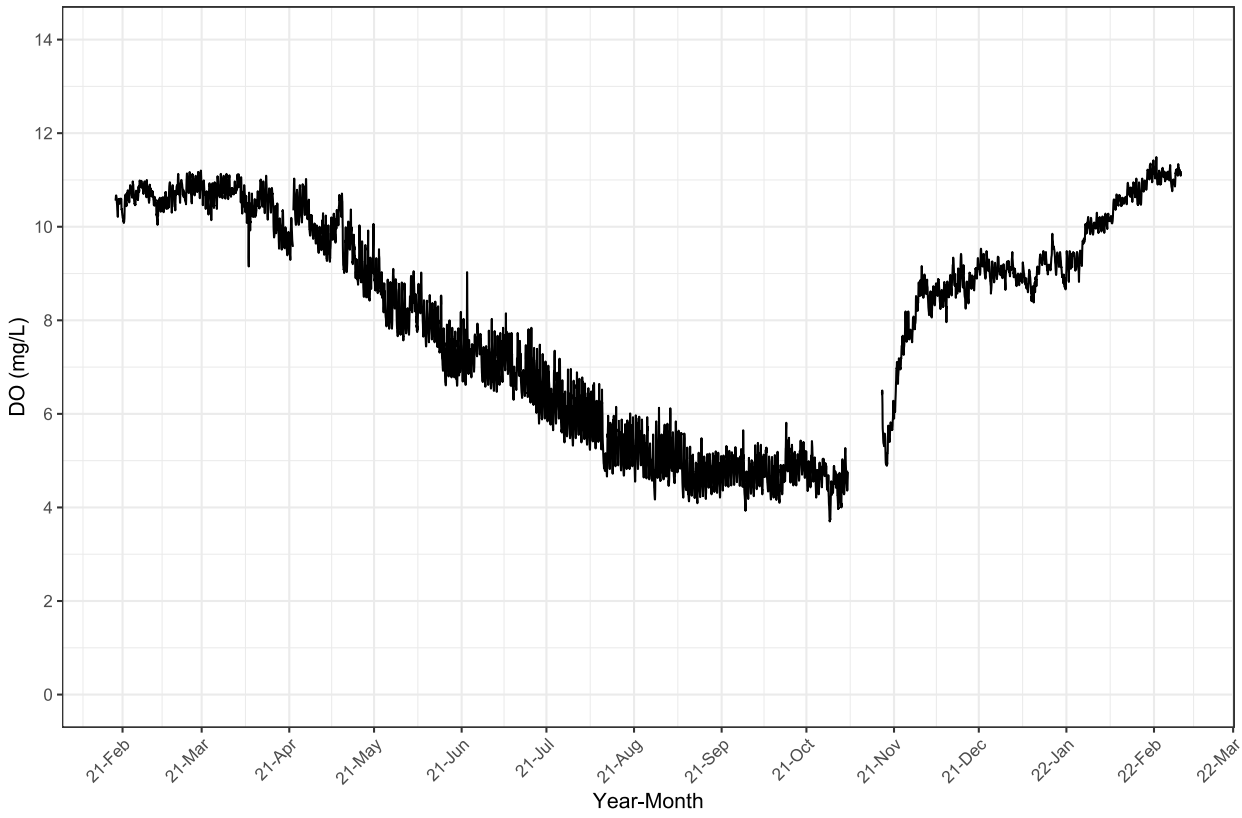

Thurmond Dam Tailrace
DO (mg/L)
0
2
4
6
8
10
12
14
21-Jan
21-Feb
21-Mar
21-Apr
21-May
21-Jun
21-Jul
21-Aug
21-Sep
21-Oct
21-Nov
21-Dec
22-Jan
Year-Month

Deep Step Monitoring Site

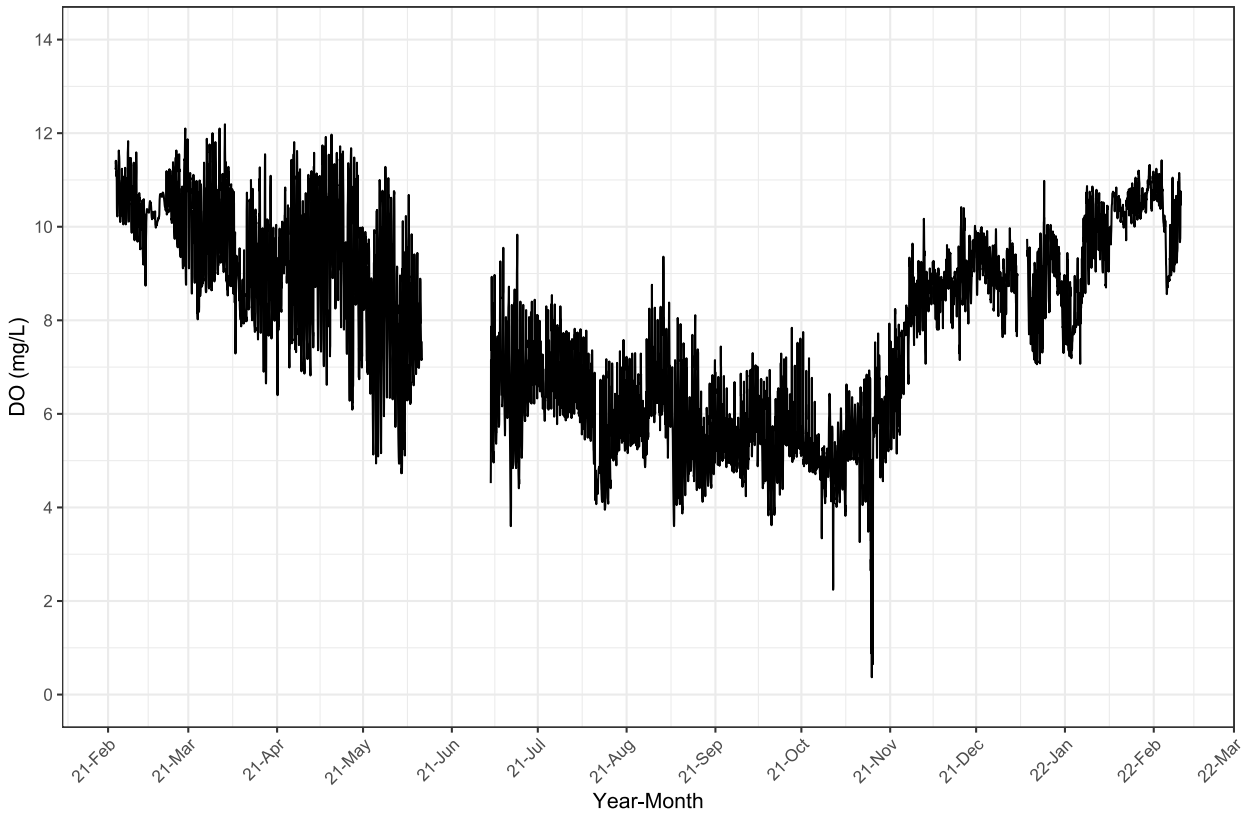



Stevens Creek Monitoring Site
DO (mg/L)
0
2
4
6
8
10
12
14
21-Feb
21-Mar
21-Apr
21-May
21-Jun
21-Jul
21-Aug
21-Sep
21-Oct
21-Nov
21-Dec
22-Jan
22-Feb
Year-Month

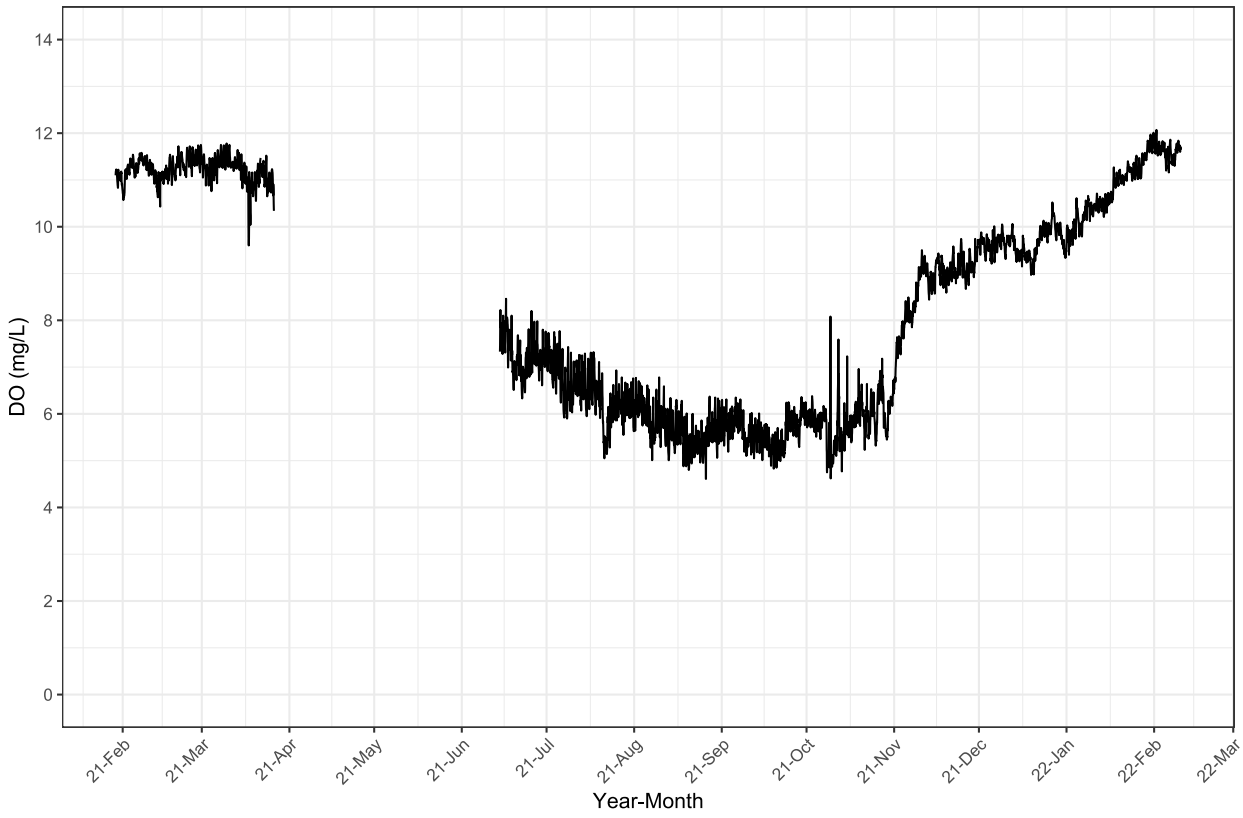
Above Powerhouse Monitoring Site

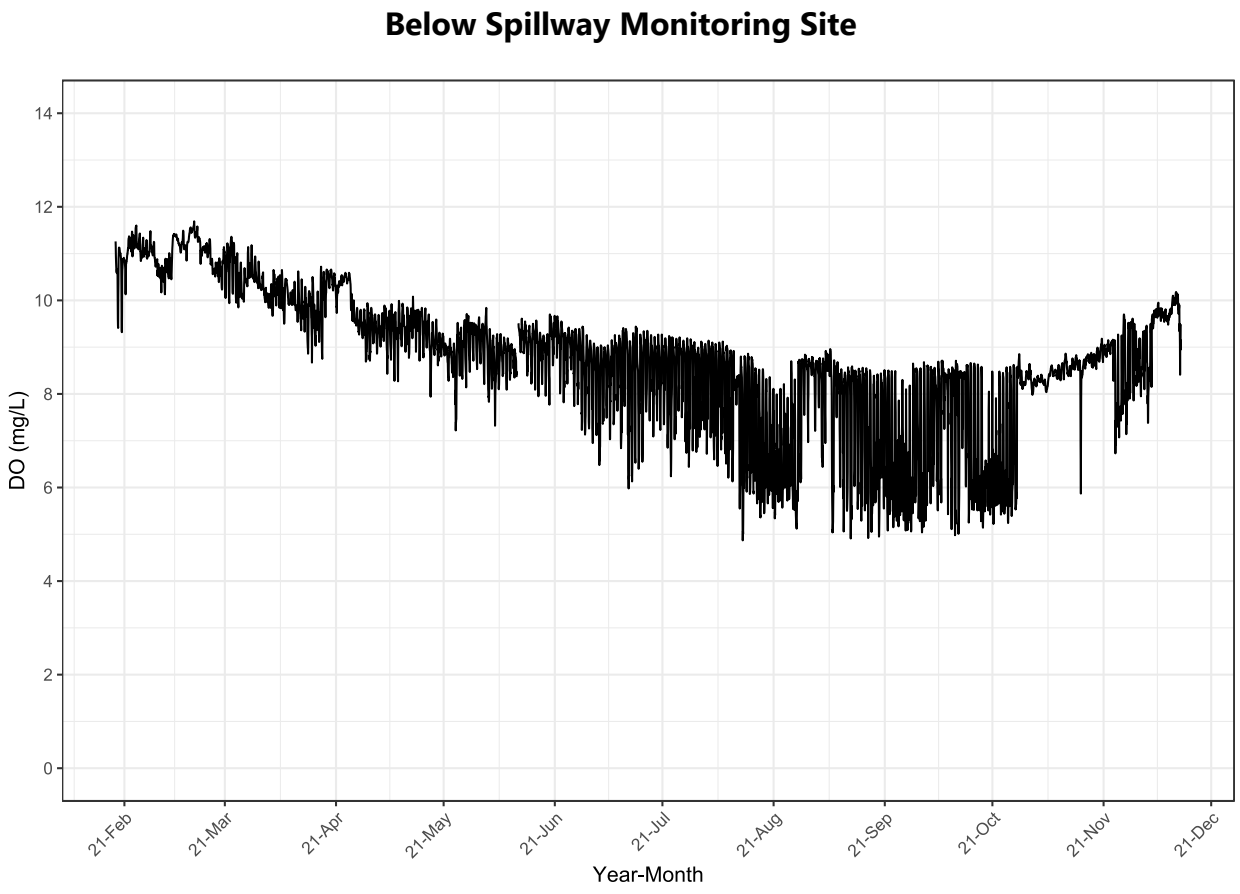


Above Spillway Monitoring Site



Below Powerhouse Monitoring Site

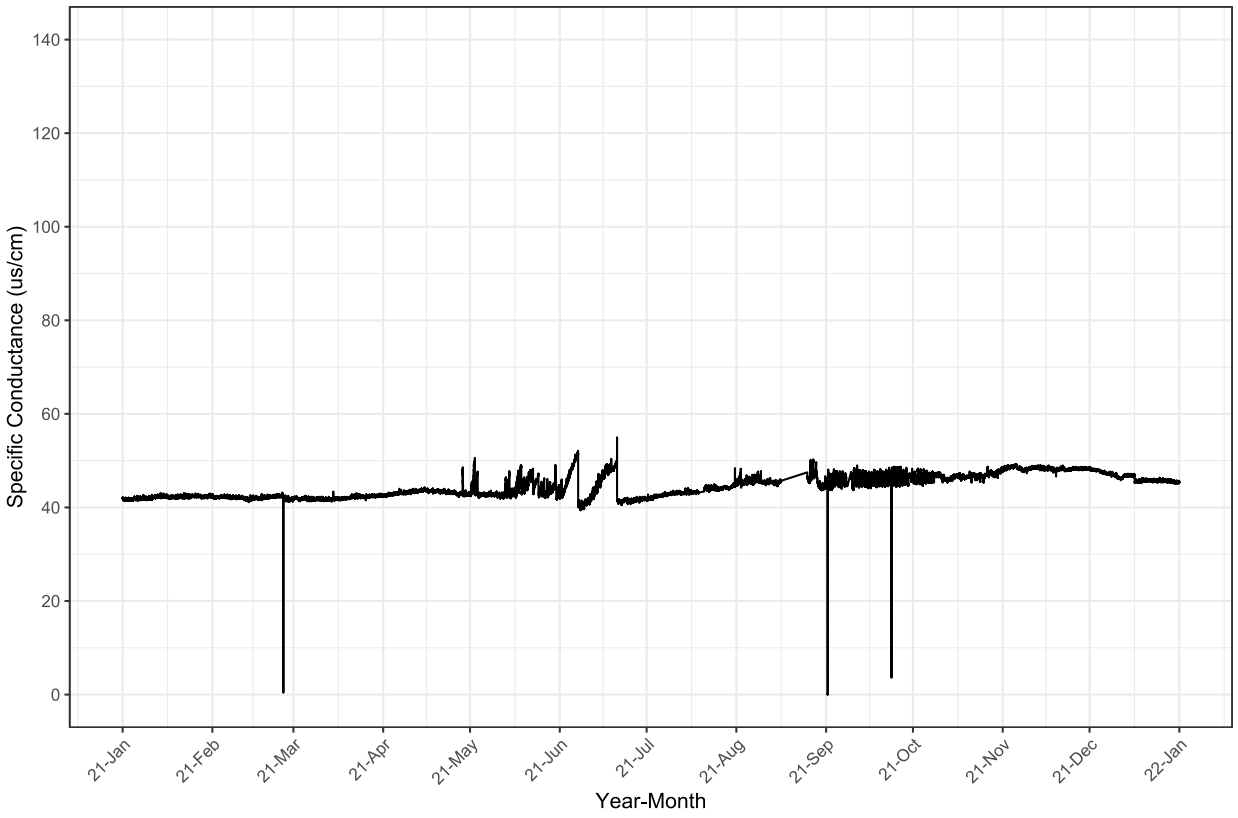


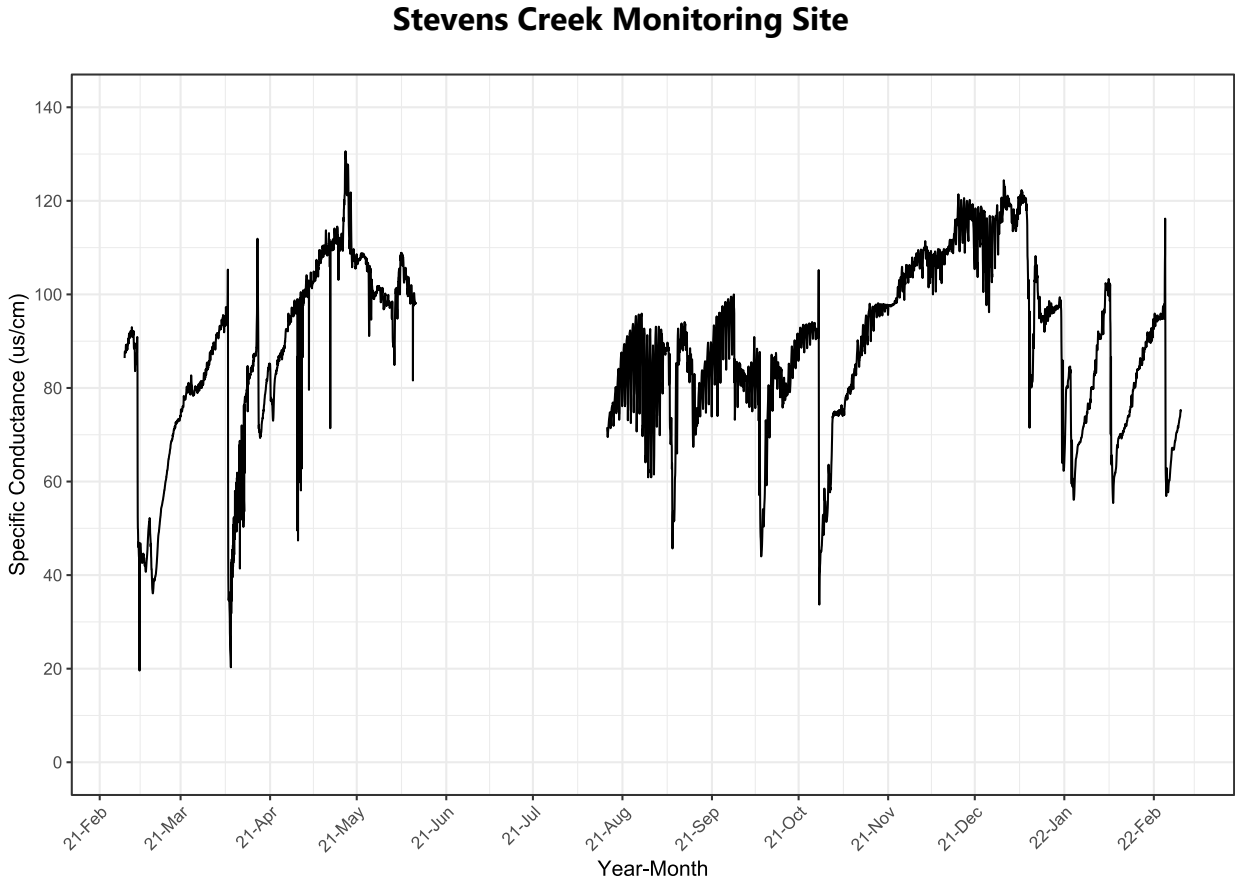

Below Spillway Monitoring Site
DO (mg/L)
14
12
10
8
6
4
2
0
21-Feb
21-Mar
21-Apr
21-May
21-Jun
21-Jul
21-Aug
21-Sep
21-Oct
21-Nov
21-Dec
Year-Month

APPENDIX C

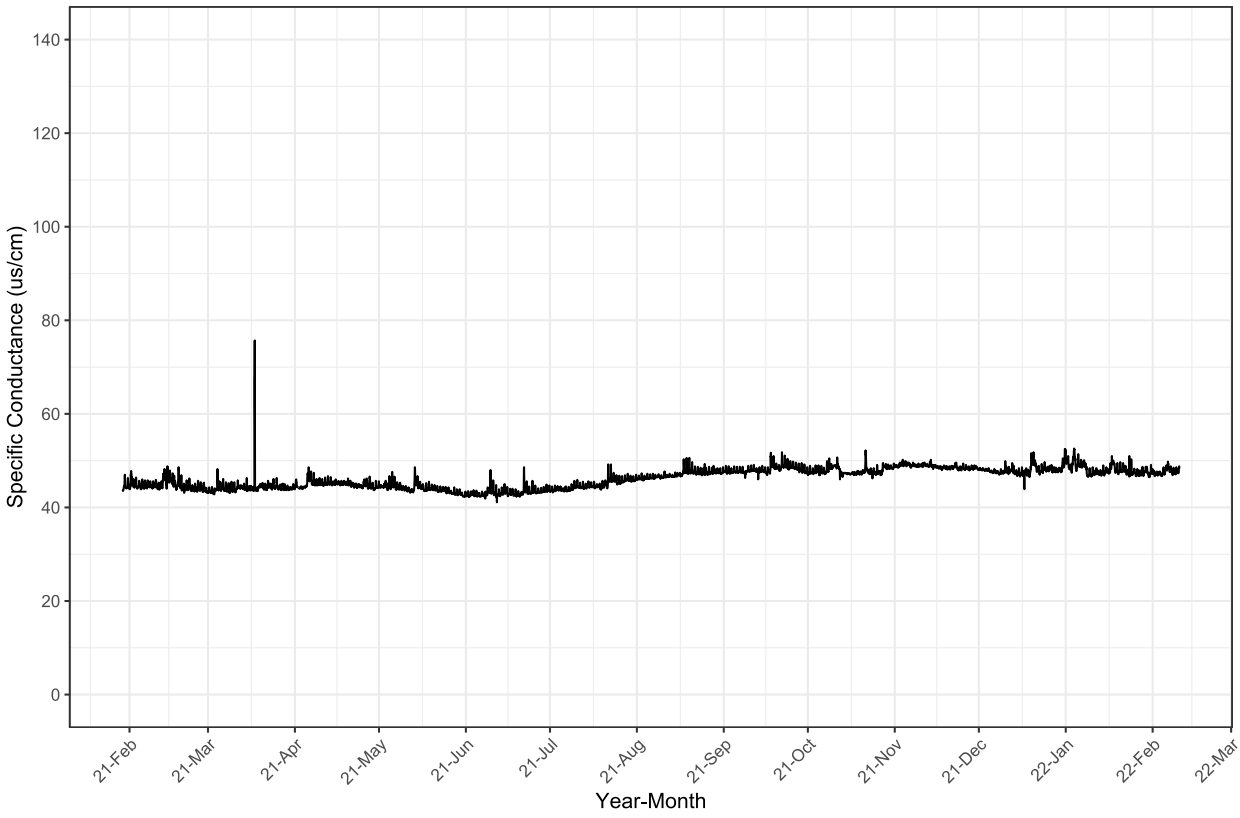
SPECIFIC CONDUCTANCE SERIES PLOTS

Thurmond Dam Tailrace

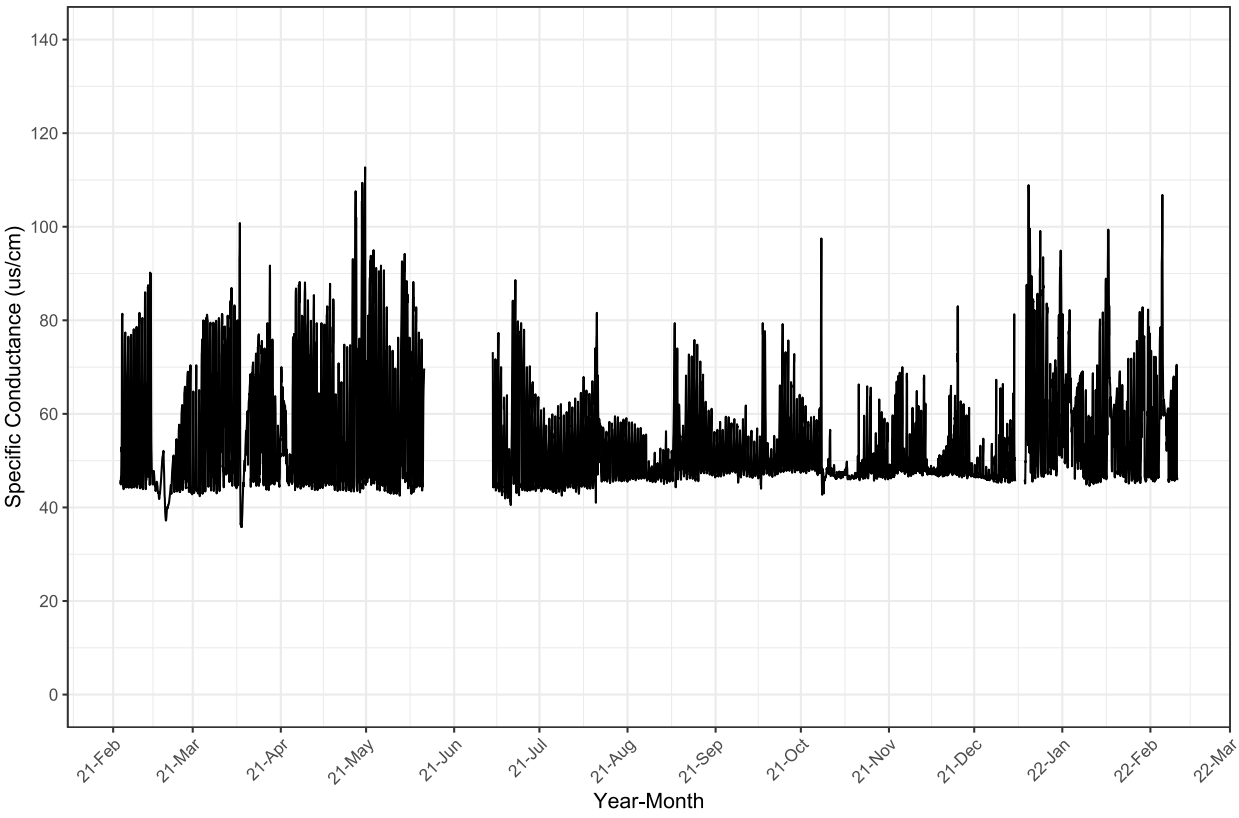



Stevens Creek Monitoring Site
Specific Conductance (us/cm)
0
20
40
60
80
100
120
140
21-Feb
21-Mar
21-Apr
21-May
21-Jun
21-Jul
21-Aug
21-Sep
21-Oct
21-Nov
21-Dec
22-Jan
22-Feb
Year-Month

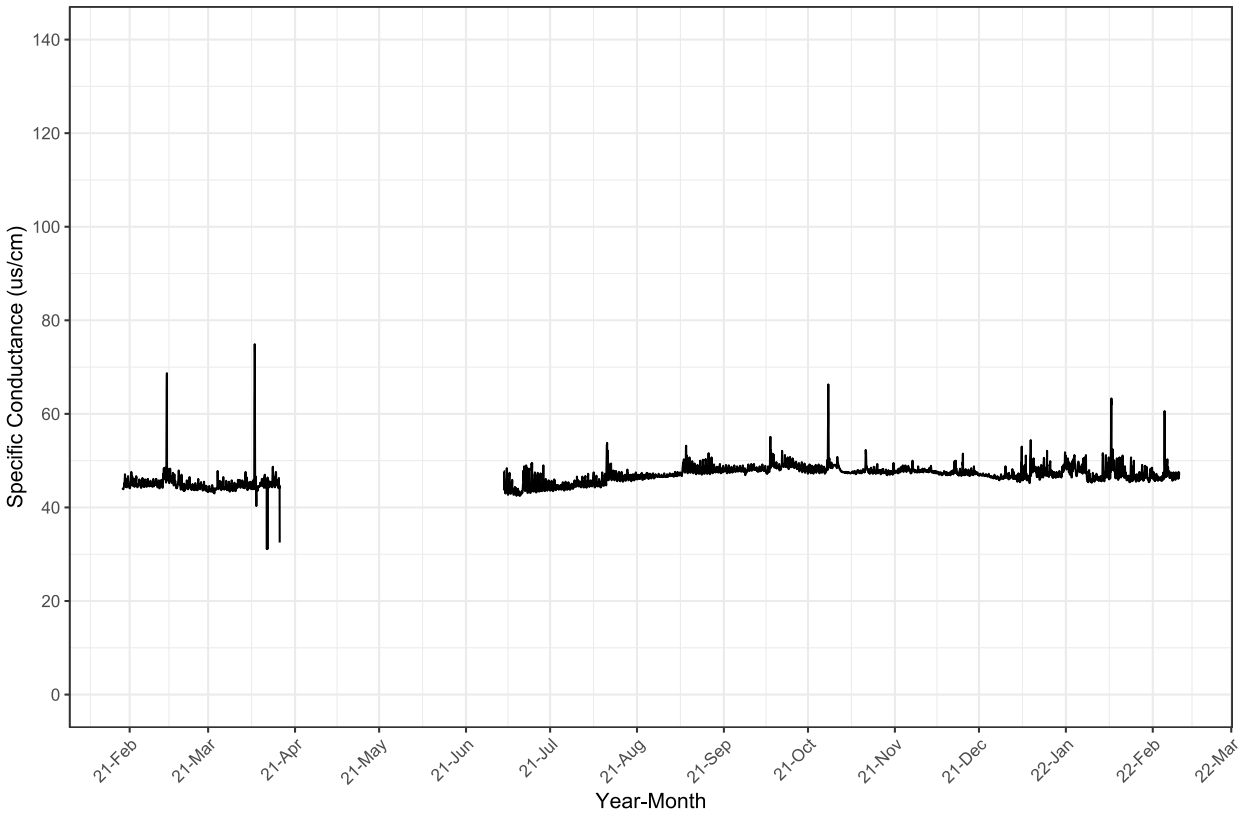
Above Powerhouse Monitoring Site



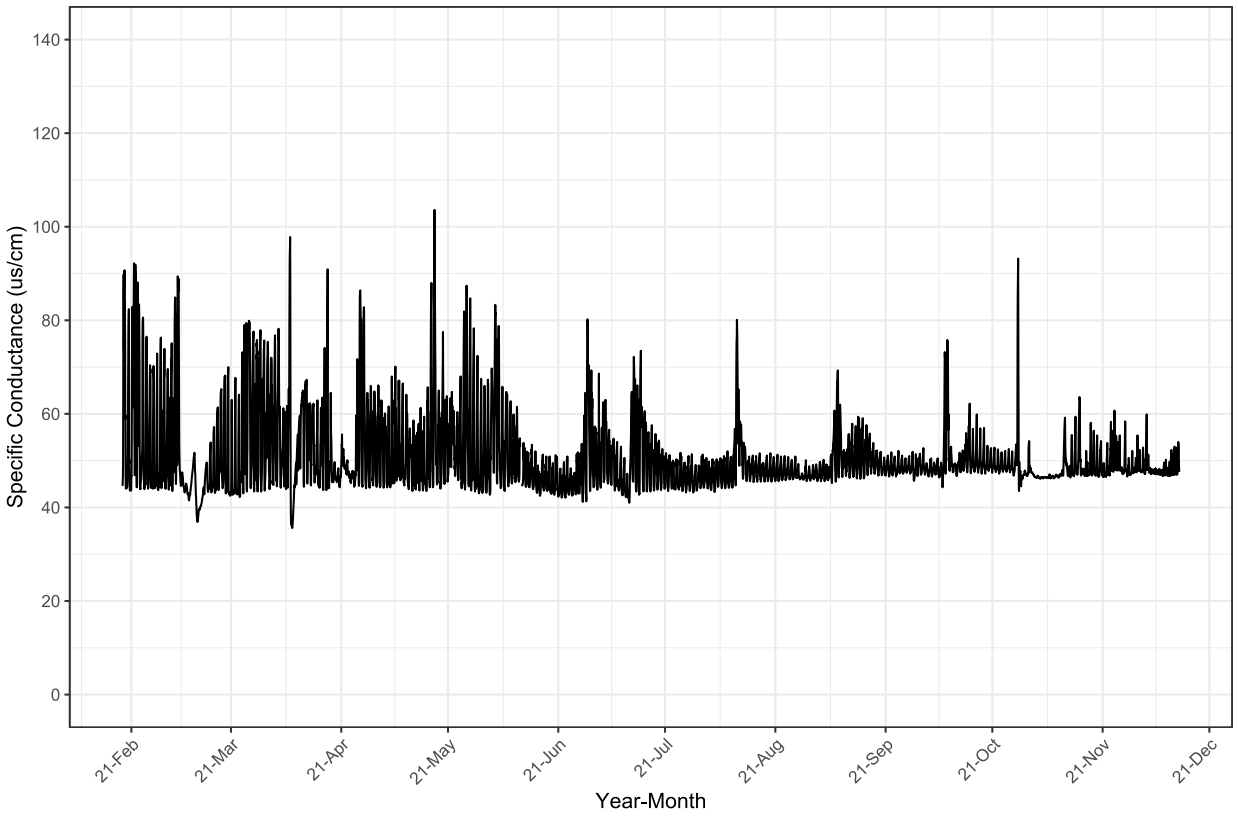
Above Spillway Monitoring Site



Below Powerhouse Monitoring Site



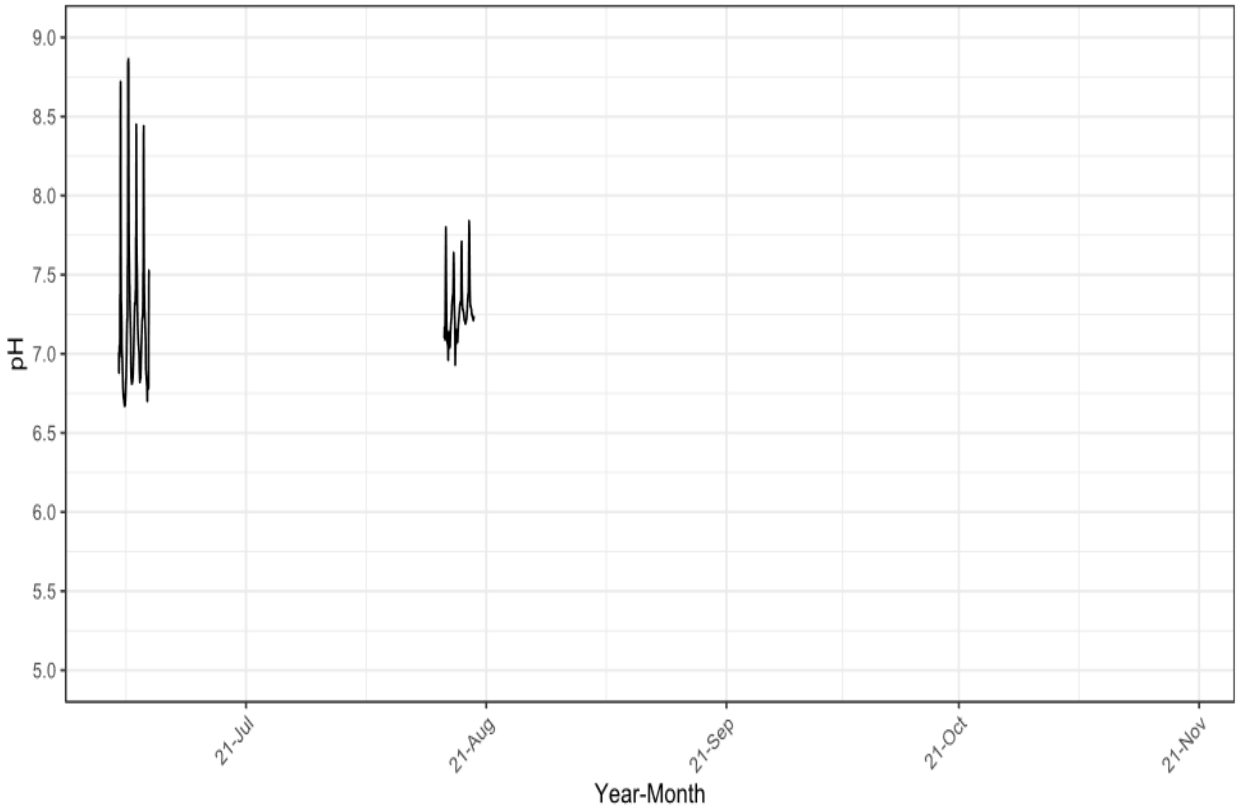
Below Spillway Monitoring Site

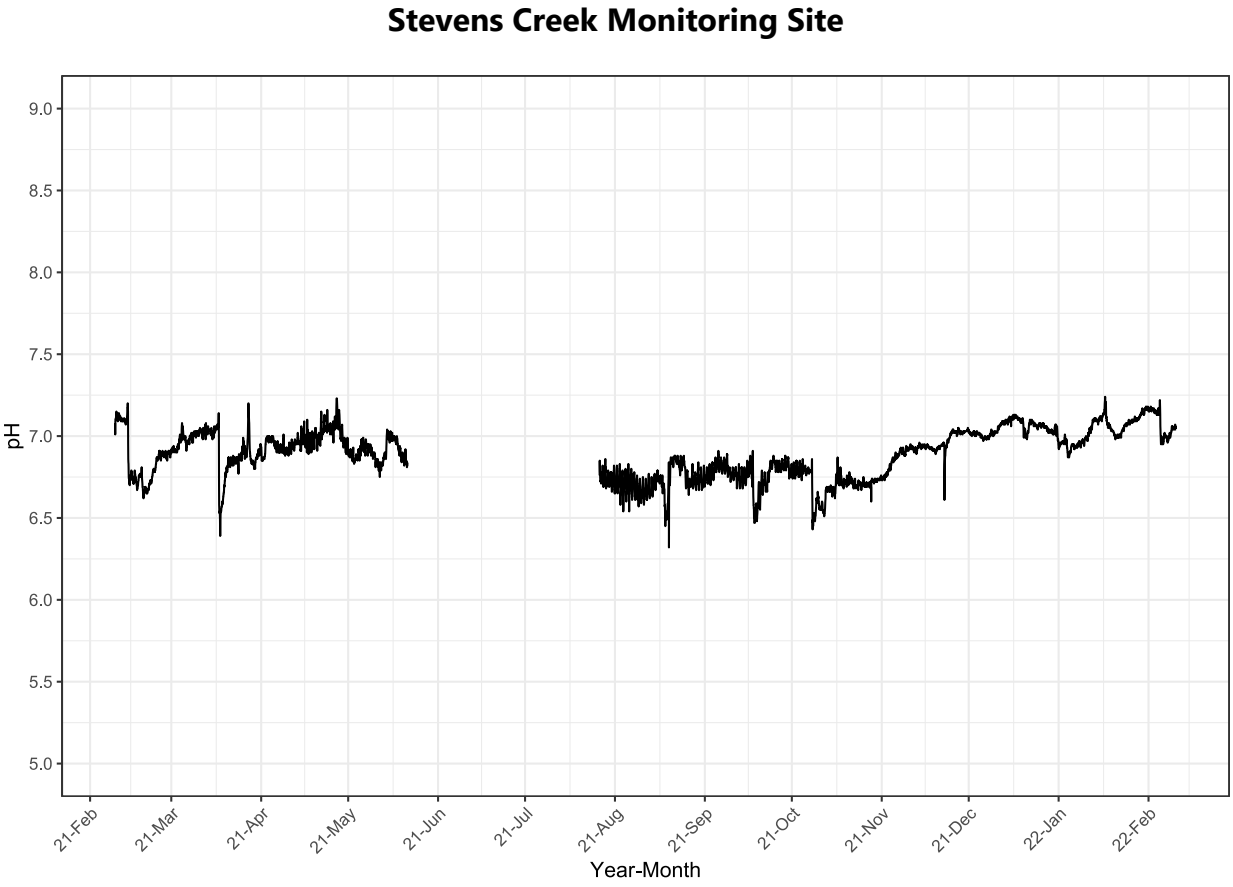


APPENDIX D

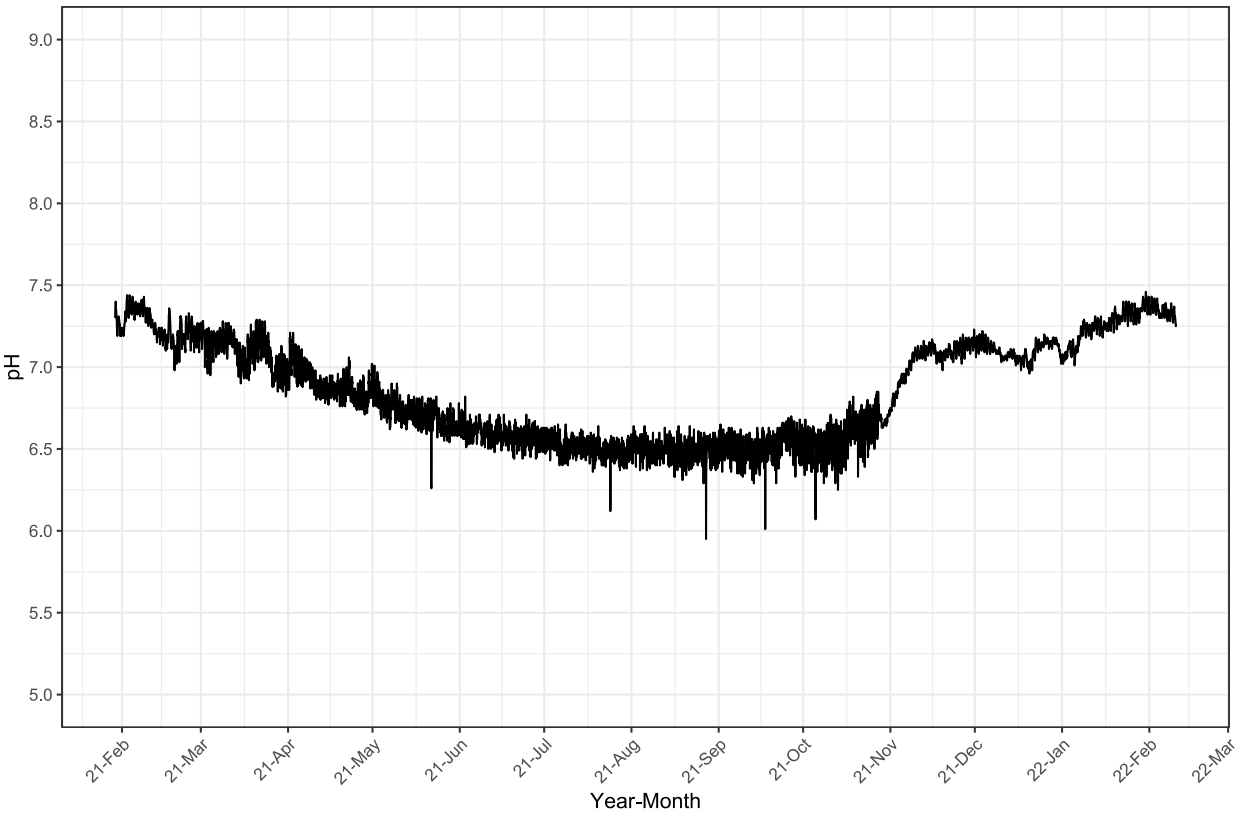
pH SERIES PLOTS

Deep Step Monitoring Site

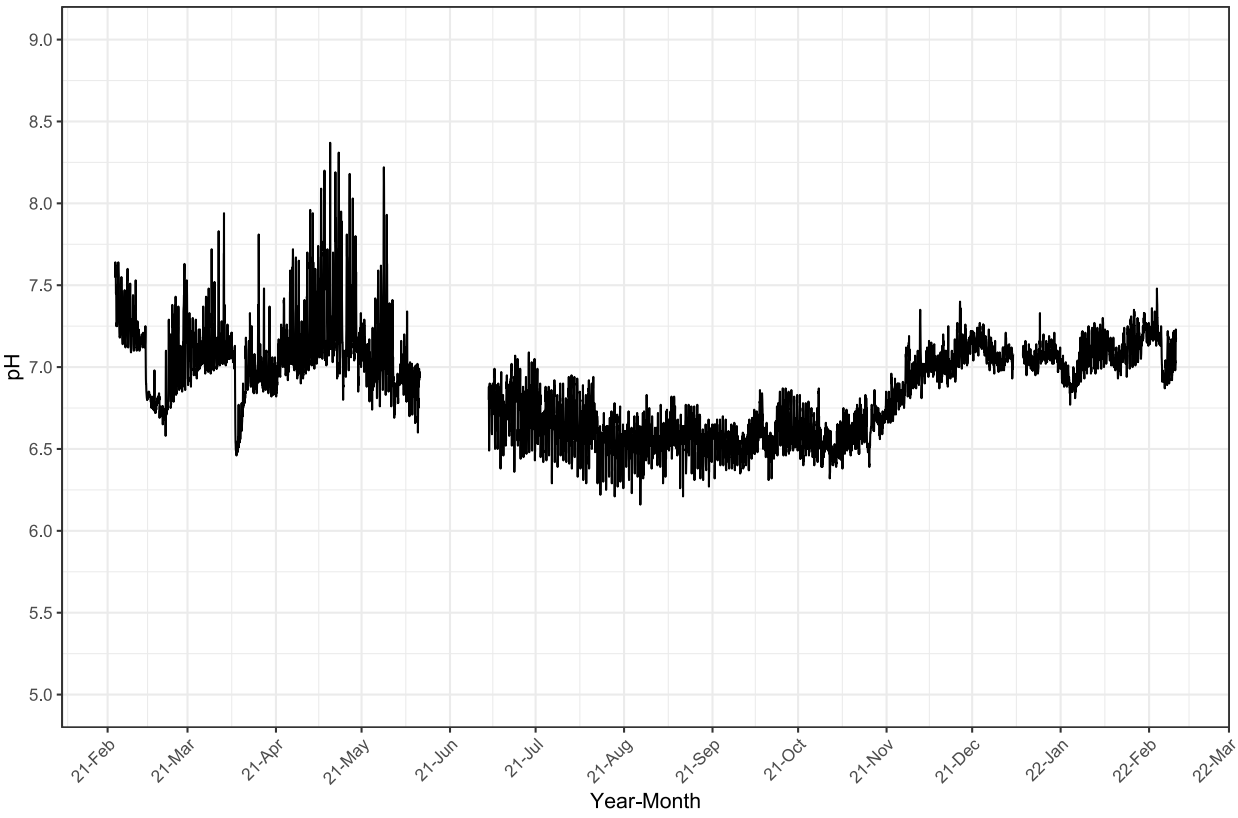



Stevens Creek Monitoring Site
pH
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
21-Feb
21-Mar
21-Apr
21-May
21-Jun
21-Jul
21-Aug
21-Sep
21-Oct
21-Nov
21-Dec
22-Jan
22-Feb
Year-Month

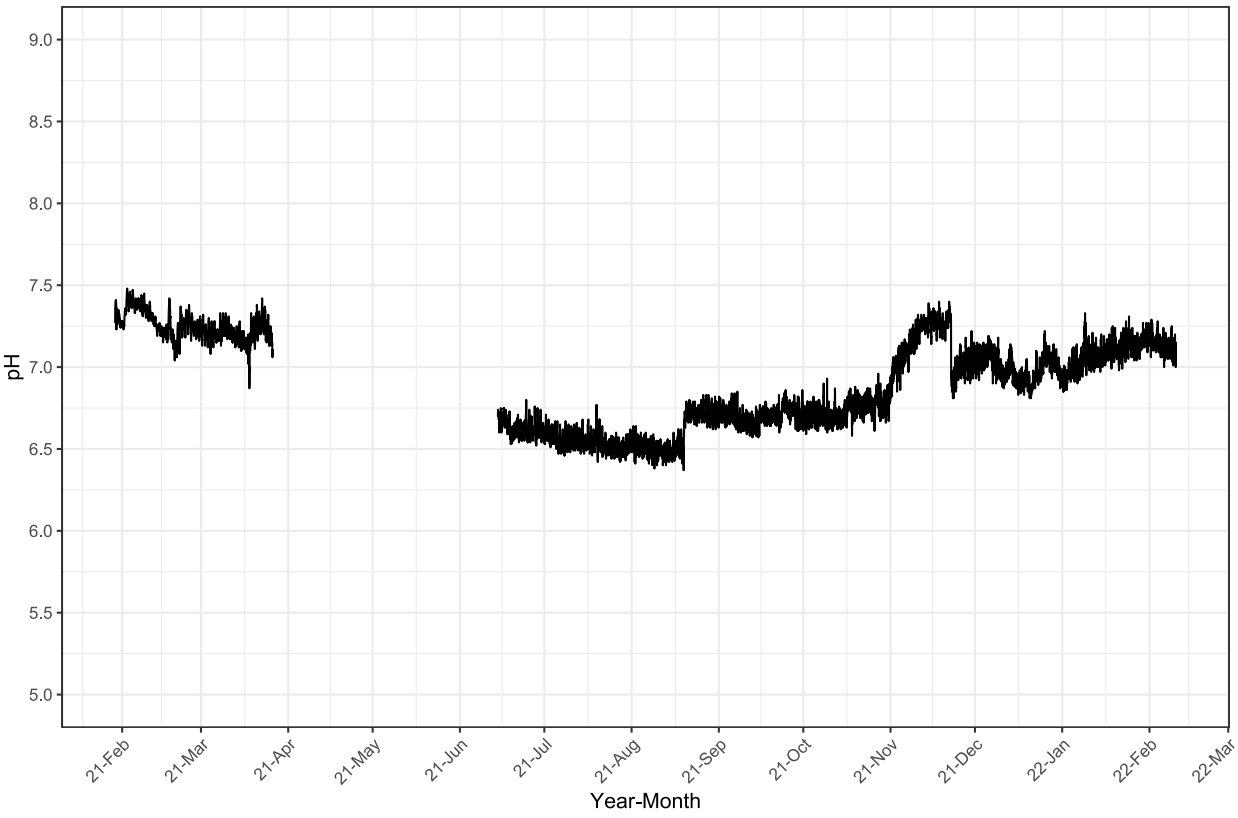
Above Powerhouse Monitoring Site



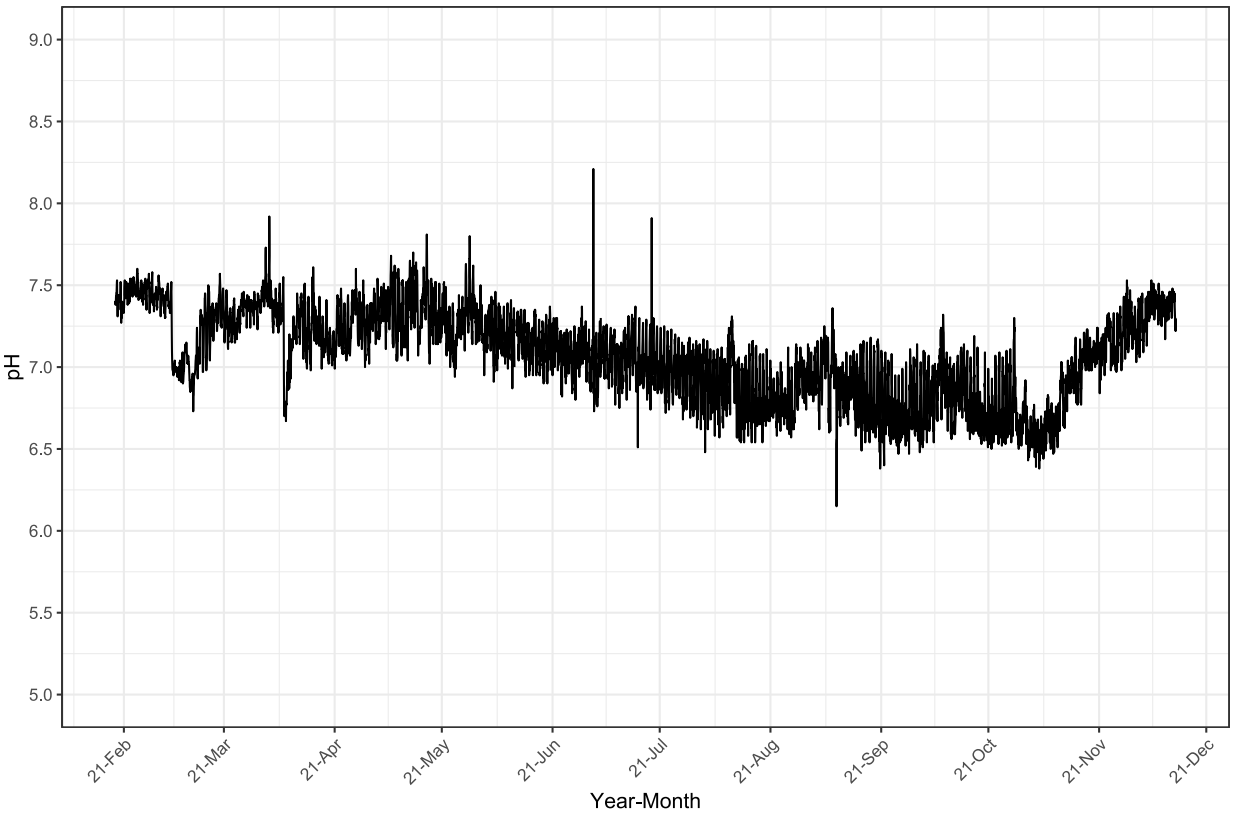
Above Spillway Monitoring Site



Below Powerhouse Monitoring Site

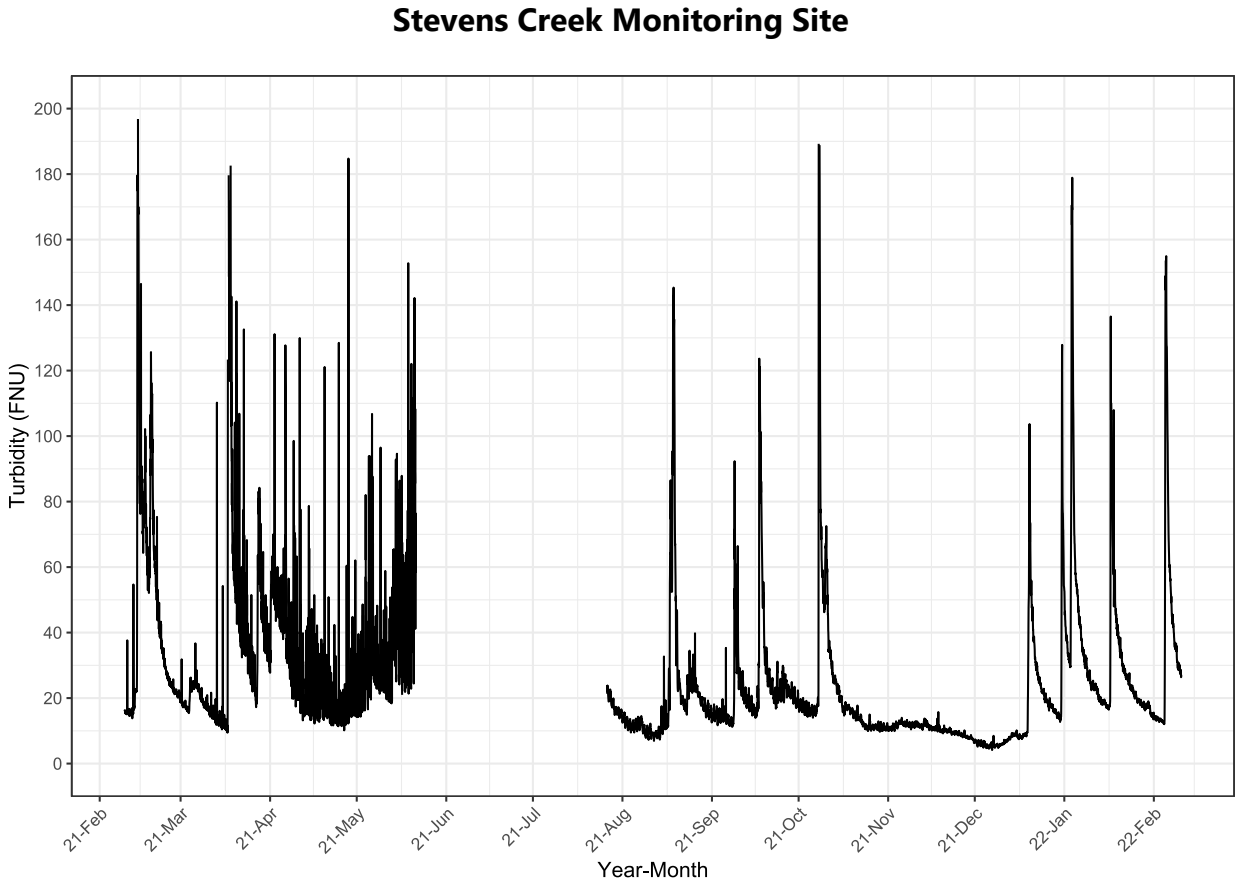


Below Spillway Monitoring Site

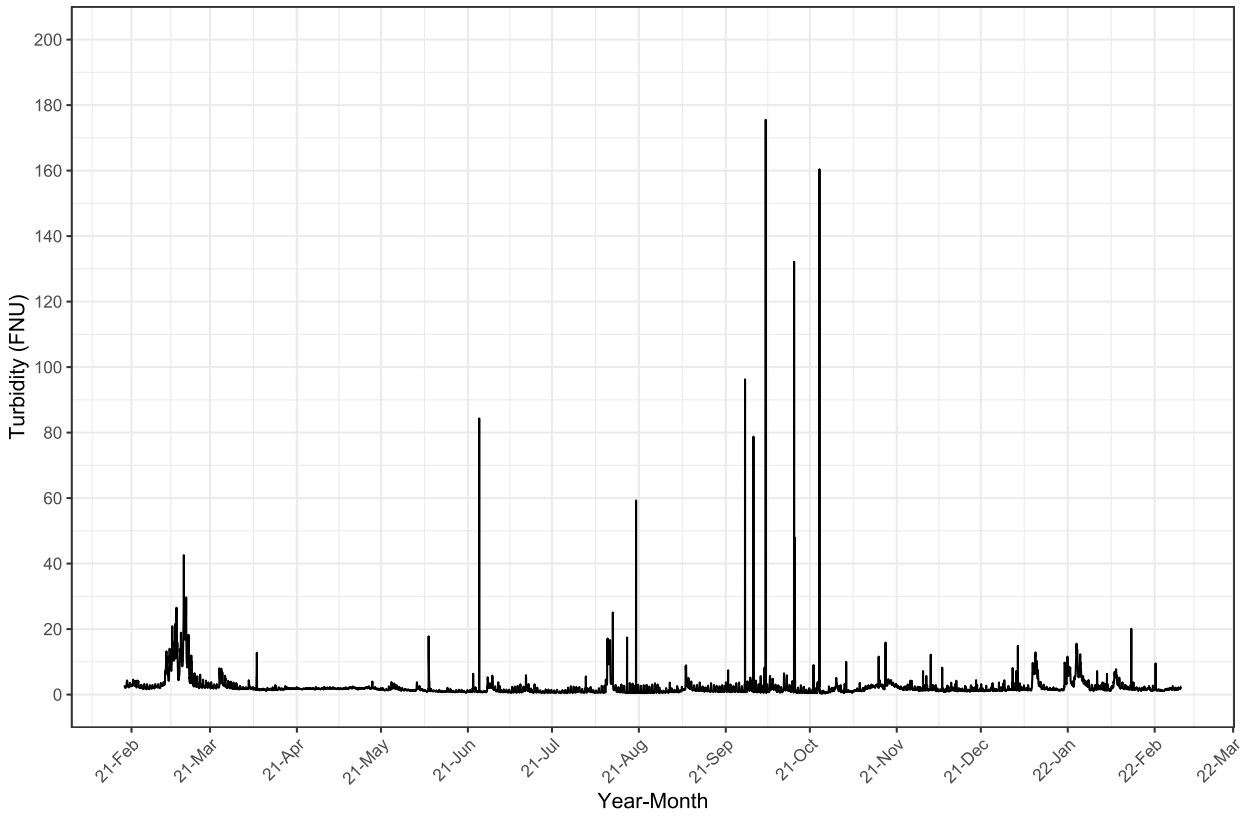


APPENDIX E

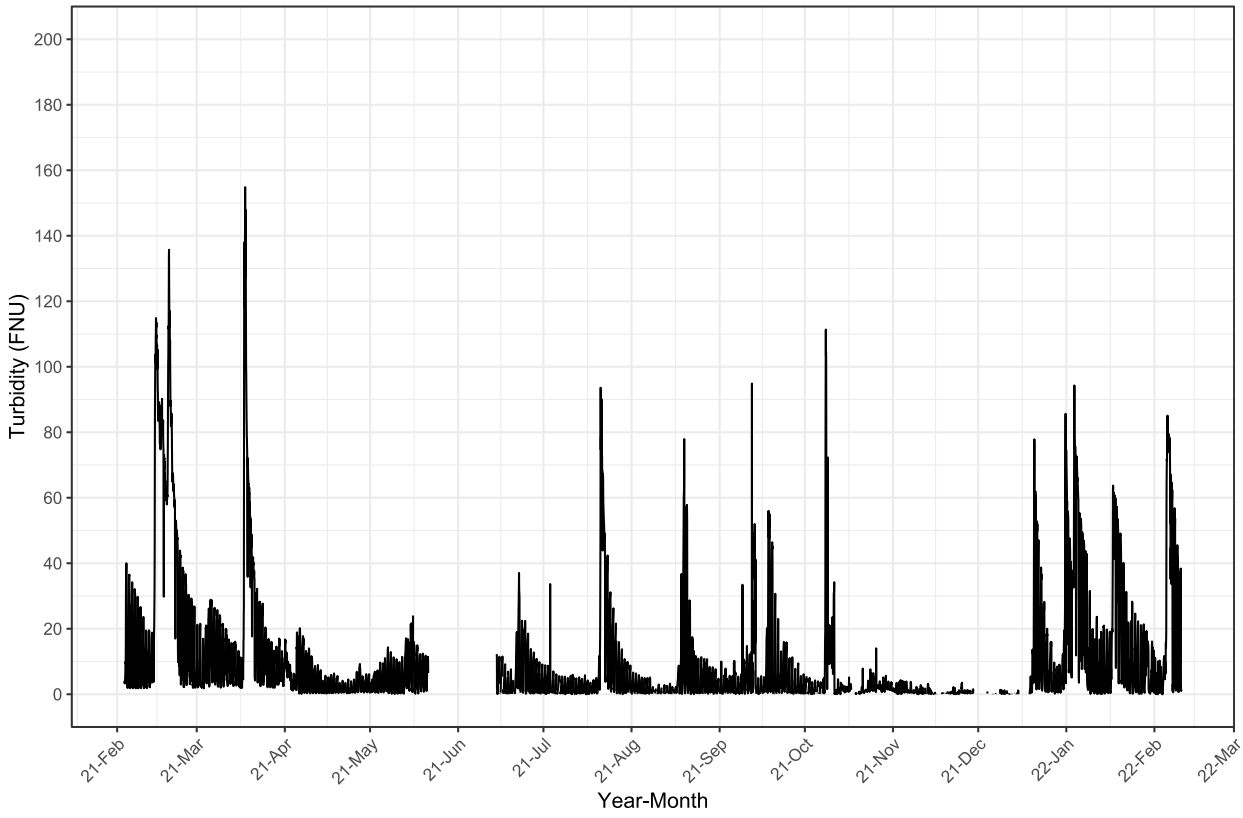
TURBIDITY SERIES PLOTS


Stevens Creek Monitoring Site
Turbidity (FNU)
0
20
40
60
80
100
120
140
160
180
200
21-Feb
21-Mar
21-Apr
21-May
21-Jun
21-Jul
21-Aug
21-Sep
21-Oct
21-Nov
21-Dec
22-Jan
22-Feb
Year-Month

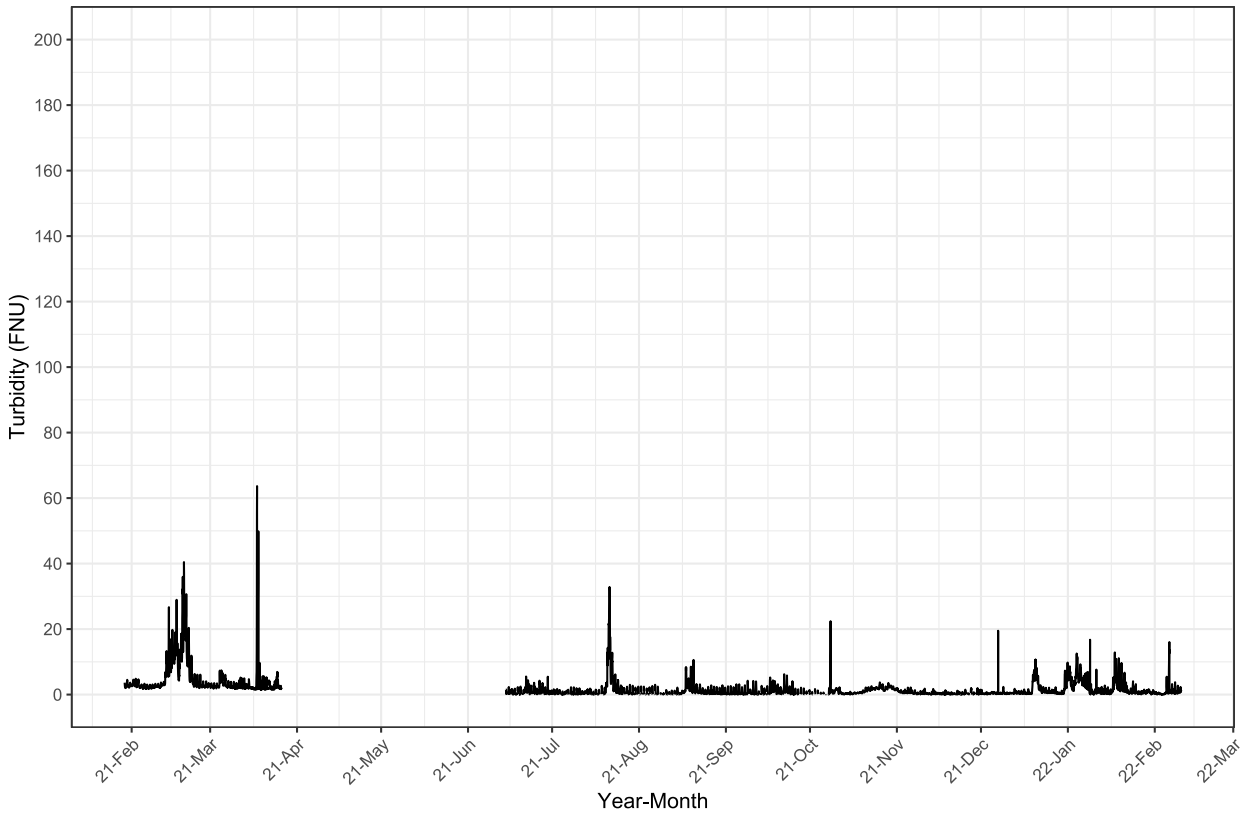
Above Powerhouse Monitoring Site



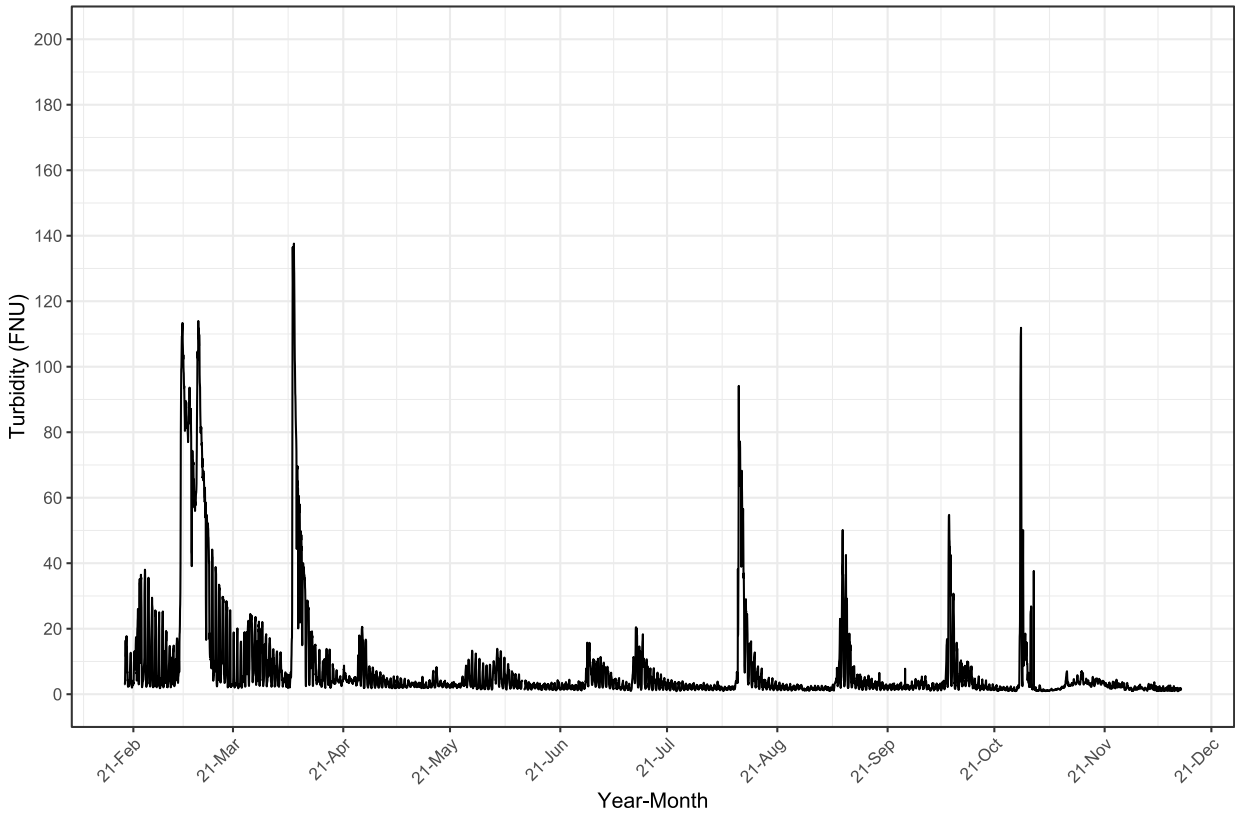
Above Spillway Monitoring Site



Below Powerhouse Monitoring Site



Below Spillway Monitoring Site



APPENDIX F

LICENSE ARTICLES 404 AND 405 2021 COMPLIANCE REPORT

Electronically Filed

Dominion Energy South Carolina, Inc.
DESC Power Generation
220 Operation Way, MC B223, Cayce SC 29033
DominionEnergySC.com

April 1, 2022

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N. E.
Washington, D. C. 20426

Subject: Dominion Energy South Carolina, Inc.
Stevens Creek Hydroelectric Project
FERC Project No. 2535
License Article 404 - Dissolved Oxygen Enhancement
License Article 405 - Water Quality Monitoring Plan

Dear Secretary Bose:

As required by Project No. 2535 License Articles 404 and 405, and FERC orders issued July 18, 1996 (76 FERC ¶62,042), August 7, 1996 (76 FERC ¶61,194) and December 13, 2012 (141 FERC ¶62,187) concerning these articles and Order issued January 21, 2022 (2535-016), Dominion Energy South Carolina, Inc. (DESC) hereby files electronically its annual Stevens Creek Water Quality Status Report including 1) status of the Savannah River Basin Watershed Project, and 2) annual water quality monitoring data for the Stevens Creek Project for the calendar year 2021. Copies of this report are also being sent to the US Environmental Protection Agency (EPA); the SC Department of Health & Environmental Control (SCDHEC); the SC Department of Natural Resources (SCDNR); the Georgia Department of Natural Resources, Fisheries Management Section (GADNR); the Georgia Department of Natural Resources, Environmental Protection Division (GAEPD); the US Fish & Wildlife Service (FWS); the United States Geological Survey, Water Resources Division (USGS-WRD); and the US Army Corps of Engineers (USACE) for their information.

Savannah River Basin Watershed Project

The Savannah River Basin Comprehensive Study is coordinated by the Savannah District, USACE. In the past, DESC has participated in the Study as a member of Action Team No. 5, which addresses issues related to water use, water supply, flow regimes, hydro facility operation, flood damage, etc. Many of the Priority 1 Recommendations from the Initial Assessment Report (including recommendations of the Water Quality Team) are to be addressed by this Comprehensive Basin Study. The USACE maintains a web site with completed and planned activities along with milestones for the study on this web site, http://www.sas.usace.army.mil/Home/CongressionalVisits/Georgia/District10CorpsProjects/SavannahRiverBasinComprehensiveStudy.GASC.aspx .

Stevens Creek Water Quality Data

The enclosed 2021 water quality monitoring data for the Stevens Creek Hydroelectric Project includes monthly summary sheets showing the variation of temperature and dissolved oxygen at sites one through eight (sites are located on the enclosed map) as water passes from J. Strom Thurmond Reservoir through the Stevens Creek Reservoir and into the Savannah River downstream of Stevens Creek; and the actual data from USACE and U.S. Geological Survey (USGS) data collection. Also included are hourly discharge tables for both Thurmond (data

reported to DESC directly from Thurmond personnel) and Stevens Creek (Provisional Data from USGS Gage No. 02197000, Savannah River at Augusta) for the days that water quality monitoring occurred. The USACE forebay data may have been collected on different days than the USGS data collected for DESC.

The Stevens Creek dam includes a 2,000-foot-long overflow spillway section with 1,000 feet of four-foot-high flashboards and 1,000 feet of five-foot-high flashboards. Starting in late August of 2020, DESC's contractors began work to install post tensioned rock anchors in the western half of the spillway and the east non-overflow section. At times this work required DESC to operate the reservoir in a lower operating range than normal. To facilitate this work, DESC also manually tripped all the 4-foot flashboards to allow higher flows from Thurmond Dam to spill over the eastern half of the spillway and limit the reservoir level when Thurmond discharge exceeds the flow that can pass through the Stevens Creek turbines. The anchoring work was completed in November 2021.

During 2021, DESC did not observe any environmental impact above or below the dam while this work was in progress. DESC received concurrence from the USACE, US Fish and Wildlife Service (USFWS), SC Department of Natural Resources (SCDNR), Georgia Wildlife Resources Division (GWRD) and the City of Augusta to modify the lower limit of the operating range to 180 feet NGVD for the construction outside of the spawning period (March, April and May). All agency correspondence is included in the Article 403 2021 Annual Operations Report filed with the FERC January 31, 2022.

Flows to the USACE tailwater sampling well during 2021 were impacted at times due to the lower water elevations resulting from the DESC work on the Stevens Creek Dam. The USACE informed DESC that the data from August 17 – 25, 2021 was not retrievable from their tailwater instrument.

As shown in the enclosed data, Stevens Creek water quality during 2021 showed that dissolved oxygen (DO) levels in both the Thurmond and Stevens Creek Reservoirs were above state standards in the winter and through spring. Thurmond Reservoir began to stratify in early summer and oxygen levels decreased near the low-level turbine intakes. By early August DO levels reached a minimum of 0 mg/l within the Thurmond forebay (Site 8). DO levels in the discharge of the Thurmond tailrace (Site 7) measured minimum readings below 4 mg/l during sample dates in June through late October. During these seasonally low DO months the main body of the Stevens Creek Reservoir located in the Savannah River remained above the state standards for all but two samplings at Site 1 with a minimum reading of 3.8 mg/l. In general, this data clearly indicates that reoxygenation occurred as the water passed through Stevens Creek Reservoir and the Stevens Creek hydroelectric plant. The DO levels measured below the Stevens Creek plant were above state standards for all of 2021. The lowest DO levels in the Stevens Creek Reservoir in 2021 were measured about 3 miles up the Stevens Creek tributary at Site 5. Thurmond Reservoir destratified in the late fall and the oxygen levels in both Thurmond and Stevens Creek Reservoirs returned to levels higher than state standards.

In addition to dissolved oxygen the USGS also samples for temperature, pH and specific conductivity. The values for these parameters throughout 2021 were within the normal range through the main body of the reservoir and below the Stevens Creek plant.

DESC recently completed a water quality study at the Project related to the FERC relicensing process. A summary of the data collected during most of 2021 is included. During relicensing

consultation with the resource agencies, DESC will be discussing the possibility of reducing the frequency of monitoring as described in the Monitoring Program per Article 405 of the current license.

If you have any questions about the contents of this filing, please call Amy Bresnahan at (803) 217-9965.

Sincerely,

Raymond R. Ammarell, P.E., Manager
Dam Safety and Civil Engineering

AIB/ab

Enclosures

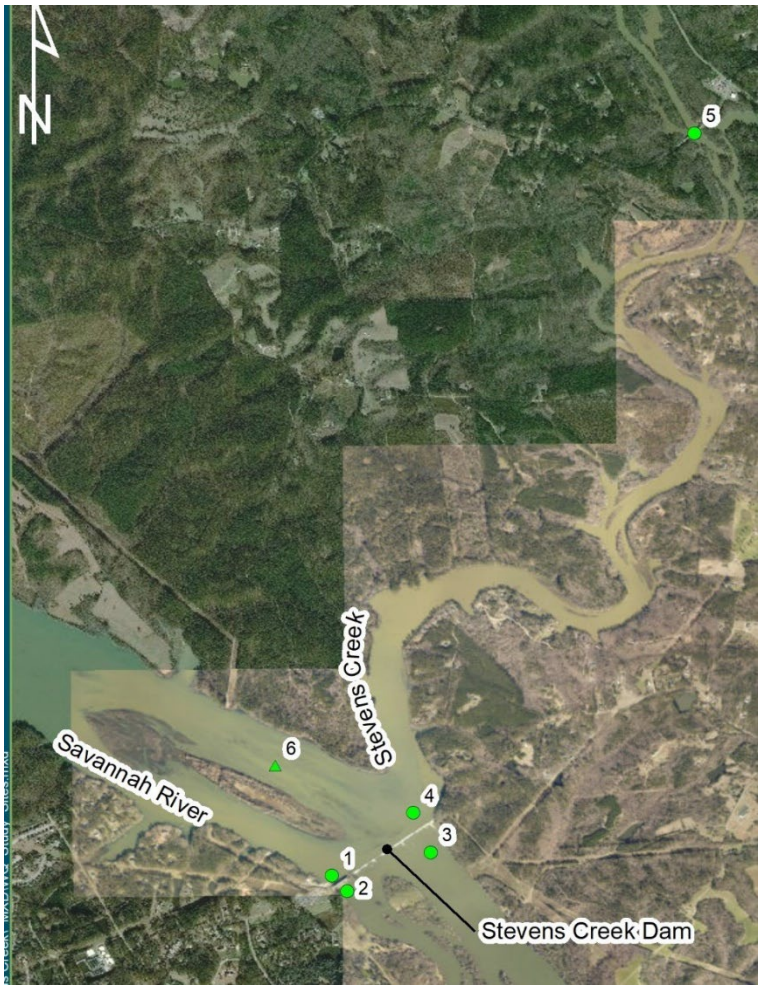
c: I. H. Griffin/J. W. Miller/H. E. Delk, Jr./ R. R. Ammarell
R. K. McMillan/J. T. Brock
C. Gaston
J. H. Hamilton
SC File
J. S. Drewel, USGS-WRD
J. A. Sykes, USACE
M. Mehta, SCDHEC
M. Olds, USFWS
K. Shell, EPA Region 4
J. Payne/P. Marcinek, GA WRD
J. Williams, GA EPD
E. Miller, SCDNR

Document Accession #: 20220401-5265 Filed Date: 04/01/2022

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Collected Through Relicensing Studies
Summary
February 2021 – February 2022

Water quality was collected as part of the Stevens Creek relicensing from February 2021 until February 2022. Six locations were monitored both upstream and downstream of the Dam: above and below the powerhouse and spillway, Stevens Creek 4.5 miles above the confluence, and periodically at site within in the Deep Step Creek area of the reservoir. Temperature measurements ranged from 4.9 °C to 32.95 °C. Dissolved Oxygen ranged from 0.37 mg/L to 13.42 mg/L. Summary statistics of the annual data collected through the relicensing studies can be found in the table below.

	Temperature (°C)			Dissolved Oxygen (mg/L)		
Site	Average	Max	Min	Average	Max	Min
Site 1 (Above Powerhouse)	15.55	23.05	6.17	8.25	11.75	3.70
Site 2 (Below Powerhouse)	15.72	23.05	8.71	8.76	12.07	4.61
Site 3 (Below Spillway)	17.71	27.97	7.05	8.94	11.69	4.87
Site 4 (Above Spillway)	17.15	27.61	6.07	8.00	12.19	0.37
Site 5 (Stevens Creek)	17.33	32.95	4.90	7.48	13.42	2.32



Document Accession #: 20220401-5265 Filed Date: 04/01/2022

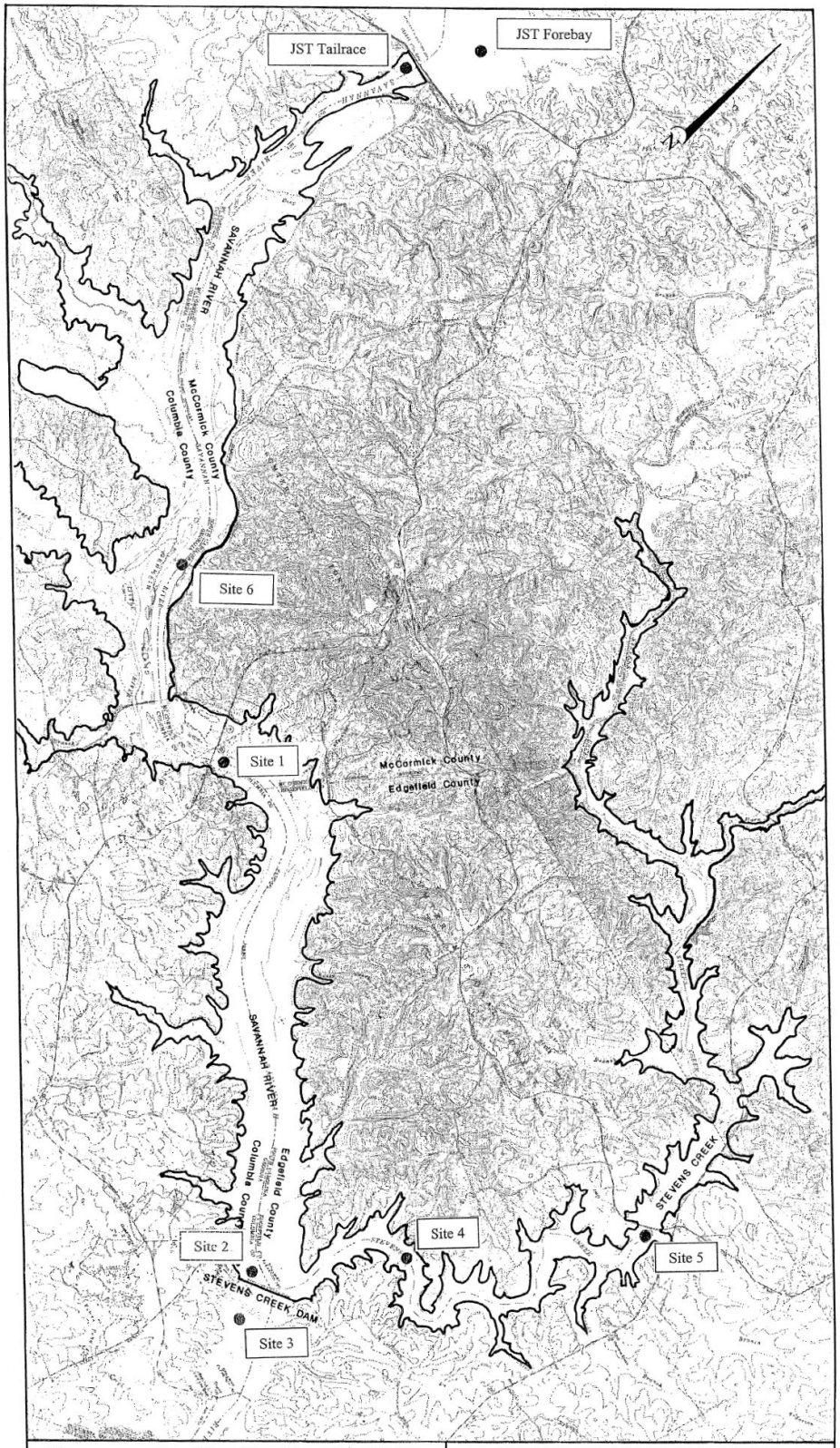
STEVENS CREEK HYDROELECTRIC PROJECT

FERC PROJECT NO. 2535 - GA, SC

WATER QUALITY DATA SUMMARY

2021

Dominion Energy®



STEVENS CREEK

HYDROELECTRIC POWER PROJECT

(FERC PROJECT NO. 2535)

✦ ***Site 6 is also referred to as A-1***

SOUTH CAROLINA ELECTRIC & GAS COMPANY

Figure E-1.1

DETAILED MAP OF

PROJECT AREA

SHOWING WATER QUALITY

MONITORING SITES

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
January 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (1/21/21)	10.28	—	10.72	10.0	—	10.6
Thurmond Tailrace (Site 7) (1/13/21 - 1/14/21)		—			—	
Stevens Creek Res. (Site 6) (1/13/21 - 1/14/21)	11.02	—	11.11	10.3	—	10.4
Stevens Creek Res. (Site 1) (1/13/21 - 1/14/21)	10.99	—	11.07	10.3	—	10.5
Stevens Creek Res. (Site 2) (1/13/21 - 1/14/21)	10.44	—	10.67	10.4	—	10.5
Stevens Creek Tailrace (Site 3) (1/13/21 - 1/14/21)	10.55	—	10.68	10.6	—	10.7
Stevens Creek (Site 5) (1/13/21 - 1/14/21)	6.81	—	6.98	11.0	—	11.0
Stevens Creek (Site 4) (1/13/21 - 1/14/21)	6.67	—	10.14	10.2	—	10.8

Stevens Creek Project Water Quality Data (Provided by USGS-WRD)

Date: 1/13/2021
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	7:55	0	6.8	7.0	72	11.0	91
		1	6.9	7.0	72	11.0	90
		2	6.9	7.0	72	11.0	90
		3	6.9	7.0	72	11.0	91
		4	6.9	7.0	72	11.0	90
3	8:48		7.0	10.7	45	10.7	96
4	9:25	0	6.9	6.7	69	10.7	88
		1	6.9	6.7	70	10.7	88
		2	6.9	6.7	70	10.7	88
		3	6.9	6.7	70	10.8	88
		4	6.9	6.7	70	10.7	88
		5	6.9	6.7	69	10.7	88
2	9:39	0	7.1	10.7	46	10.5	95
		1	7.1	10.7	46	10.5	95
		2	7.1	10.7	46	10.5	95
		3	7.1	10.7	46	10.5	94
		4	7.1	10.7	46	10.5	94
1	10:20	0	7.2	11.1	43	10.3	94
		1	7.2	11.1	43	10.3	94
		2	7.2	11.1	43	10.3	94
		3	7.2	11.1	43	10.3	94
1A	10:06	0	7.2	11.1	43	10.4	95
		1	7.2	11.1	43	10.4	94
		2	7.2	11.1	43	10.4	94
		3	7.2	11.1	43	10.4	94

Stevens Creek Project Water Quality Data (Provided by USGS-WRD)

Date: 1/14/2021
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	7:45	0	6.9	6.8	75	11.0	90
		1	6.9	6.8	75	11.0	91
		2	6.9	6.8	75	11.0	91
		3	6.9	6.8	75	11.0	90
		4	6.9	6.8	75	11.0	90
3	8:30		7.1	10.6	44	10.6	95
4	9:58	0	7.1	10.1	47	10.2	90
		1	7.1	9.7	49	10.2	90
		2	7.1	9.3	53	10.2	89
		3	7.0	8.7	57	10.3	88
		4	7.0	8.3	59	10.3	88
		5	7.0	7.9	63	10.3	87
2	9:49	0	7.1	10.4	45	10.4	93
		1	7.2	10.4	45	10.4	93
		2	7.2	10.4	45	10.4	93
		3	7.1	10.4	45	10.4	93
1	9:34	0	7.2	11.0	43	10.5	95
		1	7.2	11.0	43	10.5	95
		2	7.2	11.0	43	10.4	94
		3	7.2	11.0	43	10.4	94
1A	9:23	0	7.1	11.0	43	10.3	94
		1	7.1	11.0	43	10.3	94
		2	7.1	11.0	43	10.4	94
		3	7.1	11.0	43	10.3	94

JST Forebay Water Quality Data (Provided By USACE-ERDC)

January 21,2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	**°C**	**mg/l**	**µS/cm**	**meters**
71955	10.72	10.6	42	0.2
72025	10.62	10.53	42	2
72047	10.61	10.53	41.9	4
72110	10.61	10.58	42	6
72134	10.57	10.56	42	8
72200	10.57	10.46	42	10
72227	10.56	10.44	42.1	12
72252	10.53	10.4	42.1	14
72311	10.53	10.35	42	16
72340	10.53	10.27	42.1	18
72359	10.52	10.27	42	20
72437	10.52	10.19	42	22
72455	10.46	10.2	42.1	24
72520	10.46	10.16	42	26
72541	10.46	10.17	42.1	28
72603	10.45	10.19	42	30
72634	10.39	10.13	42.3	32
72706	10.33	10.09	42	34
72740	10.33	10.04	42.3	36
72808	10.32	10.07	42	38
72840	10.3	10.03	41.9	40
72914	10.28	9.96	42	42
72931	10.28	9.95	41.9	43.1
Max:	**10.72**	**10.6**	**42.3**	**43.1**
Min:	**10.28**	**9.95**	**41.9**	**0.2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
1/13/2021	0:00:00	11.7	42.1	9.64
1/13/2021	0:15:00	11.7	42.5	9.57
1/13/2021	0:30:00	11.73	42.2	9.38
1/13/2021	0:45:00	11.74	42	9.32
1/13/2021	1:00:00	11.74	42.5	9.29
1/13/2021	1:15:00	11.74	42.5	9.27
1/13/2021	1:30:00	11.76	42.3	9.18
1/13/2021	1:45:00	11.76	42.6	9.18
1/13/2021	2:00:00	11.75	42.5	9.15
1/13/2021	2:15:00	11.74	42.6	9.16
1/13/2021	2:30:00	11.73	42.7	9.11
1/13/2021	2:45:00	11.72	42.7	9.09
1/13/2021	3:00:00	11.72	42.5	9.06
1/13/2021	3:15:00	11.7	42.7	9.12
1/13/2021	3:30:00	11.7	42.7	9.04
1/13/2021	3:45:00	11.68	42.6	8.99
1/13/2021	4:00:00	11.67	42.8	8.96
1/13/2021	4:15:00	11.63	42.2	8.98
1/13/2021	4:30:00	11.61	42.3	8.99
1/13/2021	4:45:00	11.61	42.3	8.9
1/13/2021	5:00:00	11.59	42.3	9.01
1/13/2021	5:15:00	11.58	42	8.81
1/13/2021	5:30:00	11.56	42.4	8.83
1/13/2021	5:45:00	11.58	42.4	8.65
1/13/2021	6:00:00	11.37	42.3	8.89
1/13/2021	6:15:00	11.33	42	8.93
1/13/2021	6:30:00	11.4	42.1	8.95
1/13/2021	6:45:00	11.42	42.4	8.96
1/13/2021	7:00:00	11.43	42.2	8.96
1/13/2021	7:15:00	11.43	42.1	8.9
1/13/2021	7:30:00	11.45	42.2	8.87
1/13/2021	7:45:00	11.46	42.1	8.9
1/13/2021	8:00:00	11.47	42.4	8.9
1/13/2021	8:15:00	11.48	42.1	8.87
1/13/2021	8:30:00	11.46	42.2	8.9
1/13/2021	8:45:00	11.47	42.1	8.94
1/13/2021	9:00:00	11.46	42.2	8.89
1/13/2021	9:15:00	11.46	42.1	8.87
1/13/2021	9:30:00	11.47	42.4	8.87
1/13/2021	9:45:00	11.47	42.2	8.89
1/13/2021	10:00:00	11.46	42.2	8.86

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
1/13/2021	10:15:00	11.46	42.4	8.9
1/13/2021	10:30:00	11.46	42.2	8.89
1/13/2021	10:45:00	11.45	42.5	8.89
1/13/2021	11:00:00	11.46	42.4	8.9
1/13/2021	11:15:00	11.45	42.4	8.92
1/13/2021	11:30:00	11.45	42.1	8.88
1/13/2021	11:45:00	11.45	42.5	8.89
1/13/2021	12:00:00	11.46	42.2	8.89
1/13/2021	12:15:00	11.47	42.2	8.92
1/13/2021	12:30:00	11.49	42.4	8.85
1/13/2021	12:45:00	11.51	42.2	8.88
1/13/2021	13:00:00	11.52	42.4	8.89
1/13/2021	13:15:00	11.54	42.4	8.89
1/13/2021	13:30:00	11.58	42.5	8.9
1/13/2021	13:45:00	11.58	42.4	8.9
1/13/2021	14:00:00	11.57	42.4	8.92
1/13/2021	14:15:00	11.57	42.5	8.97
1/13/2021	14:30:00	11.56	42.4	8.94
1/13/2021	14:45:00	11.56	42.2	8.91
1/13/2021	15:00:00	11.55	42.2	8.92
1/13/2021	15:15:00	11.53	42.5	8.95
1/13/2021	15:30:00	11.53	42.2	8.9
1/13/2021	15:45:00	11.53	42.4	8.95
1/13/2021	16:00:00	11.54	42.4	8.97
1/13/2021	16:15:00	11.53	42.5	8.95
1/13/2021	16:30:00	11.53	42.5	8.99
1/13/2021	16:45:00	11.52	42.5	8.94
1/13/2021	17:00:00	11.53	42.4	8.98
1/13/2021	17:15:00	11.51	42.4	8.99
1/13/2021	17:30:00	11.5	42.1	8.96
1/13/2021	17:45:00	11.51	42.2	8.98
1/13/2021	18:00:00	11.5	42.4	8.96
1/13/2021	18:15:00	11.5	42.1	8.96
1/13/2021	18:30:00	11.49	42.5	8.98
1/13/2021	18:45:00	11.49	42.2	8.96
1/13/2021	19:00:00	11.48	42.6	8.98
1/13/2021	19:15:00	11.47	42.5	8.92
1/13/2021	19:30:00	11.45	42.2	8.93
1/13/2021	19:45:00	11.44	42.2	8.95
1/13/2021	20:00:00	11.44	42.4	8.92
1/13/2021	20:15:00	11.46	42.4	9.09
1/13/2021	20:30:00	11.46	42.5	9.05
1/13/2021	20:45:00	11.46	42.6	9.02
1/13/2021	21:00:00	11.46	42.2	8.98

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
1/13/2021	21:15:00	11.46	42.2	9.03
1/13/2021	21:30:00	11.45	42.4	8.98
1/13/2021	21:45:00	11.43	42.3	9
1/13/2021	22:00:00	11.42	42.5	8.99
1/13/2021	22:15:00	11.59	42.7	9.59
1/13/2021	22:30:00	11.6	42.5	9.83
1/13/2021	22:45:00	11.57	42.2	9.86
1/13/2021	23:00:00	11.58	42.2	9.67
1/13/2021	23:15:00	11.58	42.2	9.91
1/13/2021	23:30:00	11.57	42.5	9.92
1/13/2021	23:45:00	11.56	42.1	9.9
1/14/2021	0:00:00	11.56	42.4	10.02
1/14/2021	0:15:00	11.53	42.4	9.94
1/14/2021	0:30:00	11.52	42.5	9.96
1/14/2021	0:45:00	11.5	42.7	9.99
1/14/2021	1:00:00	11.51	42.6	9.72
1/14/2021	1:15:00	11.53	42.7	9.52
1/14/2021	1:30:00	11.53	43	9.45
1/14/2021	1:45:00	11.53	42.5	9.4
1/14/2021	2:00:00	11.51	42.6	9.34
1/14/2021	2:15:00	11.52	42.7	9.22
1/14/2021	2:30:00	11.52	42.6	9.18
1/14/2021	2:45:00	11.51	42.6	9.21
1/14/2021	3:00:00	11.5	42.7	9.14
1/14/2021	3:15:00	11.49	42.7	9.2
1/14/2021	3:30:00	11.49	42.7	9.1
1/14/2021	3:45:00	11.49	42.8	9.1
1/14/2021	4:00:00	11.47	43.1	9.02
1/14/2021	4:15:00	11.47	42.2	9.02
1/14/2021	4:30:00	11.46	42.5	9
1/14/2021	4:45:00	11.46	42.2	9
1/14/2021	5:00:00	11.45	42.5	9.02
1/14/2021	5:15:00	11.25	42.3	9.25
1/14/2021	5:30:00	11.34	41.9	9.29
1/14/2021	5:45:00	11.36	42	9.27
1/14/2021	6:00:00	11.36	42.1	9.29
1/14/2021	6:15:00	11.37	42.4	9.24
1/14/2021	6:30:00	11.38	42	9.19
1/14/2021	6:45:00	11.39	42	9.24
1/14/2021	7:00:00	11.4	42.1	9.24
1/14/2021	7:15:00	11.38	42.4	9.35
1/14/2021	7:30:00	11.38	42.3	9.02
1/14/2021	7:45:00	11.41	42.1	8.96
1/14/2021	8:00:00	11.43	42.1	8.97

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
1/14/2021	8:15:00	11.45	42.1	9.1
1/14/2021	8:30:00	11.45	42.2	9.1
1/14/2021	8:45:00	11.45	42.2	9.1
1/14/2021	9:00:00	11.44	42.1	9.07
1/14/2021	9:15:00	11.44	42.4	8.99
1/14/2021	9:30:00	11.42	42.4	8.94
1/14/2021	9:45:00	11.43	42.4	8.94
1/14/2021	10:00:00	11.43	42	8.96
1/14/2021	10:15:00	11.44	42.1	8.95
1/14/2021	10:30:00	11.46	42.1	8.97
1/14/2021	10:45:00	11.48	42.2	9.01
1/14/2021	11:00:00	11.51	42.4	8.98
1/14/2021	11:15:00	11.53	42.4	9
1/14/2021	11:30:00	11.54	42.5	8.99
1/14/2021	11:45:00	11.52	42.4	8.98
1/14/2021	12:00:00	11.54	42.4	9
1/14/2021	12:15:00	11.55	42.2	8.96
1/14/2021	12:30:00	11.58	42.5	8.99
1/14/2021	12:45:00	11.59	42.6	8.98
1/14/2021	13:00:00	11.61	42.3	8.98
1/14/2021	13:15:00	11.66	42.5	8.97
1/14/2021	13:30:00	11.69	42.5	8.99
1/14/2021	13:45:00	11.68	42.3	9
1/14/2021	14:00:00	11.67	42.3	9.01
1/14/2021	14:15:00	11.69	42.2	9
1/14/2021	14:30:00	11.69	42.5	9.04
1/14/2021	14:45:00	11.72	42.3	9.59
1/14/2021	15:00:00	11.71	42.2	9.07
1/14/2021	15:15:00	11.7	42.6	9.04
1/14/2021	15:30:00	11.69	42.2	9.05
1/14/2021	15:45:00	11.68	42.5	9.02
1/14/2021	16:00:00	11.67	42.2	9.05
1/14/2021	16:15:00	11.65	42.6	9
1/14/2021	16:30:00	11.62	42.2	9.05
1/14/2021	16:45:00	11.61	42.2	9.02
1/14/2021	17:00:00	11.58	42.6	9.03
1/14/2021	17:15:00	11.55	42.4	9.02
1/14/2021	17:30:00	11.52	42.4	8.97
1/14/2021	17:45:00	11.51	42.6	8.96
1/14/2021	18:00:00	11.49	42.5	8.95
1/14/2021	18:15:00	11.48	42.4	8.98
1/14/2021	18:30:00	11.47	42.4	8.96
1/14/2021	18:45:00	11.45	42.5	8.92
1/14/2021	19:00:00	11.44	42.5	8.99

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
1/14/2021	19:15:00	11.43	42.4	8.96
1/14/2021	19:30:00	11.43	42.2	8.96
1/14/2021	19:45:00	11.42	42.1	8.97
1/14/2021	20:00:00	11.43	42.4	8.96
1/14/2021	20:15:00	11.48	42.4	9.13
1/14/2021	20:30:00	11.65	42.2	10.1
1/14/2021	20:45:00	11.63	42.3	10.15
1/14/2021	21:00:00	11.61	42.5	10.16
1/14/2021	21:15:00	11.61	42.2	10.4
1/14/2021	21:30:00	11.6	42.4	10.32
1/14/2021	21:45:00	11.59	42.4	10.14
1/14/2021	22:00:00	11.59	42.2	10.06
1/14/2021	22:15:00	11.57	42.2	10.17
1/14/2021	22:30:00	11.56	42.4	10.12
1/14/2021	22:45:00	11.54	42.4	10.1
1/14/2021	23:00:00	11.53	42.4	10.15
1/14/2021	23:15:00	11.51	42.7	10.12
1/14/2021	23:30:00	11.56	42.6	9.86
1/14/2021	23:45:00	11.57	42.6	9.64
	Max	**11.76**	**43.1**	**10.4**
	Min	**11.25**	**41.9**	**8.65**

Stevens Creek Operations Data (Provided By DESC & USACE)

1/13/2021 Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	184.7	159.3	14653	10000
2:00	0	184.6	159	11855	8592
3:00	0	184.3	158.9	11535	8378
4:00	0	184.1	158.9	11387	8363
5:00	8	183.8	158.8	11048	8177
6:00	589	183.5	159.1	13225	9867
7:00	12355	183.7	159.2	13330	9895
8:00	18802	184	159.2	13549	9988
9:00	26280	184.5	159.2	13951	10000
10:00	23980	185	159.2	14406	10000
11:00	18345	185.4	159.4	14750	10000
12:00	18320	185.7	159.3	15092	10000
13:00	18140	186	159.4	15215	10000
14:00	18050	186.2	159.4	15407	10000
15:00	18320	186.4	159.6	15490	10000
16:00	18140	186.5	159.6	15400	10000
17:00	18320	186.7	159.7	15700	10000
18:00	17960	186.8	159.7	15584	10000
19:00	18230	186.9	159.7	15729	10000
20:00	18260	186.9	159.8	15173	10000
21:00	18350	187	159.9	15270	10000
22:00	18050	187	159.9	15139	10000
23:00	12260	187	159.8	15089	10000
24:00:00	0	186.9	159.9	16097	10000
daily avg.	**13032**	**186**	**159**	**14336**	**9719**

Total Generation	**344074**
Projected discharge	15035
Thurmond discharge	**13032**

Stevens Creek Operations Data (Provided By DESC & USACE)

1/14/2021 Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	186.5	159.7	14996	10000
2:00	0	186.2	159.5	14783	10000
3:00	0	185.8	159.4	14628	10000
4:00	0	185.5	159.4	14422	10000
5:00	441	185.2	159.3	14162	10000
6:00	12648	184.9	159.3	13887	10000
7:00	31940	185.1	159.3	14202	10000
8:00	33020	185.6	159.3	14826	10000
9:00	28200	186.2	159.3	14807	10000
10:00	18620	186.6	159.6	16017	10000
11:00	18630	186.8	159.7	16158	10000
12:00	18530	187	159.8	16169	10000
13:00	18710	187.1	160	16220	10000
14:00	18530	187.1	159.9	16219	10000
15:00	18710	187.1	160	16196	10000
16:00	18470	187.2	160	16172	10000
17:00	18530	187.2	160	16160	10000
18:00	18440	187.2	160	16180	10000
19:00	18620	187.2	160	16180	10000
20:00	18530	187.2	160.1	16129	10000
21:00	18290	187.3	160.1	16270	10000
22:00	736	187.2	160	16060	10000
23:00	0	186.9	159.9	15887	10000
24:00:00	0	186.5	159.7	15608	10000
daily avg.	**13733**	**187**	**160**	**15514**	**10000**

Total Generation	**372338**
Projected discharge	15255
Thurmond discharge	**14330**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided by USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
1/13/2021 0:00	12000
1/13/2021 1:00	12100
1/13/2021 2:00	12100
1/13/2021 3:00	12200
1/13/2021 4:00	12000
1/13/2021 5:00	11900
1/13/2021 6:00	11600
1/13/2021 7:00	11100
1/13/2021 8:00	10800
1/13/2021 9:00	10100
1/13/2021 10:00	9750
1/13/2021 11:00	9500
1/13/2021 12:00	9520
1/13/2021 13:00	10800
1/13/2021 14:00	10300
1/13/2021 15:00	10400
1/13/2021 16:00	10500
1/13/2021 17:00	10600
1/13/2021 18:00	11300
1/13/2021 19:00	12400
1/13/2021 20:00	12900
1/13/2021 21:00	13300
1/13/2021 22:00	13800
1/13/2021 23:00	14200
1/14/2021 0:00	15000
1/14/2021 1:00	15400
1/14/2021 2:00	16000
1/14/2021 3:00	16200
1/14/2021 4:00	16400
1/14/2021 5:00	16100
1/14/2021 6:00	15500
1/14/2021 7:00	14900
1/14/2021 8:00	14500
1/14/2021 9:00	14300
1/14/2021 10:00	14000
1/14/2021 11:00	14700
1/14/2021 12:00	13100
1/14/2021 13:00	12800
1/14/2021 14:00	12700
1/14/2021 15:00	13600
1/14/2021 16:00	14700
1/14/2021 17:00	15100
1/14/2021 18:00	16400
1/14/2021 19:00	17000
1/14/2021 20:00	17300
1/14/2021 21:00	17700
1/14/2021 22:00	17800
1/14/2021 23:00	17900

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
February 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (2/19/21)	9.33	—	9.55	10.3	—	10.4
Thurmond Tailrace (Site 7) (2/24/21 - 2/25/21)		—			—	
Stevens Creek Res. (Site 6) (2/24/21 - 2/25/21)	10.03	—	10.25	11.6	—	11.9
Stevens Creek Res. (Site 1) (2/24/21 - 2/25/21)	10.25	—	10.48	11.6	—	11.8
Stevens Creek Res. (Site 2) (2/24/21 - 2/25/21)	10.35	—	10.88	11.4	—	11.7
Stevens Creek Tailrace (Site 3) (2/24/21 - 2/25/21)	10.20	—	10.94	11.5	—	11.6
Stevens Creek (Site 5) (2/24/21 - 2/25/21)	9.76	—	11.22	10.1	—	10.3
Stevens Creek (Site 4) (2/24/21 - 2/25/21)	9.60	—	11.60	9.9	—	10.6

Stevens Creek Project Water Quality Data (Provided by USGS-WRD)

Date: 02/24/2021

Field Team: REH / EGM
Field Meter Model/Number: YSI EXO3 / 18H110944

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	10:38	surface	6.7	9.9	63	10.3	91
		1M	6.7	9.8	63	10.3	91
		2M	6.7	9.8	63	10.3	91
		3M	6.7	9.8	63	10.3	91
		4M	6.7	9.8	63	10.3	90
		5M	6.7	9.8	63	10.2	90
3	11:25	1M	6.9	10.2	42	11.5	103
4	13:45	surface	7.0	11.6	43	10.6	98
		1M	6.9	11.0	47	10.5	95
		2M	6.8	9.9	57	10.2	90
		3M	6.7	9.7	58	10.1	89
		4M	6.7	9.6	58	10.0	88
		5M	6.7	9.6	58	9.9	87
2	14:06	surface	7.2	10.4	38	11.4	102
		1M	7.2	10.4	40	11.5	103
		2M	7.2	10.4	43	11.6	103
		3M	7.2	10.4	43	11.6	104
1	11:45	surface	7.3	10.3	41	11.6	103
		1M	7.3	10.3	42	11.6	103
		2M	7.2	10.3	42	11.6	104
		3M	7.2	10.3	42	11.6	104
		4M	7.1	10.3	42	11.7	104
1A	14:27	surface	7.3	10.0	41	11.6	103
		1M	7.2	10.0	41	11.6	103
		2M	7.2	10.0	42	11.6	103
		3M	7.2	10.0	42	11.6	103
		4M	7.2	10.0	42	11.6	103
		5M	7.2	10.1	42	11.6	103

Stevens Creek Project Water Quality Data (Provided by USGS-WRD)

Date: 02/25/2021
Field Team: REH/EGM
Field Meter Model/Number: YSI EXO3 / 18H110944

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	14:14	surface	6.9	11.2	68	10.1	92
		1M	6.9	11.1	68	10.1	92
		2M	6.9	11.1	68	10.1	92
		3M	6.9	11.1	68	10.1	92
		4M	6.9	11.0	68	10.1	92
		5M	6.9	11.0	68	10.1	92
3	15:00	1M	7.1	10.9	33	11.6	105
4	15:30	surface	6.9	11.1	62	10.1	92
		1M	6.9	10.8	63	10.0	91
		2M	6.9	10.5	62	10.0	90
		3M	6.9	10.4	62	10.0	90
		4M	6.9	10.4	62	10.0	89
		5M	6.8	10.3	63	9.9	88
2	15:36	surface	7.3	10.9	44	11.7	105
		1M	7.3	10.9	44	11.7	106
		2M	7.3	10.8	43	11.7	106
		3M	7.3	10.8	43	11.7	106
		4M	7.3	10.8	44	11.7	106
1	16:45	surface	7.2	10.5	39	11.6	104
		1M	7.2	10.5	40	11.7	105
		2M	7.2	10.5	40	11.8	106
		3M	7.2	10.5	41	11.8	106
		4M	7.3	10.4	41	11.7	105
1A	16:30	surface	7.3	10.2	37	11.7	104
		1M	7.3	10.2	37	11.8	105
		2M	7.2	10.3	38	11.9	106
		3M	7.3	10.3	38	11.9	106

JST Forebay Water Quality Data (Provided By USACE-ERDC)

February 19, 2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	°C	mg/l	µS/cm	meters
105844	9.55	10.35	41.9	0.2
105919	9.54	10.39	41.7	2
105950	9.37	10.31	41.7	4
110016	9.36	10.3	41.7	6
110047	9.36	10.3	41.7	8
110120	9.36	10.29	41.8	10
110147	9.34	10.3	41.9	12
110221	9.34	10.26	41.9	14
110256	9.35	10.3	41.8	16
110330	9.34	10.3	41.9	18
110400	9.34	10.28	41.9	20
110439	9.33	10.25	41.8	22
110513	9.33	10.27	41.8	24
110551	9.33	10.28	41.7	26
110634	9.33	10.31	41.8	28
110712	9.33	10.26	41.8	30
110746	9.34	10.31	41.7	32
110820	9.33	10.3	42	34
110901	9.33	10.29	41.8	36
110931	9.33	10.28	41.8	38
111011	9.33	10.28	42	40
111047	9.33	10.3	41.8	42
111122	9.33	10.25	41.7	44
Max:	**9.55**	**10.39**	**42**	**44**
Min:	**9.33**	**10.25**	**41.7**	**0.2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
2/24/2021	0:00:00	10.56	42.5	11.25
2/24/2021	0:15:00	10.54	42.6	11.14
2/24/2021	0:30:00	10.53	42.7	11.15
2/24/2021	0:45:00	10.5	42.4	11.13
2/24/2021	1:00:00	10.52	42.5	11.29
2/24/2021	1:15:00	10.51	42.6	11.33
2/24/2021	1:30:00	10.5	42.6	10.9
2/24/2021	1:45:00	10.49	42.6	10.77
2/24/2021	2:00:00	10.48	42.7	10.69
2/24/2021	2:15:00	10.46	42.9	10.65
2/24/2021	2:30:00	10.45	42.8	10.55
2/24/2021	2:45:00	10.44	42.6	10.49
2/24/2021	3:00:00	10.44	42.9	10.3
2/24/2021	3:15:00	10.41	42.9	9.97
2/24/2021	3:30:00	10.23	42.5	10.51
2/24/2021	3:45:00	10.13	42.4	10.6
2/24/2021	4:00:00	10.26	42.4	10.66
2/24/2021	4:15:00	10.06	42.6	10.77
2/24/2021	4:30:00	10.03	42.6	10.79
2/24/2021	4:45:00	10.02	42.7	10.71
2/24/2021	5:00:00	10.03	42.7	10.76
2/24/2021	5:15:00	10.03	42.6	10.62
2/24/2021	5:30:00	10.05	42.5	10.33
2/24/2021	5:45:00	10.05	42.5	10.31
2/24/2021	6:00:00	10.07	42.3	10.27
2/24/2021	6:15:00	10.08	42.2	10.28
2/24/2021	6:30:00	10.09	42.3	10.37
2/24/2021	6:45:00	10.11	42.1	10.24
2/24/2021	7:00:00	10.13	42.4	10.34
2/24/2021	7:15:00	10.15	42.2	10.33
2/24/2021	7:30:00	10.18	42.6	10.36
2/24/2021	7:45:00	10.23	42.2	10.42
2/24/2021	8:00:00	10.25	42.3	10.33
2/24/2021	8:15:00	10.28	42.2	10.64
2/24/2021	8:30:00	10.29	42.4	10.82
2/24/2021	8:45:00	10.32	42.4	10.77
2/24/2021	9:00:00	10.38	42.2	10.69
2/24/2021	9:15:00	10.42	42.4	10.81
2/24/2021	9:30:00	10.44	42.3	10.84
2/24/2021	9:45:00	10.47	42.5	10.8
2/24/2021	10:00:00	10.48	42.3	10.82
2/24/2021	10:15:00	10.51	42.6	10.81

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
2/24/2021	10:30:00	10.52	42.4	10.79
2/24/2021	10:45:00	10.57	42.5	10.8
2/24/2021	11:00:00	10.57	42.6	10.81
2/24/2021	11:15:00	10.62	42.6	10.87
2/24/2021	11:30:00	10.67	42.5	10.79
2/24/2021	11:45:00	10.72	42.6	10.78
2/24/2021	12:00:00	10.7	42.6	10.85
2/24/2021	12:15:00	10.74	42.5	10.38
2/24/2021	12:30:00	10.8	42.5	10.32
2/24/2021	12:45:00	10.83	42.6	10.36
2/24/2021	13:00:00	10.85	42.6	10.35
2/24/2021	13:15:00	10.85	42.3	10.37
2/24/2021	13:30:00	10.87	42.3	10.36
2/24/2021	13:45:00	10.83	42.5	10.37
2/24/2021	14:00:00	10.83	42.3	10.3
2/24/2021	14:15:00	10.78	42.5	10.31
2/24/2021	14:30:00	10.74	42.3	10.31
2/24/2021	14:45:00	10.73	42.2	10.29
2/24/2021	15:00:00	10.72	42.5	10.29
2/24/2021	15:15:00	10.73	42.3	10.32
2/24/2021	15:30:00	10.71	42.6	10.27
2/24/2021	15:45:00	10.71	42.5	10.29
2/24/2021	16:00:00	10.72	42.6	10.27
2/24/2021	16:15:00	10.71	42.2	10.34
2/24/2021	16:30:00	10.72	42.2	10.32
2/24/2021	16:45:00	10.67	42.4	10.35
2/24/2021	17:00:00	10.65	42.6	10.28
2/24/2021	17:15:00	10.62	42.5	10.28
2/24/2021	17:30:00	10.6	42.4	10.24
2/24/2021	17:45:00	10.57	42.5	10.34
2/24/2021	18:00:00	10.54	42.5	10.37
2/24/2021	18:15:00	10.5	42.5	10.31
2/24/2021	18:30:00	10.49	42.4	10.35
2/24/2021	18:45:00	10.45	42.1	10.26
2/24/2021	19:00:00	10.43	42.4	10.31
2/24/2021	19:15:00	10.45	42.3	10.57
2/24/2021	19:30:00	10.43	42.4	10.93
2/24/2021	19:45:00	10.43	42.5	10.88
2/24/2021	20:00:00	10.41	42.6	10.92
2/24/2021	20:15:00	10.42	42.4	11.03
2/24/2021	20:30:00	10.38	42.4	11.05
2/24/2021	20:45:00	10.36	42.5	11.1
2/24/2021	21:00:00	10.35	42.5	11.17
2/24/2021	21:15:00	10.38	42.5	11.23

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
2/24/2021	21:30:00	10.7	42.7	11.18
2/24/2021	21:45:00	10.72	42.7	11.15
2/24/2021	22:00:00	10.72	42.3	11.09
2/24/2021	22:15:00	10.72	42.6	11.2
2/24/2021	22:30:00	10.71	42.5	11.09
2/24/2021	22:45:00	10.69	42.4	11.08
2/24/2021	23:00:00	10.68	42.4	10.9
2/24/2021	23:15:00	10.67	42.4	10.98
2/24/2021	23:30:00	10.67	42.2	11.04
2/24/2021	23:45:00	10.67	42.8	11.02
2/25/2021	0:00:00	10.66	42.6	10.74
2/25/2021	0:15:00	10.64	42.4	10.77
2/25/2021	0:30:00	10.62	42.5	10.72
2/25/2021	0:45:00	10.62	42.6	10.79
2/25/2021	1:00:00	10.61	42.8	10.71
2/25/2021	1:15:00	10.59	42.7	10.48
2/25/2021	1:30:00	10.58	42.5	10.55
2/25/2021	1:45:00	10.57	42.9	10.47
2/25/2021	2:00:00	10.56	42.9	10.25
2/25/2021	2:15:00	10.55	42.6	10.15
2/25/2021	2:30:00	10.54	43	10.01
2/25/2021	2:45:00	10.53	43	10.12
2/25/2021	3:00:00	10.52	43	10.06
2/25/2021	3:15:00	10.5	43.2	9.94
2/25/2021	3:30:00	10.5	42.9	10.01
2/25/2021	3:45:00	10.49	42.9	9.85
2/25/2021	4:00:00	10.49	43.1	9.73
2/25/2021	4:15:00	10.17	42.9	9.43
2/25/2021	4:30:00	10.14	42.2	10.83
2/25/2021	4:45:00	10.14	42.3	10.88
2/25/2021	5:00:00	10.13	42.3	10.79
2/25/2021	5:15:00	10.13	42.3	10.69
2/25/2021	5:30:00	10.13	42.7	10.65
2/25/2021	5:45:00	10.13	42.6	10.54
2/25/2021	6:00:00	10.12	42.3	10.67
2/25/2021	6:15:00	10.14	42.6	10.66
2/25/2021	6:30:00	10.15	42.7	10.58
2/25/2021	6:45:00	10.16	42.4	10.37
2/25/2021	7:00:00	10.18	42.4	10.52
2/25/2021	7:15:00	10.21	42.5	10.74
2/25/2021	7:30:00	10.24	42.4	10.56
2/25/2021	7:45:00	10.26	42.4	10.77
2/25/2021	8:00:00	10.3	42.3	10.64
2/25/2021	8:15:00	10.33	42.2	9.82

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
2/25/2021	8:30:00	10.35	42.5	10.74
2/25/2021	8:45:00	10.39	42.3	10.63
2/25/2021	9:00:00	10.46	42.5	10.71
2/25/2021	9:15:00	10.48	42.4	10.7
2/25/2021	9:30:00	10.51	42.6	10.65
2/25/2021	9:45:00	10.54	42.4	10.73
2/25/2021	10:00:00	10.56	42.7	10.76
2/25/2021	10:15:00	10.58	42.4	10.77
2/25/2021	10:30:00	10.61	42.5	10.64
2/25/2021	10:45:00	10.63	42.5	10.58
2/25/2021	11:00:00	10.66	42.5	10.75
2/25/2021	11:15:00	10.69	42.3	10.74
2/25/2021	11:30:00	10.73	42.5	10.73
2/25/2021	11:45:00	10.74	42.6	10.83
2/25/2021	12:00:00	10.75	42.6	10.83
2/25/2021	12:15:00	10.78	42.3	10.79
2/25/2021	12:30:00	15.38	0.4	9.95
2/25/2021	12:45:00	10.85	42.1	10.92
2/25/2021	13:00:00	10.88	41.7	11.05
2/25/2021	13:15:00	10.89	41.8	11.07
2/25/2021	13:30:00	10.9	41.8	11.08
2/25/2021	13:45:00	10.89	41.8	11.07
2/25/2021	14:00:00	10.85	42	11.06
2/25/2021	14:15:00	10.81	42	11.11
2/25/2021	14:30:00	10.82	41.8	11.1
2/25/2021	14:45:00	10.81	41.8	11.07
2/25/2021	15:00:00	10.79	41.9	11.09
2/25/2021	15:15:00	10.78	41.9	11.15
2/25/2021	15:30:00	10.77	41.9	11.14
2/25/2021	15:45:00	10.77	42	11.07
2/25/2021	16:00:00	10.76	41.9	11.09
2/25/2021	16:15:00	10.75	42	11.09
2/25/2021	16:30:00	10.71	41.9	11.08
2/25/2021	16:45:00	10.71	41.7	11.09
2/25/2021	17:00:00	10.68	42	11.09
2/25/2021	17:15:00	10.63	42.1	11.08
2/25/2021	17:30:00	10.6	41.8	11.09
2/25/2021	17:45:00	10.57	41.8	11.09
2/25/2021	18:00:00	10.55	41.8	11.13
2/25/2021	18:15:00	10.52	41.8	11.11
2/25/2021	18:30:00	10.49	41.8	11.07
2/25/2021	18:45:00	10.47	41.9	11.06
2/25/2021	19:00:00	10.46	41.7	11.08
2/25/2021	19:15:00	10.43	41.8	11.07

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
2/25/2021	19:30:00	10.42	41.9	11.1
2/25/2021	19:45:00	10.41	41.9	11.09
2/25/2021	20:00:00	10.4	41.9	11.03
2/25/2021	20:15:00	10.39	41.8	11.11
2/25/2021	20:30:00	10.38	41.8	11.05
2/25/2021	20:45:00	10.37	41.9	11.08
2/25/2021	21:00:00	10.36	41.8	11.05
2/25/2021	21:15:00	10.66	42.1	11.14
2/25/2021	21:30:00	10.76	42	11.57
2/25/2021	21:45:00	10.78	42	11.61
2/25/2021	22:00:00	10.79	41.7	11.43
2/25/2021	22:15:00	10.81	41.8	11.35
2/25/2021	22:30:00	10.8	41.7	11.47
2/25/2021	22:45:00	10.79	41.9	11.58
2/25/2021	23:00:00	10.78	42.1	11.45
2/25/2021	23:15:00	10.72	42	11.58
2/25/2021	23:30:00	10.7	41.9	11.57
2/25/2021	23:45:00	10.69	41.9	11.35
	Max	**15.38**	**43.2**	**11.61**
	Min	**10.02**	**0.4**	**9.43**

Stevens Creek Operations Data (Provided By DESC & USACE)

2/24/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	187.7	160	13457	9074
2:00	0	187.4	159.7	13405	9078
3:00	8967	187	159.5	13291	9063
4:00	13912	186.7	159.3	13158	9059
5:00	27030	186.5	159.2	13045	9088
6:00	26940	186.5	159.2	13156	9109
7:00	26940	186.6	159.2	13188	9128
8:00	22957	186.9	159.3	13359	9186
9:00	22720	187.2	159.5	13425	9139
10:00	22810	187.5	159.6	13469	9135
11:00	23317	187.7	159.8	13496	9123
12:00	22810	187.8	159.8	13571	9145
13:00	22810	187.9	159.9	13566	9130
14:00	22720	188	160	13609	9126
15:00	25810	188.1	160	13626	9102
16:00	22810	188.1	160.1	13615	9111
17:00	22810	188.2	160.1	13618	9085
18:00	22630	188.2	160.2	13588	9077
19:00	17027	188.2	160.2	13617	9069
20:00	7580	188.2	160.2	13625	9065
21:00	0	188.2	160.3	13604	9062
22:00	0	188.2	160.3	13575	9036
23:00	0	187.8	160	13407	9024
24:00:00	0	187.5	159.8	13349	9013
daily avg.	**15942**	**188**	**160**	**13451**	**9093**

Total Generation	**322819**
Projected discharge	17618
Thurmond discharge	**15942**

Stevens Creek Operations Data (Provided By DESC & USACE)

2/25/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	187	159.5	13184	9018
2:00	0	187.9	159.3	13126	9026
3:00	0	187.6	159.2	13019	9043
4:00	736	187.6	159.1	13001	90.59
5:00	15760	187.1	159	12961	9043
6:00	15290	185.9	158.9	12894	9046
7:00	15180	186.1	159	13029	90098
8:00	15290	186.3	159	13065	9084
9:00	14780	186.5	159.1	13053	9070
10:00	13070	186.6	159.1	13140	9089
11:00	13150	186.7	159.2	13190	9081
12:00	13070	186.7	159.2	13194	9071
13:00	13150	186.8	159.3	13226	9081
14:00	13150	186.8	159.3	13279	9128
15:00	13070	186.9	159.3	13258	9118
16:00	13070	186.9	159.3	13215	9091
17:00	13230	186.9	159.3	13221	9083
18:00	12990	186.9	159.3	13162	9085
19:00	13150	186.9	159.3	13159	9099
20:00	13150	186.9	159.4	13283	9147
21:00	12760	187	159.4	13175	9128
22:00	441	187	159.4	1330	9095
23:00	0	186.8	159.4	13265	9052
24:00:00	0	186.5	159.2	13019	9012
daily avg.	**9770**	**187**	**159**	**12644**	**12078**

Total Generation	**303448**
Projected discharge	10980
Thurmond discharge	**9770**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
2/24/2021 0:00	20500
2/24/2021 1:00	21200
2/24/2021 2:00	21200
2/24/2021 3:00	21400
2/24/2021 4:00	21300
2/24/2021 5:00	21100
2/24/2021 6:00	20500
2/24/2021 7:00	19900
2/24/2021 8:00	19400
2/24/2021 9:00	19000
2/24/2021 10:00	18200
2/24/2021 11:00	17700
2/24/2021 12:00	17400
2/24/2021 13:00	17600
2/24/2021 14:00	17400
2/24/2021 15:00	18000
2/24/2021 16:00	18200
2/24/2021 17:00	18500
2/24/2021 18:00	19100
2/24/2021 19:00	19500
2/24/2021 20:00	19800
2/24/2021 21:00	20900
2/24/2021 22:00	21200
2/24/2021 23:00	21500
2/25/2021 0:00	21600
2/25/2021 1:00	21900
2/25/2021 2:00	21800
2/25/2021 3:00	21700
2/25/2021 4:00	21700
2/25/2021 5:00	21000
2/25/2021 6:00	20400
2/25/2021 7:00	19600
2/25/2021 8:00	18600
2/25/2021 9:00	18000
2/25/2021 10:00	16800
2/25/2021 11:00	15900
2/25/2021 12:00	15300
2/25/2021 13:00	14800
2/25/2021 14:00	14500
2/25/2021 15:00	14200
2/25/2021 16:00	14100
2/25/2021 17:00	14300
2/25/2021 18:00	14200
2/25/2021 19:00	14200
2/25/2021 20:00	14200
2/25/2021 21:00	14600
2/25/2021 22:00	14900
2/25/2021 23:00	15000

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
March 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (3/16/21)	9.50	—	10.60	9.3	—	10.8
Thurmond Tailrace (Site 7) (3/24/21 - 3/25/21)		—			—	
Stevens Creek Res. (Site 6) (3/24/21 - 3/25/21)	11.21	—	11.86	10.9	—	10.9
Stevens Creek Res. (Site 1) (3/24/21 - 3/25/21)	11.24	—	12.09	10.4	—	11.0
Stevens Creek Res. (Site 2) (3/24/21 - 3/25/21)	12.79	—	12.83	10.4	—	10.7
Stevens Creek Tailrace (Site 3) (3/24/21 - 3/25/21)	12.64	—	13.05	10.7	—	10.8
Stevens Creek (Site 5) (3/24/21 - 3/25/21)	15.92	—	16.65	7.9	—	8.2
Stevens Creek (Site 4) (3/24/21 - 3/25/21)	13.36	—	16.09	7.7	—	9.5

Stevens Creek Project Water Quality Data (Provided by USGS-WRD)

Date: 3/24/2021
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 18H110937 handheld: 17K102282

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:39	0	6.7	15.9	81	8.2	83
		1	6.7	15.9	81	8.2	83
		2	6.8	15.9	81	8.2	83
		3	6.8	15.9	81	8.2	83
3	9:11		6.7	13.1	46	10.7	101
4	7:41	0	6.8	15.4	76	8.0	80
		1	6.8	15.4	76	8.0	80
		2	6.8	15.4	76	8.0	80
		3	6.8	15.4	76	8.0	80
		4	6.8	15.4	76	7.9	79
2	7:53	0	7.1	12.8	45	10.4	99
		1	7.1	12.8	45	10.4	99
		2	7.1	12.8	45	10.4	99
		3	7.1	12.8	45	10.4	98
		4	7.1	12.8	45	10.4	98
1-A	8:19	0	7.1	11.2	43	10.9	99
		1	7.1	11.2	43	10.9	99
		2	7.1	11.2	43	10.9	99
		3	7.1	11.2	43	10.9	99
1	8:31	0	7.1	11.3	43	11.0	100
		1	7.1	11.2	43	11.0	101
		2	7.1	11.2	43	11.0	100
		3	7.1	11.2	43	11.0	100

Stevens Creek Project Water Quality Data (Provided by USGS-WRD)

Date: 3/25/2021
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 18H110937 **handheld:** 17K102282

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:27	0	6.8	16.6	83	7.9	82
		1	6.8	16.7	83	7.9	81
		2	6.9	16.7	83	7.9	81
		3	6.9	16.7	83	7.9	81
		4	6.9	16.7	83	7.9	81
3	7:10		7.1	12.6	44	10.8	102
4	7:49	0	6.9	16.1	77	7.7	78
		1	6.9	16.1	77	7.7	78
		2	6.9	16.0	77	7.7	78
		3	6.9	16.0	77	7.7	77
		4	6.9	15.6	73	7.9	79
		5	7.0	13.5	48	9.5	91
		6	7.0	13.4	48	9.5	91
2	8:05	0	7.2	12.8	44	10.7	102
		1	7.2	12.8	44	10.7	102
		2	7.2	12.8	44	10.7	102
		3	7.2	12.8	44	10.7	101
		4	7.2	12.8	44	10.7	101
1	8:29	0	7.1	12.1	44	10.4	97
		1	7.1	12.1	44	10.4	97
		2	7.1	12.1	44	10.4	97
		3	7.1	12.1	44	10.4	97
1-a	8:40	0	7.1	11.9	43	10.9	101
		1	7.1	11.9	43	10.9	101
		2	7.1	11.9	43	10.9	101

JST Forebay Water Quality Data (Provided By USACE-ERDC)

March 16.2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	°C	mg/l	µS/cm	meters
64658	10.59	10.75	41.7	0.2
64716	10.6	10.33	41.7	2
64742	10.6	10.24	41.7	4
64757	10.59	10.22	41.9	6
64818	10.58	10.18	41.7	8
64832	10.27	10.18	41.4	10
64853	9.98	9.83	41.7	12
64913	9.94	9.72	41.5	14
64928	9.83	9.69	41.6	16
64957	9.8	9.69	41.4	18
65025	9.69	9.64	41	20
65040	9.66	9.6	41.2	22
65104	9.64	9.55	41.1	24
65127	9.63	9.56	41.1	26
65152	9.63	9.54	41.1	28
65214	9.59	9.57	40.9	30
65230	9.55	9.62	41	32
65244	9.5	9.57	40.9	34
65307	9.5	9.4	40.9	36
65322	9.5	9.37	40.9	38
65344	9.5	9.31	40.8	40
65358	9.5	9.3	40.9	42
65417	9.5	9.32	40.6	44
65442	9.51	9.34	47.2	45.5
Max:	**10.6**	**10.75**	**47.2**	**45.5**
Min:	**9.5**	**9.3**	**40.6**	**0.2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
3/24/2021	0:00:00	12.99	42.5	10.2
3/24/2021	0:15:00	13	42.6	10.2
3/24/2021	0:30:00	12.99	42.6	10.1
3/24/2021	0:45:00	12.95	42.6	10.04
3/24/2021	1:00:00	12.99	42.6	10
3/24/2021	1:15:00	12.92	42.5	9.94
3/24/2021	1:30:00	12.89	42.6	9.71
3/24/2021	1:45:00	12.91	42.6	9.62
3/24/2021	2:00:00	12.8	42.4	9.56
3/24/2021	2:15:00	12.81	42.6	9.48
3/24/2021	2:30:00	12.84	42.6	9.44
3/24/2021	2:45:00	12.87	42.5	9.39
3/24/2021	3:00:00	12.85	42.8	9.19
3/24/2021	3:15:00	12.8	42.5	9.16
3/24/2021	3:30:00	12.85	42.4	9.69
3/24/2021	3:45:00	12.91	42.5	9.91
3/24/2021	4:00:00	12.94	42.3	10.03
3/24/2021	4:15:00	12.87	42.4	10.12
3/24/2021	4:30:00	12.82	42.4	10.17
3/24/2021	4:45:00	12.81	42.1	10.18
3/24/2021	5:00:00	12.77	42.2	10.17
3/24/2021	5:15:00	12.61	42.4	9.94
3/24/2021	5:30:00	12.6	42.1	9.63
3/24/2021	5:45:00	12.58	42.1	9.55
3/24/2021	6:00:00	12.6	42.4	9.48
3/24/2021	6:15:00	12.12	41.9	9.47
3/24/2021	6:30:00	12.11	42.2	9.47
3/24/2021	6:45:00	12.07	42.2	9.44
3/24/2021	7:00:00	12.04	42.1	9.44
3/24/2021	7:15:00	12.04	42.2	9.48
3/24/2021	7:30:00	11.98	42.2	9.54
3/24/2021	7:45:00	11.97	42.3	9.58
3/24/2021	8:00:00	12.02	42.1	9.54
3/24/2021	8:15:00	12.12	42.3	9.62
3/24/2021	8:30:00	12.28	42	10.2
3/24/2021	8:45:00	12.64	42.2	10.16
3/24/2021	9:00:00	12.59	42.1	10.2
3/24/2021	9:15:00	12.7	42	10.35
3/24/2021	9:30:00	12.75	42.4	10.39
3/24/2021	9:45:00	12.81	42	10.38
3/24/2021	10:00:00	12.87	42.1	10.41
3/24/2021	10:15:00	12.92	42.2	10.41

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
3/24/2021	10:30:00	13	42.1	10.38
3/24/2021	10:45:00	13.05	42.3	10.38
3/24/2021	11:00:00	13.06	42.3	10.41
3/24/2021	11:15:00	13.13	42.3	10.36
3/24/2021	11:30:00	13.21	42.2	10.31
3/24/2021	11:45:00	13.16	42.5	10.33
3/24/2021	12:00:00	13.12	42.1	10.3
3/24/2021	12:15:00	13.05	42.2	10.39
3/24/2021	12:30:00	13.09	42.1	10.35
3/24/2021	12:45:00	13.17	42.2	10.26
3/24/2021	13:00:00	13.28	42.2	10.1
3/24/2021	13:15:00	13.34	42.2	10.04
3/24/2021	13:30:00	13.39	42.1	9.94
3/24/2021	13:45:00	13.35	42.2	9.83
3/24/2021	14:00:00	13.34	42.3	9.78
3/24/2021	14:15:00	13.35	42.3	9.73
3/24/2021	14:30:00	13.36	42.3	9.65
3/24/2021	14:45:00	13.36	42.4	9.58
3/24/2021	15:00:00	13.34	42.4	9.62
3/24/2021	15:15:00	13.31	42.2	9.6
3/24/2021	15:30:00	13.29	42.4	9.56
3/24/2021	15:45:00	13.26	42.3	9.49
3/24/2021	16:00:00	13.3	42.6	9.32
3/24/2021	16:15:00	13.26	42.3	9.46
3/24/2021	16:30:00	13.25	42.4	9.82
3/24/2021	16:45:00	13.18	42.2	10.07
3/24/2021	17:00:00	13.18	42.5	10.13
3/24/2021	17:15:00	13.1	42.2	10.21
3/24/2021	17:30:00	13.06	42.3	10.25
3/24/2021	17:45:00	13.04	42.5	10.32
3/24/2021	18:00:00	13.04	42.3	10.25
3/24/2021	18:15:00	13.05	42.3	10.34
3/24/2021	18:30:00	12.99	42.2	10.35
3/24/2021	18:45:00	12.97	42.2	10.32
3/24/2021	19:00:00	12.91	42.5	10.34
3/24/2021	19:15:00	12.89	42.2	10.32
3/24/2021	19:30:00	12.82	42.4	10.31
3/24/2021	19:45:00	12.79	42.2	10.36
3/24/2021	20:00:00	12.76	42.4	10.36
3/24/2021	20:15:00	12.74	42.2	10.34
3/24/2021	20:30:00	12.71	42.4	10.39
3/24/2021	20:45:00	12.71	42.2	10.35
3/24/2021	21:00:00	12.67	42.2	10.36
3/24/2021	21:15:00	12.72	42.2	10.44

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
3/24/2021	21:30:00	12.82	42.2	10.44
3/24/2021	21:45:00	12.81	42.2	10.38
3/24/2021	22:00:00	12.74	42.5	10.35
3/24/2021	22:15:00	12.71	42.4	10.33
3/24/2021	22:30:00	12.69	42.1	10.3
3/24/2021	22:45:00	12.71	42.1	10.3
3/24/2021	23:00:00	12.69	42.2	10.28
3/24/2021	23:15:00	12.68	42.4	10.26
3/24/2021	23:30:00	12.72	42.2	10.28
3/24/2021	23:45:00	12.72	42.4	10.27
3/25/2021	0:00:00	12.72	42.2	10.2
3/25/2021	0:15:00	12.71	42.2	10.19
3/25/2021	0:30:00	12.68	42.5	10.15
3/25/2021	0:45:00	12.68	42.4	10.1
3/25/2021	1:00:00	12.63	42.3	10.05
3/25/2021	1:15:00	12.63	42.4	9.93
3/25/2021	1:30:00	12.56	42.1	9.79
3/25/2021	1:45:00	12.48	42.4	9.68
3/25/2021	2:00:00	12.54	42.6	9.63
3/25/2021	2:15:00	12.5	42.3	9.54
3/25/2021	2:30:00	12.44	42.1	9.48
3/25/2021	2:45:00	12.42	42.3	9.4
3/25/2021	3:00:00	12.48	42.4	9.4
3/25/2021	3:15:00	12.43	42.5	9.35
3/25/2021	3:30:00	12.37	42.3	9.31
3/25/2021	3:45:00	12.47	42.5	9.28
3/25/2021	4:00:00	12.43	42.3	9.25
3/25/2021	4:15:00	12.39	42.3	9.23
3/25/2021	4:30:00	12.31	42.4	9.25
3/25/2021	4:45:00	12.38	42.6	9.2
3/25/2021	5:00:00	12.42	42.6	9.09
3/25/2021	5:15:00	12.35	42.4	9.26
3/25/2021	5:30:00	12.42	42.4	9.54
3/25/2021	5:45:00	12.41	42.4	9.67
3/25/2021	6:00:00	12.42	42.1	9.75
3/25/2021	6:15:00	12.45	42.1	9.96
3/25/2021	6:30:00	12.52	42.1	10.02
3/25/2021	6:45:00	12.53	42	10.09
3/25/2021	7:00:00	12.52	42.1	10.15
3/25/2021	7:15:00	12.57	42.3	10.17
3/25/2021	7:30:00	12.59	42.1	10.18
3/25/2021	7:45:00	12.57	42	10.17
3/25/2021	8:00:00	12.59	42.1	10.16
3/25/2021	8:15:00	12.64	42	10.23

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
3/25/2021	8:30:00	12.68	42	10.16
3/25/2021	8:45:00	12.71	42.1	10.19
3/25/2021	9:00:00	12.75	42.2	10.24
3/25/2021	9:15:00	12.79	42.2	10.19
3/25/2021	9:30:00	12.84	42.2	10.2
3/25/2021	9:45:00	12.85	42.1	10.18
3/25/2021	10:00:00	12.92	42.1	10.17
3/25/2021	10:15:00	12.96	42.1	10.19
3/25/2021	10:30:00	13.01	42.1	10.18
3/25/2021	10:45:00	13.04	42.2	10.18
3/25/2021	11:00:00	13.04	42.1	10.24
3/25/2021	11:15:00	13.09	42	10.16
3/25/2021	11:30:00	13.12	42.1	10.19
3/25/2021	11:45:00	13.14	42.1	10.18
3/25/2021	12:00:00	13.19	42	10.18
3/25/2021	12:15:00	13.19	42	10.17
3/25/2021	12:30:00	13.2	42	10.16
3/25/2021	12:45:00	13.27	42.1	10.15
3/25/2021	13:00:00	13.25	42.1	10.16
3/25/2021	13:15:00	13.35	42	10.15
3/25/2021	13:30:00	13.33	42.3	10.1
3/25/2021	13:45:00	13.29	42.4	10.11
3/25/2021	14:00:00	13.24	42.3	10.13
3/25/2021	14:15:00	13.25	42.2	10.14
3/25/2021	14:30:00	13.2	42.3	10.09
3/25/2021	14:45:00	13.13	42.3	10.13
3/25/2021	15:00:00	13.18	42.5	10.1
3/25/2021	15:15:00	13.24	42.2	10.09
3/25/2021	15:30:00	13.23	42.3	10.12
3/25/2021	15:45:00	13.26	42.3	10.07
3/25/2021	16:00:00	13.28	42.4	10.06
3/25/2021	16:15:00	13.28	42.2	10.08
3/25/2021	16:30:00	13.24	42.4	10.05
3/25/2021	16:45:00	13.24	42.2	10.08
3/25/2021	17:00:00	13.2	42.3	10.07
3/25/2021	17:15:00	12.85	42.1	9.78
3/25/2021	17:30:00	12.52	41.9	9.55
3/25/2021	17:45:00	12.46	42.1	9.41
3/25/2021	18:00:00	12.37	42.3	9.37
3/25/2021	18:15:00	12.34	42.3	9.32
3/25/2021	18:30:00	12.3	42.2	9.28
3/25/2021	18:45:00	12.23	42.4	9.29
3/25/2021	19:00:00	12.22	42.4	9.26
3/25/2021	19:15:00	12.2	42.2	9.22

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
3/25/2021	19:30:00	12.17	42.3	9.24
3/25/2021	19:45:00	12.07	42.2	9.22
3/25/2021	20:00:00	12.03	42.4	9.25
3/25/2021	20:15:00	12.04	42.2	9.29
3/25/2021	20:30:00	12	42.2	9.3
3/25/2021	20:45:00	12.01	42.2	9.27
3/25/2021	21:00:00	12.03	42.4	9.31
3/25/2021	21:15:00	12.44	42.4	9.31
3/25/2021	21:30:00	12.73	42.1	9.89
3/25/2021	21:45:00	12.76	42.4	10.15
3/25/2021	22:00:00	12.81	42.2	10.18
3/25/2021	22:15:00	12.94	42.2	10.07
3/25/2021	22:30:00	12.94	42.3	10.08
3/25/2021	22:45:00	12.87	42.5	10.21
3/25/2021	23:00:00	12.8	42.4	10.27
3/25/2021	23:15:00	12.83	42.2	10.28
3/25/2021	23:30:00	12.81	42.4	10.27
3/25/2021	23:45:00	12.75	42.5	10.1
	Max	**13.39**	**42.8**	**10.44**
	Min	**11.97**	**41.9**	**9.09**

Stevens Creek Operations Data (Provided By DESC & USACE)

3/24/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	183.6	158.6	10073	7433
2:00	0	183.3	158.6	9802	7373
3:00	0	183.1	158.4	8474	6335
4:00	147	182.8	158.4	8277	6250
5:00	2964	182.6	158.4	8096	6187
6:00	11092	182.5	158.4	8006	6178
7:00	28470	182.6	158.4	8276	6268
8:00	27880	183.3	158.1	5309	4035
9:00	16760	184.1	157.9	5832	4270
10:00	7470	184.7	157.9	5963	4235
11:00	0	185.1	157.8	5521	3888
12:00	0	185.1	157.8	5372	3822
13:00	0	185	157.7	4174	3012
14:00	0	184.9	157.6	4085	2801
15:00	0	184.8	157	3974	2797
16:00	0	184.7	157.3	3708	2720
17:00	0	184.6	157.3	3764	2721
18:00	2720	184.6	157.2	3738	2717
19:00	2850	184.7	157.1	3789	2760
20:00	230	184.7	157.1	3824	2770
21:00	2850	184.7	157.1	3816	2750
22:00	2850	184.7	157	3800	2731
23:00	0	184.7	157	3762	2639
24:00:00	0	184.6	156.9	3778	2753
daily avg.	**4428**	**184**	**158**	**5634**	**4144**

Total Generation	**135213**
Projected discharge	4554
Thurmond discharge	**4428**

Stevens Creek Operations Data (Provided By DESC & USACE)

3/25/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	184.5	157	3771	2764
2:00	0	184.4	156.9	3745	2775
3:00	0	184.4	156.9	3799	2808
4:00	0	184.3	156.9	3757	2784
5:00	147	184.2	156.9	3659	2799
6:00	4194	184	157.3	6599	4853
7:00	10270	183.8	158.4	9706	7159
8:00	10200	183.8	158.4	9991	7396
9:00	10190	183.9	158.5	10028	7369
10:00	10270	184	158.6	10084	7326
11:00	10250	184.2	158.6	10225	7392
12:00	10320	184.4	158.6	10252	7413
13:00	10260	184.6	158.7	10473	7493
14:00	10320	184.7	158.7	11029	7972
15:00	10260	184.8	158.6	11082	7929
16:00	10260	185	158.7	11213	8024
17:00	10517	185.1	158.7	11317	8061
18:00	19150	185.2	158.7	11400	8082
19:00	18940	185.5	158.7	11588	8162
20:00	18720	185.7	158.8	11728	8228
21:00	17320	186	158.8	11952	8302
22:00	588	186.3	158.9	12051	8310
23:00	0	186.5	158.9	12076	8316
24:00:00	0	186.2	158.9	11955	8260
daily avg.	**8007**	**185**	**158**	**9312**	**6666**

Total Generation	**223480**
Projected discharge	8667
Thurmond discharge	**8007**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
3/24/2021 0:00	6530
3/24/2021 1:00	6500
3/24/2021 2:00	6520
3/24/2021 3:00	6580
3/24/2021 4:00	6570
3/24/2021 5:00	6580
3/24/2021 6:00	6600
3/24/2021 7:00	6550
3/24/2021 8:00	6580
3/24/2021 9:00	6610
3/24/2021 10:00	6580
3/24/2021 11:00	6560
3/24/2021 12:00	6530
3/24/2021 13:00	6460
3/24/2021 14:00	6440
3/24/2021 15:00	6350
3/24/2021 16:00	5580
3/24/2021 17:00	5160
3/24/2021 18:00	4860
3/24/2021 19:00	4680
3/24/2021 20:00	4530
3/24/2021 21:00	4410
3/24/2021 22:00	4330
3/24/2021 23:00	4260
3/25/2021 0:00	4190
3/25/2021 1:00	4130
3/25/2021 2:00	4090
3/25/2021 3:00	4070
3/25/2021 4:00	4030
3/25/2021 5:00	4010
3/25/2021 6:00	3980
3/25/2021 7:00	3960
3/25/2021 8:00	3940
3/25/2021 9:00	3910
3/25/2021 10:00	3880
3/25/2021 11:00	3850
3/25/2021 12:00	3870
3/25/2021 13:00	3940
3/25/2021 14:00	4020
3/25/2021 15:00	4240
3/25/2021 16:00	5120
3/25/2021 17:00	6140
3/25/2021 18:00	6490
3/25/2021 19:00	6710
3/25/2021 20:00	6850
3/25/2021 21:00	6990
3/25/2021 22:00	7180
3/25/2021 23:00	7260

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
April 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (4/19/21)	10.93	—	20.04	6.7	—	9.6
Thurmond Tailrace (Site 7) (4/27/21 - 4/28/21)		—			—	
Stevens Creek Res. (Site 6) (4/27/21 - 4/28/21)	13.88	—	13.95	8.2	—	8.6
Stevens Creek Res. (Site 1) (4/27/21 - 4/28/21)	14.12	—	14.42	8.2	—	8.4
Stevens Creek Res. (Site 2) (4/27/21 - 4/28/21)	14.15	—	14.42	8.6	—	8.7
Stevens Creek Tailrace (Site 3) (4/27/21 - 4/28/21)	14.63	—	14.96	9.0	—	9.1
Stevens Creek (Site 5) (4/27/21 - 4/28/21)	17.90	—	18.97	6.7	—	7.7
Stevens Creek (Site 4) (4/27/21 - 4/28/21)	18.58	—	19.74	6.7	—	7.0

Stevens Creek Project Water Quality Data (Provided by USGS-WRD)

Date: 04/27/2021
Field Team: REH/DFS
Field Meter Model/Number: YSI EXO3 / 18H110944

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	7:50	surface	7.1	17.9	123	7.7	78
		1M	7.1	17.9	123	7.4	78
		2M	7.1	17.9	123	7.3	78
		3M	7.1	17.9	124	7.3	77
		4M	7.1	17.9	124	7.3	77
3	11:04	1M	6.9	15.0	44	9.1	91
4	9:27	surface	7.0	19.1	105	6.7	73
		1M	7.0	18.7	108	6.7	72
		2M	7.0	18.6	108	6.7	72
		3M	7.0	18.6	108	6.7	72
2	9:43	surface	6.8	14.4	44	8.7	85
		1M	6.7	14.4	44	8.7	85
		2M	6.7	14.4	44	8.7	85
		3M	6.7	14.4	44	8.7	85
		4M	6.7	14.4	44	8.7	85
		5M	6.7	14.4	44	8.7	85
1	10:09	surface	6.8	14.3	45	8.3	81
		1M	6.8	14.2	45	8.3	81
		2M	6.7	14.3	46	8.2	81
		3M	6.7	14.3	46	8.2	80
		4M	6.7	14.4	47	8.2	81
1A	10:23	surface	6.7	14.0	43	8.6	83
		1M	6.8	13.9	43	8.6	84
		2M	6.7	13.9	43	8.6	83
		3M	6.7	13.9	43	8.6	83

Stevens Creek Project Water Quality Data (Provided by USGS-WRD)

Date: 04/28/2021
Field Team: REH/DFS
Field Meter Model/Number: YSI EXO3 / 18H110944

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	7:20	surface	7.1	19.0	106	6.8	73
		1M	7.1	19.0	106	6.8	73
		2M	7.1	18.9	106	6.7	72
		3M	7.1	18.9	107	6.7	72
		4M	7.1	18.9	107	6.7	72
3	9:56	1M	6.9	14.6	44	9.0	89
4	8:16	surface	7.1	19.7	109	6.9	76
		1M	7.1	19.7	108	6.9	76
		2M	7.1	19.5	102	7.0	76
		3M	7.1	19.5	101	7.0	76
2	9:28	surface	6.8	14.2	44	8.6	84
		1M	6.8	14.2	44	8.6	84
		2M	6.8	14.2	44	8.6	84
		3M	6.8	14.2	44	8.6	84
		4M	6.7	14.2	44	8.6	83
1	9:07	surface	6.8	14.1	44	8.3	81
		1M	6.8	14.1	44	8.3	81
		2M	6.7	14.1	45	8.4	81
		3M	6.7	14.2	45	8.4	81
		4M	6.7	14.2	45	8.3	81
1A	8:54	surface	6.9	13.9	43	8.3	80
		1M	6.8	13.9	43	8.3	80
		2M	6.8	13.9	43	8.3	80
		3M	6.8	13.9	43	8.2	80

JST Forebay Water Quality Data (Provided By USACE-ERDC)

April 19, 2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	°C	mg/l	µS/cm	meters
50753	20.02	9.54	44.1	2
50813	20.03	9.55	44.1	4
50843	20.04	9.57	44.3	6
50857	20.02	9.58	44.1	8
50912	16.04	9.32	43.1	10
50933	15.16	8.39	42.9	12
50948	14.26	8.23	42.6	14
51013	13.76	7.81	42.4	16
51029	13.51	7.67	42.2	18
51046	13.22	7.62	42.1	20
51056	12.92	7.61	42	22
51111	12.73	7.62	42	24
51124	12.38	7.65	42.7	26
51139	12.24	7.75	42.8	28
51148	12.07	7.78	43.1	30
51200	11.83	7.85	43.2	32
51215	11.61	7.85	43.6	34
51230	11.28	7.64	44	36
51243	11.18	7.49	43.7	38
51259	11.01	7.3	43.8	40
51315	10.93	6.71	43.8	42
Max:	**20.04**	**9.58**	**44.3**	**42**
Min:	**10.93**	**6.71**	**42**	**2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
4/27/2021	0:00:00	15.35	43.1	8.24
4/27/2021	0:15:00	15.35	42.9	8.18
4/27/2021	0:30:00	15.28	42.9	7.7
4/27/2021	0:45:00	15.16	42.8	7.39
4/27/2021	1:00:00	15.04	42.6	7.4
4/27/2021	1:15:00	14.98	42.5	7.32
4/27/2021	1:30:00	14.96	42.4	7.33
4/27/2021	1:45:00	14.93	42.5	7.25
4/27/2021	2:00:00	14.92	42.4	7.2
4/27/2021	2:15:00	14.91	42.3	7.15
4/27/2021	2:30:00	14.89	42.6	7.1
4/27/2021	2:45:00	14.88	42.4	7.02
4/27/2021	3:00:00	14.86	42.3	7.02
4/27/2021	3:15:00	14.85	42.5	6.96
4/27/2021	3:30:00	14.81	42.2	6.94
4/27/2021	3:45:00	14.79	42.2	6.92
4/27/2021	4:00:00	14.77	42.4	6.87
4/27/2021	4:15:00	14.76	42.3	6.87
4/27/2021	4:30:00	14.74	42.4	6.83
4/27/2021	4:45:00	14.73	42.9	6.86
4/27/2021	5:00:00	14.72	42.5	6.77
4/27/2021	5:15:00	14.71	42.6	6.58
4/27/2021	5:30:00	14.77	42.6	7
4/27/2021	5:45:00	14.87	42.8	7.68
4/27/2021	6:00:00	14.93	42.9	7.94
4/27/2021	6:15:00	14.97	42.6	8.01
4/27/2021	6:30:00	15	42.8	8.16
4/27/2021	6:45:00	15.02	42.9	8.13
4/27/2021	7:00:00	15.06	42.9	8.11
4/27/2021	7:15:00	15.13	43	8.2
4/27/2021	7:30:00	15.17	43	8.18
4/27/2021	7:45:00	15.21	42.8	8.27
4/27/2021	8:00:00	15.31	43.1	8.15
4/27/2021	8:15:00	15.38	42.9	8.35
4/27/2021	8:30:00	15.39	43	7.8
4/27/2021	8:45:00	15.38	42.9	7.55
4/27/2021	9:00:00	15.36	43.1	7.5
4/27/2021	9:15:00	15.33	43	7.41
4/27/2021	9:30:00	15.33	42.9	7.27
4/27/2021	9:45:00	15.35	42.9	7.21
4/27/2021	10:00:00	15.4	42.9	7.19

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
4/27/2021	10:15:00	15.44	43.3	7.15
4/27/2021	10:30:00	15.5	43	7.17
4/27/2021	10:45:00	15.54	43	7.18
4/27/2021	11:00:00	15.57	43.1	7.16
4/27/2021	11:15:00	15.58	43.1	7.22
4/27/2021	11:30:00	15.63	43.1	7.17
4/27/2021	11:45:00	15.66	43	7.22
4/27/2021	12:00:00	15.71	43	7.24
4/27/2021	12:15:00	15.74	42.9	7.24
4/27/2021	12:30:00	15.79	43	6.86
4/27/2021	12:45:00	15.86	43.3	6.76
4/27/2021	13:00:00	15.91	43.1	6.75
4/27/2021	13:15:00	15.98	43.1	6.73
4/27/2021	13:30:00	16.03	43	6.71
4/27/2021	13:45:00	16.06	43	6.69
4/27/2021	14:00:00	16.07	43.2	6.69
4/27/2021	14:15:00	16.07	43.3	6.7
4/27/2021	14:30:00	16.11	43	6.72
4/27/2021	14:45:00	16.11	42.9	6.69
4/27/2021	15:00:00	16.12	42.9	6.68
4/27/2021	15:15:00	15.97	42.9	6.65
4/27/2021	15:30:00	15.71	42.8	6.81
4/27/2021	15:45:00	15.59	42.7	6.81
4/27/2021	16:00:00	15.52	42.7	6.82
4/27/2021	16:15:00	15.47	42.9	6.82
4/27/2021	16:30:00	15.45	42.9	6.83
4/27/2021	16:45:00	15.43	43	6.79
4/27/2021	17:00:00	15.37	43	6.74
4/27/2021	17:15:00	15.36	42.9	6.8
4/27/2021	17:30:00	15.31	42.6	6.81
4/27/2021	17:45:00	15.31	42.8	6.8
4/27/2021	18:00:00	15.25	43	6.8
4/27/2021	18:15:00	15.2	43	6.8
4/27/2021	18:30:00	15.14	43	6.78
4/27/2021	18:45:00	15.05	42.9	6.77
4/27/2021	19:00:00	14.99	43	6.82
4/27/2021	19:15:00	14.97	42.9	6.79
4/27/2021	19:30:00	14.92	43	6.76
4/27/2021	19:45:00	14.9	42.9	6.77
4/27/2021	20:00:00	14.86	42.9	6.78
4/27/2021	20:15:00	14.86	43	6.76
4/27/2021	20:30:00	14.85	43	6.77
4/27/2021	20:45:00	14.83	43	6.79
4/27/2021	21:00:00	14.82	42.9	6.77

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
4/27/2021	21:15:00	14.82	43	6.87
4/27/2021	21:30:00	14.9	43	7.47
4/27/2021	21:45:00	15.35	43.1	7.75
4/27/2021	22:00:00	15.57	43	8.04
4/27/2021	22:15:00	15.68	43	7.95
4/27/2021	22:30:00	15.73	43.1	7.85
4/27/2021	22:45:00	15.76	43.3	7.92
4/27/2021	23:00:00	15.78	43	8.19
4/27/2021	23:15:00	15.72	43.4	8.33
4/27/2021	23:30:00	15.67	43.1	8.42
4/27/2021	23:45:00	15.63	43.1	8.38
4/28/2021	0:00:00	15.64	43.1	8.29
4/28/2021	0:15:00	15.69	43.1	8.2
4/28/2021	0:30:00	15.7	43.1	8.35
4/28/2021	0:45:00	15.67	43	8.32
4/28/2021	1:00:00	15.6	42.9	8.09
4/28/2021	1:15:00	15.45	42.9	7.66
4/28/2021	1:30:00	15.35	42.8	7.49
4/28/2021	1:45:00	15.3	42.9	7.36
4/28/2021	2:00:00	15.29	43	7.33
4/28/2021	2:15:00	15.24	42.6	7.28
4/28/2021	2:30:00	15.26	42.8	7.24
4/28/2021	2:45:00	15.31	43	7.24
4/28/2021	3:00:00	15.35	43	7.28
4/28/2021	3:15:00	15.36	42.9	7.25
4/28/2021	3:30:00	15.32	43	6.99
4/28/2021	3:45:00	15.32	43	7.03
4/28/2021	4:00:00	15.3	42.8	6.87
4/28/2021	4:15:00	15.28	42.9	6.81
4/28/2021	4:30:00	15.25	43	6.7
4/28/2021	4:45:00	15.23	42.8	6.65
4/28/2021	5:00:00	15.21	42.8	6.66
4/28/2021	5:15:00	15.19	42.9	6.55
4/28/2021	5:30:00	15.24	42.9	7.13
4/28/2021	5:45:00	15.29	43	7.58
4/28/2021	6:00:00	15.32	43	7.76
4/28/2021	6:15:00	15.35	43	7.86
4/28/2021	6:30:00	15.38	42.9	7.91
4/28/2021	6:45:00	15.39	43.1	7.91
4/28/2021	7:00:00	15.42	43	7.92
4/28/2021	7:15:00	15.45	42.9	7.98
4/28/2021	7:30:00	15.49	43	7.98
4/28/2021	7:45:00	15.52	42.8	8
4/28/2021	8:00:00	15.59	42.9	8.06

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
4/28/2021	8:15:00	15.65	43	8.01
4/28/2021	8:30:00	15.68	43	8.06
4/28/2021	8:45:00	15.72	42.9	8.02
4/28/2021	9:00:00	15.74	43	8.08
4/28/2021	9:15:00	15.78	43	8.02
4/28/2021	9:30:00	15.85	43	8.03
4/28/2021	9:45:00	15.92	42.9	8.09
4/28/2021	10:15:00	16.28	45.2	8.43
4/28/2021	10:30:00	16.17	48.2	8.18
4/28/2021	10:45:00	16.17	48.2	8.16
4/28/2021	11:00:00	16.2	47.5	8.28
4/28/2021	11:15:00	16.25	46.9	8.34
4/28/2021	11:30:00	16.31	47.1	8.26
4/28/2021	11:45:00	16.37	47.4	8.35
4/28/2021	12:00:00	16.37	48.6	8.14
4/28/2021	12:15:00	16.34	47.4	8.16
4/28/2021	12:30:00	16.33	46.4	8.15
4/28/2021	12:45:00	16.37	45.1	8.25
4/28/2021	13:00:00	16.47	45.8	8.33
4/28/2021	13:15:00	16.58	45.8	8.31
4/28/2021	13:30:00	16.64	45.8	8.14
4/28/2021	13:45:00	16.71	45.3	8.19
4/28/2021	14:00:00	16.75	44.9	8.07
4/28/2021	14:15:00	16.74	44.6	8.14
4/28/2021	14:30:00	16.37	42.8	7.17
4/28/2021	14:45:00	16.18	43.1	6.92
4/28/2021	15:00:00	16.15	43.1	6.84
4/28/2021	15:15:00	15.85	42.6	6.86
4/28/2021	15:30:00	15.6	42.4	6.98
4/28/2021	15:45:00	15.47	42.4	6.92
4/28/2021	16:00:00	15.36	42.4	6.93
4/28/2021	16:15:00	15.36	42.7	6.9
4/28/2021	16:30:00	15.38	42.7	6.93
4/28/2021	16:45:00	15.4	42.7	6.85
4/28/2021	17:00:00	15.35	42.5	6.8
4/28/2021	17:15:00	15.32	42.7	6.84
4/28/2021	17:30:00	15.31	42.7	6.92
4/28/2021	17:45:00	15.29	42.7	6.93
4/28/2021	18:00:00	15.25	42.8	6.97
4/28/2021	18:15:00	15.2	42.5	6.91
4/28/2021	18:30:00	15.17	42.7	6.91
4/28/2021	18:45:00	15.13	42.5	6.93
4/28/2021	19:00:00	15.04	42.4	6.89
4/28/2021	19:15:00	15	42.5	6.93

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
4/28/2021	19:30:00	15	42.5	6.92
4/28/2021	19:45:00	14.98	42.5	6.88
4/28/2021	20:00:00	14.98	42.4	6.84
4/28/2021	20:15:00	14.94	42.4	6.9
4/28/2021	20:30:00	14.92	42.4	6.92
4/28/2021	20:45:00	14.89	42.4	6.92
4/28/2021	21:00:00	14.89	42.4	6.96
4/28/2021	21:15:00	14.89	42.5	7
4/28/2021	21:30:00	14.97	42.5	7.56
4/28/2021	21:45:00	15.42	42.8	8.18
4/28/2021	22:00:00	15.58	42.8	8.35
4/28/2021	22:15:00	15.72	43.2	8.24
4/28/2021	22:30:00	15.78	42.8	8.14
4/28/2021	22:45:00	15.82	42.8	8.05
4/28/2021	23:00:00	15.8	42.8	8.06
4/28/2021	23:15:00	15.83	42.8	8.16
4/28/2021	23:30:00	15.83	42.8	8.13
4/28/2021	23:45:00	15.79	42.7	8.41
	Max	**16.75**	**48.6**	**8.43**
	Min	**14.71**	**42.2**	**6.55**

Stevens Creek Operations Data (Provided By DESC & USACE)

4/27/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	186.3	159.1	12897	8939
2:00	0	186.1	159	12823	8973
3:00	0	185.8	159	12435	8743
4:00	0	185.6	158.9	12488	8836
5:00	0	185.2	158.8	12298	8780
6:00	0	185	158.8	12203	8747
7:00	2680	184.7	158.8	11978	8645
8:00	2930	184.6	158.8	11904	8493
9:00	3077	184.5	158.8	11814	8576
10:00	9010	184.3	158.8	11645	8493
11:00	9340	184.3	158.8	11825	8609
12:00	9420	184.4	158.8	11895	8656
13:00	9327	184.4	158.8	11858	8700
14:00	10200	184.5	158.8	11984	8673
15:00	10120	184.6	158.8	12120	8682
16:00	10554	184.7	158.8	12147	8802
17:00	27030	184.8	158.9	12094	8707
18:00	27390	185.3	158.8	12447	8823
19:00	27120	185.5	158.9	12717	8966
20:00	27120	186.3	159	13031	9040
21:00	27210	186.8	159.2	13235	9090
22:00	26940	187.1	159.3	13345	9112
23:00	883	187.4	159.5	13545	9220
24:00:00	0	187.2	159.5	13425	9169
daily avg.	**10015**	**185**	**159**	**25409**	**8811**

Total Generation	**298153**
Projected discharge	11021
Thurmond discharge	**10015**

Stevens Creek Operations Data (Provided By DESC & USACE)

4/28/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	186.9	159.3	13245	9133
2:00	0	186.6	159.2	12976	9251
3:00	0	186.2	159	12856	8904
4:00	0	186	159	12740	8915
5:00	294	185.7	158.9	12624	8864
6:00	7100	185.5	158.9	12502	8834
7:00	7100	185.2	158.9	12319	8790
8:00	7100	185.2	158.9	12295	8780
9:00	7100	185.2	158.9	12271	8767
10:00	7100	185.2	158.9	12305	8771
11:00	7020	185.2	158.9	12323	8778
12:00	7100	185.1	158.8	12291	8785
13:00	7020	185.1	158.9	12295	8750
14:00	7535	185.1	158.8	12288	8774
15:00	13695	185.1	158.8	12268	8752
16:00	26580	185	158.8	12280	8772
17:00	27480	185.2	158.8	12330	8834
18:00	27210	185.6	158.9	12590	8888
19:00	27930	186.2	158.9	12918	9011
20:00	27210	184.2	159	13146	9077
21:00	26580	187	159.3	13277	9081
22:00	441	187.9	159.4	13481	9138
23:00	0	187.6	159.6	13285	8972
24:00:00	0	187.3	159.5	13170	9006
daily avg.	**10066**	**186**	**159**	**12670**	**8901**

Total Generation	**304075**
Projected discharge	11021
Thurmond discharge	**10066**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
4/27/2021 0:00	12100
4/27/2021 1:00	12500
4/27/2021 2:00	13100
4/27/2021 3:00	13200
4/27/2021 4:00	12700
4/27/2021 5:00	12200
4/27/2021 6:00	11600
4/27/2021 7:00	11200
4/27/2021 8:00	10900
4/27/2021 9:00	10600
4/27/2021 10:00	10400
4/27/2021 11:00	10100
4/27/2021 12:00	9980
4/27/2021 13:00	9910
4/27/2021 14:00	9840
4/27/2021 15:00	9650
4/27/2021 16:00	9590
4/27/2021 17:00	9510
4/27/2021 18:00	9110
4/27/2021 19:00	9020
4/27/2021 20:00	8860
4/27/2021 21:00	8780
4/27/2021 22:00	8690
4/27/2021 23:00	8530
4/28/2021 0:00	8470
4/28/2021 1:00	8650
4/28/2021 2:00	11100
4/28/2021 3:00	11900
4/28/2021 4:00	11600
4/28/2021 5:00	11600
4/28/2021 6:00	11300
4/28/2021 7:00	11200
4/28/2021 8:00	10600
4/28/2021 9:00	10400
4/28/2021 10:00	10100
4/28/2021 11:00	9920
4/28/2021 12:00	9890
4/28/2021 13:00	9660
4/28/2021 14:00	9710
4/28/2021 15:00	9440
4/28/2021 16:00	9400
4/28/2021 17:00	9370
4/28/2021 18:00	9350
4/28/2021 19:00	9250
4/28/2021 20:00	9300
4/28/2021 21:00	9250
4/28/2021 22:00	9240
4/28/2021 23:00	9110

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
May 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (5/18/21)	12.49	—	22.24	2.5	—	9.4
Thurmond Tailrace (Site 7) (5/11/21 - 5/12/21)		—			—	
Stevens Creek Res. (Site 6) (5/11/21 - 5/12/21)	14.74	—	14.77	8.0	—	8.0
Stevens Creek Res. (Site 1) (5/11/21 - 5/12/21)	14.81	—	14.86	7.4	—	7.8
Stevens Creek Res. (Site 2) (5/11/21 - 5/12/21)	15.02	—	15.03	7.7	—	7.8
Stevens Creek Tailrace (Site 3) (5/11/21 - 5/12/21)	15.37	—	15.65	8.1	—	8.3
Stevens Creek (Site 5) (5/11/21 - 5/12/21)	20.69	—	21.25	5.0	—	5.4
Stevens Creek (Site 4) (5/11/21 - 5/12/21)	18.28	—	20.89	5.4	—	7.1

USGS note: Heavy lightening caused sampling to end early.

No data collected on 5/12 for sites 2, 4 & 6

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 05/11/2021
Field Team: REH/NDM
Field Meter Model/Number: YSI EXO3 / 18H110944

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	7:56	surface	6.4	20.7	95	5.3	59
		1M	6.4	20.7	95	5.3	60
		2M	6.5	20.7	95	5.3	60
		3M	6.5	20.7	95	5.4	60
		4M	6.5	20.7	95	5.4	60
		5M	6.6	20.7	95	5.4	60
3	10:18	1M	6.2	15.7	43	8.3	83
4	8:46	surface	6.5	20.9	85	5.4	61
		1M	6.5	20.6	83	5.5	61
		2M	6.5	19.8	71	6.3	69
		3M	6.6	19.1	61	7.0	76
		4M	6.6	18.7	60	7.1	76
		5M	6.6	18.3	60	6.8	73
2	9:05	surface	6.5	15.0	43	7.8	78
		1M	6.4	15.0	43	7.8	77
		2M	6.4	15.0	43	7.8	77
		3M	6.4	15.0	43	7.8	77
		4M	6.3	15.0	43	7.7	77
1	9:24	surface	6.4	14.8	42	7.8	77
		1M	6.4	14.8	42	7.7	76
		2M	6.4	14.8	42	7.7	76
		3M	6.4	14.8	42	7.7	76
1A	9:36	surface	6.3	14.8	42	8.0	79
		1M	6.3	14.8	42	8.0	79
		2M	6.3	14.7	42	8.0	79
		3M	6.3	14.7	42	8.0	79

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 05/12/2021
Field Team: REH/NDM
Field Meter Model/Number: YSI EXO3 / 18H110944

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	8:09	surface	6.6	21.3	96	5.1	58
		1M	6.6	21.3	96	5.1	57
		2M	6.6	21.2	96	5.0	57
		3M	6.6	21.2	96	5.0	57
		4M	6.6	21.2	96	5.1	57
3	8:45	1M	6.3	15.4	43	8.1	81
4		surface					
		1M					
		2M					
		3M					
2		surface					
		1M					
		2M					
		3M					
		4M					
1	9:16	surface	6.3	14.9	42	7.5	74
		1M	6.3	14.9	42	7.4	74
		2M	6.3	14.9	42	7.4	73
		3M	6.3	14.9	42	7.4	73
1A		surface					
		1M					
		2M					
		3M					

JST Forebay Water Quality Data (Provided By USACE-ERDC)

May 18, 2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	°C	mg/l	µS/cm	meters
44553	22.24	9.15	43.7	0.2
44612	21.54	9.27	43.7	2
44651	20.98	9.35	43.7	4
44747	20.64	8.3	44	6
44837	19.7	7.11	43.7	8
44923	17.61	5.72	43.3	10
45017	16.22	5.04	42.6	12
45117	15.7	4.96	41.7	14
45212	15.3	4.94	41	16
45312	14.77	4.92	40.5	18
45338	14.68	4.93	40.7	20
45454	14.45	4.93	40.7	22
45527	14.35	5	41	24
45605	14.11	4.98	40.5	26
45654	13.71	5.11	41.2	28
45734	13.55	5.17	41.6	30
45806	13.43	5.25	42.1	32
45832	13.12	5.28	42.1	34
45924	12.89	4.99	41.5	36
50011	12.78	4.77	41	38
50055	12.72	4.65	41	40
50145	12.61	4.54	41.2	42
50234	12.49	4.24	41.5	44
50323	12.49	4.12	41.6	46
50410	12.5	2.54	91.7	46.2
Max:	**22.24**	**9.35**	**91.7**	**46.2**
Min:	**12.49**	**2.54**	**40.5**	**0.2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
5/11/2021	0:00:00	17.86	42.7	6.56
5/11/2021	0:15:00	17.92	42.7	6.43
5/11/2021	0:30:00	17.96	42.8	6.49
5/11/2021	0:45:00	18.01	42.6	6.5
5/11/2021	1:00:00	18.04	42.8	6.28
5/11/2021	1:15:00	18.06	42.7	6.27
5/11/2021	1:30:00	18.06	42.8	6.36
5/11/2021	1:45:00	18.06	42.8	6.37
5/11/2021	2:00:00	18.06	42.8	6.14
5/11/2021	2:15:00	18.06	42.8	6.07
5/11/2021	2:30:00	18.08	42.8	6.09
5/11/2021	2:45:00	18.09	42.8	5.92
5/11/2021	3:00:00	18.1	42.8	6.02
5/11/2021	3:15:00	18.1	42.7	5.95
5/11/2021	3:30:00	18.08	43	5.69
5/11/2021	3:45:00	18.08	43.2	5.49
5/11/2021	4:00:00	18.12	43	5.2
5/11/2021	4:15:00	18.13	43	5.35
5/11/2021	4:30:00	18.14	42.7	5.34
5/11/2021	4:45:00	18.16	43	5.31
5/11/2021	5:00:00	18.16	42.8	5.16
5/11/2021	5:15:00	18.07	42.8	5.16
5/11/2021	5:30:00	17.84	42.7	5.16
5/11/2021	5:45:00	17.72	42.7	5.39
5/11/2021	6:00:00	17.46	42.3	5.45
5/11/2021	6:15:00	17.26	42.4	5.45
5/11/2021	6:30:00	17.17	42.4	5.45
5/11/2021	6:45:00	17.17	42.5	5.42
5/11/2021	7:00:00	17.21	42.2	5.27
5/11/2021	7:15:00	17.26	42.5	5.07
5/11/2021	7:30:00	17.3	42.5	4.84
5/11/2021	7:45:00	17.34	42.6	4.79
5/11/2021	8:00:00	17.34	42.6	5.11
5/11/2021	8:15:00	17.33	42.4	5.59
5/11/2021	8:30:00	17.31	42.3	5.88
5/11/2021	8:45:00	17.25	42.4	6.03
5/11/2021	9:00:00	17.18	42.1	6.06
5/11/2021	9:15:00	17.13	42	6.02
5/11/2021	9:30:00	17.05	42	6.1
5/11/2021	9:45:00	17.03	42	6.01
5/11/2021	10:00:00	16.98	41.9	5.99

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
5/11/2021	10:15:00	16.94	41.8	6.07
5/11/2021	10:30:00	16.94	41.8	6.04
5/11/2021	10:45:00	16.96	42	6.07
5/11/2021	11:00:00	16.98	42.1	6.06
5/11/2021	11:15:00	17.01	42.2	6.05
5/11/2021	11:30:00	16.97	42.1	6.02
5/11/2021	11:45:00	16.94	42.2	5.99
5/11/2021	12:00:00	16.94	42.1	6
5/11/2021	12:15:00	16.97	42	6.01
5/11/2021	12:30:00	17.02	42.1	5.97
5/11/2021	12:45:00	17.03	42.4	5.97
5/11/2021	13:00:00	17.07	42.2	6.03
5/11/2021	13:15:00	17.16	42.2	5.99
5/11/2021	13:30:00	17.19	42.2	5.9
5/11/2021	13:45:00	17.22	42.4	5.87
5/11/2021	14:00:00	17.21	42.1	5.84
5/11/2021	14:15:00	17.21	42.3	5.87
5/11/2021	14:30:00	17.17	42.2	5.86
5/11/2021	14:45:00	17.03	42.4	5.75
5/11/2021	15:00:00	17	42.4	5.67
5/11/2021	15:15:00	16.96	42.4	5.67
5/11/2021	15:30:00	16.9	42.5	5.99
5/11/2021	15:45:00	16.83	42.2	5.81
5/11/2021	16:00:00	16.8	42.5	5.7
5/11/2021	16:15:00	16.75	42.3	5.64
5/11/2021	16:30:00	16.67	42.2	5.79
5/11/2021	16:45:00	16.64	42.6	5.78
5/11/2021	17:00:00	16.63	42.3	5.86
5/11/2021	17:15:00	16.59	42.3	5.82
5/11/2021	17:30:00	16.57	42.5	5.7
5/11/2021	17:45:00	16.57	42.3	5.7
5/11/2021	18:00:00	16.58	42.6	5.63
5/11/2021	18:15:00	16.62	42.7	5.63
5/11/2021	18:30:00	16.66	42.5	5.6
5/11/2021	18:45:00	16.62	42.3	5.57
5/11/2021	19:00:00	16.61	42.6	5.64
5/11/2021	19:15:00	16.57	42.3	5.52
5/11/2021	19:30:00	16.54	42.2	5.54
5/11/2021	19:45:00	16.54	42.3	5.54
5/11/2021	20:00:00	16.54	42.5	5.52
5/11/2021	20:15:00	16.52	42.5	5.5
5/11/2021	20:30:00	16.48	42.5	5.47
5/11/2021	20:45:00	16.45	42.5	5.5
5/11/2021	21:00:00	16.42	42.3	5.5

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
5/11/2021	21:15:00	16.41	42.3	5.49
5/11/2021	21:30:00	16.65	42.5	5.56
5/11/2021	21:45:00	17.21	42.5	5.65
5/11/2021	22:00:00	17.44	42.5	6.04
5/11/2021	22:15:00	17.62	42.5	5.95
5/11/2021	22:30:00	17.72	42.5	5.93
5/11/2021	22:45:00	17.86	42.4	6.32
5/11/2021	23:00:00	17.97	42.6	6.5
5/11/2021	23:15:00	18.07	42.3	6.62
5/11/2021	23:30:00	18.15	42.6	6.47
5/11/2021	23:45:00	18.21	42.7	6.34
5/12/2021	0:00:00	18.24	42.7	6.26
5/12/2021	0:15:00	18.23	42.7	6.34
5/12/2021	0:30:00	18.25	42.7	6.32
5/12/2021	0:45:00	18.33	42.6	6.23
5/12/2021	1:00:00	18.45	43	5.98
5/12/2021	1:15:00	18.57	42.9	5.87
5/12/2021	1:30:00	18.66	43	5.81
5/12/2021	1:45:00	18.72	43.2	5.69
5/12/2021	2:00:00	18.74	43	5.63
5/12/2021	2:15:00	18.7	43.2	5.59
5/12/2021	2:30:00	18.68	43	5.45
5/12/2021	2:45:00	18.67	43	5.31
5/12/2021	3:00:00	18.65	42.9	5.16
5/12/2021	3:15:00	18.62	42.9	5.17
5/12/2021	3:30:00	18.6	42.9	5.09
5/12/2021	3:45:00	18.57	42.9	5.01
5/12/2021	4:00:00	18.55	42.8	5.07
5/12/2021	4:15:00	18.55	42.9	5.01
5/12/2021	4:30:00	18.55	42.8	4.98
5/12/2021	4:45:00	18.55	42.9	4.95
5/12/2021	5:00:00	18.54	42.9	4.97
5/12/2021	5:15:00	18.49	42.9	4.85
5/12/2021	5:30:00	18.1	42.5	5.03
5/12/2021	5:45:00	17.71	42.3	5.15
5/12/2021	6:00:00	17.51	42.4	5.14
5/12/2021	6:15:00	17.42	42.6	5.13
5/12/2021	6:30:00	17.39	42.4	5.2
5/12/2021	6:45:00	17.36	42.4	5.24
5/12/2021	7:00:00	17.33	42.3	5.23
5/12/2021	7:15:00	17.31	42.5	5.21
5/12/2021	7:30:00	17.31	42.4	5.2
5/12/2021	7:45:00	17.3	42.5	5.15
5/12/2021	8:00:00	17.32	42.4	5.19

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
5/12/2021	8:15:00	17.34	42.8	5.18
5/12/2021	8:30:00	17.34	42.4	5.18
5/12/2021	8:45:00	17.34	42.5	5.18
5/12/2021	9:00:00	17.35	42.3	5.2
5/12/2021	9:15:00	17.39	42.4	5.17
5/12/2021	9:30:00	17.4	42.6	5.15
5/12/2021	9:45:00	17.21	42.4	5.13
5/12/2021	10:00:00	17.05	42.4	5.11
5/12/2021	10:15:00	16.96	42.2	5.1
5/12/2021	10:30:00	16.91	42.5	5.07
5/12/2021	10:45:00	16.89	42.4	4.95
5/12/2021	11:00:00	16.89	42.6	4.88
5/12/2021	11:15:00	16.9	42.9	4.82
5/12/2021	11:30:00	16.9	42.6	5.07
5/12/2021	11:45:00	16.8	42	5.67
5/12/2021	12:00:00	16.67	42	5.89
5/12/2021	12:15:00	16.53	41.8	5.92
5/12/2021	12:30:00	16.35	41.9	6.04
5/12/2021	12:45:00	16.28	41.9	6.05
5/12/2021	13:00:00	16.27	42.1	6.05
5/12/2021	13:15:00	16.24	42.3	6.01
5/12/2021	13:30:00	16.28	42.4	6.01
5/12/2021	13:45:00	16.29	42.4	6.01
5/12/2021	14:00:00	16.28	42.2	5.91
5/12/2021	14:15:00	16.24	42.2	5.96
5/12/2021	14:30:00	16.11	42.2	5.98
5/12/2021	14:45:00	15.98	42.2	5.94
5/12/2021	15:00:00	15.84	42	5.91
5/12/2021	15:15:00	15.77	42.3	5.84
5/12/2021	15:30:00	15.71	42	5.84
5/12/2021	15:45:00	15.63	42.3	5.74
5/12/2021	16:00:00	15.55	42.2	5.72
5/12/2021	16:15:00	15.5	42	5.75
5/12/2021	16:30:00	15.46	42.3	5.73
5/12/2021	16:45:00	15.45	42.2	5.71
5/12/2021	17:00:00	15.42	42.2	5.65
5/12/2021	17:15:00	15.42	42.3	5.61
5/12/2021	17:30:00	15.44	42.5	5.65
5/12/2021	17:45:00	15.45	42.4	5.57
5/12/2021	18:00:00	15.46	42.4	5.56
5/12/2021	18:15:00	15.47	42.3	5.58
5/12/2021	18:30:00	15.48	42	5.62
5/12/2021	18:45:00	15.5	42.4	5.65
5/12/2021	19:00:00	15.53	42.3	5.63

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
5/12/2021	19:15:00	15.57	42.2	5.55
5/12/2021	19:30:00	15.56	42.2	5.74
5/12/2021	19:45:00	15.53	42	5.7
5/12/2021	20:00:00	15.53	42.3	5.73
5/12/2021	20:15:00	15.55	42.2	5.72
5/12/2021	20:30:00	15.55	42	5.75
5/12/2021	20:45:00	15.54	42	5.81
5/12/2021	21:00:00	15.55	42.3	5.7
5/12/2021	21:15:00	15.56	42.2	5.62
5/12/2021	21:30:00	15.61	42.7	5.37
5/12/2021	21:45:00	15.97	42.2	5.3
5/12/2021	22:00:00	16.1	42.4	4.99
5/12/2021	22:15:00	16.08	42.6	5.02
5/12/2021	22:30:00	16.06	42.9	5.08
5/12/2021	22:45:00	16.04	42.8	5.11
5/12/2021	23:00:00	16.09	42.7	5.29
5/12/2021	23:15:00	16.11	43.1	5.24
5/12/2021	23:30:00	16.13	42.9	5.17
5/12/2021	23:45:00	16.14	43.5	5.06
	Max	**18.74**	**43.5**	**6.62**
	Min	**15.42**	**41.8**	**4.79**

Stevens Creek Operations Data (Provided By DESC & USACE)

5/11/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	186.7	159.3	12902	8889
2:00	0	186.5	159.2	12785	8863
3:00	0	186.2	159.1	12686	8835
4:00	0	185.9	159	12595	8836
5:00	0	185.6	159	12460	8773
6:00	737	185.3	159	12492	8738
7:00	11640	185.1	158.9	12156	8655
8:00	11640	185.2	158.9	12156	8668
9:00	11700	185.4	159	12191	8763
10:00	11860	185.5	159	12377	8799
11:00	11700	185.6	159	12385	8736
12:00	11630	185.7	159	12382	8786
13:00	11700	185.8	159	12447	8808
14:00	11995	185.9	159	12507	8808
15:00	17285	185.9	159	12601	8832
16:00	30820	186.2	159.1	12646	8840
17:00	22320	186.6	159.2	12704	8956
18:00	15990	186.8	159.3	12980	8933
19:00	15060	186.9	159.4	13034	8958
20:00	15190	187	159.4	13030	8813
21:00	14970	187.1	159.5	12931	8826
22:00	13380	187.1	159.5	12943	8836
23:00	0	187	159.4	12925	8835
24:00:00	0	186	159.4	12763	8808
daily avg.	**9984**	**186**	**159**	**12628**	**8816**

Total Generation	**303078**
Projected discharge	11219
Thurmond discharge	**9984**

Stevens Creek Operations Data (Provided By DESC & USACE)

5/12/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	186.3	159.2	12670	8798
2:00	0	186	159.1	12545	8760
3:00	0	185.8	159	12405	8731
4:00	0	185.5	159	12241	8647
5:00	737	185.2	158.9	11860	8462
6:00	11640	184.9	158.9	11938	8498
7:00	11570	184.7	158.9	11764	8494
8:00	11640	184.9	158.9	11881	8524
9:00	11640	185	158.9	11806	8488
10:00	11780	185.2	158.9	12268	8776
11:00	11630	185.3	158.9	12275	8760
12:00	11780	185.5	158.9	12317	8743
13:00	11860	185.6	158.9	12404	8751
14:00	12530	185.7	159	12438	8771
15:00	28500	185.8	159	12545	8781
16:00	22050	186	159.1	12602	8822
17:00	22050	186.2	159.1	12729	8847
18:00	22150	186.5	159.2	12915	8937
19:00	21810	186.8	159.3	12962	8886
20:00	12504	187	159.4	13201	8868
21:00	11620	187.2	159.5	13121	8882
22:00	147	187.2	159.5	13089	8880
23:00	0	187.1	159.5	13041	8870
24:00:00	0	186.8	159.4	12921	8896
daily avg.	**10318**	**186**	**159**	**12497**	**8745**

Total Generation	**299938**
Projected discharge	11219
Thurmond discharge	**10318**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
5/11/2021 0:00	12300
5/11/2021 1:00	13100
5/11/2021 2:00	14300
5/11/2021 3:00	14600
5/11/2021 4:00	14700
5/11/2021 5:00	13200
5/11/2021 6:00	12400
5/11/2021 7:00	12300
5/11/2021 8:00	12400
5/11/2021 9:00	11500
5/11/2021 10:00	11000
5/11/2021 11:00	10600
5/11/2021 12:00	10500
5/11/2021 13:00	10200
5/11/2021 14:00	10300
5/11/2021 15:00	10400
5/11/2021 16:00	10300
5/11/2021 17:00	10400
5/11/2021 18:00	10200
5/11/2021 19:00	10200
5/11/2021 20:00	10600
5/11/2021 21:00	11100
5/11/2021 22:00	11200
5/11/2021 23:00	11200
5/12/2021 0:00	11600
5/12/2021 1:00	11700
5/12/2021 2:00	11700
5/12/2021 3:00	11700
5/12/2021 4:00	11900
5/12/2021 5:00	11800
5/12/2021 6:00	11900
5/12/2021 7:00	11900
5/12/2021 8:00	11800
5/12/2021 9:00	11400
5/12/2021 10:00	11300
5/12/2021 11:00	11000
5/12/2021 12:00	10400
5/12/2021 13:00	10300
5/12/2021 14:00	10200
5/12/2021 15:00	9940
5/12/2021 16:00	9820
5/12/2021 17:00	9710
5/12/2021 18:00	9680
5/12/2021 19:00	9720
5/12/2021 20:00	9680
5/12/2021 21:00	9680
5/12/2021 22:00	9640
5/12/2021 23:00	10300

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
June 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (6/10/21)	13.25	—	27.65	2.3	—	9.1
Thurmond Tailrace (Site 7) (6/8/21 - 6/9/21)		—			—	
Stevens Creek Res. (Site 6) (6/8/21 - 6/9/21)	15.74	—	18.36	6.1	—	6.8
Stevens Creek Res. (Site 1) (6/8/21 - 6/9/21)	15.65	—	18.37	5.5	—	6.8
Stevens Creek Res. (Site 2) (6/8/21 - 6/9/21)	16.44	—	16.68	6.6	—	6.7
Stevens Creek Tailrace (Site 3) (6/8/21 - 6/9/21)	16.56	—	18.27	7.3	—	8.0
Stevens Creek (Site 5) (6/8/21 - 6/9/21)	23.59	—	25.23	5.2	—	6.0
Stevens Creek (Site 4) (6/8/21 - 6/9/21)	24.36	—	26.93	4.6	—	5.7

USGS note: Heavy lightening resulted in not finishing afternoon run on 6/8.

No data collected on 6/8 for sites 2, 4 & 6

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
June 2021 (cont'd.)

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (6/23/21)	13.67	—	27.39	1.83	—	8.3
Thurmond Tailrace (Site 7) (6/23/21 - 6/24/21)		—			—	
Stevens Creek Res. (Site 6) (6/23/21 - 6/24/21)	16.71	—	17.21	5.5	—	5.9
Stevens Creek Res. (Site 1) (6/23/21 - 6/24/21)	16.89	—	18.58	5.7	—	6.3
Stevens Creek Res. (Site 2) (6/23/21 - 6/24/21)	17.02	—	18.01	6.2	—	7.2
Stevens Creek Tailrace (Site 3) (6/23/21 - 6/24/21)	17.64	—	19.73	6.9	—	7.9
Stevens Creek (Site 5) (6/23/21 - 6/24/21)	24.32	—	25.76	5.7	—	5.9
Stevens Creek (Site 4) (6/23/21 - 6/24/21)	18.66	—	24.91	4.6	—	6.6

USGS note: 6/23 water levels too low to sample site 6

6/24 water levels too low to sample sites 2, 4 & 6

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 6/8/2021 AM
Field Team: REH/NDM
Field Meter Model/Number: YSI EXO3 / 18H110944

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:28	surface	6.6	25.2	100	5.7	69
		1M	6.6	25.2	101	5.7	69
		2M	6.6	25.2	101	5.6	69
		3M	6.6	25.2	100	5.6	68
		4M	6.6	25.2	100	5.6	68
3	7:12	1M	6.3	16.6	43	7.6	78
4	9:16	surface	6.5	24.6	89	4.6	56
		1M	6.6	24.7	89	4.6	56
		2M	6.6	24.6	88	4.6	56
		3M	6.6	24.5	87	4.6	55
		4M	6.6	24.4	85	4.6	55
		5M	6.5	24.4	85	4.6	55
2	9:03	surface	6.3	16.6	43	6.7	69
		1M	6.3	16.6	43	6.7	69
		2M	6.2	16.6	43	6.7	69
		3M	6.2	16.6	43	6.7	69
		4M	6.2	16.6	43	6.7	69
1	8:28	surface	6.2	17.5	47	6.3	66
		1M	6.2	17.2	46	6.3	65
		2M	6.2	15.7	42	6.7	68
		3M	6.1	15.7	42	6.8	68
1A	8:17	surface	6.1	16.2	42	6.8	69
		1M	6.1	15.8	42	6.8	68
		2M	6.1	15.7	42	6.1	68

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 6/8/2021 PM
Field Team: REH/NDM
Field Meter Model/Number: YSI EXO3 / 18H110944

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	2:26	surface	6.9	24.9	102	6.0	73
		1M	6.8	24.8	102	6.0	72
		2M	6.8	24.8	101	6.0	72
		3M	6.8	24.7	100	6.0	72
		4M	6.8	24.6	100	6.0	72
3	1:46	1M	6.4	17.7	44	8.0	84
4		surface					
		1M					
		2M					
		3M					
		4M					
		5M					
2		surface					
		1M					
		2M					
		3M					
		4M					
1	2:04	surface	6.2	16.5	43	6.7	69
		1M	6.2	16.5	44	6.7	68
		2M	6.2	16.5	44	6.7	68
		3M	6.1	16.5	44	6.7	68
1A		surface					
		1M					
		2M					
		3M					

**Heavy lighting caused techs to not finish afternoon run.*

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 6/9/2021 AM
Field Team: REH/NDM
Field Meter Model/Number: YSI EXO3 / 18H110944

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:30	surface	6.5	23.6	65	5.3	62
		1M	6.5	23.6	65	5.2	62
		2M	6.5	23.6	65	5.2	62
		3M	6.5	23.6	65	5.2	61
		4M	6.5	23.6	65	5.2	61
3	9:28	1M	6.5	17.7	46	7.3	77
4	7:43	surface	6.8	25.4	103	5.1	62
		1M	6.8	25.4	103	5.0	61
		2M	6.8	25.4	103	5.0	60
		3M	6.8	25.4	103	4.9	60
		4M	6.8	25.4	102	4.7	57
		5M	6.8	25.4	101	4.6	56
2	7:29	surface	6.3	16.7	43	6.6	68
		1M	6.3	16.5	43	6.6	68
		2M	6.2	16.5	43	6.6	68
		3M	6.2	16.4	43	6.6	67
1	8:16	surface	6.3	18.4	51	5.5	59
		1M	6.3	16.4	44	6.4	66
		2M	6.3	15.8	43	6.6	67
		3M					
1A	8:31	surface	6.4	18.4	51	6.5	69
		1M	6.3	16.5	44	6.6	67
		2M	6.3	16.2	43	6.6	67
		3M	6.3	16.2	44	6.6	67

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 6/9/2021 PM
Field Team: REH/NDM
Field Meter Model/Number: YSI EXO3 / 18H110944

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	11:55	surface	6.6	24.1	66	5.3	63
		1M	6.6	24.1	66	5.3	63
		2M	6.5	24.0	66	5.2	62
		3M	6.5	23.9	66	5.2	62
		4M					
3	12:31	1M	6.4	18.3	45	7.6	81
4	2:31	surface	6.8	26.9	97	5.7	72
		1M	6.8	26.0	95	5.4	66
		2M	6.8	25.5	94	5.3	64
		3M	6.8	25.1	93	5.0	61
		4M	6.8	24.8	85	5.1	70
		5M					
2	7:29	surface	6.3	16.7	43	6.6	68
		1M	6.3	16.5	43	6.6	68
		2M	6.2	16.5	43	6.6	68
		3M	6.2	16.4	43	6.6	67
1	2:05	surface	6.4	18.3	46	6.8	72
		1M	6.4	18.2	46	6.8	72
		2M	6.3	18.2	46	6.7	72
		3M					
1A	1:54	surface	6.3	17.1	44	6.7	70
		1M	6.3	17.1	44	6.7	69
		2M	6.3	17.1	44	6.7	69
		3M	6.3	17.1	44	6.7	69

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 6/23/2021 AM
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 18H11946

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	8:05	0	6.6	24.3	83	5.7	69
		1	6.6	24.3	83	5.7	68
		2	6.6	24.3	83	5.7	68
		3	6.6	24.3	83	5.7	68
		4	6.6	24.3	83	5.7	68
3	9:37		6.3	17.6	44	7.2	75
4	7:09	0	6.4	24.4	83	5.0	60
		1	6.4	24.3	83	5.0	60
		2	6.4	24.3	82	5.0	60
		3	6.4	24.2	82	5.0	59
		4	6.4	24.2	82	4.9	58
		5	6.4	24.3	82	4.9	59
		6	6.4	24.3	82	4.9	59
2	7:23	0	5.8	17.1	43	6.2	65
		1	5.8	17.1	43	6.2	65
		2	5.8	17.0	43	6.2	65
		3	5.7	17.0	43	6.2	64
		4	5.8	17.0	43	6.2	64
1	10:12	0	6.0	17.4	45	6.3	66
		1	5.9	17.4	45	6.3	65
		2	5.9	17.4	45	6.2	66
		3	5.9	17.4	45	6.2	65

Water level was dropping during data collection periods on 6/23 & 6/24 and technicians could not get to all the sites for every run.

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 6/23/2021 PM
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 18H11946

Site No.	Time	Depth	pH	Temperature	Sp. Cond.	DO	DO
	(EST)	(meters)		(degrees C)	(us/cm)	(mg/L)	(% saturation)
5	14:15	0	6.8	25.1	85	5.9	71
		1	6.8	24.7	85	5.9	70
		2	6.8	24.5	85	5.8	70
		3	6.8	24.5	85	5.7	69
		4	6.8	24.5	85	5.7	68
3	15:47		6.5	18.5	44	7.9	84
4	14:47	0	6.5	22.5	68	5.8	67
		1	6.5	19.6	52	6.4	70
		2	6.4	19.3	50	6.5	71
		3	6.3	18.8	48	6.6	71
		4	6.3	18.7	48	6.5	70
2	14:58	0	6.3	18.0	44	7.2	77
		1	6.2	18.0	44	7.1	75
		2	6.2	18.0	44	7.1	75
		3	6.2	17.9	44	7.1	75
		4	6.2	18.0	44	7.1	75
1	13:42	0	6.1	17.0	42	5.8	60
		1	6.1	17.0	42	5.8	59
		2	6.1	17.0	42	5.7	59
		3	6.1	17.0	42	5.7	59
		4	6.1	17.0	42	5.7	59
1-a	13:30	0	6.1	16.7	42	5.6	57
		1	6.1	16.7	42	5.5	57
		2	6.1	16.7	42	5.5	57
		3	6.1	16.7	42	5.5	57

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 6/24/2021 AM
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 18H11946

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	7:33	0	6.8	24.7	87	5.9	71
		1	6.8	24.7	87	5.9	70
		2	6.8	24.7	87	5.8	70
		3	6.8	24.7	87	5.8	70
		4	6.8	24.7	87	5.8	69
3	6:54		6.3	18.1	45	6.9	73
4	8:22	0	6.5	24.9	80	4.7	56
		1	6.5	24.9	80	4.6	56
		2	6.5	24.9	80	4.6	55
		3	6.5	24.8	80	4.6	56
		4	6.5	24.9	80	4.6	55
		5	6.6	24.8	80	4.6	56
2	8:38	0	6.2	17.9	43	6.4	67
		1	6.1	17.9	43	6.3	67
		2	6.1	17.9	43	6.3	66
		3	6.0	17.9	43	6.3	66
		4	6.0	17.9	43	6.2	66
1	8:57	0	6.1	17.7	45	6.1	64
		1	6.1	17.3	43	6.0	62
		2	6.0	16.9	43	6.0	62
		3					
1-A	9:07	0	6.0	17.2	44	5.9	62
		1	6.0	16.8	43	5.7	59
		2	6.0	16.8	43	5.7	59

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 6/24/2021 PM
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 18H11946

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	14:15	0	6.8	25.7	86	5.8	71
		1	6.8	25.8	86	5.8	71
		2	6.8	25.3	85	5.7	70
		3	6.8	25.3	85	5.7	70
3	13:17		6.5	19.7	47	7.7	84
1	13:49	0	6.2	18.6	44	6.2	67
		1	6.2	18.6	44	6.2	66
		2	6.2	18.6	44	6.2	66
		3	6.1	18.6	44	6.1	66

JST Forebay Water Quality Data (Provided By USACE-ERDC)

June 10, 2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	°C	mg/l	µS/cm	meters
75756	27.65	8.68	46.9	0.2
75828	27.47	8.7	46.9	2
75852	25.94	9.11	46.7	4
75953	23.36	8.55	46.5	6
80053	20.94	6.05	45.9	7
80153	19.76	4.66	45.5	8
80230	19.23	4.07	45.5	9
80309	18.63	3.67	44.8	10
80350	18.18	3.5	44.2	11
80420	17.73	3.41	43.9	12
80449	16.92	3.35	43	14
80517	16.46	3.33	42	16
80546	16.04	3.5	40.8	18
80619	15.58	3.65	40.2	20
80645	15.36	3.79	39.7	22
80717	15.15	3.77	40.4	24
80753	14.92	4.03	39.1	26
80822	14.69	4.06	40	28
80849	14.59	4.03	40.3	30
80934	14.35	3.8	43.6	32
81010	14.13	3.89	42.6	34
81037	13.94	3.74	43.4	36
81102	13.69	3.62	42.7	38
81153	13.56	3.06	42	40
81230	13.38	2.75	42.1	42
81319	13.26	2.29	42.3	44
81340	13.25	2.26	42.5	45.2
Max:	**27.65**	**9.11**	**46.9**	**45.2**
Min:	**13.25**	**2.26**	**39.1**	**0.2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
6/8/2021	0:00:00	17.31	40.7	6.2
6/8/2021	0:15:00	17.32	40.5	6.05
6/8/2021	0:30:00	17.3	40.2	5.84
6/8/2021	0:45:00	17.35	40.2	5.64
6/8/2021	1:00:00	17.29	40.2	5.32
6/8/2021	1:15:00	17.28	40	5.22
6/8/2021	1:30:00	17.27	40.1	5.02
6/8/2021	1:45:00	17.26	39.8	4.93
6/8/2021	2:00:00	17.24	39.8	4.87
6/8/2021	2:15:00	17.22	39.8	4.85
6/8/2021	2:30:00	17.2	39.8	4.8
6/8/2021	2:45:00	17.19	39.7	4.74
6/8/2021	3:00:00	17.2	39.6	4.64
6/8/2021	3:15:00	17.21	39.7	4.64
6/8/2021	3:30:00	17.26	39.7	4.4
6/8/2021	3:45:00	17.17	39.6	4.49
6/8/2021	4:00:00	17.18	39.4	4.53
6/8/2021	4:15:00	17.2	39.7	4.55
6/8/2021	4:30:00	17.2	39.8	4.52
6/8/2021	4:45:00	17.22	39.7	4.44
6/8/2021	5:00:00	17.2	39.8	4.49
6/8/2021	5:15:00	17.22	39.4	4.45
6/8/2021	5:30:00	17.22	39.6	4.49
6/8/2021	5:45:00	17.24	39.6	4.49
6/8/2021	6:00:00	17.25	39.8	4.31
6/8/2021	6:15:00	17.21	39.7	4.34
6/8/2021	6:30:00	17.27	39.7	4.3
6/8/2021	6:45:00	17.27	39.8	4.35
6/8/2021	7:00:00	17.3	39.6	4.36
6/8/2021	7:15:00	17.25	39.7	4.33
6/8/2021	7:30:00	17.33	39.8	4.28
6/8/2021	7:45:00	17.28	39.6	4.22
6/8/2021	8:00:00	17.33	39.6	4.36
6/8/2021	8:15:00	17.4	39.6	4.37
6/8/2021	8:30:00	17.41	39.7	4.36
6/8/2021	8:45:00	17.43	39.6	4.31
6/8/2021	9:00:00	17.52	39.7	4.44
6/8/2021	9:15:00	17.52	39.7	4.44
6/8/2021	9:30:00	17.57	39.5	4.44
6/8/2021	9:45:00	17.62	39.7	4.38
6/8/2021	10:00:00	17.71	39.6	4.51

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
6/8/2021	10:15:00	17.75	39.6	4.33
6/8/2021	10:30:00	17.78	39.6	4.44
6/8/2021	10:45:00	17.83	39.5	4.49
6/8/2021	11:00:00	17.82	39.6	4.49
6/8/2021	11:15:00	17.78	39.6	4.53
6/8/2021	11:30:00	17.83	39.5	4.57
6/8/2021	11:45:00	17.74	39.5	4.75
6/8/2021	12:00:00	17.8	39.8	4.67
6/8/2021	12:15:00	17.76	40.4	4.62
6/8/2021	12:30:00	17.67	40.9	5.5
6/8/2021	12:45:00	17.54	40.9	5.69
6/8/2021	13:00:00	17.52	41	5.69
6/8/2021	13:15:00	17.19	41	5.61
6/8/2021	13:30:00	17.11	40.8	6.41
6/8/2021	13:45:00	17.11	41	6.28
6/8/2021	14:00:00	17.15	41	6.46
6/8/2021	14:15:00	17.17	41.1	6.29
6/8/2021	14:30:00	17.22	41.2	6.06
6/8/2021	14:45:00	17.25	41.2	6.01
6/8/2021	15:00:00	17.19	41.4	6.08
6/8/2021	15:15:00	17.19	41.4	6.1
6/8/2021	15:30:00	17.05	41.3	6.08
6/8/2021	15:45:00	17.05	41.5	6.02
6/8/2021	16:00:00	17.08	41.3	6.05
6/8/2021	16:15:00	16.97	41.2	6.03
6/8/2021	16:30:00	17.06	41.1	5.95
6/8/2021	16:45:00	17.04	41.3	5.91
6/8/2021	17:00:00	17.06	41	5.84
6/8/2021	17:15:00	17.02	41	5.87
6/8/2021	17:30:00	17.03	41	5.83
6/8/2021	17:45:00	17.15	40.7	6.09
6/8/2021	18:00:00	17.16	40.7	6.07
6/8/2021	18:15:00	17.14	41	6.03
6/8/2021	18:30:00	17.09	40.8	6.01
6/8/2021	18:45:00	16.98	40.8	5.98
6/8/2021	19:00:00	16.92	40.8	5.99
6/8/2021	19:15:00	16.92	40.8	6.09
6/8/2021	19:30:00	16.9	41	6.5
6/8/2021	19:45:00	16.92	41	6.66
6/8/2021	20:00:00	16.91	41	6.68
6/8/2021	20:15:00	16.96	41	6.56
6/8/2021	20:30:00	17.36	40.7	6.75
6/8/2021	20:45:00	17.6	40.9	6.91
6/8/2021	21:00:00	17.79	40.8	6.6

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
6/8/2021	21:15:00	17.84	41	6.45
6/8/2021	21:30:00	17.84	40.8	7.09
6/8/2021	21:45:00	17.87	41	6.78
6/8/2021	22:00:00	17.92	40.8	6.88
6/8/2021	22:15:00	17.95	40.8	6.78
6/8/2021	22:30:00	17.95	40.9	6.82
6/8/2021	22:45:00	17.97	40.9	6.8
6/8/2021	23:00:00	17.96	40.8	6.84
6/8/2021	23:15:00	17.91	40.8	6.66
6/8/2021	23:30:00	17.93	40.8	6.65
6/8/2021	23:45:00	17.93	40.5	6.43
6/9/2021	0:00:00	17.84	40.8	6.3
6/9/2021	0:15:00	17.77	40.4	5.88
6/9/2021	0:30:00	17.65	40.2	5.55
6/9/2021	0:45:00	17.6	40.1	5.44
6/9/2021	1:00:00	17.64	40.1	5.43
6/9/2021	1:15:00	17.59	40	5.25
6/9/2021	1:30:00	17.55	40.2	4.96
6/9/2021	1:45:00	17.68	40.1	5.17
6/9/2021	2:00:00	17.71	40.3	5.27
6/9/2021	2:15:00	17.69	40.6	5.15
6/9/2021	2:30:00	17.61	40.2	4.92
6/9/2021	2:45:00	17.59	40.2	4.83
6/9/2021	3:00:00	17.56	40.2	4.76
6/9/2021	3:15:00	17.57	40.1	4.77
6/9/2021	3:30:00	17.58	40	4.7
6/9/2021	3:45:00	17.6	40	4.64
6/9/2021	4:00:00	17.57	39.9	4.55
6/9/2021	4:15:00	17.59	40.1	4.55
6/9/2021	4:30:00	17.6	40.1	4.54
6/9/2021	4:45:00	17.59	40	4.47
6/9/2021	5:00:00	17.63	40.2	4.47
6/9/2021	5:15:00	17.63	40	4.42
6/9/2021	5:30:00	17.65	40	4.4
6/9/2021	5:45:00	17.64	39.7	4.53
6/9/2021	6:00:00	17.67	39.9	4.42
6/9/2021	6:15:00	17.69	39.9	4.35
6/9/2021	6:30:00	17.75	40	4.39
6/9/2021	6:45:00	17.77	40	4.26
6/9/2021	7:00:00	17.81	39.9	4.34
6/9/2021	7:15:00	17.72	40	4.39
6/9/2021	7:30:00	17.76	40.1	4.36
6/9/2021	7:45:00	17.8	40	4.39
6/9/2021	8:00:00	17.78	39.8	4.45

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
6/9/2021	8:15:00	17.87	39.8	4.52
6/9/2021	8:30:00	17.89	39.8	4.46
6/9/2021	8:45:00	17.93	39.8	4.56
6/9/2021	9:00:00	17.98	39.9	4.5
6/9/2021	9:15:00	18.01	39.6	4.58
6/9/2021	9:30:00	18.09	39.7	4.45
6/9/2021	9:45:00	18.15	39.7	4.51
6/9/2021	10:00:00	18.21	39.9	4.58
6/9/2021	10:15:00	18.33	39.8	4.6
6/9/2021	10:30:00	18.38	39.8	4.59
6/9/2021	10:45:00	18.49	40	4.52
6/9/2021	11:00:00	18.63	40.1	4.47
6/9/2021	11:15:00	18.78	40.1	4.48
6/9/2021	11:30:00	18.9	40.3	4.44
6/9/2021	11:45:00	19.02	40.3	4.4
6/9/2021	12:00:00	19.14	40.4	4.45
6/9/2021	12:15:00	19.24	40.3	4.33
6/9/2021	12:30:00	19.44	40.5	5.7
6/9/2021	12:45:00	19.5	40.6	5.48
6/9/2021	13:00:00	19.77	41	4.94
6/9/2021	13:15:00	20.22	41.2	4.35
6/9/2021	13:30:00	20.35	41.2	5.02
6/9/2021	13:45:00	19.79	41.1	5.7
6/9/2021	14:00:00	18.68	41.2	5.34
6/9/2021	14:15:00	18.66	41	5.87
6/9/2021	14:30:00	19	41.3	5.85
6/9/2021	14:45:00	18.73	41.1	5.96
6/9/2021	15:00:00	18.6	41.1	5.78
6/9/2021	15:15:00	18.59	41.4	5.51
6/9/2021	15:30:00	18.5	41.1	5.91
6/9/2021	15:45:00	18.47	41.2	5.68
6/9/2021	16:00:00	18.35	41.2	5.86
6/9/2021	16:15:00	18.13	40.9	6.05
6/9/2021	16:30:00	17.98	41.2	5.98
6/9/2021	16:45:00	17.98	41.2	6.01
6/9/2021	17:00:00	17.92	41.2	6.04
6/9/2021	17:15:00	17.83	41.4	5.91
6/9/2021	17:30:00	17.79	41	5.97
6/9/2021	17:45:00	17.71	41.3	5.97
6/9/2021	18:00:00	17.59	41	5.99
6/9/2021	18:15:00	17.48	41.4	6
6/9/2021	18:30:00	17.5	41.3	5.87
6/9/2021	18:45:00	17.45	41.1	5.83
6/9/2021	19:00:00	17.35	41.1	5.91

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
6/9/2021	19:15:00	17.32	41	5.94
6/9/2021	19:30:00	17.28	41.1	5.89
6/9/2021	19:45:00	17.28	41	5.93
6/9/2021	20:00:00	17.25	41.2	5.89
6/9/2021	20:15:00	17.24	41.2	5.77
6/9/2021	20:30:00	17.41	41	5.69
6/9/2021	20:45:00	17.62	41.6	5.33
6/9/2021	21:00:00	17.74	41.8	5.33
6/9/2021	21:15:00	17.82	41.3	5.04
6/9/2021	21:30:00	18.2	41.4	4.99
6/9/2021	21:45:00	18.71	41.3	5.11
6/9/2021	22:00:00	19.01	41.3	5.2
6/9/2021	22:15:00	19.23	41.6	5.04
6/9/2021	22:30:00	19.36	41.5	4.75
6/9/2021	22:45:00	19.44	41.4	4.94
6/9/2021	23:00:00	19.6	41.6	4.26
6/9/2021	23:15:00	19.71	41.4	4.11
6/9/2021	23:30:00	19.87	41.3	3.86
6/9/2021	23:45:00	19.99	41.4	4.05
	Max	**20.35**	**41.8**	**7.09**
	Min	**16.9**	**39.4**	**3.86**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
6/23/2021	0:10:00	16.45	41.3	5.87
6/23/2021	0:25:00	16.46	41.4	5.92
6/23/2021	0:40:00	16.37	41.2	5.26
6/23/2021	0:55:00	16.35	41.2	5.16
6/23/2021	1:10:00	16.29	41.3	4.85
6/23/2021	1:25:00	16.28	41.3	4.81
6/23/2021	1:40:00	16.28	41.3	4.79
6/23/2021	1:55:00	16.29	41.2	4.76
6/23/2021	2:10:00	16.27	41	4.67
6/23/2021	2:25:00	16.21	41.2	4.53
6/23/2021	2:40:00	16.26	41.2	4.6
6/23/2021	2:55:00	16.26	41.4	4.55
6/23/2021	3:10:00	16.3	41.6	4.32
6/23/2021	3:25:00	16.27	41.3	4.4
6/23/2021	3:40:00	16.22	41.3	4.29
6/23/2021	3:55:00	16.19	41.3	4.19
6/23/2021	4:10:00	16.21	41.6	4.17
6/23/2021	4:25:00	16.23	41.4	4.14
6/23/2021	4:40:00	16.21	41.4	4.11
6/23/2021	4:55:00	16.22	41.6	4.06
6/23/2021	5:10:00	16.14	41.3	4.12
6/23/2021	5:25:00	16.21	41.7	3.99
6/23/2021	5:40:00	16.2	41.4	3.98
6/23/2021	5:55:00	16.23	41.7	3.91
6/23/2021	6:10:00	16.13	41.3	4.03
6/23/2021	6:25:00	16.25	41.7	3.85
6/23/2021	6:40:00	16.21	41.6	3.91
6/23/2021	6:55:00	16.23	41.9	3.9
6/23/2021	7:10:00	16.15	41.3	3.99
6/23/2021	7:25:00	16.3	41.9	3.87
6/23/2021	7:40:00	16.17	41.3	4
6/23/2021	7:55:00	16.23	41.3	3.98
6/23/2021	8:10:00	16.61	41.7	4.36
6/23/2021	8:25:00	16.49	41.4	4.31
6/23/2021	8:40:00	16.48	41.4	4.27
6/23/2021	8:55:00	16.53	41.4	4.26
6/23/2021	9:10:00	16.55	41.4	4.21
6/23/2021	9:25:00	16.58	41.3	4.4
6/23/2021	9:40:00	16.54	41.6	4.43
6/23/2021	9:55:00	16.55	41.7	4.32
6/23/2021	10:10:00	16.59	41.7	4.29
6/23/2021	10:25:00	16.57	41.8	4.33

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
6/23/2021	10:40:00	16.59	41.7	4.37
6/23/2021	10:55:00	16.58	41.6	4.29
6/23/2021	11:10:00	16.6	41.7	4.34
6/23/2021	11:25:00	16.63	41.7	4.29
6/23/2021	11:40:00	16.69	41.8	4.31
6/23/2021	11:55:00	16.63	41.7	4.26
6/23/2021	12:10:00	16.69	41.7	4.33
6/23/2021	12:25:00	16.69	41.8	4.32
6/23/2021	12:40:00	16.69	41.8	4.34
6/23/2021	12:55:00	16.72	41.7	4.32
6/23/2021	13:10:00	16.71	41.7	4.33
6/23/2021	13:25:00	16.73	41.7	4.29
6/23/2021	13:40:00	16.72	41.6	4.29
6/23/2021	13:55:00	16.71	41.8	4.26
6/23/2021	14:10:00	16.74	41.8	4.33
6/23/2021	14:25:00	16.72	41.8	4.33
6/23/2021	14:40:00	16.69	41.8	4.32
6/23/2021	14:55:00	16.68	41.8	4.32
6/23/2021	15:10:00	16.75	41.6	5.62
6/23/2021	15:25:00	16.79	41.7	5.32
6/23/2021	15:40:00	16.76	41.8	5.36
6/23/2021	15:55:00	16.8	41.7	5.33
6/23/2021	16:10:00	16.83	41.7	5.33
6/23/2021	16:25:00	16.8	41.7	5.31
6/23/2021	16:40:00	16.79	42	5.35
6/23/2021	16:55:00	16.8	42	5.34
6/23/2021	17:10:00	16.79	42	5.67
6/23/2021	17:25:00	16.74	41.7	4.07
6/23/2021	17:40:00	16.78	41.7	3.9
6/23/2021	17:55:00	16.78	41.8	3.76
6/23/2021	18:10:00	16.8	41.7	5.1
6/23/2021	18:25:00	16.91	41.6	6.06
6/23/2021	18:40:00	17.13	41.6	6.02
6/23/2021	18:55:00	17.09	41.5	6.01
6/23/2021	19:10:00	17.09	41.7	6.09
6/23/2021	19:25:00	17.1	41.7	6.03
6/23/2021	19:40:00	17.08	41.7	6.05
6/23/2021	19:55:00	16.98	41.9	6.15
6/23/2021	20:10:00	16.84	42	5.94
6/23/2021	20:25:00	16.8	41.6	5.85
6/23/2021	20:40:00	16.88	41.8	5.88
6/23/2021	20:55:00	16.81	41.6	5.8
6/23/2021	21:10:00	16.7	41.6	5.52
6/23/2021	21:25:00	16.68	41.6	5.37

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
6/23/2021	21:40:00	16.64	41.6	5.18
6/23/2021	21:55:00	16.75	41.6	5.38
6/23/2021	22:10:00	16.74	41.7	5.27
6/23/2021	22:25:00	16.53	41.4	4.74
6/23/2021	22:40:00	16.56	41.4	4.75
6/23/2021	22:55:00	16.63	41.6	4.96
6/23/2021	23:10:00	16.57	41.4	4.69
6/23/2021	23:25:00	16.53	41.3	4.47
6/23/2021	23:40:00	16.55	41.4	4.5
6/23/2021	23:55:00	16.56	41.4	4.47
6/24/2021	0:10:00	16.55	41.4	4.37
6/24/2021	0:25:00	16.56	41.3	4.49
6/24/2021	0:40:00	16.52	41.3	4.27
6/24/2021	0:55:00	16.55	41.4	4.22
6/24/2021	1:10:00	16.45	41.3	4.02
6/24/2021	1:25:00	16.5	41.4	4.06
6/24/2021	1:40:00	16.45	41.3	3.94
6/24/2021	1:55:00	16.54	41.7	4.04
6/24/2021	2:10:00	16.53	41.7	3.86
6/24/2021	2:25:00	16.49	41.4	3.86
6/24/2021	2:40:00	16.53	41.6	3.82
6/24/2021	2:55:00	16.36	41.2	3.85
6/24/2021	3:10:00	16.44	41.4	3.76
6/24/2021	3:25:00	16.41	41.3	3.75
6/24/2021	3:40:00	16.38	41.4	3.74
6/24/2021	3:55:00	16.3	41.3	3.78
6/24/2021	4:10:00	16.4	41.3	3.74
6/24/2021	4:25:00	16.3	41.3	3.72
6/24/2021	4:40:00	16.36	41.3	3.68
6/24/2021	4:55:00	16.27	41	3.71
6/24/2021	5:10:00	16.33	41.6	3.59
6/24/2021	5:25:00	16.33	41.6	3.62
6/24/2021	5:40:00	16.29	41.3	3.63
6/24/2021	5:55:00	16.35	41.4	3.7
6/24/2021	6:10:00	16.29	41.3	3.63
6/24/2021	6:25:00	16.23	41.2	3.65
6/24/2021	6:40:00	16.32	41.4	3.64
6/24/2021	6:55:00	16.29	41.7	3.61
6/24/2021	7:10:00	16.34	41.7	3.61
6/24/2021	7:25:00	16.37	41.7	3.62
6/24/2021	7:40:00	16.43	41.8	3.68
6/24/2021	7:55:00	16.38	41.4	3.7
6/24/2021	8:10:00	16.43	41.7	3.63
6/24/2021	8:25:00	16.42	41.8	3.64

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
6/24/2021	8:40:00	16.42	41.7	3.75
6/24/2021	8:55:00	16.54	41.8	3.66
6/24/2021	9:10:00	16.58	42.1	3.75
6/24/2021	9:25:00	16.37	41.4	3.89
6/24/2021	9:40:00	16.42	41.4	3.79
6/24/2021	9:55:00	16.5	41.4	3.85
6/24/2021	10:10:00	16.44	41.6	3.97
6/24/2021	10:25:00	16.53	41.4	3.97
6/24/2021	10:40:00	16.53	41.3	4.03
6/24/2021	10:55:00	16.52	41.1	4.13
6/24/2021	11:10:00	16.58	40.9	4.21
6/24/2021	11:25:00	16.63	40.9	4.32
6/24/2021	11:40:00	16.65	40.9	4.35
6/24/2021	11:55:00	16.69	40.7	4.38
6/24/2021	12:10:00	16.81	41.7	4.53
6/24/2021	12:25:00	16.7	41.6	6.35
6/24/2021	12:40:00	16.7	41.5	6.72
6/24/2021	12:55:00	16.69	41.4	6.74
6/24/2021	13:10:00	16.98	41.9	5.64
6/24/2021	13:25:00	16.8	41.6	5.62
6/24/2021	13:40:00	16.8	41.7	5.58
6/24/2021	13:55:00	16.82	41.6	5.38
6/24/2021	14:10:00	16.93	41.6	5.87
6/24/2021	14:25:00	16.82	41.6	5.92
6/24/2021	14:40:00	16.72	41.6	5.89
6/24/2021	14:55:00	16.71	41.7	5.8
6/24/2021	15:10:00	16.69	41.7	5.7
6/24/2021	15:25:00	16.66	41.6	5.68
6/24/2021	15:40:00	16.66	41.7	5.68
6/24/2021	15:55:00	16.75	41.7	5.54
6/24/2021	16:10:00	16.73	41.5	5.57
6/24/2021	16:25:00	16.73	41.7	5.48
6/24/2021	16:40:00	16.76	41.5	5.39
6/24/2021	16:55:00	16.74	41.8	5.34
6/24/2021	17:10:00	16.78	41.8	5.48
6/24/2021	17:25:00	16.73	41.7	5.56
6/24/2021	17:40:00	16.74	41.6	5.56
6/24/2021	17:55:00	16.74	41.7	5.5
6/24/2021	18:10:00	16.78	41.7	5.11
6/24/2021	18:25:00	16.72	41.7	5.13
6/24/2021	18:40:00	16.72	41.8	5.04
6/24/2021	18:55:00	16.76	41.5	4.84
6/24/2021	19:10:00	16.77	41.5	5.59
6/24/2021	19:25:00	16.79	41.5	6.34

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
6/24/2021	19:40:00	16.89	41.7	5.88
6/24/2021	19:55:00	16.96	41.8	5.72
6/24/2021	20:10:00	16.99	41.6	5.63
6/24/2021	20:25:00	16.98	41.7	5.64
6/24/2021	20:40:00	16.79	41.3	6.48
6/24/2021	20:55:00	16.77	41.6	6.53
6/24/2021	21:10:00	16.78	41.3	6.47
6/24/2021	21:25:00	16.85	41.6	6.04
6/24/2021	21:40:00	16.79	41.6	6.29
6/24/2021	21:55:00	16.67	41.4	6.57
6/24/2021	22:10:00	16.62	41.4	6.02
6/24/2021	22:25:00	16.54	41.2	5.51
6/24/2021	22:40:00	16.49	41.2	5.31
6/24/2021	22:55:00	16.48	41.2	5.26
6/24/2021	23:10:00	16.49	41.3	5.24
6/24/2021	23:25:00	16.5	41.3	5.09
6/24/2021	23:40:00	16.47	41.2	5.01
6/24/2021	23:55:00	16.45	41.3	4.71
	Max	**17.13**	**42.1**	**6.74**
	Min	**16.13**	**40.7**	**3.59**

Stevens Creek Operations Data (Provided By DESC & USACE)

6/8/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	186.2	159.1	10477	7185
2:00	0	185.9	158.9	10472	7312
3:00	0	185.7	159	10502	7317
4:00	0	185.5	158.9	10201	7104
5:00	0	185.2	158.7	10048	7111
6:00	0	185.2	158.4	6820	4743
7:00	0	185	158.3	7002	4858
8:00	0	184.8	158.2	6702	4735
9:00	0	184.7	158.2	6882	4866
10:00	0	184.6	158.2	6850	4962
11:00	0	184.5	158.2	6613	4725
12:00	0	184.3	158.2	6602	4738
13:00	0	184.2	158.2	6540	4742
14:00	1327	184.7	158.2	6574	4765
15:00	22760	184.8	158.4	6622	4702
16:00	21410	185.3	158.5	7100	4833
17:00	24170	186	158.8	7483	4973
18:00	24197	186.4	158	9530	6031
19:00	23364	186.8	159.2	9734	6476
20:00	21750	187.1	159.5	12453	8407
21:00	13867	187.2	159.6	12429	8432
22:00	11550	187.1	159.7	12405	8416
23:00	441	186.8	159.5	12125	8238
24:00:00	0	186.5	159.4	12130	8575
daily avg.	**6868**	**186**	**159**	**8929**	**6177**

Total Generation	**214296**
Projected discharge	7727
Thurmond discharge	**6868**

Stevens Creek Operations Data (Provided By DESC & USACE)

6/9/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	186.2	159.2	12077	8378
2:00	0	185.9	159.1	11934	8346
3:00	0	185.7	159.1	11871	8319
4:00	0	185.4	159	11716	8318
5:00	0	185.2	159	11601	8291
6:00	0	185	158.8	10147	7211
7:00	0	184.8	158.7	10136	7196
8:00	0	184.6	158.5	8496	6058
9:00	0	184.4	158.4	8688	6255
10:00	0	184.3	158.4	8259	5916
11:00	0	184.1	158.4	8228	5996
12:00	0	183.9	158.4	8134	5906
13:00	0	183.9	158.3	8002	5819
14:00	6140	183.6	158.4	7947	5862
15:00	9630	183.8	158.3	7892	5796
16:00	27450	184	158.4	8009	5826
17:00	26940	184.6	158.4	8372	5945
18:00	27030	185.2	158.6	9677	6777
19:00	26600	185.8	158.7	10031	6881
20:00	23927	186.3	158.8	10318	7020
21:00	17867	186.8	159.1	10546	7104
22:00	3074	187	159.3	10509	7038
23:00	0	186.9	159.3	10403	6939
24:00:00	0	186.6	159.1	10285	6909
daily avg.	**7027**	**185**	**159**	**9720**	**6838**

Total Generation	**233278**
Projected discharge	7853
Thurmond discharge	**7027**

Stevens Creek Operations Data (Provided By DESC & USACE)

6/23/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	185.8	159.2	12823	9031
2:00	0	185.6	159.2	12675	8974
3:00	0	185.3	159	12679	8920
4:00	0	185	159.1	12480	8965
5:00	0	184.7	159	12389	8929
6:00	0	184.5	159	11925	8922
7:00	0	184.2	159	11844	8623
8:00	0	183.9	159	11610	8376
9:00	0	183.6	158.9	11407	8483
10:00	1032	183.3	158.9	11164	8359
11:00	18840	183.6	159	11375	8437
12:00	18760	184	159	11649	8535
13:00	18720	184.4	159	11951	8649
14:00	18960	184.7	159.1	12019	8639
15:00	18145	185	159.2	12160	8718
16:00	18640	185.2	159.3	12770	8731
17:00	18145	185.5	159.4	12464	8800
18:00	23240	185.7	159.5	12339	8710
19:00	23090	185.9	159.6	12480	8746
20:00	7847	185.8	159.7	12404	8710
21:00	147	185.3	159.6	12390	8724
22:00	0	185.2	159.4	12151	8657
23:00	0	184.8	159.3	11981	8597
24:00:00	0	184.7	158.7	7811	5510
daily avg.	**7732**	**185**	**159**	**11956**	**8573**

Total Generation	**286940**
Projected discharge	8870
Thurmond discharge	**7732**

Stevens Creek Operations Data (Provided By DESC & USACE)

6/24/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	184.4	158.6	7728	5537
2:00	0	184.3	158.4	7006	5097
3:00	0	184	158.4	6393	5001
4:00	0	183.9	158.1	5432	4067
5:00	0	183.8	158.1	5341	4032
6:00	0	183.6	158	5952	4441
7:00	0	183.5	158.1	6604	5004
8:00	0	183.3	158.2	6674	5033
9:00	0	183.1	158.1	6554	5013
10:00	0	182.9	158.1	6429	4962
11:00	0	182.7	158.1	6354	4935
12:00	294	182.6	157.9	4960	4010
13:00	6357	182.5	157.9	5305	4217
14:00	23150	182.3	157.9	5215	4214
15:00	25630	182.2	158.4	8689	6715
16:00	25880	182.8	158.5	8951	6774
17:00	26040	183.5	158.6	9408	6968
18:00	23960	184.1	159	11816	8573
19:00	22887	184.6	159	11913	8630
20:00	143	185.2	159.2	12167	8670
21:00	0	185.5	159.4	12257	8657
22:00	0	185.4	159.4	12111	8558
23:00	0	185.4	158.8	6308	4377
24:00:00	0	185.2	158.7	6048	4121
daily avg.	**6431**	**184**	**158**	**7734**	**5734**

Total Generation	**185615**
Projected discharge	7304
Thurmond discharge	**6431**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
6/8/2021 0:00	9200
6/8/2021 1:00	10500
6/8/2021 2:00	10900
6/8/2021 3:00	11300
6/8/2021 4:00	11800
6/8/2021 5:00	11900
6/8/2021 6:00	10400
6/8/2021 7:00	10100
6/8/2021 8:00	9760
6/8/2021 9:00	9420
6/8/2021 10:00	9220
6/8/2021 11:00	8820
6/8/2021 12:00	8510
6/8/2021 13:00	8080
6/8/2021 14:00	7740
6/8/2021 15:00	7480
6/8/2021 16:00	7190
6/8/2021 17:00	7130
6/8/2021 18:00	6940
6/8/2021 19:00	6740
6/8/2021 20:00	6710
6/8/2021 21:00	6730
6/8/2021 22:00	7880
6/8/2021 23:00	8640
6/9/2021 0:00	10400
6/9/2021 1:00	11500
6/9/2021 2:00	12000
6/9/2021 3:00	12400
6/9/2021 4:00	11900
6/9/2021 5:00	11700
6/9/2021 6:00	11500
6/9/2021 7:00	10900
6/9/2021 8:00	10400
6/9/2021 9:00	10100
6/9/2021 10:00	9420
6/9/2021 11:00	8780
6/9/2021 12:00	8390
6/9/2021 13:00	8060
6/9/2021 14:00	7770
6/9/2021 15:00	7470
6/9/2021 16:00	7380
6/9/2021 17:00	7240
6/9/2021 18:00	7070
6/9/2021 19:00	6950
6/9/2021 20:00	6980
6/9/2021 21:00	6770
6/9/2021 22:00	6740
6/9/2021 23:00	6670
6/23/2021 0:00	8770
6/23/2021 1:00	9520

Date-Time	Flow (cfs)
6/23/2021 2:00	10200
6/23/2021 3:00	10200
6/23/2021 4:00	10400
6/23/2021 5:00	10700
6/23/2021 6:00	9800
6/23/2021 7:00	9600
6/23/2021 8:00	9420
6/23/2021 9:00	9330
6/23/2021 10:00	9290
6/23/2021 11:00	9090
6/23/2021 12:00	8990
6/23/2021 13:00	8980
6/23/2021 14:00	9080
6/23/2021 15:00	8470
6/23/2021 16:00	8570
6/23/2021 17:00	8750
6/23/2021 18:00	9140
6/23/2021 19:00	9410
6/23/2021 20:00	9680
6/23/2021 21:00	9860
6/23/2021 22:00	10100
6/23/2021 23:00	10900
6/24/2021 0:00	11700
6/24/2021 1:00	12000
6/24/2021 2:00	11800
6/24/2021 3:00	10700
6/24/2021 4:00	10000
6/24/2021 5:00	9550
6/24/2021 6:00	9320
6/24/2021 7:00	8970
6/24/2021 8:00	8320
6/24/2021 9:00	7670
6/24/2021 10:00	7310
6/24/2021 11:00	6930
6/24/2021 12:00	6600
6/24/2021 13:00	6380
6/24/2021 14:00	6200
6/24/2021 15:00	6010
6/24/2021 16:00	5860
6/24/2021 17:00	5480
6/24/2021 18:00	5190
6/24/2021 19:00	4960
6/24/2021 20:00	4810
6/24/2021 21:00	4690
6/24/2021 22:00	4660
6/24/2021 23:00	6060

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
July 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (7/12/21)	14.43	—	28.30	1.5	—	8.3
Thurmond Tailrace (Site 7) (7/12/21 - 7/13/21)		—			—	
Stevens Creek Res. (Site 6) (7/12/21 - 7/13/21)	17.46	—	18.47	5.1	—	6.0
Stevens Creek Res. (Site 1) (7/12/21 - 7/13/21)	17.46	—	19.48	5.2	—	6.3
Stevens Creek Res. (Site 2) (7/12/21 - 7/13/21)	18.13	—	19.77	5.3	—	6.7
Stevens Creek Tailrace (Site 3) (7/12/21 - 7/13/21)	18.18	—	28.24	6.2	—	7.7
Stevens Creek (Site 5) (7/12/21 - 7/13/21)	28.21	—	29.98	4.9	—	8.8
Stevens Creek (Site 4) (7/12/21 - 7/13/21)	20.87	—	27.50	5.7	—	8.0

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
July 2021 (cont'd.)

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (7/19/21)	14.69	—	29.18	1.0	—	8.31
Thurmond Tailrace (Site 7)* (7/21/21 - 7/22/21)		—			—	
Stevens Creek Res. (Site 6) (7/21/21 - 7/22/21)	18.25	—	21.05	4.5	—	5.7
Stevens Creek Res. (Site 1) (7/21/21 - 7/22/21)	18.05	—	21.40	4.3	—	5.1
Stevens Creek Res. (Site 2) (7/21/21 - 7/22/21)	18.88	—	20.53	4.6	—	5.4
Stevens Creek Tailrace (Site 3) (7/21/21 - 7/22/21)	18.88	—	20.71	5.3	—	6.2
Stevens Creek (Site 5) (7/21/21 - 7/22/21)	24.15	—	25.26	5.3	—	5.9
Stevens Creek (Site 4) (7/21/21 - 7/22/21)	24.18	—	25.99	4.3	—	5.2

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 7/12/2021
Field Team: EGM/KYA
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:24	surface	7.2	28.2	110	5.6	71
		1m	7.1	28.2	111	5.6	71
		2m	7.1	28.2	110	5.5	71
		3m	7.1	28.2	111	5.5	70
		4m	7.1	28.2	111	5.4	69
3	7:15	surface	6.5	28.2	45	6.9	72
4	7:56	surface	6.9	24.7	66	6.2	75
		1m	6.9	24.6	65	6.2	74
		2m	6.8	24.4	64	6.1	73
		3m	6.8	24.4	64	6.0	71
		4m	6.8	20.9	50	6.0	67
2	8:17	surface	6.6	18.3	45	5.6	59
		1m	6.5	18.3	45	5.5	59
		2m	6.5	18.2	45	5.5	58
		3m	6.5	18.2	45	5.5	58
		4m	6.5	18.2	45	5.4	58
1	8:35	surface	6.5	18.2	45	5.2	55
		1m	6.5	17.7	44	5.2	55
		2m	6.4	17.5	44	5.2	55
		3m	6.4	17.5	44	5.2	54
1A	8:45	surface	6.5	17.9	45	5.3	55
		1m	6.5	17.7	44	5.2	54
		2m	6.4	17.6	44	5.1	54
		3m	6.4	17.6	44	5.1	54

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 7/12/2021
Field Team: EGM/KYA
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	16:00	surface	7.3	29.3	111	7.7	101
		1m	7.4	29.2	111	7.6	100
		2m	7.4	29.2	111	7.7	100
		3m	7.3	30.0	111	7.3	95
		4m	7.3	29.0	111	7.3	94
3	15:15	surface	6.6	19.9	45	7.7	84
4	13:40	surface	7.1	27.5	72	7.4	94
		1m	7.1	27.2	72	7.4	93
		2m	7.1	26.1	71	6.9	84
		4m	6.7	21.1	50	6.2	70
		5m	6.7	21.0	50	6.2	69
2	14:03	surface	6.7	19.8	44	6.7	74
		1m	6.7	19.8	45	6.7	74
		2m	6.6	19.8	45	6.7	74
		3m	6.6	19.8	45	6.7	74
		4m	6.6	19.8	45	6.7	74
1	14:21	surface	6.6	19.4	45	5.6	61
		1m	6.5	19.4	45	5.5	60
		2m	6.5	19.3	45	5.5	60
		3m	6.5	19.5	45	5.5	60
1A	14:35	surface	6.5	18.5	44	5.6	60
		1m	6.4	18.5	44	5.5	59
		2m	6.3	18.5	44	5.5	58
		3m	6.3	18.5	44	5.5	58
		4m	6.2	18.5	44	5.5	58

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 7/13/2021 AM
Field Team: EGM/KYA
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	5:42	surface	7.1	28.2	112	5.0	64
		1m	7.1	28.2	112	5.0	64
		2m	7.1	28.2	112	5.0	64
		3m	7.1	28.2	112	5.0	64
		4m	7.1	28.2	112	4.9	63
3	6:14	surface	6.4	18.2	45	6.2	65
4	6:42	surface	6.9	24.2	63	6.3	76
		1m	6.8	24.2	63	6.4	76
		2m	6.8	24.1	63	6.3	75
		3m	6.8	24.0	62	6.3	75
		4m	6.8	23.9	62	6.3	75
		5m	6.8	23.8	62	6.3	74
2	13:12	suface	6.5	18.2	45	5.4	57
		1m	6.5	18.2	45	5.4	57
		2m	6.5	18.2	45	5.3	57
		3m	6.4	18.1	45	5.3	56
		4m	6.5	18.1	45	5.3	56
1	3:36	surface	6.5	17.6	44	5.6	59
		1m	6.4	17.5	44	5.6	58
		2m	6.4	17.5	44	5.5	58
		3m	6.3	17.5	44	5.6	58
1A	7:34	surface	6.5	17.5	44	5.4	57
		1m	6.4	17.5	44	5.4	56
		2m	6.3	17.5	44	5.4	56
		2.5m	6.3	17.5	44	5.4	56

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 7/12/2021
Field Team: EGM/KYA
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	13:38	surface	7.6	29.1	112	8.8	115
		1m	7.3	28.5	112	6.7	86
		2m	7.2	28.3	113	5.6	72
		3m	7.2	28.2	113	5.4	69
		4m	7.2	28.2	113	5.1	65
3	14:16	surface	7.6	19.7	45	7.6	83
4	14:21	surface	7.2	26.1	71	8.0	99
		1m	7.1	25.6	68	8.0	98
		2M	6.9	24.1	61	6.7	80
		3m	6.9	22.8	56	6.4	74
		4m	6.8	22.1	53	6.1	70
		5m	6.7	21.5	52	5.7	65
2	15:08	surface	6.6	19.1	45	6.3	68
		1m	6.6	19.1	45	6.3	68
		2m	6.6	19.0	45	6.4	68
		3m	6.6	19.0	45	6.2	67
		4m	6.5	19.0	45	6.2	66
1	15:28	surface	6.5	18.3	44	6.3	67
		1m	6.5	18.3	44	6.3	67
		2m	6.5	18.3	44	6.3	67
		3m	6.5	18.3	44	6.3	67
		4m	6.5	18.3	44	6.3	67
1A	15:44	surface	6.5	17.6	44	6.0	63
		1m	6.5	17.6	44	6.0	63
		2m	6.4	17.6	44	6.0	63
		3m	6.4	17.7	44	5.9	62
		4m	6.4	17.7	44	5.9	62

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 7/21/2021
Field Team: DFS/WTB
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	5:46	surface	7.3	24.2	67	5.3	64
		1	7.0	24.2	68	5.3	63
		2	6.9	24.2	68	5.3	63
		3	6.9	24.2	68	5.3	63
		4	6.9	24.2	68	5.3	62
		5	6.9	24.2	67	5.3	63
3	6:23	surface	6.9	19.1	47	5.3	58
4	6:45	surface	6.9	24.3	56	4.4	52
		1	6.0	24.3	57	4.3	52
		2	4.9	24.3	58	4.3	52
		3	5.6	24.3	57	4.3	52
		4	7.0	24.3	57	4.3	51
2	6:57	surface	6.9	18.9	45	4.9	53
		1	6.7	18.9	45	4.9	52
		2	6.6	18.9	45	4.9	52
		3	6.6	18.9	45	4.8	52
		4	6.6	18.9	45	4.8	52
		5	6.5	18.9	45	4.8	52
1	7:17	surface	6.9	21.0	52	4.3	48
		1	6.8	19.0	47	4.5	49
		2	6.7	18.2	46	4.8	51
		3	6.6	18.1	46	4.8	51
		4	6.6	18.1	47	4.8	51
		5	6.6	18.1	47	4.8	51
1A	7:25	surface	7.1	21.1	54	5.2	58
		1	6.9	19.3	49	4.9	53
		2	6.7	18.4	46	4.9	52
		3	6.6	18.3	45	4.8	52

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 7/21/2021
Field Team: DFS/WTB
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	14:53	surface	6.8	24.2	58	5.9	70
		1	6.8	24.2	58	5.8	69
		2	6.8	24.2	58	5.8	69
		3	6.8	24.2	58	5.8	69
		4	6.8	24.2	58	5.8	69
		5	6.8	24.2	58	5.8	69
3	15:32	surface	6.8	20.7	47	5.8	65
4	13:51	surface	6.8	24.5	57	4.9	59
		1	6.8	24.5	57	4.9	58
		2	6.8	24.5	57	4.9	58
		3	6.8	24.5	57	4.8	58
		4	6.8	24.5	57	4.8	58
2	13:40	surface	6.9	20.1	46	5.1	57
		1	6.7	20.0	45	5.1	56
		2	6.6	20.0	45	5.1	56
		3	6.6	20.0	45	5.0	55
		4	6.6	20.0	45	5.0	55
		5	6.5	20.0	45	5.0	55
1	13:15	surface	6.8	21.4	55	4.8	55
		1	6.7	20.5	53	5.0	56
		2	6.6	20.1	52	5.0	55
		3	6.6	20.2	52	5.0	55
		4	6.6	20.2	52	5.0	55
		5	6.6	20.1	52	4.9	55
1A	13:00	surface	6.7	18.7	47	4.6	49
		1	6.6	18.7	46	4.6	49
		2	6.6	18.7	46	4.6	49
		3	6.6	18.7	46	4.5	49

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 7/22/2021
Field Team: DFS/WTB
Field Meter Model/Number: 17F104114

Site No.	Time	Depth	pH	Temperature	Sp. Cond.	DO	DO
	(EST)	(meters)		(degrees C)	(us/cm)	(mg/L)	(% saturation)
5	6:45	Surface	6.8	24.3	57	5.9	70
		1	6.8	24.3	57	5.8	70
		2	6.8	24.3	57	5.8	69
		3	6.8	24.3	57	5.8	69
		4	6.8	24.3	57	5.8	69
		5	6.8	24.3	57	5.8	69
3	6:18	Surface	6.6	18.9	46	5.4	58
4	7:18	Surface	6.8	24.2	58	5.2	62
		1	6.8	24.2	58	5.2	62
		2	6.8	24.2	58	5.1	61
		3	6.8	24.2	58	5.1	61
		4	6.8	24.2	58	5.1	61
2	7:29	Surface	6.6	18.9	46	4.8	51
		1	6.5	18.9	46	4.7	51
		2	6.5	18.9	46	4.7	50
		3	6.5	19.0	46	4.7	50
		4	6.5	18.9	46	4.6	50
1	7:46	Surface	6.5	19.8	51	4.7	52
		1	6.5	19.0	48	4.8	51
		2	6.5	18.5	48	4.9	52
		3	6.5	18.5	48	4.9	52
		4	6.5	18.4	48	4.9	52
1A	7:55	Surface	6.6	19.6	50	5.0	54
		1	6.5	18.8	47	4.9	52
		2	6.5	18.3	46	4.8	51
		3	6.5	18.3	46	4.7	50

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 7/22/2021
Field Team: DFS/WTB
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	13:42	Surface	6.8	25.3	54	5.8	70
		1	6.8	25.3	54	5.8	70
		2	6.8	25.3	54	5.8	70
		3	6.8	25.3	54	5.8	70
		4	6.8	25.3	54	5.7	70
3	13:13	Surface	6.7	20.5	47	6.2	69
4	14:16	Surface	6.9	26.0	58	5.1	62
		1	6.8	25.9	58	5.1	62
		2	6.8	25.5	58	5.1	62
		3	6.8	25.4	58	5.0	61
		4	6.8	25.3	58	5.0	61
		5	6.7	25.3	58	5.0	60
2	15:17	Surface	6.8	20.5	49	5.4	60
		1	6.6	20.4	48	5.4	60
		2	6.6	20.4	48	5.4	60
		3	6.6	20.4	48	5.4	60
		4	6.6	20.4	48	5.4	60
		5	6.6	20.4	48	5.4	59
1	15:01	Surface	6.7	19.0	45	5.1	55
		1	6.5	19.0	45	5.1	55
		2	6.5	19.0	45	5.1	55
		3	6.5	19.1	46	5.1	55
		4	6.5	19.1	46	5.1	55
		5	6.5	19.1	45	5.0	55
1A	14:51	Surface	6.7	18.9	45	5.7	62
		1	6.6	18.9	45	5.7	61
		2	6.6	18.9	45	5.7	61
		3	6.5	18.9	45	5.7	61
		4	6.5	18.9	45	5.6	61

JST Forebay Water Quality Data (Provided By USACE-ERDC)

July 12, 2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	°C	mg/l	µS/cm	meters
44019	28.22	8.28	46.2	0.2
44058	28.3	8.25	46.1	2
44143	27.8	8.15	45.9	4
44308	27.39	7.48	45.8	6
44455	24.86	4.76	45.6	7
44553	22.9	2.55	44.9	8
44713	20.58	1.84	43.6	9
44753	20.13	1.48	43.3	10
44853	19.86	1.96	42.2	11
44933	19.55	1.81	42.5	12
45032	19.09	1.8	42.2	13
45143	18.7	2.11	41.9	14
45230	18.43	2.06	41.7	15
45316	18.03	2.3	41.6	16
45450	17.62	1.64	41.8	18
45527	17.27	1.88	41.3	20
45616	16.91	1.73	41.5	22
45713	16.55	1.66	41.6	24
45827	16.17	1.64	41.9	26
45913	15.83	1.64	42.6	28
45956	15.55	1.66	42.9	30
50028	15.34	1.65	42.8	32
50104	15.19	1.68	42.2	34
50146	14.93	1.71	41.8	36
50225	14.79	1.73	41.3	38
50253	14.64	1.69	40.9	40
50344	14.48	1.6	40.5	42
50444	14.43	1.53	40.7	43.2
Max:	**28.3**	**8.28**	**46.2**	**43.2**
Min:	**14.43**	**1.48**	**40.5**	**0.2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
7/12/2021	0:10:00	18.58	43.2	4.5
7/12/2021	0:25:00	18.5	43.1	4.26
7/12/2021	0:40:00	18.46	43.1	4
7/12/2021	0:55:00	18.46	43.3	3.96
7/12/2021	1:10:00	18.47	43.1	3.88
7/12/2021	1:25:00	18.45	43.4	3.55
7/12/2021	1:40:00	18.38	43.3	3.44
7/12/2021	1:55:00	18.43	43.4	3.45
7/12/2021	2:10:00	18.45	43.5	3.41
7/12/2021	2:25:00	18.41	43.4	3.24
7/12/2021	2:40:00	18.36	43.1	3.08
7/12/2021	2:55:00	18.32	43	3.05
7/12/2021	3:10:00	18.37	43.3	3.12
7/12/2021	3:25:00	18.32	43.1	3.06
7/12/2021	3:40:00	18.36	43.4	3.03
7/12/2021	3:55:00	18.26	43.1	2.82
7/12/2021	4:10:00	18.33	43.4	2.92
7/12/2021	4:25:00	18.31	43.2	2.83
7/12/2021	4:40:00	18.33	43.3	2.84
7/12/2021	4:55:00	18.3	43.1	2.79
7/12/2021	5:10:00	18.29	43.2	2.76
7/12/2021	5:25:00	18.26	43.1	2.72
7/12/2021	5:40:00	18.31	43.3	2.71
7/12/2021	5:55:00	18.34	43.4	2.69
7/12/2021	6:10:00	18.35	43.5	2.67
7/12/2021	6:25:00	18.39	43.1	2.71
7/12/2021	6:40:00	18.42	43.5	2.71
7/12/2021	6:55:00	18.42	43.5	2.68
7/12/2021	7:10:00	18.36	43.6	2.66
7/12/2021	7:25:00	18.38	43.1	2.67
7/12/2021	7:40:00	18.48	43.3	2.71
7/12/2021	7:55:00	18.51	43.1	2.75
7/12/2021	8:10:00	18.4	43	2.82
7/12/2021	8:25:00	18.47	43	3.56
7/12/2021	8:40:00	18.73	42.9	3.55
7/12/2021	8:55:00	18.84	43.1	3.49
7/12/2021	9:10:00	18.9	42.9	3.49
7/12/2021	9:25:00	18.66	42.9	3.42
7/12/2021	9:40:00	18.76	42.9	3.41
7/12/2021	9:55:00	18.83	42.9	3.5
7/12/2021	10:10:00	18.85	42.9	3.19

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
7/12/2021	10:25:00	18.9	43.1	3.26
7/12/2021	10:40:00	18.9	43.1	3.34
7/12/2021	10:55:00	18.95	43.1	3.29
7/12/2021	11:10:00	19.01	43	3.33
7/12/2021	11:25:00	19.11	43.2	3.31
7/12/2021	11:40:00	19.19	43.2	3.37
7/12/2021	11:55:00	19.27	42.9	3.53
7/12/2021	12:10:00	19.62	43.3	3.66
7/12/2021	12:25:00	19.35	43.1	5.42
7/12/2021	12:40:00	19.27	43.1	5.53
7/12/2021	12:55:00	19.29	43.1	5.73
7/12/2021	13:10:00	19.3	43	5.66
7/12/2021	13:25:00	19.13	43	4.99
7/12/2021	13:40:00	19.07	43	4.93
7/12/2021	13:55:00	19.09	43.2	4.87
7/12/2021	14:10:00	19.16	43.1	4.76
7/12/2021	14:25:00	19.12	43.1	4.71
7/12/2021	14:40:00	19.1	42.8	4.63
7/12/2021	14:55:00	18.97	42.8	4.87
7/12/2021	15:10:00	18.83	43.1	4.73
7/12/2021	15:25:00	18.76	42.9	4.96
7/12/2021	15:40:00	18.74	43	5.06
7/12/2021	15:55:00	18.74	43.3	5.17
7/12/2021	16:10:00	18.73	43	5.07
7/12/2021	16:25:00	18.62	43.2	4.6
7/12/2021	16:40:00	18.5	43.1	4.56
7/12/2021	16:55:00	18.4	43.4	4.54
7/12/2021	17:10:00	18.39	43	4.52
7/12/2021	17:25:00	18.37	43.5	4.78
7/12/2021	17:40:00	18.41	42.9	4.69
7/12/2021	17:55:00	18.39	43.1	4.66
7/12/2021	18:10:00	18.4	43	4.65
7/12/2021	18:25:00	18.44	43	5.52
7/12/2021	18:40:00	18.44	43.1	5.63
7/12/2021	18:55:00	18.44	43	5.75
7/12/2021	19:10:00	18.37	42.7	5.68
7/12/2021	19:25:00	18.42	43.1	4.78
7/12/2021	19:40:00	18.73	43	4.69
7/12/2021	19:55:00	18.73	42.9	4.59
7/12/2021	20:10:00	18.68	43	4.74
7/12/2021	20:25:00	18.72	43	5.53
7/12/2021	20:40:00	18.73	42.9	5.58
7/12/2021	20:55:00	18.71	43	5.58
7/12/2021	21:10:00	18.69	42.9	5.65

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
7/12/2021	21:25:00	18.67	43	5.64
7/12/2021	21:40:00	18.68	42.9	5.67
7/12/2021	21:55:00	18.67	42.8	5.65
7/12/2021	22:10:00	18.65	42.9	5.67
7/12/2021	22:25:00	18.61	42.9	5.68
7/12/2021	22:40:00	18.59	43	5.68
7/12/2021	22:55:00	18.66	43	5.71
7/12/2021	23:10:00	18.71	42.8	5.74
7/12/2021	23:25:00	18.68	42.9	5.74
7/12/2021	23:40:00	18.66	42.9	5.71
7/12/2021	23:55:00	18.69	42.8	5.7
7/13/2021	0:10:00	18.74	42.9	5.7
7/13/2021	0:25:00	18.79	43.1	6.7
7/13/2021	0:40:00	18.83	42.9	6.33
7/13/2021	0:55:00	18.82	43.1	6.09
7/13/2021	1:10:00	18.88	42.8	5.79
7/13/2021	1:25:00	18.83	43.1	5.59
7/13/2021	1:40:00	18.84	43.1	5.48
7/13/2021	1:55:00	18.85	42.8	5.44
7/13/2021	2:10:00	18.84	43.1	5.45
7/13/2021	2:25:00	18.88	43.2	5.49
7/13/2021	2:40:00	18.77	43	5.3
7/13/2021	2:55:00	18.76	43	5.18
7/13/2021	3:10:00	18.75	43	5.2
7/13/2021	3:25:00	18.78	43	5.21
7/13/2021	3:40:00	18.76	43.3	5.03
7/13/2021	3:55:00	18.71	42.9	4.83
7/13/2021	4:10:00	18.71	43.2	4.75
7/13/2021	4:25:00	18.66	43	4.42
7/13/2021	4:40:00	18.66	43	4.3
7/13/2021	4:55:00	18.61	42.9	4.05
7/13/2021	5:10:00	18.62	43.2	4.01
7/13/2021	5:25:00	18.61	43.2	3.86
7/13/2021	5:40:00	18.59	43	3.66
7/13/2021	5:55:00	18.63	43.2	3.61
7/13/2021	6:10:00	18.62	43.2	3.48
7/13/2021	6:25:00	18.65	43.3	3.42
7/13/2021	6:40:00	18.62	43.2	3.32
7/13/2021	6:55:00	18.61	43	3.24
7/13/2021	7:10:00	18.62	43.2	3.16
7/13/2021	7:25:00	18.59	43	3.09
7/13/2021	7:40:00	18.62	43	3.06
7/13/2021	7:55:00	18.65	43.2	3.06
7/13/2021	8:10:00	18.71	43	3.03

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
7/13/2021	8:25:00	18.69	43.2	3.06
7/13/2021	8:40:00	18.75	43.3	3.06
7/13/2021	8:55:00	18.73	42.8	3.05
7/13/2021	9:10:00	18.75	43.2	3.02
7/13/2021	9:25:00	18.84	43.1	2.99
7/13/2021	9:40:00	18.87	43.1	2.97
7/13/2021	9:55:00	18.92	42.9	2.96
7/13/2021	10:10:00	18.98	43.1	3
7/13/2021	10:25:00	19.05	43	3
7/13/2021	10:40:00	19.1	43.2	2.94
7/13/2021	10:55:00	19.16	42.8	2.9
7/13/2021	11:10:00	19.73	43.2	2.88
7/13/2021	11:25:00	19.66	43.2	2.77
7/13/2021	11:40:00	20.04	43.2	2.86
7/13/2021	11:55:00	20.21	43.1	2.84
7/13/2021	12:10:00	20.54	43.3	2.87
7/13/2021	12:25:00	20.45	43.3	3.41
7/13/2021	12:40:00	20.21	43.1	4.09
7/13/2021	12:55:00	20.17	43.1	4.55
7/13/2021	13:10:00	20.18	43.1	4.63
7/13/2021	13:25:00	20.13	43	5.15
7/13/2021	13:40:00	20.08	43.1	5.15
7/13/2021	13:55:00	20.05	43.1	5.23
7/13/2021	14:10:00	19.51	43	5.21
7/13/2021	14:25:00	19.18	42.9	4.9
7/13/2021	14:40:00	19.11	43.1	4.72
7/13/2021	14:55:00	18.95	42.9	4.65
7/13/2021	15:10:00	18.91	43.2	4.62
7/13/2021	15:25:00	18.82	42.9	4.54
7/13/2021	15:40:00	18.81	42.9	4.51
7/13/2021	15:55:00	18.77	42.9	4.5
7/13/2021	16:10:00	18.71	43.3	4.49
7/13/2021	16:25:00	18.74	42.9	4.46
7/13/2021	16:40:00	18.72	43.2	4.4
7/13/2021	16:55:00	18.62	43.2	4.43
7/13/2021	17:10:00	18.57	43.2	4.42
7/13/2021	17:25:00	18.57	43	4.82
7/13/2021	17:40:00	18.53	43.3	4.82
7/13/2021	17:55:00	18.48	43.1	4.86
7/13/2021	18:10:00	18.46	43.1	4.84
7/13/2021	18:25:00	18.35	43	4.74
7/13/2021	18:40:00	18.36	43	4.57
7/13/2021	18:55:00	18.35	42.9	4.63
7/13/2021	19:10:00	18.33	43	4.79

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
7/13/2021	19:25:00	18.41	42.9	5.37
7/13/2021	19:40:00	18.47	42.8	5.56
7/13/2021	19:55:00	18.65	43	5.59
7/13/2021	20:10:00	18.74	42.9	5.58
7/13/2021	20:25:00	18.7	43	5.55
7/13/2021	20:40:00	18.7	42.9	5.56
7/13/2021	20:55:00	18.7	42.8	5.59
7/13/2021	21:10:00	18.7	42.9	5.6
7/13/2021	21:25:00	18.78	42.9	5.92
7/13/2021	21:40:00	18.83	42.9	5.98
7/13/2021	21:55:00	18.87	43.1	5.67
7/13/2021	22:10:00	18.9	43.2	5.61
7/13/2021	22:25:00	18.91	42.9	5.55
7/13/2021	22:40:00	18.88	42.9	5.43
7/13/2021	22:55:00	18.84	43.1	5.34
7/13/2021	23:10:00	18.75	43	5.23
7/13/2021	23:25:00	18.68	42.9	4.98
7/13/2021	23:40:00	18.7	42.9	5.03
7/13/2021	23:55:00	18.75	42.9	5.18
	Max	**20.54**	**43.6**	**6.7**
	Min	**18.26**	**42.7**	**2.66**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
7/21/2021	0:10:00	19.02	44	3.58
7/21/2021	0:25:00	19.01	44	3.47
7/21/2021	0:40:00	19	44.2	3.35
7/21/2021	0:55:00	19.02	44	3.3
7/21/2021	1:10:00	19.01	44	3.25
7/21/2021	1:25:00	18.97	44.1	3.07
7/21/2021	1:40:00	18.97	44.2	3
7/21/2021	1:55:00	18.98	44	2.97
7/21/2021	2:10:00	18.97	44.4	2.92
7/21/2021	2:25:00	19.02	44.1	3.06
7/21/2021	2:40:00	19.04	44.1	3.04
7/21/2021	2:55:00	19.11	44	3.13
7/21/2021	3:10:00	19.13	44.1	3.07
7/21/2021	3:25:00	19.14	44	2.9
7/21/2021	3:40:00	19.12	44	2.8
7/21/2021	3:55:00	19.13	43.9	2.83
7/21/2021	4:10:00	19.16	44	2.9
7/21/2021	4:25:00	19.14	44.1	2.8
7/21/2021	4:40:00	19.16	43.9	2.7
7/21/2021	4:55:00	19.14	44	2.66
7/21/2021	5:10:00	19.2	44.1	2.75
7/21/2021	5:25:00	19.15	44	2.61
7/21/2021	5:40:00	19.18	44.1	2.74
7/21/2021	5:55:00	19.14	44.3	2.64
7/21/2021	6:10:00	19.18	44	2.6
7/21/2021	6:25:00	19.18	44.3	2.58
7/21/2021	6:40:00	19.12	44.4	2.52
7/21/2021	6:55:00	19.18	44.3	2.64
7/21/2021	7:10:00	19.18	44.4	2.58
7/21/2021	7:25:00	19.27	44	2.69
7/21/2021	7:40:00	19.24	44	2.56
7/21/2021	7:55:00	19.27	44.1	2.52
7/21/2021	8:10:00	19.26	44.3	2.48
7/21/2021	8:25:00	19.35	43.9	2.58
7/21/2021	8:40:00	19.33	44.3	2.5
7/21/2021	8:55:00	19.4	44.4	2.55
7/21/2021	9:30:00	19.31	44.3	2.61
7/21/2021	9:45:00	19.38	44.2	2.63
7/21/2021	10:00:00	19.31	44.4	2.64
7/21/2021	10:15:00	19.33	44.7	2.65
7/21/2021	10:30:00	19.35	44.8	2.7

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
7/21/2021	10:45:00	19.36	44.5	2.72
7/21/2021	11:00:00	19.38	44.3	2.73
7/21/2021	11:15:00	19.46	44.7	2.78
7/21/2021	11:30:00	19.71	44.3	2.95
7/21/2021	11:45:00	19.6	44.7	2.88
7/21/2021	12:00:00	19.53	44.1	2.79
7/21/2021	12:15:00	19.62	44.1	2.87
7/21/2021	12:30:00	19.5	44	2.41
7/21/2021	12:45:00	19.46	44	2.41
7/21/2021	13:00:00	19.45	44	2.37
7/21/2021	13:15:00	19.37	43.9	3.01
7/21/2021	13:30:00	19.36	44.2	3.07
7/21/2021	13:45:00	19.02	44.2	3.71
7/21/2021	14:00:00	19.06	43.9	3.67
7/21/2021	14:15:00	19.07	44	3.55
7/21/2021	14:30:00	18.95	43.7	3.48
7/21/2021	14:45:00	18.98	44.1	3.51
7/21/2021	15:00:00	18.97	43.8	3.43
7/21/2021	15:15:00	18.96	43.8	3.37
7/21/2021	15:30:00	18.98	44	3.37
7/21/2021	15:45:00	18.94	44	3.45
7/21/2021	16:00:00	18.9	43.7	3.36
7/21/2021	16:15:00	18.9	44	3.4
7/21/2021	16:30:00	18.85	43.8	3.34
7/21/2021	16:45:00	18.77	44.1	3.31
7/21/2021	17:00:00	18.78	43.8	3.39
7/21/2021	17:15:00	18.75	43.7	3.56
7/21/2021	17:30:00	18.73	43.8	3.71
7/21/2021	17:45:00	18.73	43.8	3.69
7/21/2021	18:00:00	18.74	43.7	3.65
7/21/2021	18:15:00	18.71	43.8	3.79
7/21/2021	18:30:00	18.73	43.7	4.13
7/21/2021	18:45:00	18.77	43.7	4.18
7/21/2021	19:00:00	18.76	43.8	3.21
7/21/2021	19:15:00	18.8	44.1	3.76
7/21/2021	19:30:00	18.79	43.6	4.89
7/21/2021	19:45:00	18.84	43.7	5.11
7/21/2021	20:00:00	18.84	44.1	5.15
7/21/2021	20:15:00	18.79	43.8	5.21
7/21/2021	20:30:00	18.79	43.7	5.2
7/21/2021	20:45:00	19.07	44	5.2
7/21/2021	21:00:00	19.11	43.7	5.16
7/21/2021	21:15:00	19.09	43.9	5.18
7/21/2021	21:30:00	19.05	44.1	5.16

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
7/21/2021	21:45:00	19.06	44.1	5.12
7/21/2021	22:00:00	19.03	43.9	5.13
7/21/2021	22:15:00	19.05	43.7	5.37
7/21/2021	22:30:00	19.17	43.9	5.97
7/21/2021	22:45:00	19.25	43.9	5.69
7/21/2021	23:00:00	19.28	43.9	5.55
7/21/2021	23:15:00	19.32	43.8	5.09
7/21/2021	23:30:00	19.33	43.6	5.03
7/21/2021	23:45:00	19.25	44	4.93
7/22/2021	0:00:00	19.26	43.9	4.89
7/22/2021	0:15:00	19.23	43.9	4.87
7/22/2021	0:30:00	19.21	44	4.79
7/22/2021	0:45:00	19.16	44	4.62
7/22/2021	1:00:00	19.09	44.2	4.46
7/22/2021	1:15:00	19.06	44.4	4.21
7/22/2021	1:30:00	19.04	44.4	4.05
7/22/2021	1:45:00	19.04	44.4	4.05
7/22/2021	2:00:00	19.04	44.2	4.02
7/22/2021	2:15:00	19.03	44.1	3.91
7/22/2021	2:30:00	19.04	44.5	3.86
7/22/2021	2:45:00	19.03	44.2	3.76
7/22/2021	3:00:00	18.98	44.2	3.6
7/22/2021	3:15:00	19	44.4	3.59
7/22/2021	3:30:00	19.03	44.2	3.64
7/22/2021	3:45:00	19.04	44.1	3.6
7/22/2021	4:00:00	19.03	44	2.99
7/22/2021	4:15:00	19.03	44.4	2.97
7/22/2021	4:30:00	19.01	44.2	2.94
7/22/2021	4:45:00	18.97	44.1	2.86
7/22/2021	5:00:00	18.92	44.1	2.73
7/22/2021	5:15:00	18.99	44.2	3.05
7/22/2021	5:30:00	18.94	44	2.79
7/22/2021	5:45:00	19.03	44.4	2.98
7/22/2021	6:00:00	18.99	44.5	2.82
7/22/2021	6:15:00	18.98	44.5	2.75
7/22/2021	6:30:00	19.03	44.2	2.98
7/22/2021	6:45:00	18.94	44.5	2.63
7/22/2021	7:00:00	19.04	44.4	2.73
7/22/2021	7:15:00	18.93	44.1	2.55
7/22/2021	7:30:00	19.06	44.4	2.71
7/22/2021	7:45:00	18.95	44.4	2.53
7/22/2021	8:00:00	19.1	44.6	2.63
7/22/2021	8:15:00	19.06	44.5	2.54
7/22/2021	8:30:00	19.03	44.4	2.53

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
7/22/2021	8:45:00	19.08	44.6	2.56
7/22/2021	9:00:00	19.19	44.8	2.58
7/22/2021	9:15:00	19.28	44.5	2.57
7/22/2021	9:30:00	19.19	44.3	2.52
7/22/2021	9:45:00	19.38	44.7	2.88
7/22/2021	10:00:00	19.45	44.6	3.16
7/22/2021	10:15:00	19.53	44.7	3.08
7/22/2021	10:30:00	19.54	44.6	2.74
7/22/2021	10:45:00	19.61	44.6	2.62
7/22/2021	11:00:00	19.63	44.6	2.67
7/22/2021	11:15:00	19.87	44.1	2.7
7/22/2021	11:30:00	19.76	43.8	2.29
7/22/2021	11:45:00	19.75	43.7	2.26
7/22/2021	12:00:00	19.77	43.8	2.29
7/22/2021	12:15:00	19.78	43.8	2.66
7/22/2021	12:30:00	19.78	43.8	2.49
7/22/2021	12:45:00	19.77	43.7	2.21
7/22/2021	13:00:00	19.82	43.8	2.17
7/22/2021	13:15:00	19.71	43.8	3.14
7/22/2021	13:30:00	19.39	43.8	3.51
7/22/2021	13:45:00	19.14	43.6	3.44
7/22/2021	14:00:00	19.15	43.9	3.47
7/22/2021	14:15:00	19.09	43.7	3.42
7/22/2021	14:30:00	19.03	43.5	3.32
7/22/2021	14:45:00	19.01	43.3	3.33
7/22/2021	15:00:00	19.01	43.6	3.38
7/22/2021	15:15:00	19.01	43.5	3.34
7/22/2021	15:30:00	18.99	43.6	3.34
7/22/2021	15:45:00	18.97	43.6	3.31
7/22/2021	16:00:00	18.96	43.7	3.33
7/22/2021	16:15:00	18.96	43.3	3.32
7/22/2021	16:30:00	18.95	43.6	3.31
7/22/2021	16:45:00	18.91	43.5	3.3
7/22/2021	17:00:00	18.93	43.6	3.2
7/22/2021	17:15:00	18.92	43.7	3.28
7/22/2021	17:30:00	19.01	43.6	2.95
7/22/2021	17:45:00	19.06	43.6	2.92
7/22/2021	18:00:00	19.05	43.5	2.94
7/22/2021	18:15:00	19.06	43.5	2.86
7/22/2021	18:30:00	19.12	43.6	2.63
7/22/2021	18:45:00	19.1	43.7	2.48
7/22/2021	19:00:00	19.04	43.9	2.48
7/22/2021	19:15:00	19.15	43.9	2.52
7/22/2021	19:30:00	19.34	43.6	2.59

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
7/22/2021	19:45:00	19.29	43.8	2.52
7/22/2021	20:00:00	19.26	43.6	2.51
7/22/2021	20:15:00	19.26	43.6	2.66
7/22/2021	20:30:00	19.28	43.8	2.97
7/22/2021	20:45:00	19.29	43.8	3.03
7/22/2021	21:00:00	19.29	43.8	3.06
7/22/2021	21:15:00	19.3	43.8	3.02
7/22/2021	21:30:00	19.28	43.9	3.04
7/22/2021	21:45:00	19.3	43.9	3.01
7/22/2021	22:00:00	19.27	43.8	3.04
7/22/2021	22:15:00	19.31	43.8	3.92
7/22/2021	22:30:00	19.44	43.8	4.77
7/22/2021	22:45:00	19.47	43.7	4.95
7/22/2021	23:00:00	19.46	43.7	4.85
7/22/2021	23:15:00	19.47	43.5	4.86
7/22/2021	23:30:00	19.49	43.9	4.78
7/22/2021	23:45:00	19.5	43.7	4.78
	Max	**19.87**	**44.8**	**5.97**
	Min	**18.71**	**43.3**	**2.17**

Stevens Creek Operations Data (Provided By DESC & USACE)

7/12/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	184.9	159	10342	7348
2:00	0	184.7	158.6	6988	4955
3:00	0	184.6	158.4	6714	4887
4:00	0	184.4	158.4	7330	5301
5:00	0	184.2	158.4	6693	5010
6:00	0	184	158.3	6835	5025
7:00	0	183.8	158.3	7060	5222
8:00	0	183.6	158.3	6877	5071
9:00	0	183.4	158.2	6270	4735
10:00	0	183.2	158.1	5934	4162
11:00	0	183.2	158	5303	4168
12:00	590	183	158	5300	4100
13:00	8554	182.8	158	5232	4120
14:00	17600	182.7	158	5123	4102
15:00	19685	182.7	158.4	8136	6150
16:00	21590	183.1	157.7	9100	6741
17:00	23540	183.6	157.7	9381	6986
18:00	17467	183.9	158.9	10853	8316
19:00	10917	184.5	159	11644	8436
20:00	9100	184.9	159.1	11921	8568
21:00	7400	185.2	159.2	12084	8593
22:00	7470	185.2	159.2	12077	8610
23:00	7400	185.2	159.2	12092	8633
24:00:00	7320	185.2	159.2	12104	8650
daily avg.	**6610**	**184**	**158**	**8391**	**6162**

Total Generation	**201393**
Projected discharge	7389
Thurmond discharge	**6610**

Stevens Creek Operations Data (Provided By DESC & USACE)

7/13/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	185.1	159.2	12069	8601
2:00	0	185	159.2	12085	8600
3:00	0	184.7	159.1	11859	8542
4:00	0	184.3	159.1	11567	8440
5:00	0	184	159.1	11510	8512
6:00	0	183.7	1559	11102	8383
7:00	0	183.5	159	10396	7751
8:00	0	183.4	158.9	6531	4953
9:00	0	183.2	158.4	5804	3518
10:00	0	183.1	158.1	4404	3475
11:00	0	183	157.9	4297	3320
12:00	0	182.9	157.9	4088	3302
13:00	0	182.7	157.7	3975	3058
14:00	12832	182.6	157.7	3629	4756
15:00	21097	183	157.9	6443	7520
16:00	26680	183.3	157.7	10038	8516
17:00	27030	183.8	159	11604	8575
18:00	26860	184.4	159	11811	8733
19:00	25160	185.1	159.1	12221	8839
20:00	12730	185.6	159.2	12495	8839
21:00	3400	185.9	159.3	12599	8838
22:00	3320	185.9	159.3	12564	8783
23:00	0	185.7	159.3	12401	8735
24:00:00	0	185.4	159.2	12271	8686
daily avg.	**6630**	**184**	**217**	**9490**	**7136**

Total Generation	**227763**
Projected discharge	7416
Thurmond discharge	**6630**

Stevens Creek Operations Data (Provided By DESC & USACE)

7/21/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	186.2	159.5	11870	8204
2:00	0	186	159.4	11910	8291
3:00	0	185.8	159.3	11771	8241
4:00	0	185.6	159.3	11609	8161
5:00	0	186.4	159.2	11506	8140
6:00	0	185.2	159.2	11291	8048
7:00	0	185	159.1	11405	8042
8:00	0	184.9	159.1	11540	8251
9:00	0	184.8	159.1	11327	8177
10:00	0	184.6	159.1	11241	8217
11:00	0	184.5	159.1	11260	8097
12:00	0	184.3	159.1	11309	8192
13:00	442	184.2	159.1	11212	8266
14:00	7785	184.1	159.1	11171	8244
15:00	22050	184.3	159.1	11407	8100
16:00	26640	185	159.1	11890	8206
17:00	26780	185.6	159.1	12445	8374
18:00	26860	186.3	159.3	12702	8623
19:00	25600	186.7	159.5	12644	8644
20:00	11880	187.1	159.7	12674	8606
21:00	2380	187.2	159.9	12504	8576
22:00	2860	187	159.8	12285	8426
23:00	2690	186.8	159.7	12285	8134
24:00:00	0	186.6	159.6	12312	8501
daily avg.	**6499**	**186**	**159**	**11815**	**8282**

Total Generation	**283570**
Projected discharge	7223
Thurmond discharge	**6499**

Stevens Creek Operations Data (Provided By DESC & USACE)

7/22/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	186.3	159.4	12104	8408
2:00	0	186	159.4	12018	8371
3:00	0	185.8	159.3	11941	8343
4:00	0	185.6	159.2	11781	8313
5:00	0	1853	159.2	11541	8209
6:00	0	185.1	159.2	11250	7995
7:00	0	184.9	159.1	11122	8001
8:00	0	184.6	159.1	10865	7818
9:00	0	184.4	159	10483	7597
10:00	0	184.2	159	10027	7275
11:00	0	184	158.9	9374	6811
12:00	147	183.6	159.1	10794	7953
13:00	3865	183.3	159	10835	8145
14:00	9484	183.3	159	11023	8151
15:00	26670	183.3	159.1	10808	8115
16:00	26670	183.8	159.1	1176	8252
17:00	26520	184.4	159.1	11565	8410
18:00	26420	185.1	159.2	12076	8544
19:00	15607	185.7	159.2	12368	8729
20:00	7547	186.1	159.3	12575	8816
21:00	5940	186.1	159.3	12638	8817
22:00	2930	186.1	159.3	12571	8778
23:00	2750	185.9	159.3	12508	8717
24:00:00	0	185.7	159.3	12508	8728
daily avg.	**6440**	**254**	**159**	**11081**	**8221**

Total Generation	**265951**
Projected discharge	6917
Thurmond discharge	**6440**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
7/12/2021 0:00	7090
7/12/2021 1:00	7470
7/12/2021 2:00	7790
7/12/2021 3:00	7820
7/12/2021 4:00	7860
7/12/2021 5:00	7990
7/12/2021 6:00	7930
7/12/2021 7:00	7430
7/12/2021 8:00	6980
7/12/2021 9:00	5900
7/12/2021 10:00	5530
7/12/2021 11:00	5260
7/12/2021 12:00	4990
7/12/2021 13:00	4780
7/12/2021 14:00	4620
7/12/2021 15:00	4490
7/12/2021 16:00	4380
7/12/2021 17:00	4310
7/12/2021 18:00	4310
7/12/2021 19:00	4520
7/12/2021 20:00	5060
7/12/2021 21:00	5570
7/12/2021 22:00	5800
7/12/2021 23:00	5920
7/13/2021 0:00	6080
7/13/2021 1:00	6270
7/13/2021 2:00	6380
7/13/2021 3:00	6680
7/13/2021 4:00	6770
7/13/2021 5:00	6810
7/13/2021 6:00	6890
7/13/2021 7:00	7220
7/13/2021 8:00	7610
7/13/2021 9:00	8920
7/13/2021 10:00	9250
7/13/2021 11:00	8850
7/13/2021 12:00	8220
7/13/2021 13:00	7390
7/13/2021 14:00	6930
7/13/2021 15:00	6540
7/13/2021 16:00	6200
7/13/2021 17:00	5990
7/13/2021 18:00	5830
7/13/2021 19:00	5680
7/13/2021 20:00	5580
7/13/2021 21:00	5830
7/13/2021 22:00	6070

Date-Time	Flow (cfs)
7/13/2021 23:00	6350
7/21/2021 0:00	10400
7/21/2021 1:00	11400
7/21/2021 2:00	12300
7/21/2021 3:00	12600
7/21/2021 4:00	12400
7/21/2021 5:00	11900
7/21/2021 6:00	11000
7/21/2021 7:00	10500
7/21/2021 8:00	10200
7/21/2021 9:00	10100
7/21/2021 10:00	10100
7/21/2021 11:00	9830
7/21/2021 12:00	9800
7/21/2021 13:00	9820
7/21/2021 14:00	9480
7/21/2021 15:00	9240
7/21/2021 16:00	9180
7/21/2021 17:00	9060
7/21/2021 18:00	8930
7/21/2021 19:00	8940
7/21/2021 20:00	8820
7/21/2021 21:00	8790
7/21/2021 22:00	8900
7/21/2021 23:00	10000
7/22/2021 0:00	10800
7/22/2021 1:00	11600
7/22/2021 2:00	12100
7/22/2021 3:00	12400
7/22/2021 4:00	12000
7/22/2021 5:00	11900
7/22/2021 6:00	11400
7/22/2021 7:00	10400
7/22/2021 8:00	9940
7/22/2021 9:00	9650
7/22/2021 10:00	9410
7/22/2021 11:00	9170
7/22/2021 12:00	9010
7/22/2021 13:00	8840
7/22/2021 14:00	8720
7/22/2021 15:00	8450
7/22/2021 16:00	8460
7/22/2021 17:00	8210
7/22/2021 18:00	8200
7/22/2021 19:00	8130
7/22/2021 20:00	8060
7/22/2021 21:00	8170
7/22/2021 22:00	8070
7/22/2021 23:00	8140

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
August 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (8/02/21)	15.04	—	31.15	0.0	—	8.0
Thurmond Tailrace (Site 7)* (8/02/21 - 8/03/21)		—			—	
Stevens Creek Res. (Site 6) (8/02/21 - 8/03/21)	18.65	—	19.67	4.4	—	5.6
Stevens Creek Res. (Site 1) (8/02/21 - 8/03/21)	18.87	—	19.74	4.8	—	5.7
Stevens Creek Res. (Site 2) (8/02/21 - 8/03/21)	19.57	—	20.67	4.9	—	5.7
Stevens Creek Tailrace (Site 3) (8/02/21 - 8/03/21)	19.86	—	20.84	5.9	—	6.8
Stevens Creek (Site 5) (8/02/21 - 8/03/21)	30.31	—	31.55	2.9	—	4.2
Stevens Creek (Site 4) (8/02/21 - 8/03/21)	21.17	—	29.06	4.9	—	7.4

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
August 2021 (cont'd.)

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (8/13/21)	15.25	—	30.24	0.0	—	8.6
Thurmond Tailrace (Site 7) (8/18/21 - 8/19/21)		—			—	
Stevens Creek Res. (Site 6) (8/18/21 - 8/19/21)	19.94	—	22.55	4.0	—	4.8
Stevens Creek Res. (Site 1) (8/18/21 - 8/19/21)	19.73	—	21.70	3.8	—	5.0
Stevens Creek Res. (Site 2) (8/18/21 - 8/19/21)	19.95	—	21.92	4.3	—	5.2
Stevens Creek Tailrace (Site 3) (8/18/21 - 8/19/21)	20.39	—	22.37	4.8	—	5.8
Stevens Creek (Site 5) (8/18/21 - 8/19/21)	25.71	—	27.81	3.8	—	5.2
Stevens Creek (Site 4) (8/18/21 - 8/19/21)	25.10	—	27.20	3.8	—	5.6

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 8/2/2021
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 18J102052

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	7:38	0	6.7	30.5	89	3.3	44
		1	6.7	30.5	89	3.2	43
		2	6.7	30.5	89	3.2	43
		3	6.7	30.5	89	3.2	43
3	8:29		6.4	19.9	46	6.0	66
4	9:40	0	6.5	26.5	60	5.0	63
		1	6.5	26.3	59	5.1	64
		2	6.6	26.2	59	5.1	63
		3	6.6	26.1	59	5.0	62
		4	6.5	25.9	58	4.9	61
		5	6.5	22.6	49	5.4	63
		6	6.4	21.4	46	5.5	62
		7	6.4	21.2	46	5.3	60
2	9:54	0	6.4	20.0	45	5.0	55
		1	6.4	20.0	45	5.0	55
		2	6.4	19.9	45	5.0	54
		3	6.3	19.9	45	5.0	54
1	10:14	0	6.3	19.7	46	4.8	52
		1	6.2	19.3	45	4.8	52
		2	6.3	19.1	45	4.8	52
		3	6.3	19.1	45	4.8	52
		4	6.3	19.1	45	4.8	51
1-A	10:28	0	6.3	19.7	45	4.5	49
		1	6.3	19.1	45	4.4	48
		2	6.3	19.0	45	4.4	47

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 8/2/2021
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 18J102052

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	14:30	0	6.8	31.6	90	4.2	57
		1	6.7	31.3	90	4.0	55
		2	6.7	31.2	90	3.9	53
		3	6.7	30.9	90	3.7	50
3	16:45		6.4	20.8	47	6.2	70
4	15:30	0	6.7	29.1	60	7.4	97
		1	6.6	27.0	57	6.5	82
		2	6.6	26.4	56	6.1	74
		3	6.4	23.5	51	5.2	61
		4	6.4	22.8	50	5.2	60
2	16:30	0	6.4	20.7	46	5.6	63
		1	6.4	20.7	46	5.6	62
		2	6.4	20.7	46	5.6	63
		3	6.4	20.7	46	5.6	63
1	16:13	0	6.3	19.1	44	5.7	61
		1	6.3	19.1	44	5.7	61
		2	6.3	19.1	44	5.6	61
		3	6.3	19.1	44	5.6	61
1-A	16:01	0	6.3	18.7	44	4.9	52
		1	6.3	18.7	44	4.8	52
		2	6.3	18.7	44	4.9	52
		3	6.2	18.7	44	4.8	52

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 8/3/2021
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: 18J102052

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:58	0	6.7	30.4	90	3.0	40
		1	6.7	30.4	90	2.9	39
		2	6.7	30.4	90	2.9	39
		3	6.7	30.4	90	2.9	38
3	9:49		6.3	19.9	45	5.9	65
4	9:21	0	6.5	25.9	58	5.1	63
		1	6.5	25.7	58	5.1	63
		2	6.5	25.7	58	5.0	62
		3	6.5	25.7	58	5.0	61
		4	6.4	21.6	47	5.4	61
		5	6.4	21.2	46	5.2	58
2	8:13	0	6.3	19.6	45	5.0	54
		1	6.3	19.6	45	5.0	54
		2	6.3	19.6	45	5.0	54
		3	6.3	19.6	45	4.9	54
		4	6.3	19.6	45	4.9	54
1	8:39	0	6.3	19.7	47	4.8	53
		1	6.2	19.0	45	4.8	51
		2	6.2	18.9	45	4.8	51
		3	6.2	18.9	44	4.8	51
		4	6.1	18.9	44	4.8	51
1-A	8:51	0	6.2	19.4	45	5.0	55
		1	6.1	19.0	45	4.8	52
		2	6.1	18.9	45	4.7	51

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 8/3/2021
Field Team: Nmatthews / Dhampton
Field Meter Model/Number: **18J102052**

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	16:33	0	6.7	30.3	91	3.1	41
		1	6.7	30.3	91	3.0	40
		2	6.7	30.3	91	3.0	40
		3	6.7	30.3	91	3.0	40
3	14:06		6.5	20.6	46	6.8	76
4	15:26	0	6.6	26.8	59	6.0	75
		1	6.6	25.9	57	5.8	72
		2	6.6	25.2	54	6.2	75
		3	6.6	24.8	53	6.3	76
		4	6.5	24.0	52	6.3	74
		5	6.5	23.6	51	6.2	73
		6	6.5	23.4	50	6.1	72
2	14:26	0	6.3	20.1	45	5.6	62
		1	6.3	20.1	45	5.6	62
		2	6.4	20.1	45	5.6	62
		3	6.4	20.2	45	5.7	63
1	15:03	0	6.3	19.4	44	5.7	61
		1	6.3	19.4	44	5.6	61
		2	6.3	19.4	44	5.6	61
		3	6.3	19.4	44	5.6	61
1-A	14:51	0	6.3	19.3	44	5.5	60
		1	6.3	19.3	44	5.6	61
		2	6.3	19.3	44	5.6	61
		3	6.3	19.3	44	5.6	61

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 8/18/2021
Field Team: JDL/DFS
Field Meter Model/Number: 18J102052

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:08	surface	6.7	25.9	74	4.0	50
		1	6.7	25.9	74	4.9	48
		2	6.7	25.8	73	3.9	47
		3	6.6	25.7	72	4.0	48
		4	6.6	25.8	73	3.8	47
3	9:10	surface	6.5	20.4	47	5.2	58
4	6:48	surface	6.5	25.1	44	5.6	68
		1	6.5	25.1	44	5.6	68
		2	6.5	25.1	44	5.6	68
		3	6.5	25.1	44	5.6	67
		4	6.5	25.1	44	5.6	67
2	7:19	surface	6.5	20.0	47	4.4	49
		1	6.4	20.0	47	4.3	48
		2	6.4	20.0	47	4.3	48
		3	6.3	20.0	47	4.3	48
		4	6.3	20.0	47	4.3	47
		5	6.2	20.0	47	4.3	47
1	8:01	surface	6.3	21.6	52	3.8	43
		1	6.3	21.0	50	3.9	44
		2	6.3	20.1	48	4.1	46
		3	6.3	19.8	47	4.3	46
		4	6.3	19.7	47	4.3	47
1A	7:48	surface	6.5	21.6	54	4.8	55
		1	6.4	20.4	49	4.5	50
		2	6.3	19.9	48	4.3	48
		3	6.4	20.0	48	4.3	48

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 8/18/2021
Field Team: JDL/DFS
Field Meter Model/Number: 18J102052

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	14:14	surface	6.7	26.8	68	4.3	54
		1	6.6	26.5	68	4.2	52
		2	6.6	26.4	68	4.1	51
		3	6.6	26.3	68	4.1	50
		4	6.6	26.3	68	4.0	50
3	13:01	surface	6.5	21.1	47	5.8	65
4	13:41	surface	6.6	26.0	51	5.4	66
		1	6.6	26.0	51	5.4	66
		2	6.6	25.9	51	5.3	66
		3	6.6	25.9	51	5.3	66
		4	6.6	25.9	51	5.3	66
2	15:12	surface	6.4	21.9	49	4.9	55
		1	6.4	21.9	49	4.9	56
		2	6.4	21.8	49	5.0	57
		3	6.4	21.8	49	4.9	56
		4	6.4	21.8	49	4.9	56
		5	6.4	21.8	49	4.9	56
1	14:56	surface	6.4	20.3	46	5.0	55
		1	6.3	20.3	46	5.0	55
		2	6.3	20.4	46	5.0	55
		3	6.3	20.4	46	5.0	55
		4	6.3	20.5	46	5.0	55
		5	6.3	20.4	46	4.9	55
		6	6.3	20.5	46	4.9	55
1A	14:45	surface	6.3	20.1	45	4.6	51
		1	6.3	20.1	45	4.6	51
		2	6.3	20.1	45	4.6	51
		3	6.3	20.1	45	4.6	50
		4	6.3	20.1	45	4.6	50

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 8/19/2021
Field Team: JDL/DFS
Field Meter Model/Number: 18J102052

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:30	Surface	6.6	26.0	66	5.2	64
		1	6.6	26.0	66	5.2	63
		2	6.6	26.0	66	5.1	63
		3	6.6	26.0	66	5.1	64
		4	6.6	26.0	66	5.1	64
3	5:53	Surface	6.4	20.5	47	4.8	53
4	7:13	Surface	6.5	26.4	53	4.4	54
		1	6.5	26.4	53	4.4	54
		2	6.5	26.3	53	4.4	54
		3	6.5	26.3	53	4.4	54
		4	6.5	26.3	53	4.4	54
		5	6.5	26.3	53	4.4	54
2	7:25	Surface	6.4	20.6	47	4.6	51
		1	6.3	20.5	47	4.5	50
		2	6.3	20.5	47	4.5	50
		3	6.3	20.5	47	4.5	50
		4	6.3	20.5	47	4.4	49
		5	6.3	20.5	47	4.4	49
1	7:58	Surface	6.3	21.7	51	4.3	48
		1	6.3	21.3	49	4.3	49
		2	6.3	21.1	49	4.3	49
		3	6.3	20.8	49	4.4	49
1A	7:49	Surface	6.5	22.6	58	4.8	55
		1	6.4	20.4	48	4.3	48
		2	6.3	20.3	47	4.3	48
		3	6.3	20.3	47	4.3	47

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 8/19/2021
Field Team: JDL/DFS
Field Meter Model/Number: 18J102052

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	14:26	Surface	6.8	27.8	87	5.2	66
		1	6.8	26.8	89	5.2	65
		2	6.8	26.8	89	5.2	65
		3	6.8	26.7	89	5.2	64
		4	6.8	26.7	89	5.1	64
3	15:03	Surface	6.5	22.4	49	5.8	67
4	13:51	Surface	6.5	27.2	55	4.1	52
		1	6.5	26.7	55	4.0	50
		2	6.5	26.6	54	3.9	49
		3	6.5	26.6	54	3.9	49
		4	6.5	26.6	54	3.8	48
		5	6.5	26.6	54	3.8	47
2	13:40	Surface	6.5	21.8	47	5.2	59
		1	6.4	21.8	47	5.2	59
		2	6.4	21.8	47	5.2	59
		3	6.4	21.8	47	5.2	59
		4	6.4	21.8	47	5.2	59
		5	6.4	21.8	47	5.2	60
1	13:20	Surface	6.4	21.4	48	4.5	51
		1	6.4	21.4	48	4.5	51
		2	6.4	21.3	48	4.4	50
		3	6.4	21.3	48	4.4	50
		4	6.4	21.3	48	4.4	50
		5	6.4	21.3	48	4.4	49
1A	13:11	Surface	6.3	20.4	46	4.1	45
		1	6.3	20.4	46	4.0	45
		2	6.3	20.4	46	4.0	45
		3	6.3	20.4	46	4.0	45
		4	6.3	20.4	46	4.0	44

JST Forebay Water Quality Data (Provided By USACE-ERDC)

August 13, 2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	°C	mg/l	µS/cm	meters
43724	30.24	8.07	48	0.2
43759	30.05	8.49	48.2	2
43830	29.19	8.61	47.8	4
43914	27.59	6.12	46.8	6
44017	25.29	2.82	45.7	8
44124	23.41	1.41	44.6	9
44152	22.61	1.33	44.2	10
44217	22.08	1.43	43.4	11
44322	21.44	1.93	42.9	12
44522	21.3	2.04	42.8	13
44713	20.81	2.13	42.5	14
44752	20.55	2.33	42.6	15
44840	20.44	2.87	42.4	16
44918	20.07	2.99	42.5	17
44937	19.95	3	42.3	18
45009	19.72	2.84	42.4	19
45101	19.55	2.87	42.3	20
45140	19.33	2.68	42.4	21
45220	19.15	2.23	42.7	22
45259	18.93	1.34	43.6	23
45327	18.64	0.68	44.1	24
45354	18.51	0.41	45.3	25
45434	18.32	0.13	46.2	26
45500	18.16	0.11	46	27
45531	17.86	0	47.9	28
45603	17.49	0	49.8	30
45629	17.3	0	51.3	32
45710	16.86	0	49.4	34
45744	16.56	0	47.7	36
45818	16.2	0	45.4	38
45852	15.82	0	45.5	40
45916	15.38	0	46.2	42
50009	15.26	0	47.1	44
50030	15.25	0	47.4	45
Max:	**30.24**	**8.61**	**51.3**	**45**
Min:	**15.25**	**0**	**42.3**	**0.2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
8/2/2021	0:00:00	22.73	45.6	3.28
8/2/2021	0:15:00	22.78	45.6	2.96
8/2/2021	0:30:00	22.77	45.9	3.01
8/2/2021	0:45:00	22.79	46.4	2.68
8/2/2021	1:00:00	22.81	46.5	2.46
8/2/2021	1:15:00	22.85	46.3	2.39
8/2/2021	1:30:00	22.94	46.6	2.5
8/2/2021	1:45:00	23.06	46.4	2.73
8/2/2021	2:00:00	23.09	46.5	2.63
8/2/2021	2:15:00	23.09	46.8	2.6
8/2/2021	2:30:00	23.06	46.7	2.53
8/2/2021	2:45:00	23.03	46.1	2.88
8/2/2021	3:00:00	22.98	45.8	2.87
8/2/2021	3:15:00	22.95	45.8	3.07
8/2/2021	3:30:00	22.96	45.8	2.99
8/2/2021	3:45:00	22.93	45.4	3.01
8/2/2021	4:00:00	22.81	45.4	2.61
8/2/2021	4:15:00	22.61	45.5	2.83
8/2/2021	4:30:00	22.46	45.4	2.69
8/2/2021	4:45:00	22.31	45.3	2.71
8/2/2021	5:00:00	22.24	45.2	2.68
8/2/2021	5:15:00	22.2	45.1	2.77
8/2/2021	5:30:00	22.16	45.2	2.63
8/2/2021	5:45:00	22.14	45.2	2.7
8/2/2021	6:00:00	22.11	45.1	2.46
8/2/2021	6:15:00	22.06	45.1	2.33
8/2/2021	6:30:00	22.04	45.1	2.33
8/2/2021	6:45:00	22.04	45.2	2.27
8/2/2021	7:00:00	22.02	45.2	2.3
8/2/2021	7:15:00	22	45.3	2.25
8/2/2021	7:30:00	21.98	45.2	2.22
8/2/2021	7:45:00	22	45.3	2.14
8/2/2021	8:00:00	21.99	45.3	2.23
8/2/2021	8:15:00	22.06	45.2	2.07
8/2/2021	8:30:00	22.13	45.2	1.93
8/2/2021	8:45:00	22.19	45.1	1.81
8/2/2021	9:00:00	22.23	45.2	1.87
8/2/2021	9:15:00	22.31	46.4	1.78
8/2/2021	9:30:00	22.4	46.4	1.77
8/2/2021	9:45:00	22.51	47.4	1.66
8/2/2021	10:00:00	22.63	46.8	1.7

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
8/2/2021	10:15:00	22.74	46.8	1.69
8/2/2021	10:30:00	22.88	47.1	1.74
8/2/2021	10:45:00	22.99	46.5	1.79
8/2/2021	11:00:00	23.13	46.8	1.83
8/2/2021	11:15:00	23.24	47.3	1.86
8/2/2021	11:30:00	23.36	47.5	1.81
8/2/2021	11:45:00	23.48	47	1.81
8/2/2021	12:00:00	23.65	47.2	1.84
8/2/2021	12:15:00	23.77	48.3	2.15
8/2/2021	12:30:00	23.9	47.8	2.59
8/2/2021	12:45:00	23.79	45.6	3.09
8/2/2021	13:00:00	23.64	45.5	4.43
8/2/2021	13:15:00	23.56	45.2	4.48
8/2/2021	13:30:00	23.29	45	4.63
8/2/2021	13:45:00	22.04	44.9	4.42
8/2/2021	14:00:00	21.37	44.8	4.36
8/2/2021	14:15:00	21.18	44.6	4.17
8/2/2021	14:30:00	21.05	44.5	4.15
8/2/2021	14:45:00	21.01	44.6	4.05
8/2/2021	15:00:00	20.97	44.4	4.14
8/2/2021	15:15:00	20.87	44.2	4.03
8/2/2021	15:30:00	20.81	44.4	3.99
8/2/2021	15:45:00	20.8	44.4	3.96
8/2/2021	16:00:00	20.71	44.5	3.95
8/2/2021	16:15:00	20.7	44.4	3.93
8/2/2021	16:30:00	20.83	44.7	4
8/2/2021	16:45:00	20.95	44.6	3.98
8/2/2021	17:00:00	21.04	44.8	3.98
8/2/2021	17:15:00	21.39	44.7	3.96
8/2/2021	17:30:00	21.53	44.8	4.49
8/2/2021	17:45:00	21.6	45	4.68
8/2/2021	18:00:00	21.56	44.8	4.67
8/2/2021	18:15:00	21.48	44.9	4.68
8/2/2021	18:30:00	21.45	44.7	4.88
8/2/2021	18:45:00	21.47	44.7	5.14
8/2/2021	19:00:00	21.58	44.7	5.19
8/2/2021	19:15:00	21.76	45.1	5.25
8/2/2021	19:30:00	21.92	45.2	5.08
8/2/2021	19:45:00	22.09	44.9	4.67
8/2/2021	20:00:00	22.22	44.6	4.65
8/2/2021	20:15:00	22.39	45.1	4.29
8/2/2021	20:30:00	22.5	45.3	4.32
8/2/2021	20:45:00	22.47	45.2	4.42
8/2/2021	21:00:00	22.42	44.9	4.49

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
8/2/2021	21:15:00	22.46	44.8	4.44
8/2/2021	21:30:00	22.49	44.8	4.51
8/2/2021	21:45:00	22.63	45.3	4.42
8/2/2021	22:00:00	22.72	46	4.35
8/2/2021	22:15:00	22.82	45.5	4.09
8/2/2021	22:30:00	22.88	45.7	4.01
8/2/2021	22:45:00	22.9	45.7	3.84
8/2/2021	23:00:00	22.96	45.5	3.77
8/2/2021	23:15:00	22.96	45	3.81
8/2/2021	23:30:00	22.9	45	3.89
8/2/2021	23:45:00	22.84	45.5	4.07
8/3/2021	0:00:00	22.76	45.1	4.15
8/3/2021	0:15:00	22.7	45.2	3.84
8/3/2021	0:30:00	22.71	45	3.54
8/3/2021	0:45:00	22.74	45.1	3.31
8/3/2021	1:00:00	22.58	45.4	3.09
8/3/2021	1:15:00	22.3	45.3	2.93
8/3/2021	1:30:00	22.18	45.4	2.81
8/3/2021	1:45:00	22.07	45.2	2.66
8/3/2021	2:00:00	22.02	45.2	2.66
8/3/2021	2:15:00	21.99	45.4	2.59
8/3/2021	2:30:00	21.99	45.3	2.54
8/3/2021	2:45:00	21.98	45.4	2.47
8/3/2021	3:00:00	21.99	45.2	2.47
8/3/2021	3:15:00	21.99	45.6	2.46
8/3/2021	3:30:00	21.98	45.4	2.47
8/3/2021	3:45:00	21.97	45.3	2.45
8/3/2021	4:00:00	21.99	45.4	2.42
8/3/2021	4:15:00	22	45.4	2.41
8/3/2021	4:30:00	22.04	45.4	2.44
8/3/2021	4:45:00	22.03	45.4	2.34
8/3/2021	5:00:00	22.05	45.3	2.29
8/3/2021	5:15:00	22.1	45.2	2.63
8/3/2021	5:30:00	22.12	44.9	2.59
8/3/2021	5:45:00	22.14	45	2.53
8/3/2021	6:00:00	22.12	44.9	2.38
8/3/2021	6:15:00	22.13	45.2	2.32
8/3/2021	6:30:00	22.15	45.1	2.36
8/3/2021	6:45:00	22.17	45.1	2.27
8/3/2021	7:00:00	22.2	45.1	2.22
8/3/2021	7:15:00	22.21	45.1	2.23
8/3/2021	7:30:00	22.24	45.1	2.21
8/3/2021	7:45:00	22.24	45	2.17
8/3/2021	8:00:00	22.27	45	2.16

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
8/3/2021	8:15:00	22.3	44.9	2.13
8/3/2021	8:30:00	22.32	45	2.09
8/3/2021	8:45:00	22.34	45.1	2.12
8/3/2021	9:00:00	22.37	45.1	2.14
8/3/2021	9:15:00	22.4	45	2.11
8/3/2021	9:30:00	22.47	45.2	2.07
8/3/2021	9:45:00	22.52	45	2.09
8/3/2021	10:00:00	22.56	45.2	2.12
8/3/2021	10:15:00	22.62	45.1	2.12
8/3/2021	10:30:00	22.67	45.2	2.04
8/3/2021	10:45:00	22.67	45.2	2.02
8/3/2021	11:00:00	22.7	45.1	1.98
8/3/2021	11:15:00	22.8	45.4	1.7
8/3/2021	11:30:00	22.87	45.5	1.71
8/3/2021	11:45:00	22.96	45.5	1.76
8/3/2021	12:00:00	23.03	45.4	1.79
8/3/2021	12:15:00	23.12	45.5	1.75
8/3/2021	12:30:00	22.75	45.6	2.03
8/3/2021	12:45:00	22.55	45.3	2.79
8/3/2021	13:00:00	22.4	45.5	3.22
8/3/2021	13:15:00	22.22	45.6	3.4
8/3/2021	13:30:00	21.87	45.7	2.87
8/3/2021	13:45:00	21.44	45.4	2.96
8/3/2021	14:00:00	20.98	45.5	2.84
8/3/2021	14:15:00	20.9	45.3	2.78
8/3/2021	14:30:00	20.84	45.2	2.78
8/3/2021	14:45:00	20.79	45.4	2.86
8/3/2021	15:00:00	20.8	45.4	2.82
8/3/2021	15:15:00	20.77	45.3	2.82
8/3/2021	15:30:00	20.74	45.5	2.84
8/3/2021	15:45:00	20.66	45.3	2.82
8/3/2021	16:00:00	20.63	45.3	2.87
8/3/2021	16:15:00	20.66	45.1	2.91
8/3/2021	16:30:00	20.63	45.4	2.99
8/3/2021	16:45:00	20.53	45.3	2.96
8/3/2021	17:00:00	20.5	45.4	2.98
8/3/2021	17:15:00	20.57	45.1	2.98
8/3/2021	17:30:00	20.65	45	2.99
8/3/2021	17:45:00	20.79	45	3.03
8/3/2021	18:00:00	20.75	45.2	3.05
8/3/2021	18:15:00	20.68	45.2	3.05
8/3/2021	18:30:00	20.72	45.2	2.77
8/3/2021	18:45:00	20.8	44.8	2.43
8/3/2021	19:00:00	20.82	44.8	2.37

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
8/3/2021	19:15:00	20.8	44.9	2.39
8/3/2021	19:30:00	21.22	45.5	2.35
8/3/2021	19:45:00	21.4	45.2	2.31
8/3/2021	20:00:00	21.43	45.3	2.27
8/3/2021	20:15:00	21.46	45.1	2.25
8/3/2021	20:30:00	21.49	45.1	2.6
8/3/2021	20:45:00	21.59	45.1	3.14
8/3/2021	21:00:00	21.59	45.1	3.29
8/3/2021	21:15:00	21.61	45	3.34
8/3/2021	21:30:00	21.64	45.2	3.21
8/3/2021	21:45:00	21.79	45.4	3.23
8/3/2021	22:00:00	21.87	46.1	3.05
8/3/2021	22:15:00	21.96	45.6	2.87
8/3/2021	22:30:00	22.14	45.2	2.98
8/3/2021	22:45:00	22.36	45.8	3.1
8/3/2021	23:00:00	22.52	45.6	3.03
8/3/2021	23:15:00	22.61	45.7	3.16
8/3/2021	23:30:00	22.5	45.3	3.18
8/3/2021	23:45:00	22.15	45.7	3.17
	Max	23.9	48.3	5.25
	Min	20.5	44.2	1.66

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

DATA FOR 8/18/2021 – 8/19/2021 NOT AVAILABLE DUE TO EQUIPMENT MALFUNCTION

Stevens Creek Operations Data (Provided By DESC & USACE)

8/2/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	2631	185.2	158.7	9126	6389
2:00	61	185.1	158.7	9294	9519
3:00	61	184.8	158.9	10242	7309
4:00	61	184.6	158.8	9381	6711
5:00	61	184.4	158.7	9858	6604
6:00	61	184.2	158.7	8801	6360
7:00	61	184	158.7	9131	6511
8:00	61	183.7	158.7	8831	6483
9:00	70	183.5	158.7	8538	6348
10:00	70	183.3	158.6	8300	6157
11:00	70	183	158.7	8494	6387
12:00	365	182.7	158.8	8219	6255
13:00	3993	182.4	158.7	7939	6123
14:00	16414	182.3	158.7	7959	6166
15:00	26651	182.7	158.7	8145	6246
16:00	26581	183.1	159.1	10022	7521
17:00	26751	183.3	159.1	10436	7702
18:00	25641	183.5	159.1	10849	7835
19:00	8205	184.5	159.1	11228	8015
20:00	6522	185.1	159.1	11457	8080
21:00	5961	185.5	159.1	11559	8087
22:00	2641	185.6	159.1	11475	8067
23:00	61	185.6	159.1	11343	8000
24:00:00	61	185.4	158.8	9232	6450
daily avg.	**6380**	**184**	**159**	**9577**	**7055**

Total Generation	**229859**
Projected discharge	6948
Thurmond discharge	**6380**

Stevens Creek Operations Data (Provided By DESC & USACE)

8/3/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	185	158.7	9055	6343
2:00	61	184.9	158.7	2902	6346
3:00	61	184.7	158.5	7435	5271
4:00	61	184.6	158.5	7289	5213
5:00	61	184.4	158.4	7254	5302
6:00	61	184.2	158.4	7024	5150
7:00	62	184	158.7	9148	6706
8:00	70	183.7	158.7	9018	6579
9:00	70	183.5	158.7	8825	6509
10:00	70	183.2	158.7	8626	6473
11:00	70	182.9	158.7	8130	6131
12:00	70	182.7	158.7	7946	6077
13:00	946	182.4	158.7	7979	6101
14:00	16637	182.1	158.7	7766	6042
15:00	24252	182.4	158.7	8094	6222
16:00	24322	183.1	158.7	8451	6359
17:00	24617	183.7	159	10565	7811
18:00	26582	184.3	159.1	10977	7942
19:00	14552	184.9	159.1	11438	8149
20:00	6816	185.4	159.2	11745	8301
21:00	6071	185.6	159.2	11881	8353
22:00	4171	185.6	159.2	11863	8339
23:00	61	185.5	159.2	11724	8293
24:00:00	61	185.2	159.2	11723	8325
daily avg.	**6242**	**184**	**159**	**9036**	**6764**

Total Generation	**216858**
Projected discharge	6957
Thurmond discharge	**6242**

Stevens Creek Operations Data (Provided By DESC & USACE)

8/18/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	11722	186.7	159.5	10405	6944
2:00	209	186.7	159.5	10394	6997
3:00	62	186.5	159.5	10246	6902
4:00	62	186.3	159.3	10094	6889
5:00	62	186.1	159.3	9951	6762
6:00	62	185.9	159.1	9586	6599
7:00	62	185.7	159.1	9642	6644
8:00	62	185.5	159.1	9589	6656
9:00	62	185.4	158.9	8211	5682
10:00	62	185.3	158.9	8339	5733
11:00	62	185.1	159	9103	6369
12:00	208	185	159.8	8776	6176
13:00	4249	184.8	158.9	8538	6027
14:00	26262	184.9	158.9	8852	6255
15:00	27004	185.6	158.6	7929	5457
16:00	27004	186	159.3	11902	8325
17:00	27274	186.5	159.5	12243	8434
18:00	27184	186.9	159.6	12480	8490
19:00	27184	187.3	159.8	12500	8442
20:00	26502	187.6	159.9	12607	8434
21:00	4926	187.7	160.1	12570	8375
22:00	3642	187.6	160.2	12494	8380
23:00	3632	187.4	160.1	12418	8348
24:00:00	3702	187.2	159.9	12179	8265
daily avg.	**9219**	**186**	**159**	**10460**	**7149**

Total Generation	**251048**
Projected discharge	9725
Thurmond discharge	**9219**

Stevens Creek Operations Data (Provided By DESC & USACE)

8/19/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	3612	186.9	159.8	12033	8148
2:00	62	186.7	159.7	11923	8124
3:00	62	186.4	159.5	11693	8101
4:00	62	186.2	159.4	11595	8015
5:00	62	185.9	159.4	10989	7706
6:00	62	185.7	159.2	10990	7670
7:00	62	185.5	159.2	10835	7581
8:00	62	185.2	159.1	9569	6705
9:00	62	185.1	159	9318	6571
10:00	62	184.9	159	9305	6629
11:00	62	184.7	158.9	9222	6569
12:00	62	184.4	158.9	8013	5685
13:00	13342	184.3	158.9	8413	6084
14:00	21732	184.6	158.8	8533	6060
15:00	23657	184.9	159.1	11491	8171
16:00	27274	185.4	159.3	11777	8326
17:00	28084	186	159.3	12065	8429
18:00	27004	186.5	159.5	12303	8495
19:00	27184	186.9	159.6	12404	8472
20:00	26502	187.3	159.8	12563	9474
21:00	8976	187.5	160	12624	8523
22:00	2682	187.4	160	12567	8508
23:00	62	187.2	159.9	12437	8408
24:00:00	62	186.9	159.7	12155	8279
daily avg.	**8786**	**186**	**159**	**11034**	**7697**

Total Generation	**264817**
Projected discharge	9594
Thurmond discharge	**8786**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
8/2/2021 0:00	6680
8/2/2021 1:00	6880
8/2/2021 2:00	6780
8/2/2021 3:00	6800
8/2/2021 4:00	6790
8/2/2021 5:00	6870
8/2/2021 6:00	6350
8/2/2021 7:00	6170
8/2/2021 8:00	6050
8/2/2021 9:00	5980
8/2/2021 10:00	5810
8/2/2021 11:00	5690
8/2/2021 12:00	5610
8/2/2021 13:00	5560
8/2/2021 14:00	5530
8/2/2021 15:00	5520
8/2/2021 16:00	5510
8/2/2021 17:00	5490
8/2/2021 18:00	5450
8/2/2021 19:00	5730
8/2/2021 20:00	5850
8/2/2021 21:00	5940
8/2/2021 22:00	6010
8/2/2021 23:00	6100
8/3/2021 0:00	6420
8/3/2021 1:00	6540
8/3/2021 2:00	6750
8/3/2021 3:00	6900
8/3/2021 4:00	6870
8/3/2021 5:00	6640
8/3/2021 6:00	6300
8/3/2021 7:00	5770
8/3/2021 8:00	5530
8/3/2021 9:00	5370
8/3/2021 10:00	5540
8/3/2021 11:00	5530
8/3/2021 12:00	5530
8/3/2021 13:00	5520
8/3/2021 14:00	5520
8/3/2021 15:00	5510
8/3/2021 16:00	5510
8/3/2021 17:00	5560
8/3/2021 18:00	5770
8/3/2021 19:00	5840
8/3/2021 20:00	5830
8/3/2021 21:00	5890
8/3/2021 22:00	5970
8/3/2021 23:00	6050
8/18/2021 0:00	9230
8/18/2021 1:00	9380

Date-Time	Flow (cfs)
8/18/2021 2:00	9390
8/18/2021 3:00	9330
8/18/2021 4:00	9390
8/18/2021 5:00	9620
8/18/2021 6:00	10100
8/18/2021 7:00	10400
8/18/2021 8:00	10600
8/18/2021 9:00	10600
8/18/2021 10:00	10300
8/18/2021 11:00	9790
8/18/2021 12:00	9470
8/18/2021 13:00	9040
8/18/2021 14:00	8440
8/18/2021 15:00	8120
8/18/2021 16:00	7740
8/18/2021 17:00	7640
8/18/2021 18:00	7260
8/18/2021 19:00	7400
8/18/2021 20:00	7530
8/18/2021 21:00	8360
8/18/2021 22:00	9130
8/18/2021 23:00	10200
8/19/2021 0:00	11100
8/19/2021 1:00	12100
8/19/2021 2:00	12900
8/19/2021 3:00	12900
8/19/2021 4:00	13600
8/19/2021 5:00	13700
8/19/2021 6:00	14000
8/19/2021 7:00	13100
8/19/2021 8:00	12900
8/19/2021 9:00	12600
8/19/2021 10:00	11500
8/19/2021 11:00	10900
8/19/2021 12:00	10300
8/19/2021 13:00	10000
8/19/2021 14:00	9650
8/19/2021 15:00	9490
8/19/2021 16:00	9230
8/19/2021 17:00	9050
8/19/2021 18:00	8870
8/19/2021 19:00	8780
8/19/2021 20:00	8610
8/19/2021 21:00	8540
8/19/2021 22:00	8580
8/19/2021 23:00	8820

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
September 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (9/13/21)	15.97	—	26.79	0.0	—	7.8
Thurmond Tailrace (Site 7)* (9/08/21 - 9/09/21)		—			—	
Stevens Creek Res. (Site 6) (9/08/21 - 9/09/21)	21.06	—	21.57	4.0	—	4.8
Stevens Creek Res. (Site 1) (9/08/21 - 9/09/21)	21.00	—	21.54	4.1	—	4.5
Stevens Creek Res. (Site 2) (9/08/21 - 9/09/21)	21.24	—	22.04	4.0	—	4.7
Stevens Creek Tailrace (Site 3) (9/08/21 - 9/09/21)	21.27	—	22.20	5.6	—	6.2
Stevens Creek (Site 5) (9/08/21 - 9/09/21)	25.30	—	26.37	2.6	—	4.9
Stevens Creek (Site 4) (9/08/21 - 9/09/21)	22.16	—	24.74	4.3	—	5.2

USGS note: Thunderstorm and heavy downpour curtailed the sampling on 9/8/21 afternoon. Only site 5 & 3 were collected.

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
September 2021 (cont'd.)

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (09/--/21)	no data	—		no data	—	
Thurmond Tailrace (Site 7)* (9/21/21 - 9/22/21)		—			—	
Stevens Creek Res. (Site 6) (9/21/21 - 9/22/21)	21.78	—	23.20	4.3	—	5.4
Stevens Creek Res. (Site 1) (9/21/21 - 9/22/21)	21.69	—	23.09	3.9	—	4.8
Stevens Creek Res. (Site 2) (9/21/21 - 9/22/21)	21.65	—	22.71	4.3	—	4.8
Stevens Creek Tailrace (Site 3) (9/21/21 - 9/22/21)	21.72	—	23.05	4.8	—	5.8
Stevens Creek (Site 5) (9/21/21 - 9/22/21)	24.23	—	26.21	3.9	—	5.0
Stevens Creek (Site 4) (9/21/21 - 9/22/21)	23.61	—	26.13	3.4	—	6.4

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 9/8/2021
Field Team: Nmatthews / Kanderson
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	7:10	0	7.0	26.4	100	2.7	33
		1	6.9	26.4	100	2.6	33
		2	6.9	26.4	100	2.7	33
		3	6.9	26.4	100	2.7	33
		4	6.9	26.4	100	2.6	32
3	7:55		6.6	21.6	48	5.6	64
4	8:30	0	6.8	24.7	60	4.6	55
		1	6.7	24.7	60	4.6	55
		2	6.8	24.7	60	4.5	54
		3	6.7	24.7	60	4.5	54
		4	6.7	24.6	60	4.4	53
		5	6.7	24.6	59	4.3	52
2	8:51	0	6.6	21.5	48	4.6	52
		1	6.5	21.5	48	4.5	51
		2	6.5	21.5	48	4.5	51
		3	6.5	21.5	48	4.5	51
		4	6.5	21.5	48	4.5	51
1	9:12	0	6.5	21.2	47	4.5	51
		1	6.5	21.0	48	4.5	50
		2	6.5	21.1	48	4.5	50
		3	6.5	21.1	48	4.4	49
		4	6.5	21.0	48	4.4	49
1-A	9:37	0	6.5	21.6	48	4.8	55
		1	6.5	21.2	48	4.7	53
		2	6.5	21.2	48	4.7	53

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 9/8/2021
Field Team: Nmatthews / Kanderson
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	14:38	0	7.1	26.2	98	4.2	52
		1	7.1	26.0	94	4.4	54
		2	7.1	25.6	79	4.7	57
		3	7.0	25.4	73	4.9	59
		4	7.0	25.3	71	4.9	59
3	15:09		6.7	22.1	47	5.9	68

NOTES: Heavy downpours from a long line of thunderstorms and constant lightning. Tried to wait it out, but the line of storms was on us and around us with lightning. Did not want to get on boat with lightning in the area.

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 9/9/2021
Field Team: Nmatthews / Kanderson
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	7:20	0	6.9	25.4	86	3.5	43
		1	6.9	25.4	86	3.5	43
		2	6.9	25.4	86	3.5	42
		3	6.9	25.4	86	3.4	42
		4	6.9	25.4	86	3.4	42
3	8:02		6.5	21.3	49	5.9	66
4	9:30	0	6.8	24.5	59	4.7	56
		1	6.8	24.4	59	4.6	55
		2	6.7	24.3	59	4.6	55
		3	6.7	24.3	58	4.5	54
		4	6.8	24.3	58	4.5	54
		5	6.7	24.1	58	4.3	52
2	9:48	0	6.6	21.3	48	4.1	46
		1	6.6	21.3	48	4.0	45
		2	6.6	21.3	45	4.0	45
		3	6.5	21.2	48	4.0	45
		4	6.5	21.2	48	4.0	45
1	10:12	0	6.5	21.2	48	4.2	48
		1	6.5	21.2	49	4.1	47
		2	6.5	21.1	49	4.2	47
		3	6.4	21.0	49	4.2	47
		4	6.4	21.0	49	4.2	47
1-A	10:27	0	6.5	21.2	48	4.3	48
		1	6.5	21.1	48	4.2	47
		2	6.5	21.1	48	4.2	47

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 9/9/2021
Field Team: Nmatthews / Kanderson
Field Meter Model/Number: 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	14:21	0	6.9	26.2	88	3.9	48
		1	6.9	26.1	88	3.7	46
		2	6.9	25.9	89	3.7	46
		3	6.9	25.8	89	3.6	45
		4	6.9	25.6	90	3.5	43
3	15:05		6.7	22.2	49	6.2	71
4	16:54	0	6.7	23.1	51	5.2	61
		1	6.6	23.1	51	5.2	60
		2	6.6	22.4	49	4.9	56
		3	6.6	22.2	49	4.8	55
		4	6.6	22.2	49	4.8	55
2	16:40	0	6.6	22.0	49	4.7	54
		1	6.5	22.0	49	4.7	54
		2	6.5	22.0	49	4.7	53
		3	6.5	22.0	49	4.7	54
1	16:22	0	6.4	21.5	48	4.4	49
		1	6.4	21.5	48	4.4	49
		2	6.4	21.5	48	4.2	48
		3	6.5	21.5	48	4.2	47
		4	6.4	21.5	48	4.2	47
1-A	16:12	0	6.5	21.3	48	4.1	46
		1	6.5	21.3	48	4.0	45
		2	6.5	21.3	48	4.0	45
		3	6.5	21.3	48	4.0	45
		4	6.5	21.3	48	4.0	45

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 9/21/2021
Field Team: WTB/PMS
Field Meter Model/Number: 20J104516

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:19	surface	6.8	24.2	79	4.6	55
		1	6.8	24.2	79	4.5	54
		2	6.8	24.2	79	4.5	54
		3	6.8	24.2	79	4.5	54
		4	6.8	24.2	79	4.5	53
		5	6.8	24.2	79	4.4	53
3	8:58	surface	6.5	21.7	48	4.8	54
4	7:07	surface	6.5	23.8	52	4.0	48
		1	6.5	23.8	52	4.0	47
		2	6.5	23.7	52	4.0	47
		3	6.5	23.7	52	4.0	47
		4	6.5	23.7	52	3.9	46
		5	6.5	23.7	51	3.9	46
		6	6.5	23.6	51	3.8	45
2	7:24	surface	6.5	21.7	47	4.5	51
		1	6.5	21.7	47	4.4	50
		2	6.5	21.7	47	4.4	50
		3	6.5	21.6	47	4.4	49
		4	6.5	21.6	47	4.3	49
		5	6.5	21.6	47	4.3	49
1	7:47	surface	6.5	21.9	50	4.0	45
		1	6.5	21.7	49	4.1	46
		2	6.4	21.7	48	4.1	46
		3	6.4	21.7	48	4.1	46
		4	6.4	21.7	49	4.1	46
		5	6.4	21.7	49	4.0	46
		6	6.4	21.7	49	4.0	46
1A	7:56	surface	6.5	21.8	48	4.3	49
		1	6.5	21.8	48	4.3	49
		2	6.5	21.8	48	4.3	49
		3	6.5	21.8	48	4.3	49

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 9/21/2021
Field Team: WTB/PMS
Field Meter Model/Number: 20J104516

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	16:58	surface	6.8	25.0	86	4.6	55
		1	6.8	25.0	86	4.5	54
		2	6.8	25.0	86	4.5	54
		3	6.8	25.0	86	4.5	54
		4	6.8	25.0	86	4.4	54
		5	6.8	25.0	87	4.4	54
3	14:09	surface	6.5	22.5	48	5.2	60
4	14:54	surface	6.6	26.1	55	6.4	80
		1	6.6	25.1	58	4.4	53
		2	6.6	25.0	59	4.2	51
		3	6.6	24.8	60	4.0	48
		4	6.6	24.7	60	3.7	44
		5	6.6	24.7	62	3.4	41
2	15:15	surface	6.5	22.5	49	4.7	55
		1	6.5	22.4	49	4.6	54
		2	6.5	22.4	49	4.6	53
		3	6.5	22.4	49	4.5	52
		4	6.5	22.4	49	4.5	52
		5	6.5	22.4	49	4.5	52
1	15:34	surface	6.5	22.7	48	4.6	54
		1	6.5	22.6	48	4.6	53
		2	6.5	22.7	48	4.6	53
		3	6.5	22.7	48	4.5	53
		4	6.5	22.6	48	4.5	52
		5	6.5	22.7	48	4.5	52
1A	15:47	surface	6.4	22.0	46	4.6	53
		1	6.4	22.0	46	4.6	52
		2	6.4	22.0	46	4.5	52
		3	6.4	22.0	46	4.5	51
		4	6.4	22.0	46	4.5	51
		5	6.4	22.0	46	4.4	51

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 9/22/2021
Field Team: WTB/PMS
Field Meter Model/Number: 20J104516

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:06	Surface	6.8	24.7	84	4.1	49
		1	6.8	24.7	84	4.1	49
		2	6.8	24.7	84	4.0	49
		3	6.8	24.7	84	4.0	48
		4	6.8	24.7	84	4.0	48
		5	6.8	24.7	84	3.9	47
3	8:56	Surface	6.5	22.2	48	5.8	66
4	7:08	Surface	6.6	24.0	53	4.6	55
		1	6.6	24.0	53	4.6	54
		2	6.6	23.9	52	4.4	53
		3	6.6	23.8	52	4.4	52
		4	6.5	23.7	52	4.3	51
		5	6.5	23.7	52	4.4	52
2	7:21	Surface	6.5	22.0	48	4.6	52
		1	6.5	22.0	48	4.5	52
		2	6.5	21.9	48	4.5	51
		3	6.5	21.9	48	4.5	51
		4	6.5	21.9	48	4.5	51
1	7:41	Surface	6.5	23.0	53	3.9	45
		1	6.5	22.5	50	4.2	48
		2	6.5	21.9	48	4.5	52
		3	6.5	21.9	48	4.5	52
		4	6.5	21.9	48	4.5	52
		5	6.5	21.9	48	4.5	52
1A	7:55	Surface	6.6	23.2	51	5.4	64
		1	6.6	22.7	51	4.7	54
		2	6.5	22.4	50	4.6	52
		3	6.5	22.3	50	4.5	52

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 9/22/2021
Field Team: WTB/PMS
Field Meter Model/Number: 20J104516

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	15:44	Surface	6.9	26.2	87	5.0	62
		1	6.9	25.3	87	4.6	56
		2	6.8	25.0	87	4.4	53
		3	6.8	24.9	87	4.3	52
		4	6.8	24.9	87	4.4	53
		5	6.8	24.9	88	4.3	52
		6	6.8	24.9	87	4.2	50
3	16:25	Surface	6.5	23.1	49	5.2	61
4	15:00	Surface	6.6	25.3	58	4.5	55
		1	6.6	24.9	58	4.3	52
		2	6.6	24.8	58	4.2	50
		3	6.6	24.8	59	4.1	50
		4	6.6	24.7	59	4.0	48
		5	6.5	24.6	60	4.0	48
2	14:49	Surface	6.5	22.7	48	4.8	55
		1	6.5	22.7	48	4.7	55
		2	6.5	22.7	48	4.7	55
		3	6.5	22.7	48	4.7	55
		4	6.5	22.6	48	4.7	54
		5	6.5	22.6	48	4.7	54
1	14:33	Surface	6.5	23.1	50	4.8	55
		1	6.5	23.0	50	4.7	55
		2	6.5	23.0	50	4.7	54
		3	6.5	23.0	50	4.7	54
		4	6.5	23.0	50	4.6	54
		5	6.5	23.0	50	4.6	54
1A	14:21	Surface	6.5	22.3	47	4.4	50
		1	6.5	22.3	47	4.3	49
		2	6.4	22.3	47	4.3	50
		3	6.4	22.3	47	4.3	49
		4	6.4	22.3	47	4.3	49

JST Forebay Water Quality Data (Provided By USACE-ERDC)

September 13, 2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	℃	mg/l	µS/cm	meters
60459	26.69	7.76	47.5	0.2
60541	26.78	7.75	47.5	2
60607	26.79	7.68	47.5	4
60636	26.77	7.67	47.3	6
61119	26.6	5.59	47.2	8
61231	24.37	0.16	45	10
61304	23.52	0.08	44.1	11
61352	23.01	0.38	43.6	12
61445	22.6	1	42.9	13
61527	22.36	1.2	42.6	14
61553	22.12	1.24	42.6	15
61613	21.91	1.28	42.3	16
61652	21.75	1.53	42.3	17
61745	21.65	2.3	42	18
61830	21.48	1.98	42.2	19
61908	21.43	1.93	42.4	20
62004	21.28	2.8	42.1	21
62046	21.21	2.2	42.2	22
62115	21.1	2.22	42.2	23
62153	21.03	1.96	42.3	24
62239	20.88	1.28	42.9	25
62349	20.64	0.4	44.5	26
62418	20.52	0.28	44.4	27
62450	20.19	0	47.1	28
62522	19.91	0	49.6	29
62548	19.56	0	57.4	30
62609	19.11	0	56.3	32
62631	18.96	0	58	33
62648	18.57	0	55.3	34
62715	18.26	0	54.2	36
62742	17.82	0	53.7	38
62808	17.36	0	52.3	40
62840	16.68	0	54.2	42
62900	15.97	0	68.5	44
Max:	**26.79**	**7.76**	**68.5**	**44**
Min:	**15.97**	**0**	**42**	**0.2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
9/8/2021	0:00:00	21.29	45.1	3.58
9/8/2021	0:15:00	21.29	44.9	3.49
9/8/2021	0:30:00	21.3	45	3.64
9/8/2021	0:45:00	21.3	44.9	3.54
9/8/2021	1:00:00	21.31	45.2	3.24
9/8/2021	1:15:00	21.27	45.1	3.25
9/8/2021	1:30:00	21.27	44.8	3.21
9/8/2021	1:45:00	21.24	44.6	3.08
9/8/2021	2:00:00	21.25	44.8	3.1
9/8/2021	2:15:00	21.25	44.8	3.05
9/8/2021	2:30:00	21.24	44.8	3.08
9/8/2021	2:45:00	21.24	44.6	2.94
9/8/2021	3:00:00	21.21	44.9	2.86
9/8/2021	3:15:00	21.21	44.6	2.9
9/8/2021	3:30:00	21.2	44.7	2.83
9/8/2021	3:45:00	21.21	44.9	2.86
9/8/2021	4:00:00	21.21	44.7	2.82
9/8/2021	4:15:00	21.18	44.9	2.8
9/8/2021	4:30:00	21.18	44.7	2.74
9/8/2021	4:45:00	21.18	44.9	2.73
9/8/2021	5:00:00	21.18	44.5	2.72
9/8/2021	5:15:00	21.18	44.6	2.72
9/8/2021	5:30:00	21.18	45	2.71
9/8/2021	5:45:00	21.16	45	2.65
9/8/2021	6:00:00	21.15	45	2.63
9/8/2021	6:15:00	21.15	45	2.63
9/8/2021	6:30:00	21.16	45	2.63
9/8/2021	6:45:00	21.15	45	2.61
9/8/2021	7:00:00	21.16	45	2.62
9/8/2021	7:15:00	21.17	44.9	2.64
9/8/2021	7:30:00	21.2	44.7	2.56
9/8/2021	7:45:00	21.22	44.7	2.58
9/8/2021	8:00:00	21.23	44.7	2.56
9/8/2021	8:15:00	21.23	44.9	2.54
9/8/2021	8:30:00	21.25	44.9	2.53
9/8/2021	8:45:00	21.23	45.3	2.54
9/8/2021	9:00:00	21.24	44.6	2.55
9/9/2021	14:45:00	21.33	47.6	4.19
9/9/2021	15:00:00	21.38	47	4.18
9/9/2021	15:15:00	21.38	47.1	4.17
9/9/2021	15:30:00	21.42	47.1	4.13

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
9/9/2021	15:45:00	21.35	47.1	4.16
9/9/2021	16:00:00	21.37	47.2	4.08
9/9/2021	16:15:00	21.38	47.4	4.03
9/9/2021	16:30:00	21.4	47.2	4.02
9/9/2021	16:45:00	21.35	47.2	4.03
9/9/2021	17:00:00	21.33	47.1	4.02
9/9/2021	17:15:00	21.33	47.1	4.03
9/9/2021	17:30:00	21.36	47.1	4.02
9/9/2021	17:45:00	21.36	47.2	4
9/9/2021	18:00:00	21.35	47.4	3.95
9/9/2021	18:15:00	21.31	47.2	4.47
9/9/2021	18:30:00	21.34	46.8	4.03
9/9/2021	18:45:00	21.35	46.3	3.98
9/9/2021	19:00:00	21.34	46.6	3.98
9/9/2021	19:15:00	21.34	46.6	3.13
9/9/2021	19:30:00	21.35	45.9	3.26
9/9/2021	19:45:00	21.36	46.2	3.21
9/9/2021	20:00:00	21.35	46.3	3.18
9/9/2021	20:15:00	21.38	46.2	4.28
9/9/2021	20:30:00	21.45	46.2	4.74
9/9/2021	20:45:00	21.47	46.1	4.56
9/9/2021	21:00:00	21.47	46	4.52
9/9/2021	21:15:00	21.48	46	4.43
9/9/2021	21:30:00	21.48	46	4.38
9/9/2021	21:45:00	21.48	46.1	4.3
9/9/2021	22:00:00	21.43	46.5	4.27
9/9/2021	22:15:00	21.44	46.6	4.13
9/9/2021	22:30:00	21.45	46.5	4.13
9/9/2021	22:45:00	21.45	46.5	4.09
9/9/2021	23:00:00	21.44	46.2	3.9
9/9/2021	23:15:00	21.42	45.6	3.49
9/9/2021	23:30:00	21.42	45.4	3.42
9/9/2021	23:45:00	21.39	44.9	3.22
	Max	21.48	47.6	4.74
	Min	21.15	44.5	2.53

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
9/21/2021	0:00:00	21.82	46	3.72
9/21/2021	0:15:00	21.84	45.7	3.68
9/21/2021	0:30:00	21.84	45.8	3.64
9/21/2021	0:45:00	21.83	45.7	3.69
9/21/2021	1:00:00	21.82	46	3.62
9/21/2021	1:15:00	21.83	45.5	3.5
9/21/2021	1:30:00	21.83	45.5	3.41
9/21/2021	1:45:00	21.82	45.3	3.31
9/21/2021	2:00:00	21.8	45.3	3.27
9/21/2021	2:15:00	21.81	45.4	3.29
9/21/2021	2:30:00	21.82	45.3	3.17
9/21/2021	2:45:00	21.82	45.3	3.19
9/21/2021	3:00:00	21.82	45	3.12
9/21/2021	3:15:00	21.84	44.9	3.07
9/21/2021	3:30:00	21.84	44.9	3.02
9/21/2021	3:45:00	21.84	45.1	3.01
9/21/2021	4:00:00	21.83	44.9	2.99
9/21/2021	4:15:00	21.82	44.9	3.03
9/21/2021	4:30:00	21.83	45	3.01
9/21/2021	4:45:00	21.84	44.8	3
9/21/2021	5:00:00	21.85	44.8	2.96
9/21/2021	5:15:00	21.85	44.8	2.91
9/21/2021	5:30:00	21.86	44.6	2.88
9/21/2021	5:45:00	21.86	44.8	2.83
9/21/2021	6:00:00	21.86	44.6	2.84
9/21/2021	6:15:00	21.86	44.5	2.81
9/21/2021	6:30:00	21.86	44.4	2.79
9/21/2021	6:45:00	21.86	44.5	2.78
9/21/2021	7:00:00	21.87	44.6	2.78
9/21/2021	7:15:00	21.86	44.6	2.74
9/21/2021	7:30:00	21.87	44.8	2.76
9/21/2021	7:45:00	21.88	44.5	2.72
9/21/2021	8:00:00	21.9	44.6	2.69
9/21/2021	8:15:00	21.92	44.5	2.71
9/21/2021	8:30:00	21.91	44.6	2.69
9/21/2021	8:45:00	21.92	44.5	2.68
9/21/2021	9:00:00	21.91	44.8	2.64
9/21/2021	9:15:00	21.94	44.4	2.66
9/21/2021	9:30:00	21.94	44.5	2.64
9/21/2021	9:45:00	21.95	44.5	2.63
9/21/2021	10:00:00	21.95	44.6	2.62
9/21/2021	10:15:00	21.96	44.7	2.64

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
9/21/2021	10:30:00	21.97	44.5	2.63
9/21/2021	10:45:00	21.97	44.8	2.63
9/21/2021	11:00:00	21.97	44.9	2.61
9/21/2021	11:15:00	21.98	44.7	2.64
9/21/2021	11:30:00	21.99	44.5	2.66
9/21/2021	11:45:00	22.01	44.7	2.63
9/21/2021	12:00:00	22.03	44.8	2.66
9/21/2021	12:15:00	22.06	45.2	3.15
9/21/2021	12:30:00	21.87	46.6	4.48
9/21/2021	12:45:00	21.83	46.8	4.61
9/21/2021	13:00:00	21.82	47.2	4.66
9/21/2021	13:15:00	21.77	47.6	4.69
9/21/2021	13:30:00	21.77	47.8	4.47
9/21/2021	13:45:00	21.77	47.7	4.4
9/21/2021	14:00:00	21.8	47.8	4.39
9/21/2021	14:15:00	21.9	47.4	4.88
9/21/2021	14:30:00	21.9	47.5	4.63
9/21/2021	14:45:00	21.89	47.4	4.54
9/21/2021	15:00:00	21.89	47.2	4.57
9/21/2021	15:15:00	21.91	47.2	4.56
9/21/2021	15:30:00	21.91	47.2	4.58
9/21/2021	15:45:00	21.89	47.5	4.6
9/21/2021	16:00:00	21.91	47.4	4.59
9/21/2021	16:15:00	21.91	47.2	4.6
9/21/2021	16:30:00	21.95	47.4	4.64
9/21/2021	16:45:00	21.97	47.1	4.61
9/21/2021	17:00:00	21.96	47.1	4.59
9/21/2021	17:15:00	21.94	47.1	4.42
9/21/2021	17:30:00	21.92	47.6	4.32
9/21/2021	17:45:00	21.9	47.5	4.32
9/21/2021	18:00:00	21.92	47.6	4.28
9/21/2021	18:15:00	21.87	47.7	3.98
9/21/2021	18:30:00	21.87	48.1	3.87
9/21/2021	18:45:00	21.87	47.7	3.7
9/21/2021	19:00:00	21.89	47.7	3.65
9/21/2021	19:15:00	21.91	47.6	4.02
9/21/2021	19:30:00	21.82	47.9	3.92
9/21/2021	19:45:00	21.84	47.9	3.88
9/21/2021	20:00:00	21.86	47.7	3.92
9/21/2021	20:15:00	21.87	47.7	4.09
9/21/2021	20:30:00	21.87	47	4.65
9/21/2021	20:45:00	21.87	47.2	4.7
9/21/2021	21:00:00	21.88	47.1	4.72
9/21/2021	21:15:00	21.88	47.1	4.89

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
9/21/2021	21:30:00	21.9	47.1	4.86
9/21/2021	21:45:00	21.91	47.2	4.91
9/21/2021	22:00:00	21.9	46.8	5.19
9/21/2021	22:15:00	21.9	46.8	5.17
9/21/2021	22:30:00	21.91	47.1	4.7
9/21/2021	22:45:00	21.92	47.2	4.24
9/21/2021	23:00:00	21.92	47.2	4.57
9/21/2021	23:15:00	21.91	47.1	4.57
9/21/2021	23:30:00	21.93	47	4.46
9/21/2021	23:45:00	21.94	46.5	4.13
9/22/2021	0:00:00	21.91	46.5	3.94
9/22/2021	0:15:00	21.91	46.3	3.95
9/22/2021	0:30:00	21.92	46.1	3.77
9/22/2021	0:45:00	21.91	45.8	3.65
9/22/2021	1:00:00	21.9	45.7	3.56
9/22/2021	1:15:00	21.92	45.7	3.36
9/22/2021	1:30:00	21.91	45.3	3.28
9/22/2021	1:45:00	21.88	45.3	3.21
9/22/2021	2:00:00	21.88	45.4	3.18
9/22/2021	2:15:00	21.88	45.7	3.31
9/22/2021	2:30:00	21.89	45.7	3.38
9/22/2021	2:45:00	21.89	45.9	3.34
9/22/2021	3:00:00	21.89	45.7	3.31
9/22/2021	3:15:00	21.88	45.4	3.06
9/22/2021	3:30:00	21.86	45.5	2.98
9/22/2021	3:45:00	21.86	45.3	2.96
9/22/2021	4:00:00	21.86	45.4	2.98
9/22/2021	4:15:00	21.87	45.3	2.87
9/22/2021	4:30:00	21.88	45.7	3.13
9/22/2021	4:45:00	21.87	45.5	3.09
9/22/2021	5:00:00	21.87	45.5	3.06
9/22/2021	5:15:00	21.86	45.3	2.94
9/22/2021	5:30:00	21.85	45.1	2.79
9/22/2021	5:45:00	21.85	45.3	2.79
9/22/2021	6:00:00	21.86	45.3	2.74
9/22/2021	6:15:00	21.86	45	2.72
9/22/2021	6:30:00	21.85	45.1	2.71
9/22/2021	6:45:00	21.86	44.9	2.7
9/22/2021	7:00:00	21.87	45	2.79
9/22/2021	7:15:00	21.88	45.2	2.89
9/22/2021	7:30:00	21.88	45.2	2.83
9/22/2021	7:45:00	21.88	45	2.77
9/22/2021	8:00:00	21.88	45.2	2.83
9/22/2021	8:15:00	21.89	45.2	2.79

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
9/22/2021	8:30:00	21.92	45.2	2.74
9/22/2021	8:45:00	21.91	44.9	2.73
9/22/2021	9:00:00	21.91	44.9	2.69
9/22/2021	9:15:00	21.92	44.8	2.71
9/22/2021	9:30:00	21.93	44.8	2.7
9/22/2021	9:45:00	22	44.8	2.73
9/22/2021	10:00:00	21.99	44.7	2.7
9/22/2021	10:15:00	22.06	44.8	2.8
9/22/2021	10:30:00	22.07	44.7	2.84
9/22/2021	10:45:00	22.08	44.8	2.82
9/22/2021	11:00:00	22.08	44.5	2.85
9/22/2021	11:15:00	22.08	44.9	2.78
9/22/2021	11:30:00	22.09	44.7	2.82
9/22/2021	11:45:00	22.12	44.9	2.84
9/22/2021	12:00:00	22.15	44.8	2.83
9/22/2021	12:15:00	22.06	46	3.69
9/22/2021	12:30:00	21.89	47.2	3.15
9/22/2021	12:45:00	21.89	47.1	3.1
9/22/2021	13:00:00	21.88	47.3	3.03
9/22/2021	13:15:00	21.87	47.3	4.14
9/22/2021	13:30:00	21.86	47.7	3.85
9/22/2021	13:45:00	21.85	47.7	3.8
9/22/2021	14:00:00	21.86	47.9	3.78
9/22/2021	14:15:00	21.93	47	4.55
9/22/2021	14:30:00	21.97	47.2	3.95
9/22/2021	14:45:00	21.89	47.4	3.84
9/22/2021	15:00:00	21.91	47.4	3.81
9/22/2021	15:15:00	21.99	47.2	4.41
9/22/2021	15:30:00	22.02	47.1	4.74
9/22/2021	15:45:00	22	47.1	4.71
9/22/2021	16:00:00	21.99	47.1	4.72
9/22/2021	16:15:00	22.03	47.1	4.78
9/22/2021	16:30:00	22.08	47.1	4.79
9/22/2021	16:45:00	22.13	47.5	4.79
9/22/2021	17:00:00	22.14	47.5	4.8
9/22/2021	17:15:00	22.15	47.7	4.71
9/22/2021	17:30:00	22.18	47.4	4.76
9/22/2021	17:45:00	22.2	47.6	4.75
9/22/2021	18:00:00	22.18	47.8	4.73
9/22/2021	18:15:00	22.16	47.5	4.22
9/22/2021	18:30:00	22.13	48.3	4.02
9/22/2021	18:45:00	22.18	48.3	3.94
9/22/2021	19:00:00	22.25	48.5	3.99
9/22/2021	19:15:00	22.27	48.4	4.13

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
9/22/2021	19:30:00	22.32	48.2	4.54
9/22/2021	19:45:00	22.36	47.7	4.64
9/22/2021	20:00:00	22.39	48	4.61
9/22/2021	20:15:00	22.37	48	4.72
9/22/2021	20:30:00	22.26	47.2	4.67
9/22/2021	20:45:00	22.22	47.2	4.55
9/22/2021	21:00:00	22.21	47.2	4.56
9/22/2021	21:15:00	22.23	47	4.86
9/22/2021	21:30:00	22.21	46.9	5.04
9/22/2021	21:45:00	22.22	47	5.17
9/22/2021	22:00:00	22.21	46.8	5.16
9/22/2021	22:15:00	22.2	46.9	5.2
9/22/2021	22:30:00	22.21	46.9	5.34
9/22/2021	22:45:00	22.22	46.7	5.33
9/22/2021	23:00:00	22.25	46.9	5.38
9/22/2021	23:15:00	22.28	47.1	5.36
9/22/2021	23:30:00	22.3	46.8	5.44
9/22/2021	23:45:00	22.32	46.9	5.36
	Max	22.39	48.5	5.44
	Min	21.77	44.4	2.61

Stevens Creek Operations Data (Provided By DESC & USACE)

9/8/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	185.1	158.8	9050	6306
2:00	61	184.9	158.8	8861	6230
3:00	61	184.7	158.8	8737	6217
4:00	61	184.5	158.8	8591	6158
5:00	61	184.3	158.8	8539	6077
6:00	61	183.8	158.8	8238	6062
7:00	61	183.7	158.8	8197	5966
8:00	61	183.4	158.8	8088	6007
9:00	61	183.2	158.8	8064	6004
10:00	61	183	158.8	7849	5881
11:00	61	182.6	158.7	7935	5764
12:00	356	182.3	159	8871	6741
13:00	3926	182.3	158.1	8527	6675
14:00	9016	182.5	158.7	7310	5565
15:00	13052	182.8	159.1	9709	7404
16:00	29952	183.4	159.3	9962	7570
17:00	33144	184.3	159.3	10480	7777
18:00	33144	184.2	159.3	10999	8008
19:00	29069	185.2	159.3	11544	8223
20:00	12863	185.8	159.4	11808	8320
21:00	6122	186.3	159.5	11788	8142
22:00	2672	186.4	159.5	11562	7959
23:00	62	186.2	159.5	11135	7649
24:00:00	62	186	159.4	10629	7323
daily avg.	**7252**	**184**	**159**	**9436**	**6835**

Total Generation	**226473**
Projected discharge	6215
Thurmond discharge	**7252**

Stevens Creek Operations Data (Provided By DESC & USACE)

9/9/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	61	185.8	159.1	9708	6713
2:00	61	185.6	159.1	9421	6491
3:00	61	185.4	159	9347	5834
4:00	61	185.2	158.9	8139	5627
5:00	61	185.1	158.7	7418	5161
6:00	61	185.1	158.7	7324	5092
7:00	61	184.9	158.7	7087	5013
8:00	61	184.8	158.4	6084	4347
9:00	61	184.5	158.4	5986	4296
10:00	61	184.4	158.4	5914	4324
11:00	61	184.2	158.4	6058	4405
12:00	61	184.1	158.4	5977	4337
13:00	1094	183.9	158.6	6858	5037
14:00	18862	183.7	158.6	6964	5158
15:00	19892	184.1	158.7	7678	5523
16:00	26662	184.6	158.9	8703	6216
17:00	26922	185.2	159	9571	6744
18:00	26924	185.8	159.1	10154	7048
19:00	26342	186.3	159	11008	7544
20:00	4650	186.7	159.3	11322	7684
21:00	2672	186.7	159.5	11502	7852
22:00	62	186.6	159.7	11357	7728
23:00	62	186.2	159.6	10940	7572
24:00:00	62	186	159.5	10892	7438
daily avg.	**6456**	**185**	**159**	**8559**	**5966**

Total Generation	**205412**
Projected discharge	7164
Thurmond discharge	**6456**

Stevens Creek Operations Data (Provided By DESC & USACE)

9/21/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	62	186.3	159.5	11184	7703
2:00	62	186.1	159.4	10696	7378
3:00	62	185.8	159.2	10417	7150
4:00	62	185.7	159.1	9516	6553
5:00	61	185.5	159.1	9384	6498
6:00	61	185.3	159.1	9402	6609
7:00	61	185.1	159.1	9406	6621
8:00	61	184.9	159.1	9397	6663
9:00	61	184.7	159.1	9448	6719
10:00	61	184.5	159	9290	6643
11:00	61	184.3	159.1	9451	6785
12:00	356	184.1	159	9483	6879
13:00	4104	183.8	159.3	9933	7276
14:00	13517	183.6	159.2	10024	7397
15:00	30914	183.5	159.3	10071	7453
16:00	31374	183.7	159.3	10229	7617
17:00	31444	184.2	159.3	10550	7680
18:00	30244	185	159.3	10785	7732
19:00	28534	185.7	159.4	10991	7919
20:00	15472	186.6	159.5	11859	8097
21:00	6782	187	159.7	11778	7957
22:00	62	187.2	159.8	11520	7730
23:00	62	187.2	159.9	10985	7326
24:00:00	62	187	159.7	8816	6239
daily avg.	**8067**	**185**	**159**	**10192**	**7193**

Total Generation	**244615**
Projected discharge	8825
Thurmond discharge	**8067**

Stevens Creek Operations Data (Provided By DESC & USACE)

9/22/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	62	186.8	159.4	8628	5775
2:00	62	186.6	159.4	8445	5553
3:00	62	186.4	159.2	8262	5538
4:00	62	186.3	159	7532	4091
5:00	62	186.1	158.8	6837	4553
6:00	62	186	158.7	6121	4095
7:00	62	185.9	158.3	4138	2702
8:00	62	185.8	158.2	4507	3035
9:00	62	185.7	158.4	5201	3565
10:00	62	185.6	158.4	5485	3770
11:00	62	185.4	158.8	8167	5595
12:00	62	185.2	159.1	9609	6702
13:00	590	184.9	159.1	9694	6906
14:00	9275	184.7	159.1	10069	7119
15:00	13877	184.9	159.1	10328	7336
16:00	28840	185.2	159.2	10563	7510
17:00	31200	185.6	159.2	10846	7593
18:00	31610	186.3	159.3	11557	7979
19:00	31310	186.8	159.6	11811	8066
20:00	19942	187.2	159.8	11876	7964
21:00	12407	187.5	159.9	11866	7927
22:00	5497	187.5	160	11770	7872
23:00	2790	187.4	160	11678	7805
24:00:00	2710	187.2	159.8	11035	7387
daily avg.	**7950**	**186**	**159**	**9001**	**6102**

Total Generation	**216025**
Projected discharge	8798
Thurmond discharge	**7950**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
9/8/2021 0:00	5820
9/8/2021 1:00	5790
9/8/2021 2:00	5770
9/8/2021 3:00	5760
9/8/2021 4:00	5750
9/8/2021 5:00	5740
9/8/2021 6:00	5740
9/8/2021 7:00	5730
9/8/2021 8:00	5730
9/8/2021 9:00	5720
9/8/2021 10:00	5720
9/8/2021 11:00	5710
9/8/2021 12:00	5700
9/8/2021 13:00	5690
9/8/2021 14:00	5670
9/8/2021 15:00	5670
9/8/2021 16:00	5690
9/8/2021 17:00	6730
9/8/2021 18:00	7140
9/8/2021 19:00	7370
9/8/2021 20:00	7580
9/8/2021 21:00	7800
9/8/2021 22:00	7880
9/8/2021 23:00	7980
9/9/2021 0:00	7930
9/9/2021 1:00	8010
9/9/2021 2:00	8120
9/9/2021 3:00	8370
9/9/2021 4:00	8260
9/9/2021 5:00	8180
9/9/2021 6:00	8360
9/9/2021 7:00	8460
9/9/2021 8:00	7890
9/9/2021 9:00	7250
9/9/2021 10:00	6980
9/9/2021 11:00	6850
9/9/2021 12:00	6740
9/9/2021 13:00	6100
9/9/2021 14:00	5860
9/9/2021 15:00	5780
9/9/2021 16:00	5650
9/9/2021 17:00	5510
9/9/2021 18:00	5400
9/9/2021 19:00	5300
9/9/2021 20:00	5210
9/9/2021 21:00	5160
9/9/2021 22:00	5130
9/9/2021 23:00	5130
9/21/2021 0:00	10300

Date-Time	Flow (cfs)
9/21/2021 1:00	10400
9/21/2021 2:00	10900
9/21/2021 3:00	11200
9/21/2021 4:00	11200
9/21/2021 5:00	11600
9/21/2021 6:00	10800
9/21/2021 7:00	10500
9/21/2021 8:00	10200
9/21/2021 9:00	9890
9/21/2021 10:00	9940
9/21/2021 11:00	9340
9/21/2021 12:00	9180
9/21/2021 13:00	8940
9/21/2021 14:00	8610
9/21/2021 15:00	8270
9/21/2021 16:00	8120
9/21/2021 17:00	8040
9/21/2021 18:00	7910
9/21/2021 19:00	7820
9/21/2021 20:00	7680
9/21/2021 21:00	7690
9/21/2021 22:00	7720
9/21/2021 23:00	7680
9/22/2021 0:00	8520
9/22/2021 1:00	9070
9/22/2021 2:00	9730
9/22/2021 3:00	10200
9/22/2021 4:00	10300
9/22/2021 5:00	10400
9/22/2021 6:00	10400
9/22/2021 7:00	10100
9/22/2021 8:00	10000
9/22/2021 9:00	9680
9/22/2021 10:00	9700
9/22/2021 11:00	8850
9/22/2021 12:00	8120
9/22/2021 13:00	7660
9/22/2021 14:00	7320
9/22/2021 15:00	7070
9/22/2021 16:00	6890
9/22/2021 17:00	6670
9/22/2021 18:00	6550
9/22/2021 19:00	6470
9/22/2021 20:00	7670
9/22/2021 21:00	7860
9/22/2021 22:00	8260
9/22/2021 23:00	8560

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
October 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (10/10/21)	16.26	—	24.86	0.0	—	7.1
Thurmond Tailrace (Site 7)* (10/04/21 - 10/05/21)		—			—	
Stevens Creek Res. (Site 6) (10/04/21 - 10/05/21)	21.87	—	22.25	4.2	—	4.9
Stevens Creek Res. (Site 1) (10/04/21 - 10/05/21)	21.83	—	22.43	4.5	—	4.7
Stevens Creek Res. (Site 2) (10/04/21 - 10/05/21)	22.13	—	22.62	4.4	—	5.1
Stevens Creek Tailrace (Site 3) (10/04/21 - 10/05/21)	22.23	—	22.69	5.7	—	6.2
Stevens Creek (Site 5) (10/04/21 - 10/05/21)	23.48	—	24.18	3.5	—	4.2
Stevens Creek (Site 4) (10/04/21 - 10/05/21)	23.57	—	24.87	4.4	—	5.0

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 10/4/2021
Field Team: DRH/KYA
Field Meter Model/Number: 17K102282 SOND: 20J104515

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:38	surface	6.7	23.5	93	3.7	44
		1M	6.7	23.5	93	3.7	44
		2M	6.7	23.5	93	3.7	44
		3M	6.7	23.5	93	3.7	43
3	7:10	1M	6.4	22.2	47	5.7	66
4	7:45	surface	6.6	24.2	61	4.9	58
		1M	6.6	24.2	62	4.8	58
		2M	6.6	24.2	61	4.8	58
		3M	6.6	24.2	61	4.8	57
		4M	6.6	24.1	61	4.8	57
		5M	6.6	24.1	60	4.7	55
2	8:12	surface	6.4	22.2	47	4.4	51
		1M	6.4	22.2	47	4.4	51
		2M	6.4	22.2	47	4.4	50
		3M	6.4	22.2	47	4.4	50
		4M	6.4	22.2	47	4.4	50
1	8:36	surface	6.4	21.9	47	4.7	53
		1M	6.4	21.8	47	4.7	53
		2M	6.4	21.8	47	4.7	53
1A	8:48	surface	6.4	21.9	48	4.5	52
		1M	6.4	21.9	48	4.5	51
		2M	6.4	21.9	48	4.5	48

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 10/4/2021
Field Team: DRH/KYA
Field Meter Model/Number: 17K102282 **SOND: 20J104515**

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	13:32	surface	6.8	23.6	94	3.8	45
		1M	6.8	23.6	94	3.8	45
		2M	6.8	23.5	94	3.8	45
		3M	6.8	23.5	94	3.8	44
		4M	6.8	23.5	94	3.7	44
3	14:15	1M	6.5	22.7	48	6.1	70
4	2:49	surface	6.6	24.6	66	4.8	57
		1M	6.6	24.9	67	4.6	55
		2M	6.6	24.3	65	4.6	55
		3M	6.5	23.6	56	4.4	52
2	3:06	surface	6.4	22.6	48	4.9	56
		1M	6.4	22.6	48	4.8	56
		2M	6.4	22.6	48	4.8	56
		3M	6.4	22.5	48	4.8	56
1	3:29	surface	6.4	22.4	47	4.7	55
		1M	6.4	22.4	47	4.7	55
		2M	6.4	22.4	47	4.7	54
		3M					
		4M					
1A	15:48	surface	6.4	22.2	47	4.9	56
		1M	6.4	22.2	47	4.8	56
		2M	6.4	22.2	47	4.8	55

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 10/5/2021
Field Team: DRH/KYA
Field Meter Model/Number: 17K102282 SOND: 20J104515

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	6:38	surface	6.8	23.6	94	3.5	42
		1M	6.8	23.6	94	3.5	42
		2M	6.8	23.6	93	3.5	41
		3M	6.8	23.6	93	3.5	41
		4M	6.8	23.6	93	3.5	41
3	9:12	1M	6.4	22.4	47	6.1	70
4	7:15	surface	6.6	23.9	60	4.9	58
		1M	6.6	23.9	59	4.8	57
		2M	6.6	23.9	59	4.8	57
		3M	6.6	23.9	59	4.8	57
		4M	6.6	23.9	58	4.8	57
		5M	6.6	23.8	58	4.7	55
2	7:55	surface	6.4	22.1	47	4.6	53
		1M	6.4	22.1	47	4.6	53
		2M	6.4	22.1	47	4.6	53
		3M	6.4	22.1	47	4.6	53
		4M	6.4	22.1	47	4.6	53
1	7:54	surface	6.4	22.0	47	4.5	51
		1M	6.4	21.9	47	4.5	51
		2M	6.4	21.9	47	4.5	51
		3M					
		4M					
1A	8:06	surface	6	21.9	48	4.3	49
		1M	6	21.9	48	4.2	48
		2M	6	21.9	48	4.2	48

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 10/5/2021
Field Team: DRH/KYA
Field Meter Model/Number: 17K102282 SOND: 20J104515

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	13:17	surface	6.8	24.2	94	4.2	48
		1M	6.8	23.8	94	3.9	47
		2M	6.8	23.7	94	3.8	45
		3M	6.8	23.6	94	3.8	45
		4M	6.8	23.6	94	3.7	44
3	14:00	1M	6.5	22.7	47	6.2	71
4	15:14	surface	6.6	24.9	66	5.0	61
		1M	6.6	24.8	66	4.9	58
		2M	6.6	24.6	66	4.7	56
		3M	6.6	24.5	64	4.7	56
		4M	6.6	24.0	61	4.5	54
		5M	6.5	23.6	57	4.4	51
2	14:54	surface	6.4	22.6	47	5.1	59
		1M	6.4	22.6	47	5.1	59
		2M	6.4	22.6	47	5.1	59
		3M	6.4	22.6	47	5.1	59
1	14:21	surface	6.4	22.4	47	4.6	53
		1M	6.4	22.4	47	4.6	53
		2M	6.4	22.4	47	4.6	53
		3M	6.4	22.4	47	4.6	53
		4M	6.4	22.4	47	4.5	52
1A	14:32	surface	6.4	22.2	48	4.5	52
		1M	6.4	22.2	48	4.5	52
		2M	6.4	22.2	48	4.5	52

JST Forebay Water Quality Data (Provided By USACE-ERDC)

October 10, 2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	°C	mg/l	µS/cm	meters
122859	24.86	7.04	48.2	0.2
122919	24.75	7.05	47.9	2
122942	24.69	7.08	48	4
123001	24.66	7.08	48.1	6
123028	24.66	7.08	48	8
123053	24.63	7	48	10
123134	24.58	6.8	48	12
123216	24.56	6.76	47.8	14
123256	23.46	0.65	45.5	15
123321	22.9	0.78	44.2	16
123347	22.71	0.88	44.3	17
123422	22.45	1.13	43.9	18
123449	22.29	1.08	43.8	19
123529	22.21	1.73	43.2	20
123556	22.16	1.83	42.8	21
123629	22.02	0.99	43.3	22
123655	21.98	0.78	43.4	23
123719	21.96	0.67	43.3	24
123745	21.86	0.36	43.6	25
123802	21.83	0.25	43.6	26
123817	21.56	0.01	46.6	28
123834	21.17	0	51.1	30
123850	20.96	0	58.2	32
123908	20.35	0	64.8	34
123930	19.9	0	62	36
123949	19.21	0	61.8	38
124009	18.39	0	68.4	40
124026	17.7	0	69.4	42
124051	16.57	0	84.4	44
124104	16.28	0	90.2	46
124114	16.26	0	91.3	46.2
Max:	**24.86**	**7.08**	**91.3**	**46.2**
Min:	**16.26**	**0**	**42.8**	**0.2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
10/4/2021	0:00:00	22.03	46.2	3.29
10/4/2021	0:15:00	22.03	46.1	3.11
10/4/2021	0:30:00	22.02	46	2.93
10/4/2021	0:45:00	22.02	46	2.72
10/4/2021	1:00:00	22.02	46	2.61
10/4/2021	1:15:00	22.02	45.7	2.58
10/4/2021	1:30:00	22.01	45.7	2.53
10/4/2021	1:45:00	22.01	45.7	2.43
10/4/2021	2:00:00	22	45.8	2.44
10/4/2021	2:15:00	22	45.6	2.34
10/4/2021	2:30:00	21.99	45.7	2.35
10/4/2021	2:45:00	21.99	45.6	2.3
10/4/2021	3:00:00	22	45.3	2.19
10/4/2021	3:15:00	21.99	45.2	2.2
10/4/2021	3:30:00	21.99	45.4	2.15
10/4/2021	3:45:00	21.99	45.3	2.14
10/4/2021	4:00:00	21.99	45.4	2.13
10/4/2021	4:15:00	21.98	45.4	2.14
10/4/2021	4:30:00	21.98	45.4	2.13
10/4/2021	4:45:00	21.98	45.3	2.13
10/4/2021	5:00:00	21.97	45.4	2.27
10/4/2021	5:15:00	21.97	45.4	2.1
10/4/2021	5:30:00	21.97	45	2.1
10/4/2021	5:45:00	21.95	45.3	2.29
10/4/2021	6:00:00	21.96	45.3	2.14
10/4/2021	6:15:00	21.96	45.4	2.12
10/4/2021	6:30:00	21.95	45.4	2.17
10/4/2021	6:45:00	21.96	45.4	2.12
10/4/2021	7:00:00	21.97	45.2	2.07
10/4/2021	7:15:00	21.97	44.9	2.09
10/4/2021	7:30:00	21.99	45.2	2.03
10/4/2021	7:45:00	21.97	45	2.15
10/4/2021	8:00:00	21.98	45.3	2.1
10/4/2021	8:15:00	22.05	44.9	2.94
10/4/2021	8:30:00	22.05	44.9	3.54
10/4/2021	8:45:00	22.1	44.7	4.01
10/4/2021	9:00:00	22.13	44.6	4.11
10/4/2021	9:15:00	22.11	44.7	4.05
10/4/2021	9:30:00	22.25	44.7	3.93
10/4/2021	9:45:00	22.18	44.7	4
10/4/2021	10:00:00	22.32	44.9	4.19

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
10/4/2021	10:15:00	22.22	44.8	3.48
10/4/2021	10:30:00	22.22	44.6	3.41
10/4/2021	10:45:00	22.22	44.8	3.42
10/4/2021	11:00:00	22.24	44.8	3.49
10/4/2021	11:15:00	22.27	45.4	2.99
10/4/2021	11:30:00	22.26	46.4	2.95
10/4/2021	11:45:00	22.27	46.9	3.27
10/4/2021	12:00:00	22.29	46.7	3.31
10/4/2021	12:15:00	22.26	46.8	4.83
10/4/2021	12:30:00	22.26	46.7	5.29
10/4/2021	12:45:00	22.26	46.4	5.31
10/4/2021	13:00:00	22.28	46.4	5.28
10/4/2021	13:15:00	22.28	46.9	4.96
10/4/2021	13:30:00	22.27	46.7	4.89
10/4/2021	13:45:00	22.28	46.8	4.9
10/4/2021	14:00:00	22.28	46.9	4.85
10/4/2021	14:15:00	22.28	46.5	5.14
10/4/2021	14:30:00	22.27	46.5	5.13
10/4/2021	14:45:00	22.26	46.5	5.09
10/4/2021	15:00:00	22.24	46.8	5.12
10/4/2021	15:15:00	22.26	47.1	4.36
10/4/2021	15:30:00	22.25	47.2	4.48
10/4/2021	15:45:00	22.29	46.5	4.68
10/4/2021	16:00:00	22.23	47	4.71
10/4/2021	16:15:00	22.21	47.3	4.16
10/4/2021	16:30:00	22.19	47.8	3.85
10/4/2021	16:45:00	22.19	47.8	3.74
10/4/2021	17:00:00	22.15	47.9	3.69
10/4/2021	17:15:00	22.15	48.1	3.82
10/4/2021	17:30:00	22.17	47.9	3.92
10/4/2021	17:45:00	22.14	48.2	3.91
10/4/2021	18:00:00	22.1	48	3.89
10/4/2021	18:15:00	22.17	47.9	4.19
10/4/2021	18:30:00	22.14	47.7	4.55
10/4/2021	18:45:00	22.14	47.2	4.6
10/4/2021	19:00:00	22.12	47.1	4.65
10/4/2021	19:15:00	22.12	47.4	4.28
10/4/2021	19:30:00	22.09	47.4	3.89
10/4/2021	19:45:00	22.11	47.5	3.89
10/4/2021	20:00:00	22.12	47.4	3.87
10/4/2021	20:15:00	22.16	47.4	4.58
10/4/2021	20:30:00	22.17	47.3	3.4
10/4/2021	20:45:00	22.15	47.2	3.16
10/4/2021	21:00:00	22.14	47.3	3.08

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
10/4/2021	21:15:00	22.15	47	3.69
10/4/2021	21:30:00	22.2	47	3.99
10/4/2021	21:45:00	22.2	47	4.05
10/4/2021	22:00:00	22.19	47.3	4.04
10/4/2021	22:15:00	22.18	46.6	4.09
10/4/2021	22:30:00	22.18	47	4.07
10/4/2021	22:45:00	22.17	46.9	4.04
10/4/2021	23:00:00	22.17	46.9	3.96
10/4/2021	23:15:00	22.17	47	3.99
10/4/2021	23:30:00	22.16	46.9	3.97
10/4/2021	23:45:00	22.14	46.9	4.02
10/5/2021	0:00:00	22.14	46.9	3.99
10/5/2021	0:15:00	22.12	46.8	3.54
10/5/2021	0:30:00	22.12	46.5	3.35
10/5/2021	0:45:00	22.1	46.2	3.01
10/5/2021	1:00:00	22.09	46.2	2.95
10/5/2021	1:15:00	22.08	46.1	2.73
10/5/2021	1:30:00	22.07	45.8	2.51
10/5/2021	1:45:00	22.06	46	2.45
10/5/2021	2:00:00	22.05	45.8	2.37
10/5/2021	2:15:00	22.04	45.7	2.37
10/5/2021	2:30:00	22.03	45.7	2.28
10/5/2021	2:45:00	22.03	45.7	2.19
10/5/2021	3:00:00	22.03	45.6	2.14
10/5/2021	3:15:00	22.02	45.7	2.1
10/5/2021	3:30:00	22.02	45.4	2.08
10/5/2021	3:45:00	22.03	45.6	2.04
10/5/2021	4:00:00	22.03	45.4	2
10/5/2021	4:15:00	22.02	45.4	2
10/5/2021	4:30:00	22.02	45.7	2
10/5/2021	4:45:00	22.02	45.4	2.01
10/5/2021	5:00:00	22.01	45.3	2
10/5/2021	5:15:00	22.01	45.3	1.96
10/5/2021	5:30:00	22.01	45.4	1.98
10/5/2021	5:45:00	22	45.4	2.04
10/5/2021	6:00:00	22	45.4	1.97
10/5/2021	6:15:00	22.01	45.2	1.92
10/5/2021	6:30:00	22	45.3	2.09
10/5/2021	6:45:00	21.99	45.2	2.14
10/5/2021	7:00:00	22	45.3	1.97
10/5/2021	7:15:00	22.01	45.3	1.82
10/5/2021	7:30:00	22	45.4	1.96
10/5/2021	7:45:00	22.01	45.6	1.97
10/5/2021	8:00:00	22.01	45.6	1.93

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
10/5/2021	8:15:00	22.02	45.2	2.02
10/5/2021	8:30:00	22.02	45.3	2.01
10/5/2021	8:45:00	22.04	45.1	1.96
10/5/2021	9:00:00	22.06	45.2	1.93
10/5/2021	9:15:00	22.08	45.5	1.88
10/5/2021	9:30:00	22.11	45.3	1.88
10/5/2021	9:45:00	22.11	45.2	1.9
10/5/2021	10:00:00	22.12	45.3	1.91
10/5/2021	10:15:00	22.2	45.1	1.91
10/5/2021	10:30:00	22.19	45.2	1.94
10/5/2021	10:45:00	22.22	45.2	1.94
10/5/2021	11:00:00	22.22	45.2	1.97
10/5/2021	11:15:00	22.25	45.1	1.99
10/5/2021	11:30:00	22.27	45.4	1.99
10/5/2021	11:45:00	22.32	45.4	2.01
10/5/2021	12:00:00	22.31	45.3	2.01
10/5/2021	12:15:00	22.43	45.5	2.81
10/5/2021	12:30:00	22.3	46.3	5.17
10/5/2021	12:45:00	22.32	46.2	5.23
10/5/2021	13:00:00	22.24	46.3	4.85
10/5/2021	13:15:00	22.2	46.5	4.99
10/5/2021	13:30:00	22.16	46.8	4.85
10/5/2021	13:45:00	22.15	46.8	4.83
10/5/2021	14:00:00	22.16	46.8	4.8
10/5/2021	14:15:00	22.11	47	4.04
10/5/2021	14:30:00	22.11	47.1	3.92
10/5/2021	14:45:00	22.12	47.1	3.95
10/5/2021	15:00:00	22.13	47.3	3.94
10/5/2021	15:15:00	22.19	47.4	4.15
10/5/2021	15:30:00	22.19	47.3	4.55
10/5/2021	15:45:00	22.12	47.8	4.35
10/5/2021	16:00:00	22.16	47.7	4.27
10/5/2021	16:15:00	22.14	47.4	4.01
10/5/2021	16:30:00	22.15	47.7	3.81
10/5/2021	16:45:00	22.2	47.9	3.73
10/5/2021	17:00:00	22.18	47.7	3.72
10/5/2021	17:15:00	22.19	47.7	4.11
10/5/2021	17:30:00	22.15	47.2	4.67
10/5/2021	17:45:00	22.15	47.5	4.67
10/5/2021	18:00:00	22.15	47.3	4.67
10/5/2021	18:15:00	22.16	47.7	4.21
10/5/2021	18:30:00	22.15	47.2	4.08
10/5/2021	18:45:00	22.16	47.3	4.05
10/5/2021	19:00:00	22.18	47	4.02

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
10/5/2021	19:15:00	22.12	47.5	3.99
10/5/2021	19:30:00	22.15	47.2	4.42
10/5/2021	19:45:00	22.17	47	4.63
10/5/2021	20:00:00	22.15	47.2	4.52
10/5/2021	20:15:00	22.19	47	4.74
10/5/2021	20:30:00	22.19	46.9	5.49
10/5/2021	20:45:00	22.21	47	4.71
10/5/2021	21:00:00	22.22	47.3	4.35
10/5/2021	21:15:00	22.22	47.4	4.05
10/5/2021	21:30:00	22.21	47.2	4.19
10/5/2021	21:45:00	22.19	47	4.71
10/5/2021	22:00:00	22.19	47.3	4.63
10/5/2021	22:15:00	22.19	47.2	4.66
10/5/2021	22:30:00	22.18	47.2	4.67
10/5/2021	22:45:00	22.18	47	4.67
10/5/2021	23:00:00	22.18	47	4.66
10/5/2021	23:15:00	22.17	47.2	4.7
10/5/2021	23:30:00	22.17	47.2	4.47
10/5/2021	23:45:00	22.17	47	4.46
	Max	22.43	48.2	5.49
	Min	21.95	44.6	1.82

Stevens Creek Operations Data (Provided By DESC & USACE)

10/4/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	185.2	158.7	7445	5166
2:00	0	185	158.6	7332	5104
3:00	0	184.9	158.6	7184	5124
4:00	0	184.7	158.6	7108	5107
5:00	0	184.5	158.6	6987	5011
6:00	0	184.4	158.6	6800	4895
7:00	0	184.2	158.6	6687	4875
8:00	0	184	158.6	6431	4867
9:00	0	183.8	158.6	6500	4776
10:00	0	183.6	158.6	6320	4137
11:00	0	183.5	158.5	6275	4735
12:00	295	183.3	158.6	6089	4786
13:00	4175	183.1	158.5	6240	4782
14:00	6510	183.1	158.5	6279	4767
15:00	7795	183.2	158.6	6295	4744
16:00	10695	183.4	158.6	6460	4822
17:00	20535	183.6	158.5	8570	4838
18:00	23330	184	158.8	7034	6188
19:00	21750	184.6	158.5	6368	5025
20:00	11364	185.3	158.5	7513	4681
21:00	8760	185.7	158.7	7511	5121
22:00	3307	185.6	158.7	7577	5180
23:00	0	185.8	158.7	7573	5190
24:00:00	0	185.6	158.7	7549	5179
daily avg.	**4938**	**184**	**159**	**6922**	**4963**

Total Generation	**166127**
Projected discharge	5445
Thurmond discharge	**4938**

Stevens Creek Operations Data (Provided By DESC & USACE)

10/5/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	185.4	158.6	7342	5099
2:00	0	185.2	158.6	7338	5086
3:00	0	185.1	158.6	7217	5034
4:00	0	184.9	158.6	7066	5088
5:00	0	184.8	158.5	7532	4936
6:00	0	184.6	158.7	7313	5014
7:00	0	184.4	158.7	7272	5244
8:00	0	184.2	158.6	7191	5286
9:00	0	184.1	158.6	7041	5111
10:00	0	183.8	158.6	6904	5165
11:00	0	183.6	158.6	6763	5086
12:00	0	183.4	158.6	6711	5077
13:00	0	183.1	158.6	6655	5034
14:00	3430	183	158.7	6547	5033
15:00	11550	183	158.6	6561	4979
16:00	13512	183.2	158.6	6638	4997
17:00	21740	183.7	158.6	7021	5172
18:00	23510	184.1	158.6	7360	5279
19:00	16420	184.7	158.6	7996	5626
20:00	14430	185.2	158.8	8224	5722
21:00	11980	185.6	159	9946	6903
22:00	0	185.8	159	9965	6860
23:00	0	185.7	158.9	8061	5493
24:00:00	0	185.5	158.7	7797	5370
daily avg.	**4857**	**184**	**159**	**7436**	**5321**

Total Generation	**178461**
Projected discharge	5391
Thurmond discharge	**4857**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
10/4/2021 0:00	5120
10/4/2021 1:00	5140
10/4/2021 2:00	5170
10/4/2021 3:00	5180
10/4/2021 4:00	5200
10/4/2021 5:00	5210
10/4/2021 6:00	5210
10/4/2021 7:00	5220
10/4/2021 8:00	5220
10/4/2021 9:00	5210
10/4/2021 10:00	5210
10/4/2021 11:00	5200
10/4/2021 12:00	5190
10/4/2021 13:00	5420
10/4/2021 14:00	6540
10/4/2021 15:00	6750
10/4/2021 16:00	6980
10/4/2021 17:00	6760
10/4/2021 18:00	6640
10/4/2021 19:00	6290
10/4/2021 20:00	6130
10/4/2021 21:00	6050
10/4/2021 22:00	5940
10/4/2021 23:00	5600
10/5/2021 0:00	5300
10/5/2021 1:00	5060
10/5/2021 2:00	4880
10/5/2021 3:00	4770
10/5/2021 4:00	4700
10/5/2021 5:00	4660
10/5/2021 6:00	4650
10/5/2021 7:00	4640
10/5/2021 8:00	4640
10/5/2021 9:00	4640
10/5/2021 10:00	4650
10/5/2021 11:00	4670
10/5/2021 12:00	4680
10/5/2021 13:00	4700
10/5/2021 14:00	4710
10/5/2021 15:00	4720
10/5/2021 16:00	4740
10/5/2021 17:00	4750
10/5/2021 18:00	4750
10/5/2021 19:00	4760
10/5/2021 20:00	4770
10/5/2021 21:00	4780
10/5/2021 22:00	4790
10/5/2021 23:00	4810

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
November 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (11/15/21)	17.91	—	18.33	6.2	—	8.5
Thurmond Tailrace (Site 7)* (11/08/21 - 11/09/21)		—			—	
Stevens Creek Res. (Site 6) (11/08/21 - 11/09/21)	19.10	—	19.50	8.0	—	8.4
Stevens Creek Res. (Site 1) (11/08/21 - 11/09/21)	18.90	—	19.30	8.3	—	8.6
Stevens Creek Res. (Site 2) (11/08/21 - 11/09/21)	18.60	—	18.80	7.6	—	8.1
Stevens Creek Tailrace (Site 3) (11/08/21 - 11/09/21)	18.80	—	18.94	7.9	—	8.3
Stevens Creek (Site 5) (11/08/21 - 11/09/21)	12.20	—	12.40	5.3	—	5.6
Stevens Creek (Site 4) (11/08/21 - 11/09/21)	15.87	—	17.50	7.2	—	7.7

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 11/8/21
Field Team: KAC, DFS
Field Meter Model/Number: 18H110932

Site No.	Time	Depth	pH	Temperature	Sp. Cond.	DO	DO
	(EST)	(meters)		(degrees C)	(us/cm)	(mg/L)	(% saturation)
5	8:30	S	6.1	12.4	107	5.4	51
		1	6.3	12.4	107	5.4	50
		2	6.4	12.4	107	5.3	50
		3	6.4	12.4	107	5.3	50
		4	6.4	12.3	107	5.3	49
3	11:30	S	6.4	18.9	48	7.9	85
4	9:15	S	6.3	16.0	57	7.4	75
		1	6.5	15.9	57	7.4	75
		2	6.5	15.9	59	7.2	73
2	10:35	S	6.3	18.8	48	7.7	82
		1	6.4	18.8	48	7.7	82
		2	6.4	18.8	48	7.6	82
		3	6.5	18.8	48	7.6	82
		4	6.5	18.8	48	7.6	82
		5	6.5	18.8	48	7.6	82
1	10:00	S	6.6	19.2	47	8.6	93
		1	6.6	19.3	47	8.4	91
		2	6.6	19.3	47	8.4	91
		3	6.6	19.3	47	8.4	91
		4	6.6	19.3	47	8.4	91
1A	9:40	S	6.2	19.5	47	8.1	88
		1	6.3	19.5	47	8.1	88
		2	6.4	19.5	47	8.1	88
		3	6.4	19.5	47	8.0	88
		4	6.5	19.5	47	8.0	87

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 11/9/21
Field Team: DFS/KAC
Field Meter Model/Number: 18H110932

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	8:35	S	7.3	12.3	108	5.6	52
		1	7.2	12.2	108	5.5	51
		2	7.1	12.2	108	5.5	51
		3	6.8	12.2	108	5.4	50
		4	6.7	12.2	108	5.4	50
3	11:45	S	7.1	18.8	48	8.3	89
4	9:30	S	7.2	17.5	52	7.7	80
		1	7.1	17.4	53	7.6	79
		2	7.1	17.3	53	7.5	78
		3	7.0	17.3	54	7.5	78
2	10:40	S	7.1	18.6	48	8.1	87
		1	7.0	18.6	48	8.1	87
		2	7.0	18.6	48	8.1	86
		3	6.9	18.6	48	8.1	86
		4	6.9	18.6	48	8.1	86
		5	6.9	18.6	48	8.0	86
1	10:16	S	7.1	19.0	47	8.5	91
		1	7.0	19.1	47	8.4	91
		2	7.0	19.1	47	8.4	90
		3	7.0	19.0	47	8.4	90
		4	6.9	18.9	47	8.4	90
		5	6.9	18.9	47	8.3	90
		6	6.9	19.0	47	8.3	90
1A	10:00	S	7.3	19.1	47	8.4	90
		1	7.2	19.1	47	8.4	90
		2	7.1	19.1	47	8.3	90
		3	7.1	19.1	47	8.3	90
		4	7.1	19.1	47	8.3	90

JST Forebay Water Quality Data (Provided By USACE-ERDC)

November 15, 2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	°C	mg/l	µS/cm	meters
53816	18.21	8.48	43.1	0.2
53836	18.32	7.68	45.9	2
53902	18.32	7.69	45.9	4
53921	18.32	7.62	45.9	6
53948	18.33	7.65	45.9	8
54010	18.33	7.62	45.9	10
54025	18.32	7.67	45.8	12
54052	18.33	7.69	45.8	14
54112	18.32	7.62	45.9	16
54131	18.32	7.64	45.9	18
54200	18.32	7.58	45.7	20
54225	18.32	7.56	45.8	22
54248	18.33	7.63	45.7	24
54304	18.31	7.54	45.8	26
54322	18.3	7.4	45.8	28
54356	18.12	6.8	45.4	30
54414	18.06	6.69	45.3	32
54449	18.05	6.58	45.4	34
54508	18.04	6.54	45.3	36
54531	17.95	6.37	44.9	38
54550	17.94	6.26	45	40
54610	17.93	6.26	44.7	42
54629	17.91	6.19	44.9	44
Max:	**18.33**	**8.48**	**45.9**	**44**
Min:	**17.91**	**6.19**	**43.1**	**0.2**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
11/8/2021	23:00:00	19.8	48.1	6.37
11/8/2021	23:15:00	19.77	48.2	6.28
11/8/2021	23:30:00	19.75	48.1	6.34
11/8/2021	23:45:00	19.74	48.1	6.3
11/8/2021	0:00:00	19.74	48.2	6.15
11/8/2021	0:15:00	19.78	48.2	5.93
11/8/2021	0:30:00	19.86	48.1	6.46
11/8/2021	0:45:00	19.84	48.2	6.5
11/8/2021	1:00:00	19.83	47.9	6.62
11/8/2021	1:15:00	19.83	48.2	6.66
11/8/2021	1:30:00	19.82	47.9	6.78
11/8/2021	1:45:00	19.8	48.1	6.76
11/8/2021	2:00:00	19.79	48.2	6.79
11/8/2021	2:15:00	19.78	48.2	6.77
11/8/2021	2:30:00	19.77	48.1	6.82
11/8/2021	2:45:00	19.76	48.1	6.72
11/8/2021	3:00:00	19.75	48.2	6.64
11/8/2021	3:15:00	19.74	47.9	6.69
11/8/2021	3:30:00	19.72	48.1	6.68
11/8/2021	3:45:00	19.72	48.1	6.67
11/8/2021	4:00:00	19.71	48.1	6.71
11/8/2021	4:15:00	19.7	47.9	6.72
11/8/2021	4:30:00	19.69	48	6.66
11/8/2021	4:45:00	19.68	47.9	6.71
11/8/2021	5:00:00	19.68	47.9	6.7
11/8/2021	5:15:00	19.68	47.9	6.97
11/8/2021	5:30:00	19.7	48.1	5.76
11/8/2021	5:45:00	19.68	47.9	5.77
11/8/2021	6:00:00	19.67	47.8	5.73
11/8/2021	6:15:00	19.49	47.9	5.87
11/8/2021	6:30:00	19.55	47.5	5.92
11/8/2021	6:45:00	19.57	47.8	5.96
11/8/2021	7:00:00	19.59	48	5.96
11/8/2021	7:15:00	19.58	47.9	5.99
11/8/2021	7:30:00	19.58	47.9	6.14
11/8/2021	7:45:00	19.63	47.8	6.14
11/8/2021	8:00:00	19.64	47.7	6.15
11/8/2021	8:15:00	19.67	47.9	6.2
11/8/2021	8:30:00	19.7	48.1	6.21
11/8/2021	8:45:00	19.7	48.1	6.21
11/8/2021	9:00:00	19.71	48.1	6.28

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
11/8/2021	9:15:00	19.71	48.1	6.24
11/8/2021	9:30:00	19.73	48.2	6.2
11/8/2021	9:45:00	19.73	47.9	6.25
11/8/2021	10:00:00	19.73	48.1	6.28
11/8/2021	10:15:00	19.74	48.1	6.36
11/8/2021	10:30:00	19.75	47.9	6.41
11/8/2021	10:45:00	19.76	47.9	6.37
11/8/2021	11:00:00	19.76	48.2	6.38
11/8/2021	11:15:00	19.76	47.8	6.39
11/8/2021	11:30:00	19.77	47.7	6.37
11/8/2021	11:45:00	19.77	47.9	6.27
11/8/2021	12:00:00	19.77	48.1	6.31
11/8/2021	12:15:00	19.77	48.2	6.29
11/8/2021	12:30:00	19.77	48.1	6.34
11/8/2021	12:45:00	19.77	48.1	6.24
11/8/2021	13:00:00	19.78	48.2	6.28
11/8/2021	13:15:00	19.8	48.3	6.16
11/8/2021	13:30:00	19.8	48.2	6.19
11/8/2021	13:45:00	19.79	48.2	6.25
11/8/2021	14:00:00	19.77	48.2	6.28
11/8/2021	14:15:00	19.77	48.2	6.29
11/8/2021	14:30:00	19.76	48.1	6.27
11/8/2021	14:45:00	19.77	48.1	6.25
11/8/2021	15:00:00	19.77	48.1	6.25
11/8/2021	15:15:00	19.76	48.1	6.29
11/8/2021	15:30:00	19.74	47.9	6.29
11/8/2021	15:45:00	19.73	48.2	6.3
11/8/2021	16:00:00	19.72	48.2	6.31
11/8/2021	16:15:00	19.7	48.3	5.97
11/8/2021	16:30:00	19.68	48.3	5.9
11/8/2021	16:45:00	19.65	48	5.9
11/8/2021	17:00:00	19.63	48.2	5.97
11/8/2021	17:15:00	19.61	48.3	5.65
11/8/2021	17:30:00	19.61	48.2	5.48
11/8/2021	17:45:00	19.61	48.2	5.51
11/8/2021	18:00:00	19.6	48.3	5.59
11/8/2021	18:15:00	19.62	48.3	5.59
11/8/2021	18:30:00	19.54	47.9	5.65
11/8/2021	18:45:00	19.53	47.9	5.69
11/8/2021	19:00:00	19.54	48.2	5.67
11/8/2021	19:15:00	19.49	48.3	5.78
11/8/2021	19:30:00	19.58	47.9	6.05
11/8/2021	19:45:00	19.56	47.9	6.08
11/8/2021	20:00:00	19.55	48	6.04

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
11/8/2021	20:15:00	19.55	47.9	6.01
11/8/2021	20:30:00	19.55	48	6.02
11/8/2021	20:45:00	19.54	47.8	6.04
11/8/2021	21:00:00	19.53	48.1	6.03
11/8/2021	21:15:00	19.53	48.2	6.09
11/8/2021	21:30:00	19.48	48.1	6.64
11/8/2021	21:45:00	19.47	48.1	6.66
11/8/2021	22:00:00	19.46	48.1	6.52
11/8/2021	22:15:00	19.45	48.3	6.6
11/8/2021	22:30:00	19.45	48.3	6.58
11/8/2021	22:45:00	19.45	48	6.74
11/9/2021	23:00:00	19.44	47.9	6.74
11/9/2021	23:15:00	19.44	48.4	6.72
11/9/2021	23:30:00	19.42	48.1	6.88
11/9/2021	23:45:00	19.39	48	6.61
11/9/2021	0:00:00	19.37	48.3	6.54
11/9/2021	0:15:00	19.35	48.2	6.48
11/9/2021	0:30:00	19.34	48	6.47
11/9/2021	0:45:00	19.33	48.2	6.51
11/9/2021	1:00:00	19.3	48.4	6.5
11/9/2021	1:15:00	19.28	48.4	6.43
11/9/2021	1:30:00	19.27	48.2	6.41
11/9/2021	1:45:00	19.24	48.5	6.37
11/9/2021	2:00:00	19.27	48.4	6.23
11/9/2021	2:15:00	19.3	48.4	6
11/9/2021	2:30:00	19.29	48.5	5.93
11/9/2021	2:45:00	19.28	48.1	5.84
11/9/2021	3:00:00	19.31	48.2	5.64
11/9/2021	3:15:00	19.3	48.4	5.66
11/9/2021	3:30:00	19.3	48.2	5.64
11/9/2021	3:45:00	19.28	48.4	5.53
11/9/2021	4:00:00	19.28	48.4	5.56
11/9/2021	4:15:00	19.28	48.4	5.48
11/9/2021	4:30:00	19.3	48.4	6.33
11/9/2021	4:45:00	19.29	48.4	6.53
11/9/2021	5:00:00	19.28	48.4	6.6
11/9/2021	5:15:00	19.29	48.5	6.84
11/9/2021	5:30:00	19.21	48.4	6.1
11/9/2021	5:45:00	19.2	48.1	6.01
11/9/2021	6:00:00	19.21	48	6.07
11/9/2021	6:15:00	19.24	48	6.18
11/9/2021	6:30:00	19.24	47.8	6.2
11/9/2021	6:45:00	19.25	48.1	6.2
11/9/2021	7:00:00	19.26	47.3	6.26

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
11/9/2021	7:15:00	19.27	48.1	6.2
11/9/2021	7:30:00	19.29	48.4	6.12
11/9/2021	7:45:00	19.31	48	6.27
11/9/2021	8:00:00	19.31	48.1	6.29
11/9/2021	8:15:00	19.31	47.9	6.47
11/9/2021	8:30:00	19.35	48	7.02
11/9/2021	8:45:00	19.34	47.9	7.12
11/9/2021	9:00:00	19.35	47.9	7.22
11/9/2021	9:15:00	19.37	47.7	7.09
11/9/2021	9:30:00	19.36	48.2	7.65
11/9/2021	9:45:00	19.35	48	7.7
11/9/2021	10:00:00	19.36	48	7.64
11/9/2021	10:15:00	19.37	47.9	7.58
11/9/2021	10:30:00	19.38	48	7.54
11/9/2021	10:45:00	19.39	48.1	7.63
11/9/2021	11:00:00	19.4	48.1	7.53
11/9/2021	11:15:00	19.4	48	7.63
11/9/2021	11:30:00	19.41	48.1	7.61
11/9/2021	11:45:00	19.42	47.9	7.6
11/9/2021	12:00:00	19.43	47.9	7.6
11/9/2021	12:15:00	19.43	48.3	7.63
11/9/2021	12:30:00	19.44	48	7.68
11/9/2021	12:45:00	19.45	48.1	7.62
11/9/2021	13:00:00	19.46	48.1	7.65
11/9/2021	13:15:00	19.46	48	7.72
11/9/2021	13:30:00	19.48	47.8	7.61
11/9/2021	13:45:00	19.47	48	7.69
11/9/2021	14:00:00	19.47	48	7.66
11/9/2021	14:15:00	19.46	48.1	7.68
11/9/2021	14:30:00	19.45	48.1	7.72
11/9/2021	14:45:00	19.45	48.1	7.73
11/9/2021	15:00:00	19.45	48.3	7.69
11/9/2021	15:15:00	19.44	48.1	7.67
11/9/2021	15:30:00	19.42	48.3	7.73
11/9/2021	15:45:00	19.42	48.1	7.71
11/9/2021	16:00:00	19.41	48.1	7.69
11/9/2021	16:15:00	19.37	48.1	7.53
11/9/2021	16:30:00	19.32	48.1	6.82
11/9/2021	16:45:00	19.3	48	6.73
11/9/2021	17:00:00	19.28	48.2	6.7
11/9/2021	17:15:00	19.29	48.2	6.88
11/9/2021	17:30:00	19.26	48.1	6.71
11/9/2021	17:45:00	19.29	48	6.6
11/9/2021	18:00:00	19.28	48.1	6.61

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
11/9/2021	18:15:00	19.26	48.1	6.61
11/9/2021	18:30:00	19.24	48.1	6.5
11/9/2021	18:45:00	19.25	48	6.53
11/9/2021	19:00:00	19.26	48.2	6.47
11/9/2021	19:15:00	19.28	48.1	6.45
11/9/2021	19:30:00	19.21	48.1	7.4
11/9/2021	19:45:00	19.21	48.2	7.42
11/9/2021	20:00:00	19.22	48.2	7.47
11/9/2021	20:15:00	19.22	48.2	7.56
11/9/2021	20:30:00	19.21	48.4	7.54
11/9/2021	20:45:00	19.2	48.2	7.61
11/9/2021	21:00:00	19.2	48.2	7.52
11/9/2021	21:15:00	19.19	48.3	7.53
11/9/2021	21:30:00	19.19	48.3	7.55
11/9/2021	21:45:00	19.18	48.2	7.51
11/9/2021	22:00:00	19.17	48.3	7.61
11/9/2021	22:15:00	19.17	48.3	7.6
11/9/2021	22:30:00	19.16	48.5	7.64
11/9/2021	22:45:00	19.17	48.5	7.58
	Max	19.86	48.5	7.73
	Min	19.16	47.3	5.48

Stevens Creek Operations Data (Provided By DESC & USACE)

11/8/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	185.7	158.9	10412	7215
2:00	3160	185.5	158.9	10274	7203
3:00	3160	185.4	158.9	10299	7180
4:00	3080	185.3	158.9	10193	7113
5:00	3160	185.2	158.9	10094	7156
6:00	3760	185.1	158.9	10075	7138
7:00	15495	185	158.9	10022	7124
8:00	27280	182.2	158.9	10068	7161
9:00	8494	185.6	158.9	10597	7350
10:00	8340	186	158.9	10614	7357
11:00	8340	186	158.9	10558	7302
12:00	7800	186.1	158.9	10898	7514
13:00	7720	186.1	158.9	10654	7323
14:00	6980	186.1	158.9	10721	7372
15:00	7960	185.8	158.9	10676	7350
16:00	7800	186.1	158.9	10715	7368
17:00	7280	186.1	158.9	10720	7354
18:00	7280	186.1	159	10729	7383
19:00	9435	186.1	158.9	10701	7339
20:00	14060	186.2	159	10705	7335
21:00	8180	186.3	159	10890	7399
22:00	8110	186.3	159	10836	7407
23:00	3007	186.3	159	10752	7369
24:00:00	2780	186.2		10673	7311
daily avg.	**7611**	**186**	**159**	**10537**	**7297**

Total Generation	**252876**
Projected discharge	8285
Thurmond discharge	**7611**

Stevens Creek Operations Data (Provided By DESC & USACE)

11/9/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	185.9	158.9	10550	7339
2:00	0	185.7	158.9	10516	7282
3:00	0	185.5	158.9	10471	7247
4:00	0	185.3	158.9	10223	7187
5:00	295	185..1	158.9	10131	7131
6:00	4129	184.9	158.9	10022	7103
7:00	27120	184.8	158.9	9911	7064
8:00	23390	185.2	158.9	10311	7194
9:00	22750	185.7	158.9	10462	7241
10:00	10300	186.3	158.9	10747	7351
11:00	2780	186.5	159	10872	7367
12:00	2860	186.3	159.2	12689	8796
13:00	2700	186.2	159.2	12542	8724
14:00	2850	186	159.2	12484	8712
15:00	2770	185.9	159.5	12275	8578
16:00	3235	185.7	159.1	12242	8641
17:00	10175	185.5	159.1	12098	8542
18:00	24150	185.4	159.1	120149	8561
19:00	23070	185.5	159.1	12130	8549
20:00	3170	185.9	159.1	12349	8601
21:00	3100	186.2	159.1	12453	8686
22:00	3170	186.2	159.2	12399	8619
23:00	3100	186.1	159.2	12261	8538
24:00:00	3160	185.9	159.1	12150	8449
daily avg.	**7428**	**186**	**159**	**15935**	**7979**

Total Generation	**382437**
Projected discharge	8289
Thurmond discharge	**7428**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
11/8/2021 0:00	6440
11/8/2021 1:00	6840
11/8/2021 2:00	7110
11/8/2021 3:00	7070
11/8/2021 4:00	7040
11/8/2021 5:00	7010
11/8/2021 6:00	7310
11/8/2021 7:00	7010
11/8/2021 8:00	6960
11/8/2021 9:00	7060
11/8/2021 10:00	7040
11/8/2021 11:00	6840
11/8/2021 12:00	6800
11/8/2021 13:00	6740
11/8/2021 14:00	6920
11/8/2021 15:00	7130
11/8/2021 16:00	7250
11/8/2021 17:00	7350
11/8/2021 18:00	7360
11/8/2021 19:00	7300
11/8/2021 20:00	7410
11/8/2021 21:00	7490
11/8/2021 22:00	7560
11/8/2021 23:00	7420
11/9/2021 0:00	7450
11/9/2021 1:00	7470
11/9/2021 2:00	7490
11/9/2021 3:00	7550
11/9/2021 4:00	7490
11/9/2021 5:00	7490
11/9/2021 6:00	7440
11/9/2021 7:00	7420
11/9/2021 8:00	7570
11/9/2021 9:00	7570
11/9/2021 10:00	7470
11/9/2021 11:00	7500
11/9/2021 12:00	7380
11/9/2021 13:00	7360
11/9/2021 14:00	7540
11/9/2021 15:00	7860
11/9/2021 16:00	7830
11/9/2021 17:00	8180
11/9/2021 18:00	8470
11/9/2021 19:00	8180
11/9/2021 20:00	8260
11/9/2021 21:00	8270
11/9/2021 22:00	8250
11/9/2021 23:00	8210

Stevens Creek Hydroelectric Project
FERC Project No. 2535 – GA, SC
Water Quality Data Summary
December 2021

Location	Temperature (°C)			Dissolved Oxygen (mg/L)		
Thurmond Forebay (Site 8) (12/15/21)	14.31	—	15.17	6.5	—	8.9
Thurmond Tailrace (Site 7) (12/07/21 - 12/08/21)		—			—	
Stevens Creek Res. (Site 6) (12/07/21 - 12/08/21)	15.05	—	15.31	9.2	—	9.5
Stevens Creek Res. (Site 1) (12/07/21 - 12/08/21)	14.90	—	15.27	9.1	—	9.7
Stevens Creek Res. (Site 2) (12/07/21 - 12/08/21)	14.80	—	15.18	9.0	—	9.1
Stevens Creek Tailrace (Site 3) (12/07/21 - 12/08/21)	14.73	—	15.26	9.2	—	9.4
Stevens Creek (Site 5) (12/07/21 - 12/08/21)	10.39	—	10.52	6.0	—	6.7
Stevens Creek (Site 4) (12/07/21 - 12/08/21)	13.48	—	15.23	7.6	—	8.4

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 12/7/2021
Field Team: REH/EGM
Field Meter Model/Number: YSI EXO3 / 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	10:24	surface	6.7	10.5	118	6.1	54
		1M	6.6	10.5	118	6.0	54
		2M	6.6	10.4	117	6.0	54
		3M	6.6	10.4	117	6.0	54
		4M	6.6	10.4	117	6.0	54
		5M	6.6	10.4	117	6.0	54
		6M	6.6	10.4	117	6.0	53
3	11:04	1M	7.1	15.3	47	9.4	94
4	12:23	surface	6.9	15.2	51	8.4	84
		1M	6.9	15.2	51	8.3	83
		2M	6.9	14.4	57	8.1	79
		3M	6.8	14.1	60	7.9	77
		4M	6.8	14.0	61	7.8	76
		5M	6.8	13.9	63	7.8	76
		6M	6.8	13.7	64	7.9	76
		7M	6.8	13.6	68	7.6	73
2	12:36	surface	6.9	15.2	47	9.1	90
		1M	6.9	15.2	47	9.0	90
		2M	6.9	15.2	47	9.0	90
		3M	6.9	15.2	47	9.0	90
		4M	6.9	15.2	47	9.0	90
		5M	6.9	15.2	47	9.0	89
		6M	6.9	15.2	47	9.0	89
1	12:00	surface	7.0	15.3	46	9.7	96
		1M	7.0	15.3	46	9.6	95
		2M	6.9	15.3	46	9.6	95
		3M	6.9	15.3	46	9.5	95
		4M	6.9	15.3	46	9.5	95
1A	11:45	surface	7.0	15.3	46	9.5	95
		1M	7.0	15.3	46	9.5	95
		2M	7.0	15.3	46	9.5	95
		3M	7.0	15.3	46	9.5	95
		4M	7.0	15.3	46	9.5	95

Stevens Creek Project Water Quality Data (Provided By USGS-WRD)

Date: 12/8/2021
Field Team: REH/EGM
Field Meter Model/Number: YSI EXO3 / 17F104114

Site No.	Time (EST)	Depth (meters)	pH	Temperature (degrees C)	Sp. Cond. (us/cm)	DO (mg/L)	DO (% saturation)
5	10:53	surface	6.8	10.5	118	6.7	60
		1M	6.8	10.5	118	6.5	58
		2M	6.8	10.4	118	6.5	58
		3M	6.8	10.4	118	6.4	58
		4M	6.8	10.4	119	6.4	57
		5M	6.8	10.4	119	6.4	57
3	10:17	1M	6.9	14.7	47	9.2	91
4	9:49	surface	6.6	13.6	66	7.9	75
		1M	6.6	13.6	66	7.8	75
		2M	6.6	13.6	67	7.8	75
		3M	6.6	13.6	67	7.8	75
		4M	6.6	13.6	67	7.8	75
		5M	6.5	13.5	68	7.7	73
		6M	6.5	13.5	69	7.6	73
		7M	6.5	13.5	69	7.6	73
		8M	6.5	13.5	69	7.6	73
2	10:04	surface	6.9	14.8	46	9.0	89
		1M	6.9	14.8	46	9.0	89
		2M	6.9	14.8	46	9.0	89
		3M	6.9	14.8	46	9.0	89
		4M	6.9	14.8	46	9.0	89
		5M					
1	11:50	surface	7.0	14.9	46	9.2	91
		1M	7.0	14.9	46	9.2	91
		2M	7.0	14.9	46	9.2	91
		3M	7.0	14.9	46	9.1	90
		4M	7.0	14.9	46	9.1	90
		5M	7.0	14.9	46	9.1	90
1A	11:39	surface	7.0	15.1	45	9.3	92
		1M	7.0	15.1	45	9.3	92
		2M	7.0	15.1	46	9.3	92
		3M	7.0	15.1	45	9.3	92
		4M	7.0	15.1	45	9.2	92

JST Forebay Water Quality Data (Provided By USACE-ERDC)

December 15, 2021

Time	Temp	LDO	SpCond	Depth
HHMMSS	°C	mg/l	µS/cm	meters
134050	15.17	8.85	44.2	0.4
134126	15.17	8.77	44.4	2.34
134153	15.14	8.72	44.3	4.11
134234	15.14	8.72	44.2	6.08
134300	15.12	8.69	44.2	8.36
134346	14.78	8.43	44.2	10.11
134438	14.76	8.36	44.3	12.18
134517	14.75	8.26	44.3	14.16
134546	14.75	8.23	44.2	16.21
134618	14.74	8.21	44.3	18.09
134658	14.72	8.26	44.3	20.04
134730	14.7	8.21	43.9	22.2
134855	14.64	7.25	43.2	24.31
134953	14.5	6.84	42.7	26.36
135117	14.39	6.54	43.1	28.38
135143	14.38	6.58	43.1	30.26
135224	14.36	6.74	43.2	32.2
135314	14.33	6.92	43.3	34.3
135359	14.33	6.9	43.3	36.11
135436	14.32	6.78	43.4	38.27
135509	14.32	6.71	43.4	40.11
135555	14.32	6.71	43.6	42.16
135622	14.31	6.72	43.9	44.13
Max:	**15.17**	**8.85**	**44.4**	**44.13**
Min:	**14.31**	**6.54**	**42.7**	**0.4**

JST Tailrace Water Quality Data (Provided By USACE-ERDC)

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
12/7/2021	0:00:00	15.64	47.2	8.53
12/7/2021	0:15:00	15.64	47.1	8.56
12/7/2021	0:30:00	15.65	47.2	9.44
12/7/2021	0:45:00	15.65	47.2	9.33
12/7/2021	1:00:00	15.65	47.2	9.14
12/7/2021	1:15:00	15.64	47.2	9.07
12/7/2021	1:30:00	15.64	47.2	9.08
12/7/2021	1:45:00	15.63	47.2	9.05
12/7/2021	2:00:00	15.62	47.2	8.95
12/7/2021	2:15:00	15.61	47.2	8.89
12/7/2021	2:30:00	15.59	47.2	8.83
12/7/2021	2:45:00	15.59	47.1	8.88
12/7/2021	3:00:00	15.57	47.1	8.72
12/7/2021	3:15:00	15.57	47.2	8.72
12/7/2021	3:30:00	15.57	47.2	8.8
12/7/2021	3:45:00	15.55	47.2	8.7
12/7/2021	4:00:00	15.53	47.1	8.7
12/7/2021	4:15:00	15.53	47.2	8.59
12/7/2021	4:30:00	15.58	47.4	8.86
12/7/2021	4:45:00	15.61	47.2	8.96
12/7/2021	5:00:00	15.62	47.1	9.04
12/7/2021	5:15:00	15.62	47.1	8.99
12/7/2021	5:30:00	15.63	47	9.02
12/7/2021	5:45:00	15.63	47.1	9.05
12/7/2021	6:00:00	15.62	47	9.06
12/7/2021	6:15:00	15.63	47.2	9.07
12/7/2021	6:30:00	15.62	47.4	8.75
12/7/2021	6:45:00	15.61	47.1	8.71
12/7/2021	7:00:00	15.61	47.2	8.74
12/7/2021	7:15:00	15.6	47.2	8.65
12/7/2021	7:30:00	15.59	47.1	8.66
12/7/2021	7:45:00	15.59	47.1	8.61
12/7/2021	8:00:00	15.58	47.2	8.62
12/7/2021	8:15:00	15.58	47.4	8.6
12/7/2021	8:30:00	15.57	47	8.55
12/7/2021	8:45:00	15.57	47.1	8.56
12/7/2021	9:00:00	15.58	47.2	8.5
12/7/2021	9:15:00	15.57	47.1	8.57
12/7/2021	9:30:00	15.57	47.1	8.59
12/7/2021	9:45:00	15.57	47.1	8.55
12/7/2021	10:00:00	15.55	47.2	8.61

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
12/7/2021	10:15:00	15.56	47.1	8.63
12/7/2021	10:30:00	15.58	47.2	8.7
12/7/2021	10:45:00	15.58	47.2	8.77
12/7/2021	11:00:00	15.58	46.9	8.76
12/7/2021	11:15:00	15.59	47.1	8.77
12/7/2021	11:30:00	15.61	47.4	8.94
12/7/2021	11:45:00	15.61	47.2	8.9
12/7/2021	12:00:00	15.62	47	8.92
12/7/2021	12:15:00	15.62	47.2	8.96
12/7/2021	12:30:00	15.62	47.1	8.95
12/7/2021	12:45:00	15.63	47.2	8.93
12/7/2021	13:00:00	15.63	47.2	9.01
12/7/2021	13:15:00	15.64	47.2	9.02
12/7/2021	13:30:00	15.63	47.4	8.95
12/7/2021	13:45:00	15.65	47.4	8.93
12/7/2021	14:00:00	15.64	47.4	8.98
12/7/2021	14:15:00	15.64	46.9	8.9
12/7/2021	14:30:00	15.65	47.4	8.89
12/7/2021	14:45:00	15.66	47.5	8.92
12/7/2021	15:00:00	15.64	47.1	9.01
12/7/2021	15:15:00	15.62	47.4	8.91
12/7/2021	15:30:00	15.63	47.2	8.91
12/7/2021	15:45:00	15.62	47.2	8.86
12/7/2021	16:00:00	15.62	47.1	8.87
12/7/2021	16:15:00	15.59	47.4	9.02
12/7/2021	16:30:00	15.57	47.1	8.34
12/7/2021	16:45:00	15.57	47.1	8.22
12/7/2021	17:00:00	15.55	47.2	8.15
12/7/2021	17:15:00	15.55	47	8.08
12/7/2021	17:30:00	15.54	47.1	8.05
12/7/2021	17:45:00	15.55	47.2	8.18
12/7/2021	18:00:00	15.56	47.2	8.16
12/7/2021	18:15:00	15.53	47.1	8.18
12/7/2021	18:30:00	15.55	47.4	8.19
12/7/2021	18:45:00	15.53	47.1	8.15
12/7/2021	19:00:00	15.52	47.1	8.13
12/7/2021	19:15:00	15.5	47.1	8.17
12/7/2021	19:30:00	15.52	47.1	8.21
12/7/2021	19:45:00	15.52	47.1	8.21
12/7/2021	20:00:00	15.51	47.2	8.23
12/7/2021	20:15:00	15.52	47.2	8.21
12/7/2021	20:30:00	15.52	47.1	8.18
12/7/2021	20:45:00	15.49	47.2	8.21
12/7/2021	21:00:00	15.5	47.2	8.09

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
12/7/2021	21:15:00	15.48	47.4	8.18
12/7/2021	21:30:00	15.49	47.1	8.14
12/7/2021	21:45:00	15.5	47.1	8.16
12/7/2021	22:00:00	15.5	47	8.17
12/7/2021	22:15:00	15.47	47.1	8.24
12/7/2021	22:30:00	15.48	47.2	8.13
12/7/2021	22:45:00	15.49	47.1	8.21
12/7/2021	23:00:00	15.47	47.1	8.12
12/7/2021	23:15:00	15.48	47.1	8.12
12/7/2021	23:30:00	15.52	47.1	9.1
12/7/2021	23:45:00	15.51	47	9.42
12/8/2021	0:00:00	15.5	47.4	9.23
12/8/2021	0:15:00	15.49	47	8.97
12/8/2021	0:30:00	15.48	47.2	8.93
12/8/2021	0:45:00	15.48	47	8.96
12/8/2021	1:00:00	15.48	47.2	8.9
12/8/2021	1:15:00	15.46	47	8.9
12/8/2021	1:30:00	15.45	47	8.9
12/8/2021	1:45:00	15.46	47.2	8.84
12/8/2021	2:00:00	15.46	47.2	8.82
12/8/2021	2:15:00	15.45	47.2	8.9
12/8/2021	2:30:00	15.45	47.1	8.78
12/8/2021	2:45:00	15.45	47	8.82
12/8/2021	3:00:00	15.44	47.1	8.71
12/8/2021	3:15:00	15.44	47.2	8.72
12/8/2021	3:30:00	15.45	47.2	8.38
12/8/2021	3:45:00	15.45	47.5	8.25
12/8/2021	4:00:00	15.45	47.5	8.2
12/8/2021	4:15:00	15.46	47.7	8.09
12/8/2021	4:30:00	15.44	47.4	8.45
12/8/2021	4:45:00	15.42	47.1	8.59
12/8/2021	5:00:00	15.42	47.1	8.64
12/8/2021	5:15:00	15.4	47.1	8.64
12/8/2021	5:30:00	15.41	46.9	8.5
12/8/2021	5:45:00	15.4	47.1	8.39
12/8/2021	6:00:00	15.39	47	8.4
12/8/2021	6:15:00	15.4	47	8.53
12/8/2021	6:30:00	15.4	47.1	8.61
12/8/2021	6:45:00	15.42	47.1	8.68
12/8/2021	7:00:00	15.42	46.9	8.62
12/8/2021	7:15:00	15.44	46.9	8.69
12/8/2021	7:30:00	15.43	46.9	8.67
12/8/2021	7:45:00	15.42	47	8.61
12/8/2021	8:00:00	15.44	47	8.71

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
12/8/2021	8:15:00	15.44	46.9	8.69
12/8/2021	8:30:00	15.43	47	8.49
12/8/2021	8:45:00	15.43	47	8.57
12/8/2021	9:00:00	15.43	47.1	8.49
12/8/2021	9:15:00	15.42	46.9	8.56
12/8/2021	9:30:00	15.42	46.7	8.65
12/8/2021	9:45:00	15.42	46.9	8.51
12/8/2021	10:00:00	15.41	46.9	8.51
12/8/2021	10:15:00	15.42	47	8.45
12/8/2021	10:30:00	15.43	47.1	8.81
12/8/2021	10:45:00	15.42	47	8.78
12/8/2021	11:00:00	15.41	46.7	8.81
12/8/2021	11:15:00	15.41	46.7	8.84
12/8/2021	11:30:00	15.42	46.9	9.16
12/8/2021	11:45:00	15.43	46.7	9.3
12/8/2021	12:00:00	15.42	46.6	9.26
12/8/2021	12:15:00	15.42	46.9	9.32
12/8/2021	12:30:00	15.41	46.9	9.32
12/8/2021	12:45:00	15.42	46.9	9.23
12/8/2021	13:00:00	15.42	46.9	9.31
12/8/2021	13:15:00	15.42	46.9	9.31
12/8/2021	13:30:00	15.42	47	9.34
12/8/2021	13:45:00	15.42	46.7	9.18
12/8/2021	14:00:00	15.42	46.9	9.35
12/8/2021	14:15:00	15.42	46.7	9.25
12/8/2021	14:30:00	15.41	46.7	9.35
12/8/2021	14:45:00	15.41	46.7	9.3
12/8/2021	15:00:00	15.4	46.7	9.25
12/8/2021	15:15:00	15.39	47	9.12
12/8/2021	15:30:00	15.4	47	9.17
12/8/2021	15:45:00	15.39	46.9	9.21
12/8/2021	16:00:00	15.4	46.6	8.97
12/8/2021	16:15:00	15.39	47.1	8.8
12/8/2021	16:30:00	15.4	47	8.61
12/8/2021	16:45:00	15.39	46.7	8.6
12/8/2021	17:00:00	15.41	47.1	8.47
12/8/2021	17:15:00	15.45	47.4	8.21
12/8/2021	17:30:00	15.54	47	8.33
12/8/2021	17:45:00	15.57	46.9	8.29
12/8/2021	18:00:00	15.58	47	8.31
12/8/2021	18:15:00	15.59	47	8.27
12/8/2021	18:30:00	15.61	47.1	8.54
12/8/2021	18:45:00	15.64	47	8.49
12/8/2021	19:00:00	15.66	47.2	8.58

Date	Time	Temp	SpCond	LDO
MMDDYY	HHMMSS	°C	µS/cm	mg/l
12/8/2021	19:15:00	15.65	47.2	8.63
12/8/2021	19:30:00	15.66	47.4	8.58
12/8/2021	19:45:00	15.66	47.4	8.51
12/8/2021	20:00:00	15.66	47.6	8.62
12/8/2021	20:15:00	15.64	46.9	8.5
12/8/2021	20:30:00	15.65	47	8.59
12/8/2021	20:45:00	15.63	47.4	8.53
12/8/2021	21:00:00	15.62	47.4	8.49
12/8/2021	21:15:00	15.6	47.2	8.53
12/8/2021	21:30:00	15.55	47.6	8.59
12/8/2021	21:45:00	15.52	47.4	8.39
12/8/2021	22:00:00	15.49	47.1	8.26
12/8/2021	22:15:00	15.44	47.2	8.09
12/8/2021	22:30:00	15.42	47.1	7.93
12/8/2021	22:45:00	15.41	47.2	7.94
12/8/2021	23:00:00	15.39	47	7.87
12/8/2021	23:15:00	15.39	47.2	7.91
12/8/2021	23:30:00	15.39	47.1	7.9
12/8/2021	23:45:00	15.38	47.4	7.92
	Max	15.66	47.7	9.44
	Min	15.38	46.6	7.87

Stevens Creek Operations Data (Provided By DESC & USACE)

12/7/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	187.9	159.3	4521	2574
2:00	0	187.6	159.1	4769	2814
3:00	590	187.3	158.9	4771	2884
4:00	8007	187	158.8	4745	2901
5:00	12030	186.9	158.6	4766	2952
6:00	13140	187	158.6	5664	3581
7:00	13140	187	158.7	5807	3703
8:00	13310	187.1	158.8	6547	4150
9:00	13230	187.2	158.9	6540	4128
10:00	12560	187.3	158.9	6577	4140
11:00	12270	187.3	159	6564	4106
12:00	12270	187.4	159	6523	4129
13:00	12410	187.4	159	6538	4095
14:00	12330	187.4	159	6615	4117
15:00	12490	187.4	159.1	6806	4253
16:00	19690	187.4	159.1	7148	4520
17:00	20120	187.5	159.2	7249	4565
18:00	20220	187.6	159.3	7282	4600
19:00	20320	187.7	159.4	7481	4657
20:00	20200	187.8	159.5	7561	4733
21:00	20640	188	159.6	7593	4747
22:00	20160	188.1	159.6	7674	4750
23:00	884	188.1	159.7	7622	4690
24:00:00	0	188.2	159.8	7547	4615
daily avg.	**12084**	**187**	**159**	**6455**	**4017**

Total Generation	**154910**
Projected discharge	13235
Thurmond discharge	**12084**

Stevens Creek Operations Data (Provided By DESC & USACE)

12/8/2021

Hour	Thurmond Discharges	Headwater	Tailrace	Generation	Estimated Total CFS
1:00	0	187.8	159.6	7313	4543
2:00	0	187.5	159.4	6958	4324
3:00	295	187.3	159.2	6617	4172
4:00	4140	187	159.1	6594	4115
5:00	4957	186.8	158.9	6543	4197
6:00	10100	186.8	158.8	6674	4302
7:00	12420	186.7	158.8	6757	4335
8:00	13140	186.8	158.8	6747	4331
9:00	13140	186.9	158.8	7084	4532
10:00	7820	187	159	7829	5085
11:00	6060	187	159.1	8338	5399
12:00	2830	187	159	8346	5443
13:00	0	186.81	159	8211	5359
14:00	0	86.7	158.8	6489	4206
15:00	0	186.4	158.8	8161	5415
16:00	1769	186.2	158.7	8107	5445
17:00	34270	186	158.6	8049	5445
18:00	38010	186	158.5	8122	5470
19:00	38430	186.6	158.7	8378	5506
20:00	37750	187.2	158.9	8540	54995
21:00	20627	187.7	159.3	8503	5424
22:00	17880	188.1	159.6	8372	5219
23:00	17880	188.3	159.8	7201	4300
24:00:00	15390	188.4	159.8	5247	2982
daily avg.	**12371**	**183**	**159**	**7466**	**6856**

Total Generation	**179180**
Projected discharge	16262
Thurmond discharge	**12371**

USGS Gage 02197000 Provisional Hourly Flow Data (Provided By USGS-WRD)

Station: 02197000 (Savannah River at Augusta)
PCode: FLOW (Instantaneous Discharge)

Date-Time	Flow (cfs)
12/7/2021 0:00	13100
12/7/2021 1:00	13200
12/7/2021 2:00	13200
12/7/2021 3:00	12900
12/7/2021 4:00	13100
12/7/2021 5:00	13200
12/7/2021 6:00	13100
12/7/2021 7:00	13200
12/7/2021 8:00	12800
12/7/2021 9:00	12800
12/7/2021 10:00	12700
12/7/2021 11:00	12800
12/7/2021 12:00	11900
12/7/2021 13:00	11500
12/7/2021 14:00	11100
12/7/2021 15:00	11100
12/7/2021 16:00	10800
12/7/2021 17:00	10800
12/7/2021 18:00	10700
12/7/2021 19:00	11100
12/7/2021 20:00	11200
12/7/2021 21:00	11500
12/7/2021 22:00	11700
12/7/2021 23:00	11500
12/8/2021 0:00	12700
12/8/2021 1:00	13200
12/8/2021 2:00	13500
12/8/2021 3:00	13600
12/8/2021 4:00	14300
12/8/2021 5:00	14600
12/8/2021 6:00	14900
12/8/2021 7:00	14900
12/8/2021 8:00	14000
12/8/2021 9:00	13300
12/8/2021 10:00	13100
12/8/2021 11:00	12700
12/8/2021 12:00	12500
12/8/2021 13:00	12300
12/8/2021 14:00	12100
12/8/2021 15:00	12000
12/8/2021 16:00	11900
12/8/2021 17:00	11700
12/8/2021 18:00	11500
12/8/2021 19:00	11100
12/8/2021 20:00	10900
12/8/2021 21:00	9830
12/8/2021 22:00	9460
12/8/2021 23:00	9160

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Document Content(s)

APPENDIX G

DAILY AVERAGE (MIN - MAX) DATA FOR CONTINUOUS MONITORING SITES

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
1/29/2021	N/A	10.68 (10.489 - 10.775)	N/A	10.60 (10.274 - 10.757)	10.54 (10.145 - 10.815)
1/30/2021	N/A	10.21 (9.897 - 10.553)	N/A	10.14 (9.855 - 10.442)	10.05 (9.585 - 10.73)
1/31/2021	N/A	10.00 (9.83 - 10.132)	N/A	9.94 (9.785 - 10.052)	9.81 (9.612 - 10.023)
2/1/2021	N/A	9.89 (9.748 - 10.078)	N/A	9.83 (9.698 - 10.012)	9.34 (8.755 - 9.695)
2/2/2021	N/A	9.81 (9.355 - 10.212)	N/A	9.75 (9.34 - 10.188)	8.29 (7.496 - 9.181)
2/3/2021	N/A	9.69 (9.126 - 10.173)	9.24 (8.769 - 9.652)	9.61 (9.055 - 10.102)	8.56 (7.188 - 9.447)
2/4/2021	N/A	9.63 (9.187 - 9.962)	8.61 (7.068 - 9.716)	9.57 (9.168 - 9.898)	8.71 (7.049 - 9.798)
2/5/2021	N/A	9.85 (9.722 - 10.008)	8.82 (7.054 - 10.021)	9.79 (9.66 - 9.951)	8.95 (7.293 - 9.998)
2/6/2021	N/A	9.78 (9.718 - 9.9)	8.93 (7.307 - 9.728)	9.70 (9.626 - 9.827)	9.07 (7.811 - 9.771)
2/7/2021	N/A	9.76 (9.48 - 10.087)	8.88 (7.125 - 9.936)	9.70 (9.39 - 10.028)	9.07 (7.7 - 9.993)
2/8/2021	N/A	9.90 (9.453 - 10.298)	9.32 (7.282 - 10.357)	9.84 (9.411 - 10.237)	9.47 (7.516 - 10.542)
2/9/2021	9.17 (9.11 - 9.221)	10.13 (9.846 - 10.509)	9.87 (8.082 - 10.778)	10.08 (9.785 - 10.444)	9.94 (8.291 - 10.807)
2/10/2021	9.81 (9.166 - 10.735)	10.43 (10.17 - 10.666)	10.72 (9.153 - 12.03)	10.39 (10.081 - 10.589)	10.80 (9.539 - 12.004)
2/11/2021	11.41 (10.817 - 12.225)	10.38 (10.092 - 10.647)	11.09 (10.376 - 12.305)	10.35 (10.076 - 10.592)	11.21 (10.605 - 11.941)
2/12/2021	12.27 (12.148 - 12.401)	10.08 (9.787 - 10.465)	10.82 (10.36 - 11.385)	10.02 (9.737 - 10.39)	10.81 (10.085 - 11.321)
2/13/2021	11.20 (9.732 - 12.213)	9.76 (9.548 - 9.986)	10.27 (9.59 - 10.837)	9.67 (9.431 - 9.863)	10.16 (9.457 - 10.681)
2/14/2021	8.31 (8.021 - 9.58)	9.41 (9.354 - 9.524)	8.91 (7.979 - 11.146)	9.42 (9.277 - 9.742)	9.09 (8.042 - 11.223)
2/15/2021	8.17 (8.067 - 8.37)	9.42 (9.293 - 9.514)	8.10 (7.977 - 8.194)	9.34 (9.151 - 9.475)	8.16 (8.039 - 8.267)
2/16/2021	8.96 (8.421 - 9.361)	9.74 (9.523 - 10.006)	8.82 (8.22 - 9.417)	9.73 (9.479 - 10.161)	8.89 (8.288 - 9.52)
2/17/2021	8.74 (8.45 - 9.068)	9.78 (9.334 - 10.096)	8.90 (8.662 - 9.083)	9.74 (9.283 - 10.07)	8.97 (8.783 - 9.181)
2/18/2021	8.48 (8.01 - 8.676)	9.73 (9.336 - 10.053)	8.55 (8.223 - 8.794)	9.63 (9.235 - 9.99)	8.64 (8.351 - 8.896)
2/19/2021	7.85 (7.544 - 8.105)	9.24 (9.077 - 9.413)	7.88 (7.608 - 8.122)	9.10 (8.708 - 9.382)	7.96 (7.684 - 8.254)
2/20/2021	8.18 (7.854 - 8.551)	9.58 (9.227 - 9.969)	8.13 (7.739 - 8.608)	9.52 (9.17 - 9.958)	8.19 (7.78 - 8.674)
2/21/2021	8.30 (7.862 - 8.666)	9.79 (9.345 - 10.113)	8.54 (7.926 - 9.541)	9.73 (9.322 - 10.052)	8.62 (7.947 - 9.581)
2/22/2021	8.83 (8.578 - 9.246)	9.89 (9.705 - 10.096)	9.45 (8.514 - 10.114)	9.82 (9.611 - 10.002)	9.53 (8.641 - 10.21)
2/23/2021	9.47 (9.096 - 9.829)	9.85 (9.366 - 10.465)	9.74 (8.743 - 10.761)	9.79 (9.319 - 10.366)	9.78 (8.785 - 10.644)
2/24/2021	10.05 (9.762 - 10.374)	10.06 (9.656 - 10.579)	10.23 (9.421 - 10.979)	10.00 (9.584 - 10.509)	10.27 (9.485 - 10.835)
2/25/2021	10.84 (10.259 - 11.365)	10.27 (9.707 - 10.849)	10.93 (10.104 - 11.842)	10.22 (9.628 - 10.77)	10.98 (10.213 - 11.838)
2/26/2021	11.55 (11.251 - 11.882)	10.19 (10.016 - 10.343)	11.28 (10.609 - 12.031)	10.11 (9.923 - 10.255)	11.17 (10.675 - 11.713)

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
2/27/2021	11.73 (11.252 - 12.526)	10.33 (9.897 - 10.95)	11.47 (10.389 - 12.178)	10.30 (9.872 - 10.859)	11.49 (10.383 - 12.193)
2/28/2021	12.96 (12.269 - 13.724)	10.51 (10.203 - 10.994)	11.90 (10.702 - 12.626)	10.46 (10.196 - 10.916)	11.63 (10.492 - 12.437)
3/1/2021	14.59 (13.857 - 15.166)	10.68 (10.335 - 11.128)	12.04 (11.085 - 13.204)	10.63 (10.306 - 11.007)	11.69 (11.003 - 13.135)
3/2/2021	14.88 (14.625 - 15.053)	10.41 (10.055 - 10.78)	11.31 (9.238 - 13.916)	10.33 (9.969 - 10.8)	11.27 (10.161 - 13.711)
3/3/2021	13.55 (13.042 - 14.549)	10.27 (9.811 - 10.866)	11.28 (9.768 - 12.62)	10.22 (9.752 - 10.785)	11.11 (9.769 - 12.616)
3/4/2021	12.37 (11.826 - 12.882)	10.72 (10.071 - 11.42)	12.36 (10.535 - 13.766)	10.68 (10.038 - 11.362)	12.28 (10.299 - 13.83)
3/5/2021	12.25 (11.73 - 12.724)	11.15 (10.65 - 11.641)	12.43 (10.929 - 13.154)	11.10 (10.639 - 11.507)	12.45 (10.797 - 13.185)
3/6/2021	11.89 (11.634 - 12.271)	10.86 (10.264 - 11.374)	12.04 (11.346 - 12.849)	10.78 (10.205 - 11.329)	12.08 (11.326 - 12.855)
3/7/2021	11.06 (10.587 - 11.57)	10.27 (9.93 - 10.685)	11.21 (9.929 - 11.94)	10.23 (9.882 - 10.656)	11.24 (10.026 - 11.841)
3/8/2021	10.58 (9.867 - 11.214)	10.69 (10.268 - 11.13)	11.27 (10.155 - 11.91)	10.66 (10.226 - 11.147)	11.24 (10.364 - 11.908)
3/9/2021	10.68 (10.007 - 11.229)	11.01 (10.6 - 11.348)	11.66 (10.613 - 12.192)	10.99 (10.585 - 11.402)	11.66 (10.782 - 12.084)
3/10/2021	11.24 (10.437 - 11.979)	11.22 (10.645 - 11.617)	12.00 (10.985 - 12.63)	11.21 (10.688 - 11.651)	12.01 (11.046 - 12.595)
3/11/2021	12.25 (11.502 - 13.383)	11.83 (11.425 - 12.385)	12.20 (11.705 - 14.252)	11.80 (11.363 - 12.273)	12.61 (11.889 - 13.541)
3/12/2021	13.86 (12.672 - 15.557)	11.71 (11.495 - 11.94)	12.77 (12.131 - 14.053)	11.72 (11.478 - 11.899)	13.60 (12.938 - 14.421)
3/13/2021	14.63 (13.854 - 16.616)	11.60 (11.419 - 11.9)	13.87 (13.178 - 15.27)	11.61 (11.403 - 11.814)	14.13 (12.743 - 15.522)
3/14/2021	15.77 (14.628 - 16.907)	11.48 (11.05 - 12.205)	14.22 (11.862 - 15.686)	11.65 (11.166 - 12.178)	13.91 (12.076 - 14.539)
3/15/2021	16.55 (16.129 - 17.287)	11.01 (10.633 - 11.52)	13.75 (11.366 - 15.475)	11.11 (10.606 - 11.489)	13.18 (11.484 - 13.916)
3/16/2021	16.23 (15.862 - 16.67)	10.81 (10.418 - 11.282)	12.82 (10.919 - 14.974)	10.80 (10.36 - 11.449)	12.26 (10.672 - 13.429)
3/17/2021	13.07 (11.276 - 15.832)	11.17 (10.293 - 13.878)	13.19 (11.383 - 15.629)	11.26 (10.291 - 13.34)	13.13 (11.35 - 15.797)
3/18/2021	12.54 (11.295 - 13.751)	11.75 (11.191 - 12.699)	12.21 (11.358 - 13.616)	11.86 (11.166 - 12.699)	12.31 (11.528 - 13.58)
3/19/2021	14.17 (13.703 - 14.589)	11.97 (11.408 - 12.364)	13.33 (12.934 - 13.745)	11.98 (11.358 - 12.341)	13.33 (12.567 - 13.754)
3/20/2021	13.94 (13.488 - 14.363)	11.56 (11.13 - 12.093)	13.79 (12.581 - 14.451)	11.64 (11.185 - 12.309)	13.73 (12.594 - 14.573)
3/21/2021	13.79 (13.399 - 14.121)	11.62 (11.411 - 11.897)	13.39 (11.379 - 14.15)	11.69 (11.332 - 12.053)	13.39 (11.589 - 14.121)
3/22/2021	14.24 (13.491 - 15.061)	12.24 (11.63 - 13.058)	13.71 (11.757 - 15.092)	12.34 (11.673 - 13.306)	13.72 (11.964 - 14.839)
3/23/2021	15.23 (14.662 - 15.883)	12.76 (12.294 - 13.214)	14.48 (12.456 - 15.729)	12.89 (12.262 - 13.465)	14.24 (12.646 - 15.182)
3/24/2021	16.19 (15.672 - 16.696)	12.98 (12.751 - 13.392)	14.24 (12.71 - 15.402)	13.13 (12.715 - 13.516)	14.13 (13.195 - 14.769)
3/25/2021	17.57 (16.215 - 19.604)	12.83 (12.483 - 13.426)	15.65 (13.898 - 17.599)	12.95 (12.427 - 13.325)	14.68 (13.435 - 16.867)
3/26/2021	18.19 (17.91 - 18.57)	12.19 (11.539 - 12.589)	15.84 (13.489 - 17.314)	12.62 (11.991 - 13.168)	15.53 (13.138 - 17.021)
3/27/2021	18.63 (18.288 - 18.987)	12.04 (11.494 - 12.749)	15.78 (13.696 - 17.449)	N/A	15.27 (12.946 - 17.076)

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
3/28/2021	19.31 (18.948 - 19.63)	12.28 (11.865 - 12.754)	15.63 (13.66 - 19.137)	N/A	14.84 (13.152 - 19.137)
3/29/2021	19.33 (19.043 - 19.574)	12.54 (11.966 - 13.222)	14.42 (12.497 - 17.259)	N/A	13.68 (12.206 - 16.255)
3/30/2021	18.51 (18.118 - 18.944)	12.21 (11.926 - 12.49)	14.08 (12.788 - 16.841)	N/A	13.06 (12.459 - 13.684)
3/31/2021	17.92 (17.699 - 18.679)	12.46 (12.1 - 12.896)	14.28 (12.514 - 15.873)	N/A	13.29 (12.633 - 13.943)
4/1/2021	17.84 (17.471 - 18.173)	13.03 (12.409 - 13.799)	15.76 (14.255 - 17.568)	N/A	14.12 (13.394 - 14.964)
4/2/2021	16.32 (15.616 - 17.352)	12.92 (6.174 - 13.835)	14.77 (9.364 - 15.692)	N/A	13.90 (13.259 - 14.793)
4/3/2021	14.94 (14.627 - 15.521)	12.99 (12.454 - 13.53)	13.72 (13.009 - 14.487)	N/A	13.49 (12.77 - 14.179)
4/4/2021	14.35 (14.109 - 14.708)	12.86 (12.202 - 13.637)	13.66 (12.737 - 14.592)	N/A	13.38 (12.651 - 14.129)
4/5/2021	14.80 (13.996 - 15.688)	13.24 (12.487 - 14.206)	14.84 (13.69 - 15.947)	N/A	14.48 (13.066 - 15.726)
4/6/2021	15.88 (14.975 - 17.375)	13.58 (13.049 - 14.325)	15.45 (14.842 - 16.344)	N/A	15.61 (15.237 - 16.444)
4/7/2021	17.13 (16.089 - 19.01)	13.68 (13.191 - 14.529)	15.97 (14.842 - 16.737)	N/A	15.67 (14.736 - 16.572)
4/8/2021	18.20 (17.387 - 19.76)	13.49 (13.138 - 14.1)	15.98 (14.441 - 17.162)	N/A	15.58 (14.325 - 16.698)
4/9/2021	18.67 (18.357 - 19.024)	13.41 (13.155 - 13.774)	16.02 (13.495 - 17.711)	N/A	15.38 (13.772 - 16.423)
4/10/2021	18.83 (18.521 - 19.113)	13.30 (12.987 - 13.729)	15.67 (13.747 - 17.514)	N/A	15.00 (13.811 - 15.809)
4/11/2021	18.98 (18.364 - 19.63)	13.42 (12.86 - 14.332)	15.91 (14.492 - 17.561)	N/A	15.53 (14.762 - 16.577)
4/12/2021	19.18 (18.381 - 19.965)	13.74 (13.074 - 14.848)	16.71 (14.775 - 18.573)	N/A	16.03 (15.154 - 16.939)
4/13/2021	19.64 (18.831 - 20.45)	13.97 (13.38 - 15.003)	17.05 (15.095 - 18.281)	N/A	16.31 (15.226 - 16.894)
4/14/2021	20.03 (19.548 - 21.621)	13.64 (13.171 - 14.27)	16.23 (14.609 - 17.693)	N/A	16.15 (14.647 - 17.525)
4/15/2021	20.64 (20.107 - 21.513)	13.89 (13.519 - 14.378)	16.82 (14.742 - 19.09)	N/A	16.59 (15.241 - 18.444)
4/16/2021	20.21 (19.604 - 20.889)	13.81 (13.406 - 14.297)	16.65 (14.299 - 18.511)	N/A	16.44 (14.278 - 18.118)
4/17/2021	20.35 (19.494 - 21.739)	14.00 (13.621 - 14.449)	17.15 (15.178 - 18.778)	N/A	16.55 (14.805 - 17.885)
4/18/2021	20.18 (19.197 - 21.404)	14.06 (13.506 - 14.648)	16.54 (14.357 - 18.942)	N/A	16.00 (14.372 - 17.396)
4/19/2021	20.09 (19.174 - 21.26)	14.31 (13.816 - 14.822)	17.51 (15.321 - 19.304)	N/A	16.55 (15.257 - 17.626)
4/20/2021	19.58 (19.189 - 20.069)	13.84 (13.481 - 14.221)	16.71 (14.607 - 17.82)	N/A	15.91 (14.148 - 17.171)
4/21/2021	19.78 (18.841 - 21.189)	13.71 (13.147 - 14.425)	16.02 (15.127 - 17.593)	N/A	15.71 (14.857 - 17.285)
4/22/2021	19.03 (18.275 - 19.738)	14.45 (13.736 - 15.498)	15.55 (13.506 - 17.254)	N/A	15.70 (14.017 - 17.346)
4/23/2021	18.33 (17.48 - 19.603)	14.18 (13.743 - 14.624)	15.83 (14.413 - 16.922)	N/A	15.87 (14.93 - 16.99)
4/24/2021	17.92 (17.48 - 18.374)	13.71 (13.497 - 13.922)	15.41 (14.297 - 17.332)	N/A	15.07 (14.278 - 16.254)
4/25/2021	17.56 (16.9 - 18.95)	14.19 (13.593 - 15.298)	15.98 (14.518 - 17.055)	N/A	16.06 (14.607 - 16.915)

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
4/26/2021	17.76 (17.023 - 18.532)	14.81 (14.297 - 15.61)	17.19 (15.777 - 18.125)	N/A	17.26 (16.297 - 17.993)
4/27/2021	18.69 (17.757 - 20.263)	14.93 (14.382 - 15.924)	18.11 (16.799 - 18.888)	N/A	17.38 (16.344 - 18.554)
4/28/2021	19.73 (18.8 - 21.439)	14.71 (14.134 - 15.684)	17.87 (16.199 - 18.837)	N/A	17.64 (16.407 - 18.521)
4/29/2021	20.73 (19.876 - 22.347)	14.97 (14.06 - 16.139)	18.47 (16.143 - 21.019)	N/A	17.70 (16.267 - 19.029)
4/30/2021	21.66 (20.926 - 23.05)	16.14 (15.455 - 17.259)	19.61 (17.139 - 22.836)	N/A	18.23 (17.011 - 19.513)
5/1/2021	21.85 (21.11 - 22.864)	15.82 (15.128 - 16.753)	18.75 (16.905 - 20.651)	N/A	18.53 (17.624 - 19.844)
5/2/2021	22.23 (21.45 - 23.499)	16.16 (15.656 - 17.159)	19.82 (17.143 - 21.331)	N/A	18.34 (17.343 - 19.344)
5/3/2021	22.44 (22.112 - 22.714)	16.00 (15.002 - 16.881)	19.86 (16.393 - 22.566)	N/A	18.22 (17.232 - 19.403)
5/4/2021	22.31 (21.752 - 22.994)	15.25 (14.719 - 16.338)	19.30 (16.135 - 22.052)	N/A	17.91 (15.906 - 19.842)
5/5/2021	21.67 (21.214 - 22.654)	15.23 (14.548 - 16.604)	18.97 (17.611 - 21.752)	N/A	18.56 (17.072 - 21.008)
5/6/2021	21.10 (20.745 - 21.661)	15.40 (14.869 - 16.245)	18.82 (16.497 - 21.372)	N/A	18.91 (16.785 - 21.007)
5/7/2021	21.00 (20.206 - 21.993)	15.21 (14.547 - 16.236)	18.01 (14.979 - 20.845)	N/A	17.79 (15.041 - 20.324)
5/8/2021	20.59 (19.735 - 21.902)	15.86 (15.463 - 16.363)	18.08 (15.935 - 19.704)	N/A	17.87 (16.321 - 19.386)
5/9/2021	20.76 (19.649 - 22.572)	15.44 (14.904 - 16.263)	17.90 (16.157 - 19.208)	N/A	17.71 (16.198 - 19.175)
5/10/2021	20.98 (20.564 - 21.57)	15.28 (14.926 - 15.676)	17.84 (16.316 - 20.016)	N/A	17.76 (16.11 - 19.762)
5/11/2021	21.22 (20.814 - 21.862)	15.45 (15.027 - 16.094)	17.92 (15.98 - 19.656)	N/A	17.95 (16.768 - 19.552)
5/12/2021	21.16 (20.597 - 21.681)	15.16 (14.595 - 15.566)	17.69 (15.005 - 20.316)	N/A	17.41 (14.807 - 20.084)
5/13/2021	19.44 (18.833 - 20.402)	15.13 (14.387 - 16.361)	18.33 (16.459 - 20.919)	N/A	17.46 (16.308 - 18.201)
5/14/2021	18.27 (17.652 - 18.752)	15.90 (15.476 - 16.429)	18.95 (17.187 - 20.294)	N/A	18.63 (17.675 - 19.867)
5/15/2021	18.35 (17.588 - 19.284)	15.88 (15.492 - 16.425)	18.69 (16.553 - 19.58)	N/A	17.99 (16.705 - 19.314)
5/16/2021	18.82 (18.18 - 20.009)	15.82 (15.222 - 16.433)	18.35 (16.586 - 19.102)	N/A	17.90 (16.919 - 18.78)
5/17/2021	19.86 (18.92 - 21.495)	16.31 (15.61 - 17.502)	18.85 (16.524 - 20.485)	N/A	18.59 (17.119 - 19.718)
5/18/2021	20.68 (19.974 - 21.451)	16.15 (15.573 - 17.133)	18.77 (16.592 - 20.923)	N/A	18.34 (17.059 - 19.775)
5/19/2021	21.45 (20.694 - 22.495)	16.21 (15.525 - 17.292)	18.83 (16.823 - 20.791)	N/A	18.27 (17.352 - 19.353)
5/20/2021	22.16 (21.241 - 23.564)	16.63 (15.996 - 17.542)	19.08 (17.145 - 21.122)	N/A	18.70 (17.994 - 19.74)
5/21/2021	22.24 (21.731 - 23.366)	16.76 (16.349 - 17.69)	20.11 (19.044 - 21.405)	N/A	19.00 (17.997 - 19.953)
5/22/2021	N/A	16.54 (15.916 - 17.528)	N/A	N/A	18.86 (17.992 - 19.881)
5/23/2021	N/A	16.85 (16.292 - 17.971)	N/A	N/A	19.21 (18.261 - 20.411)
5/24/2021	N/A	16.91 (16.218 - 18.288)	N/A	N/A	19.72 (18.168 - 21.236)

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
5/25/2021	N/A	16.35 (15.569 - 17.571)	N/A	N/A	19.37 (17.628 - 20.317)
5/26/2021	N/A	16.11 (15.396 - 16.971)	N/A	N/A	19.04 (18.344 - 19.785)
5/27/2021	N/A	16.70 (15.731 - 18.32)	N/A	N/A	19.58 (18.292 - 21.166)
5/28/2021	N/A	16.84 (16.127 - 18.357)	N/A	N/A	19.61 (18.498 - 21.447)
5/29/2021	N/A	16.90 (16.378 - 17.773)	N/A	N/A	19.46 (18.389 - 21.005)
5/30/2021	N/A	16.07 (15.908 - 16.468)	N/A	N/A	18.34 (16.682 - 19.754)
5/31/2021	N/A	16.46 (15.842 - 17.641)	N/A	N/A	18.58 (17.738 - 19.752)
6/1/2021	N/A	16.43 (15.713 - 17.605)	N/A	N/A	18.63 (17.99 - 19.793)
6/2/2021	N/A	16.77 (15.999 - 19.029)	N/A	N/A	19.11 (17.992 - 20.081)
6/3/2021	N/A	17.15 (16.36 - 18.052)	N/A	N/A	18.98 (17.905 - 20.307)
6/4/2021	N/A	16.71 (16.272 - 17.518)	N/A	N/A	18.99 (18.163 - 19.535)
6/5/2021	N/A	16.65 (16.302 - 17.111)	N/A	N/A	19.06 (18.029 - 19.76)
6/6/2021	N/A	17.04 (16.548 - 17.858)	N/A	N/A	19.54 (18.019 - 20.921)
6/7/2021	N/A	16.93 (16.545 - 17.548)	N/A	N/A	19.60 (18.186 - 20.728)
6/8/2021	N/A	16.87 (16.452 - 17.633)	N/A	N/A	20.34 (18.846 - 21.647)
6/9/2021	N/A	17.34 (16.403 - 19.134)	N/A	N/A	21.40 (19.622 - 23.241)
6/10/2021	N/A	17.34 (16.511 - 18.644)	N/A	N/A	21.02 (19.265 - 22.918)
6/11/2021	N/A	17.54 (16.676 - 18.843)	N/A	N/A	21.02 (19.128 - 22.944)
6/12/2021	N/A	17.44 (16.712 - 18.697)	N/A	N/A	20.86 (19.107 - 22.565)
6/13/2021	N/A	17.41 (16.851 - 18.515)	N/A	N/A	20.99 (18.78 - 22.818)
6/14/2021	N/A	17.71 (17.067 - 18.79)	20.73 (18.387 - 25.205)	18.44 (17.525 - 19.251)	21.25 (19.222 - 27.521)
6/15/2021	N/A	17.77 (17.199 - 19.244)	22.25 (19.001 - 24.542)	18.17 (17.401 - 19.815)	21.10 (19.724 - 22.264)
6/16/2021	N/A	17.81 (17.221 - 19.053)	22.47 (18.14 - 26.012)	18.27 (17.294 - 19.338)	20.93 (18.539 - 22.261)
6/17/2021	N/A	17.40 (16.547 - 18.212)	21.20 (18.081 - 24.243)	17.70 (16.826 - 18.428)	19.73 (18.379 - 21.47)
6/18/2021	N/A	17.14 (16.516 - 18.34)	20.85 (17.662 - 23.714)	17.43 (16.744 - 18.501)	19.93 (18.19 - 21.827)
6/19/2021	N/A	16.87 (16.375 - 17.626)	19.95 (17.066 - 23.527)	17.02 (16.343 - 17.759)	19.03 (17.144 - 20.339)
6/20/2021	N/A	16.86 (16.278 - 17.377)	18.61 (16.729 - 20.278)	16.88 (16.36 - 17.316)	18.36 (17.738 - 19.205)
6/21/2021	N/A	17.75 (16.902 - 19.23)	21.94 (19.042 - 26.229)	18.08 (16.965 - 19.392)	20.68 (19.1 - 23.232)
6/22/2021	N/A	17.44 (17.028 - 18.185)	22.52 (18.324 - 25.103)	17.83 (16.917 - 18.712)	21.38 (18.432 - 24.012)

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
6/23/2021	N/A	17.39 (16.823 - 18.127)	21.54 (17.969 - 23.892)	17.56 (16.91 - 18.2)	20.68 (18.339 - 22.776)
6/24/2021	N/A	18.05 (17.311 - 19.302)	23.02 (18.757 - 25.55)	18.47 (17.232 - 19.906)	21.40 (18.788 - 23.494)
6/25/2021	N/A	17.57 (16.908 - 18.761)	21.86 (18.317 - 25.401)	17.76 (16.926 - 19.019)	20.64 (18.176 - 22.036)
6/26/2021	N/A	17.76 (17.073 - 18.778)	20.87 (18.302 - 23.782)	17.98 (17.061 - 19.334)	20.17 (18.713 - 21.283)
6/27/2021	N/A	18.38 (17.762 - 19.718)	22.01 (18.865 - 24.695)	18.68 (17.764 - 20.273)	21.04 (18.847 - 22.387)
6/28/2021	N/A	18.14 (17.546 - 19.383)	21.97 (18.587 - 25.832)	18.49 (17.612 - 20.768)	21.13 (18.661 - 22.631)
6/29/2021	N/A	18.45 (17.873 - 19.576)	21.91 (18.957 - 25.001)	18.67 (17.834 - 19.738)	21.20 (19.113 - 22.686)
6/30/2021	N/A	18.30 (17.78 - 19.192)	22.18 (18.754 - 25.395)	18.57 (17.787 - 19.652)	21.17 (18.701 - 22.573)
7/1/2021	N/A	18.33 (17.804 - 19.245)	21.64 (18.858 - 24.485)	18.55 (17.817 - 19.666)	20.96 (18.826 - 22.459)
7/2/2021	N/A	18.14 (17.457 - 18.714)	21.50 (17.917 - 24.37)	18.39 (17.434 - 19.366)	20.57 (18.212 - 21.885)
7/3/2021	N/A	18.07 (17.42 - 18.947)	20.49 (18.55 - 22.648)	18.09 (17.404 - 18.852)	19.74 (18.977 - 20.656)
7/4/2021	N/A	18.18 (17.629 - 19.04)	21.20 (18.757 - 23.193)	18.17 (17.703 - 18.982)	20.29 (19.018 - 21.36)
7/5/2021	N/A	18.03 (17.315 - 18.881)	21.63 (18.626 - 23.98)	18.11 (17.442 - 19.061)	20.95 (19.232 - 22.18)
7/6/2021	N/A	18.08 (17.427 - 19.137)	21.61 (18.69 - 23.897)	18.19 (17.41 - 19.266)	20.78 (19.173 - 21.797)
7/7/2021	N/A	18.04 (17.468 - 18.888)	21.68 (18.61 - 24.863)	18.09 (17.419 - 19.209)	20.56 (18.633 - 21.982)
7/8/2021	N/A	18.22 (17.394 - 19.054)	21.20 (18.791 - 24.464)	18.21 (17.374 - 18.992)	20.36 (18.874 - 21.627)
7/9/2021	N/A	18.77 (17.966 - 20.087)	21.41 (19.622 - 24.344)	18.75 (17.909 - 20.056)	20.74 (19.772 - 22.331)
7/10/2021	N/A	18.58 (17.765 - 19.862)	21.60 (19.324 - 24.728)	18.63 (17.729 - 20.165)	20.91 (19.708 - 21.985)
7/11/2021	N/A	18.54 (18.039 - 19.399)	22.04 (19.057 - 24.798)	18.68 (18.074 - 19.423)	21.20 (19.063 - 22.57)
7/12/2021	N/A	18.69 (18 - 19.764)	21.86 (19.429 - 24.805)	18.91 (18.143 - 20.078)	20.95 (19.671 - 22.65)
7/13/2021	N/A	18.55 (17.957 - 19.543)	21.97 (18.868 - 24.826)	18.78 (18.123 - 20.044)	21.05 (19.388 - 22.002)
7/14/2021	N/A	18.67 (18.012 - 19.962)	21.90 (19.169 - 25.014)	18.84 (18.063 - 20.37)	21.05 (19.648 - 22.489)
7/15/2021	N/A	18.70 (17.985 - 19.73)	22.07 (19.435 - 25.433)	18.81 (18.185 - 19.661)	20.93 (19.571 - 21.945)
7/16/2021	N/A	18.92 (18.383 - 19.955)	22.43 (19.232 - 26.148)	19.21 (18.414 - 20.384)	21.29 (19.597 - 22.376)
7/17/2021	N/A	18.81 (18.093 - 19.79)	22.17 (19.378 - 25.409)	19.03 (18.182 - 19.943)	21.19 (19.525 - 22.384)
7/18/2021	N/A	18.79 (18.278 - 19.48)	22.16 (19.038 - 25.186)	18.91 (18.408 - 19.442)	21.32 (19.33 - 22.482)
7/19/2021	N/A	18.89 (18.477 - 19.882)	22.21 (19.531 - 25.321)	19.15 (18.529 - 20.299)	21.14 (19.626 - 22.184)
7/20/2021	N/A	19.17 (18.52 - 20.026)	22.70 (19.97 - 25.784)	19.40 (18.803 - 19.984)	21.79 (20.03 - 23.268)
7/21/2021	N/A	19.35 (18.763 - 20.54)	24.86 (23.205 - 26.196)	20.42 (19.065 - 21.815)	24.90 (22.915 - 26.074)

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
7/22/2021	N/A	19.48 (18.784 - 20.849)	24.00 (20.585 - 25.567)	20.01 (18.944 - 20.961)	23.63 (21.239 - 24.862)
7/23/2021	N/A	19.43 (18.979 - 20.364)	23.76 (20.069 - 25.983)	19.92 (19.12 - 20.804)	22.73 (20.337 - 24.341)
7/24/2021	N/A	19.44 (18.981 - 20.492)	23.49 (19.983 - 26.121)	20.11 (19.298 - 21.308)	22.36 (20.394 - 24.196)
7/25/2021	N/A	19.49 (18.979 - 20.637)	23.37 (20.113 - 26.633)	20.02 (19.15 - 21.311)	22.35 (20.356 - 24.332)
7/26/2021	29.32 (28.344 - 32.947)	19.49 (18.972 - 20.484)	23.15 (20.427 - 26.393)	20.02 (19.438 - 20.914)	22.43 (20.56 - 27.967)
7/27/2021	28.78 (28.301 - 30.045)	19.60 (19.096 - 20.722)	23.31 (20.002 - 27.129)	19.98 (19.207 - 20.873)	22.43 (20.223 - 24.561)
7/28/2021	29.21 (28.71 - 30.408)	19.69 (19.043 - 20.785)	23.17 (20.236 - 26.377)	20.07 (19.437 - 21.484)	21.96 (20.636 - 23.415)
7/29/2021	29.61 (29.124 - 30.25)	19.81 (19.252 - 20.802)	23.19 (20.441 - 26.648)	20.18 (19.622 - 20.949)	22.38 (20.652 - 24.438)
7/30/2021	29.93 (29.302 - 30.554)	19.74 (19.338 - 20.658)	23.47 (20.279 - 26.688)	20.27 (19.484 - 21.263)	22.41 (20.342 - 24.563)
7/31/2021	30.29 (29.534 - 31.506)	19.88 (19.359 - 20.978)	23.35 (20.291 - 26.529)	20.32 (19.476 - 21.428)	22.28 (20.559 - 23.873)
8/1/2021	30.44 (29.609 - 31.791)	19.97 (19.326 - 21.011)	23.50 (20.735 - 26.679)	20.33 (19.649 - 21.046)	22.36 (20.715 - 24.62)
8/2/2021	30.19 (28.689 - 31.652)	20.00 (19.511 - 20.862)	23.28 (20.403 - 26.378)	20.31 (19.606 - 20.852)	22.36 (20.694 - 24.081)
8/3/2021	29.70 (27.747 - 30.389)	19.73 (19.253 - 20.337)	22.78 (19.881 - 25.586)	20.10 (19.319 - 20.374)	21.91 (20.093 - 23.301)
8/4/2021	28.99 (27.492 - 29.914)	19.54 (19.204 - 20.2)	21.96 (19.966 - 24.962)	19.80 (19.358 - 20.318)	21.22 (20.063 - 23.018)
8/5/2021	28.32 (26.334 - 29.547)	19.61 (19.052 - 20.541)	22.10 (20.306 - 25.284)	19.79 (19.278 - 20.48)	21.47 (20.406 - 22.981)
8/6/2021	27.78 (26.335 - 28.429)	19.35 (18.953 - 19.771)	21.60 (19.32 - 23.931)	19.60 (18.915 - 20.051)	21.14 (19.339 - 22.296)
8/7/2021	27.53 (26.053 - 28.407)	19.50 (18.928 - 20.338)	21.31 (20.055 - 23.376)	19.54 (19.053 - 20.263)	20.62 (20.164 - 21.899)
8/8/2021	27.17 (26.051 - 28.583)	19.73 (19.083 - 20.602)	22.03 (21.019 - 23.64)	19.75 (19.268 - 20.504)	21.50 (20.896 - 22.196)
8/9/2021	27.15 (25.999 - 28.67)	19.63 (19.085 - 20.32)	22.17 (20.323 - 23.359)	19.67 (19.128 - 20.199)	21.80 (20.458 - 22.733)
8/10/2021	27.88 (26.328 - 29.384)	19.80 (19.157 - 20.796)	22.74 (20.814 - 25.191)	19.88 (19.128 - 21.019)	22.27 (20.591 - 23.449)
8/11/2021	28.27 (27.021 - 29.679)	20.04 (19.384 - 21.095)	22.74 (21.366 - 24.247)	20.01 (19.368 - 20.883)	22.42 (20.902 - 24.907)
8/12/2021	28.67 (27.603 - 29.895)	20.10 (19.416 - 21.01)	23.38 (21.042 - 25.542)	20.09 (19.379 - 20.921)	22.87 (21.36 - 24.099)
8/13/2021	29.00 (28.591 - 29.604)	20.13 (19.436 - 21.026)	23.05 (21.303 - 25.701)	20.13 (19.319 - 20.97)	22.59 (21.207 - 24.631)
8/14/2021	29.19 (28.766 - 29.404)	20.31 (19.802 - 21.174)	23.84 (21.019 - 26.576)	20.41 (19.813 - 21.364)	22.98 (21.155 - 24.31)
8/15/2021	28.69 (28.038 - 29.421)	20.08 (19.612 - 20.643)	22.42 (20.596 - 24.005)	20.10 (19.68 - 20.538)	22.13 (20.904 - 23.217)
8/16/2021	28.35 (28.012 - 28.531)	20.09 (19.86 - 20.449)	22.06 (20.595 - 24.265)	20.05 (19.804 - 20.557)	22.06 (20.526 - 23.827)
8/17/2021	26.15 (25.408 - 27.788)	20.63 (19.974 - 21.525)	24.28 (21.208 - 27.246)	20.84 (20.036 - 21.446)	22.95 (21.14 - 24.337)
8/18/2021	25.77 (25.153 - 26.256)	20.70 (19.999 - 22.06)	24.03 (22.384 - 26.661)	20.94 (20.084 - 22.1)	23.83 (22.287 - 25.859)
8/19/2021	26.62 (26.016 - 27.606)	20.98 (20.266 - 22.339)	25.07 (22.538 - 26.706)	21.10 (20.26 - 22.287)	24.39 (22.991 - 25.87)

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
8/20/2021	27.35 (26.756 - 28.15)	20.89 (20.3 - 21.941)	25.01 (21.676 - 26.963)	21.17 (20.352 - 21.955)	23.98 (22.083 - 25.605)
8/21/2021	27.90 (27.429 - 28.54)	20.91 (20.343 - 21.798)	24.54 (21.731 - 27.294)	21.09 (20.458 - 22.111)	23.70 (21.908 - 25.082)
8/22/2021	27.99 (27.662 - 28.4)	20.88 (20.404 - 21.578)	24.04 (21.334 - 26.998)	20.95 (20.51 - 21.523)	23.09 (21.168 - 24.07)
8/23/2021	27.85 (27.236 - 28.434)	21.01 (20.381 - 22.013)	23.83 (22.104 - 26.845)	21.06 (20.442 - 21.959)	23.08 (22.224 - 24.313)
8/24/2021	27.81 (27.237 - 28.543)	21.17 (20.615 - 22.04)	24.79 (22.413 - 27.075)	21.27 (20.706 - 21.972)	23.74 (22.23 - 24.943)
8/25/2021	28.00 (27.215 - 28.696)	21.34 (20.883 - 22.157)	24.83 (21.877 - 27.572)	21.51 (20.994 - 22.407)	23.80 (22.283 - 25.101)
8/26/2021	28.30 (27.597 - 29.12)	21.40 (20.861 - 22.22)	24.46 (22.138 - 27.606)	21.64 (20.954 - 22.91)	23.60 (22.071 - 25.233)
8/27/2021	28.51 (27.899 - 29.663)	21.62 (21.159 - 22.582)	24.55 (22.05 - 26.887)	21.94 (21.406 - 22.943)	23.73 (22.102 - 24.504)
8/28/2021	28.70 (28.331 - 29.213)	21.49 (21.12 - 21.999)	23.89 (21.907 - 26.215)	21.66 (21.215 - 22.062)	23.33 (22.08 - 24.439)
8/29/2021	28.75 (28.325 - 29.784)	21.52 (21.053 - 22.296)	24.04 (22.011 - 26.227)	21.74 (21.219 - 22.258)	23.55 (22.204 - 24.582)
8/30/2021	28.78 (28.314 - 29.293)	21.47 (21.066 - 22.249)	24.05 (21.77 - 26.834)	21.74 (21.159 - 22.614)	23.41 (21.997 - 24.707)
8/31/2021	28.78 (28 - 29.15)	21.38 (21.009 - 21.952)	23.68 (21.672 - 25.581)	21.62 (21.016 - 21.983)	23.14 (21.609 - 24.236)
9/1/2021	28.34 (27.956 - 28.614)	21.27 (20.978 - 21.716)	23.33 (21.414 - 25.197)	21.44 (21.148 - 21.839)	22.85 (21.328 - 23.892)
9/2/2021	27.94 (27.09 - 28.519)	21.58 (21.126 - 22.436)	23.27 (22.154 - 25.589)	21.67 (21.152 - 22.385)	22.80 (22.252 - 24.192)
9/3/2021	27.47 (26.997 - 28.188)	21.43 (21.028 - 21.958)	23.26 (21.765 - 24.615)	21.52 (21.074 - 21.896)	22.62 (21.793 - 23.483)
9/4/2021	26.84 (26.192 - 27.252)	21.44 (20.944 - 22.013)	23.06 (21.846 - 25.459)	21.50 (21.032 - 21.958)	22.57 (21.779 - 24.208)
9/5/2021	26.54 (25.978 - 27.771)	21.53 (21.106 - 22.104)	22.96 (21.853 - 25.319)	21.59 (21.203 - 22.049)	22.58 (21.831 - 23.92)
9/6/2021	26.39 (25.947 - 26.737)	21.58 (21.209 - 22.105)	22.87 (21.753 - 24.913)	21.62 (21.276 - 22.158)	22.56 (21.797 - 23.648)
9/7/2021	26.54 (26.177 - 27.107)	21.75 (21.44 - 22.458)	23.08 (22.037 - 25.397)	21.81 (21.525 - 22.364)	22.70 (21.97 - 24.007)
9/8/2021	26.35 (25.548 - 26.704)	21.62 (21.22 - 22.095)	23.24 (21.537 - 24.955)	21.72 (21.131 - 22.2)	22.75 (21.361 - 24.006)
9/9/2021	25.81 (25.448 - 26.223)	21.54 (21.16 - 22.113)	22.97 (21.977 - 24.597)	21.59 (21.226 - 22.031)	22.61 (22.057 - 23.626)
9/10/2021	25.74 (25.137 - 26.141)	21.78 (21.315 - 22.438)	23.33 (22.15 - 25.378)	21.80 (21.327 - 22.373)	22.85 (22.029 - 23.863)
9/11/2021	25.42 (24.76 - 25.953)	21.66 (21.181 - 22.322)	23.18 (22.13 - 25.516)	21.75 (21.29 - 22.266)	22.70 (21.648 - 24.043)
9/12/2021	25.43 (24.688 - 26.332)	21.56 (21.091 - 22.188)	22.76 (22.166 - 23.702)	21.60 (21.132 - 22.134)	22.45 (22.032 - 23.068)
9/13/2021	25.41 (24.705 - 26)	21.67 (21.171 - 22.31)	23.24 (22.159 - 25.02)	21.79 (21.384 - 22.243)	22.77 (21.985 - 23.661)
9/14/2021	25.68 (25.066 - 26.311)	21.85 (21.378 - 22.526)	23.42 (22.634 - 25.482)	21.88 (21.46 - 22.474)	22.98 (22.096 - 23.805)
9/15/2021	25.70 (25.264 - 26.029)	21.71 (21.396 - 22.303)	23.42 (21.732 - 25.212)	21.75 (21.438 - 22.346)	23.00 (21.557 - 23.856)
9/16/2021	25.29 (24.753 - 25.816)	21.54 (21.397 - 21.77)	22.73 (21.633 - 24.11)	21.53 (21.364 - 21.707)	22.40 (21.641 - 23.248)
9/17/2021	23.40 (22.655 - 25.216)	21.91 (21.514 - 22.838)	23.66 (22.03 - 25.106)	22.03 (21.494 - 23.003)	23.43 (22.141 - 25.165)

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
9/18/2021	23.32 (22.918 - 23.847)	22.14 (21.735 - 22.965)	23.82 (22.9 - 24.678)	22.16 (21.76 - 22.911)	23.71 (22.891 - 24.278)
9/19/2021	24.16 (23.744 - 24.68)	22.12 (21.788 - 22.645)	23.78 (22.665 - 24.675)	22.16 (21.829 - 22.653)	23.58 (22.602 - 24.407)
9/20/2021	24.43 (24.296 - 24.535)	21.79 (21.597 - 22.032)	23.31 (21.863 - 24.371)	21.84 (21.506 - 22.214)	22.98 (21.706 - 23.707)
9/21/2021	24.50 (24.168 - 24.897)	21.96 (21.525 - 22.815)	23.07 (22.301 - 24.812)	21.93 (21.493 - 22.765)	22.77 (22.366 - 23.592)
9/22/2021	24.93 (24.677 - 25.382)	22.26 (21.863 - 23.051)	23.68 (23.032 - 24.52)	22.26 (21.839 - 23.054)	23.48 (22.99 - 24.188)
9/23/2021	24.35 (23.799 - 25.003)	21.94 (21.463 - 22.56)	23.58 (22.469 - 25.051)	21.99 (21.593 - 22.512)	23.30 (22.387 - 23.991)
9/24/2021	23.36 (22.673 - 24.196)	21.99 (21.558 - 22.48)	23.22 (22.319 - 24.487)	21.99 (21.595 - 22.426)	22.73 (22.14 - 23.562)
9/25/2021	22.55 (21.773 - 23.46)	21.87 (21.44 - 22.341)	22.69 (22.164 - 23.968)	21.87 (21.429 - 22.299)	22.32 (21.864 - 22.803)
9/26/2021	22.15 (21.416 - 23.001)	22.04 (21.559 - 22.556)	22.66 (22.162 - 24.298)	22.03 (21.591 - 22.519)	22.52 (22.083 - 23.512)
9/27/2021	22.09 (21.425 - 23.03)	22.15 (21.723 - 22.67)	22.85 (22.281 - 24.625)	22.16 (21.745 - 22.621)	22.70 (22.327 - 23.534)
9/28/2021	22.15 (21.45 - 23.01)	22.23 (21.761 - 22.786)	23.04 (22.522 - 24.439)	22.24 (21.778 - 22.742)	22.91 (22.397 - 23.858)
9/29/2021	22.36 (21.747 - 23.026)	22.41 (21.99 - 22.909)	23.02 (22.534 - 25.281)	22.40 (21.994 - 22.86)	22.89 (22.405 - 23.958)
9/30/2021	22.60 (22.119 - 23.189)	22.47 (22.145 - 22.854)	23.30 (22.558 - 25.304)	22.49 (22.19 - 22.801)	23.25 (22.616 - 24.052)
10/1/2021	22.84 (22.479 - 23.286)	22.43 (22.141 - 22.8)	23.28 (22.597 - 24.976)	22.47 (22.188 - 22.746)	23.15 (22.602 - 23.909)
10/2/2021	23.15 (22.563 - 23.8)	22.54 (22.166 - 22.962)	23.43 (22.746 - 25.292)	22.58 (22.283 - 22.89)	23.28 (22.64 - 24.3)
10/3/2021	23.54 (23.008 - 24.185)	22.47 (22.163 - 22.929)	23.35 (22.58 - 25.397)	22.55 (22.267 - 22.961)	23.28 (22.581 - 24.224)
10/4/2021	23.81 (23.471 - 24.243)	22.37 (22.188 - 22.621)	23.28 (22.419 - 24.701)	22.44 (22.264 - 22.669)	23.09 (22.402 - 23.944)
10/5/2021	23.91 (23.564 - 24.252)	22.32 (22.112 - 22.638)	23.11 (22.422 - 24.458)	22.36 (22.145 - 22.694)	23.02 (22.367 - 23.908)
10/6/2021	23.96 (23.756 - 24.214)	22.19 (22.086 - 22.352)	22.82 (22.18 - 23.917)	22.22 (22.102 - 22.471)	22.79 (22.215 - 23.486)
10/7/2021	23.51 (22.464 - 24.124)	22.09 (21.93 - 22.165)	22.78 (21.979 - 23.664)	22.12 (21.858 - 22.267)	22.70 (22.064 - 23.23)
10/8/2021	21.15 (20.792 - 21.611)	22.02 (21.91 - 22.199)	22.23 (21.132 - 23.753)	22.11 (21.853 - 22.493)	22.31 (21.208 - 23.727)
10/9/2021	21.61 (21.394 - 21.838)	22.16 (21.95 - 22.479)	22.02 (21.374 - 22.371)	22.11 (21.901 - 22.429)	22.04 (21.71 - 22.391)
10/10/2021	21.70 (21.389 - 22.17)	22.43 (22.054 - 22.893)	22.74 (22.022 - 24.044)	22.37 (22 - 22.836)	22.50 (21.957 - 23.218)
10/11/2021	21.55 (21.436 - 21.724)	22.23 (22.068 - 22.561)	22.44 (21.674 - 23.332)	22.18 (22.015 - 22.513)	22.32 (21.94 - 22.857)
10/12/2021	21.52 (21.296 - 22.165)	22.23 (21.889 - 22.641)	22.41 (21.737 - 23.533)	22.18 (21.842 - 22.587)	22.26 (21.8 - 22.858)
10/13/2021	21.26 (21.088 - 21.564)	22.37 (21.937 - 22.87)	22.57 (21.843 - 23.289)	22.32 (21.896 - 22.819)	22.46 (21.807 - 23.212)
10/14/2021	21.59 (21.217 - 22.037)	22.48 (22.118 - 22.96)	23.00 (22.303 - 23.62)	22.43 (22.072 - 22.906)	22.65 (22.009 - 23.316)
10/15/2021	21.90 (21.476 - 22.283)	22.53 (22.178 - 22.945)	23.12 (22.486 - 23.597)	22.48 (22.127 - 22.89)	22.66 (22.095 - 23.245)
10/16/2021	22.76 (22.181 - 23.891)	22.45 (22.142 - 22.844)	23.12 (22.374 - 23.533)	22.41 (22.099 - 22.8)	22.52 (22.062 - 23.019)

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
10/17/2021	21.33 (20.769 - 22.149)	22.54 (22.29 - 22.906)	22.40 (21.532 - 23.039)	22.50 (22.259 - 22.861)	22.29 (21.672 - 23.023)
10/18/2021	20.46 (20.192 - 21.02)	22.33 (21.918 - 22.759)	22.24 (21.547 - 22.848)	22.29 (21.884 - 22.706)	22.22 (21.583 - 22.82)
10/19/2021	19.79 (19.306 - 20.254)	22.22 (21.868 - 22.63)	22.20 (21.498 - 22.965)	22.18 (21.814 - 22.573)	22.19 (21.529 - 22.868)
10/20/2021	19.41 (18.841 - 21.157)	22.21 (21.792 - 22.626)	22.18 (21.64 - 22.801)	22.17 (21.751 - 22.594)	22.15 (21.581 - 22.782)
10/21/2021	18.79 (17.964 - 19.68)	22.21 (21.935 - 22.488)	22.13 (20.355 - 23.141)	22.16 (21.89 - 22.444)	21.81 (20.886 - 22.613)
10/22/2021	19.29 (18.848 - 20.222)	22.44 (22.205 - 22.74)	22.43 (22.083 - 22.853)	22.39 (22.165 - 22.687)	22.43 (22.103 - 22.923)
10/23/2021	19.06 (18.183 - 20.019)	22.39 (21.956 - 22.842)	22.18 (21.082 - 22.75)	22.35 (21.906 - 22.805)	22.21 (21.249 - 22.803)
10/24/2021	18.84 (17.837 - 20.061)	22.33 (21.982 - 22.621)	22.00 (20.518 - 22.864)	22.28 (21.93 - 22.576)	22.00 (20.753 - 22.674)
10/25/2021	18.55 (18.033 - 19.694)	22.32 (22.158 - 22.469)	21.94 (20.894 - 23.004)	22.25 (22.055 - 22.419)	21.89 (21.16 - 22.505)
10/26/2021	19.22 (18.755 - 19.804)	22.09 (21.765 - 22.356)	22.11 (21.495 - 22.563)	22.04 (21.73 - 22.317)	22.01 (21.572 - 22.422)
10/27/2021	18.63 (18.126 - 19.657)	21.89 (21.64 - 22.215)	21.45 (20.914 - 22.101)	21.89 (21.61 - 22.207)	21.52 (20.971 - 21.867)
10/28/2021	17.87 (17.108 - 18.879)	21.36 (20.945 - 21.856)	20.72 (20.119 - 21.575)	21.40 (20.998 - 21.921)	20.85 (20.239 - 21.621)
10/29/2021	17.34 (16.742 - 18.135)	21.31 (21.074 - 21.556)	20.30 (19.584 - 20.892)	21.34 (21.063 - 21.604)	20.45 (19.752 - 21.031)
10/30/2021	16.98 (16.327 - 17.715)	21.20 (20.889 - 21.435)	20.06 (19.059 - 20.847)	21.21 (20.756 - 21.5)	20.20 (19.308 - 20.949)
10/31/2021	16.62 (15.974 - 17.312)	21.02 (20.694 - 21.313)	19.96 (18.894 - 21.161)	20.98 (20.275 - 21.369)	20.12 (19.178 - 21.177)
11/1/2021	16.61 (16.092 - 17.264)	21.06 (20.707 - 21.394)	20.54 (19.713 - 21.372)	21.12 (20.747 - 21.44)	20.72 (19.981 - 21.454)
11/2/2021	16.29 (15.742 - 16.659)	21.06 (20.65 - 21.345)	20.41 (18.886 - 21.308)	21.09 (20.702 - 21.399)	20.57 (19.423 - 21.363)
11/3/2021	15.94 (15.533 - 16.421)	20.72 (20.46 - 21.185)	19.78 (18.571 - 20.531)	20.74 (20.503 - 21.238)	20.01 (18.974 - 20.461)
11/4/2021	15.23 (14.794 - 16.055)	20.08 (19.68 - 20.636)	18.92 (17.548 - 19.913)	20.07 (19.731 - 20.688)	19.45 (18.63 - 20.036)
11/5/2021	14.32 (13.868 - 15.24)	19.51 (19.191 - 19.916)	18.10 (16.519 - 19.301)	19.46 (19.177 - 19.993)	18.68 (17.876 - 19.794)
11/6/2021	13.79 (13.497 - 14.299)	19.32 (19.095 - 19.638)	17.88 (17.076 - 19.079)	19.26 (18.905 - 19.709)	18.12 (17.119 - 19.481)
11/7/2021	13.10 (12.55 - 13.611)	18.84 (18.165 - 19.449)	17.16 (15.14 - 18.401)	18.72 (17.891 - 19.516)	17.79 (16.167 - 19.174)
11/8/2021	13.02 (12.466 - 13.584)	19.09 (18.671 - 19.35)	17.68 (16.008 - 18.571)	19.01 (18.532 - 19.434)	18.11 (16.965 - 18.835)
11/9/2021	12.89 (12.232 - 13.232)	18.95 (18.515 - 19.284)	17.79 (15.491 - 19.006)	18.91 (18.367 - 19.356)	18.28 (16.812 - 19.096)
11/10/2021	12.91 (12.334 - 13.314)	18.80 (18.384 - 19.13)	17.83 (16.294 - 18.989)	18.83 (18.426 - 19.178)	18.46 (17.754 - 18.951)
11/11/2021	13.14 (12.464 - 14.152)	18.51 (18.224 - 18.841)	18.13 (16.447 - 18.916)	18.55 (18.264 - 18.888)	18.48 (17.693 - 18.905)
11/12/2021	13.76 (12.897 - 14.602)	18.57 (18.312 - 18.806)	18.38 (16.891 - 19.238)	18.61 (18.358 - 18.849)	18.58 (17.771 - 19.04)
11/13/2021	13.14 (12.598 - 13.918)	18.14 (17.87 - 18.543)	17.50 (16.092 - 18.461)	18.17 (17.862 - 18.603)	17.92 (16.854 - 18.55)
11/14/2021	13.15 (12.58 - 13.647)	17.82 (17.493 - 18.136)	17.49 (16.916 - 18.071)	17.83 (17.488 - 18.196)	17.56 (17.088 - 18.124)

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
11/15/2021	13.08 (12.627 - 13.803)	17.68 (17.393 - 17.977)	16.95 (16.603 - 17.203)	17.74 (17.454 - 18.062)	17.07 (16.562 - 17.728)
11/16/2021	12.93 (12.487 - 13.248)	17.73 (17.287 - 18.075)	16.88 (16.233 - 17.79)	17.79 (17.362 - 18.129)	17.11 (16.268 - 18.148)
11/17/2021	12.99 (12.518 - 13.287)	17.90 (17.522 - 18.118)	17.46 (16.296 - 18.01)	17.96 (17.592 - 18.186)	17.60 (16.931 - 18.239)
11/18/2021	13.04 (12.482 - 13.607)	17.97 (17.747 - 18.128)	17.64 (16.556 - 18.562)	18.03 (17.775 - 18.173)	17.72 (16.822 - 18.219)
11/19/2021	13.34 (12.981 - 13.716)	17.71 (17.455 - 18.092)	17.54 (16.895 - 18.175)	17.79 (17.522 - 18.148)	17.65 (17.064 - 18.335)
11/20/2021	12.60 (12.077 - 13.359)	17.04 (16.724 - 17.505)	16.42 (15.764 - 17.283)	17.12 (16.811 - 17.583)	16.47 (15.631 - 17.302)
11/21/2021	12.13 (11.769 - 12.535)	17.04 (16.621 - 17.377)	15.96 (14.988 - 17.207)	17.06 (16.72 - 17.455)	16.02 (15.038 - 17.354)
11/22/2021	11.83 (11.514 - 12.387)	17.25 (17.045 - 17.446)	15.81 (14.593 - 17.128)	17.16 (16.789 - 17.457)	16.22 (15.615 - 17.171)
11/23/2021	11.62 (11.27 - 12.119)	16.61 (16.3 - 17.02)	15.66 (14.756 - 16.684)	16.56 (16.354 - 17.082)	N/A
11/24/2021	10.82 (10.367 - 11.215)	16.33 (15.912 - 16.589)	14.87 (13.455 - 16.041)	16.23 (15.892 - 16.55)	N/A
11/25/2021	10.18 (9.235 - 11.006)	16.32 (15.594 - 16.837)	14.61 (12.062 - 16.068)	16.16 (15.189 - 16.914)	N/A
11/26/2021	10.43 (9.867 - 11.035)	16.54 (16.336 - 16.715)	15.73 (14.254 - 16.513)	16.52 (16.245 - 16.688)	N/A
11/27/2021	10.27 (9.572 - 10.857)	16.17 (15.641 - 16.501)	15.17 (13.91 - 15.675)	16.17 (15.668 - 16.55)	N/A
11/28/2021	10.02 (9.364 - 10.614)	15.98 (15.61 - 16.326)	14.89 (13.485 - 15.749)	15.97 (15.648 - 16.334)	N/A
11/29/2021	9.55 (9.036 - 9.81)	15.70 (15.44 - 16.054)	14.63 (13.375 - 15.29)	15.65 (15.273 - 15.935)	N/A
11/30/2021	9.71 (9.055 - 10.236)	15.63 (15.161 - 15.991)	14.77 (13.867 - 15.66)	15.65 (15.152 - 16.042)	N/A
12/1/2021	9.91 (8.984 - 11.099)	15.65 (15.231 - 15.989)	15.12 (13.94 - 15.647)	15.70 (15.302 - 16.019)	N/A
12/2/2021	10.05 (9.11 - 11.096)	15.66 (15.32 - 15.923)	15.23 (13.71 - 15.868)	15.71 (15.369 - 15.973)	N/A
12/3/2021	10.34 (9.358 - 11.46)	15.67 (15.349 - 15.99)	15.57 (13.65 - 16.187)	15.72 (15.396 - 16.031)	N/A
12/4/2021	10.36 (9.428 - 11.307)	15.46 (15.238 - 15.701)	15.39 (13.988 - 15.906)	15.51 (15.29 - 15.753)	N/A
12/5/2021	10.99 (9.982 - 11.833)	15.32 (15.067 - 15.568)	15.37 (14.951 - 15.76)	15.37 (15.119 - 15.61)	N/A
12/6/2021	11.11 (10.08 - 12.113)	15.29 (15.055 - 15.499)	15.37 (15.021 - 15.739)	15.34 (15.105 - 15.536)	N/A
12/7/2021	11.00 (10.396 - 12.011)	15.22 (15.116 - 15.422)	15.29 (14.861 - 15.568)	15.27 (15.16 - 15.472)	N/A
12/8/2021	10.74 (10.419 - 11.919)	14.80 (14.649 - 15.083)	14.54 (13.407 - 15.09)	14.85 (14.681 - 15.135)	N/A
12/9/2021	10.75 (10.53 - 11.269)	14.69 (14.617 - 14.768)	14.29 (13.718 - 14.61)	14.74 (14.666 - 14.804)	N/A
12/10/2021	10.47 (10.368 - 10.58)	14.53 (14.357 - 14.679)	13.87 (13.025 - 14.346)	14.58 (14.399 - 14.728)	N/A
12/11/2021	10.95 (10.589 - 11.415)	14.90 (14.646 - 15.245)	14.41 (13.07 - 15.387)	14.93 (14.623 - 15.28)	N/A
12/12/2021	11.86 (11.407 - 12.373)	14.97 (14.686 - 15.234)	14.89 (14.301 - 15.24)	15.03 (14.75 - 15.273)	N/A
12/13/2021	11.59 (11.233 - 11.872)	14.45 (14.154 - 14.66)	14.27 (13.867 - 14.822)	14.51 (14.199 - 14.718)	N/A

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
12/14/2021	11.33 (11.005 - 11.606)	14.46 (14.038 - 14.761)	13.75 (13.155 - 14.123)	14.52 (14.093 - 14.849)	N/A
12/15/2021	10.86 (10.558 - 11.165)	14.47 (14.06 - 14.761)	13.21 (12.159 - 13.931)	14.51 (14.123 - 14.798)	N/A
12/16/2021	10.37 (9.816 - 10.76)	14.50 (14.224 - 14.717)	N/A	14.47 (14.045 - 14.722)	N/A
12/17/2021	10.34 (10.056 - 10.867)	14.79 (14.675 - 14.953)	N/A	14.78 (14.546 - 14.983)	N/A
12/18/2021	11.11 (10.557 - 11.932)	14.94 (14.746 - 15.199)	15.67 (15.633 - 15.722)	14.98 (14.815 - 15.219)	N/A
12/19/2021	13.20 (11.593 - 14.871)	15.09 (14.883 - 15.244)	14.92 (13.76 - 15.752)	15.13 (14.915 - 15.269)	N/A
12/20/2021	13.71 (12.961 - 14.702)	14.24 (13.907 - 14.781)	13.42 (12.253 - 14.358)	14.27 (13.948 - 14.825)	N/A
12/21/2021	11.86 (11.163 - 12.865)	13.65 (13.528 - 13.857)	13.08 (12.754 - 13.658)	13.68 (13.577 - 13.912)	N/A
12/22/2021	10.69 (10.384 - 11.065)	13.73 (13.211 - 14.14)	12.63 (12.27 - 12.927)	13.74 (13.247 - 14.169)	N/A
12/23/2021	9.85 (9.445 - 10.264)	13.65 (13.23 - 13.963)	12.39 (11.468 - 13.112)	13.64 (13.271 - 13.97)	N/A
12/24/2021	8.98 (8.727 - 9.797)	13.49 (13.115 - 13.756)	12.14 (10.589 - 13.429)	13.44 (13.133 - 13.728)	N/A
12/25/2021	8.67 (8.121 - 9.114)	13.73 (13.428 - 14.029)	12.53 (10.502 - 13.898)	13.69 (13.04 - 14.08)	N/A
12/26/2021	9.42 (8.851 - 10.891)	14.38 (14.015 - 14.781)	12.81 (11.734 - 14.81)	14.36 (13.946 - 14.819)	N/A
12/27/2021	10.15 (9.552 - 10.909)	14.43 (14.286 - 14.531)	14.52 (13.497 - 15.522)	14.48 (14.328 - 14.579)	N/A
12/28/2021	11.38 (10.407 - 12.358)	14.58 (14.383 - 14.807)	14.79 (14.011 - 15.799)	14.63 (14.441 - 14.843)	N/A
12/29/2021	12.72 (11.623 - 13.529)	14.70 (14.624 - 14.852)	14.90 (14.206 - 16.108)	14.75 (14.656 - 14.831)	N/A
12/30/2021	14.03 (13.023 - 15.249)	14.64 (14.556 - 14.735)	14.98 (14.058 - 15.829)	14.73 (14.623 - 14.959)	N/A
12/31/2021	15.57 (14.996 - 15.864)	14.56 (14.332 - 14.854)	14.97 (13.535 - 16.162)	14.63 (14.384 - 14.903)	N/A
1/1/2022	16.10 (15.794 - 16.509)	14.92 (14.569 - 15.343)	16.07 (15.596 - 16.627)	15.00 (14.644 - 15.63)	N/A
1/2/2022	16.83 (16.548 - 16.939)	14.92 (14.703 - 15.079)	16.61 (16.226 - 16.882)	15.03 (14.638 - 15.415)	N/A
1/3/2022	15.99 (15.037 - 16.935)	14.27 (14.078 - 14.625)	16.20 (15.357 - 16.719)	14.35 (14.104 - 14.856)	N/A
1/4/2022	13.45 (12.194 - 14.918)	13.85 (13.575 - 14.131)	14.28 (13.255 - 15.274)	13.89 (13.628 - 14.179)	N/A
1/5/2022	11.60 (11.344 - 12.097)	13.53 (13.24 - 13.737)	13.10 (12.554 - 13.635)	13.58 (13.307 - 13.794)	N/A
1/6/2022	10.78 (10.575 - 11.286)	13.56 (13.343 - 13.735)	12.20 (11.725 - 13.112)	13.57 (13.387 - 13.769)	N/A
1/7/2022	10.19 (9.978 - 10.566)	13.26 (13.086 - 13.674)	11.67 (11.049 - 12.949)	13.17 (12.834 - 13.752)	N/A
1/8/2022	9.48 (8.974 - 9.894)	13.08 (12.582 - 13.486)	11.59 (10.376 - 12.588)	13.04 (12.338 - 13.543)	N/A
1/9/2022	8.84 (8.339 - 9.431)	13.30 (12.909 - 13.738)	12.29 (10.189 - 13.472)	13.30 (12.727 - 13.786)	N/A
1/10/2022	9.44 (8.924 - 9.9)	13.62 (13.371 - 13.732)	12.88 (11.52 - 14.089)	13.67 (13.436 - 13.778)	N/A
1/11/2022	9.57 (9.372 - 9.932)	12.97 (12.675 - 13.313)	12.15 (10.445 - 13.374)	13.04 (12.727 - 13.369)	N/A

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
1/12/2022	8.71 (8.21 - 9.625)	12.87 (12.484 - 13.17)	11.94 (10.355 - 12.927)	12.95 (12.553 - 13.29)	N/A
1/13/2022	7.74 (7.468 - 8.332)	12.88 (12.404 - 13.195)	11.54 (9.319 - 12.714)	12.95 (12.474 - 13.279)	N/A
1/14/2022	7.41 (7.003 - 7.663)	12.90 (12.352 - 13.218)	11.30 (9.022 - 12.633)	12.83 (12.14 - 13.291)	N/A
1/15/2022	7.21 (7.012 - 7.38)	12.65 (12.464 - 13.083)	11.15 (9.004 - 12.393)	12.59 (12.164 - 13.134)	N/A
1/16/2022	6.92 (6.565 - 7.145)	11.94 (11.616 - 12.521)	9.72 (7.834 - 11.418)	11.82 (11.515 - 12.415)	N/A
1/17/2022	6.40 (6.232 - 6.717)	11.29 (10.937 - 11.854)	6.67 (6.364 - 7.514)	10.77 (9.662 - 11.718)	N/A
1/18/2022	6.11 (5.822 - 6.31)	11.28 (10.615 - 11.884)	6.86 (6.066 - 8.925)	11.21 (9.774 - 11.928)	N/A
1/19/2022	6.04 (5.721 - 6.296)	11.73 (11.081 - 12.096)	7.92 (6.145 - 10.801)	11.34 (10.065 - 12.127)	N/A
1/20/2022	6.37 (6.173 - 6.808)	11.80 (11.551 - 11.998)	9.04 (6.438 - 11.448)	11.43 (10.513 - 11.891)	N/A
1/21/2022	6.92 (6.813 - 6.968)	11.32 (10.817 - 11.805)	8.39 (6.549 - 11.279)	11.04 (10.525 - 11.567)	N/A
1/22/2022	6.69 (6.427 - 6.905)	10.94 (10.49 - 11.382)	8.88 (6.678 - 9.792)	10.96 (10.266 - 11.459)	N/A
1/23/2022	6.13 (5.948 - 6.376)	11.16 (10.719 - 11.52)	9.49 (7.86 - 10.713)	11.23 (10.787 - 11.611)	N/A
1/24/2022	5.71 (5.38 - 5.982)	11.17 (10.362 - 11.568)	9.27 (6.597 - 10.697)	11.11 (10.183 - 11.654)	N/A
1/25/2022	5.90 (5.644 - 6.245)	11.31 (11.079 - 11.441)	9.92 (6.894 - 11.368)	11.29 (10.607 - 11.493)	N/A
1/26/2022	6.68 (6.157 - 7.487)	11.18 (10.868 - 11.465)	9.92 (6.939 - 11.685)	11.19 (10.874 - 11.51)	N/A
1/27/2022	6.81 (6.498 - 7.207)	10.88 (10.505 - 11.209)	9.02 (6.839 - 10.576)	10.88 (10.527 - 11.275)	N/A
1/28/2022	6.60 (6.353 - 6.936)	10.72 (10.491 - 10.985)	9.00 (6.51 - 10.438)	10.68 (10.401 - 11.02)	N/A
1/29/2022	5.88 (5.49 - 6.278)	9.87 (9.574 - 10.486)	7.15 (6.405 - 9.657)	9.77 (9.543 - 10.45)	N/A
1/30/2022	5.69 (5.404 - 5.961)	10.19 (9.763 - 10.652)	8.42 (7.554 - 9.655)	10.21 (9.827 - 10.599)	N/A
1/31/2022	5.37 (4.903 - 5.541)	10.35 (9.916 - 10.529)	8.56 (6.427 - 10.51)	10.29 (10.016 - 10.586)	N/A
2/1/2022	5.49 (4.97 - 5.926)	10.40 (9.995 - 10.756)	9.53 (7.249 - 10.748)	10.40 (9.959 - 10.804)	N/A
2/2/2022	6.03 (5.552 - 6.636)	10.55 (10.315 - 10.765)	9.75 (7.665 - 10.882)	10.58 (10.341 - 10.798)	N/A
2/3/2022	7.32 (6.549 - 8.709)	10.99 (10.685 - 11.378)	10.98 (8.92 - 12.361)	11.02 (10.728 - 11.4)	N/A
2/4/2022	9.23 (8.027 - 10.986)	11.22 (10.971 - 11.384)	10.53 (9.474 - 11.949)	11.26 (10.932 - 11.396)	N/A
2/5/2022	11.96 (11.237 - 12.317)	10.43 (10.09 - 10.749)	11.26 (8.749 - 12.397)	10.49 (10.102 - 10.777)	N/A
2/6/2022	10.27 (9.68 - 11.109)	10.28 (10.051 - 10.59)	10.99 (10.7 - 11.8)	10.35 (10.098 - 10.656)	N/A
2/7/2022	8.95 (8.458 - 9.611)	10.08 (9.883 - 10.331)	10.12 (9.965 - 10.501)	10.12 (9.927 - 10.354)	N/A
2/8/2022	8.14 (7.882 - 8.353)	10.08 (9.85 - 10.318)	9.71 (9.26 - 9.948)	10.12 (9.884 - 10.365)	N/A
2/9/2022	7.81 (7.49 - 8.089)	10.17 (9.736 - 10.599)	9.53 (8.299 - 10.344)	10.19 (9.785 - 10.639)	N/A

Daily Water Temperature (°C) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
2/10/2022	7.82 (7.618 - 9.42)	10.02 (9.785 - 10.354)	9.16 (8.068 - 10.336)	10.05 (9.818 - 10.412)	N/A

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
1/29/2021	N/A	10.62 (10.56 - 10.67)	N/A	11.17 (11.09 - 11.22)	10.79 (10.59 - 11.26)
1/30/2021	N/A	10.47 (10.21 - 10.59)	N/A	11.03 (10.83 - 11.22)	10.68 (9.41 - 11.13)
1/31/2021	N/A	10.48 (10.24 - 10.6)	N/A	10.99 (10.76 - 11.18)	10.58 (9.32 - 10.94)
2/1/2021	N/A	10.26 (10.08 - 10.66)	N/A	10.80 (10.57 - 11.2)	10.77 (10.13 - 11.08)
2/2/2021	N/A	10.64 (10.44 - 10.78)	N/A	11.19 (11.02 - 11.33)	11.23 (11.04 - 11.37)
2/3/2021	N/A	10.69 (10.52 - 10.89)	11.27 (11.08 - 11.41)	11.29 (11.11 - 11.46)	11.22 (10.94 - 11.47)
2/4/2021	N/A	10.77 (10.62 - 10.97)	10.93 (10.22 - 11.63)	11.36 (11.23 - 11.54)	11.28 (11.09 - 11.6)
2/5/2021	N/A	10.59 (10.46 - 10.77)	10.62 (10.1 - 11.24)	11.18 (11.05 - 11.36)	11.08 (10.84 - 11.43)
2/6/2021	N/A	10.69 (10.57 - 10.86)	10.65 (10.05 - 11.26)	11.30 (11.15 - 11.55)	11.07 (10.93 - 11.34)
2/7/2021	N/A	10.92 (10.84 - 10.99)	10.75 (10.05 - 11.71)	11.50 (11.41 - 11.58)	11.03 (10.89 - 11.29)
2/8/2021	N/A	10.83 (10.7 - 10.97)	10.97 (10.11 - 11.83)	11.41 (11.31 - 11.51)	11.14 (10.96 - 11.48)
2/9/2021	10.90 (10.84 - 10.95)	10.85 (10.63 - 11)	10.61 (9.87 - 11.37)	11.39 (11.21 - 11.53)	10.94 (10.72 - 11.25)
2/10/2021	10.69 (10.49 - 10.94)	10.69 (10.51 - 10.9)	10.66 (9.71 - 11.59)	11.24 (11.09 - 11.43)	10.69 (10.5 - 10.88)
2/11/2021	10.13 (9.77 - 10.43)	10.71 (10.57 - 10.82)	10.31 (9.68 - 10.72)	11.24 (11.11 - 11.35)	10.50 (10.17 - 10.74)
2/12/2021	9.53 (9.36 - 9.75)	10.51 (10.34 - 10.64)	10.12 (9.52 - 10.62)	11.08 (10.85 - 11.21)	10.59 (10.13 - 10.89)
2/13/2021	9.63 (9.34 - 10.45)	10.28 (10.04 - 10.57)	9.87 (9.11 - 10.59)	10.90 (10.63 - 11.17)	10.77 (10.47 - 11.01)
2/14/2021	11.03 (10.53 - 11.14)	10.52 (10.32 - 10.62)	9.95 (8.74 - 10.38)	10.99 (10.43 - 11.17)	11.09 (10.45 - 11.42)
2/15/2021	11.18 (10.99 - 11.31)	10.52 (10.31 - 10.64)	10.43 (10.3 - 10.55)	11.08 (10.92 - 11.18)	11.36 (11.28 - 11.41)
2/16/2021	10.99 (10.91 - 11.08)	10.58 (10.38 - 10.74)	10.27 (10.16 - 10.45)	11.15 (11.01 - 11.31)	11.15 (11.02 - 11.27)
2/17/2021	10.86 (10.75 - 10.95)	10.70 (10.39 - 10.95)	10.13 (9.98 - 10.33)	11.29 (10.92 - 11.54)	11.24 (11.09 - 11.49)
2/18/2021	11.06 (10.9 - 11.43)	10.60 (10.3 - 10.89)	10.17 (10.04 - 10.48)	11.19 (10.89 - 11.51)	11.16 (10.85 - 11.31)
2/19/2021	11.45 (11.4 - 11.49)	10.61 (10.35 - 10.77)	10.67 (10.58 - 10.7)	11.16 (10.99 - 11.34)	11.48 (11.36 - 11.56)
2/20/2021	11.27 (11.13 - 11.48)	10.89 (10.69 - 11.13)	10.60 (10.4 - 10.73)	11.46 (11.27 - 11.72)	11.49 (11.34 - 11.69)
2/21/2021	11.16 (11.1 - 11.2)	10.81 (10.51 - 11)	10.41 (10.26 - 11.19)	11.42 (11.1 - 11.6)	11.38 (11.25 - 11.58)
2/22/2021	10.98 (10.88 - 11.11)	10.75 (10.64 - 10.94)	10.72 (10.32 - 11.23)	11.31 (11.18 - 11.49)	11.08 (10.78 - 11.3)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
2/23/2021	10.66 (10.57 - 10.85)	10.75 (10.48 - 11.14)	10.66 (10.08 - 11.38)	11.34 (11.06 - 11.69)	11.12 (11.02 - 11.22)
2/24/2021	10.54 (10.43 - 10.7)	10.96 (10.72 - 11.17)	10.70 (9.74 - 11.63)	11.53 (11.28 - 11.72)	11.11 (10.92 - 11.31)
2/25/2021	10.26 (10.12 - 10.59)	10.84 (10.5 - 11.12)	10.51 (9.56 - 11.55)	11.42 (11.08 - 11.7)	10.73 (10.56 - 10.89)
2/26/2021	9.91 (9.77 - 10.26)	10.90 (10.67 - 11.09)	10.11 (9.35 - 10.86)	11.46 (11.3 - 11.65)	10.66 (10.51 - 10.81)
2/27/2021	9.75 (9.63 - 9.91)	10.93 (10.75 - 11.17)	10.48 (9.11 - 12.1)	11.49 (11.31 - 11.74)	10.61 (10.39 - 10.9)
2/28/2021	9.53 (9.4 - 9.69)	10.91 (10.61 - 11.2)	10.71 (8.76 - 11.87)	11.45 (11.16 - 11.75)	10.77 (10.23 - 11.14)
3/1/2021	9.15 (8.87 - 9.4)	10.80 (10.46 - 10.99)	10.51 (9.11 - 11.15)	11.36 (11.05 - 11.55)	10.78 (10.05 - 11.22)
3/2/2021	8.60 (8.34 - 8.88)	10.65 (10.38 - 10.76)	10.24 (8.57 - 11.11)	11.21 (10.88 - 11.33)	10.86 (9.94 - 11.36)
3/3/2021	8.80 (8.34 - 9.31)	10.64 (10.26 - 10.93)	10.13 (8.8 - 10.98)	11.21 (10.88 - 11.47)	10.81 (10.14 - 11.25)
3/4/2021	9.64 (9.42 - 9.93)	10.69 (10.14 - 10.93)	9.29 (8.02 - 10.99)	11.24 (10.76 - 11.47)	10.33 (9.85 - 11.01)
3/5/2021	9.72 (9.57 - 9.89)	10.67 (10.4 - 10.95)	9.46 (8.52 - 10.91)	11.25 (10.99 - 11.57)	10.28 (10.04 - 10.81)
3/6/2021	9.58 (9.51 - 9.77)	10.75 (10.38 - 11.08)	9.94 (8.79 - 11.37)	11.32 (10.93 - 11.64)	10.33 (9.97 - 10.69)
3/7/2021	9.74 (9.52 - 10.03)	10.86 (10.63 - 11.13)	10.01 (8.6 - 11.88)	11.47 (11.27 - 11.75)	10.60 (10.3 - 11.14)
3/8/2021	10.06 (9.88 - 10.2)	10.84 (10.61 - 11.09)	10.03 (8.68 - 11.76)	11.48 (11.26 - 11.74)	10.70 (10.47 - 11.18)
3/9/2021	10.21 (10.04 - 10.29)	10.86 (10.6 - 11.13)	10.11 (8.64 - 12)	11.50 (11.22 - 11.78)	10.56 (10.39 - 10.94)
3/10/2021	10.18 (10.09 - 10.26)	10.85 (10.59 - 11.1)	10.26 (8.83 - 11.81)	11.50 (11.28 - 11.75)	10.45 (10.26 - 10.83)
3/11/2021	9.85 (9.31 - 10.08)	10.74 (10.64 - 10.83)	9.98 (8.99 - 12.1)	11.33 (11.26 - 11.43)	10.32 (10.12 - 10.6)
3/12/2021	9.53 (9.12 - 9.75)	10.78 (10.69 - 10.97)	10.06 (9.23 - 11.13)	11.35 (11.19 - 11.49)	10.06 (9.96 - 10.27)
3/13/2021	9.15 (8.85 - 9.46)	10.88 (10.72 - 11.12)	10.25 (9.03 - 12.19)	11.41 (11.24 - 11.64)	9.97 (9.84 - 10.35)
3/14/2021	8.79 (8.53 - 8.93)	10.93 (10.52 - 11.12)	9.65 (8.53 - 11.3)	11.36 (11 - 11.58)	10.15 (9.67 - 10.65)
3/15/2021	8.42 (8.29 - 8.53)	10.56 (10.28 - 10.96)	10.03 (8.73 - 11.28)	11.09 (10.82 - 11.47)	10.20 (9.89 - 10.51)
3/16/2021	8.21 (8.1 - 8.29)	10.57 (10.16 - 10.89)	10.02 (8.57 - 10.8)	11.13 (10.75 - 11.37)	10.28 (9.83 - 10.65)
3/17/2021	9.25 (8.14 - 10.12)	10.12 (9.15 - 10.73)	8.84 (7.29 - 9.88)	10.59 (9.6 - 11.17)	10.03 (9.5 - 10.49)
3/18/2021	9.24 (8.79 - 9.83)	10.32 (9.92 - 10.71)	8.90 (8.32 - 9.54)	10.72 (10.04 - 11.16)	10.20 (9.9 - 10.46)
3/19/2021	8.72 (8.01 - 8.96)	10.34 (10.21 - 10.59)	8.22 (7.87 - 8.87)	10.87 (10.65 - 11.17)	10.00 (9.9 - 10.22)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
3/20/2021	8.85 (8.42 - 9.17)	10.47 (10.23 - 10.76)	8.19 (7.93 - 9.5)	11.01 (10.55 - 11.35)	10.01 (9.79 - 10.4)
3/21/2021	8.98 (8.7 - 9.15)	10.65 (10.39 - 11.01)	8.86 (7.98 - 10.73)	11.14 (10.85 - 11.47)	10.00 (9.54 - 10.62)
3/22/2021	8.86 (8.53 - 9.04)	10.67 (10.43 - 10.97)	9.39 (8.23 - 11)	11.22 (11.06 - 11.41)	9.85 (9.36 - 10.45)
3/23/2021	8.67 (8.44 - 8.78)	10.65 (10.29 - 11.09)	9.01 (8 - 10.81)	11.15 (10.86 - 11.52)	9.81 (9.33 - 10.29)
3/24/2021	8.13 (7.71 - 8.34)	10.51 (10.15 - 10.82)	9.33 (7.75 - 10.37)	10.90 (10.65 - 11.16)	9.71 (8.86 - 10.2)
3/25/2021	8.03 (7.8 - 8.36)	10.63 (10.3 - 10.83)	9.03 (7.59 - 11.27)	10.99 (10.73 - 11.23)	9.78 (8.67 - 10.5)
3/26/2021	7.47 (6.97 - 7.8)	10.23 (9.77 - 10.72)	9.28 (7.73 - 11.05)	10.78 (10.34 - 11.16)	9.56 (9.03 - 10.19)
3/27/2021	7.70 (7.13 - 8.28)	10.18 (9.86 - 10.5)	8.75 (6.9 - 11.55)	N/A	9.79 (9.11 - 10.72)
3/28/2021	7.31 (6.96 - 7.79)	9.92 (9.53 - 10.18)	8.90 (6.65 - 10.16)	N/A	9.98 (8.75 - 10.61)
3/29/2021	6.56 (6.29 - 6.93)	9.94 (9.51 - 10.35)	9.38 (7.67 - 11.09)	N/A	10.40 (9.64 - 10.66)
3/30/2021	6.72 (6.56 - 6.93)	9.77 (9.54 - 9.99)	9.02 (7.61 - 9.98)	N/A	10.50 (10.26 - 10.66)
3/31/2021	7.02 (6.77 - 7.26)	9.60 (9.39 - 9.89)	8.84 (7.77 - 10.04)	N/A	10.37 (10.15 - 10.58)
4/1/2021	7.21 (7.02 - 7.42)	9.71 (9.29 - 10.19)	8.10 (6.4 - 9.96)	N/A	10.18 (9.73 - 10.41)
4/2/2021	7.77 (7.41 - 8.13)	10.40 (9.57 - 11.75)	8.92 (8.18 - 11.84)	N/A	10.40 (10.32 - 10.54)
4/3/2021	8.16 (7.9 - 8.28)	10.39 (10.04 - 10.79)	9.81 (9 - 10.84)	N/A	10.50 (10.39 - 10.59)
4/4/2021	8.30 (8.1 - 8.47)	10.40 (10.04 - 10.89)	9.60 (8.8 - 10.46)	N/A	10.47 (10.36 - 10.59)
4/5/2021	8.39 (8.06 - 8.64)	10.41 (10.09 - 10.91)	8.66 (6.99 - 11.19)	N/A	9.91 (9.56 - 10.37)
4/6/2021	8.13 (7.55 - 8.48)	10.62 (10.25 - 11.02)	9.63 (7.51 - 11.81)	N/A	9.63 (9.46 - 9.87)
4/7/2021	7.68 (7.4 - 7.96)	10.37 (10.16 - 10.91)	9.21 (7.32 - 11.66)	N/A	9.51 (9.27 - 9.8)
4/8/2021	7.29 (6.92 - 7.78)	10.03 (9.81 - 10.27)	9.56 (7.47 - 11.46)	N/A	9.48 (9.19 - 9.81)
4/9/2021	6.88 (6.61 - 7.06)	9.94 (9.74 - 10.2)	8.82 (6.91 - 11.23)	N/A	9.32 (8.69 - 9.94)
4/10/2021	6.63 (6.5 - 7)	9.84 (9.64 - 10.04)	8.77 (6.86 - 10.55)	N/A	9.37 (8.71 - 9.84)
4/11/2021	6.62 (6.35 - 6.95)	9.67 (9.44 - 10)	9.15 (7.17 - 11.11)	N/A	9.43 (9.08 - 9.7)
4/12/2021	6.67 (6.41 - 7.04)	9.76 (9.5 - 10.29)	9.00 (6.82 - 11.17)	N/A	9.33 (8.86 - 9.69)
4/13/2021	6.75 (6.47 - 7.13)	9.71 (9.4 - 10.24)	9.37 (7.42 - 11.58)	N/A	9.39 (9.01 - 9.73)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
4/14/2021	6.52 (6.02 - 7.83)	9.55 (9.27 - 10.03)	10.18 (8.71 - 11.14)	N/A	9.57 (9.13 - 9.89)
4/15/2021	6.85 (6.46 - 7.75)	9.64 (9.25 - 10.2)	9.62 (7.36 - 11.08)	N/A	9.31 (8.43 - 9.78)
4/16/2021	6.61 (6.03 - 7.82)	9.99 (9.72 - 10.28)	9.81 (7.33 - 11.74)	N/A	9.37 (8.73 - 9.92)
4/17/2021	6.63 (5.83 - 7.87)	9.99 (9.66 - 10.36)	9.62 (7.02 - 11.72)	N/A	9.16 (8.28 - 9.75)
4/18/2021	6.58 (5.95 - 7.52)	10.38 (10.03 - 10.68)	9.43 (6.62 - 11.92)	N/A	9.36 (8.27 - 9.99)
4/19/2021	6.66 (5.91 - 7.48)	10.36 (9.6 - 10.71)	9.61 (7.23 - 11.57)	N/A	9.51 (9.02 - 9.93)
4/20/2021	6.32 (5.32 - 6.99)	9.33 (9.01 - 9.98)	9.88 (8.9 - 11.97)	N/A	9.32 (8.9 - 9.85)
4/21/2021	6.67 (5.69 - 8.15)	9.52 (9.03 - 10.11)	10.12 (8.25 - 11.58)	N/A	9.42 (8.77 - 9.83)
4/22/2021	6.74 (6.39 - 7.45)	9.88 (9.51 - 10.37)	10.00 (8.43 - 11.48)	N/A	9.60 (9.19 - 10.08)
4/23/2021	6.72 (6.37 - 8.04)	9.59 (9.2 - 9.99)	9.93 (7.85 - 11.72)	N/A	9.51 (8.9 - 9.8)
4/24/2021	6.62 (6.29 - 6.93)	9.23 (8.9 - 9.57)	9.18 (7.8 - 11.61)	N/A	9.53 (8.71 - 9.84)
4/25/2021	6.75 (6.47 - 7.3)	9.16 (8.76 - 10.03)	9.33 (7.28 - 11.36)	N/A	9.36 (8.78 - 9.83)
4/26/2021	7.06 (6.21 - 7.52)	9.21 (8.81 - 9.69)	9.36 (6.28 - 11.68)	N/A	9.38 (8.99 - 9.7)
4/27/2021	7.19 (6.52 - 7.71)	8.94 (8.5 - 9.61)	8.08 (6.09 - 11.48)	N/A	8.87 (7.94 - 9.54)
4/28/2021	6.47 (6.08 - 7.07)	8.90 (8.49 - 9.92)	9.66 (8.33 - 11.37)	N/A	9.16 (8.83 - 9.59)
4/29/2021	6.07 (5.77 - 6.65)	8.73 (8.42 - 9.34)	8.73 (6.74 - 11.1)	N/A	9.01 (8.61 - 9.46)
4/30/2021	5.47 (5.07 - 6.58)	9.25 (8.71 - 10.06)	8.43 (6.99 - 9.99)	N/A	9.05 (8.8 - 9.29)
5/1/2021	4.87 (4.52 - 5.28)	8.92 (8.64 - 9.33)	9.03 (8.22 - 9.89)	N/A	8.94 (8.82 - 9.08)
5/2/2021	4.58 (4.08 - 5.49)	8.88 (8.58 - 9.52)	8.05 (6.85 - 9.64)	N/A	8.77 (8.28 - 9.18)
5/3/2021	4.18 (3.97 - 4.48)	8.71 (8.48 - 9.03)	8.07 (6.43 - 9.73)	N/A	8.74 (8.36 - 9.08)
5/4/2021	4.72 (4.03 - 5.43)	8.48 (8.17 - 8.8)	7.42 (5.13 - 9.93)	N/A	8.48 (7.22 - 9.52)
5/5/2021	5.67 (4.73 - 6.13)	8.16 (7.87 - 8.87)	8.09 (4.94 - 10.36)	N/A	9.00 (8.39 - 9.42)
5/6/2021	5.92 (5.39 - 6.38)	8.21 (7.82 - 8.82)	8.21 (5.09 - 11)	N/A	8.96 (8.32 - 9.58)
5/7/2021	5.92 (5.36 - 6.28)	8.40 (7.82 - 9.1)	8.44 (5.16 - 10.77)	N/A	9.17 (8.14 - 9.71)
5/8/2021	5.58 (4.98 - 5.88)	8.53 (8.25 - 8.88)	8.79 (5.95 - 11.28)	N/A	9.20 (8.47 - 9.52)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
5/9/2021	5.35 (4.94 - 5.61)	8.12 (7.66 - 8.78)	9.02 (6.35 - 11.04)	N/A	9.24 (8.71 - 9.51)
5/10/2021	5.01 (4.45 - 5.4)	8.08 (7.69 - 8.81)	8.80 (6.34 - 10.62)	N/A	9.19 (8.53 - 9.64)
5/11/2021	4.57 (3.42 - 5.03)	8.08 (7.57 - 8.79)	8.75 (6.31 - 10.76)	N/A	9.18 (8.65 - 9.5)
5/12/2021	4.71 (4.35 - 5.05)	7.96 (7.72 - 8.26)	7.76 (5.72 - 9.23)	N/A	9.14 (8.21 - 9.84)
5/13/2021	5.73 (4.65 - 6.4)	8.06 (7.69 - 8.51)	6.50 (4.94 - 8.96)	N/A	8.70 (7.83 - 9.44)
5/14/2021	7.01 (6.39 - 7.31)	8.55 (8.17 - 9.01)	6.72 (4.73 - 10.12)	N/A	8.75 (8.11 - 9.25)
5/15/2021	6.92 (6.47 - 7.21)	8.50 (7.97 - 9.05)	6.86 (5.11 - 10.23)	N/A	8.53 (7.32 - 9.28)
5/16/2021	6.54 (6.1 - 6.8)	8.16 (7.75 - 8.78)	8.31 (6.29 - 10.68)	N/A	8.80 (8.1 - 9.28)
5/17/2021	6.36 (6.24 - 6.72)	8.44 (8.15 - 9.02)	7.82 (6.21 - 9.84)	N/A	8.82 (8.38 - 9.21)
5/18/2021	5.91 (5.56 - 6.49)	8.02 (7.65 - 8.43)	7.87 (6.61 - 9.49)	N/A	8.82 (8.09 - 9.19)
5/19/2021	5.42 (4.94 - 6.14)	7.84 (7.44 - 8.42)	7.83 (6.85 - 9.44)	N/A	8.83 (8.3 - 9.1)
5/20/2021	5.07 (4.46 - 5.9)	8.00 (7.53 - 8.54)	7.74 (6.98 - 8.89)	N/A	8.82 (8.35 - 9)
5/21/2021	4.76 (4.33 - 5.19)	7.95 (7.59 - 8.37)	7.72 (7.15 - 8.81)	N/A	8.90 (8.36 - 9.51)
5/22/2021	N/A	7.92 (7.53 - 8.4)	N/A	N/A	9.26 (8.89 - 9.61)
5/23/2021	N/A	7.77 (7.43 - 8.3)	N/A	N/A	9.19 (8.87 - 9.55)
5/24/2021	N/A	7.70 (7.31 - 8.53)	N/A	N/A	8.98 (8.39 - 9.46)
5/25/2021	N/A	7.27 (6.92 - 7.83)	N/A	N/A	8.95 (8.22 - 9.5)
5/26/2021	N/A	7.15 (6.61 - 7.91)	N/A	N/A	9.18 (8.09 - 9.57)
5/27/2021	N/A	7.23 (6.8 - 8)	N/A	N/A	8.89 (7.95 - 9.37)
5/28/2021	N/A	7.22 (6.78 - 7.84)	N/A	N/A	8.93 (8.21 - 9.25)
5/29/2021	N/A	7.22 (6.78 - 7.76)	N/A	N/A	8.81 (7.96 - 9.28)
5/30/2021	N/A	7.04 (6.6 - 7.83)	N/A	N/A	9.12 (7.77 - 9.7)
5/31/2021	N/A	7.19 (6.82 - 8.18)	N/A	N/A	9.18 (8.61 - 9.67)
6/1/2021	N/A	7.20 (6.69 - 8.03)	N/A	N/A	9.41 (8.77 - 9.66)
6/2/2021	N/A	7.24 (6.62 - 9.03)	N/A	N/A	9.05 (8.01 - 9.55)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
6/3/2021	N/A	7.31 (6.85 - 8.37)	N/A	N/A	8.88 (7.82 - 9.41)
6/4/2021	N/A	7.12 (6.78 - 7.49)	N/A	N/A	9.03 (8.22 - 9.42)
6/5/2021	N/A	7.35 (6.9 - 7.7)	N/A	N/A	9.06 (8.52 - 9.35)
6/6/2021	N/A	7.54 (7.23 - 7.93)	N/A	N/A	8.80 (7.74 - 9.39)
6/7/2021	N/A	7.49 (7.27 - 7.71)	N/A	N/A	8.81 (7.78 - 9.39)
6/8/2021	N/A	7.01 (6.68 - 7.43)	N/A	N/A	8.71 (7.23 - 9.44)
6/9/2021	N/A	6.95 (6.58 - 7.45)	N/A	N/A	8.29 (7.13 - 9.26)
6/10/2021	N/A	7.06 (6.62 - 7.78)	N/A	N/A	8.57 (7.26 - 9.14)
6/11/2021	N/A	7.04 (6.54 - 8.03)	N/A	N/A	8.38 (6.95 - 9.08)
6/12/2021	N/A	6.91 (6.49 - 7.77)	N/A	N/A	8.41 (7.12 - 9)
6/13/2021	N/A	6.92 (6.47 - 7.67)	N/A	N/A	8.00 (6.48 - 9.04)
6/14/2021	N/A	7.16 (6.62 - 7.73)	7.04 (4.52 - 8.93)	7.84 (7.33 - 8.22)	8.39 (7.36 - 9.01)
6/15/2021	N/A	7.24 (6.68 - 7.84)	6.50 (4.96 - 8.97)	7.64 (7.28 - 8.1)	8.55 (7.49 - 9.04)
6/16/2021	N/A	7.42 (6.93 - 8.15)	6.43 (5.36 - 7.67)	7.80 (7.31 - 8.46)	8.35 (7.03 - 9.15)
6/17/2021	N/A	7.32 (6.85 - 7.72)	7.04 (5.72 - 9.26)	7.62 (6.99 - 8.06)	8.49 (7.35 - 9.26)
6/18/2021	N/A	7.00 (6.6 - 7.73)	7.29 (6.16 - 9.55)	7.42 (6.89 - 8.1)	8.61 (7.64 - 9.25)
6/19/2021	N/A	6.64 (6.3 - 7.01)	6.80 (5.54 - 8.39)	6.85 (6.51 - 7.13)	8.33 (6.84 - 9.36)
6/20/2021	N/A	6.98 (6.51 - 7.73)	7.16 (5.91 - 8.72)	7.12 (6.72 - 7.68)	8.91 (7.74 - 9.41)
6/21/2021	N/A	7.09 (6.74 - 7.56)	5.86 (3.6 - 8.33)	7.12 (6.82 - 7.57)	7.98 (5.98 - 9.32)
6/22/2021	N/A	6.63 (6.34 - 6.94)	6.14 (4.84 - 8.66)	6.69 (6.33 - 7.01)	8.11 (6.13 - 9.3)
6/23/2021	N/A	6.79 (6.38 - 7.47)	6.80 (4.84 - 9.83)	6.84 (6.46 - 7.31)	8.62 (6.53 - 9.44)
6/24/2021	N/A	6.77 (6.36 - 7.81)	5.77 (4.41 - 8.4)	7.22 (6.79 - 7.81)	7.99 (6.4 - 9.27)
6/25/2021	N/A	6.79 (6.24 - 7.84)	6.41 (5.06 - 8.33)	7.28 (6.84 - 8.2)	8.28 (6.55 - 9.34)
6/26/2021	N/A	6.71 (6.19 - 7.41)	6.67 (5.85 - 8.22)	7.36 (7.06 - 7.97)	8.68 (7.62 - 9.35)
6/27/2021	N/A	6.55 (6.02 - 7.39)	6.66 (5.95 - 8.07)	7.29 (7.03 - 7.98)	8.51 (7.43 - 9.26)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
6/28/2021	N/A	6.38 (5.79 - 7.48)	6.91 (6.22 - 8.4)	7.08 (6.71 - 7.37)	8.52 (7.09 - 9.22)
6/29/2021	N/A	6.37 (5.88 - 7.28)	6.96 (6.22 - 8.44)	7.14 (6.61 - 7.8)	8.57 (7.43 - 9.27)
6/30/2021	N/A	6.42 (5.9 - 7.12)	7.08 (6.33 - 8.11)	7.29 (7 - 7.76)	8.46 (7.23 - 9.27)
7/1/2021	N/A	6.36 (5.84 - 7.03)	6.94 (6.48 - 7.99)	7.25 (6.91 - 7.73)	8.56 (7.35 - 9.19)
7/2/2021	N/A	6.20 (5.77 - 6.62)	6.61 (6.11 - 7.27)	7.09 (6.87 - 7.44)	8.23 (6.85 - 9.24)
7/3/2021	N/A	6.30 (5.65 - 7.35)	6.42 (5.85 - 8.3)	7.04 (6.56 - 7.75)	8.28 (6.24 - 9.21)
7/4/2021	N/A	6.31 (5.79 - 6.88)	6.83 (6.09 - 8.22)	6.93 (6.43 - 7.5)	8.17 (7.03 - 9.18)
7/5/2021	N/A	6.43 (5.9 - 7.18)	7.12 (6.11 - 8.54)	7.01 (6.39 - 7.77)	8.69 (7.64 - 9.21)
7/6/2021	N/A	6.02 (5.6 - 6.72)	7.10 (5.94 - 8.34)	6.65 (6.19 - 7.39)	8.57 (7.5 - 9.14)
7/7/2021	N/A	5.83 (5.39 - 6.48)	6.88 (5.78 - 7.9)	6.34 (5.92 - 6.99)	8.28 (6.74 - 9.19)
7/8/2021	N/A	6.01 (5.52 - 6.95)	6.72 (5.97 - 8.3)	6.44 (5.9 - 7.43)	8.25 (6.44 - 9.17)
7/9/2021	N/A	5.96 (5.48 - 6.96)	6.69 (5.98 - 7.73)	6.50 (6.06 - 7.31)	8.45 (6.79 - 9.11)
7/10/2021	N/A	5.85 (5.32 - 6.71)	6.38 (5.86 - 7.72)	6.51 (6.03 - 7.12)	8.28 (6.76 - 8.97)
7/11/2021	N/A	6.07 (5.48 - 6.89)	6.63 (5.92 - 7.77)	6.72 (6.38 - 7.14)	8.31 (7.08 - 9.12)
7/12/2021	N/A	6.00 (5.55 - 6.75)	6.51 (5.91 - 7.6)	6.77 (6.38 - 7.26)	8.41 (7.24 - 9.07)
7/13/2021	N/A	5.97 (5.39 - 6.78)	6.76 (6 - 7.82)	6.60 (6.07 - 7.25)	8.34 (6.72 - 9.14)
7/14/2021	N/A	5.93 (5.46 - 6.65)	6.78 (6.11 - 7.74)	6.62 (6.1 - 7.29)	8.46 (7.07 - 9.1)
7/15/2021	N/A	5.85 (5.34 - 6.55)	6.47 (5.82 - 7.81)	6.46 (5.95 - 7.18)	8.03 (6.6 - 9.07)
7/16/2021	N/A	5.79 (5.23 - 6.48)	6.15 (5.56 - 7.64)	6.58 (6.1 - 7.31)	8.08 (6.46 - 9.1)
7/17/2021	N/A	5.95 (5.41 - 6.66)	6.27 (5.45 - 7.78)	6.63 (6.19 - 7.32)	8.16 (6.81 - 9.12)
7/18/2021	N/A	5.80 (5.26 - 6.28)	6.14 (5.49 - 7.29)	6.40 (5.98 - 6.78)	8.07 (6.51 - 9.03)
7/19/2021	N/A	5.74 (5.4 - 6.64)	6.18 (5.42 - 7.36)	6.49 (5.91 - 7.11)	7.98 (6.21 - 9.01)
7/20/2021	N/A	5.69 (5.24 - 6.52)	5.89 (4.93 - 7.01)	6.33 (5.81 - 6.87)	8.00 (6.13 - 8.93)
7/21/2021	N/A	5.02 (4.78 - 5.34)	4.41 (4.07 - 4.79)	5.38 (5.05 - 5.84)	8.19 (7.77 - 8.38)
7/22/2021	N/A	5.17 (4.66 - 5.96)	5.09 (4.38 - 6.73)	5.56 (5.14 - 6.15)	7.67 (5.55 - 8.8)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
7/23/2021	N/A	5.28 (4.82 - 5.81)	4.88 (4.12 - 6.82)	5.81 (5.28 - 6.44)	6.93 (4.87 - 8.81)
7/24/2021	N/A	5.31 (4.72 - 5.96)	5.04 (3.95 - 7.17)	6.13 (5.82 - 6.62)	7.49 (5.91 - 8.86)
7/25/2021	N/A	5.39 (4.88 - 6.15)	5.08 (4.08 - 7.12)	6.11 (5.86 - 6.93)	7.42 (5.86 - 8.8)
7/26/2021	5.23 (4.61 - 7.31)	5.35 (4.9 - 5.87)	5.42 (4.41 - 7.08)	6.24 (5.93 - 6.64)	7.47 (5.87 - 8.74)
7/27/2021	4.41 (3.99 - 5.73)	5.23 (4.79 - 5.88)	5.56 (5 - 6.86)	6.16 (5.76 - 6.78)	7.04 (5.66 - 8.52)
7/28/2021	4.32 (3.69 - 5.77)	5.12 (4.68 - 5.78)	5.53 (4.9 - 7.09)	6.07 (5.55 - 6.67)	6.75 (5.36 - 8.51)
7/29/2021	4.07 (3.7 - 4.76)	5.30 (4.82 - 5.86)	5.86 (5.22 - 7.34)	6.23 (5.97 - 6.64)	6.95 (5.45 - 8.53)
7/30/2021	3.79 (3.43 - 4.2)	5.34 (4.82 - 6.01)	6.02 (5.38 - 7.58)	6.18 (5.91 - 6.68)	6.79 (5.66 - 8.36)
7/31/2021	3.50 (3.15 - 4.52)	5.31 (4.88 - 5.93)	5.78 (5.21 - 7.22)	6.21 (5.63 - 6.76)	6.84 (5.56 - 8.12)
8/1/2021	3.38 (2.8 - 4.38)	5.22 (4.55 - 5.97)	5.98 (5.16 - 7.02)	6.12 (5.64 - 6.77)	6.46 (5.34 - 7.99)
8/2/2021	3.36 (2.87 - 4.23)	5.33 (4.82 - 5.94)	6.01 (5.31 - 7.29)	6.21 (5.93 - 6.7)	6.66 (5.69 - 8.11)
8/3/2021	3.10 (2.81 - 3.57)	5.34 (4.9 - 5.88)	5.93 (5.37 - 7.3)	6.28 (5.75 - 6.66)	6.54 (5.57 - 8.21)
8/4/2021	2.92 (2.58 - 3.36)	5.05 (4.64 - 5.55)	5.72 (5.24 - 7.03)	6.09 (5.8 - 6.39)	6.66 (5.72 - 7.92)
8/5/2021	3.05 (2.54 - 3.89)	5.16 (4.62 - 5.93)	5.94 (5.3 - 7.29)	6.06 (5.73 - 6.61)	6.71 (5.75 - 8.7)
8/6/2021	3.02 (2.72 - 3.59)	4.92 (4.6 - 5.37)	5.75 (5.06 - 6.85)	5.90 (5.28 - 6.53)	6.59 (5.52 - 8.43)
8/7/2021	2.96 (2.57 - 4.07)	4.88 (4.57 - 5.56)	5.31 (4.86 - 6.47)	5.67 (5.01 - 6.35)	6.14 (5.12 - 8.69)
8/8/2021	3.47 (2.56 - 4.91)	4.82 (4.17 - 5.84)	6.37 (5.46 - 8.25)	5.78 (5.36 - 6.52)	7.82 (6.11 - 8.74)
8/9/2021	3.94 (2.8 - 5.16)	5.14 (4.63 - 6.13)	6.87 (5.95 - 8.76)	6.00 (5.59 - 6.78)	8.47 (7.55 - 8.84)
8/10/2021	3.79 (2.75 - 5.11)	5.00 (4.57 - 5.56)	6.75 (5.82 - 8.27)	5.73 (5.29 - 6.17)	8.38 (6.97 - 8.79)
8/11/2021	3.94 (2.92 - 5.27)	5.02 (4.6 - 5.77)	6.80 (6.23 - 8.01)	5.92 (5.5 - 6.59)	8.63 (8.4 - 8.79)
8/12/2021	3.61 (2.84 - 4.84)	5.08 (4.66 - 5.79)	6.68 (5.65 - 8.29)	5.62 (5.31 - 6.11)	8.30 (7.21 - 8.71)
8/13/2021	3.49 (2.78 - 4.24)	5.10 (4.46 - 6.12)	6.71 (5.98 - 9.36)	5.58 (5.01 - 6.34)	8.53 (7.71 - 8.77)
8/14/2021	3.49 (3.04 - 3.93)	5.14 (4.78 - 5.61)	6.56 (5.49 - 8.05)	5.69 (5.43 - 6.08)	7.92 (6.44 - 8.76)
8/15/2021	3.65 (3.25 - 4.54)	5.00 (4.52 - 5.84)	6.49 (5.06 - 8.38)	5.59 (5.16 - 6.3)	8.45 (6.95 - 8.92)
8/16/2021	3.28 (2.88 - 3.62)	5.22 (4.75 - 5.64)	6.33 (5.72 - 7.03)	5.75 (5.34 - 6.23)	8.69 (8.38 - 8.96)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
8/17/2021	4.52 (3.58 - 5.11)	5.16 (4.83 - 5.59)	5.10 (3.6 - 7.15)	5.80 (5.35 - 6.28)	6.87 (5.04 - 8.72)
8/18/2021	5.16 (4.73 - 5.59)	4.70 (4.21 - 5.58)	5.65 (4.05 - 8.05)	5.49 (4.88 - 5.94)	8.31 (7.5 - 8.68)
8/19/2021	5.23 (5.03 - 5.91)	4.69 (4.37 - 5.28)	5.39 (4.07 - 7.92)	5.28 (4.88 - 6.01)	7.81 (6.01 - 8.53)
8/20/2021	5.21 (4.87 - 5.55)	4.55 (4.13 - 5.3)	5.44 (3.87 - 7.51)	5.13 (4.8 - 5.57)	7.48 (5.06 - 8.46)
8/21/2021	4.91 (4.57 - 5.41)	4.66 (4.25 - 5.13)	5.56 (4.26 - 7.19)	5.36 (4.94 - 6)	7.46 (5.5 - 8.57)
8/22/2021	4.60 (4.22 - 5.18)	4.53 (4.2 - 4.96)	5.34 (4.56 - 6.93)	5.32 (5.07 - 5.75)	7.16 (4.91 - 8.59)
8/23/2021	4.39 (3.91 - 4.98)	4.53 (4.09 - 5.17)	5.68 (4.78 - 7.69)	5.40 (5.14 - 5.64)	7.87 (6.03 - 8.5)
8/24/2021	4.71 (4.2 - 5.18)	4.66 (4.22 - 5.48)	5.95 (4.56 - 8.11)	5.32 (4.96 - 5.86)	7.52 (5.54 - 8.54)
8/25/2021	4.23 (3.99 - 4.47)	4.67 (4.24 - 5.09)	5.72 (4.37 - 7.38)	5.30 (4.95 - 5.6)	7.29 (5.29 - 8.56)
8/26/2021	3.81 (3.38 - 4.34)	4.64 (4.18 - 5.14)	5.20 (4.41 - 6.82)	5.30 (4.61 - 5.73)	7.23 (5.51 - 8.55)
8/27/2021	3.70 (3.36 - 5.56)	4.79 (4.42 - 5.15)	4.97 (4.12 - 6.48)	5.76 (5.31 - 6.37)	6.88 (4.92 - 8.51)
8/28/2021	3.37 (3.07 - 4.39)	4.71 (4.28 - 5.16)	4.93 (4.24 - 6.13)	5.66 (5.39 - 6.04)	6.59 (5.05 - 8.39)
8/29/2021	3.23 (2.87 - 4.65)	4.76 (4.33 - 5.2)	5.12 (4.46 - 6.55)	5.76 (5.41 - 6.35)	6.99 (5.68 - 8.42)
8/30/2021	3.18 (2.94 - 3.75)	4.73 (4.31 - 5.17)	5.21 (4.42 - 6.83)	5.66 (5.06 - 6.33)	6.82 (4.95 - 8.44)
8/31/2021	2.99 (2.59 - 3.5)	4.65 (4.21 - 5.1)	5.63 (4.71 - 7.15)	5.81 (5.41 - 6.28)	7.34 (5.55 - 8.51)
9/1/2021	2.90 (2.71 - 3.2)	4.75 (4.36 - 5.11)	5.69 (4.91 - 6.53)	5.84 (5.32 - 6.3)	7.12 (5.08 - 8.49)
9/2/2021	2.80 (2.4 - 3.63)	4.89 (4.46 - 5.31)	5.66 (4.89 - 7.44)	5.84 (5.54 - 6.31)	7.05 (5.43 - 8.5)
9/3/2021	2.96 (2.6 - 3.67)	4.82 (4.44 - 5.21)	5.53 (5 - 6.81)	5.64 (5.19 - 6.02)	6.58 (5.15 - 8.49)
9/4/2021	3.06 (2.73 - 3.66)	4.84 (4.47 - 5.18)	5.50 (4.86 - 6.55)	5.84 (5.46 - 6.16)	6.28 (5.17 - 7.86)
9/5/2021	3.22 (2.78 - 4.25)	4.87 (4.48 - 5.29)	5.24 (4.95 - 6)	5.91 (5.62 - 6.35)	6.23 (5.41 - 8.3)
9/6/2021	3.31 (2.94 - 3.8)	4.86 (4.54 - 5.09)	5.15 (4.78 - 5.9)	5.96 (5.59 - 6.3)	6.13 (5.08 - 8.1)
9/7/2021	3.21 (2.83 - 3.87)	4.86 (4.46 - 5.25)	5.06 (4.75 - 6.68)	5.91 (5.64 - 6.31)	6.00 (5.09 - 8.18)
9/8/2021	3.51 (2.79 - 4.56)	4.86 (4.44 - 5.65)	5.20 (4.76 - 5.92)	5.67 (5.19 - 6.08)	6.22 (5.06 - 8.65)
9/9/2021	3.86 (3.6 - 4.25)	4.32 (3.93 - 4.77)	5.36 (4.63 - 6.86)	5.36 (5.1 - 5.61)	7.48 (5.68 - 8.55)
9/10/2021	3.72 (3.4 - 4.22)	4.57 (4.18 - 5.06)	5.14 (4.44 - 6.69)	5.46 (5.3 - 5.77)	6.89 (5.28 - 8.55)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
9/11/2021	3.88 (3.53 - 4.61)	4.64 (4.29 - 5.01)	5.09 (4.24 - 6.92)	5.54 (5.13 - 6.02)	6.31 (5.04 - 8.68)
9/12/2021	3.99 (3.64 - 5.53)	4.68 (4.24 - 5.33)	5.57 (4.82 - 6.82)	5.50 (5.05 - 5.91)	6.72 (5.29 - 8.61)
9/13/2021	4.20 (3.76 - 5.17)	4.83 (4.39 - 5.38)	5.97 (5.09 - 7.05)	5.56 (5.18 - 5.87)	7.32 (5.66 - 8.6)
9/14/2021	4.43 (3.96 - 5.2)	4.82 (4.45 - 5.34)	6.10 (5.33 - 7.3)	5.62 (5.16 - 6.01)	7.60 (6.03 - 8.56)
9/15/2021	4.69 (4.19 - 5.34)	4.68 (4.28 - 5.13)	5.89 (4.88 - 7.04)	5.43 (5.01 - 5.71)	7.47 (5.51 - 8.69)
9/16/2021	4.96 (4.62 - 5.39)	4.90 (4.65 - 5.28)	5.83 (5.35 - 6.74)	5.54 (5.28 - 5.78)	7.54 (5.68 - 8.71)
9/17/2021	5.60 (4.91 - 6.64)	4.61 (4.34 - 5.09)	5.42 (4.41 - 6.74)	5.42 (5.09 - 5.71)	8.29 (7.25 - 8.71)
9/18/2021	5.48 (4.92 - 5.76)	4.52 (4.17 - 5.08)	5.25 (4.56 - 6.78)	5.21 (4.89 - 5.47)	7.99 (5.43 - 8.53)
9/19/2021	5.22 (4.66 - 5.67)	4.59 (4.21 - 5.12)	5.22 (3.83 - 6.94)	5.33 (4.83 - 5.61)	7.74 (5.11 - 8.57)
9/20/2021	4.84 (4.48 - 5.17)	4.54 (4.16 - 5.19)	5.00 (3.62 - 6.61)	5.21 (4.85 - 5.7)	7.40 (4.98 - 8.71)
9/21/2021	4.64 (4.23 - 5.02)	4.39 (4.1 - 4.91)	4.79 (3.84 - 5.93)	5.23 (4.99 - 5.46)	7.42 (5.01 - 8.64)
9/22/2021	4.34 (4.13 - 4.73)	4.55 (4.28 - 4.91)	5.44 (4.52 - 6.55)	5.36 (5.07 - 5.67)	8.22 (6.84 - 8.49)
9/23/2021	4.93 (4.15 - 5.52)	4.93 (4.54 - 5.81)	5.56 (4.27 - 7.29)	5.52 (5.08 - 6.24)	7.88 (6.02 - 8.62)
9/24/2021	5.40 (4.93 - 5.83)	5.11 (4.77 - 5.49)	5.60 (4.39 - 7.17)	5.79 (5.44 - 6.25)	7.17 (5.25 - 8.66)
9/25/2021	5.24 (5.01 - 5.77)	4.92 (4.53 - 5.34)	5.72 (5.32 - 7.21)	5.85 (5.62 - 6.07)	6.69 (5.52 - 8.65)
9/26/2021	5.15 (4.81 - 5.52)	4.85 (4.47 - 5.19)	5.54 (5.09 - 6.54)	5.82 (5.53 - 6.15)	6.79 (5.51 - 8.63)
9/27/2021	5.18 (4.76 - 5.81)	4.79 (4.47 - 5.14)	5.55 (4.97 - 7.84)	5.73 (5.51 - 5.98)	6.49 (5.28 - 8.58)
9/28/2021	5.30 (4.95 - 6.03)	4.93 (4.57 - 5.43)	5.39 (5.03 - 7.03)	5.64 (5.29 - 6.08)	6.13 (5.14 - 8.51)
9/29/2021	5.18 (4.82 - 5.92)	5.07 (4.7 - 5.4)	5.39 (5.08 - 7.52)	6.12 (5.87 - 6.36)	6.22 (5.51 - 7.65)
9/30/2021	4.98 (4.76 - 5.42)	4.96 (4.63 - 5.28)	5.45 (5.1 - 7.61)	5.98 (5.76 - 6.25)	6.28 (5.42 - 8.48)
10/1/2021	4.68 (4.49 - 5.03)	4.73 (4.35 - 5.06)	5.32 (4.88 - 7.75)	5.87 (5.71 - 6.07)	6.04 (5.22 - 8.37)
10/2/2021	4.53 (4.13 - 4.85)	4.83 (4.43 - 5.42)	5.36 (4.93 - 6.92)	5.93 (5.71 - 6.38)	6.54 (5.63 - 8.48)
10/3/2021	4.49 (4.14 - 5)	4.91 (4.55 - 5.38)	5.24 (4.76 - 7.19)	5.94 (5.61 - 6.33)	6.62 (5.42 - 8.45)
10/4/2021	4.26 (3.97 - 5.23)	4.63 (4.21 - 5)	5.13 (4.75 - 6.77)	5.77 (5.51 - 6.09)	6.57 (5.44 - 8.57)
10/5/2021	4.02 (3.73 - 4.34)	4.64 (4.28 - 4.96)	5.01 (4.71 - 6.26)	5.80 (5.46 - 6.02)	6.71 (5.24 - 8.58)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
10/6/2021	3.87 (3.66 - 4.31)	4.75 (4.43 - 5.04)	5.02 (4.81 - 5.55)	5.88 (5.7 - 6.03)	6.95 (5.39 - 8.62)
10/7/2021	4.05 (3.69 - 5.16)	4.86 (4.67 - 5.04)	4.96 (4.59 - 5.57)	5.98 (5.84 - 6.17)	6.90 (5.53 - 8.58)
10/8/2021	6.54 (5.03 - 6.92)	4.48 (4.1 - 4.89)	4.74 (3.34 - 5.31)	5.12 (4.75 - 5.88)	8.50 (8.19 - 8.85)
10/9/2021	6.81 (6.47 - 7.11)	4.07 (3.7 - 4.56)	4.64 (4.09 - 5.22)	5.33 (4.62 - 8.08)	8.24 (8.11 - 8.5)
10/10/2021	6.27 (5.87 - 6.9)	4.56 (4.27 - 4.88)	5.43 (4.65 - 6.43)	5.15 (4.87 - 5.43)	8.36 (8.19 - 8.49)
10/11/2021	5.50 (4.96 - 5.96)	4.59 (4.27 - 4.77)	5.03 (4.13 - 6.07)	5.38 (5.1 - 6.03)	8.41 (8.13 - 8.64)
10/12/2021	4.77 (4.48 - 5.3)	4.32 (3.97 - 4.74)	4.51 (2.24 - 5.4)	6.15 (5.2 - 7.59)	8.17 (7.98 - 8.33)
10/13/2021	4.79 (4.66 - 5.19)	4.47 (4 - 5.03)	4.74 (4.01 - 5.82)	5.37 (4.77 - 5.7)	8.27 (8.16 - 8.39)
10/14/2021	4.72 (3.97 - 5.19)	4.66 (4.28 - 5.27)	4.97 (4.11 - 6.12)	5.59 (5.21 - 6.23)	8.32 (8.25 - 8.41)
10/15/2021	4.61 (3.75 - 5.12)	4.58 (4.36 - 4.83)	4.92 (4.38 - 5.64)	5.79 (5.5 - 7.23)	8.22 (8.05 - 8.31)
10/16/2021	6.00 (4.69 - 7.11)	N/A	5.11 (3.82 - 6.63)	5.69 (5.39 - 5.97)	8.24 (8.04 - 8.43)
10/17/2021	4.74 (4.07 - 5.94)	N/A	5.65 (5 - 6.49)	5.80 (5.44 - 5.97)	8.50 (8.38 - 8.61)
10/18/2021	4.10 (3.68 - 5.54)	N/A	5.61 (5.02 - 6.36)	6.02 (5.72 - 6.26)	8.45 (8.34 - 8.52)
10/19/2021	4.01 (3.46 - 4.71)	N/A	5.49 (5.02 - 6.2)	6.07 (5.74 - 6.96)	8.44 (8.32 - 8.62)
10/20/2021	3.59 (3.12 - 5.21)	N/A	5.45 (4.92 - 6.23)	6.23 (5.95 - 6.63)	8.52 (8.29 - 8.66)
10/21/2021	3.43 (2.98 - 3.94)	N/A	5.42 (3.26 - 6.57)	5.74 (5.23 - 6.08)	8.67 (8.43 - 8.86)
10/22/2021	3.19 (2.87 - 4)	N/A	5.40 (4.05 - 6.68)	5.99 (5.47 - 6.64)	8.47 (8.38 - 8.59)
10/23/2021	2.88 (2.32 - 4.29)	N/A	5.66 (4.12 - 6.84)	5.92 (5.54 - 6.53)	8.62 (8.52 - 8.76)
10/24/2021	2.84 (2.52 - 4.54)	N/A	5.66 (3.48 - 6.93)	6.17 (5.95 - 6.46)	8.67 (8.51 - 8.83)
10/25/2021	2.74 (2.47 - 3.08)	N/A	3.07 (0.37 - 6.76)	5.59 (5.32 - 5.94)	8.19 (5.87 - 8.72)
10/26/2021	2.59 (2.38 - 3.23)	N/A	5.99 (4.12 - 7.53)	6.40 (5.88 - 6.72)	8.60 (8.38 - 8.74)
10/27/2021	2.71 (2.52 - 3.06)	6.31 (5.85 - 6.5)	6.38 (5.06 - 7.72)	6.69 (6.29 - 7.18)	8.76 (8.62 - 8.85)
10/28/2021	3.51 (2.57 - 5.44)	5.46 (5.24 - 5.69)	6.05 (4.64 - 7.25)	6.04 (5.7 - 6.58)	8.75 (8.57 - 8.88)
10/29/2021	3.80 (3.52 - 4.2)	5.10 (4.89 - 5.72)	5.54 (4.56 - 6.32)	5.66 (5.45 - 6.24)	8.73 (8.53 - 8.85)
10/30/2021	3.83 (3.59 - 4.26)	5.60 (5.4 - 5.82)	5.99 (4.96 - 6.81)	6.18 (6 - 6.37)	8.83 (8.66 - 8.99)

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
10/31/2021	4.10 (3.65 - 4.6)	5.86 (5.66 - 6.28)	6.37 (5.2 - 7.93)	6.40 (6.17 - 6.72)	8.94 (8.68 - 9.18)
11/1/2021	4.07 (3.91 - 4.24)	6.38 (5.9 - 6.98)	6.67 (5.24 - 7.55)	6.97 (6.52 - 7.53)	8.90 (8.79 - 9.05)
11/2/2021	4.50 (4.05 - 4.87)	6.96 (6.64 - 7.19)	6.94 (5.48 - 8.24)	7.48 (7.19 - 7.66)	8.99 (8.85 - 9.15)
11/3/2021	5.21 (4.51 - 5.88)	7.21 (6.95 - 7.64)	6.62 (5.15 - 7.64)	7.61 (7.27 - 7.97)	9.00 (8.28 - 9.16)
11/4/2021	5.99 (5.15 - 6.54)	7.52 (7.26 - 7.87)	6.82 (5.55 - 7.91)	7.89 (7.61 - 8.25)	7.90 (6.73 - 9.15)
11/5/2021	6.39 (5.77 - 7.01)	7.78 (7.54 - 8.19)	7.32 (6.42 - 7.95)	8.17 (7.97 - 8.41)	7.82 (7.07 - 9.27)
11/6/2021	6.44 (6.15 - 6.62)	7.79 (7.59 - 8.19)	7.97 (7.68 - 8.32)	8.14 (7.95 - 8.49)	8.90 (7.57 - 9.7)
11/7/2021	7.04 (6.59 - 7.41)	7.79 (7.53 - 8.08)	8.07 (6.64 - 9.34)	8.13 (7.85 - 8.39)	8.19 (7.14 - 9.52)
11/8/2021	6.91 (6.7 - 7.18)	8.06 (7.81 - 8.52)	8.68 (7.87 - 9.64)	8.41 (8.17 - 8.81)	9.08 (7.9 - 9.54)
11/9/2021	7.03 (6.73 - 7.3)	8.48 (8.2 - 8.81)	8.44 (7.47 - 8.93)	8.78 (8.41 - 9.14)	8.93 (7.86 - 9.61)
11/10/2021	7.25 (6.91 - 7.66)	8.76 (8.52 - 9.16)	8.43 (7.63 - 9.27)	9.11 (8.87 - 9.5)	8.64 (8.17 - 9.34)
11/11/2021	7.29 (7.05 - 7.6)	8.74 (8.48 - 8.98)	8.62 (7.7 - 9.25)	9.19 (8.99 - 9.38)	8.58 (7.95 - 9.19)
11/12/2021	7.16 (7 - 7.37)	8.71 (8.52 - 8.87)	9.04 (7.78 - 10.17)	9.08 (8.94 - 9.24)	8.96 (8.1 - 9.45)
11/13/2021	7.35 (7.02 - 7.61)	8.37 (8.11 - 8.62)	8.28 (7.07 - 9.46)	8.76 (8.44 - 9.03)	8.34 (7.38 - 9.46)
11/14/2021	7.27 (7.17 - 7.44)	8.37 (8.06 - 8.73)	8.64 (8.19 - 9.11)	8.79 (8.56 - 9.04)	9.26 (8.15 - 9.7)
11/15/2021	7.39 (7.25 - 7.59)	8.56 (8.32 - 8.79)	8.83 (8.34 - 9.25)	8.94 (8.57 - 9.27)	9.74 (9.55 - 9.81)
11/16/2021	7.41 (7.25 - 7.62)	8.73 (8.52 - 8.88)	8.82 (8.02 - 9.27)	9.30 (9.17 - 9.43)	9.78 (9.56 - 9.95)
11/17/2021	7.26 (7.14 - 7.42)	8.50 (8.24 - 8.68)	8.52 (7.8 - 9.11)	9.08 (8.75 - 9.38)	9.69 (9.54 - 9.83)
11/18/2021	7.07 (7.01 - 7.21)	8.53 (8.29 - 8.82)	8.69 (8.17 - 8.93)	9.02 (8.69 - 9.24)	9.65 (9.53 - 9.81)
11/19/2021	7.01 (6.89 - 7.13)	8.52 (7.96 - 8.83)	8.67 (7.83 - 9.04)	8.91 (8.59 - 9.13)	9.69 (9.48 - 9.83)
11/20/2021	7.13 (7.02 - 7.29)	8.70 (8.49 - 8.97)	8.90 (8.42 - 9.61)	8.96 (8.75 - 9.24)	9.98 (9.8 - 10.1)
11/21/2021	7.28 (7.18 - 7.43)	8.88 (8.53 - 9.34)	9.04 (8.67 - 9.52)	9.16 (8.83 - 9.58)	10.03 (9.71 - 10.18)
11/22/2021	7.65 (7.26 - 8.32)	8.89 (8.48 - 9.31)	8.51 (7.83 - 9.44)	9.08 (8.79 - 9.53)	9.37 (8.41 - 9.9)
11/23/2021	7.80 (7.65 - 7.97)	8.82 (8.57 - 9.11)	8.71 (8.34 - 9.04)	9.11 (8.9 - 9.43)	N/A
11/24/2021	8.13 (7.97 - 8.31)	9.04 (8.61 - 9.42)	8.83 (8.08 - 9.58)	9.35 (8.97 - 9.74)	N/A

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
11/25/2021	8.49 (8.27 - 8.87)	8.84 (8.55 - 9.18)	8.97 (7.15 - 10.42)	9.15 (8.91 - 9.47)	N/A
11/26/2021	8.38 (8.31 - 8.49)	8.54 (8.25 - 8.83)	9.29 (8.33 - 10.4)	8.97 (8.67 - 9.22)	N/A
11/27/2021	8.44 (8.34 - 8.55)	8.70 (8.36 - 9.02)	8.90 (8.19 - 9.6)	9.15 (8.75 - 9.53)	N/A
11/28/2021	8.46 (8.39 - 8.6)	8.82 (8.67 - 8.96)	9.10 (7.93 - 9.81)	9.13 (9.02 - 9.29)	N/A
11/29/2021	8.44 (8.38 - 8.51)	8.85 (8.64 - 9.11)	8.99 (8.36 - 9.7)	9.21 (8.92 - 9.74)	N/A
11/30/2021	8.68 (8.44 - 9.12)	9.12 (8.89 - 9.33)	9.61 (9.04 - 10.02)	9.51 (9.26 - 9.72)	N/A
12/1/2021	8.77 (8.55 - 9.26)	9.22 (8.97 - 9.53)	9.43 (8.54 - 9.87)	9.66 (9.4 - 9.88)	N/A
12/2/2021	8.79 (8.44 - 9.34)	9.27 (9.12 - 9.42)	9.56 (8.87 - 9.99)	9.70 (9.52 - 9.78)	N/A
12/3/2021	8.76 (8.51 - 9.29)	9.13 (8.89 - 9.48)	9.52 (8.96 - 9.93)	9.52 (9.27 - 9.84)	N/A
12/4/2021	8.72 (8.46 - 9.28)	9.16 (8.92 - 9.3)	9.39 (8.79 - 9.91)	9.62 (9.48 - 9.76)	N/A
12/5/2021	8.82 (8.43 - 9.25)	8.91 (8.57 - 9.26)	9.10 (8.57 - 9.57)	9.45 (9.21 - 9.93)	N/A
12/6/2021	8.53 (8.21 - 8.95)	9.03 (8.81 - 9.23)	9.04 (8.38 - 9.6)	9.59 (9.24 - 10.01)	N/A
12/7/2021	8.35 (8.21 - 8.72)	9.11 (8.88 - 9.36)	9.13 (8.21 - 9.95)	9.68 (9.45 - 9.83)	N/A
12/8/2021	8.53 (8.16 - 8.96)	9.06 (8.96 - 9.33)	8.96 (8.09 - 9.59)	9.68 (9.52 - 9.84)	N/A
12/9/2021	8.43 (8.23 - 8.71)	9.04 (8.9 - 9.2)	8.78 (8.17 - 9.22)	9.83 (9.61 - 10.05)	N/A
12/10/2021	8.79 (8.66 - 8.89)	8.97 (8.65 - 9.24)	8.65 (7.64 - 9.31)	9.55 (9.31 - 9.81)	N/A
12/11/2021	9.09 (8.77 - 9.39)	9.14 (8.98 - 9.27)	8.68 (7.71 - 9.53)	9.70 (9.58 - 9.81)	N/A
12/12/2021	9.59 (9.36 - 9.76)	9.17 (8.94 - 9.46)	9.18 (8.73 - 9.97)	9.82 (9.6 - 10.06)	N/A
12/13/2021	9.52 (9.34 - 9.7)	9.06 (8.92 - 9.28)	9.28 (8.61 - 9.65)	9.64 (9.47 - 9.8)	N/A
12/14/2021	9.68 (9.39 - 9.96)	8.89 (8.73 - 9)	9.04 (8.37 - 9.41)	9.40 (9.25 - 9.53)	N/A
12/15/2021	10.00 (9.75 - 10.19)	8.90 (8.75 - 9)	8.62 (7.66 - 11.42)	9.39 (9.26 - 9.49)	N/A
12/16/2021	10.10 (9.88 - 10.33)	9.00 (8.8 - 9.24)	N/A	9.52 (9.15 - 9.81)	N/A
12/17/2021	10.27 (9.96 - 10.58)	8.84 (8.68 - 9)	N/A	9.39 (9.23 - 9.55)	N/A
12/18/2021	9.97 (9.76 - 10.21)	8.81 (8.6 - 9.08)	9.51 (9.37 - 9.74)	9.42 (9.25 - 9.49)	N/A
12/19/2021	10.24 (9.93 - 10.4)	8.69 (8.41 - 9.03)	8.71 (7.7 - 9.56)	9.15 (8.97 - 9.42)	N/A

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
12/20/2021	10.26 (10.12 - 10.38)	8.64 (8.38 - 8.81)	8.01 (7.34 - 8.99)	9.29 (8.98 - 9.53)	N/A
12/21/2021	10.72 (10.39 - 11.01)	8.96 (8.73 - 9.15)	8.07 (7.09 - 9.23)	9.58 (9.41 - 9.74)	N/A
12/22/2021	11.11 (10.9 - 11.23)	9.21 (8.99 - 9.41)	8.45 (7.06 - 9.53)	9.81 (9.59 - 10.02)	N/A
12/23/2021	11.43 (11.26 - 11.54)	9.32 (9.18 - 9.48)	8.43 (7.08 - 9.86)	9.94 (9.71 - 10.13)	N/A
12/24/2021	11.71 (11.54 - 11.88)	9.30 (9.2 - 9.46)	9.00 (7.31 - 10.98)	9.94 (9.78 - 10.09)	N/A
12/25/2021	12.05 (11.89 - 12.21)	9.11 (8.98 - 9.21)	9.00 (8.04 - 10.04)	9.87 (9.66 - 10.08)	N/A
12/26/2021	12.12 (11.89 - 12.24)	9.25 (9.07 - 9.77)	8.92 (8.17 - 10.04)	10.02 (9.84 - 10.45)	N/A
12/27/2021	11.83 (11.62 - 11.89)	9.57 (9.32 - 9.85)	9.59 (9.02 - 10.04)	10.26 (10 - 10.52)	N/A
12/28/2021	11.43 (11.28 - 11.58)	9.22 (8.97 - 9.45)	9.33 (8.94 - 9.84)	9.90 (9.71 - 10.08)	N/A
12/29/2021	10.86 (10.58 - 11.36)	9.31 (9.14 - 9.46)	9.04 (8.54 - 9.74)	9.96 (9.82 - 10.09)	N/A
12/30/2021	10.14 (9.9 - 10.57)	9.01 (8.79 - 9.29)	8.73 (8.3 - 9.45)	9.71 (9.52 - 9.94)	N/A
12/31/2021	10.27 (9.86 - 10.46)	8.81 (8.66 - 9.01)	7.78 (7.3 - 8.97)	9.48 (9.34 - 9.72)	N/A
1/1/2022	10.24 (10.07 - 10.33)	9.18 (8.82 - 9.48)	8.01 (7.48 - 9.44)	9.79 (9.4 - 10.03)	N/A
1/2/2022	9.80 (9.63 - 10.03)	9.29 (9.1 - 9.48)	7.75 (7.23 - 8.82)	9.80 (9.59 - 9.93)	N/A
1/3/2022	10.19 (9.78 - 10.45)	9.39 (9.2 - 9.46)	7.51 (7.19 - 7.88)	9.97 (9.61 - 10.16)	N/A
1/4/2022	11.03 (10.49 - 11.55)	9.26 (9.06 - 9.46)	7.92 (7.7 - 8.95)	10.18 (9.74 - 10.61)	N/A
1/5/2022	11.88 (11.59 - 12.05)	9.20 (8.82 - 9.49)	8.25 (7.9 - 9.33)	10.05 (9.79 - 10.31)	N/A
1/6/2022	12.09 (12.01 - 12.16)	9.43 (9.16 - 9.7)	8.30 (7.07 - 9.32)	10.01 (9.79 - 10.26)	N/A
1/7/2022	12.24 (12.17 - 12.27)	9.82 (9.64 - 10.06)	9.21 (8.5 - 10.24)	10.32 (10.14 - 10.56)	N/A
1/8/2022	12.22 (11.94 - 12.39)	10.03 (9.85 - 10.21)	9.97 (8.58 - 10.87)	10.46 (10.14 - 10.66)	N/A
1/9/2022	12.43 (12.2 - 12.7)	10.01 (9.84 - 10.19)	10.04 (8.77 - 10.75)	10.37 (10.12 - 10.52)	N/A
1/10/2022	12.66 (12.56 - 12.72)	9.96 (9.83 - 10.09)	10.06 (9.12 - 10.86)	10.35 (10.22 - 10.49)	N/A
1/11/2022	12.58 (12.48 - 12.62)	10.09 (9.96 - 10.3)	9.87 (9.04 - 10.78)	10.50 (10.34 - 10.71)	N/A
1/12/2022	12.67 (12.44 - 12.92)	10.04 (9.87 - 10.2)	10.22 (9.5 - 10.79)	10.48 (10.3 - 10.64)	N/A
1/13/2022	13.05 (12.8 - 13.24)	10.09 (9.9 - 10.22)	10.06 (9.3 - 10.59)	10.50 (10.33 - 10.61)	N/A

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
1/14/2022	12.67 (11.56 - 13.42)	10.08 (9.87 - 10.28)	9.72 (9.02 - 10.52)	10.47 (10.21 - 10.7)	N/A
1/15/2022	11.67 (11.61 - 11.73)	10.13 (9.95 - 10.28)	9.59 (8.7 - 10.45)	10.56 (10.3 - 10.72)	N/A
1/16/2022	11.84 (11.7 - 12.16)	10.16 (10.12 - 10.23)	9.59 (9.04 - 10)	10.60 (10.48 - 10.75)	N/A
1/17/2022	12.48 (12.21 - 12.62)	10.31 (10.07 - 10.58)	10.40 (9.62 - 10.75)	10.81 (10.52 - 11.27)	N/A
1/18/2022	12.73 (12.64 - 12.8)	10.54 (10.36 - 10.69)	10.64 (10.33 - 10.84)	10.99 (10.83 - 11.16)	N/A
1/19/2022	12.82 (12.76 - 12.89)	10.59 (10.45 - 10.68)	10.50 (10.18 - 10.66)	11.05 (10.87 - 11.22)	N/A
1/20/2022	12.75 (12.64 - 12.9)	10.56 (10.44 - 10.63)	10.35 (10.1 - 10.59)	11.03 (10.92 - 11.1)	N/A
1/21/2022	12.54 (12.48 - 12.65)	10.56 (10.49 - 10.64)	10.24 (9.98 - 10.47)	11.02 (10.89 - 11.13)	N/A
1/22/2022	12.49 (12.42 - 12.62)	10.73 (10.48 - 10.94)	10.29 (9.71 - 10.74)	11.18 (10.98 - 11.4)	N/A
1/23/2022	12.77 (12.65 - 12.92)	10.76 (10.64 - 10.84)	10.56 (10.24 - 10.82)	11.22 (11.17 - 11.29)	N/A
1/24/2022	12.93 (12.83 - 12.99)	10.76 (10.53 - 10.95)	10.49 (10.07 - 10.93)	11.18 (10.98 - 11.37)	N/A
1/25/2022	13.02 (12.96 - 13.08)	10.82 (10.63 - 11.03)	10.61 (10 - 11.05)	11.28 (11.01 - 11.52)	N/A
1/26/2022	12.82 (12.72 - 12.95)	10.63 (10.47 - 10.95)	10.68 (10.15 - 11.2)	11.16 (11.02 - 11.47)	N/A
1/27/2022	12.64 (12.54 - 12.72)	10.70 (10.47 - 11.03)	10.43 (10.17 - 10.92)	11.25 (11.03 - 11.57)	N/A
1/28/2022	12.52 (12.44 - 12.61)	10.88 (10.75 - 10.99)	10.53 (10.37 - 10.83)	11.47 (11.32 - 11.58)	N/A
1/29/2022	12.68 (12.52 - 12.73)	10.99 (10.79 - 11.22)	10.60 (10.3 - 10.99)	11.62 (11.42 - 11.84)	N/A
1/30/2022	12.63 (12.53 - 12.72)	11.20 (11.01 - 11.35)	11.06 (10.82 - 11.32)	11.78 (11.59 - 11.97)	N/A
1/31/2022	12.79 (12.7 - 12.87)	11.16 (10.95 - 11.42)	10.69 (10.34 - 11.18)	11.76 (11.57 - 12.01)	N/A
2/1/2022	12.80 (12.72 - 12.89)	11.22 (11.03 - 11.49)	10.92 (10.57 - 11.24)	11.82 (11.56 - 12.07)	N/A
2/2/2022	12.72 (12.61 - 12.79)	11.04 (10.9 - 11.2)	10.81 (10.45 - 11.13)	11.69 (11.52 - 11.82)	N/A
2/3/2022	12.49 (12.36 - 12.59)	11.03 (10.9 - 11.22)	10.81 (10.38 - 11.42)	11.64 (11.53 - 11.81)	N/A
2/4/2022	12.09 (11.6 - 12.39)	11.12 (10.97 - 11.26)	10.22 (9.89 - 10.8)	11.68 (11.48 - 11.83)	N/A
2/5/2022	11.08 (10.97 - 11.48)	11.09 (11.01 - 11.17)	9.09 (8.56 - 10.13)	11.55 (11.2 - 11.71)	N/A
2/6/2022	11.39 (11.17 - 11.64)	11.13 (10.99 - 11.32)	9.24 (8.83 - 10.04)	11.61 (11.16 - 11.86)	N/A
2/7/2022	11.73 (11.65 - 11.91)	10.90 (10.76 - 11.01)	10.05 (8.96 - 11.05)	11.44 (11.32 - 11.55)	N/A

Daily Dissolved Oxygen (mg/L) by Site – Average (Min - Max)					
Date	**Stevens Creek**	**Above Powerhouse**	**Above Spillway**	**Below Powerhouse**	**Below Spillway**
2/8/2022	12.06 (11.95 - 12.29)	11.04 (10.86 - 11.22)	9.99 (9.04 - 10.66)	11.55 (11.3 - 11.76)	N/A
2/9/2022	12.32 (12.25 - 12.39)	11.20 (11.09 - 11.34)	10.37 (9.23 - 11.15)	11.71 (11.58 - 11.84)	N/A
2/10/2022	12.42 (12.36 - 12.61)	11.16 (11.09 - 11.22)	10.20 (9.67 - 10.93)	11.68 (11.6 - 11.74)	N/A

N/A = Not Applicable

Deep Step Daily Temperature and Dissolved Oxygen		
Date	**Temperature (°C)**	**DO (mg/L)**
6/14/2021	20.94 (19.25 - 23.14)	9.82 (8.69 - 11.79)
6/15/2021	20.19 (18.75 - 23.62)	8.47 (6.79 - 11.67)
6/16/2021	19.94 (18.74 - 23.02)	8.54 (6.96 - 11.31)
6/17/2021	19.71 (18.67 - 24.11)	8.42 (6.86 - 11.38)
6/18/2021	19.52 (17.59 - 30.58)	7.27 (6.41 - 8.52)
7/26/2021	21.62 (20.44 - 24.89)	6.91 (5.7 - 9.08)
7/27/2021	20.80 (19.92 - 24.01)	5.77 (4.85 - 7.69)
7/28/2021	20.57 (19.69 - 24.30)	5.71 (4.79 - 8.07)
7/29/2021	21.05 (19.95 - 25.29)	5.98 (5.02 - 8.55)
7/30/2021	20.42 (20.21 - 20.72)	5.45 (5.01 - 6.19)
8/19/2021	22.66 (20.57 - 24.24)	6.39 (4.57 - 8.88)
8/20/2021	21.69 (20.20 - 24.49)	5.15 (3.96 - 8.41)
8/21/2021	21.56 (20.31 - 24.45)	5.08 (4.01 - 8.48)
8/22/2021	21.24 (20.25 - 23.61)	4.80 (3.96 - 7.7)
8/23/2021	21.33 (20.30 - 24.07)	4.95 (3.79 - 8.2)
8/24/2021	21.65 (20.51 - 24.57)	5.27 (3.98 - 9.02)
8/25/2021	21.86 (20.86 - 24.74)	5.24 (4.03 - 8.16)
8/26/2021	22.12 (20.84 - 25.03)	5.28 (3.99 - 8.21)
8/27/2021	22.89 (21.95 - 24.90)	5.41 (4.19 - 7.05)
8/28/2021	22.96 (22.20 - 24.50)	5.29 (4.14 - 7.03)
8/29/2021	22.83 (21.86 - 25.09)	5.60 (4.26 - 8.02)
8/30/2021	22.78 (21.80 - 24.85)	5.46 (4.11 - 7.51)
8/31/2021	22.69 (21.85 - 23.74)	5.72 (4.82 - 7.09)
9/1/2021	21.69 (21.38 - 22.46)	5.14 (4.54 - 6.27)
9/15/2021	22.81 (21.94 - 23.62)	6.00 (4.92 - 6.72)
9/16/2021	21.63 (21.34 - 22.30)	5.37 (4.77 - 6.6)
9/17/2021	21.62 (21.50 - 22.16)	4.55 (4.17 - 5.14)
10/27/2021	21.99 (21.95 - 22.09)	6.65 (6.34 - 7.07)
10/28/2021	21.38 (20.94 - 21.90)	5.75 (5.03 - 6.36)
10/29/2021	21.31 (21.07 - 21.56)	5.20 (4.72 - 5.63)

APPENDIX H

CONSULTATION

Document	Commentor	Comment Code	Comment	Addressed in Body of Report	Applicant Response
Water Quality Study Report	SCDHEC	WQ DHEC C-01	SCDHEC notes that the executive summary fails to make note of one of the major revelations of the study: the negative impact of the project on water quality above the dam in the Stevens Creek arm of the reservoir as indicated in this study, for example, by water quality at Study Site 5 and USGS Station 5. SCDHEC notes that the executive summary only makes a conclusion about the lack of a negative impact on water quality downstream of the dam, even though the stated	No: See Applicant Response	Thank you for your comment. It has been noted.
Water Quality Study Report	SCDHEC	WQ DHEC C-02	The report makes the following statement on page 2-1 under the heading Geographical and Temporal Scope: “Monitoring Site 1 was used as a control and was located in Stevens Creek Reservoir upstream of the hydro station.” We don’t understand the use of the term control here and the meaning of this statement. The authors should explain the meaning of this statement. Were any of the stations located in a freely flowing portion of the river, free from the influence of any dam or hydroelectric project?	Yes: 2021 WQ Report - Section 2.0	The term "control" has been removed and clarification added regarding the monitoring site locations and purposes.
Water Quality Study Report	SCDHEC	WQ DHEC C-03	SCDHEC also notes that this section describes the location of Study Sites and provides a figure showing these locations but doesn’t provide any coordinates. The report should provide coordinates and photographs for each Study Site.	Yes: 2021 WQ Report - Section 2.0	Coordinates for each study site have been provided.
Water Quality Study Report	SCDHEC	WQ DHEC C-04	The report also states the following under the same heading: “Monitoring Site 5 was located in Stevens Creek near Woodlawn Road, approximately 4.5 miles upstream of its confluence with the Savannah River at Stevens Creek Dam.” In an earlier section, the report describes the reservoir as reaching 12 miles up Stevens Creek. Since the report documents water quality issues at this Study Site, we believe additional data is needed to document the physical extent of these issues. For example, SCDHEC ambient surface water quality monitoring data indicate DO, NH3, pH, and Turbidity fully support classified uses at station SV-371 in Horn Creek at Garrett Road, approximately 4 or 5 miles upstream of Study Site 5 (See Figure 1).	No: See Applicant Response	Comment noted. Since the time of this comment, the 2023 Water Quality Study Plan has been developed in consultation with the Water Quality RCG, of which SCDHEC is an active member. The purpose of the 2023 WQ Study Plan is to determine the extent and duration of low DO.
Water Quality Study Report	SCDHEC	WQ DHEC C-05	The report makes the following statement on page 3-3 under the heading SCDHEC Water Quality Standards for Freshwaters referring to Regulation 61-68: “The regulation assigns classifications to water bodies in the state and establishes water quality standards for those classifications.” SCDHEC notes that this is not correct and that classifications are assigned in Regulation 61-69, Classified Waters, which we note the authors do list in the reference section.	Yes: 2021 WQ Report - Section 3.3	The revision has been made as suggested.
Water Quality Study Report	SCDHEC	WQ DHEC C-06	SCDHEC notes that Table 3-4 on page 3-2 gives the equation for calculating the criterion maximum concentration (CMC) in waters where salmonids are absent from ATTACHMENT 3 - CALCULATION OF FRESHWATER AMMONIA CRITERION in R.61-68, which is one of two conditions included in Attachment 3. (The regulation states CMC means the highest instream concentration of a toxicant or an effluent to which the organisms can be exposed for a brief period of time without causing an acute effect.) A footnote in R.61-68 to the NON PRIORITY POLLUTANTS table under the Appendix titled WATER QUALITY NUMERIC CRITERIA FOR THE PROTECTION OF AQUATIC LIFE AND HUMAN HEALTH states the following: “According to the procedures described in the Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses, except possibly where a very sensitive species is important at a site, freshwater aquatic life should be protected if both conditions specified in Attachment 3 - Calculation of Freshwater Ammonia Criterion are satisfied.” Table 3-4 states that the “standard” is pH, temperature, and life-stage dependent; however, regulation 61-68 notes in the NON PRIORITY POLLUTANTS table that numeric criteria for ammonia are pH and temperature dependent.	Yes: 2021 WQ Report - Section 3.3	The word "standard" has been replace with "criteria".
Water Quality Study Report	SCDHEC	WQ DHEC C-07	SCDEC notes that Regulation 61-68, under Section E.GENERAL RULES AND STANDARDS APPLICABLE TO ALL WATERS, states the following:“11. In order to protect and maintain lakes and other waters of the State, consideration needs to be given to the control of nutrients reaching the waters of the State. Therefore, the Department shall control nutrients as prescribed below. a… b. Numeric nutrient criteria for lakes are based on an ecoregional approach which takes into account the geographic location of the lakes within the State and are listed below. These numeric criteria are applicable to lakes of 40 acres or more. Lakes of less than 40 acres will continue to be protected by the narrative criteria. (1)… (2) For the Piedmont and Southeastern Plains ecoregions of the State, total phosphorus shall not exceed 0.06 mg/l, chlorophyll a shall not exceed 40 ug/l, and total nitrogen shall not exceed 1.50 mg/l.”	Yes: 2021 WQ Report - Section 3.3	Table 3.4 has been revised as suggested.
Water Quality Study Report	SCDHEC	WQ DHEC C-08	SCDHEC notes specific conductance values were highest at Study Site 5 and USGS Site 5.	No: See Applicant Response	Thank you for your comment. It has been noted.
Water Quality Study Report	SCDHEC	WQ DHEC C-09	SCDHEC notes that Table 4-26 and Figure 4-45 indicate some unusually high pH readings at Study Site 6. Can the authors give any explanation for this data?	No: See Applicant Response	Due to the shallow nature of this site, there is a large amount of submerged and emergent vegetation. High levels of photosynthetic activity can deplete dissolved carbon dioxide levels in the water leading to elevated pH levels.
Water Quality Study Report	SCDHEC	WQ DHEC C-10	SCDHEC notes turbidity values were highest at Study Site 5.	No: See Applicant Response	Thank you for your comment. It has been noted.
Water Quality Study Report	SCDHEC	WQ DHEC C-11	SCDHEC notes that Study Site 5 generally had the highest nutrient levels measured except for ammonia and orthophosphate, which were highest at Study Sites 3 and 2 respectively. The ammonia value measured at Study Site 3 is higher than the maximum TKN value. Since TKN includes ammonia, the ammonia value should have been lower than the TKN value. It’s also peculiar that Orthophosphate was measured at Study Site 2, but Phosphorous was not detected.	No: See Applicant Response	Thank you for your comment. The high ammonia level at Site 3 (Below Spillway) was from a single detection in a June 2021 sample. That sample result was flagged by the analytical laboratory for matrix spike/matrix spike duplicate failure, so the results may not be reliable. The results for Study Site 2 (Below Powerhouse) appear to be accurate according to lab results. Orthophosphate and Total Phosphorous are analyzed using different methods, which may account for the discrepancy.

Water Quality Study Report	SCDHEC	WQ DHEC C-12	The analysis and discussion section makes the following statement on page 5-2: “Water quality within Stevens Creek arm and Savannah River arm of Stevens Creek Reservoir is significantly influenced by external sources outside of DESC’s control; nevertheless, water quality monitoring data demonstrate that re-oxygenation occurs as water passes through Stevens Creek Reservoir, the Stevens Creek powerhouse and over the Stevens Creek spillway, benefiting aquatic resources within the Savannah River downstream of the Project.” We note that dissolved oxygen and some of the other parameters measured in this study fully support classified uses upstream of Study Site 5 in Stevens Creek, for example at SCDHEC fixed ambient surface water quality monitoring station SV-371 in Horn Creek at Garrett Road, approximately 4 or 5 miles upstream of Study Site 5 (See Figure 1). We also note that dissolved oxygen fully supported classified uses at all the other stations shown in Figure 1 where it was assessed (all but one). 2018 trend analysis indicated no significant trends in dissolved oxygen data at Station SV-371 or at any of the stations in Figure 1 where dissolved oxygen was assessed and where there was enough data for trend analysis.	No: See Applicant Response	Thank you for your comment.
Water Quality Study Report	SCDHEC	WQ DHEC R-01	SCDHEC requests the water quality study be continued for a second year, collecting additional water quality data and additional water quality parameters (for example chlorophyll a) at additional locations in the Stevens Creek Arm of the reservoir to document the physical extent of water quality issues in this part of the reservoir. According to the South Carolina Department of Natural Resources, the water quality issues here could be acting as a barrier or impediment to fish passage upstream to the many miles of stream habitat in the Stevens Creek watershed. SCDHEC requests that stakeholders, including regulatory and resource agencies, be consulted when planning the details of this study.	No: See Applicant Response	Thank you for your comment. As discussed in previous comment responses, the licensee is conducting a Stevens Creek water quality study during 2023; the plan was consulted on by the Water Quality RCG, of which SCDHEC is an active member. The purpose of the study is to determine the extent and duration of low DO in the Stevens Creek arm of the reservoir.
Water Quality Study Report	SCDHEC	WQ DHEC R-02	SCDHEC also requests additional data collection to determine the residence time in the lower portion of the Stevens Creek arm of the reservoir where there are documented water quality issues such as low dissolved oxygen. SCDHEC also recommends collecting similar data from an upstream reach that is more river-like and where dissolved oxygen and other parameters fully supports aquatic life uses for comparison. SCDHEC requests that stakeholders, including regulatory and resource agencies, be consulted when planning the details of the additional data collection.	No: See Applicant Response	See response to DHEC comment R-01, above.
Water Quality Study Report	SCDHEC	WQ DHEC R-03	Finally, SCDHEC requests that the licensee, in designing this second-year study, considers the adequacy of the data for informing the task of working with the regulatory and resource agencies and other stakeholders to develop PM&E measures to include in the license application to address these water quality issues and ameliorate their potential impact on fish passage.	No: See Applicant Response	See response to DHEC comment R-01, above.
Water Quality Study Report	SCDNR	WQ SCDNR 01	Data presented in the Water Quality Study Report indicate that poor water quality conditions frequently occur in the Stevens Creek arm. One main objective of the study was to assess the water quality in the Stevens Creek arm. However, the report does not make note of any contributing factors leading to the poor water quality. USGS station 021963601 located near Study Site 5 suggests a direct effect of the Stevens Creek reservoir level on flow fluctuations in the Stevens Creek arm. SCDNR staff would like an assessment of how flow dynamics and hydraulic residency may be altering instream flows, sediment transport, nutrients, and water quality in the Stevens Creek arm.	No: See Applicant Response	Thank you for your comment. Since the time of this report distribution, the licensee has developed, in consultation with stakeholders, and is currently implementing a study plan to assess the water quality in the Stevens Creek arm of the reservoir. SCDNR is an active member in the consultation process.
Water Quality Study Report	SCDNR	WQ SCDNR 02	The Executive Summary states that there were several dissolved oxygen excursions throughout the study period, particularly at Site 4 and the J. Strom Thurmond (JST) Dam Tailrace. However, Section 5.0 states that dissolved oxygen excursions were most prevalent below the JST Dam and at Site 5, with Site 1 having the third most excursions at the Project. The Executive Summary should be corrected to reflect the results of the study.	Yes: 2021 WQ Report - Executive Summary	The Executive Summary was revised as suggested.
Water Quality Study Report	SCDNR	WQ SCDNR 03	The Water Quality Study Plan developed in consultation with the resource agencies and stakeholders stipulates that all continuous data will be analyzed by computing daily and monthly minimum, maximum, and average values for DO and water temperature. Please include the applicable daily water quality parameters in the report. This information will be a useful tool in determining the duration of low DO excursions at each of the Study Sites.	Yes: 2021 WQ Report	The requested information has been added as an appendix to the 2021 Water Quality Study Report.
Water Quality Study Report	SCDNR	WQ SCDNR 04	The SCDNR requests that the GPS coordinates and approximate depth ranges of all Study Sites be included in the report.	Yes: 2021 WQ Report - Section 2.0	The requested information has been included in the revised report.
Water Quality Study Report	SCDNR	WQ SCDNR 05	If possible, the SCDNR recommends that the licensee include bathymetry data around the Stevens Creek dam in the report to better understand the effects of sediment deposition on water quality.	No: See Applicant Response	Thank you for comment. DESC does not believe bathymetry data around the dam is needed at this time. However, DESC is proposing to continue to assess water quality at the Project through an Adaptive Management Plan, which may include additional data collection.
Water Quality Study Report	SCDNR	WQ SCDNR 06	The SCDNR requests further information and discussion regarding why the dissolved oxygen level dropped at Study Site 4 in October 2021.	No: See Applicant Response	The monitor at Site 4 was routinely found to be fouled with floating aquatic vegetation. When this occurs, the mats of aquatic vegetation can create microenvironment where water flow to the probes is severely or completely restricted, resulting in the development of hypoxic conditions at the probe.

Water Quality Study Report	SCDNR	WQ SCDNR 07	To better understand the Stevens Creek Project's effects on water quality, the SCDNR requests an extension of the current water quality study for an additional 12-month period. As indicated in the report, Study Site 5 is only 4.5 miles upstream of the confluence with the Savannah River at Stevens Creek Dam. Since the Project Boundary extends 12 miles upstream of the confluence, SCDNR requests additional study sites within the Stevens Creek arm in the second period of the study to better understand the physical extent of the poor water quality. Further, the SCDNR requests additional study sites in the vicinity of Site 5 to determine if the low dissolved oxygen is creating a barrier to fish passage.	No: See Applicant Response	See response to DNR comment 01, above.
Water Quality Study Report	SCDNR	WQ SCDNR 08	The SCDNR recommends the licensee work with the resource agencies and stakeholders to develop PM&E measures to include in the license application to minimize these water quality issues and prevent negative impacts on fish passage.	No: See Applicant Response	See response to DNR comment 01, above.
Water Quality Study Report	GADNR	WQ GDNR 01	One of the most significant findings from this study is the poor water quality in the Stevens Creek arm (study sites 4 & 5). Stevens Creek Dam likely plays an important role in the downstream processing of all the water quality parameters measured in this study, especially in the context of receiving the poor water quality measured in Stevens Creek and the poorly oxygenated water from Thurmond Dam. Please expand of the "Analysis and Discussion" section to include discussion of these parameters, most notably dissolved oxygen, temperature, turbidity, and nutrient levels. Specifically, include discussion of the following observations:		Comment noted. Additional analysis and examination of the changes in DO (and other water quality parameters) will be examined as part of the ongoing 2023 WQ study.
Water Quality Study Report	GADNR	WQ GDNR 02	Dissolved Oxygen: Minimum recorded values of dissolved oxygen (DO) were below 5 mg/L for six months each at sites 4 & 5 and of further concern is a minimum DO value of 0.4 mg/L at site 4 in October 2021 (Tables 4-11 and 4-12). We request Dominion provide a discussion of how long dissolved oxygen levels remained below 5 mg/L during each excursion and discuss the potential causes.	Yes: 2021 WQ Report	The requested information has been included in the revised report.
Water Quality Study Report	GADNR	WQ GDNR 03	Temperature: Stevens Creek Dam appears to help mitigate the latitudinal temperature gradient seemingly driven by the warmer water coming from Stevens Creek.	No: See Applicant Response	Thank you for your comment.
Water Quality Study Report	GADNR	WQ GDNR 04	Turbidity: Stevens Creek is consistently very turbid and appears to maintain higher turbidity levels on the SC side both above and below the dam. Overall turbidity appears largely unaffected by the dam, with downstream sites matching very closely to corresponding upstream sites, except for occasional spikes of turbidity at Site 1 that do not seem to make it past the dam.	No: See Applicant Response	Thank you for your comment.
Water Quality Study Report	GADNR	WQ GDNR 05	Turbidity: At site 1 from June to October of 2021, there were several outlier turbidity measurements that were significantly higher than average for that site and higher than other sites at that time.	No: See Applicant Response	These outlier measurements were likely the result of fouling by drifting aquatic vegetation.
Water Quality Study Report	GADNR	WQ GDNR 06	Nutrients: Stevens Creek Reservoir appears to function as a P-sink, reducing the high P load from Stevens Creek to negligible levels before it enters the reservoir (likely due to settling or uptake). Phosphorous levels were negligible within the reservoir and below the dam despite high levels above in Stevens Creek.	No: See Applicant Response	Thank you for your comment.
Water Quality Study Report	GADNR	WQ GDNR 07	Nutrients: The negligible values of ammonia measured indicate that the TKN values essentially represent organic N. Stevens Creek also appears to be a significant source of organic N that decreases by almost half as it flows through the SC side of the system (sites 5, 4, then 3). A lesser amount of organic N flows through the system on the GA side. Dissolved inorganic N levels are consistent across all sites suggesting that N may be saturated and not a primary limiting nutrient in the system. Stevens Creek Reservoir does not appear to function as a strong sink for N, as it does for P.	No: See Applicant Response	Thank you for your comment.
Water Quality Study Report	GADNR	WQ GDNR 08	Nutrients: The ammonia value measured at site 3 is higher than any corresponding TKN value, which should not be possible.	No: See Applicant Response	Thank you for your comment. The high ammonia level at Site 3 (Below Spillway) was from a single detection in a June 2021 sample. That sample result was flagged by the analytical laboratory for matrix spike/matrix spike duplicate failure, so the results may not be reliable.
Water Quality Study Report	GADNR	WQ GDNR 09	Nutrients: With Orthophosphate measured at site 2, it seems that the corresponding Total Phosphorous value should have detected at least a similar value.		The orthophosphate results for Study Site 2 (Below Powerhouse) appear to be accurate according to lab results. Orthophosphate and Total Phosphorus are analyzed using two different methods, which may account for the discrepancy.
Water Quality Study Report	GADNR	WQ GDNR 10	Nutrients: Please provide the nutrient data listed by month collected, as was provided for DO, temperature, and turbidity. These data may help us understand seasonal effects and relationships with other monthly parameters.	Yes: 2021 WQ Study Report - Section 4.6	The requested information has been included in the revised report.
Water Quality Study Report	GADNR	WQ GDNR 11	Other: We request Dominion include coordinates of the water quality sampling locations within the study report, so that resource agencies can know the exact location of the water quality sampling within the channel. Two additional inset maps (1. JST forebay/tailrace and 2. Site 5) would be helpful. These details will help us understand how flow dynamics could be affecting water quality results.	Yes: 2021 WQ Report - Section 2.0	The requested information has been included in the revised report.
Water Quality Study Report	GADNR	WQ GDNR 12	Additional Studies: We request that Dominion extend the continuous and monthly water quality study for a second 12-month period. During this second period, we request that Dominion consult with resource agencies to expand water quality monitoring efforts within the Stevens Creek arm by adding sample sites dispersed throughout the Stevens Creek project area. This expanded study should include investigation into how Stevens Creek Dam alters flow dynamics of Stevens Creek. Results of the study should include a discussion of how the dam may be influencing the elevated phosphorus and low dissolved oxygen levels within Stevens Creek and the reservoir at and below the confluence.	No: See Applicant Response	Thank you for your comment. Since the time of this report distribution, the licensee has developed, in consultation with stakeholders, and is currently implementing a study plan to assess the water quality in the Stevens Creek arm of the reservoir. GADNR is an active member in the consultation process.

Water Quality Study Report	NFMS	WQ NMFS R01	Section 4 presents the methods used in data collection and mentions continuous monitoring but does not state the time interval used. The methods section should explicitly state how frequently measurements were taken.	Yes: 2021 WQ Report - Section 3.1.1.	The requested information has been added to the revised report.
Water Quality Study Report	NFMS	WQ NMFS R02	The results tables in section 4 give the monthly average, maximum, and minimum of the various water quality parameters measured. Are the maximum and minimum values instantaneous measures or a daily average? The report should make clear what value is being presented.	No: See Applicant Response	The table headers indicate the results represent the average, maximum, and minimum values for each month.
Water Quality Study Report	NFMS	WQ NMFS R03	Because the tables in section 4 are presenting a monthly average, NMFS suggests including the average in the figures as well. That would make it a little easier for the reader to keep up with the data presented because the table and figure would contain the same information. You could superimpose the monthly average as a symbol over the box plots.	No: See Applicant Response	The boxplots display the median values for each parameter at each study site, which Dominion believes is sufficient to characterize the central tendency of the data.
Water Quality Study Report	NFMS	WQ NMFS R04a	Restructure Recommendation 1: Re-ordering site presentations. Currently, the study site numbers seem to be assigned going counterclockwise around the dam. That leads to a lot of jumping around in space for the reader and confuses the message. We suggest presenting the sites in the order that water flows through the project area: JST Tailrace, Site 6, Site 5, Site 1, Site 4, Site 2, and Site 3. In this way, the reader is following along as the water moves downstream and can track changes more easily. This is especially important for DO and makes the point that DO improved after moving through SC powerhouse or over the spillway more stark. We also suggest changing site names to include some descriptive information, or at least reflect this reordering. Discussion o the USGS sites should also be reordered in a similar fashion.	Yes: 2021 WQ Report	The 2021 WQ Report has been restructured as recommended. The site names now reflect the location of the monitors and the results have been presented
Water Quality Study Report	NFMS	WQ NMFS R04b	Restructure Recommendation 2: Many of the tables in section 4 could be combined. A single table for each water quality parameter could list each of the seven sites side-by-side as columns (in the same order suggested above). You could still use footnotes to indicate all the various quirks as the report currently does. This allows the reader to easily track changes from site to site, and reduces the burden of flipping from page to page to make a comparison. The figures could probably also benefit from being combined on a single grid for each environmental parameter.	Yes: 2021 WQ Report	A table was added for each water quality parameter that presents the data as suggested. Combining figures for each parameter would inevitably obscure results for some sites. Therefore, the figures have been kept separate.
Water Quality Study Report	NFMS	WQ NMFS R05	Appendix B is titled “Dissolved Oxygen Monthly Data” when series data are presented.	Yes: 2021 WQ Report - Appendix B	The title was changed to reflect that it was series data.
Water Quality Study Report	NFMS	WQ NMFS C01	The methods used for study enabled accurate determinations of average daily and instantaneous values, which was not possible with the methods used under the current license. However, the main body of the Water Quality Study Report summarizes water quality parameters at a monthly resolution and only presents continuous data as figures in appendices. That is useful for broadly determining when poor water quality affects system, but it does not make use of the data’s full potential. It should be possible, for example, to pinpoint the timing and duration of individual hypoxia events in Stevens Creek. Such high-resolution data is valuable to resource managers and represents a powerful analytical tool.	Yes: 2021 WQ Report	The requested information has been included in the revised report.
Water Quality Study Report	NFMS	WQ NMFS C02	It appears the DO issues experienced in the lower portion of Stevens Creek are the result of the water becoming impounded as it approaches the confluence with the Savannah River, and subsequently, the Stevens Creek Dam. NMFS suggests conducting a study of the hydraulic residence time in Stevens Creek in order to determine how long water stays impounded above the dam before passing over the spillway or through the powerhouse.	No: See Applicant Response	Thank you for your comment. Since the time of this report distribution, the licensee has developed, in consultation with stakeholders, and is currently implementing a study plan to assess the water quality in the Stevens Creek arm of the reservoir. NMFS is an active member in the consultation process.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

MARK WILLIAMS
COMMISSIONER

TED WILL
DIRECTOR

MEMORANDUM
SUBJECT: Stevens Creek Hydropower Project, FERC Docket # P-2535
Comments on Recreation Use and Needs Study Report and Water Quality Study Report

Water Quality Study Report
One of the most significant findings from this study is the poor water quality in the Stevens Creek arm (study sites 4 & 5). Stevens Creek Dam likely plays an important role in the downstream processing of all the water quality parameters measured in this study, especially in the context of receiving the poor water quality measured in Stevens Creek and the poorly oxygenated water from Thurmond Dam.

Please expand of the "Analysis and Discussion" section to include discussion of these parameters, most notably dissolved oxygen, temperature, turbidity, and nutrient levels. Specifically, include discussion of the following observations:

Dissolved Oxygen

- Minimum recorded values of dissolved oxygen (DO) were below 5 mg/L for six months each at sites 4 & 5 and of further concern is a minimum DO value of 0.4 mg/L at site 4 in October 2021 (Tables 4-11 and 4-12). We request Dominion provide a discussion of how long dissolved oxygen levels remained below 5 mg/L during each excursion and discuss the potential causes.

Temperature

- Stevens Creek Dam appears to help mitigate the latitudinal temperature gradient seemingly driven by the warmer water coming from Stevens Creek.

Turbidity

- Stevens Creek is consistently very turbid and appears to maintain higher turbidity levels on the SC side both above and below the dam. Overall turbidity appears largely unaffected by the dam, with downstream sites matching very closely to corresponding upstream sites, except for occasional spikes of turbidity at Site 1 that do not seem to make it past the dam.
- At site 1 from June to October of 2021, there were several outlier turbidity measurements that were significantly higher than average for that site and higher than other sites at that time.

Nutrients

- Stevens Creek Reservoir appears to function as a P-sink, reducing the high P load from Stevens Creek to negligible levels before it enters the reservoir (likely due to settling or uptake). Phosphorous levels were negligible within the reservoir and below the dam despite high levels above in Stevens Creek.
- The negligible values of ammonia measured indicate that the TKN values essentially represent organic N. Stevens Creek also appears to be a significant source of organic N that decreases by almost half as it flows through the SC side of the system (sites 5, 4, then 3). A lesser amount of organic N flows through the system on the GA side. Dissolved inorganic N levels are consistent

across all sites suggesting that N may be saturated and not a primary limiting nutrient in the system. Stevens Creek Reservoir does not appear to function as a strong sink for N, as it does for P.

- The ammonia value measured at site 3 is higher than any corresponding TKN value, which should not be possible.
- With Orthophosphate measured at site 2, it seems that the corresponding Total Phosphorous value should have detected at least a similar value.
- Please provide the nutrient data listed by month collected, as was provided for DO, temperature, and turbidity. These data may help us understand seasonal effects and relationships with other monthly parameters.

Other

- We request Dominion include coordinates of the water quality sampling locations within the study report, so that resource agencies can know the exact location of the water quality sampling within the channel. Two additional inset maps (1. JST forebay/tailrace and 2. Site 5) would be helpful. These details will help us understand how flow dynamics could be affecting water quality results.

Additional Studies

- We request that Dominion extend the continuous and monthly water quality study for a second 12-month period. During this second period, we request that Dominion consult with resource agencies to expand water quality monitoring efforts within the Stevens Creek arm by adding sample sites dispersed throughout the Stevens Creek project area. This expanded study should include investigation into how Stevens Creek Dam alters flow dynamics of Stevens Creek. Results of the study should include a discussion of how the dam may be influencing the elevated phosphorus and low dissolved oxygen levels within Stevens Creek and the reservoir at and below the confluence.

Recreation Use and Needs Study Report

Discussion of Future Use

- Please expand the discussion section to address Objective iii of Goal 2 by summarizing some potential takeaways or ideas to improve recreation in the project area.

Improved Reservoir Access

- In Section 4.5.6, nearly as many responses in Table 4.16 mentioned “near the dam” as they did “Sportsman’s Corner”. The former was not mentioned in the narrative and the latter was. Please include the need for more access near the dam on the Georgia side in the narrative along with the need for access near Sportsman’s Corner.
- The results of the surveys suggest a need for improved boating access. The Stevens Creek recreation site was the only site to exceed capacity (Section 4.3) during the recreation study and it was also the site where most of the users were boat fishing (Section 4.5.2) and vehicles with trailers were the most common vehicle type (Section 4.6). It was peak fishing season (April – June 2021) when the Stevens Creek site exceeded or approached capacity. Additional boating access facilities with trailer parking would help with Stevens Creek Recreation Site’s capacity issues. Since most of the project area users are from the Georgia (Section 4.5.1), additional boating access may be most effective on the Georgia side of the reservoir.

Downstream Access

- Sixty-nine percent of visitors indicated that they would utilize a portage. Additionally, Stallings Island is included as a Columbia County tourist attraction (https://www.visitcolumbiacountyga.com/serene18-paddle-trail/). We look forward to continued discussions with all stakeholders to ensure efforts to improve access reduce, or at the minimum do not increase, potential threats to cultural resources.

Anglers' Target Species

- If possible, please provide the percentage of anglers' total responses for each target fish species listed in Section 4.5.2.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
https://www.fisheries.noaa.gov/region/southeast

September 1, 2022 F/SER47:KM/pw

(Sent via Electronic Mail)

Jennifer A. Güt, Staff Licensing Coordinator
Kelinschmidt
204 Caughman Farm Lane, Suite 301
Lexington, SC 29072

Dear Ms. Güt:

NOAA's National Marine Fisheries Service (NMFS) reviewed the reports on recreation, mussels, and water quality studies conducted at the Stevens Creek Hydroelectric Project (FERC No. 2535) on behalf of Dominion Energy South Carolina, Inc. (DESC). The current license for the project expires October 31, 2025. Three studies related to relicensing are now complete and ready for review. NMFS has no comments on the *Recreation Use and Needs Study Report* or the *2021 Mussel Study Executive Summary*. As the nation's federal trustee for the conservation and management of marine, estuarine, and diadromous fishery resources, the NMFS provides the following comments and recommendations on the *Water Quality Study Report* pursuant to the authorities of the Fish and Wildlife Coordination Act and Federal Power Act.

The Stevens Creek Hydroelectric Project impounds the Savannah River at its confluence with Stevens Creek. The project is approximately one mile upstream of the Augusta Diversion Dam and approximately 13 river miles downstream of the U.S. Army Corps of Engineers (USACE) J. Storm Thurmond (JST) Dam. DESC operates the Stevens Creek Project to produce hydroelectric energy and re-regulate the flows discharged from JST Dam. The USACE collects water quality data every 15 minutes at JST Dam, and the U.S. Geological Survey collects water quality data monthly at six sites throughout the project area. Low concentrations of dissolved oxygen (DO) are the primary water quality concern. As water temperatures warm, the JST Reservoir stratifies resulting in discharges of hypoxic/anoxic waters into the Savannah River. Similar but less severe low DO conditions occur in Stevens Creek during late summer and persist into fall.

Throughout 2021, DESC recorded water quality hourly at five additional sites and periodically at an additional one. Measures of water temperature, DO, pH, conductivity, and turbidity were taken every hour at each of the five hourly monitoring sites. The *Water Quality Study Report* summarizes these data in the context of the other monitoring studies and identifies instances when water quality failed to meet state standards. Average daily DO in the JST tailrace was below state standard (5 mg/L) for 44% of the year. At the Stevens Creek monitoring site (about five river miles upstream from the confluence with the Savannah River), average daily DO dropped below the state standard for at least 30% of the year (29% of measured days with no data during a summer month when DO was likely low). At both of those locations, the recorded DO was below the instantaneous state standard (4 mg/L) for 27% and 15% of samples, respectively.

As water flows downstream from the JST tailrace and Stevens Creek monitoring site, the water re-oxygenates as indicated by DO measurements at the hourly monitoring sites directly above the Stevens Creek powerhouse and spillway. Average daily DO above the powerhouse was below the state standard for 16% of the year, and below the instantaneous standard for 0.22% of samples. This represents an

improvement over DO coming out of the JST tailrace. Comparing average monthly DO between the two indicates that flowing down the Savannah River added approximately 2 mg/L of oxygen back into the water during months when low DO is a concern. Average daily DO above the Stevens Creek spillway was below the state standard for 4% of the year, and below the instantaneous standard for 0.77% of samples. This represents an improvement over DO at the Stevens Creek monitoring site. Comparing average monthly DO between the two indicates that flowing down Stevens Creek added approximately 1.7 mg/L of oxygen back into the water during months when low DO is a concern.

Notably, DO levels remained above the daily average and instantaneous state standards at both of the hourly monitoring sites below the Stevens Creek Dam, despite the hypoxic water conditions upstream during parts of the year. This indicates that, in 2021, the Stevens Creek Dam contributed to re-oxygenating the water moving through the system. The degree of re-oxygenation can be roughly determined. During months when low DO is a concern, moving through the Stevens Creek powerhouse added approximately 1 mg/L of oxygen back into the water. Spilling over the tailrace increased DO by approximately 2 mg/L.

The methods used for study enabled accurate determinations of average daily and instantaneous values, which was not possible with the methods used under the current license. However, the main body of the *Water Quality Study Report* summarizes water quality parameters at a monthly resolution and only presents continuous data as figures in appendices. That is useful for broadly determining when poor water quality affects system, but it does not make use of the data's full potential. It should be possible, for example, to pinpoint the timing and duration of individual hypoxia events in Stevens Creek. Such high-resolution data is valuable to resource managers and represents a powerful analytical tool.

Low DO is a concern in this system, especially in the lower reaches of Stevens Creek. Water quality monitoring conducted by the South Carolina Department and Health and Environmental Concern at a site in Stevens Creek and a site in Horn Creek had no DO values below state standards. Those monitoring stations are approximately 12 and 5 river miles above the Stevens Creek monitoring site in the Water Quality Study Report, respectively. It appears the DO issues experienced in the lower portion of Stevens Creek are the result of the water becoming impounded as it approaches the confluence with the Savannah River, and subsequently, the Stevens Creek Dam. NMFS suggests conducting a study of the hydraulic residence time in Stevens Creek in order to determine how long water stays impounded above the dam before passing over the spillway or through the powerhouse.

NMFS has the following recommendations for improving the *Water Quality Study Report*:

1) Section 4 presents the methods used in data collection and mentions continuous monitoring but does not state the time interval used. The methods section should explicitly state how frequently measurements were taken.
2) The results tables in section 4 give the monthly average, maximum, and minimum of the various water quality parameters measured. Are the maximum and minimum values instantaneous measures or a daily average? The report should make clear what value is being presented.
3) Because the tables in section 4 are presenting a monthly average, NMFS suggests including the average in the figures as well. That would make it a little easier for the reader to keep up with the data presented because the table and figure would contain the same information. You could superimpose the monthly average as a symbol over the box plots.
4) The report may benefit from some restructuring.
    a. Re-ordering site presentations. Currently, the study site numbers seem to be assigned going counterclockwise around the dam. That leads to a lot of jumping around in space for the reader and confuses the message. We suggest presenting the sites in the order that water flows through the project area: JST Tailrace, Site 6, Site 5, Site 1, Site 4, Site 2, and Site 3. In this way, the reader is following along as the water moves downstream and

can track changes more easily. This is especially important for DO and makes the point that DO improved after moving through SC powerhouse or over the spillway more stark. We also suggest changing site names to include some descriptive information, or at least reflect this reordering. Discussion o the USGS sites should also be reordered in a similar fashion.

b. Many of the tables in section 4 could be combined. A single table for each water quality parameter could list each of the seven sites side-by-side as columns (in the same order suggested above). You could still use footnotes to indicate all the various quirks as the report currently does. This allows the reader to easily track changes from site to site, and reduces the burden of flipping from page to page to make a comparison. The figures could probably also benefit from being combined on a single grid for each environmental parameter.

5) Appendix B is titled "Dissolved Oxygen Monthly Data" when series data are presented.

Thank you for the opportunity to provide these comments and recommendations. Please direct related questions or comments to the attention of Mr. Kevin Mack at our Charleston Field Office, 331 Ft Johnson Road, Charleston, South Carolina 29412 or at Kevin.Mack@noaa.gov.

Sincerely,

/ for

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

cc: Kleinschmidt, Jennifer.Gut@kleinschmidtgroup.com
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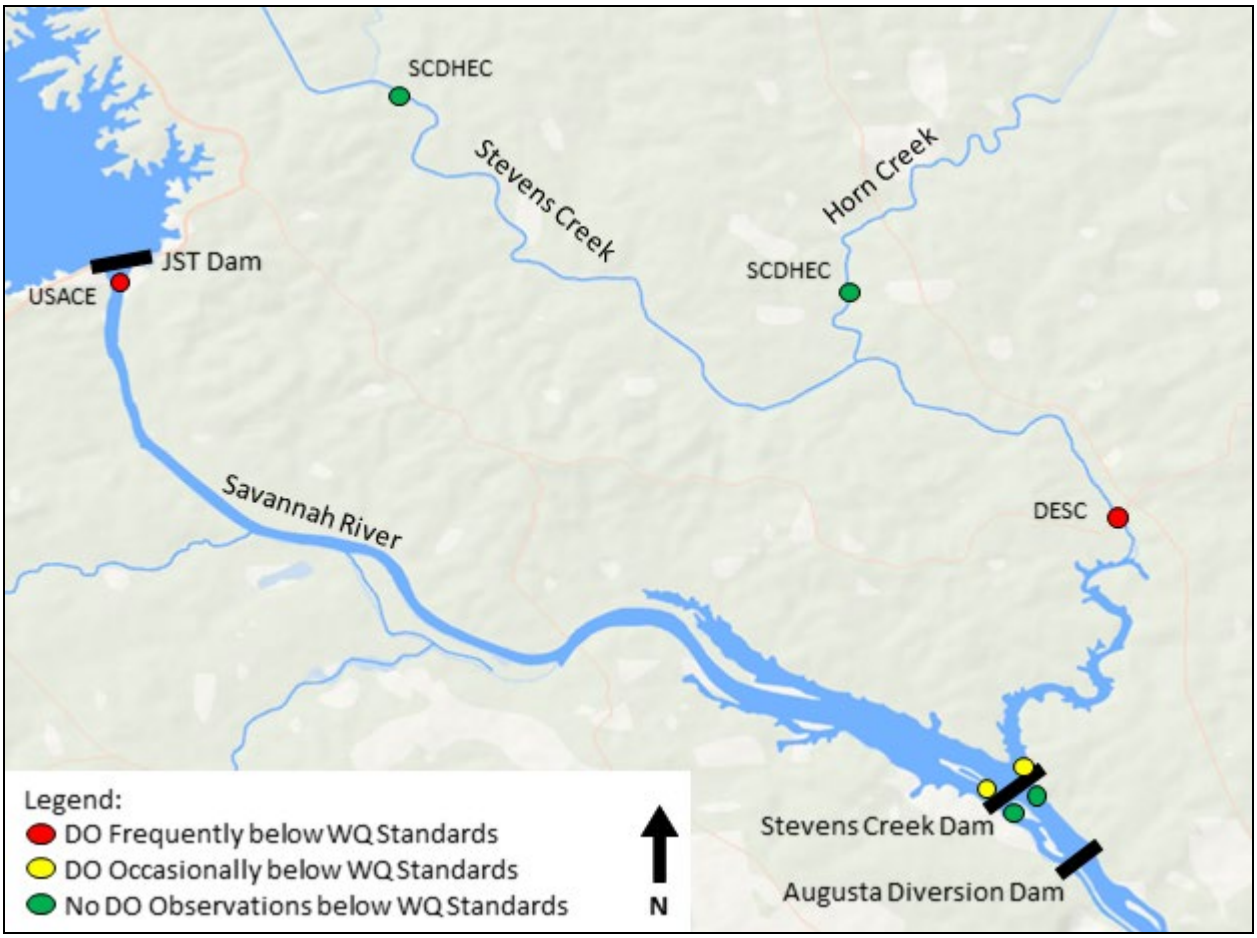

NMFS map summarizing data in the *Water Quality Study Report* illustrating the discussion of the frequencies of reported observations below state water quality standards at eight stations.

20220902 SC Department of Health & Environmental Control's (SCDHEC's) comments, questions, and requests regarding the draft Water Quality Study Report for the Stevens Creek Hydroelectric Project, FERC No. 2535.

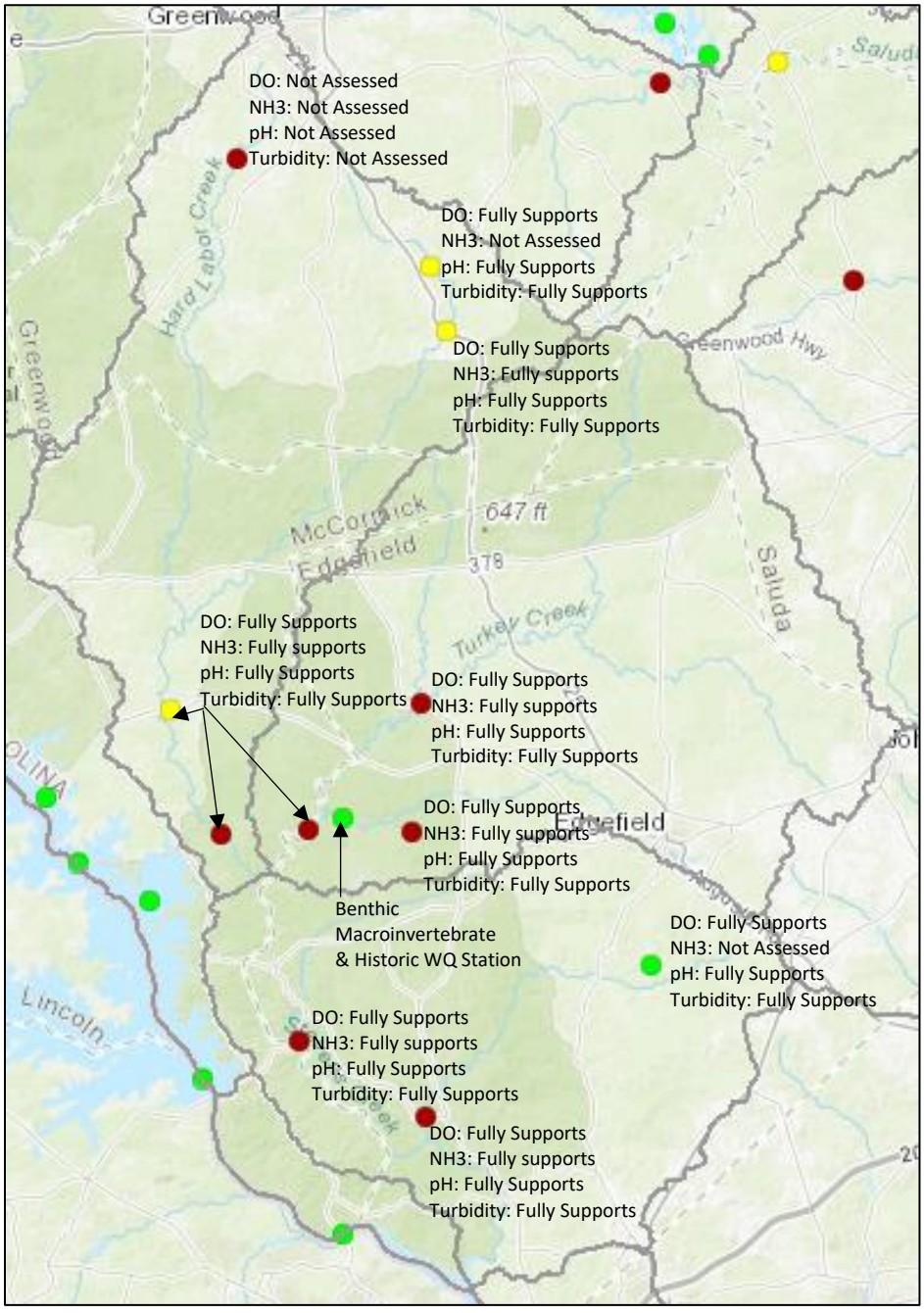

Figure 1. SCDHEC surface water quality monitoring stations in the Stevens Creek watershed where use support and trends were reported in 2018. Green = Fully Supports, Yellow = Partially Supports, Red = Use Support Not Met. Note that Total Nitrogen and Total Phosphorous were not assessed at any of these stream stations and are only assessed at lake stations. Note that temperature is not assessed at any stations because of the standard being based on natural conditions. Note also that SCDHEC monitors water quality, benthic macroinvertebrates, and fish tissue at additional stations in the

watershed not shown on this figure. SCDHEC water quality data can be downloaded from the Water Quality Portal here: https://www.waterqualitydata.us/.

Comments and Questions:

1. SCDHEC notes that the executive summary fails to make note of one of the major revelations of the study: the negative impact of the project on water quality above the dam in the Stevens Creek arm of the reservoir as indicated in this study, for example, by water quality at Study Site 5 and USGS Station 5. SCDHEC notes that the executive summary only makes a conclusion about the lack of a negative impact on water quality downstream of the dam, even though the stated goals and objectives include assessing water quality in the Stevens Creek arm of the reservoir.

2. The report makes the following statement on page 2-1 under the heading Geographical and Temporal Scope: "Monitoring Site 1 was used as a control and was located in Stevens Creek Reservoir upstream of the hydro station." We don't understand the use of the term control here and the meaning of this statement. The authors should explain the meaning of this statement. Were any of the stations located in a freely flowing portion of the river, free from the influence of any dam or hydroelectric project?

3. SCDHEC also notes that this section describes the location of Study Sites and provides a figure showing these locations but doesn't provide any coordinates. The report should provide coordinates and photographs for each Study Site.

4. The report also states the following under the same heading: "Monitoring Site 5 was located in Stevens Creek near Woodlawn Road, approximately 4.5 miles upstream of its confluence with the Savannah River at Stevens Creek Dam." In an earlier section, the report describes the reservoir as reaching 12 miles up Stevens Creek. Since the report documents water quality issues at this Study Site, we believe additional data is needed to document the physical extent of these issues. For example, SCDHEC ambient surface water quality monitoring data indicate DO, NH3, pH, and Turbidity fully support classified uses at station SV-371 in Horn Creek at Garrett Road, approximately 4 or 5 miles upstream of Study Site 5 (See **Figure 1**).

5. The report makes the following statement on page 3-3 under the heading SCDHEC Water Quality Standards for Freshwaters referring to Regulation 61-68: "The regulation assigns classifications to water bodies in the state and establishes water quality standards for those classifications." SCDHEC notes that this is not correct and that classifications are assigned in Regulation 61-69, *Classified Waters*, which we note the authors do list in the reference section.

6. SCDHEC notes that Table 3-4 on page 3-2 gives the equation for calculating the criterion maximum concentration (CMC) in waters where salmonids are absent from ATTACHMENT 3 - CALCULATION OF FRESHWATER AMMONIA CRITERION in R.61-68, which is one of two conditions included in Attachment 3. (The regulation states CMC means the highest instream concentration of a toxicant or an effluent to which the organisms can be exposed for a brief period of time without causing an acute effect.) A footnote in R.61-68 to the NON PRIORITY POLLUTANTS table under the Appendix titled WATER QUALITY NUMERIC CRITERIA FOR THE PROTECTION OF AQUATIC LIFE AND HUMAN HEALTH states the following: "According to the procedures described in the Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses, except possibly where a very sensitive species is important at a site, freshwater aquatic life should be protected if both conditions specified in Attachment 3 - Calculation of Freshwater Ammonia Criterion are satisfied." Table 3-4 states that the

"standard" is pH, temperature, and life-stage dependent; however, regulation 61-68 notes in the NON PRIORITY POLLUTANTS table that numeric criteria for ammonia are pH and temperature dependent.

7. SCDEC notes that Regulation 61-68, under Section E.GENERAL RULES AND STANDARDS APPLICABLE TO ALL WATERS, states the following:

> "11. In order to protect and maintain lakes and other waters of the State, consideration needs to be given to the control of nutrients reaching the waters of the State. Therefore, the Department shall control nutrients as prescribed below.
>
> a…
>
> b. Numeric nutrient criteria for lakes are based on an ecoregional approach which takes into account the geographic location of the lakes within the State and are listed below. These numeric criteria are applicable to lakes of 40 acres or more. Lakes of less than 40 acres will continue to be protected by the narrative criteria.
>
> (1)…
>
> (2) For the Piedmont and Southeastern Plains ecoregions of the State, total phosphorus shall not exceed 0.06 mg/l, chlorophyll a shall not exceed 40 ug/l, and total nitrogen shall not exceed 1.50 mg/l."

8. SCDHEC notes specific conductance values were highest at Study Site 5 and USGS Site 5.

9. SCDHEC notes that Table 4-26 and Figure 4-45 indicate some unusually high pH readings at Study Site 6. Can the authors give any explanation for this data?

10. SCDHEC notes turbidity values were highest at Study Site 5.

11. SCDHEC notes that Study Site 5 generally had the highest nutrient levels measured except for ammonia and orthophosphate, which were highest at Study Sites 3 and 2 respectively. The ammonia value measured at Study Site 3 is higher than the maximum TKN value. Since TKN includes ammonia, the ammonia value should have been lower than the TKN value. It's also peculiar that Orthophosphate was measured at Study Site 2, but Phosphorous was not detected.

12. The analysis and discussion section makes the following statement on page 5-2: "Water quality within Stevens Creek arm and Savannah River arm of Stevens Creek Reservoir is significantly influenced by external sources outside of DESC's control; nevertheless, water quality monitoring data demonstrate that re-oxygenation occurs as water passes through Stevens Creek Reservoir, the Stevens Creek powerhouse and over the Stevens Creek spillway, benefiting aquatic resources within the Savannah River downstream of the Project." We note that dissolved oxygen and some of the other parameters measured in this study fully support classified uses upstream of Study Site 5 in Stevens Creek, for example at SCDHEC fixed ambient surface water quality monitoring station SV-371 in Horn Creek at Garrett Road, approximately 4 or 5 miles upstream of Study Site 5 (See **Figure 1**). We also note that dissolved oxygen fully supported classified uses at all the other stations shown in **Figure 1** where it was assessed (all but one). 2018 trend analysis indicated no significant trends in dissolved oxygen data at Station SV-371 or at any of the stations in **Figure 1** where dissolved oxygen was assessed and where there was enough data for trend analysis.

Request for second year of study, etc.:

1. SCDHEC requests the water quality study be continued for a second year, collecting additional water quality data and additional water quality parameters (for example chlorophyll a) at additional locations

in the Stevens Creek Arm of the reservoir to document the physical extent of water quality issues in this part of the reservoir. According to the South Carolina Department of Natural Resources, the water quality issues here could be acting as a barrier or impediment to fish passage upstream to the many miles of stream habitat in the Stevens Creek watershed. SCDHEC requests that stakeholders, including regulatory and resource agencies, be consulted when planning the details of this study.

2. SCDHEC also requests additional data collection to determine the residence time in the lower portion of the Stevens Creek arm of the reservoir where there are documented water quality issues such as low dissolved oxygen. SCDHEC also recommends collecting similar data from an upstream reach that is more river-like and where dissolved oxygen and other parameters fully supports aquatic life uses for comparison. SCDHEC requests that stakeholders, including regulatory and resource agencies, be consulted when planning the details of the additional data collection.

3. Finally, SCDHEC requests that the licensee, in designing this second-year study, considers the adequacy of the data for informing the task of working with the regulatory and resource agencies and other stakeholders to develop PM&E measures to include in the license application to address these water quality issues and ameliorate their potential impact on fish passage.

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September 2, 2022

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204 Caughman Farm Lane, Suite 301
Lexington, SC 29072

REFERENCE: Comments on the Stevens Creek Hydroelectric Project (P-2535) Freshwater Mussel, Recreation Use and Needs, and Water Quality Study Reports.

Dear Ms. Güt:

The South Carolina Department of Natural Resources (SCDNR) has reviewed the Stevens Creek Hydroelectric Project's (P-2535) Freshwater Mussel, Recreation Use and Needs, and Water Quality Study Reports and offer the following comments.

Freshwater Mussel Study Report

The SCDNR notes that the two species collected during the survey were *Elliptio complanata* and *Villosa delumbis*, which are both moderate priority species in the South Carolina State Wildlife Action Plan (SWAP). The SCDNR has records of *Lampsilis cariosa*, a highest priority SWAP species, at Stevens Creek Heritage Preserve, located less than four miles upstream of the Project Boundary in the Stevens Creek arm. SCDNR also has records of *Uniomerus carolinianus, Elliptio angustata*, and *Elliptio producta* in the surrounding area. Additionally, the SCDNR notes that since deeper pools were not sampled during the survey, *Lampsilis cariosa* could have been missed due to their habitat preference.

Recreation Use and Needs Study Report

The SCDNR finds the data collected during the Recreational Use and Needs (RUN) Study Report support the need for additional recreational enhancements at the Stevens Creek Project.

The SCDNR requests the licensee further discuss Goal 2 of the RUN Study by identifying ways to improve recreational access and amenities in the Project Area.

The SCDNR continues to support the licensee providing downstream portage opportunities for the public around the Stevens Creek dam. The findings in Section 4.5.2 indicate that 79 percent of recreationists at the Betty's Branch Recreation Site and 11 percent of recreationists at Stevens Creek Recreation Site identified non-motorized watercraft as their primary recreation activity. Further, 71 percent of the recreationists at Betty's Branch and 62 percent of recreationists at Stevens Creek Recreation Site indicated that they were likely to very likely to utilize a portage around the dam.

The SCDNR agrees with partner resource agencies, tribes, and other stakeholders that looting of Stallings Island is a concern and looks forward to developing protective measures to preserve the island's cultural resources. Public recreational access to the Savannah River below Stevens Creek dam currently exists; therefore, the public's access around the dam should not be limited due to these concerns.

Water Quality Study Report

Data presented in the Water Quality Study Report indicate that poor water quality conditions frequently occur in the Stevens Creek arm. One main objective of the study was to assess the water quality in the Stevens Creek arm. However, the report does not make note of any contributing factors leading to the poor water quality. USGS station 021963601 located near Study Site 5 suggests a direct effect of the Stevens Creek reservoir level on flow fluctuations in the Stevens Creek arm. SCDNR staff would like an assessment of how flow dynamics and hydraulic residency may be altering instream flows, sediment transport, nutrients, and water quality in the Stevens Creek arm.

The Executive Summary states that there were several dissolved oxygen excursions throughout the study period, particularly at Site 4 and the J. Strom Thurmond (JST) Dam Tailrace. However, Section 5.0 states that dissolved oxygen excursions were most prevalent below the JST Dam and at Site 5, with Site 1 having the third most excursions at the Project. The Executive Summary should be corrected to reflect the results of the study.

The Water Quality Study Plan developed in consultation with the resource agencies and stakeholders stipulates that all continuous data will be analyzed by computing daily and monthly minimum, maximum, and average values for DO and water temperature. Please include the applicable daily water quality parameters in the report. This information will be a useful tool in determining the duration of low DO excursions at each of the Study Sites.

The SCDNR requests that the GPS coordinates and approximate depth ranges of all Study Sites be included in the report.

If possible, the SCDNR recommends that the licensee include bathymetry data around the Stevens Creek dam in the report to better understand the effects of sediment deposition on water quality.

The SCDNR requests further information and discussion regarding why the dissolved oxygen level dropped at Study Site 4 in October 2021.

To better understand the Stevens Creek Project's effects on water quality, the SCDNR requests an extension of the current water quality study for an additional 12-month period. As indicated in the report, Study Site 5 is only 4.5 miles upstream of the confluence with the Savannah River at Stevens Creek Dam. Since the Project Boundary extends 12 miles upstream of the confluence, SCDNR requests additional study sites within the Stevens Creek arm in the second period of the study to better understand the physical extent of the poor water quality. Further, the SCDNR requests additional study sites in the vicinity of Site 5 to determine if the low dissolved oxygen is creating a barrier to fish passage.

The SCDNR recommends the licensee work with the resource agencies and stakeholders to develop PM&E measures to include in the license application to minimize these water quality issues and prevent negative impacts on fish passage.

Thank you for the opportunity to review the study reports and provide comments. Should you have any questions or need additional information, please do not hesitate to contact me by email at MillerE@dnr.sc.gov or by phone at 843.953.3881.

Sincerely,

Elizabeth C. Miller
FERC Coordinator, SCDNR