SAMPLING ACTIVITIES REPORT
2022 Sampling Event
Final

Carpenter Snow Creek Mining Site
Cascade County, Montana

Prepared for:

United States Environmental Protection Agency, Region 8
Ecosystem Protection and Remediation – Program Support
1595 Wynkoop Street
Denver, Colorado 80202

Prepared By:

Environmental Services Assistance Team
TechLaw
1 Denver Federal Center
Building 25, Door E3,
Denver, Colorado 80225

March 2023

Contract No.:68HE0121D0001
TD No.: F045
DCN: 83145-2-F045-FA-0479

Approval Sheet

Administrative Reviewer:

Roger Hoogerheide

Digitally signed by Roger Hoogerheide
Date: 2023.05.19 09:40:41 -06'00'

Signature/Date

Roger Hoogerheide: Remedial Project Manager

Technical Reviewer:

Roger Hoogerheide

Digitally signed by Roger Hoogerheide
Date: 2023.05.19 09:41:02 -06'00'

Signature/Date

Roger Hoogerheide: Remedial Project Manager

Distribution List
2022 Sampling Activities Report – Carpenter Snow Creek – Cascade County, Montana

The following is a list of individuals who will receive a copy of the Sampling Activities Report (SAR) for the 2022 sampling events at Carpenter Snow Creek (CSC) Mining District. Federal agency (United States Environmental Protection Agency [EPA], United States Forest Service [USFS], or United States Fish and Wildlife Service [USFWS]), state agency (Montana Department of Environmental Quality [MDEQ]) and contractor (Environmental Services Assistance Team [ESAT]) affiliations are listed below for each individual.

Roger Hoogerheide	EPA	hoogerheide.roger@epa.gov
Dave Christenson	EPA	christenson.dave@epa.gov
Will Folland	EPA	folland.william@epa.gov
Sarah Teschner	EPA	teschner.sarah@epa.gov
Steve Opp	USFS	james.s.opp@usda.gov
Steven Auer	ESAT	auer.steven@epa.gov
Brian Sanchez	EPA	sanchez.brian@epa.gov
Gordon Levin	Montana Department of Environmental Quality	gordon.levin@mt.gov

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Abbreviations and Acronyms List

ATV	All-Terrain Vehicle
BERA	Baseline Ecological Risk Assessment
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
COC	Chain of Custody
CRDL	Contract Reporting Detection Limit
CSC	Carpenter Snow Creek
DO	Dissolved Oxygen
EDCD	Electronic Data Collection Device
EPA	United States Environmental Protection Agency
ESAT	Environmental Services Assistance Team
GPS	Global Positioning System
HDPE	High Density Polyethylene
ICB	Initial Calibration Blank
ICSA	Interference Check Solution Stock A
ICSAB	Interference Check Solution Stock AB
ICV	Initial Calibration Verification
ID	Identification
mL	Milliliter
MDEQ	Montana Department of Environmental Quality
MS	Matrix Spike
MW	Monitoring Well
NPL	National Priorities List
ORP	Oxidation Reduction Potential

OU	Operable Unit
RI	Remedial Investigation
ROD	Record of Decision
RPD	Relative Percent Difference
QC	Quality Control
SAP/QAPP	Sampling and Analysis Plan/Quality Assurance Project Plan
SAR	Sampling Activities Report
SCV	Secondary Calibration Verification
SI	Site Investigation
SLERA	Screening-Level Ecological Risk Assessment
SOP	Standard Operating Procedure
SRM	Standard Reference Material
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
YSI	Yellow Springs Instrument

1.0 Introduction

This SAR summarizes the 2022 field sampling activities and provides field and laboratory data associated with the CSC site in Cascade County, Montana. Sampling was conducted the week of June 20th and September 19th 2022. Sampling was performed to further determine the spatial and temporal distribution of contamination, as well as to provide new data to complement the existing datasets collected in previous years. Additionally, the data will be used to monitor the efficacy of the various removal actions. Field activities included the collection of surface water, adit discharges, seeps, groundwater, field water quality measurements, and stream discharge measurements. Samples were analyzed for total recoverable metals, dissolved metals, alkalinity, and anions.

This SAR includes the following sections: Sampling Activities and Procedures (Section 2.0), Sample Quality Control (Section 3.0), Field Changes and Corrective Actions (Section 4.0), and References (Section 5.0). All of the data obtained from field activities and sample analyses are provided in supporting tables and appendices.

1.1 Site Background and Description

The CSC site is located in the Little Belt Mountains of southern Cascade County, Montana, about 55 miles south of Great Falls, Montana. The entire CSC national priorities list (NPL) site is located within Township 14N, Range 8E, a 36-square-mile area, the central portion of which covers the Carpenter Creek and Snow Creek watersheds and the Town of Neihart, Montana.

The CSC site is located next to and includes the town of Neihart, which is at about 5,500 feet in elevation and is surrounded by mountains ranging between 5,900 and 7,820 feet high. The CSC site is rural, mostly forested and characterized by a cool, dry, semi-arid climate typical of northern intermountain regions. The Western Regional Climate Center reports annual precipitation of 21.4 inches, primarily delivered in the spring. Winter is characterized by an average of 113.5 inches of snowfall and occasional blizzards. It can snow any time between September and June, but most of the snowfall occurs during January, February, and March. Late spring and early summer yield high runoff as the snowpack melts and rainfall increases. The CSC site has three main surface water features, namely: Belt Creek, Carpenter Creek, and Snow Creek.

The CSC site also consists of three geographic areas, referred to as operable units (OUs).

> OU1 includes residential soils and roadway materials within the town of Neihart and the Belt Creek Tailings pile.
>
> OU2 encompasses abandoned mines, mills, and associated wastes along Snow Creek. These areas contain the majority of the inaccessible adit discharges and an estimated 120,000 cubic yards of mine-related waste. This OU also includes mining related wastes in the Belt Creek floodplain below Snow Creek confluence with Carpenter Creek extending downstream to the Town of Monarch, Montana.

OU3 includes mine wastes associated with the Silver Dyke Mining Complex and several ancillary mines in Carpenter Creek down to its confluence with Snow Creek. This OU includes Lucy Creek, unnamed Creek, Mackay Creek, Sih Mem Creek, Haystack Creek, and Burg Creek in the Upper Carpenter Creek basin. Approximately 700,000 cubic yards of mine-related solid waste are estimated to be present in this OU.

Belt Creek flows from the southeast to the northwest generally parallel to Highway 89, and eventually discharges to the Missouri River east of Great Falls, Montana. Tributaries that discharge to Belt Creek within the CSC site include (presented from upstream to downstream): Narrow Gauge Gulch, O'Brien Creek, Broadwater Creek, Johnston Creek, Compromise Creek, Rock Creek, Spring Gulch, and Carpenter Creek, as well as several unnamed tributaries. Adit mine water from numerous historic mines discharge into Belt Creek tributaries on the east side of the Neihart valley. These tributaries include Broadwater Creek, Rock Creek, Compromise Creek, Carpenter Creek, and other unnamed tributaries. It is also anticipated that groundwater, contaminated from underground mine workings and surface water infiltration as water flows over mine waste rock, discharges into the tributaries or directly into the Belt Creek alluvial aquifer. Several springs are found at the base of the hill slopes on either side of the valley along Belt Creek during the Neihart OU1 investigations.

Carpenter Creek is about six miles long and flows northeast to the southwest and flows into Belt Creek about 1.5 miles north of the town of Neihart. Tributaries that discharge into Carpenter Creek within the area of interest include (presented from upstream to downstream) No Name Creek, Burg Creek, Sih Mem Creek, Mackay Creek, Haystack Creek, Lucy Creek, and Snow Creek. The Silver Dyke Mine, located in the Sih Mem Creek drainage, was the largest mining operation in the Carpenter Creek watershed. A mine tailings impoundment (Silver Dyke tailings impoundment) located on the unnamed creek below the Silver Dyke Mill washed out after an earthquake in 1925 and tailings were deposited along Carpenter Creek. In 1926, the Carpenter Creek tailings were developed into two impoundments (referred to as the upper and lower tailings impoundments) constructed as tailings settling ponds. Tailings were placed into the impoundments by slurry from the upstream Silver Dyke mill. The tailings impoundments are thought to have originally spanned the entire valley. Several seep areas are present at the base of the upper tailings impoundment as well as the lower tailings (Maxim Technologies, Inc., 2002; Tetra Tech, 2013a).

Snow Creek is about 2.5 miles long, flows from east to west, and discharges into Carpenter Creek downstream of Lucy Creek. Several unnamed tributaries discharge into Snow Creek. The Big Seven Mine was a predominant mine in the Snow Creek drainage, although the largest discharge is from the Lower Rebellion Mine adit whose discharge averages about 115 gallons per minute (Tetra Tech, 2014). The IXL/Eureka mill, which historic records state that cyanide was used to extract gold, also operated within the Snow Creek drainage. Minimal tailings are present in the Snow Creek drainage and are localized around the historic mines (Maxim, 2005; Tetra Tech, 2013b).

The CSC Mining District can be divided into three distinct units based on differences in the type and occurrence of ore. The first is the Carpenter Creek area which is characterized by lower grade ore that contains a high proportion of copper. The second is the upper Snow Creek basin, which is characterized by ore that has low base metal content and higher gold content. The third

is on the Neihart slope, which is characterized by richer surface ore that decreases in silver and lead content with depth (EPA, 2014b).

Mining began in the CSC Mining District when prospectors from the Barker/Hughesville Mining District discovered silver deposits near the town of Neihart in 1881. Only those mines with high-grade silver ore continued to operate after 1883. Later, during the period from 1915 to 1919, the use of the flotation process allowed for mining lower-grade silver ore. Lead and zinc were produced in large quantities in the 1920s and for World War II during the early 1940s. The CSC Mining District, which produced about 16 million dollars in silver between 1882 and 1929, was the primary silver producer in Cascade County. The CSC Mining District has been largely inactive since the 1960s even though some mines have reported mine development work and some sporadic production. Further information on site characteristics, mining history, and regulatory actions for the CSC site can be found in the *Remedial Investigation Report, Neihart Operable Unit, Carpenter-Snow Creek Mining District NPL Site* (EPA, 2005) and various annual reports and technical, memorandum generated since 2010.

At least 21 of the abandoned mines are probable sources of surface water contamination. Impacts from mining waste have been documented to soil, groundwater, surface water and stream sediments in Belt Creek, Carpenter Creek, and Snow Creek drainages in many of the documents cited above. The CSC site was proposed for EPA's NPL in December 2000, and the site was added to the NPL in September 2001. EPA began site investigations in the town of Neihart and the immediate surroundings (this area is referred to as the Neihart OU1) in 2002. Based on the results of the Neihart OU investigations, soil was removed in 2004 near two historic mills due to high lead levels. The Neihart tailings pile along Belt Creek was also capped and armored to prevent runoff or failure during flood events.

In 2009, EPA signed a Record of Decision (ROD) for the Neihart OU1 Neihart Community Soils Area (EPA, 2009). The selected remedy for OU1 includes excavating and replacing contaminated residential soils and roadway material, and excavating the Belt Creek Tailings pile, followed by transport of the waste materials to a secure repository for disposal.

Results from the Hazardous Materials Inventory by the Montana Abandoned Mine Reclamation Bureau (AMRB, 1994) and the Preliminary Assessment/Site Inspection Report (Pioneer Technical Services, 1995) showed high levels of metals, including arsenic, cadmium, copper, iron, lead, manganese, nickel, and zinc in surface water, sediments, and soils. The Site Investigation (SI) Report (Maxim, 2002) and the Remedial Investigation (RI) Report for the Neihart OU1 (EPA, 2005) summarize all previous investigations for the CSC site.

On July 16, 2012, the EPA recorded a storm event that washed fines from the upper and lower tailings impoundments into Carpenter Creek. Water samples and photographs were taken near the tailings piles and downstream where Carpenter Creek flows into Belt Creek. Subsequent investigations in the Belt Creek floodplain indicate that waste continues to get entrained in high flow events and redeposited downstream as overbank deposits as far as the town of Monarch located about 14 miles north of Neihart. The risk associated with human contact with contaminated surface water and unconfined tailings solids by yearlong downstream residents, nearby summer residents and dispersed public recreationists doing activities such as rock hounding or gold panning, fishing and/or riding an All-Terrain Vehicle (ATV) or motorcycle

resulted in a removal action being initiated in 2013 and 2014. The actions conducted by USFS in 2013 under an action memorandum were implemented to stabilize these tailings impoundments until a permanent action is taken. Stabilization activities included: 1) Construction of a lined surface run-on and run-off ditch at the upper portions of the two lower tailings piles to prevent storm flows and snowmelt from eroding tailings, 2) Installation of erosion check dams at all three tailings features in areas where deep rills have formed in past erosion events, 3) Installation and maintenance of continuous straw bales erosion berms along piles adjacent to Carpenter Creek, 4) Installation of engineering controls including fence and signs to discourage ATV's and other vehicles from driving on the tailings (EPA, 2019).

An addendum to the 2013 Action Memorandum was issued in August 2014 to address the Silver Dyke tailings impoundment. The objective of this removal action was to prevent continued releases from the estimated 35,000 cubic yards of tailings at the Silver Dyke tailings impoundment within No Name Creek drainage area. The action included the following elements: (1) Removing the tailings from the hillside slopes and staging for disposal; (2) constructing an onsite repository; (3) placing the tailings in an onsite repository; and (4) reclaiming/restoring removal area slopes. The removal action occurred between September and October 2014 and all objectives were met (EPA, 2014a).

The screening-level ecological risk assessment (SLERA) identified preliminary contaminants of concern based on a limited dataset for a subset of metals, including arsenic, cadmium, copper, lead, and zinc (EPA 2007). While these contaminants are typically the primary metals of interest from mining contamination, other metals may also potentially contribute to risks at the CSC site. In 2016, a Baseline Ecological Risk Assessment (BERA) for the Site was performed in basic accordance with methods and procedures established by the EPA for conducting ecological risk assessments (EPA, 2016). The purpose of the BERA was to describe the likelihood, nature, and extent of adverse effects that occur in the ecological receptors exposed to environmental contaminants at the Site under present conditions.

1.2 Objective

The objectives of the sampling events were to further characterize the variability of site-related contamination in aquatic ecosystems, to evaluate the extent of groundwater contamination within alluvial portions of Carpenter Creek, and to monitor the effectiveness of removal actions. The data collected in 2022 followed similar protocols as in past investigations. Sampling in the creeks, groundwater monitoring wells, and adits occurred at some of the same locations that were sampled in 2009 through 2021.

The following data was collected during the events:

- Real-time field water quality measurements: pH, specific conductivity, dissolved oxygen (DO), oxidation reduction potential (ORP), and temperature;
- Stream flow measurements: using Sontek® Flow Tracker™ flow meters and portable cutthroat flumes;
- Surface water and adit discharge water: dissolved metals, hardness (via calculation), total recoverable metals, alkalinity, and anions;

- Groundwater collected from existing groundwater monitoring wells: dissolved metals, hardness (via calculation), mercury, and total recoverable metals;
- Collection of Global Positioning System (GPS) coordinates; and
- Electronic Data Collection Device (EDCD) entries: sampling date, time, location, weather conditions, personnel, water quality measurements (pH, DO, specific conductivity, ORP, and temperature), sample bottle lot numbers, equipment identification (ID) numbers, photo documentation and other pertinent observations.

2.0 SAMPLING ACTIVITIES AND PROCEDURES

Field activities occurred during June 20th to 23rd and September 20st to 22nd . The following sections describe in detail, sample handling and identification; surface water, groundwater sampling procedures; water quality and stream discharge measurement procedures; and documentation procedures.

2.1 Sample Handling and Identification

Surface water samples were identified by established Carpenter/Snow Creek and Belt Creek designations used in previous sampling events, followed by the respective station numbers. For example, locations in Carpenter Creek and Snow Creek were identified as CSC-XXX and locations along Belt Creek were identified as ST-XXX. Duplicate samples were identified by the location followed by the letters “Dup”.

Adit water samples were identified by the mine identification number followed by “AD” and the sequential sample number. For example, the fifth Ripple Mines adit water sample would be 07-163-AD5.

Groundwater samples were identified by a prefix, MW (monitoring well) or CSC, followed by the monitoring well number. Note that CSC surface water samples have a 3-digit station designation, whereas CSC monitoring well samples have a 2-digit designation.

2.2 Surface and Adit Water Sampling

Surface water and adit water samples were collected in accordance with Standard Operating Procedure (SOP) FLD-01.00 *Surface Water Sampling* (EPA, 2012a) and the *Final 2022 Sampling and Analysis Plan/Quality Assurance Project Plan* (SAP/QAPP) *Carpenter Snow Creek Mining District Superfund Site* (ESAT, 2022). Samples were collected at locations along Carpenter Creek, Snow Creek, Belt Creek, and adit discharges within the mining district boundaries. Sample locations are shown in **Figure 1**.

Surface water samples for dissolved metals analysis were collected in a certified clean 250 milliliter (mL) High Density Polyethylene (HDPE) bottle after a triple rinse with water from the sample location, then transferred and filtered through a 0.45-micron filter apparatus into a 250 mL sample container. The 250 mL HDPE bottle used to transfer the sample for dissolved metals was refilled for total recoverable metals analysis. Samples collected for alkalinity and anions analysis were collected in a 500 mL HDPE triple rinsed bottle. All surface water sample

containers and processing equipment was new, certified clean, and station dedicated; therefore, decontamination was not necessary.

Samples for total recoverable and dissolved metals analysis were preserved with nitric acid in accordance with SOP FLD-03.00 *Sample Preservation* (EPA, 2012b). Alkalinity and anion samples were preserved by placing them on ice in the field. All samples were entered onto chain of custody (COC) forms on-site or back at the staging area prior to leaving the CSC site. Samples were placed in a cooler with ice during transport to Region 8 EPA Laboratory and were then stored in the four-degree Celsius laboratory walk-in cooler until analysis.

Samples were analyzed for total and dissolved metals (EPA method 200.7 and 200.8), hardness (EPA method 2340B) calculated from calcium and magnesium results), alkalinity (EPA method 310.1) and anions (EPA method 300.0). Analytical data from the 2022 events are provided in **Tables 1** through **5**. EDCD entries are provided in **Attachment B**.

2.3 Groundwater Sampling

Groundwater samples were collected from monitoring wells along Carpenter Creek and Snow Creek in accordance with SOP FLD-04.00 *Groundwater Sampling* (EPA, 2012c) and the CSC site 2022 SAP/QAPP (ESAT, 2022). Groundwater sampling locations are shown in **Figure 1**.

The static water level and total depth measurements for each well were collected using a water level indicator. The monitoring well water was then purged using a peristaltic pump or bailer until water quality measurements (pH, specific conductivity, temperature, and DO) met stabilization criteria. After stabilization, samples for total recoverable metals were collected in 250 mL HDPE bottles and samples for dissolved metals were collected in 250 mL Nalgene® filter bottles and filtered on-site. Pump tubing and bailers were station dedicated; therefore, decontamination was not required.

Groundwater samples were preserved with nitric acid in accordance with SOP FLD-03.00 *Sample Preservation* (EPA, 2012b). All samples were entered onto COC forms on-site or back at the staging area prior to leaving the CSC site. Samples were placed in a cooler with ice during transport to the Region 8 EPA Laboratory and were then stored in the four-degree Celsius laboratory walk-in cooler until analysis. Groundwater samples were analyzed for dissolved metals and total recoverable metals (EPA methods 200.7 and 200.8), and hardness (EPA method 2340B calculated from calcium and magnesium results). Groundwater analytical data are provided in **Tables 3** and **4**. Electronic data collection device entries are provided in **Attachment B** and groundwater data sheets are provided in **Attachment D**.

2.4 Water Quality and Stream Discharge

Field water quality measurements (pH, temperature, DO, ORP and specific conductivity) were collected at each water and sediment sampling location using a Yellow Springs Instrument (YSI) pro multi-parameter meter. Water quality measurements were collected in accordance with manufacturer guidelines presented in *Professional Plus User Manual* (YSI, 2009). All water quality and discharge results were recorded in an EDCD.

Stream discharge was measured using FlowTracker® flow meters or portable cutthroat flumes. Locations where stream discharge was not measured are listed in Section 4.0. Stream discharge measurements collected with a FlowTracker® were done in accordance with SOP FLD-08.00 *Flow Tracker Operation* (EPA, 2012d) and results are included in **Attachment A**. Discharge measurements made with cutthroat flumes and FlowTtracker®s are included in the EDCD entries (**Attachment B**).

2.5 Sample Collection Documentation

At the time of sampling, EDCDs were used to collect the following information: sampling date, time, location, weather conditions, personnel, sample bottle lot numbers, water quality measurements, equipment ID numbers, and other pertinent observations (**Attachment B**). Groundwater data sheets (**Attachment D**) include the following information: personnel, sampling date, time, location, static water level, well depth, well diameter, water quality measurements, number of liters purged, and other pertinent observations. EDCDs were also used to take photographs of the sampling locations and activities. Photographs are provided in **Attachment C.**

Samples submitted for laboratory analysis were entered into a COC system using Scribe. All analytical chemistry data, field water quality measurements, and discharge estimates were also entered into Scribe.

3.0 SAMPLE QUALITY CONTROL

This section details Quality Control (QC) methods used in the field for activities performed during the sampling event. These include decontamination methods, field instrument calibration, duplicate sample collection, and field blank sample collection.

3.1 Decontamination Methods

All sample containers and supplies such as tubing and well bailers were new and certified clean, site-dedicated, and disposed of between monitoring stations so decontamination was not necessary.

3.2 Field Instrument Calibration

Field instrumentation requiring calibration or routine function checks included the water quality meters and the Flow Tracker® flow measurement device. Water quality meters were calibrated daily using certified buffers and standards. YSI pro multi-parameter meters' calibration procedures were completed in accordance with manufacturer instructions (YSI, 2009). All calibration values associated output information, along with buffer and standard lot numbers were recorded in the instrument's calibration notebook (**Attachment E**). At the end of each sampling day, the water quality meters' calibration was checked using certified buffers and standards which was recorded in the calibration notebook (**Attachment E**). The FlowTracker®

flow meters have routine internal function checks that are conducted in the field prior to data collection in accordance with SOP FLD-08.00 *FlowTracker® Operation* (EPA, 2012d).

3.3 Duplicate Sample Collection

Duplicate samples were collected during these events at a 10% frequency to determine sampling precision and correlation between samples. EPA *National Functional Guidance for Inorganic Superfund Methods Data Review* (EPA, 2017) recommends a Relative Percent Difference (RPD) control limit of 20% for water and 35% for sediment samples. RPDs were only calculated when assessment and duplicate sample values were equal to or greater than five times the Contract Required Quantitation Limit. Although these are laboratory guidelines which may not apply to all field situations, an RPD was calculated for duplicate total and dissolved metals, alkalinity, and anions samples above the reporting limit. RPD values were calculated using the following equation:

RPD =100*[Absolute value of (Assessment Sample Result – Duplicate Sample Result)] / [0.5 * (Assessment Sample Result + Duplicate Sample Result)]

Tables 1 through **4** show RPD results for water samples. **Table 5** shows RPD results for sediment samples.

3.4 Field Blank Samples

Field blank samples were collected to evaluate the potential of sample contamination during collection, transportation, and while being stored at the laboratory before analysis. Aqueous field blank samples were processed in the field using laboratory grade de-ionized water. Field blank sample processing and handling was similar to field samples and were collected at a frequency of one per day. Field blanks were analyzed for total recoverable metals, dissolved metals, alkalinity, and anions. Field blank analytical results are included in **Tables 1** through **4**.

3.5 Laboratory Quality Control Methods

Laboratory QC methods were used while analyzing all samples to verify the accuracy. The following methods were used during total recoverable metals, dissolved metals, alkalinity, and/or anions:

QC Check	Analysis	Run Frequency
Standard Reference Material (SRM)/Initial Calibration Verification (ICV)/Continuing Calibration Verification (CCV)	Metals, Anions and Alkalinity	SRM or ICV at the start of run, CCV after every 10 samples
Initial Calibration Blank (ICB)/Continuing Calibration Blank (CCB)	Metals, Anions, and Alkalinity	ICB at start of run, CCB after every 10 samples

Secondary Calibration Verification (SCV)	Metals and Anions	SCV after calibration verification
Contract Reporting Detection Limit (CRDL)	Metals	CRDL after calibration verification
Interference Check Solution Stock A (ICSA)/Interference Check Solution Stock AB (ICSAB)	Metals	ICSA and ICSAB at the start of run
Sample Duplicate	Metals, Anions	One per 20 samples or less
	Alkalinity	One per 10 samples or less
Matrix Spike (MS)	Metals and Anions	One per 10 samples or less

4.0 FIELD CHANGES AND CORRECTIVE ACTIONS

This section identifies and describes deviations from the CSC 2022 SAP/QAPP that occurred in the field during the 2022 sampling events.

The follow deviations were made during the 2022 field sampling events:

June 20th - 23rd, 2022

- The following locations could not be sampled due to the monitoring well being dry: MW-12.
- The following locations were not collected as sample locations were unable to be located: MW-9A.
- An additional opportunistic sample was collected for total recoverable metals, alkalinity and anions and labeled 07-167-AD1.
- Stream discharge measurements were not collected at any of the adit locations per the Remedial Project Manager.
- Aluminum and Manganese Total Recoverable Metal analyses for surface water had RPD values nd, 2022 greater than 20% at 07-157-001

September 20th - 22nd, 2022

- The following locations could not be sampled due to stream being dry: CSC-111C, CSC-111B, , 07-157-004, CSC-5, and MW-6
- At the following locations flow data was not collected as there was insufficient flow: 07-079-AD1, 07-084-001, 07-084-AD1
- Stream discharge measurements were not collected at any of the adit locations per the Remedial Project Manager.
- Zinc analyses for groundwater DM at MW-4A had RPD values are greater than 20%; however, the results are < 5x the detection limits and are below action limits
- Copper and Lead Total Recoverable Metal analyses for surface water had RPD values greater than 20% at CSC-105.
- Aluminum Total Recoverable Metal analyses for surface water had RPD values greater than 20% at CSC-117.
- Copper analyses for surface water DM at CSC-105 had RPD values are greater than 20%; however, the results are < 5x the detection limits and are below action limits

- Silver and Arsenic analyses for sediment Total Recoverable Metals at CSC-105 had RPD values are greater than 35%; however, the results are < 5x the detection limits and are below action limits

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Tables

Table 1. Carpenter Snow Creek Surface Water Total Recoverable Metals Analytical Results and RPD Calculations for Duplicates – June 2022

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
07-079-AD1	6/23/2022	08:00	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	71.2D	71300	<5.00U	3.99D	4.78JD	109J	28.3D	49200	8560	132D	<7.50U	7660	<2.50U	2100	377	<5.00U	<10.0U	31900
07-084-AD1	6/23/2022	09:07	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	4.13D	45200	5.30JD	0.967JD	<2.50U	143J	3.53D	24700	1060	17.0D	<7.50U	9440	<2.50U	2710	366	<5.00U	<10.0U	2350
07-156-AD3	6/21/2022	14:58	789	<2.50U	<3.00U	<25.0U	<2.00U	8.57D	62200	<5.00U	93.2D	10.1D	21700	9.32D	30700	26600	180D	<7.50U	15800	<2.50U	2420	215	<5.00U	<10.0U	10300
07-156-SEEP2	6/21/2022	15:11	110	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	4880	<5.00U	<0.500U	<2.50U	148J	1.58D	1070	8.42J	<2.50U	<7.50U	6790	<2.50U	770J	21.0	<5.00U	<10.0U	32.2
07-157-001	6/21/2022	15:53	245	<2.50U	<3.00U	<25.0U	<2.00U	22.9D	23400	<5.00U	7.40D	52.7D	655	74.2D	8500	7160	22.0D	<7.50U	11100	<2.50U	1180	120	<5.00U	<10.0U	5000
07-157-001-Du	6/21/2022	15:53	671	<2.50U	<3.00U	<25.0U	<2.00U	26.8D	21300	<5.00U	2.78D	63.8D	139J	26.8D	8200	4890	24.6D	<7.50U	13100	<2.50U	1180	109	<5.00U	<10.0U	5880
07-157-003	6/21/2022	15:33	246	<2.50U	<3.00U	<25.0U	<2.00U	23.1D	23600	<5.00U	7.64D	53.7D	661	73.6D	8630	7160	22.9D	<7.50U	11100	<2.50U	1210	122	<5.00U	<10.0U	5110
07-157-006	6/21/2022	13:48	324	<2.50U	<3.00U	<25.0U	<2.00U	6.41D	10400	<5.00U	<0.500U	23.2D	157J	16.0D	3350	901	6.93D	<7.50U	8540	<2.50U	1070	50.9	<5.00U	<10.0U	1540
07-157-AD1	6/21/2022	16:10	320	<2.50U	<3.00U	<25.0U	<2.00U	21.4D	23600	<5.00U	7.80D	50.3D	939	97.1D	8560	7410	23.7D	<7.50U	11400	<2.50U	1190	120	<5.00U	<10.0U	4710
07-167-AD1	6/21/2022	14:38	78.6J	<2.50U	<3.00U	<25.0U	<2.00U	2.80D	8150	<5.00U	0.637JD	2.72JD	365	31.5D	2080	461	<2.50U	<7.50U	5610	<2.50U	664J	25.4	<5.00U	<10.0U	747
Blank	6/21/2022	11:17	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	<175U	<5.00U	<0.500U	<2.50U	<100U	<0.500U	<250U	<7.50U	<2.50U	<7.50U	<250U	<2.50U	<250U	<2.50U	<5.00U	<10.0U	<15.0U
Blank	6/21/2022	12:40	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	<175U	5.56JD	<0.500U	<2.50U	<100U	<0.500U	<250U	<7.50U	<2.50U	<7.50U	<250U	<2.50U	<250U	<2.50U	<5.00U	<10.0U	<15.0U
CSC-101	6/21/2022	11:20	430	<2.50U	<3.00U	65.8D	<2.00U	<0.500U	11500	<5.00U	<0.500U	5.20D	256	1.35D	3290	43.1	<2.50U	<7.50U	9140	<2.50U	1330	97.5	<5.00U	<10.0U	139
CSC-102	6/21/2022	11:26	236	<2.50U	<3.00U	30.3JD	<2.00U	2.18D	9800	5.46JD	<0.500U	26.3D	163J	4.14D	3210	163	<2.50U	<7.50U	10000	<2.50U	1430	67.7	<5.00U	<10.0U	491
CSC-103	6/21/2022	11:30	170	<2.50U	<3.00U	<25.0U	<2.00U	2.85D	9170	<5.00U	<0.500U	34.1D	143J	5.08D	3190	207	2.51JD	<7.50U	10300	<2.50U	1500	56.2	<5.00U	<10.0U	633
CSC-104	6/21/2022	11:50	188	<2.50U	<3.00U	<25.0U	<2.00U	3.81D	9000	<5.00U	<0.500U	53.6D	122J	6.11D	3110	357	<2.50U	<7.50U	11200	<2.50U	1650	63.6	<5.00U	<10.0U	720
CSC-104A	6/21/2022	12:20	180	<2.50U	<3.00U	<25.0U	<2.00U	3.56D	8830	<5.00U	<0.500U	51.1D	122J	5.92D	3040	343	<2.50U	<7.50U	10800	<2.50U	1620	62.6	<5.00U	<10.0U	707
CSC-105	6/21/2022	12:45	120	<2.50U	<3.00U	<25.0U	<2.00U	1.31D	8780	<5.00U	<0.500U	<2.50U	135J	1.74D	3260	62.6	3.16JD	<7.50U	8960	<2.50U	1200	40.1	<5.00U	<10.0U	495
CSC-106	6/22/2022	09:30	118	<2.50U	<3.00U	<25.0U	<2.00U	1.37D	8940	5.25JD	<0.500U	<2.50U	128J	1.49D	3320	70.5	3.35JD	<7.50U	8940	<2.50U	1220	40.8	<5.00U	<10.0U	534
CSC-107	6/21/2022	13:12	91.1J	<2.50U	<3.00U	<25.0U	<2.00U	2.17D	21900	<5.00U	<0.500U	2.92JD	<100U	2.50D	9860	98.2	19.4D	<7.50U	10700	<2.50U	1370	81.0	<5.00U	<10.0U	1820
CSC-108	6/21/2022	13:25	98.7J	<2.50U	<3.00U	<25.0U	<2.00U	6.87D	13300	6.16JD	<0.500U	8.87D	<100U	6.96D	4590	470	9.07D	<7.50U	10100	<2.50U	1060	60.7	<5.00U	<10.0U	1880
CSC-111A	6/21/2022	13:10	141	<2.50U	<3.00U	<25.0U	<2.00U	3.67D	8800	5.22JD	<0.500U	55.2D	<100U	5.91D	3120	381	<2.50U	<7.50U	10600	<2.50U	1420	61.9	<5.00U	<10.0U	763
CSC-111B	6/21/2022	13:55	145	<2.50U	<3.00U	<25.0U	<2.00U	3.80D	8210	5.75JD	<0.500U	54.4D	<100U	6.51D	2980	383	<2.50U	<7.50U	10600	<2.50U	1350	58.1	<5.00U	<10.0U	724
CSC-111C	6/21/2022	14:30	132	<2.50U	<3.00U	<25.0U	<2.00U	3.73D	8200	<5.00U	<0.500U	53.4D	<100U	5.85D	3020	388	<2.50U	<7.50U	10500	<2.50U	1390	58.7	<5.00U	<10.0U	744
CSC-111D	6/21/2022	14:45	133	<2.50U	<3.00U	<25.0U	<2.00U	4.07D	8600	5.71JD	<0.500U	54.4D	<100U	6.02D	3110	383	<2.50U	<7.50U	10500	<2.50U	1420	60.6	<5.00U	<10.0U	771
CSC-114	6/21/2022	14:40	664	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	9740	6.14JD	<0.500U	9.89D	640	2.08D	1840	30.6	<2.50U	<7.50U	26000	<2.50U	4330	62.4	<5.00U	<10.0U	112
CSC-115	6/21/2022	14:50	337	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	12600	5.10JD	<0.500U	12.6D	269	1.57D	2420	10.2J	<2.50U	<7.50U	23200	<2.50U	3500	96.6	<5.00U	<10.0U	158
CSC-116	6/21/2022	15:55	124	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	5720	5.72JD	<0.500U	4.24JD	<100U	3.07D	2380	<7.50U	<2.50U	<7.50U	9390	<2.50U	1070	36.4	<5.00U	<10.0U	20.0J
CSC-117	6/21/2022	15:25	500	<10.0U	<12.0U	<100U	<2.00U	143D	79300	<20.0U	23.7D	1970D	<100U	82.3D	27600	21600	71.5D	<30.0U	22300	<10.0U	4000	702	<20.0U	<40.0U	29300
CSC-117-Dup	6/21/2022	15:25	495	<10.0U	<12.0U	<100U	<2.00U	142D	80800	<20.0U	24.4D	1960D	<100U	82.5D	28200	21500	72.7D	<30.0U	21900	<10.0U	4170	721	<20.0U	<40.0U	30200
CSC-117A	6/21/2022	16:00	932	<25.0U	<30.0U	<250U	<2.00U	169D	77000	<50.0U	54.1D	2710D	1790	396D	29300	31400	77.4D	<75.0U	20900	<25.0U	3680	716	<50.0U	<100U	36100
CSC-117A-Dup	6/21/2022	16:00	977	<25.0U	<30.0U	<250U	<2.00U	172D	78100	<50.0U	55.7D	2770D	1810	403D	29800	32600	80.7D	<75.0U	21700	<25.0U	3840	734	<50.0U	<100U	36800
CSC-119	6/21/2022	17:00	160	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	10600	5.24JD	<0.500U	6.27D	130J	10.9D	2320	8.01J	<2.50U	<7.50U	14600	<2.50U	2360	77.7	<5.00U	<10.0U	61.4
CSC-119B	6/21/2022	17:00	176	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	6630	5.38JD	<0.500U	<2.50U	115J	1.21D	1560	<7.50U	<2.50U	<7.50U	14400	<2.50U	2110	44.1	<5.00U	<10.0U	19.0J
CSC-120A	6/21/2022	16:35	184	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	5890	6.61JD	<0.500U	6.70D	183J	14.9D	2360	12.3J	<2.50U	<7.50U	9870	<2.50U	1120	37.7	<5.00U	<10.0U	26.8J
ST010A	6/21/2022	18:00	309	<2.50U	<3.00U	95.2D	<2.00U	<0.500U	14800	6.94JD	<0.500U	<2.50U	219J	<0.500U	3710	<7.50U	<2.50U	<7.50U	8640	<2.50U	1220	143	<5.00U	<10.0U	<15.0U
ST015	6/21/2022	17:31	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	14.7D	24400	<5.00U	<0.500U	<2.50U	<100U	1.12D	11500	857	17.7D	<7.50U	12800	<2.50U	1330	80.5	<5.00U	<10.0U	8390
ST016	6/21/2022	17:52	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	31300	6.08JD	<0.500U	<2.50U	<100U	<0.500U	18400	282	7.25D	<7.50U	10100	<2.50U	1970	189	<5.00U	<10.0U	548

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
07-157-001	6/21/2022	15:53	245	<2.50U	<3.00U	<25.0U	<2.00U	22.9D	23400	<5.00U	7.40D	52.7D	655	74.2D	8500	7160	22.0D	<7.50U	11100	<2.50U	1180	120	<5.00U	<10.0U	5000
07-157-001-Du	6/21/2022	15:53	671	<2.50U	<3.00U	<25.0U	<2.00U	26.8D	21300	<5.00U	2.78D	63.8D	139J	26.8D	8200	4890	24.6D	<7.50U	13100	<2.50U	1180	109	<5.00U	<10.0U	5880
		RPD	93.01%	N/A	N/A	N/A	N/A	N/A	9.40%	N/A	N/A	N/A	N/A	N/A	3.59%	37.68%	N/A	N/A	16.53%	N/A	0.00%	9.61%	N/A	N/A	16.18%

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
CSC-117	6/21/2022	15:25	500	<10.0U	<12.0U	<100U	<2.00U	143D	79300	<20.0U	23.7D	1970D	<100U	82.3D	27600	21600	71.5D	<30.0U	22300	<10.0U	4000	702	<20.0U	<40.0U	29300
CSC-117-Dup	6/21/2022	15:25	495	<10.0U	<12.0U	<100U	<2.00U	142D	80800	<20.0U	24.4D	1960D	<100U	82.5D	28200	21500	72.7D	<30.0U	21900	<10.0U	4170	721	<20.0U	<40.0U	30200
		RPD	1.01%	N/A	N/A	N/A	N/A	N/A	1.87%	N/A	N/A	N/A	N/A	N/A	2.15%	0.46%	N/A	N/A	1.81%	N/A	4.16%	2.67%	N/A	N/A	3.03%

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
CSC-117A	6/21/2022	16:00	932	<25.0U	<30.0U	<250U	<2.00U	169D	77000	<50.0U	54.1D	2710D	1790	396D	29300	31400	77.4D	<75.0U	20900	<25.0U	3680	716	<50.0U	<100U	36100
CSC-117A-Dup	6/21/2022	16:00	977	<25.0U	<30.0U	<250U	<2.00U	172D	78100	<50.0U	55.7D	2770D	1810	403D	29800	32600	80.7D	<75.0U	21700	<25.0U	3840	734	<50.0U	<100U	36800
		RPD	4.71%	N/A	N/A	N/A	N/A	N/A	1.42%	N/A	N/A	N/A	1.11%	N/A	1.69%	3.75%	N/A	N/A	3.76%	N/A	4.26%	2.48%	N/A	N/A	1.92%

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 1.1 Carpenter Snow Creek Surface Water Dissolved Metals Analytical Results and RPD Calculations for Duplicates – June 2022

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
07-079-AD1	6/23/2022	08:00	<50.0U	<5.00U	<6.00U	<50.0U	<2.00U	73.5D	68900	<10.0U	4.25D	7.35JD	384	<100U	13.4D	51600	9150	144D	<15.0U	7840	<5.00U	1970	363	<10.0U	<20.0U	31000
07-084-AD1	6/23/2022	09:07	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	3.23D	44000	<5.00U	0.689JD	<2.50U	215	<100U	<0.500U	25700	770	17.0D	<7.50U	9890	<2.50U	2670	355	<5.00U	<10.0U	2130
07-156-AD3	6/21/2022	14:58	732	<5.00U	<6.00U	<50.0U	<2.00U	8.37D	60200	<10.0U	94.2D	11.0D	281	19800	5.01D	31800	29100	185D	<15.0U	15700	<5.00U	2310	210	<10.0U	<20.0U	10300
07-156-SEEP2	6/21/2022	15:11	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	<0.100U	4850	<1.00U	<0.100U	0.561J	17	<100U	0.120J	1070	<7.50U	1.66J	<1.50U	6690	<0.500U	750J	20.6	<1.00U	<2.00U	40.9
07-157-001	6/21/2022	15:53	54.8J	<2.50U	<3.00U	<25.0U	<2.00U	24.7D	22400	<5.00U	8.07D	56.2D	91	440	52.6D	8590	7870	25.7D	<7.50U	11600	<2.50U	1110	116	<5.00U	<10.0U	5380
07-157-001-Dup	6/21/2022	15:53	58.5J	<2.50U	<3.00U	<25.0U	<2.00U	24.8D	22600	<5.00U	7.97D	56.0D	92	455	52.2D	8740	7840	25.0D	<7.50U	11600	<2.50U	1120	118	<5.00U	<10.0U	5510
07-157-003	6/21/2022	15:33	634	<5.00U	<6.00U	<50.0U	<2.00U	27.6D	21600	<10.0U	3.06D	73.7D	90	<100U	23.2D	8830	5420	27.3D	<15.0U	13900	<5.00U	1190	112	<10.0U	<20.0U	6160
07-157-006	6/21/2022	13:48	131	<0.500U	<0.600U	7.73J	<2.00U	6.98	9870	<1.00U	0.394	13.1	39	<100U	7.19	3440	934	7.92	<1.50U	9050	<0.500U	1020	49.5	<1.00U	<2.00U	1630
07-157-AD1	6/21/2022	16:10	301	<2.50U	<3.00U	<25.0U	<2.00U	21.8D	23400	<5.00U	8.12D	52.4D	95	740	82.5D	8970	8080	25.0D	<7.50U	11900	<2.50U	1150	120	<5.00U	<10.0U	5330
07-167-AD1	6/21/2022	14:38	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	3.12	8580	<1.00U	0.625	1.75	31	<100U	2.16	2260	497	3.17	<1.50U	5760	<0.500U	684J	26.6	<1.00U	<2.00U	823
Blank	6/21/2022	11:17	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	<0.100U	<175U	<1.00U	<0.100U	<0.500U	<2U	<100U	<0.100U	<250U	<7.50U	0.996J	<1.50U	<250U	<0.500U	<250U	<2.50U	<1.00U	<2.00U	<15.0U
Blank	6/21/2022	12:40	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	<0.100U	<175U	<1.00U	<0.100U	<0.500U	<2U	<100U	<0.100U	<250U	<7.50U	0.994J	<1.50U	<250U	<0.500U	<250U	<2.50U	<1.00U	<2.00U	<15.0U
CSC-101	6/21/2022	11:20	168	<0.500U	<0.600U	66.0	<2.00U	0.476	11500	<1.00U	<0.100U	5.19	43	<100U	0.378	3430	36.6	2.82	<1.50U	8670	<0.500U	1300	99.0	<1.00U	<2.00U	135
CSC-102	6/21/2022	11:26	87.2J	<2.50U	<3.00U	29.4JD	<2.00U	1.81D	9810	<5.00U	<0.500U	24.3D	38	<100U	1.04D	3310	164	4.21JD	<7.50U	9820	<2.50U	1380	67.9	<5.00U	<10.0U	519
CSC-103	6/21/2022	11:30	67.8J	<2.50U	<3.00U	<25.0U	<2.00U	2.62D	9280	<5.00U	<0.500U	32.2D	37	<100U	1.38D	3320	220	4.44JD	<7.50U	10700	<2.50U	1460	56.9	<5.00U	<10.0U	683
CSC-104	6/21/2022	11:50	99.8J	<2.50U	<3.00U	<25.0U	<2.00U	3.67D	8880	<5.00U	<0.500U	49.8D	35	<100U	2.62D	3180	385	3.95JD	<7.50U	11400	<2.50U	1580	63.0	<5.00U	<10.0U	780
CSC-104A	6/21/2022	12:20	86.5J	<2.50U	<3.00U	<25.0U	<2.00U	3.43D	9040	<5.00U	<0.500U	50.7D	36	<100U	2.47D	3220	379	3.95JD	<7.50U	11300	<2.50U	1600	64.7	<5.00U	<10.0U	787
CSC-105	6/21/2022	12:45	<50.0U	<0.500U	<0.600U	9.60J	<2.00U	1.51	8730	<1.00U	<0.100U	2.03	36	<100U	0.433	3350	55.9	4.76	<1.50U	9050	<0.500U	1140	40.1	<1.00U	<2.00U	548
CSC-106	6/22/2022	09:30	<50.0U	<0.500U	<0.600U	9.25J	<2.00U	1.46	9310	<1.00U	<0.100U	1.82	38	<100U	0.508	3580	67.2	4.55	<1.50U	9000	<0.500U	1220	42.6	<1.00U	<2.00U	590
CSC-107	6/21/2022	13:12	57.1J	<0.500U	<0.600U	13.2	<2.00U	2.27	19800	1.01J	0.114J	1.96	87	<100U	0.428	9070	76.9	19.6	<1.50U	10900	<0.500U	1280	73.6	<1.00U	<2.00U	1700
CSC-108	6/21/2022	13:25	78.5J	<0.500U	<0.600U	13.4	<2.00U	7.25	12900	<1.00U	0.305	7.39	51	<100U	3.64	4550	465	9.48	<1.50U	10500	<0.500U	1110	59.6	<1.00U	<2.00U	1860
CSC-111A	6/21/2022	13:10	59.9J	<2.50U	<3.00U	<25.0U	<2.00U	4.00D	8010	<5.00U	<0.500U	50.0D	32	<100U	2.92D	2910	382	4.05JD	<7.50U	10800	<2.50U	1380	56.7	<5.00U	<10.0U	732
CSC-111B	6/21/2022	13:55	<250U	<2.50U	<3.00U	<25.0U	<10.0U	3.84D	8640D	<5.00U	<0.500U	48.3D	34D	<500U	2.85D	3120D	362D	5.72D	<7.50U	10400D	<2.50U	1470JD	56.6D	<5.00U	<10.0U	752D
CSC-111C	6/21/2022	14:30	71.0J	<2.50U	<3.00U	<25.0U	<2.00U	4.06D	7700	<5.00U	<0.500U	52.1D	31	<100U	3.05D	2870	389	3.72JD	<7.50U	10900	<2.50U	1360	55.3	<5.00U	<10.0U	732
CSC-111D	6/21/2022	14:45	71.7J	<2.50U	<3.00U	<25.0U	<2.00U	3.59D	7220	<5.00U	<0.500U	47.8D	29	<100U	2.78D	2710	362	3.41JD	<7.50U	10300	<2.50U	1300	52.3	<5.00U	<10.0U	686
CSC-114	6/21/2022	14:40	293	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	8490	<5.00U	<0.500U	9.09D	28	194J	0.999JD	1620	<7.50U	15.7D	<7.50U	23500	<2.50U	4010	55.6	<5.00U	<10.0U	92.1
CSC-115	6/21/2022	14:50	134	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	11400	<5.00U	<0.500U	12.0D	38	<100U	0.705JD	2220	<7.50U	3.25JD	<7.50U	21600	<2.50U	3340	89.6	<5.00U	<10.0U	147
CSC-116	6/21/2022	15:55	57.1J	<0.500U	<0.600U	11.0	<2.00U	0.162J	5160	<1.00U	<0.100U	3.63	22	<100U	1.05	2160	<7.50U	1.63	<1.50U	9470	<0.500U	1050	33.5	<1.00U	<2.00U	17.8J
CSC-117	6/21/2022	15:25	503	<12.5U	<15.0U	<125U	<2.00U	140D	71200	<25.0U	24.1D	1940D	284	<100U	80.5D	25700	21500	73.1D	<37.5U	23000	<12.5U	3890	659	<25.0U	<50.0U	27200
CSC-117-Dup	6/21/2022	15:25	494	<12.5U	<15.0U	<125U	<2.00U	145D	71100	<25.0U	25.1D	2010D	283	<100U	82.2D	25600	21400	74.2D	<37.5U	22500	<12.5U	3850	655	<25.0U	<50.0U	27100
CSC-117A	6/21/2022	16:00	891	<12.5U	<15.0U	<125U	<2.00U	173D	69800	<25.0U	54.1D	2580D	288	1030	366D	27600	32300	84.5D	<37.5U	21700	<12.5U	3530	673	<25.0U	<50.0U	33700
CSC-117A-Dup	6/21/2022	16:00	885	<12.5U	<15.0U	<125U	<2.00U	173D	69900	<25.0U	55.0D	2610D	289	958	363D	27700	32000	84.9D	<37.5U	21900	<12.5U	3580	676	<25.0U	<50.0U	33600
CSC-119	6/21/2022	17:00	66.1J	<0.500U	<0.600U	13.6	<2.00U	0.514	9610	<1.00U	<0.100U	4.36	33	<100U	1.63	2130	<7.50U	1.88	<1.50U	15000	<0.500U	2250	71.6	<1.00U	<2.00U	50.2
CSC-119B	6/21/2022	17:00	99.6J	<0.500U	<0.600U	10.3	<2.00U	0.121J	5990	<1.00U	<0.100U	1.11	21	<100U	0.551	1420	<7.50U	1.54	<1.50U	14500	<0.500U	2000	40.3	<1.00U	<2.00U	18.0J
CSC-120A	6/21/2022	16:35	68.9J	<0.500U	<0.600U	10.9	<2.00U	0.149J	5690	<1.00U	<0.100U	2.46	24	<100U	0.819	2310	<7.50U	1.34	<1.50U	9700	<0.500U	1160	37.1	<1.00U	<2.00U	20.6J
ST010A	6/21/2022	18:00	87.6J	<0.500U	<0.600U	87.9	<2.00U	<0.100U	13400	<1.00U	<0.100U	0.513J	47	<100U	<0.100U	3420	<7.50U	2.16	<1.50U	8080	<0.500U	1210	133	<1.00U	<2.00U	<15.0U
ST015	6/21/2022	17:31	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	15.3D	22500	<5.00U	<0.500U	<2.50U	102	<100U	0.573JD	11000	808	19.7D	<7.50U	13400	<2.50U	1330	77.0	<5.00U	<10.0U	7990
ST016	6/21/2022	17:52	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	0.461	27800	<1.00U	0.176J	1.05	139	<100U	<0.100U	17000	250	7.56	<1.50U	10400	<0.500U	1850	173	<1.00U	<2.00U	504

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
07-157-001	6/21/2022	15:53	54.8J	<2.50U	<3.00U	<25.0U	<2.00U	24.7D	22400	<5.00U	8.07D	56.2D	91	440	52.6D	8590	7870	25.7D	<7.50U	11600	<2.50U	1110	116	<5.00U	<10.0U	5380
07-157-001-Dup	6/21/2022	15:53	58.5J	<2.50U	<3.00U	<25.0U	<2.00U	24.8D	22600	<5.00U	7.97D	56.0D	92	455	52.2D	8740	7840	25.0D	<7.50U	11600	<2.50U	1120	118	<5.00U	<10.0U	5510
		RPD	N/A	N/A	N/A	N/A	N/A	N/A	0.89%	N/A	N/A	N/A	1.09%	3.35%	N/A	1.73%	0.38%	N/A	N/A	0.00%	N/A	0.90%	1.71%	N/A	N/A	2.39%

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
CSC-117	6/21/2022	15:25	503	<12.5U	<15.0U	<125U	<2.00U	140D	71200	<25.0U	24.1D	1940D	284	<100U	80.5D	25700	21500	73.1D	<37.5U	23000	<12.5U	3890	659	<25.0U	<50.0U	27200
CSC-117-Dup	6/21/2022	15:25	494	<12.5U	<15.0U	<125U	<2.00U	145D	71100	<25.0U	25.1D	2010D	283	<100U	82.2D	25600	21400	74.2D	<37.5U	22500	<12.5U	3850	655	<25.0U	<50.0U	27100
		RPD	1.81%	N/A	N/A	N/A	N/A	N/A	0.14%	N/A	N/A	N/A	0.35%	N/A	N/A	0.39%	0.47%	N/A	N/A	2.20%	N/A	1.03%	0.61%	N/A	N/A	0.37%

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
CSC-117A	6/21/2022	16:00	891	<12.5U	<15.0U	<125U	<2.00U	173D	69800	<25.0U	54.1D	2580D	288	1030	366D	27600	32300	84.5D	<37.5U	21700	<12.5U	3530	673	<25.0U	<50.0U	33700
CSC-117A-Dup	6/21/2022	16:00	885	<12.5U	<15.0U	<125U	<2.00U	173D	69900	<25.0U	55.0D	2610D	289	958	363D	27700	32000	84.9D	<37.5U	21900	<12.5U	3580	676	<25.0U	<50.0U	33600
		RPD	0.68%	N/A	N/A	N/A	N/A	N/A	0.14%	N/A	N/A	N/A	0.35%	7.24%	N/A	0.36%	0.93%	N/A	N/A	0.92%	N/A	1.41%	0.44%	N/A	N/A	0.30%

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 1.2 Carpenter Snow Creek Surface Water Wet Chemistry Analytical Results and RPD Calculations for Duplicates – June 2022

Location	Date	TIME	Bromide	Chloride	Fluoride	Nitrate/Nitrite as N	Sulfate as SO4	Total Alkalinity
			µg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO3 / L
07-079-AD1	6/23/2022	08:00	<1.2U	<5.0U	<0.5U	<2.5UJ	373D	70.1
07-084-AD1	6/23/2022	09:07	<0.5U	<2.0U	<0.2U	<1.0UJ	116D	119
07-156-AD3	6/21/2022	14:58	<0.5U	<2.0U	0.7D	<1.0UJ	382D	5.83J
07-156-SEEP2	6/21/2022	15:11	<0.2U	<1.0U	<0.1U	<0.5UJ	4.7J	15.4
07-157-001	6/21/2022	15:53	<0.2U	<1.0U	0.2	<0.5UJ	119	<5.00U
07-157-001-Dup	6/21/2022	15:53	<0.2U	<1.0U	0.2	<0.5UJ	119	<5.00U
07-157-003	6/21/2022	15:33	<0.2U	<1.0U	0.2	<0.5UJ	118	<5.00U
07-157-006	6/21/2022	13:48	<0.2U	<1.0U	0.1J	<0.5UJ	33.9	12.4
07-157-AD1	6/21/2022	16:10	<0.2U	<1.0U	0.2	<0.5UJ	119	5.12J
07-167-AD1	6/21/2022	14:38	<0.2U	<1.0U	<0.1U	<0.5UJ	14.2	21.2
Blank	6/21/2022	11:17	<0.2U	<1.0U	<0.1U	<0.5UJ	<2.5U	<5.00U
Blank	6/21/2022	12:40	<0.2U	<1.0U	<0.1U	<0.5UJ	<2.5U	<5.00U
CSC-101	6/21/2022	11:20	<0.2U	1.0J	<0.1U	<0.5UJ	6.3	41.8
CSC-102	6/21/2022	11:26	<0.2U	<1.0U	<0.1U	<0.5UJ	17.8	25.6
CSC-103	6/21/2022	11:30	<0.2U	<1.0U	<0.1U	<0.5UJ	22.0	19.9
CSC-104	6/21/2022	11:50	<0.2U	<1.0U	0.1J	<0.5UJ	19.5	24.1
CSC-104A	6/21/2022	12:20	<0.2U	<1.0U	0.1J	<0.5UJ	19.5	22.0
CSC-105	6/21/2022	12:45	<0.2U	<1.0U	<0.1U	<0.5UJ	25.1	14.7
CSC-106	6/22/2022	09:30	<0.2U	<1.0U	<0.1U	<0.5UJ	25.0	15.1
CSC-107	6/21/2022	13:12	<0.2U	<1.0U	0.2	<0.5UJ	101	<5.00U
CSC-108	6/21/2022	13:25	<0.2U	<1.0U	0.1J	<0.5UJ	52.1	10.9
CSC-111A	6/21/2022	13:10	<0.2U	<1.0U	<0.1U	<0.5UJ	18.3	24.0
CSC-111B	6/21/2022	13:55	<0.2U	<1.0U	0.1J	<0.5UJ	18.3	22.0
CSC-111C	6/21/2022	14:30	<0.2U	<1.0U	<0.1U	<0.5UJ	17.1	22.1
CSC-111D	6/21/2022	14:45	<0.2U	<1.0U	0.1J	<0.5UJ	17.0	22.0
CSC-114	6/21/2022	14:40	<0.2U	<1.0U	0.3	<0.5UJ	27.0	11.9
CSC-115	6/21/2022	14:50	<0.2U	<1.0U	0.3	<0.5UJ	28.8	19.9
CSC-116	6/21/2022	15:55	<0.2U	<1.0U	<0.1U	<0.5UJ	3.6J	26.4
CSC-117	6/21/2022	15:25	<0.5U	<2.0U	0.3JD	<1.0UJ	414D	<5.00U
CSC-117-Dup	6/21/2022	15:25	<0.5U	<2.0U	0.3JD	<1.0UJ	408D	<5.00U
CSC-117A	6/21/2022	16:00	<0.5U	<2.0U	0.3JD	<1.0UJ	442D	<5.00U
CSC-117A-Dup	6/21/2022	16:00	<0.5U	<2.0U	0.3JD	<1.0UJ	441D	<5.00U
CSC-119	6/21/2022	17:00	<0.2U	<1.0U	<0.1U	<0.5UJ	16.2	25.8
CSC-119B	6/21/2022	17:00	<0.2U	<1.0U	<0.1U	<0.5UJ	5.4	23.7
CSC-120A	6/21/2022	16:35	<0.2U	<1.0U	<0.1U	<0.5UJ	4.0J	23.7
ST010A	6/21/2022	18:00	<0.2U	2.1	<0.1U	<0.5UJ	2.6J	54.0
ST015	6/21/2022	17:31	<0.2U	<1.0U	0.2	<0.5UJ	123	9.00J
ST016	6/21/2022	17:52	<0.2U	<1.0U	0.2	<0.5UJ	127	36.8

Location	Date	TIME	Bromide	Chloride	Fluoride	Nitrate/Nitrite as N	Sulfate as SO4	Total Alkalinity
			µg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO3 / L
07-157-001	6/21/2022	15:53	<0.2U	<1.0U	0.2	<0.5UJ	119	<5.00U
07-157-001-Dup	6/21/2022	15:53	<0.2U	<1.0U	0.2	<0.5UJ	119	<5.00U
		RPD	N/A	N/A	0	N/A	0	N/A

Location	Date	TIME	Bromide	Chloride	Fluoride	Nitrate/Nitrite as N	Sulfate as SO4	Total Alkalinity
			µg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO3 / L
CSC-117	6/21/2022	15:25	<0.5U	<2.0U	0.3JD	<1.0UJ	414D	<5.00U
CSC-117-Dup	6/21/2022	15:25	<0.5U	<2.0U	0.3JD	<1.0UJ	408D	<5.00U
		RPD	N/A	N/A	N/A	N/A	N/A	N/A

Location	Date	TIME	Bromide	Chloride	Fluoride	Nitrate/Nitrite as N	Sulfate as SO4	Total Alkalinity
			µg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO3 / L
CSC-117A	6/21/2022	16:00	<0.5U	<2.0U	0.3JD	<1.0UJ	442D	<5.00U
CSC-117A-Dup	6/21/2022	16:00	<0.5U	<2.0U	0.3JD	<1.0UJ	441D	<5.00U
		RPD	N/A	N/A	N/A	N/A	N/A	N/A

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 2. Carpenter Snow Creek Groundwater Total Recoverable Metals Analytical Results and RPD Calculations for Duplicates – June 2022

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Blank	6/22/2022	12:30	<50.0U	<2.50U	8.56JD	<25.0U	<2.00U	<0.500U	<175U	<5.00U	<0.500U	<2.50U	<100U	<0.500U	<250U	<7.50U	<2.50U	<7.50U	<250U	<2.50U	<250U	<2.50U	<5.00U	<10.0U	<15.0U
Blank	6/22/2022	17:40	<50.0U	<2.50U	6.24JD	<25.0U	<2.00U	<0.500U	<175U	<5.00U	<0.500U	<2.50U	<100U	<0.500U	<250U	<7.50U	<2.50U	<7.50U	<250U	<2.50U	<250U	<2.50U	<5.00U	<10.0U	<15.0U
CSC-15	6/22/2022	14:54	<50.0U	<2.50U	7.70JD	56.2D	<2.00U	<0.500U	20300	<5.00U	1.97D	<2.50U	6530	2.24D	10100	195	2.51JD	<7.50U	20300	<2.50U	3830	88.5	<5.00U	<10.0U	56.0
CSC-25	6/22/2022	13:22	<50.0U	<2.50U	9.38JD	58.1D	<2.00U	<0.500U	82800	<5.00U	7.73D	<2.50U	10600	0.858JD	12600	1100	7.39D	<7.50U	26800	<2.50U	5760	409	<5.00U	<10.0U	303
CSC-5	6/22/2022	13:30	881	<2.50U	23.9D	280D	<2.00U	15.2D	57400	<5.00U	191D	48.2D	139000	41.3D	24400	10300	22.1D	<7.50U	29600	<2.50U	2850	213	<5.00U	<10.0U	620
MW-1	6/22/2022	08:48	174	<2.50U	5.30JD	<25.0U	<2.00U	<0.500U	14200	<5.00U	<0.500U	3.57JD	137J	1.02D	3460	<7.50U	<2.50U	<7.50U	13300	<2.50U	2450	71.6	<5.00U	<10.0U	119
MW-10	6/22/2022	15:20	<50.0U	<2.50U	7.95JD	28.5JD	<2.00U	70.3D	57200	<5.00U	<0.500U	206D	<100U	1.80D	20400	336	40.6D	<7.50U	23000	<2.50U	3280	321	<5.00U	<10.0U	16400
MW-11	6/22/2022	15:38	360	<2.50U	8.76JD	<25.0U	<2.00U	<0.500U	10100	<5.00U	<0.500U	2.93JD	287	3.47D	2250	<7.50U	<2.50U	<7.50U	13900	<2.50U	1830	73.5	<5.00U	<10.0U	<15.0U
MW-13	6/22/2022	10:59	520	<2.50U	7.42JD	<25.0U	<2.00U	<0.500U	5420	5.58JD	<0.500U	<2.50U	389	2.47D	2810	11.1J	<2.50U	<7.50U	13200	<2.50U	1230	25.3	<5.00U	<10.0U	50.7
MW-14	6/22/2022	12:05	256	<2.50U	7.67JD	<25.0U	<2.00U	17.2D	27000	5.22JD	<0.500U	6.63D	<100U	<0.500U	10300	115	23.7D	<7.50U	17900	<2.50U	1490	126	<5.00U	<10.0U	5820
MW-2	6/22/2022	09:38	67.8J	<2.50U	7.90JD	<25.0U	<2.00U	<0.500U	10500	<5.00U	<0.500U	<2.50U	<100U	0.732JD	4000	<7.50U	<2.50U	<7.50U	11400	<2.50U	1600	50.3	<5.00U	<10.0U	276
MW-3	6/22/2022	10:14	85.7J	<2.50U	7.71JD	<25.0U	<2.00U	<0.500U	45700	<5.00U	9.45D	<2.50U	151J	1.70D	3370	369	3.68JD	<7.50U	29600	<2.50U	6960	327	<5.00U	<10.0U	22.7J
MW-3-Dup	6/22/2022	10:14	101	<2.50U	8.09JD	<25.0U	<2.00U	<0.500U	44600	<5.00U	10.0D	<2.50U	173J	1.12D	3500	361	3.68JD	<7.50U	28400	<2.50U	7440	331	<5.00U	<10.0U	25.2J
MW-4A	6/22/2022	11:03	2790	<2.50U	8.80JD	35.9JD	<2.00U	<0.500U	8330	6.93JD	0.731JD	18.5D	2210	8.57D	2270	26.1	3.03JD	<7.50U	33000	<2.50U	4710	59.1	<5.00U	<10.0U	37.4
MW-5	6/22/2022	13:07	2830	<2.50U	11.2D	30.5JD	<2.00U	<0.500U	9010	7.32JD	0.809JD	20.2D	2940	34.6D	2600	23.5	3.75JD	<7.50U	32800	<2.50U	3910	46.8	<5.00U	<10.0U	127
MW-6	6/22/2022	12:31	<50.0U	<2.50U	7.44JD	<25.0U	<2.00U	30.9D	130000	<5.00U	7.99D	90.0D	<100U	56.5D	47100	12700	38.7D	<7.50U	12700	<2.50U	13700	215	<5.00U	<10.0U	2950
MW-6A	6/22/2022	11:31	1310	<2.50U	10.1D	<25.0U	<2.00U	<0.500U	3690	<5.00U	0.832JD	3.96JD	1390	5.21D	1420	8.19J	<2.50U	<7.50U	31300	<2.50U	3220	27.2	<5.00U	<10.0U	17.5J
MW-8	6/22/2022	14:21	946	<2.50U	11.3D	81.8D	<2.00U	1.61D	16900	<5.00U	10.1D	34.8D	4190	10.7D	3250	2920	2.96JD	<7.50U	34600	<2.50U	5640	128	<5.00U	<10.0U	146
MW-9	6/22/2022	14:40	776	<2.50U	9.22JD	<25.0U	<2.00U	62.9D	62700	<5.00U	0.916JD	392D	302	6.15D	21900	2170	38.4D	<7.50U	33400	<2.50U	4920	563	<5.00U	<10.0U	14800
MW-9-Dup	6/22/2022	14:40	767	<2.50U	10.7D	<25.0U	<2.00U	64.0D	63100	<5.00U	0.934JD	413D	300	6.12D	22000	2170	39.7D	<7.50U	33400	<2.50U	5000	570	<5.00U	<10.0U	14800

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MW-3	6/22/2022	10:14	85.7J	<2.50U	7.71JD	<25.0U	<2.00U	<0.500U	45700	<5.00U	9.45D	<2.50U	151J	1.70D	3370	369	3.68JD	<7.50U	29600	<2.50U	6960	327	<5.00U	<10.0U	22.7J
MW-3-Dup	6/22/2022	10:14	101	<2.50U	8.09JD	<25.0U	<2.00U	<0.500U	44600	<5.00U	10.0D	<2.50U	173J	1.12D	3500	361	3.68JD	<7.50U	28400	<2.50U	7440	331	<5.00U	<10.0U	25.2J
		RPD	N/A	N/A	N/A	N/A	N/A	N/A	2.44%	N/A	N/A	N/A	N/A	N/A	3.78%	2.19%	N/A	N/A	4.14%	N/A	6.67%	1.22%	N/A	N/A	N/A

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MW-9	6/22/2022	14:40	776	<2.50U	9.22JD	<25.0U	<2.00U	62.9D	62700	<5.00U	0.916JD	392D	302	6.15D	21900	2170	38.4D	<7.50U	33400	<2.50U	4920	563	<5.00U	<10.0U	14800
MW-9-Dup	6/22/2022	14:40	767	<2.50U	10.7D	<25.0U	<2.00U	64.0D	63100	<5.00U	0.934JD	413D	300	6.12D	22000	2170	39.7D	<7.50U	33400	<2.50U	5000	570	<5.00U	<10.0U	14800
		RPD	1.17%	N/A	N/A	N/A	N/A	N/A	0.64%	N/A	N/A	N/A	0.66%	N/A	0.46%	0.00%	N/A	N/A	0.00%	N/A	1.61%	1.24%	N/A	N/A	0.00%

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 2.1 Carpenter Snow Creek Groundwater Dissolved Metal Analytical Results and RPD Calculations for Duplicates – June 2022

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Blank	6/22/2022	12:30	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	<0.100U	<175U	<1.00U	<0.100U	<0.500U	<2U	<100U	<0.100U	<250U	<7.50U	<0.500U	<1.50U	<250U	<0.500U	<250U	<2.50U	<1.00U	<2.00U	<15.0U
Blank	6/22/2022	17:40	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	<0.100U	<175U	<1.00U	<0.100U	<0.500U	<2U	<100U	<0.100U	<250U	<7.50U	<0.500U	<1.50U	<250U	<0.500U	<250U	<2.50U	<1.00U	<2.00U	<15.0U
CSC-15	6/22/2022	14:54	<50.0U	<2.50U	<3.00U	57.3D	<2.00U	<0.500U	17500	<5.00U	1.98D	<2.50U	80	5010	0.511JD	8750	185	3.00JD	<7.50U	19500	<2.50U	3310	75.8	<5.00U	<10.0U	53.9
CSC-25	6/22/2022	13:22	<50.0U	<5.00U	<6.00U	54.6JD	<2.00U	<1.00U	73000	<10.0U	8.02D	<5.00U	228	4730	<1.00U	11100	1070	8.00JD	<15.0U	24400	<5.00U	5130	357	<10.0U	<20.0U	265
CSC-5	6/22/2022	13:30	<50.0U	<2.50U	<3.00U	57.2D	<2.00U	2.82D	51200	<5.00U	8.80D	3.12JD	219	<100U	1.70D	22200	1040	9.73D	<7.50U	13700	<2.50U	2620	180	<5.00U	<10.0U	161
MW-1	6/22/2022	08:48	78.4J	<0.500U	<0.600U	22.3	<2.00U	0.540	12800	<1.00U	<0.100U	2.70	45	<100U	0.458	3120	<7.50U	1.51	<1.50U	13800	<0.500U	2270	64.7	<1.00U	<2.00U	113
MW-10	6/22/2022	15:20	<50.0U	<5.00U	<6.00U	<50.0U	<2.00U	71.3D	51700	<10.0U	<1.00U	214D	207	<100U	1.40JD	18900	327	49.7D	<15.0U	23200	<5.00U	3040	294	<10.0U	<20.0U	15300
MW-11	6/22/2022	15:38	215	<0.500U	<0.600U	14.5	<2.00U	<0.100U	8700	<1.00U	<0.100U	2.08	30	115J	1.56	1930	<7.50U	0.923J	<1.50U	13000	<0.500U	1610	63.3	<1.00U	<2.00U	<15.0U
MW-13	6/22/2022	10:59	325	<0.500U	<0.600U	7.69J	<2.00U	<0.100U	4880	<1.00U	<0.100U	1.42	22	199J	0.771	2480	<7.50U	1.86	<1.50U	12500	<0.500U	1120	22.9	<1.00U	<2.00U	49.7
MW-14	6/22/2022	12:05	223	<5.00U	<6.00U	<50.0U	<2.00U	17.2D	24300	<10.0U	<1.00U	7.35JD	99	<100U	<1.00U	9290	112	27.0D	<15.0U	18000	<5.00U	1320	114	<10.0U	<20.0U	5230
MW-2	6/22/2022	09:38	<50.0U	<0.500U	<0.600U	14.1	<2.00U	0.492	9590	<1.00U	<0.100U	1.70	39	<100U	0.215	3580	<7.50U	2.36	<1.50U	11100	<0.500U	1440	45.5	<1.00U	<2.00U	260
MW-3	6/22/2022	10:14	<50.0U	<5.00U	<6.00U	<50.0U	<2.00U	<1.00U	41600	<10.0U	3.82D	<5.00U	117	<100U	13.5D	3080	299	<5.00U	<15.0U	27100	<5.00U	6470	302	<10.0U	<20.0U	22.8J
MW-3-Dup	6/22/2022	10:14	<50.0U	<0.500U	<0.600U	13.3	<2.00U	<0.100U	42200	<1.00U	3.08	0.929J	118	<100U	0.735	3120	289	3.12	<1.50U	26600	<0.500U	6550	305	<1.00U	<2.00U	23.6J
MW-4A	6/22/2022	11:03	2860	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	7590	<5.00U	<0.500U	14.5D	27	1340	4.54D	1950	19.8	2.55JD	<7.50U	34000	<2.50U	4000	52.3	<5.00U	<10.0U	33.1
MW-5	6/22/2022	13:07	1350	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	7720	<5.00U	<0.500U	7.08D	27	780	7.52D	1930	<7.50U	3.02JD	<7.50U	26500	<2.50U	3190	37.6	<5.00U	<10.0U	80.9
MW-6	6/22/2022	12:31	<50.0U	<5.00U	<6.00U	<50.0U	<2.00U	25.5D	111000	<10.0U	1.27JD	20.7D	436	<100U	1.39JD	38400	9680	39.7D	<15.0U	12800	<5.00U	10900	177	<10.0U	<20.0U	2360
MW-6A	6/22/2022	11:31	997	<0.500U	<0.600U	6.55J	<2.00U	0.101J	3320	<1.00UJ	0.465J	1.94J	13	556	1.07	1140	<7.50U	1.41J	<1.50U	28700	<0.500U	2670	23.1	<1.00U	<2.00UJ	15.3J
MW-8	6/22/2022	14:21	<50.0U	<0.500U	1.04J	66.8	<2.00U	0.127J	15200	<1.00UJ	6.95J	1.06J	49	2420	0.177J	2600	2800	1.87J	<1.50U	31000	<0.500U	4720	111	<1.00U	<2.00UJ	49.8
MW-9	6/22/2022	14:40	382	<10.0U	<12.0U	<100U	<2.00U	62.4D	56800	<20.0U	<2.00U	441D	219	<100U	<2.00U	18700	1970	42.8D	<30.0U	31200	<10.0U	4190	495	<20.0U	<40.0U	13900
MW-9-Dup	6/22/2022	14:40	384	<10.0U	<12.0U	<100U	<2.00U	62.8D	57000	<20.0U	<2.00U	433D	220	<100U	<2.00U	18800	2010	42.6D	<30.0U	31600	<10.0U	4230	500	<20.0U	<40.0U	14000

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MW-3	6/22/2022	10:14	<50.0U	<5.00U	<6.00U	<50.0U	<2.00U	<1.00U	41600	<10.0U	3.82D	<5.00U	117	<100U	13.5D	3080	299	<5.00U	<15.0U	27100	<5.00U	6470	302	<10.0U	<20.0U	22.8J
MW-3-Dup	6/22/2022	10:14	<50.0U	<0.500U	<0.600U	13.3	<2.00U	<0.100U	42200	<1.00U	3.08	0.929J	118	<100U	0.735	3120	289	3.12	<1.50U	26600	<0.500U	6550	305	<1.00U	<2.00U	23.6J
		RPD	N/A	N/A	N/A	N/A	N/A	N/A	1.43%	N/A	N/A	N/A	0.85%	N/A	N/A	1.29%	3.40%	N/A	N/A	1.86%	N/A	1.23%	0.99%	N/A	N/A	N/A

Location	Date	TIME	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MW-9	6/22/2022	14:40	382	<10.0U	<12.0U	<100U	<2.00U	62.4D	56800	<20.0U	<2.00U	441D	219	<100U	<2.00U	18700	1970	42.8D	<30.0U	31200	<10.0U	4190	495	<20.0U	<40.0U	13900
MW-9-Dup	6/22/2022	14:40	384	<10.0U	<12.0U	<100U	<2.00U	62.8D	57000	<20.0U	<2.00U	433D	220	<100U	<2.00U	18800	2010	42.6D	<30.0U	31600	<10.0U	4230	500	<20.0U	<40.0U	14000
		RPD	0.52%	N/A	N/A	N/A	N/A	N/A	0.35%	N/A	N/A	N/A	0.46%	N/A	N/A	0.53%	2.01%	N/A	N/A	1.27%	N/A	0.95%	1.01%	N/A	N/A	0.72%

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 3. Carpenter Snow Creek Surface Water Dissolved Metals Analytical Results and RPD Calculations for Duplicates – September 2022

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
07-079-AD1	Dissolved Metals	9/20/2022	11:36	Surface Water	<50.0U	<5.00U	<6.00U	<50.0U	<2.00U	15.2D	87800	<10.0U	<1.00U	<5.00U	451	<100U	<1.00U	56200	3070	97.8D	<15.0U	10300	<5.00U	3040	536	<10.0U	<20.0U	16700
07-084	Dissolved Metals	9/20/2022	12:00	Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	2.87D	56300	<5.00U	16.1D	<2.50U	288	4650	<0.500U	35900	15600	60.0D	<7.50U	13100	<2.50U	3130	392	7.61JD	<10.0U	3920
07-084-AD1	Dissolved Metals	9/20/2022	12:40	Surface Water	<50.0U	<0.500U	<0.600U	8.41J	<2.00U	3.42	44100	<1.00U	0.914	0.779J	204	<100U	<0.100U	22700	1110	17.9	<1.50U	10800	<0.500U	2830	346	<1.00U	<2.00U	2320
07-156-SEEP2	Dissolved Metals	9/20/2022	15:00	Surface Water	334JD	<10.0U	<12.0U	<100U	<10.0U	7.43D	130000D	<20.0U	282D	<10.0U	612D	107000D	2.16JD	69800D	72100D	514D	<30.0U	17700D	<10.0U	3040JD	411D	<20.0U	<40.0U	29000D
07-157-001	Dissolved Metals	9/20/2022	16:00	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	34.5D	36200	<5.00U	13.0D	58.4D	146	<100U	18.7D	13600	11500	36.6D	<7.50U	12300	<2.50U	1460	204	<5.00U	<10.0U	7030
07-157-003	Dissolved Metals	9/20/2022	16:55	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	35.1D	36900	<5.00U	12.8D	49.4D	149	<100U	9.02D	13700	11400	35.9D	<7.50U	12200	<2.50U	1470	207	<5.00U	<10.0U	7100
07-157-AD1	Dissolved Metals	9/20/2022	15:30	Surface Water	405	<2.50U	<3.00U	<25.0U	<2.00U	36.0D	36300	<5.00U	13.6D	74.6D	147	207J	66.5D	13600	11600	35.5D	<7.50U	12600	<2.50U	1460	205	<5.00U	<10.0U	7060
07-167-AD1	Dissolved Metals	9/20/2022	14:25	Surface Water	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	1.59	12900	<1.00U	0.379	0.767J	51	<100U	0.229	4600	341	2.1	<1.50U	6320	<0.500U	894J	38.7	<1.00U	<2.00U	594
07-167-AD1	Dissolved Metals	9/20/2022	14:25	Surface Water	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	1.59	12900	<1.00U	0.384	0.733J	51	<100U	0.187J	4580	342	2.12	<1.50U	6310	<0.500U	872J	38.5	<1.00U	<2.00U	599
Blank	Dissolved Metals	9/20/2022	15:54	Water	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	<0.100U	<175U	<1.00U	<0.100U	<0.500U	<2U	<100U	<0.100U	<250U	<7.50U	<0.500U	<1.50U	<250U	<0.500U	<250U	<2.50U	<1.00U	<2.00U	<15.0U
CSC-101	Dissolved Metals	9/20/2022	12:03	Surface Water	<50.0U	<0.500U	0.808J	116	<2.00U	0.505	20000	<1.00U	<0.100U	1.45	76	<100U	0.339	6430	14.8J	1.7	<1.50U	7480	<0.500U	1870	183	<1.00U	<2.00U	100
CSC-102	Dissolved Metals	9/20/2022	12:52	Surface Water	<50.0U	<0.500U	0.846J	126	<2.00U	<0.100U	19500	<1.00U	<0.100U	<0.500U	75	<100U	<0.100U	6350	<7.50U	1.42	<1.50U	6830	<0.500U	1740	186	<1.00U	<2.00U	<15.0U
CSC-103	Dissolved Metals	9/20/2022	13:30	Surface Water	<50.0U	<0.500U	<0.600U	31.4	<2.00U	4.67	21100	<1.00U	0.146J	7.04	78	<100U	0.933	6110	157	4.12	<1.50U	14000	<0.500U	2710	128	<1.00U	<2.00U	938
CSC-104	Dissolved Metals	9/20/2022	13:30	Surface Water	<50.0U	<0.500U	<0.600U	28.9	<2.00U	6.87	21200	<1.00U	0.353	15.8	78	<100U	0.942	6180	450	5.38	<1.50U	14700	<0.500U	2740	137	<1.00U	<2.00U	1340
CSC-104A	Dissolved Metals	9/20/2022	14:20	Surface Water	<50.0U	<0.500U	<0.600U	35	<2.00U	9.4	24700	<1.00U	0.506	22	89	<100U	1.38	6740	696	5.8	<1.50U	15800	<0.500U	3200	173	<1.00U	<2.00U	1670
CSC-105	Dissolved Metals	9/20/2022	13:50	Surface Water	<50.0U	<0.500U	<0.600U	16.4	<2.00U	1.51	15700	<1.00U	<0.100U	1.08	63	<100U	<0.100U	5650	<7.50U	4.31	<1.50U	12400	<0.500U	1950	69.9	<1.00U	<2.00U	645
CSC-105	Dissolved Metals	9/20/2022	13:50	Surface Water	<50.0U	<0.500U	<0.600U	15.6	<2.00U	1.38	14300	<1.00U	<0.100U	3.83	57	<100U	1.59	5130	<7.50U	4.58	<1.50U	11300	<0.500U	1880	64.1	<1.00U	<2.00U	588
CSC-106	Dissolved Metals	9/21/2022	10:45	Surface Water	<50.0U	<0.500U	<0.600U	15.8	<2.00U	1.72	15400	<1.00U	0.132J	0.977J	61	<100U	<0.100U	5530	9.19J	5.41	<1.50U	12600	<0.500U	1850	68.3	<1.00U	<2.00U	693
CSC-107	Dissolved Metals	9/21/2022	13:20	Surface Water	168	<2.50U	<3.00U	<25.0U	<2.00U	5.14D	41400	<5.00U	<0.500U	3.34JD	178	<100U	1.23D	18100	290	47.0D	<7.50U	15400	<2.50U	2060	151	<5.00U	<10.0U	3920
CSC-108	Dissolved Metals	9/21/2022	13:55	Surface Water	<50.0U	<0.500U	<0.600U	23.6	<2.00U	7.86	23700	<1.00U	<0.100U	1.77	93	<100U	<0.100U	8210	<7.50U	11.9	<1.50U	14000	<0.500U	1580	102	<1.00U	<2.00U	2500
CSC-111A	Dissolved Metals	9/20/2022	14:07	Surface Water	<50.0U	<0.500U	<0.600U	34	<2.00U	11.2	23000	<1.00U	0.694	33.5	85	<100U	2	6790	996	6.85	<1.50U	15500	<0.500U	2990	169	<1.00U	<2.00U	1940
CSC-114	Dissolved Metals	9/20/2022	15:00	Surface Water	<50.0U	<0.500U	<0.600U	8.93J	<2.00U	0.44	21800	<1.00U	<0.100U	3.25	70	<100U	0.174J	3800	10.7J	2.54	<1.50U	30100	<0.500U	7360	143	<1.00U	<2.00U	210
CSC-115	Dissolved Metals	9/20/2022	15:15	Surface Water	<50.0U	<0.500U	<0.600U	23	<2.00U	0.367	21500	<1.00U	<0.100U	3.57	71	<100U	<0.100U	4290	11.2J	2.35	<1.50U	26700	<0.500U	5420	170	<1.00U	<2.00U	157
CSC-116	Dissolved Metals	9/20/2022	15:50	Surface Water	<50.0U	<0.500U	<0.600U	17	<2.00U	0.357	10800	<1.00U	<0.100U	3.98	44	<100U	1.17	4060	<7.50U	0.870J	<1.50U	11300	<0.500U	1850	73.4	<1.00U	<2.00U	35.2
CSC-117	Dissolved Metals	9/20/2022	15:35	Surface Water	1650D	<10.0U	<12.0U	<100U	<10.0U	266D	176000D	<20.0U	37.3D	2970D	715D	<500U	254D	66700D	49800D	142D	<30.0U	28600D	<10.0U	7320D	1660D	<20.0U	<40.0U	63400D
CSC-117	Dissolved Metals	9/20/2022	15:35	Surface Water	1600D	<10.0U	<12.0U	<100U	<10.0U	259D	174000D	<20.0U	37.0D	2900D	707D	<500U	260D	66000D	49200D	139D	<30.0U	27800D	<10.0U	7210D	1640D	<20.0U	<40.0U	62600D
CSC-117A	Dissolved Metals	9/20/2022	15:36	Surface Water	2110D	<10.0U	<12.0U	<100U	<10.0U	399D	208000D	<20.0U	151D	3830D	887D	4330D	872D	88900D	102000D	211D	<30.0U	24500D	<10.0U	6390D	2090D	<20.0U	<40.0U	100000D
CSC-119	Dissolved Metals	9/20/2022	16:10	Surface Water	<50.0U	<0.500U	<0.600U	18.7	<2.00U	0.792	18200	<1.00U	<0.100U	4.41	61	<100U	1.32	3750	<7.50U	1.32	<1.50U	18100	<0.500U	3660	141	<1.00U	<2.00U	74.5
CSC-119B	Dissolved Metals	9/20/2022	17:05	Surface Water	<50.0U	<0.500U	<0.600U	15.9	<2.00U	0.29	10900	<1.00U	<0.100U	1.07	38	<100U	<0.100U	2700	<7.50U	1.2	<1.50U	16600	<0.500U	2990	75.9	<1.00U	<2.00U	51.7
CSC-120A	Dissolved Metals	9/20/2022	16:25	Surface Water	<50.0U	<0.500U	<0.600U	13.4	<2.00U	<0.100U	9740	<1.00U	<0.100U	<0.500U	40	<100U	0.116J	3870	<7.50U	0.662J	<1.50U	11200	<0.500U	1640	65	<1.00U	<2.00U	<15.0U
GE-SW-001	Dissolved Metals	9/21/2022	8:20	Surface Water	<50.0U	<0.500U	<0.600U	30.9	<2.00U	<0.100U	1390	<1.00U	<0.100U	<0.500U	7	<100U	1.55	881	<7.50U	<0.500U	<1.50U	5550	<0.500U	414J	8.20J	<1.00U	<2.00U	<15.0U
ST010A	Dissolved Metals	9/20/2022	18:30	Surface Water	<50.0U	<0.500U	1.04J	127	<2.00U	<0.100U	22300	<1.00U	<0.100U	<0.500U	85	<100U	<0.100U	7130	<7.50U	1.6	<1.50U	8610	<0.500U	1900	251	<1.00U	<2.00U	<15.0U
ST010A	Dissolved Metals	9/20/2022	18:30	Surface Water	<50.0U	<0.500U	0.962J	126	<2.00U	<0.100U	22800	<1.00U	<0.100U	0.634J	87	<100U	<0.100U	7340	<7.50U	1.57	<1.50U	8650	<0.500U	1920	258	<1.00U	<2.00U	<15.0U
ST015	Dissolved Metals	9/20/2022	17:35	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	12.3D	38700	<5.00U	<0.500U	<2.50U	183	<100U	<0.500U	20900	<7.50U	15.8D	<7.50U	15100	<2.50U	2260	134	<5.00U	<10.0U	8750
ST016	Dissolved Metals	9/20/2022	17:55	Surface Water	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	0.178J	50100	<1.00U	0.175J	0.877J	258	<100U	<0.100U	32200	428	8.59	<1.50U	11800	<0.500U	3130	321	<1.00U	<2.00U	519

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
07-167-AD1	Dissolved Metals	9/20/2022	14:25	Surface Water	<50.0	<0.500	<0.600	<5.00	<2.00	1.59	12900	<1.00	0.379	0.767	51	<100	0.229	4600	341	2.1	<1.50	6320	<0.500	894	38.7	<1.00	<2.00	594
07-167-AD1	Dissolved Metals	9/20/2022	14:25	Surface Water	<50.0	<0.500	<0.600	<5.00	<2.00	1.59	12900	<1.00	0.384	0.733	51	<100	0.187	4580	342	2.12	<1.50	6310	<0.500	872	38.5	<1.00	<2.00	599
					N/A	N/A	N/A	N/A	N/A	0.00%	0.00%	N/A	1.31%	4.53%	0.00%	N/A	20.19%	0.44%	0.29%	0.95%	N/A	0.16%	N/A	2.49%	0.52%	N/A	N/A	0.84%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
CSC-105	Dissolved Metals	9/20/2022	13:50	Surface Water	<50.0	<0.500	<0.600	16.4	<2.00	1.51	15700	<1.00	<0.100	1.08	63	<100	<0.100	5650	<7.50	4.31	<1.50	12400	<0.500	1950	69.9	<1.00	<2.00	645
CSC-105	Dissolved Metals	9/20/2022	13:50	Surface Water	<50.0	<0.500	<0.600	15.6	<2.00	1.38	14300	<1.00	<0.100	3.83	57	<100	1.59	5130	<7.50	4.58	<1.50	11300	<0.500	1880	64.1	<1.00	<2.00	588
					N/A	N/A	N/A	5.00%	N/A	9.00%	9.33%	N/A	N/A	112.02%	10.00%	N/A	N/A	9.65%	N/A	6.07%	N/A	9.28%	N/A	3.66%	8.66%	N/A	N/A	9.25%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
CSC-117	Dissolved Metals	9/20/2022	15:35	Surface Water	1650	<10.0	<12.0	<100	<10.0	266	176000	<20.0	37.3	2970	715	<500	254	66700	49800	142	<30.0	28600	<10.0	7320	1660	<20.0	<40.0	63400
CSC-117	Dissolved Metals	9/20/2022	15:35	Surface Water	1600	<10.0	<12.0	<100	<10.0	259	174000	<20.0	37	2900	707	<500	260	66000	49200	139	<30.0	27800	<10.0	7210	1640	<20.0	<40.0	62600
					3.08%	N/A	N/A	N/A	N/A	2.67%	1.14%	N/A	0.81%	2.39%	1.13%	N/A	2.33%	1.06%	1.21%	2.14%	N/A	2.84%	N/A	1.51%	1.21%	N/A	N/A	1.27%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
ST010A	Dissolved Metals	9/20/2022	18:30	Surface Water	<50.0	<0.500	1.04	127	<2.00	<0.100	22300	<1.00	<0.100	<0.500	85	<100	<0.100	7130	<7.50	1.6	<1.50	8610	<0.500	1900	251	<1.00	<2.00	<15.0
ST010A	Dissolved Metals	9/20/2022	18:30	Surface Water	<50.0	<0.500	0.962	126	<2.00	<0.100	22800	<1.00	<0.100	0.634	87	<100	<0.100	7340	<7.50	1.57	<1.50	8650	<0.500	1920	258	<1.00	<2.00	<15.0
					N/A	N/A	7.79%	0.79%	N/A	N/A	2.22%	N/A	N/A	N/A	2.33%	N/A	N/A	2.90%	N/A	1.89%	N/A	0.46%	N/A	1.05%	2.75%	N/A	N/A	N/A

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 3.1 Carpenter Snow Creek Surface Water Toatal Recoverable Metals Analytical Results and RPD Calculations for Duplicates – September 2022

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
07-079-AD1	Total Recoverable Metals	44824	11:36	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	15.8D	89600	6.85JBD	0.680JD	3.66JD	<100U	2.31D	60500	3140	101D	<7.50U	10300	<2.50U	2990	544	<5.00U	<10.0U	16300
07-084	Total Recoverable Metals	44824	12:00	Water	<250U	<2.50U	<3.00U	<25.0U	<10.0U	2.75D	53200D	<5.00U	16.6D	<2.50U	5140D	16.7D	31600D	14600D	61.5D	<7.50U	11600D	<2.50U	2860JD	360D	6.59JD	<10.0U	3440D
07-084-AD1	Total Recoverable Metals	44824	12:40	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	3.61D	44200	6.48JBD	1.03D	<2.50U	140J	2.57D	24000	1160	20.3D	<7.50U	10800	<2.50U	2870	349	<5.00U	<10.0U	2460
07-156-SEEP2	Total Recoverable Metals	44824	15:00	Surface Water	352JD	<5.00U	<6.00U	<50.0U	<10.0U	7.69D	133000D	<10.0U	269D	6.35JD	116000D	3.26D	77200D	75700D	492D	<15.0U	18600D	<5.00U	3150JD	437D	<10.0U	<20.0U	31600D
07-157-001	Total Recoverable Metals	44824	16:00	Surface Water	585	<2.50U	<3.00U	<25.0U	<2.00U	33.2D	36600	<5.00U	13.0D	73.8D	1500	115D	15100	11900	35.6D	<7.50U	13300	<2.50U	1510	215	<5.00U	<10.0U	7120
07-157-003	Total Recoverable Metals	44824	16:55	Surface Water	109	<2.50U	<3.00U	<25.0U	<2.00U	34.3D	37400	<5.00U	12.8D	52.0D	186J	25.6D	15400	11900	35.4D	<7.50U	12900	<2.50U	1530	218	<5.00U	<10.0U	7250
07-157-AD1	Total Recoverable Metals	44824	15:30	Surface Water	472	<2.50U	<3.00U	<25.0U	<2.00U	34.8D	36600	<5.00U	14.0D	79.4D	891	92.4D	15100	11800	36.9D	<7.50U	12900	<2.50U	1520	215	<5.00U	<10.0U	7200
07-167-AD1	Total Recoverable Metals	44824	14:25	Surface Water	<50.0U	<2.50U	3.41JD	<25.0U	<2.00U	1.43D	13100	<5.00U	<0.500U	<2.50U	480	4.87D	5100	371	<2.50U	<7.50U	6440	<2.50U	919J	40.9	<5.00U	<10.0U	602
07-167-AD1	Total Recoverable Metals	44824	14:25	Surface Water	<50.0U	<2.50U	3.01JD	<25.0U	<2.00U	1.49D	13200	<5.00U	<0.500U	<2.50U	466	4.61D	5080	374	<2.50U	<7.50U	6540	<2.50U	916J	40.7	<5.00U	<10.0U	608
Blank	Total Recoverable Metals	44824	15:54	Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	<175U	<5.00U	<0.500U	<2.50U	<100U	<0.500U	<250U	<7.50U	<2.50U	<7.50U	<250U	<2.50U	<250U	<2.50U	<5.00U	<10.0U	<15.0U
CSC-101	Total Recoverable Metals	44824	12:03	Surface Water	<50.0U	<2.50U	<3.00U	113D	<2.00U	0.523JD	20600	<5.00U	<0.500U	2.54JD	<100U	8.96D	7220	30.7	<2.50U	<7.50U	7660	<2.50U	1970	195	<5.00U	<10.0U	128
CSC-102	Total Recoverable Metals	44824	12:52	Surface Water	<50.0U	<2.50U	<3.00U	118D	<2.00U	<0.500U	19700	<5.00U	<0.500U	<2.50U	<100U	<0.500U	7030	<7.50U	<2.50U	<7.50U	6940	<2.50U	1800	196	<5.00U	<10.0U	25.4J
CSC-103	Total Recoverable Metals	44824	13:30	Surface Water	<50.0U	<2.50U	<3.00U	30.3JD	<2.00U	4.29D	21300	<5.00U	<0.500U	9.12D	<100U	4.85D	6720	166	4.43JD	<7.50U	14300	<2.50U	2760	133	<5.00U	<10.0U	974
CSC-104	Total Recoverable Metals	44824	13:30	Surface Water	<50.0U	<2.50U	<3.00U	29.0JD	<2.00U	6.54D	22200	<5.00U	<0.500U	20.6D	<100U	2.33D	7000	468	5.76D	<7.50U	14900	<2.50U	2910	147	<5.00U	<10.0U	1390
CSC-104A	Total Recoverable Metals	44824	14:20	Surface Water	<50.0U	<2.50U	<3.00U	35.6JD	<2.00U	8.87D	25400	<5.00U	0.552JD	29.1D	<100U	3.01D	7480	712	6.44D	<7.50U	16000	<2.50U	3310	183	<5.00U	<10.0U	1700
CSC-105	Total Recoverable Metals	44824	13:50	Surface Water	172	<2.50U	<3.00U	<25.0U	<2.00U	1.70D	15400	5.69JBD	<0.500U	10.1D	399	10.6D	5960	59.5	5.09D	<7.50U	12800	<2.50U	1970	69.9	<5.00U	<10.0U	703
CSC-105	Total Recoverable Metals	44824	13:50	Surface Water	148	<2.50U	<3.00U	<25.0U	<2.00U	1.69D	15200	5.24JBD	<0.500U	4.88JD	335	6.00D	5910	53.9	5.00D	<7.50U	12600	<2.50U	1930	69.9	<5.00U	<10.0U	687
CSC-106	Total Recoverable Metals	44825	10:45	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	1.70D	15300	5.54JBD	<0.500U	<2.50U	<100U	<0.500U	5900	13.0J	5.42D	<7.50U	12400	<2.50U	1840	69	<5.00U	<10.0U	673
CSC-107	Total Recoverable Metals	44825	13:20	Surface Water	355	<5.00U	<6.00U	<50.0U	<2.00U	5.02D	40900	<10.0U	<1.00U	32.9D	182J	8.16D	19400	347	45.8D	<15.0U	15700	<5.00U	2030	151	<10.0U	<20.0U	3980
CSC-108	Total Recoverable Metals	44825	13:55	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	7.62D	24100	6.00JD	<0.500U	<2.50U	<100U	0.977JD	8360	<7.50U	12.6D	<7.50U	13700	<2.50U	1570	104	<5.00U	<10.0U	2430
CSC-111A	Total Recoverable Metals	44824	14:07	Surface Water	<50.0U	<2.50U	<3.00U	32.5JD	<2.00U	10.5D	24400	5.55JD	0.686JD	42.9D	<100U	5.00D	7230	1010	6.94D	<7.50U	15000	<2.50U	3060	179	<5.00U	<10.0U	1940
CSC-114	Total Recoverable Metals	44824	15:00	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	21800	6.45JD	<0.500U	4.40JD	<100U	0.689JD	3570	14.1J	2.96JD	<7.50U	28400	<2.50U	7030	140	<5.00U	<10.0U	210
CSC-115	Total Recoverable Metals	44824	15:15	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	20400	6.87JD	<0.500U	5.09D	<100U	0.593JD	3810	13.3J	2.67JD	<7.50U	24900	<2.50U	4900	156	<5.00U	<10.0U	142
CSC-116	Total Recoverable Metals	44824	15:50	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	10000	7.58JD	<0.500U	5.27D	<100U	2.39D	3550	<7.50U	<2.50U	<7.50U	10800	<2.50U	1670	66.3	<5.00U	<10.0U	38.6
CSC-117	Total Recoverable Metals	44824	15:35	Surface Water	1630D	<10.0U	<12.0U	<100U	<10.0U	271D	168000D	<20.0U	38.3D	3010D	<500U	270D	58900D	48100D	143D	<30.0U	26200D	<10.0U	6510D	1530D	<20.0U	<40.0U	57600D
CSC-117	Total Recoverable Metals	44824	15:35	Surface Water	2080D	<10.0U	<12.0U	<100U	<10.0U	280D	170000D	<20.0U	39.4D	3260D	1030JD	301D	59400D	47600D	150D	<30.0U	28000D	<10.0U	6600D	1540D	<20.0U	<40.0U	57300D
CSC-117A	Total Recoverable Metals	44824	15:36	Surface Water	2060D	<5.00U	<6.00U	<50.0U	<10.0U	415D	205000D	<10.0U	155D	3890D	3990D	874D	80200D	96800D	219D	<15.0U	22700D	<5.00U	6000D	1990D	<10.0U	<20.0U	94700D
CSC-119	Total Recoverable Metals	44824	16:10	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	0.812JD	17300	5.10JD	<0.500U	6.63D	<100U	3.13D	3360	<7.50U	<2.50U	<7.50U	17000	<2.50U	3360	132	<5.00U	<10.0U	83.7
CSC-119B	Total Recoverable Metals	44824	17:05	Surface Water	124	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	10900	5.94JD	<0.500U	<2.50U	104J	3.96D	2540	13.5J	<2.50U	<7.50U	15900	<2.50U	2840	74.3	<5.00U	<10.0U	81.5
CSC-120A	Total Recoverable Metals	44824	16:25	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	9630	6.09JD	<0.500U	<2.50U	<100U	0.824JD	3600	<7.50U	<2.50U	<7.50U	10400	<2.50U	1580	62.7	<5.00U	<10.0U	41.3
GE-SW-001	Total Recoverable Metals	44825	8:20	Surface Water	<50.0U	<2.50U	<3.00U	33.7JD	<2.00U	<0.500U	1210	<5.00U	<0.500U	<2.50U	<100U	3.46D	765	<7.50U	<2.50U	<7.50U	5190	<2.50U	394J	7.97J	<5.00U	<10.0U	20.5J
ST010A	Total Recoverable Metals	44824	18:30	Surface Water	<50.0U	<2.50U	<3.00U	135D	<2.00U	<0.500U	22800	<5.00U	<0.500U	<2.50U	<100U	<0.500U	6860	<7.50U	<2.50U	<7.50U	8040	<2.50U	1850	251	<5.00U	<10.0U	21.6J
ST010A	Total Recoverable Metals	44824	18:30	Surface Water	<50.0U	<2.50U	<3.00U	133D	<2.00U	<0.500U	22600	5.48JD	<0.500U	<2.50U	<100U	<0.500U	6820	<7.50U	<2.50U	<7.50U	8090	<2.50U	1840	249	<5.00U	<10.0U	<15.0U
ST015	Total Recoverable Metals	44824	17:35	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	13.0D	39000	6.64JD	<0.500U	<2.50U	<100U	0.778JD	19100	<7.50U	17.2D	<7.50U	14000	<2.50U	2170	130	<5.00U	<10.0U	8170
ST016	Total Recoverable Metals	44824	17:55	Surface Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	49400	7.80JD	<0.500U	<2.50U	<100U	<0.500U	29300	434	9.85D	<7.50U	11000	<2.50U	2930	306	<5.00U	<10.0U	503

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
07-167-AD1	Total Recoverable Metals	44824	14:25	Surface Water	<50.0	<2.50	3.41	<25.0	<2.00	1.43	13100	<5.00	<0.500	<2.50	480	4.87	5100	371	<2.50	<7.50	6440	<2.50	919	40.9	<5.00	<10.0	602
07-167-AD1	Total Recoverable Metals	44824	14:25	Surface Water	<50.0	<2.50	3.01	<25.0	<2.00	1.49	13200	<5.00	<0.500	<2.50	466	4.61	5080	374	<2.50	<7.50	6540	<2.50	916	40.7	<5.00	<10.0	608
					N/A	N/A	12.46%	N/A	N/A	4.11%	0.76%	N/A	N/A	N/A	2.96%	5.49%	0.39%	0.81%	N/A	N/A	1.54%	N/A	0.33%	0.49%	N/A	N/A	0.99%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
CSC-105	Total Recoverable Metals	44824	13:50	Surface Water	172	<2.50	<3.00	<25.0	<2.00	1.7	15400	5.69B	<0.500	10.1	399	10.6	5960	59.5	5.09	<7.50	12800	<2.50	1970	69.9	<5.00	<10.0	703
CSC-105	Total Recoverable Metals	44824	13:50	Surface Water	148	<2.50	<3.00	<25.0	<2.00	1.69	15200	5.24B	<0.500	4.88	335	6	5910	53.9	5	<7.50	12600	<2.50	1930	69.9	<5.00	<10.0	687
					15.00%	N/A	N/A	N/A	N/A	0.59%	1.31%	N/A	N/A	69.69%	17.44%	55.42%	0.84%	9.88%	1.78%	N/A	1.57%	N/A	2.05%	0.00%	N/A	N/A	2.30%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
CSC-117	Total Recoverable Metals	44824	15:35	Surface Water	1630	<10.0	<12.0	<100	<10.0	271	168000	<20.0	38.3	3010	<500	270	58900	48100	143	<30.0	26200	<10.0	6510	1530	<20.0	<40.0	57600
CSC-117	Total Recoverable Metals	44824	15:35	Surface Water	2080	<10.0	<12.0	<100	<10.0	280	170000	<20.0	39.4	3260	1030	301	59400	47600	150	<30.0	28000	<10.0	6600	1540	<20.0	<40.0	57300
					24.26%	N/A	N/A	N/A	N/A	3.27%	1.18%	N/A	2.83%	7.97%	N/A	10.86%	0.85%	1.04%	4.78%	N/A	6.64%	N/A	1.37%	0.65%	N/A	N/A	0.52%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
ST010A	Total Recoverable Metals	44824	18:30	Surface Water	<50.0	<2.50	<3.00	135	<2.00	<0.500	22800	<5.00	<0.500	<2.50	<100	<0.500	6860	<7.50	<2.50	<7.50	8040	<2.50	1850	251	<5.00	<10.0	21.6
ST010A	Total Recoverable Metals	44824	18:30	Surface Water	<50.0	<2.50	<3.00	133	<2.00	<0.500	22600	5.48	<0.500	<2.50	<100	<0.500	6820	<7.50	<2.50	<7.50	8090	<2.50	1840	249	<5.00	<10.0	<15.0
					N/A	N/A	N/A	1.49%	N/A	N/A	0.88%	N/A	N/A	N/A	N/A	N/A	0.58%	N/A	N/A	N/A	0.62%	N/A	0.54%	0.80%	N/A	N/A	N/A

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 3.2 Carpenter Snow Creek Surface Water Wet Chemistry Analytical Results and RPD Calculations for Duplicates – September 2022

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Bromide	Chloride	Fluoride	Nitrate/Nitrite as N	Sulfate as SO4	Total Alkalinity
	Wet Chemistry				mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO3 / L
07-079-AD1	Wet Chemistry	44824	11:36	Surface Water	<0.5U	<2.0U	<0.2U	<1.0UJ	433D	111
07-084	Wet Chemistry	44824	12:00	Water	<0.5U	<2.0U	0.2JD	<1.0UJ	266D	70.1J
07-084-AD1	Wet Chemistry	44824	12:40	Surface Water	<0.2U	<1.0U	0.1J	<0.5UJ	121	119
07-156-SEEP2	Wet Chemistry	44824	15:00	Surface Water	<1.2U	<5.0U	0.7JD	<2.5UJ	978D	45.4
07-157-001	Wet Chemistry	44824	16:00	Surface Water	<0.2U	<1.0U	0.2	<0.5UJ	195	5.76J
07-157-003	Wet Chemistry	44824	16:55	Surface Water	<0.2U	<1.0U	0.3	<0.5UJ	195	5.87J
07-157-AD1	Wet Chemistry	44824	15:30	Surface Water	<0.2U	<1.0U	0.2	<0.5UJ	196	7.08J
07-167-AD1	Wet Chemistry	44824	14:25	Surface Water	<0.2U	<1.0U	0.1J	<0.5UJ	21.8	38.6
07-167-AD1	Wet Chemistry	44824	14:25	Surface Water	<0.2U	<1.0U	<0.1U	<0.5UJ	22.1	38.4
Blank	Wet Chemistry	44824	15:54	Water	<0.2U	<1.0U	<0.1U	<0.5UJ	<2.5U	<5.00U
CSC-101	Wet Chemistry	44824	12:03	Surface Water	<0.2U	1.1J	<0.1U	<0.5UJ	12.1	79.6
CSC-102	Wet Chemistry	44824	12:52	Surface Water	<0.2U	1.1J	<0.1U	<0.5UJ	6.4	84.5
CSC-103	Wet Chemistry	44824	13:30	Surface Water	<0.2U	<1.0U	0.1J	<0.5UJ	59.6	32.8
CSC-104	Wet Chemistry	44824	13:30	Surface Water	<0.2U	<1.0U	0.2	<0.5UJ	68.8	28.2
CSC-104A	Wet Chemistry	44824	14:20	Surface Water	<0.2U	<1.0U	0.2	<0.5UJ	78	32.5
CSC-105	Wet Chemistry	44824	13:50	Surface Water	<0.2U	<1.0U	0.1J	<0.5UJ	50.7	20.8
CSC-105	Wet Chemistry	44824	13:50	Surface Water	<0.2U	<1.0U	0.1J	<0.5UJ	50.8	20.8
CSC-106	Wet Chemistry	44825	10:45	Surface Water	<0.2U	<1.0U	0.1J	<0.5UJ	52.1	21.2
CSC-107	Wet Chemistry	44825	13:20	Surface Water	<0.5U	<2.0U	0.2JD	<1.0UJ	206D	<5.00U
CSC-108	Wet Chemistry	44825	13:55	Surface Water	<0.2U	<1.0U	0.1J	<0.5UJ	99.2	13.1
CSC-111A	Wet Chemistry	44824	14:07	Surface Water	<0.2U	<1.0U	0.2	<0.5UJ	75.2	32.5
CSC-114	Wet Chemistry	44824	15:00	Surface Water	<0.2U	<1.0U	0.4	<0.5UJ	66.7	19.1
CSC-115	Wet Chemistry	44824	15:15	Surface Water	<0.2U	<1.0U	0.4	<0.5UJ	47.6	38.1
CSC-116	Wet Chemistry	44824	15:50	Surface Water	<0.2U	<1.0U	<0.1U	<0.5UJ	7.6	40.7
CSC-117	Wet Chemistry	44824	15:35	Surface Water	<1.2U	<5.0U	<0.5U	<2.5UJ	944D	<5.00U
CSC-117	Wet Chemistry	44824	15:35	Surface Water	<1.2U	<5.0U	<0.5U	<2.5UJ	938D	<5.00U
CSC-117A	Wet Chemistry	44824	15:36	Surface Water	<1.2U	<5.0U	<0.5U	<2.5UJ	1330D	<5.00U
CSC-119	Wet Chemistry	44824	16:10	Surface Water	<0.2U	<1.0U	<0.1U	<0.5UJ	24.4	44.2
CSC-119B	Wet Chemistry	44824	17:05	Surface Water	<0.2U	<1.0U	<0.1U	<0.5UJ	12	34.1
CSC-120A	Wet Chemistry	44824	16:25	Surface Water	<0.2U	<1.0U	<0.1U	<0.5UJ	5.9	42.8
GE-SW-001	Wet Chemistry	44825	8:20	Surface Water	<0.2U	<1.0U	<0.1U	<0.5UJ	<2.5U	6.63J
ST010A	Wet Chemistry	44824	18:30	Surface Water	<0.2U	1.3J	<0.1U	<0.5UJ	5.1	88.6
ST010A	Wet Chemistry	44824	18:30	Surface Water	<0.2U	1.2J	<0.1U	<0.5UJ	5.1	88.7
ST015	Wet Chemistry	44824	17:35	Surface Water	<0.2U	<1.0U	0.2	<0.5UJ	193	9.23J
ST016	Wet Chemistry	44824	17:55	Surface Water	<0.5U	<2.0U	<0.2U	<1.0UJ	213D	49

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Bromide	Chloride	Fluoride	Nitrate/Nitrite as N	Sulfate as SO4	Total Alkalinity
	Wet Chemistry				mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO3 / L
07-167-AD1	Wet Chemistry	44824	14:25	Surface Water	<0.2	<1.0	0.1	<0.5	21.8	38.6
07-167-AD1	Wet Chemistry	44824	14:25	Surface Water	<0.2	<1.0	<0.1	<0.5	22.1	38.4
					N/A	N/A	N/A	N/A	1.37%	0.52%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Bromide	Chloride	Fluoride	Nitrate/Nitrite as N	Sulfate as SO4	Total Alkalinity
	Wet Chemistry				mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO3 / L
CSC-105	Wet Chemistry	44824	13:50	Surface Water	<0.2	<1.0	0.1	<0.5	50.7	20.8
CSC-105	Wet Chemistry	44824	13:50	Surface Water	<0.2	<1.0	0.1	<0.5	50.8	20.8
					N/A	N/A	0.00%	N/A	0.20%	0.00%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Bromide	Chloride	Fluoride	Nitrate/Nitrite as N	Sulfate as SO4	Total Alkalinity
	Wet Chemistry				mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO3 / L
CSC-117	Wet Chemistry	44824	15:35	Surface Water	<1.2	<5.0	<0.5	<2.5	944	<5.00
CSC-117	Wet Chemistry	44824	15:35	Surface Water	<1.2	<5.0	<0.5	<2.5	938	<5.00
					N/A	N/A	N/A	N/A	0.64%	N/A

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Bromide	Chloride	Fluoride	Nitrate/Nitrite as N	Sulfate as SO4	Total Alkalinity
	Wet Chemistry				mg/L	mg/L	mg/L	mg/L	mg/L	mg CaCO3 / L
ST010A	Wet Chemistry	44824	18:30	Surface Water	<0.2	1.3	<0.1	<0.5	5.1	88.6
ST010A	Wet Chemistry	44824	18:30	Surface Water	<0.2	1.2	<0.1	<0.5	5.1	88.7
					N/A	8.00%	N/A	N/A	0.00%	0.11%

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 4. Carpenter Snow Creek Groundwater Dissolved Metals Analytical Results and RPD Calculations for Duplicates – September 2022

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Blank	Dissolved Metals	9/21/2022	17:00	Water	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	<0.100U	<175U	<1.00U	<0.100U	<0.500U	<2U	<100U	<0.100U	<250U	<7.50U	<0.500U	<1.50U	<250U	<0.500U	<250U	<2.50U	<1.00U	<2.00U	<15.0U
Blank	Dissolved Metals	9/22/2022	12:25	Water	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	<0.100U	<175U	<1.00U	<0.100U	<0.500U	<2U	<100U	<0.100U	<250U	<7.50U	<0.500U	<1.50U	<250U	<0.500U	<250U	<2.50U	<1.00U	<2.00U	<15.0U
Blank	Dissolved Metals	9/22/2022	12:30	Water	<50.0U	<0.500U	<0.600U	<5.00U	<2.00U	0.114J	<175U	<1.00U	<0.100U	<0.500U	<2U	<100U	<0.100U	<250U	<7.50U	<0.500U	<1.50U	<250U	<0.500U	<250U	<2.50U	<1.00U	<2.00U	<15.0U
CSC-15	Dissolved Metals	9/21/2022	17:44	Groundwater	<50.0U	<0.500U	0.762J	38.8	<2.00U	<0.100U	13200	<1.00U	1.12	<0.500U	58	3830	0.263	6190	125	1.83	<1.50U	20500	<0.500U	3170	54.9	<1.00U	2.93J	54.4
CSC-25	Dissolved Metals	9/22/2022	11:27	Groundwater	<50.0U	<2.50U	<3.00U	88.7D	<2.00U	<0.500U	118000	<5.00U	9.85D	<2.50U	367	8080	<0.500U	17800	1820	10.5D	<7.50U	24200	<2.50U	6870	569	<5.00U	<10.0U	482
MW-1	Dissolved Metals	9/22/2022	8:47	Groundwater	<50.0U	<0.500U	<0.600U	34.1	<2.00U	0.898	18800	<1.00U	0.196J	2.34	66	<100U	0.116J	4510	<7.50U	2.06	<1.50U	13400	<0.500U	2660	90.1	<1.00U	<2.00U	190
MW-10	Dissolved Metals	9/21/2022	15:42	Groundwater	<50.0U	<2.50U	<3.00U	27.1JD	<2.00U	29.4D	33900	<5.00U	<0.500U	98.8D	127	<100U	0.993JD	10200	85.7	19.4D	<7.50U	20700	<2.50U	4060	215	<5.00U	<10.0U	5740
MW-11	Dissolved Metals	9/21/2022	15:00	Groundwater	<50.0U	<0.500U	<0.600U	18.4	<2.00U	<0.100U	12400	<1.00U	<0.100U	<0.500U	44	<100U	<0.100U	3230	<7.50U	0.899J	<1.50U	12000	<0.500U	1850	81.5	<1.00U	<2.00U	24.1J
MW-13	Dissolved Metals	9/21/2022	13:08	Groundwater	<50.0U	<2.50U	<3.00U	38.2JD	<2.00U	<0.500U	30100	<5.00U	<0.500U	<2.50U	134	<100U	<0.500U	14300	<7.50U	6.98D	<7.50U	12900	<2.50U	2720	134	<5.00U	<10.0U	237
MW-13	Dissolved Metals	9/21/2022	13:08	Groundwater	<50.0U	<2.50U	<3.00U	37.5JD	<2.00U	<0.500U	29900	<5.00U	<0.500U	<2.50U	133	<100U	<0.500U	14200	<7.50U	7.03D	<7.50U	13000	<2.50U	2730	133	<5.00U	<10.0U	243
MW-14	Dissolved Metals	9/21/2022	12:10	Groundwater	77.9J	<2.50U	<3.00U	<25.0U	<2.00U	16.4D	35200	<5.00U	2.94D	3.89JD	136	<100U	<0.500U	11700	173	25.1D	<7.50U	17400	<2.50U	1750	148	<5.00U	<10.0U	4670
MW-2	Dissolved Metals	9/22/2022	9:31	Groundwater	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	14500	<5.00U	<0.500U	<2.50U	57	<100U	<0.500U	5090	<7.50U	2.74JD	<7.50U	12000	<2.50U	2100	67.3	<5.00U	<10.0U	241
MW-3	Dissolved Metals	9/22/2022	9:42	Groundwater	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	44700	<5.00U	2.87D	<2.50U	125	<100U	<0.500U	3210	278	3.79JD	<7.50U	27800	<2.50U	7100	310	<5.00U	<10.0U	24.7J
MW-4A	Dissolved Metals	9/22/2022	10:08	Groundwater	<50.0U	<2.50U	<3.00U	52.7D	<2.00U	<0.500U	34500	<5.00U	4.51D	<2.50U	115	268	<0.500U	7110	222	5.24D	<7.50U	24200	<2.50U	8240	217	<5.00U	<10.0U	58.5
MW-4A	Dissolved Metals	9/22/2022	10:08	Groundwater	<50.0U	<2.50U	<3.00U	52.4D	<2.00U	<0.500U	33500	<5.00U	4.48D	<2.50U	112	251	<0.500U	6950	215	5.24D	<7.50U	24000	<2.50U	8040	213	<5.00U	<10.0U	40.3
MW-5	Dissolved Metals	9/22/2022	10:25	Groundwater	368	<2.50U	<3.00U	<25.0U	<2.00U	0.789JD	9800	<5.00U	<0.500U	6.25D	34	203J	6.18D	2280	<7.50U	2.77JD	<7.50U	22700	<2.50U	3870	44.6	<5.00U	<10.0U	93.4
MW-6A	Dissolved Metals	9/22/2022	10:41	Groundwater	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	5880	<5.00U	<0.500U	<2.50U	23	<100U	<0.500U	1980	<7.50U	<2.50U	<7.50U	31200	<2.50U	4270	37.7	<5.00U	<10.0U	16.2J
MW-8	Dissolved Metals	9/21/2022	17:18	Groundwater	<50.0U	<2.50U	<3.00U	65.8D	<2.00U	<0.500U	15000	<5.00U	8.47D	<2.50U	48	1850	<0.500U	2520	2360	2.55JD	<7.50U	30800	<2.50U	5220	104	<5.00U	<10.0U	94.9
MW-9	Dissolved Metals	9/21/2022	16:43	Groundwater	657	<5.00U	<6.00U	<50.0U	<2.00U	69.7D	73000	<10.0U	<1.00U	608D	277	<100U	2.74D	23100	1760	46.6D	<15.0U	37200	<5.00U	5580	637	<10.0U	<20.0U	17700
MW-9A	Dissolved Metals	9/21/2022	16:21	Groundwater	236	<2.50U	<3.00U	<25.0U	<2.00U	31.7D	55600	<5.00U	<0.500U	447D	212	<100U	0.832JD	17700	143	25.1D	<7.50U	21600	<2.50U	4070	393	<5.00U	<10.0U	8310

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-13	Dissolved Metals	9/21/2022	13:08	Groundwater	<50.0	<2.50	<3.00	38.2	<2.00	<0.500	30100	<5.00	<0.500	<2.50	134	<100	<0.500	14300	<7.50	6.98	<7.50	12900	<2.50	2720	134	<5.00	<10.0	237
MW-13	Dissolved Metals	9/21/2022	13:08	Groundwater	<50.0	<2.50	<3.00	37.5	<2.00	<0.500	29900	<5.00	<0.500	<2.50	133	<100	<0.500	14200	<7.50	7.03	<7.50	13000	<2.50	2730	133	<5.00	<10.0	243
					N/A	N/A	N/A	1.85%	N/A	N/A	0.67%	N/A	N/A	N/A	0.75%	N/A	N/A	0.70%	N/A	0.71%	N/A	0.77%	N/A	0.37%	0.75%	N/A	N/A	2.50%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Hardness	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-4A	Dissolved Metals	9/22/2022	10:08	Groundwater	<50.0	<2.50	<3.00	52.7	<2.00	<0.500	34500	<5.00	4.51	<2.50	115	268	<0.500	7110	222	5.24	<7.50	24200	<2.50	8240	217	<5.00	<10.0	58.5
MW-4A	Dissolved Metals	9/22/2022	10:08	Groundwater	<50.0	<2.50	<3.00	52.4	<2.00	<0.500	33500	<5.00	4.48	<2.50	112	251	<0.500	6950	215	5.24	<7.50	24000	<2.50	8040	213	<5.00	<10.0	40.3
					N/A	N/A	N/A	0.57%	N/A	N/A	2.94%	N/A	0.67%	N/A	2.64%	6.55%	N/A	2.28%	3.20%	0.00%	N/A	0.83%	N/A	2.46%	1.86%	N/A	N/A	36.84%

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 4.1 Carpenter Snow Creek Groundwater Total Recoverable Metals Analytical Results and RPD Calculations for Duplicates – September 2022

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Blank	Total Recoverable Metals	9/21/2022	17:00	Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	<175U	<5.00U	<0.500U	<2.50U	<100U	<0.500U	<250U	<7.50U	<2.50U	<7.50U	<250U	<2.50U	<250U	<2.50U	<5.00U	<10.0U	<15.0U
Blank	Total Recoverable Metals	9/22/2022	12:25	Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	<175U	<5.00U	<0.500U	<2.50U	<100U	<0.500U	<250U	<7.50U	<2.50U	<7.50U	<250U	<2.50U	<250U	<2.50U	<5.00U	<10.0U	<15.0U
Blank	Total Recoverable Metals	9/22/2022	12:30	Water	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	<175U	<5.00U	<0.500U	<2.50U	<100U	<0.500U	<250U	<7.50U	<2.50U	<7.50U	<250U	<2.50U	<250U	<2.50U	<5.00U	<10.0U	<15.0U
CSC-15	Total Recoverable Metals	9/21/2022	17:44	Groundwater	<50.0U	<2.50U	<3.00U	42.3JD	<2.00U	<0.500U	13200	8.55JD	1.23D	<2.50U	3890	1.25D	6200	131	<2.50U	<7.50U	21500	<2.50U	3250	54.9	<5.00U	<10.0U	22.4J
CSC-25	Total Recoverable Metals	9/22/2022	11:27	Groundwater	<50.0U	<2.50U	3.27JD	98.8D	<2.00U	<0.500U	124000	<5.00U	10.1D	2.65JD	11500	1.28D	18700	1840	11.5D	<7.50U	26500	<2.50U	7640	610	<5.00U	<10.0U	486
MW-1	Total Recoverable Metals	9/22/2022	8:47	Groundwater	104	<2.50U	<3.00U	37.1JD	<2.00U	1.00D	19500	<5.00U	<0.500U	3.24JD	<100U	0.835JD	4710	<7.50U	<2.50U	<7.50U	14500	<2.50U	2860	94	<5.00U	<10.0U	163
MW-10	Total Recoverable Metals	9/21/2022	15:42	Groundwater	<50.0U	<2.50U	<3.00U	31.0JD	<2.00U	30.2D	34900	<5.00U	<0.500U	91.6D	<100U	2.08D	10400	83.7	18.6D	<7.50U	21700	<2.50U	4260	222	<5.00U	<10.0U	5680
MW-11	Total Recoverable Metals	9/21/2022	15:00	Groundwater	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	12500	5.04JD	<0.500U	<2.50U	<100U	<0.500U	3250	<7.50U	<2.50U	<7.50U	12700	<2.50U	1940	82.2	<5.00U	<10.0U	<15.0U
MW-13	Total Recoverable Metals	9/21/2022	13:08	Groundwater	<50.0U	<2.50U	<3.00U	38.9JD	<2.00U	<0.500U	30800	5.19JD	<0.500U	<2.50U	<100U	<0.500U	14600	<7.50U	7.08D	<7.50U	13500	<2.50U	2890	137	<5.00U	<10.0U	258
MW-13	Total Recoverable Metals	9/21/2022	13:08	Groundwater	<50.0U	<2.50U	<3.00U	39.1JD	<2.00U	<0.500U	31400	6.07JD	<0.500U	<2.50U	<100U	<0.500U	14900	<7.50U	7.54D	<7.50U	13800	<2.50U	2940	139	<5.00U	<10.0U	223
MW-14	Total Recoverable Metals	9/21/2022	12:10	Groundwater	133000D	<10.0U	26.3JD	1100D	<20.0U	36.3D	66600D	937D	152D	217D	180000D	937D	93800D	3570D	320D	<30.0U	460000D	54.2D	19400D	531D	<20.0U	278D	10700D
MW-2	Total Recoverable Metals	9/22/2022	9:31	Groundwater	<50.0U	<2.50U	<3.00U	<25.0U	<2.00U	0.544JD	15300	<5.00U	<0.500U	3.17JD	<100U	<0.500U	5370	<7.50U	2.78JD	<7.50U	12700	<2.50U	2250	70.7	<5.00U	<10.0U	248
MW-3	Total Recoverable Metals	9/22/2022	9:42	Groundwater	54.8J	<2.50U	<3.00U	<25.0U	<2.00U	<0.500U	47000	<5.00U	8.69D	<2.50U	<100U	4.46D	3380	414	3.87JD	<7.50U	29100	<2.50U	7600	324	<5.00U	<10.0U	<15.0U
MW-4A	Total Recoverable Metals	9/22/2022	10:08	Groundwater	<50.0U	<2.50U	<3.00U	55.3D	<2.00U	<0.500U	33700	<5.00U	4.51D	<2.50U	341	1.10D	6950	227	5.25D	<7.50U	25800	<2.50U	8350	213	<5.00U	<10.0U	<15.0U
MW-4A	Total Recoverable Metals	9/22/2022	10:08	Groundwater	<50.0U	<2.50U	<3.00U	54.4D	<2.00U	<0.500U	34800	<5.00U	4.46D	<2.50U	354	0.946JD	7180	230	5.18D	<7.50U	25600	<2.50U	8560	220	<5.00U	<10.0U	40.1
MW-5	Total Recoverable Metals	9/22/2022	10:25	Groundwater	555	<2.50U	<3.00U	<25.0U	<2.00U	0.722JD	10000	7.53JD	<0.500U	6.19D	359	5.13D	2380	<7.50U	3.33JD	<7.50U	25000	<2.50U	4080	46	<5.00U	<10.0U	99.2
MW-6A	Total Recoverable Metals	9/22/2022	10:41	Groundwater	112	<2.50U	<3.00U	30.4JD	<2.00U	<0.500U	6200	6.97JD	<0.500U	<2.50U	205J	1.01D	2150	<7.50U	<2.50U	<7.50U	32800	<2.50U	4670	39.9	<5.00U	<10.0U	<15.0U
MW-8	Total Recoverable Metals	9/21/2022	17:18	Groundwater	<50.0U	<2.50U	<3.00U	78.5D	<2.00U	<0.500U	15200	7.36JD	9.15D	<2.50U	1930	0.558JD	2560	2450	2.99JD	<7.50U	32400	<2.50U	5520	105	<5.00U	<10.0U	73.4
MW-9	Total Recoverable Metals	9/21/2022	16:43	Groundwater	842	<5.00U	<6.00U	<50.0U	<2.00U	71.2D	76700	<10.0U	<1.00U	595D	179J	6.72D	24100	1890	46.8D	<15.0U	40200	<5.00U	5990	666	<10.0U	<20.0U	18300
MW-9A	Total Recoverable Metals	9/21/2022	16:21	Groundwater	347	<5.00U	<6.00U	<50.0U	<2.00U	32.0D	54400	<10.0U	<1.00U	428D	192J	5.26D	17300	207	26.0D	<15.0U	22400	<5.00U	4120	385	<10.0U	<20.0U	7800

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-13	Total Recoverable Metals	9/21/2022	13:08	Groundwater	<50.0	<2.50	<3.00	38.9	<2.00	<0.500	30800	5.19	<0.500	<2.50	<100	<0.500	14600	<7.50	7.08	<7.50	13500	<2.50	2890	137	<5.00	<10.0	258
MW-13	Total Recoverable Metals	9/21/2022	13:08	Groundwater	<50.0	<2.50	<3.00	39.1	<2.00	<0.500	31400	6.07	<0.500	<2.50	<100	<0.500	14900	<7.50	7.54	<7.50	13800	<2.50	2940	139	<5.00	<10.0	223
					N/A	N/A	N/A	0.51%	N/A	N/A	1.93%	15.63%	N/A	N/A	N/A	N/A	2.03%	N/A	6.29%	N/A	2.20%	N/A	1.72%	1.45%	N/A	N/A	14.55%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-4A	Total Recoverable Metals	9/22/2022	10:08	Groundwater	<50.0	<2.50	<3.00	55.3	<2.00	<0.500	33700	<5.00	4.51	<2.50	341	1.1	6950	227	5.25	<7.50	25800	<2.50	8350	213	<5.00	<10.0	<15.0
MW-4A	Total Recoverable Metals	9/22/2022	10:08	Groundwater	<50.0	<2.50	<3.00	54.4	<2.00	<0.500	34800	<5.00	4.46	<2.50	354	0.946	7180	230	5.18	<7.50	25600	<2.50	8560	220	<5.00	<10.0	40.1
					N/A	N/A	N/A	1.64%	N/A	N/A	3.21%	N/A	1.11%	N/A	3.74%	15.05%	3.26%	1.31%	1.34%	N/A	0.78%	N/A	2.48%	3.23%	N/A	N/A	N/A

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 5. Carpenter Snow Creek Sediment Analytical Results and RPD Calculations for Duplicates – September 2022

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt
07-157-003	Total Recoverable Metals	44824	16:55	Sediment	4060D	3830JD	229000D	154000D	3.57JD	5720D	1840D	8240JD	8640D	368000D	40600D	1710000D	1760D	1630D	7120D	<7510U	4200D	41200D	<250U	10.6D	<5010U	<10000U	1410D
CSC-101	Total Recoverable Metals	44824	12:03	Sediment	5500D	<2530UJ	10500D	241000D	<2.02U	11400D	2570JD	16300JD	10600D	490000D	26700D	1100000JD	4060D	3380D	20300D	<7590U	4610D	6690JD	<253U	27.0D	<5060U	24500JD	2270D
CSC-102	Total Recoverable Metals	44824	12:52	Sediment	7170D	<1010UJ	28700JD	626000D	<2.02U	2960D	2460D	20800JD	8180D	21500D	21600D	437000D	5150D	2450D	24400JD	<3030U	4850D	6420D	<252U	23.0D	<2020U	15100JD	1080D
CSC-103	Total Recoverable Metals	44824	13:30	Sediment	3940D	<2460U	14600D	149000D	<1.97U	23900D	2320D	9600JD	15300D	1100000D	17600D	2220000D	2700D	6500D	21300D	<7390U	4050D	5100D	<246U	14.2D	<4920U	18000D	3280D
CSC-104	Total Recoverable Metals	44824	13:30	Sediment	4520D	<2440U	12000D	113000D	<1.95U	20200D	1810D	16500D	18400D	891000D	18300D	1430000D	3150D	5960D	28700D	<7310U	2840D	8780D	<244U	9.53JD	<4870U	20800D	2470D
CSC-104A	Total Recoverable Metals	44824	14:20	Sediment	4280D	<2390U	23600D	190000D	<1.91U	43500D	2250D	13000D	20400D	1820000D	19900D	2340000D	2190D	10100D	22900D	<7170U	4220D	9540D	<239U	19.6D	<4780U	19700D	4590D
CSC-105	Total Recoverable Metals	44824	13:50	Sediment	7320D	<987U	20500D	515000D	<1.97U	32200D	2030D	20400D	25300D	76800D	24600D	469000D	4410D	9840D	76000D	<2960U	3990D	6180D	<247U	16.5D	<1970U	23300D	5160D
CSC-105	Total Recoverable Metals	44824	13:50	Sediment	8070D	1140JD	30700D	622000D	<1.96U	40300D	3480D	23100D	35000D	92300D	29800D	410000D	4510D	13000D	83100D	<2940U	4980D	13200D	<245U	22.0D	<1960U	23000D	6410D
CSC-106	Total Recoverable Metals	44825	10:45	Sediment	7210D	<989U	14500D	257000D	<1.98U	19700D	2060D	20000D	23900D	82200D	21700D	396000D	4830D	5920D	51400D	<2970U	2350D	3940D	<247U	12.5D	<1980U	24600D	3710D
CSC-111A	Total Recoverable Metals	44824	14:07	Sediment	5340D	<4800U	30100D	302000D	<1.92U	51900D	2520D	13600JD	21300D	2740000D	23300D	3600000D	2810D	12200D	26200D	<14400U	3420D	15900D	<240U	21.6D	<9600U	26000JD	5150D
CSC-114	Total Recoverable Metals	44824	15:00	Sediment	10500D	<980U	8590D	337000D	13.3D	30900D	7480D	11500D	123000D	427000D	70900D	248000D	2730D	11100D	46700D	<2940U	9570D	2160D	<490U	70.9D	<1960U	22000D	3380D
CSC-115	Total Recoverable Metals	44824	15:15	Sediment	3440D	<1000U	3150JD	153000D	<2.01U	6400D	1900D	6720D	22500D	157000D	14400D	180000D	1520D	2110D	15700D	<3010U	3890D	<1000U	<251U	33.9D	<2010U	8970D	733D
CSC-116	Total Recoverable Metals	44824	15:50	Sediment	5390D	<4880U	55000D	122000D	<1.95U	8000D	2920D	17300JD	13200D	1920000D	32000D	4430000D	3580D	2070D	12100D	<14600U	5720D	22600D	<244U	19.1D	<9760U	31700D	1210D
CSC-117	Total Recoverable Metals	44824	15:35	Sediment	13000D	<2480UJ	27300D	284000D	<1.99U	6920D	3740D	27000D	13500D	1240000D	35300D	2830000D	6860D	1720D	18200D	<7450U	9300D	24400D	<248U	33.4D	<4960U	33300D	1590D
CSC-117	Total Recoverable Metals	44824	15:35	Sediment	12900D	<2440U	26900D	277000D	<1.95U	7870D	3580D	28500D	14400D	1410000D	36200D	3060000D	7050D	2130D	18100D	<7310U	8650D	27700D	<244U	35.3D	<4880U	34900D	1570D
CSC-117A	Total Recoverable Metals	44824	15:36	Sediment	5570D	<5030U	42100D	106000D	<2.01U	5450D	1900D	14300JD	66300D	1280000D	70900D	4800000D	2610D	9120D	6350JD	<15100U	4710D	23400D	<251U	15.7D	<10100U	21000JD	1220D
CSC-119	Total Recoverable Metals	44824	16:10	Sediment	9400D	<2520U	17100D	158000D	<2.02U	4860D	5010D	21500D	10900D	470000D	24200D	1700000D	4740D	1110D	14200D	<7570U	5470D	10900D	275JD	35.9D	<5050U	34100D	800D
CSC-119B	Total Recoverable Metals	44824	17:10	Sediment	9350D	<2520U	6920JD	144000D	<2.01U	9490D	6070D	29500D	9870D	69500D	16800D	392000D	4560D	1200D	26000D	<7550U	9120D	4210JD	<252U	41.4D	<5040U	28800D	934D
CSC-120A	Total Recoverable Metals	44824	16:25	Sediment	9300D	<2460U	8900JD	87300D	<1.97U	1090D	4420D	16900D	9620D	18300D	16700D	315000D	7040D	342D	12200D	<7390U	5110D	<2460U	<246U	28.7D	<4930U	35800D	652D
ST010A	Total Recoverable Metals	44824	18:30	Sediment	8770D	<2500U	3210JD	154000D	<2.00U	<500U	1910D	17000D	6600D	13500D	19300D	19000D	5430D	205D	17800D	<7490U	3460D	<2500U	<250U	20.0D	<5000U	11400JD	53.4D
ST010A	Total Recoverable Metals	44824	18:30	Sediment	9660D	<2510U	<3020U	172000D	<2.01U	<503U	2340D	19400D	6470D	12700D	20900D	19500D	6720D	229D	21200D	<7540U	2910D	<2510U	<251U	21.7D	<5030U	11500JD	63.9D
ST015	Total Recoverable Metals	44824	17:35	Sediment	1700D	<2540U	37400D	388000D	<2.04U	99200D	2170D	18800D	33100D	149000D	4890D	1660000D	795D	8690D	101000D	<7630U	1220D	13800D	<254U	4.78JD	<5090U	17100D	4540D

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt
CSC-105	Total Recoverable Metals	44824	13:50	Sediment	7320	<987	20500	515000	<1.97	32200	2030	20400	25300	76800	24600	469000	4410	9840	76000	<2960	3990	6180	<247	16.5	<1970	23300	5160
CSC-105	Total Recoverable Metals	44824	13:50	Sediment	8070	1140	30700	622000	<1.96	40300	3480	23100	35000	92300	29800	410000	4510	13000	83100	<2940	4980	13200	<245	22	<1960	23000	6410
					9.75%	N/A	39.84%	18.82%	N/A	22.34%	52.63%	12.41%	32.17%	18.33%	19.12%	13.42%	2.24%	27.67%	8.93%	N/A	22.07%	72.45%	N/A	28.57%	N/A	1.30%	21.61%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt
CSC-117	Total Recoverable Metals	44824	15:35	Sediment	13000	<2480	27300	284000	<1.99	6920	3740	27000	13500	1240000	35300	2830000	6860	1720	18200	<7450	9300	24400	<248	33.4	<4960	33300	1590
CSC-117	Total Recoverable Metals	44824	15:35	Sediment	12900	<2440	26900	277000	<1.95	7870	3580	28500	14400	1410000	36200	3060000	7050	2130	18100	<7310	8650	27700	<244	35.3	<4880	34900	1570
					0.77%	N/A	1.48%	2.50%	N/A	12.85%	4.37%	5.41%	6.45%	12.83%	2.52%	7.81%	2.73%	21.30%	0.55%	N/A	7.24%	12.67%	N/A	5.53%	N/A	4.69%	1.27%

STATION_ID	ANALYSIS	SAMPDATE	SAMPLETIME	SUBMATRIX	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel	Selenium	Silica (SiO2)	Silver	Sodium	Strontium	Thallium	Vanadium	Zinc
					mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt	ug/kg dry wt	mg/kg dry wt	mg/kg dry wt	ug/kg dry wt	ug/kg dry wt	mg/kg dry wt
ST010A	Total Recoverable Metals	44824	18:30	Sediment	8770	<2500	3210	154000	<2.00	<500	1910	17000	6600	13500	19300	19000	5430	205	17800	<7490	3460	<2500	<250	20	<5000	11400	53.4
ST010A	Total Recoverable Metals	44824	18:30	Sediment	9660	<2510	<3020	172000	<2.01	<503	2340	19400	6470	12700	20900	19500	6720	229	21200	<7540	2910	<2510	<251	21.7	<5030	11500	63.9
					9.66%	N/A	N/A	11.04%	N/A	N/A	20.24%	13.19%	1.99%	6.11%	7.96%	2.60%	21.23%	11.06%	17.44%	N/A	17.27%	N/A	N/A	8.15%	N/A	0.87%	17.90%

D The analyte was diluted prior to analysis

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit

J The result is an estimated quantity. The associated numerical value is the approx. concentration of the analyte in the sample

Table 6.1 Carpenter June Surface Water Flow (cfs)

Location	Event Date	Event Time	Flow (cfs)
CSC-104	6/21/2022	11:44	25.4717
CSC-105	6/21/2022	12:29	10.3452
CSC-111C	6/21/2022	14:29	23.7998
CSC-111D	6/21/2022	14:50	19.2777
CSC-120A	6/21/2022	16:40	18.3976
CSC-119	6/21/2022	17:19	9.1728
ST015	6/21/2022	17:31	0.893
CSC-103	6/21/2022	11:30	35.9009
ST016	6/21/2022	17:52	7.5088
CSC-104A	6/21/2022	12:20	22.1214
CSC-111A	6/21/2022	13:10	18.0466
CSC-111B	6/21/2022	13:55	20.3153
CSC-114	6/21/2022	14:40	0.3798
CSC-115	6/21/2022	14:50	0.3798
CSC-116	6/21/2022	15:55	12.9421
CSC-119B	6/21/2022	17:00	0.1688

Table 6.2 Carpenter September Surface Water Flow (cfs)

Location	Event Date	Event Time	Flow (cfs)
CSC-104	9/20/2022	12:51	1.57
CSC-105	9/20/2022	13:50	0.65
CSC-104A	9/20/2022	14:16	1.7236
CSC-114	9/20/2022	14:59	0.0208
CSC-116	9/20/2022	15:50	0.67
CSC-119	9/20/2022	16:04	0.7488
CSC-120A	9/20/2022	16:25	0.5467
CSC-101	9/20/2022	12:03	16.03
CSC-102	9/20/2022	12:52	17.77
CSC-111A	9/20/2022	14:07	11.543
CSC-117A	9/20/2022	15:36	0.0208
CSC-106	9/21/2022	10:45	0.2232

Figures

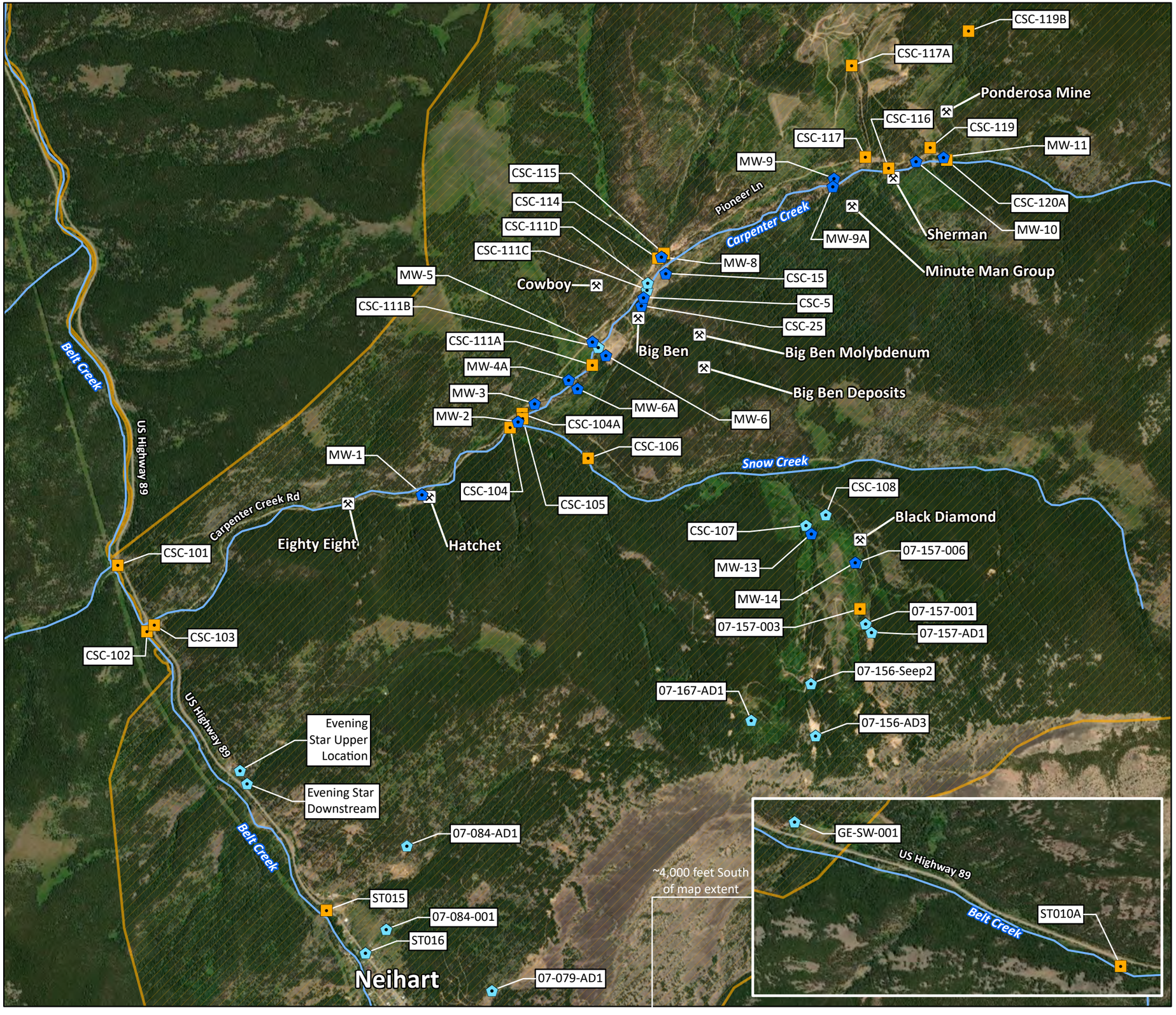

Figure 1
Carpenter Snow Creek
2022 Surface Water, Sediment, and Groundwater Sample Locations
Belt Creek, Carpenter Creek, & Snow Creek

- Groundwater Sample Locations
- Surface Water Sample Locations
- Surface Water and Sediment Sample Locations
- Mines
- Creeks
- Site Boundary

Date: December 14, 2022

Map Projection: UTM Zone 12N, WGS84, Meters

Data Sources:
Sample Locations: *EPA* (2022);
Mines: *EPA* (2022);
Creeks: *NHDPlus V2 - U.S. EPA & USGS* (2013);
Site Boundary: *U.S. EPA Region 8* (2017);
Base Map: *Esri World Imagery Map Service* (2022).

0 2,000 4,000 Feet

N

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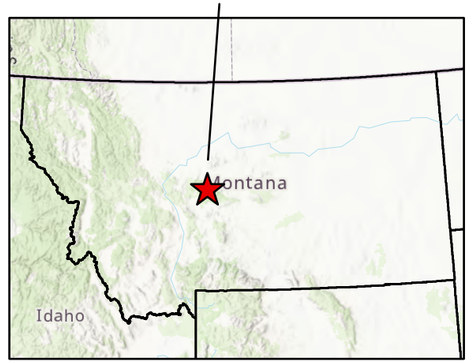
Area Enlarged



Attachment A
Flow Data Sheets

Discharge Measurement Summary

File Information

File name	CSC-120A_20220621-164742.ft
Start date and time	6/21/2022 4:11 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	6/21/2022 4:14:06 PM	End time	6/21/2022 4:45:11 PM
# Stations	26	Avg interval	40
Mean depth	0.198 m		
Mean velocity	0.665 m/s	Total width	3.962 m
Mean SNR	49.332 dB	Total area	0.784 m²
Mean temp	6.478 °C	Total discharge	0.521 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025027
Probe serial number	FT2P2024006
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC-120A
Site number	CSC-120A
Operator(s)	RH
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.3%	3.2%
Velocity	0.7%	12.6%
Width	0.1%	0.1%
Method	1.8%	
# Stations	2.0%	
Overall	2.9%	13.0%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg


Discharge chart
Station discharge (m³/s)
0.04
0.03
0.02
0.01
0
2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6
m
Velocity chart
Velocity (m/s)
1
0.5
0
2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6
m
Depth chart
Depth (m)
0.1
0.2
0.3
2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6
m

Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q
0	4:14 PM	2.743	None	0.030	0.000	0.000	0	0.000	1.000	0.144	0.003	0.000	0.084
1	4:14 PM	2.941	0.6	0.122	0.600	0.073	80	0.144	1.000	0.144	0.024	0.003	0.668
2	4:15 PM	3.139	0.6	0.213	0.600	0.128	80	0.353	1.000	0.353	0.042	0.015	2.861
3	4:16 PM	3.338	0.6	0.183	0.600	0.110	80	0.326	1.000	0.326	0.036	0.012	2.266
4	4:18 PM	3.536	0.6	0.213	0.600	0.128	80	0.333	1.000	0.333	0.042	0.014	2.705
5	4:19 PM	3.734	0.6	0.213	0.600	0.128	80	0.314	1.000	0.314	0.042	0.013	2.548
6	4:20 PM	3.932	0.6	0.213	0.600	0.128	80	0.367	1.000	0.367	0.042	0.016	2.981
7	4:22 PM	4.130	0.6	0.213	0.600	0.128	80	0.314	1.000	0.314	0.042	0.013	2.548
8	4:23 PM	4.328	0.6	0.152	0.600	0.091	80	0.379	1.000	0.379	0.030	0.011	2.199
9	4:24 PM	4.526	0.6	0.152	0.600	0.091	80	0.520	1.000	0.520	0.030	0.016	3.013
10	4:25 PM	4.724	0.6	0.152	0.600	0.091	80	0.467	1.000	0.467	0.030	0.014	2.708
11	4:26 PM	4.923	0.6	0.183	0.600	0.110	80	0.997	1.000	0.997	0.028	0.028	5.333
12	4:45 PM	5.029	0.6	0.183	0.600	0.110	80	0.786	1.000	0.786	0.018	0.014	2.735
13	4:28 PM	5.121	0.6	0.213	0.600	0.128	80	1.273	1.000	1.273	0.031	0.039	7.551
14	4:29 PM	5.319	0.6	0.244	0.600	0.146	80	0.135	1.000	0.135	0.048	0.007	1.253
15	4:30 PM	5.517	0.6	0.213	0.600	0.128	80	1.258	1.000	1.258	0.031	0.039	7.460
16	4:42 PM	5.608	0.6	0.244	0.600	0.146	80	1.229	1.000	1.229	0.024	0.030	5.697
17	4:32 PM	5.715	0.6	0.274	0.600	0.165	80	1.335	1.000	1.335	0.025	0.033	6.427
18	4:43 PM	5.791	0.6	0.274	0.600	0.165	80	1.189	1.000	1.189	0.027	0.032	6.200
19	4:33 PM	5.913	0.6	0.183	0.600	0.110	80	1.365	1.000	1.365	0.020	0.027	5.114
20	4:38 PM	6.005	0.6	0.244	0.600	0.146	80	-0.016	1.000	-0.016	0.024	0.000	-0.075
21	4:34 PM	6.111	0.6	0.305	0.600	0.183	80	1.186	1.000	1.186	0.028	0.033	6.347
22	4:40 PM	6.187	0.6	0.244	0.600	0.146	80	1.248	1.000	1.248	0.024	0.030	5.786
23	4:35 PM	6.309	0.6	0.244	0.600	0.146	80	0.872	1.000	0.872	0.039	0.034	6.533
24	4:37 PM	6.507	0.6	0.244	0.600	0.146	80	0.919	1.000	0.919	0.048	0.044	8.526
25	4:38 PM	6.706	None	0.030	0.000	0.000	0	0.000	1.000	0.919	0.003	0.003	0.533

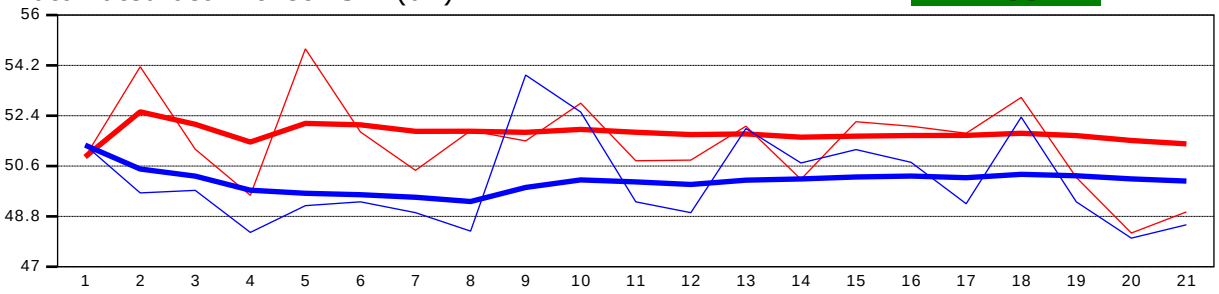
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	4:14 PM	2.941	0.6	0.122	0.600	0.073	Standard Error > QC
2	4:15 PM	3.139	0.6	0.213	0.600	0.128	Standard Error > QC
3	4:16 PM	3.338	0.6	0.183	0.600	0.110	Standard Error > QC,Velocity Angle > QC
4	4:18 PM	3.536	0.6	0.213	0.600	0.128	Standard Error > QC
5	4:19 PM	3.734	0.6	0.213	0.600	0.128	Standard Error > QC
6	4:20 PM	3.932	0.6	0.213	0.600	0.128	Standard Error > QC
7	4:22 PM	4.130	0.6	0.213	0.600	0.128	Standard Error > QC
8	4:23 PM	4.328	0.6	0.152	0.600	0.091	Standard Error > QC
9	4:24 PM	4.526	0.6	0.152	0.600	0.091	Standard Error > QC
10	4:25 PM	4.724	0.6	0.152	0.600	0.091	Standard Error > QC
11	4:26 PM	4.923	0.6	0.183	0.600	0.110	Standard Error > QC
12	4:45 PM	5.029	0.6	0.183	0.600	0.110	Standard Error > QC
13	4:28 PM	5.121	0.6	0.213	0.600	0.128	Standard Error > QC
14	4:29 PM	5.319	0.6	0.244	0.600	0.146	Standard Error > QC,Velocity Angle > QC
15	4:30 PM	5.517	0.6	0.213	0.600	0.128	Standard Error > QC
16	4:42 PM	5.608	0.6	0.244	0.600	0.146	Standard Error > QC
17	4:32 PM	5.715	0.6	0.274	0.600	0.165	Standard Error > QC
18	4:43 PM	5.791	0.6	0.274	0.600	0.165	Standard Error > QC
19	4:33 PM	5.913	0.6	0.183	0.600	0.110	Standard Error > QC
20	4:38 PM	6.005	0.6	0.244	0.600	0.146	Boundary Interference,Beam SNRs Not Similar,Large SNR Variation,SNR Threshold Variation,Standard Error > QC
21	4:34 PM	6.111	0.6	0.305	0.600	0.183	Beam SNRs Not Similar,SNR Threshold Variation,Standard Error > QC
22	4:40 PM	6.187	0.6	0.244	0.600	0.146	Standard Error > QC
23	4:35 PM	6.309	0.6	0.244	0.600	0.146	Standard Error > QC
24	4:37 PM	6.507	0.6	0.244	0.600	0.146	Standard Error > QC
25	4:38 PM	6.706	None	0.030	0.000	0.000	Water Depth > QC

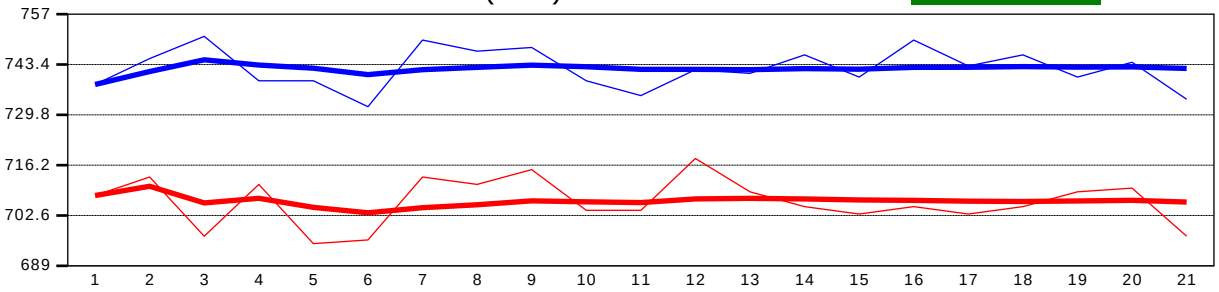
1/19/2023 12:23:26 PM

Automated beam check Start time 6/21/2022 4:13:41 PM

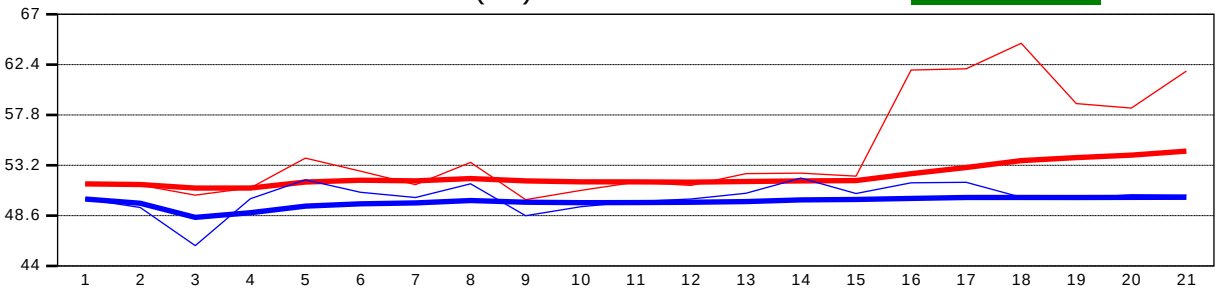
Automated beam check SNR(dB) PASS



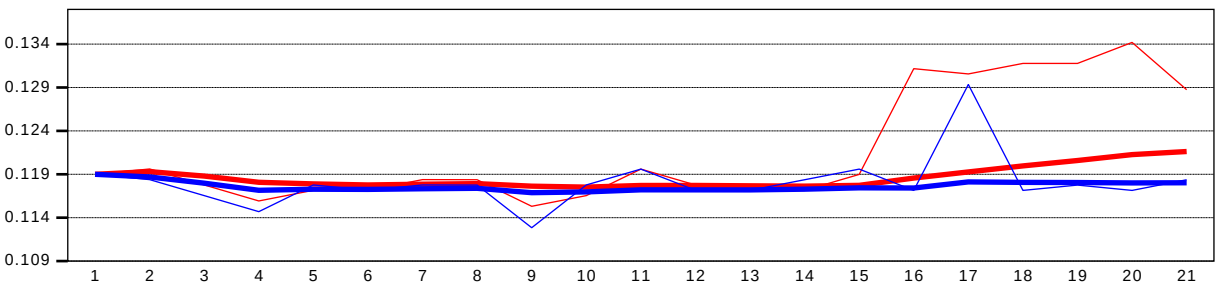
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC-116_20220621-161425.ft
Start date and time	6/21/2022 3:43 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	6/21/2022 3:44:02 PM	End time	6/21/2022 4:11:11 PM
# Stations	24	Avg interval	40
Mean depth	0.301 m		
Mean velocity	0.444 m/s	Total width	2.743 m
Mean SNR	52.298 dB	Total area	0.825 m²
Mean temp	6.739 °C	Total discharge	0.366 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025005
Probe serial number	FT2P2024003
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC-116
Site number	CSC-116
Operator(s)	CG
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.2%	2.8%
Velocity	1.5%	10.5%
Width	0.1%	0.1%
Method	2.0%	
# Stations	2.1%	
Overall	3.4%	11.0%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

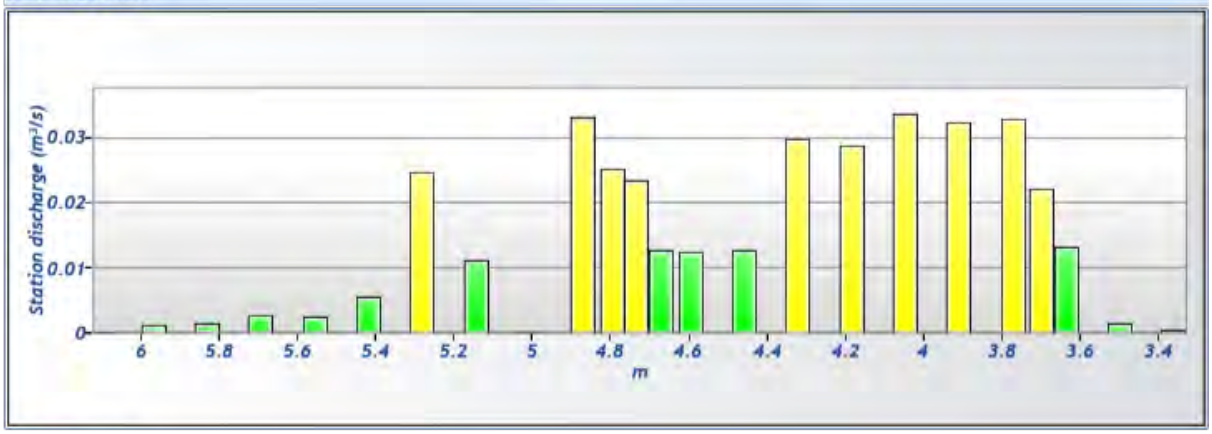
Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

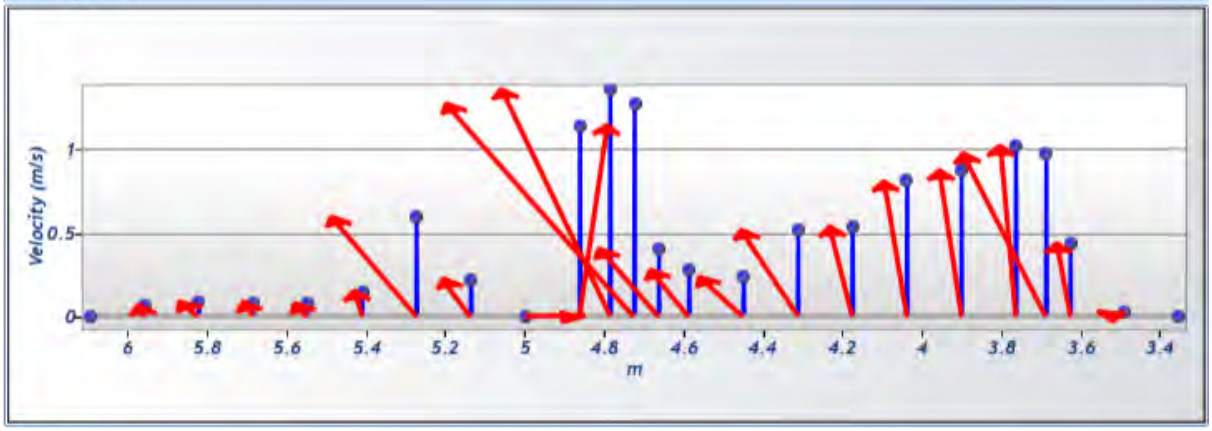
Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

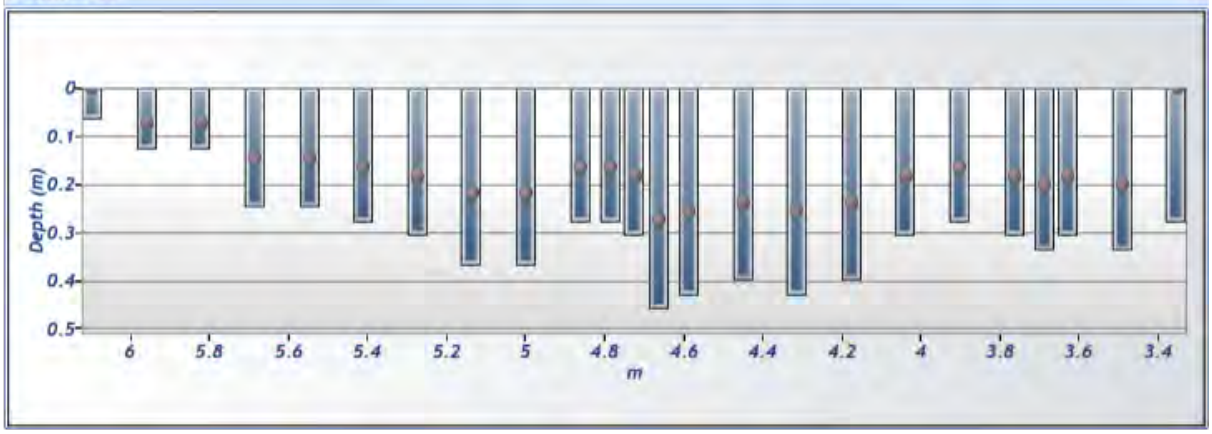
Discharge chart



Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	3:44 PM	3.353	None	0.274	0.000	0.000	0	0.000	1.000	0.032	0.019	0.001	0.164	✓
1	3:44 PM	3.490	0.6	0.335	0.600	0.201	80	0.032	1.000	0.032	0.046	0.001	0.401	✓
2	3:46 PM	3.627	0.6	0.305	0.600	0.183	80	0.438	1.000	0.438	0.030	0.013	3.607	✓
3	4:08 PM	3.688	0.6	0.335	0.600	0.201	80	0.970	1.000	0.970	0.023	0.022	6.085	✓
4	3:47 PM	3.764	0.6	0.305	0.600	0.183	80	1.015	1.000	1.015	0.033	0.033	9.008	✓
5	3:48 PM	3.901	0.6	0.274	0.600	0.165	80	0.867	1.000	0.867	0.038	0.033	8.899	✓
6	3:49 PM	4.039	0.6	0.305	0.600	0.183	80	0.806	1.000	0.806	0.042	0.034	9.198	✓
7	3:50 PM	4.176	0.6	0.396	0.600	0.238	80	0.533	1.000	0.533	0.054	0.029	7.909	✓
8	3:52 PM	4.313	0.6	0.427	0.600	0.256	80	0.513	1.000	0.513	0.059	0.030	8.194	✓
9	3:53 PM	4.450	0.6	0.396	0.600	0.238	80	0.237	1.000	0.237	0.054	0.013	3.514	✓
10	3:54 PM	4.587	0.6	0.427	0.600	0.256	80	0.275	1.000	0.275	0.046	0.013	3.416	✓
11	4:11 PM	4.663	0.6	0.457	0.600	0.274	80	0.404	1.000	0.404	0.031	0.013	3.458	✓
12	3:55 PM	4.724	0.6	0.305	0.600	0.183	80	1.263	1.000	1.263	0.019	0.023	6.404	✓
13	4:09 PM	4.785	0.6	0.274	0.600	0.165	80	1.350	1.000	1.350	0.019	0.025	6.932	✓
14	3:56 PM	4.862	0.6	0.274	0.600	0.165	80	1.136	1.000	1.136	0.029	0.033	9.072	✓
15	3:58 PM	4.999	0.6	0.366	0.600	0.219	80	0.006	1.000	0.006	0.050	0.000	0.078	✓
16	3:59 PM	5.136	0.6	0.366	0.600	0.219	80	0.223	1.000	0.223	0.050	0.011	3.048	✓
17	4:00 PM	5.273	0.6	0.305	0.600	0.183	80	0.591	1.000	0.591	0.042	0.025	6.745	✓
18	4:01 PM	5.410	0.6	0.274	0.600	0.165	80	0.151	1.000	0.151	0.038	0.006	1.552	✓
19	4:03 PM	5.547	0.6	0.244	0.600	0.146	80	0.079	1.000	0.079	0.033	0.003	0.719	✓
20	4:04 PM	5.685	0.6	0.244	0.600	0.146	80	0.085	1.000	0.085	0.033	0.003	0.779	✓
21	4:05 PM	5.822	0.6	0.122	0.600	0.073	80	0.092	1.000	0.092	0.017	0.002	0.418	✓
22	4:06 PM	5.959	0.6	0.122	0.600	0.073	80	0.070	1.000	0.070	0.017	0.001	0.318	✓
23	4:07 PM	6.096	None	0.061	0.000	0.000	0	0.000	1.000	0.070	0.004	0.000	0.079	✓

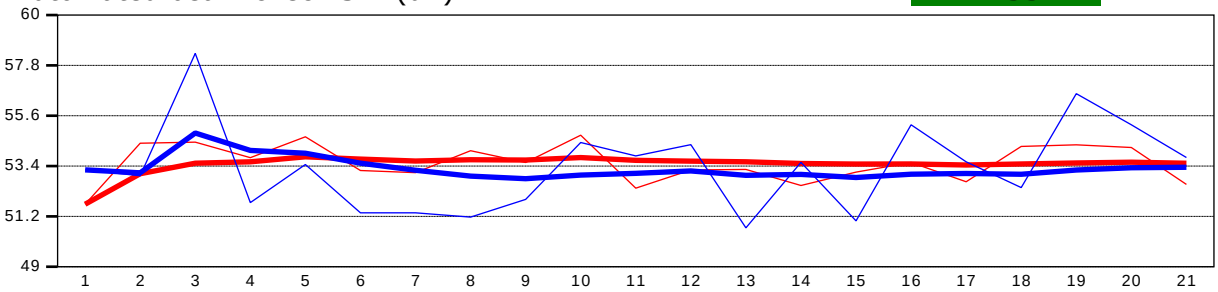
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	3:44 PM	3.490	0.6	0.335	0.600	0.201	Standard Error > QC,Velocity Angle > QC
2	3:46 PM	3.627	0.6	0.305	0.600	0.183	Standard Error > QC
3	4:08 PM	3.688	0.6	0.335	0.600	0.201	Standard Error > QC
4	3:47 PM	3.764	0.6	0.305	0.600	0.183	Stn Spacing > QC,Standard Error > QC
5	3:48 PM	3.901	0.6	0.274	0.600	0.165	Standard Error > QC
6	3:49 PM	4.039	0.6	0.305	0.600	0.183	Standard Error > QC
7	3:50 PM	4.176	0.6	0.396	0.600	0.238	Standard Error > QC
8	3:52 PM	4.313	0.6	0.427	0.600	0.256	Standard Error > QC
9	3:53 PM	4.450	0.6	0.396	0.600	0.238	Standard Error > QC,Velocity Angle > QC
10	3:54 PM	4.587	0.6	0.427	0.600	0.256	Standard Error > QC
11	4:11 PM	4.663	0.6	0.457	0.600	0.274	Standard Error > QC,Velocity Angle > QC
12	3:55 PM	4.724	0.6	0.305	0.600	0.183	Standard Error > QC,Velocity Angle > QC
13	4:09 PM	4.785	0.6	0.274	0.600	0.165	Standard Error > QC
14	3:56 PM	4.862	0.6	0.274	0.600	0.165	Standard Error > QC
15	3:58 PM	4.999	0.6	0.366	0.600	0.219	Standard Error > QC
16	3:59 PM	5.136	0.6	0.366	0.600	0.219	Standard Error > QC
17	4:00 PM	5.273	0.6	0.305	0.600	0.183	Standard Error > QC
18	4:01 PM	5.410	0.6	0.274	0.600	0.165	Standard Error > QC
19	4:03 PM	5.547	0.6	0.244	0.600	0.146	Velocity Angle > QC
21	4:05 PM	5.822	0.6	0.122	0.600	0.073	Velocity Angle > QC

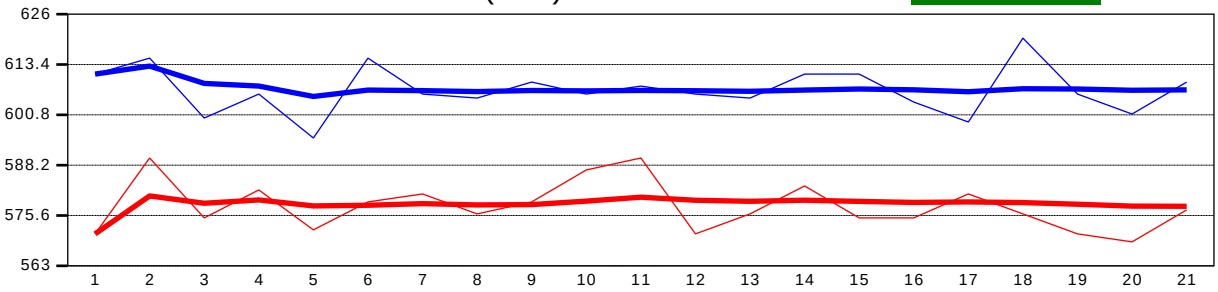
1/19/2023 12:22:56 PM

Automated beam check Start time 6/21/2022 3:43:44 PM

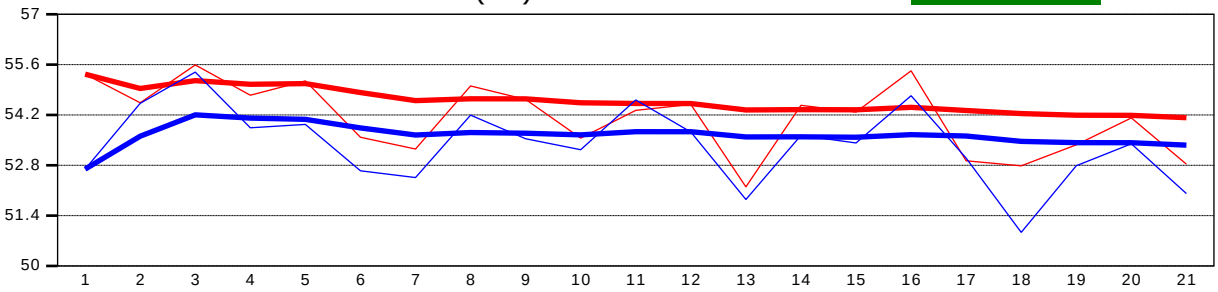
Automated beam check SNR(dB) PASS



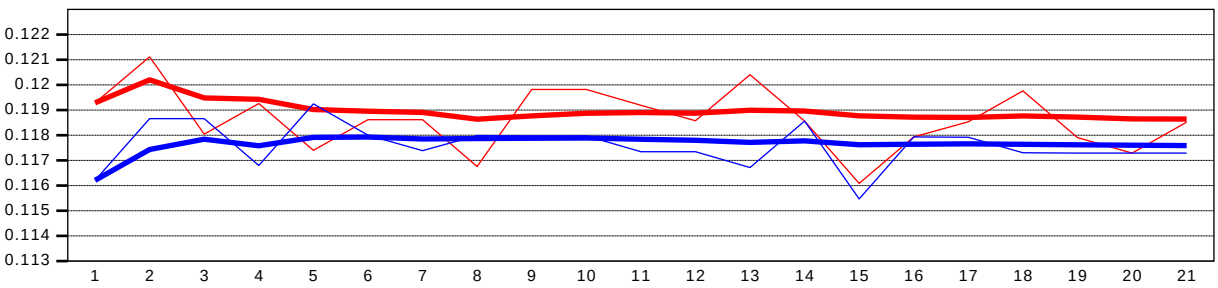
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC-111D_20220621-151323.ft
Start date and time	6/21/2022 2:40 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	6/21/2022 2:42:38 PM	End time	6/21/2022 3:10:06 PM
# Stations	21	Avg interval	40
Mean depth	0.285 m		
Mean velocity	0.786 m/s	Total width	2.438 m
Mean SNR	47.829 dB	Total area	0.695 m²
Mean temp	8.479 °C	Total discharge	0.546 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025027
Probe serial number	FT2P2024006
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC-111D
Site number	CSC-111D
Operator(s)	RH
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.2%	2.5%
Velocity	0.7%	5.6%
Width	0.1%	0.1%
Method	1.9%	
# Stations	2.4%	
Overall	3.3%	6.2%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

Data Collection Settings

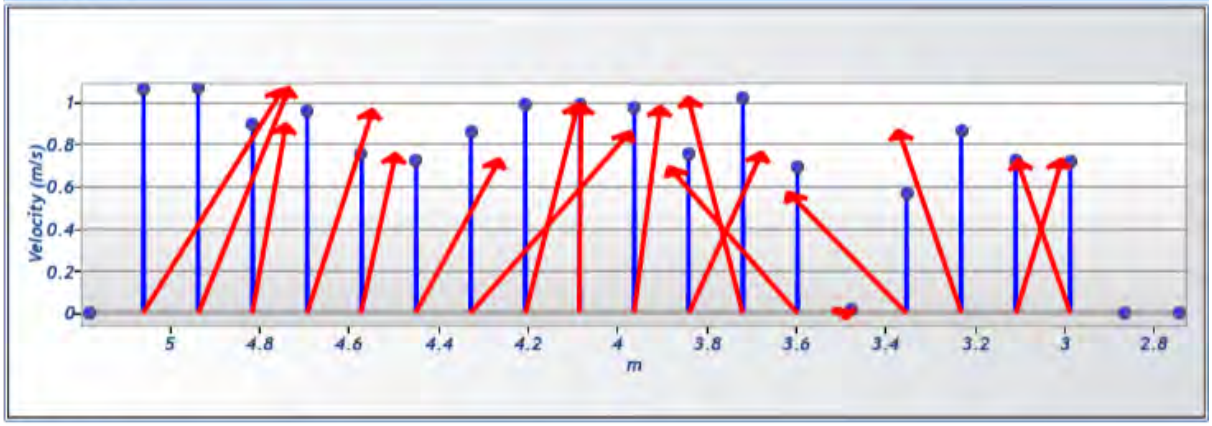
Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

Quality Control Settings

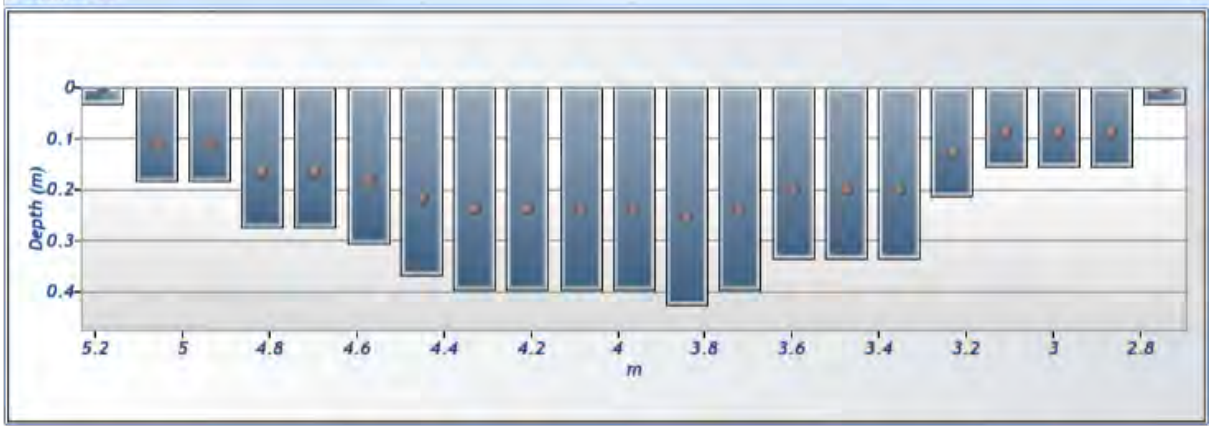
SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

Discharge chart

Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q
0	2:42 PM	2.743	None	0.030	0.000	0.000	0	0.000	1.000	-0.001	0.002	0.000	0.000
1	2:42 PM	2.865	0.6	0.152	0.600	0.091	80	-0.001	1.000	-0.001	0.019	0.000	-0.003
2	2:44 PM	2.987	0.6	0.152	0.600	0.091	80	0.721	1.000	0.721	0.019	0.013	2.453
3	2:45 PM	3.109	0.6	0.152	0.600	0.091	80	0.726	1.000	0.726	0.019	0.013	2.471
4	2:47 PM	3.231	0.6	0.213	0.600	0.128	80	0.863	1.000	0.863	0.026	0.022	4.111
5	2:48 PM	3.353	0.6	0.335	0.600	0.201	80	0.570	1.000	0.570	0.041	0.023	4.272
6	2:50 PM	3.475	0.6	0.335	0.600	0.201	80	0.018	1.000	0.018	0.041	0.001	0.134
7	2:51 PM	3.597	0.6	0.335	0.600	0.201	80	0.692	1.000	0.692	0.041	0.028	5.184
8	2:52 PM	3.719	0.6	0.396	0.600	0.238	80	1.021	1.000	1.021	0.048	0.049	9.031
9	2:55 PM	3.840	0.6	0.427	0.600	0.256	80	0.759	1.000	0.759	0.052	0.039	7.230
10	2:56 PM	3.962	0.6	0.396	0.600	0.238	80	0.975	1.000	0.975	0.048	0.047	8.630
11	2:58 PM	4.084	0.6	0.396	0.600	0.238	80	0.986	1.000	0.986	0.048	0.048	8.725
12	2:59 PM	4.206	0.6	0.396	0.600	0.238	80	0.988	1.000	0.988	0.048	0.048	8.747
13	3:00 PM	4.328	0.6	0.396	0.600	0.238	80	0.857	1.000	0.857	0.048	0.041	7.583
14	3:02 PM	4.450	0.6	0.366	0.600	0.219	80	0.725	1.000	0.725	0.045	0.032	5.925
15	3:03 PM	4.572	0.6	0.305	0.600	0.183	80	0.752	1.000	0.752	0.037	0.028	5.121
16	3:04 PM	4.694	0.6	0.274	0.600	0.165	80	0.960	1.000	0.960	0.033	0.032	5.881
17	3:06 PM	4.816	0.6	0.274	0.600	0.165	80	0.894	1.000	0.894	0.033	0.030	5.475
18	3:07 PM	4.938	0.6	0.183	0.600	0.110	80	1.065	1.000	1.065	0.022	0.024	4.351
19	3:09 PM	5.060	0.6	0.183	0.600	0.110	80	1.058	1.000	1.058	0.022	0.024	4.320
20	3:10 PM	5.182	None	0.030	0.000	0.000	0	0.000	1.000	1.058	0.002	0.002	0.360

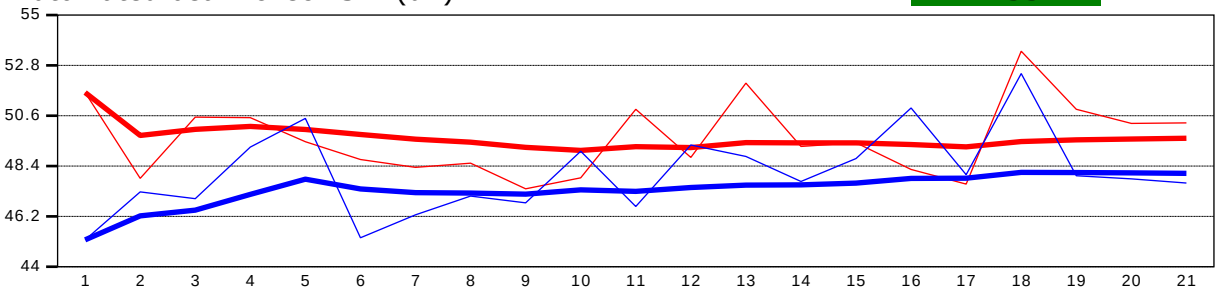
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	2:42 PM	2.865	0.6	0.152	0.600	0.091	Boundary Interference,Beam SNRs Not Similar,SNR Threshold Variation
2	2:44 PM	2.987	0.6	0.152	0.600	0.091	Standard Error > QC
3	2:45 PM	3.109	0.6	0.152	0.600	0.091	Standard Error > QC
4	2:47 PM	3.231	0.6	0.213	0.600	0.128	Standard Error > QC
5	2:48 PM	3.353	0.6	0.335	0.600	0.201	Standard Error > QC,Velocity Angle > QC
6	2:50 PM	3.475	0.6	0.335	0.600	0.201	Standard Error > QC
7	2:51 PM	3.597	0.6	0.335	0.600	0.201	Standard Error > QC,Velocity Angle > QC
8	2:52 PM	3.719	0.6	0.396	0.600	0.238	Standard Error > QC
9	2:55 PM	3.840	0.6	0.427	0.600	0.256	Standard Error > QC
10	2:56 PM	3.962	0.6	0.396	0.600	0.238	Standard Error > QC
11	2:58 PM	4.084	0.6	0.396	0.600	0.238	Standard Error > QC
12	2:59 PM	4.206	0.6	0.396	0.600	0.238	Standard Error > QC
13	3:00 PM	4.328	0.6	0.396	0.600	0.238	Standard Error > QC,Velocity Angle > QC
14	3:02 PM	4.450	0.6	0.366	0.600	0.219	Standard Error > QC
15	3:03 PM	4.572	0.6	0.305	0.600	0.183	Standard Error > QC
16	3:04 PM	4.694	0.6	0.274	0.600	0.165	Standard Error > QC
17	3:06 PM	4.816	0.6	0.274	0.600	0.165	Standard Error > QC
18	3:07 PM	4.938	0.6	0.183	0.600	0.110	Standard Error > QC
19	3:09 PM	5.060	0.6	0.183	0.600	0.110	Standard Error > QC

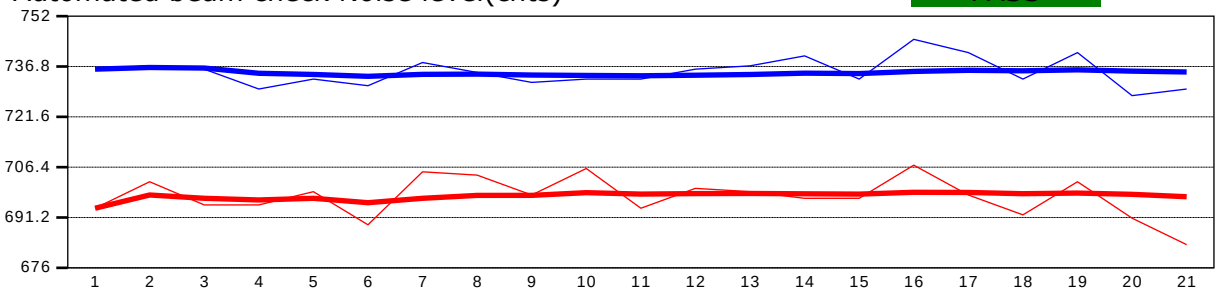
1/19/2023 12:20:19 PM

Automated beam check Start time 6/21/2022 2:42:10 PM

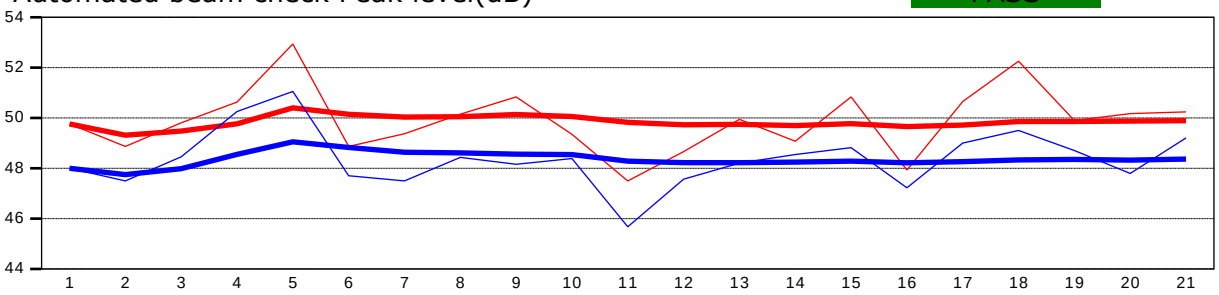
Automated beam check SNR(dB) PASS



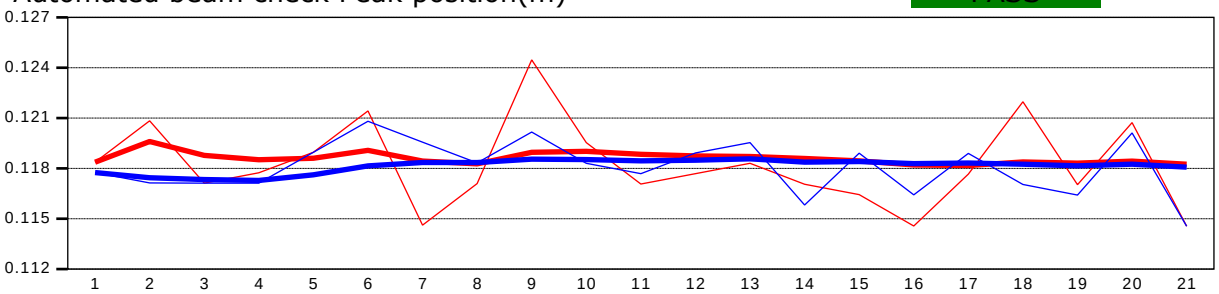
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC-111C_20220621-143407.ft
Start date and time	6/21/2022 2:03 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	6/21/2022 2:04:57 PM	End time	6/21/2022 2:30:48 PM
# Stations	22	Avg interval	40
Mean depth	0.245 m		
Mean velocity	0.901 m/s	Total width	3.048 m
Mean SNR	49.393 dB	Total area	0.748 m^2
Mean temp	7.746 °C	Total discharge	0.674 m^3/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025027
Probe serial number	FT2P2024006
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC-111C
Site number	CSC-111C
Operator(s)	RH
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.3%	3.6%
Velocity	0.6%	8.3%
Width	0.1%	0.1%
Method	2.0%	
# Stations	2.3%	
Overall	3.3%	9.1%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

Data Collection Settings

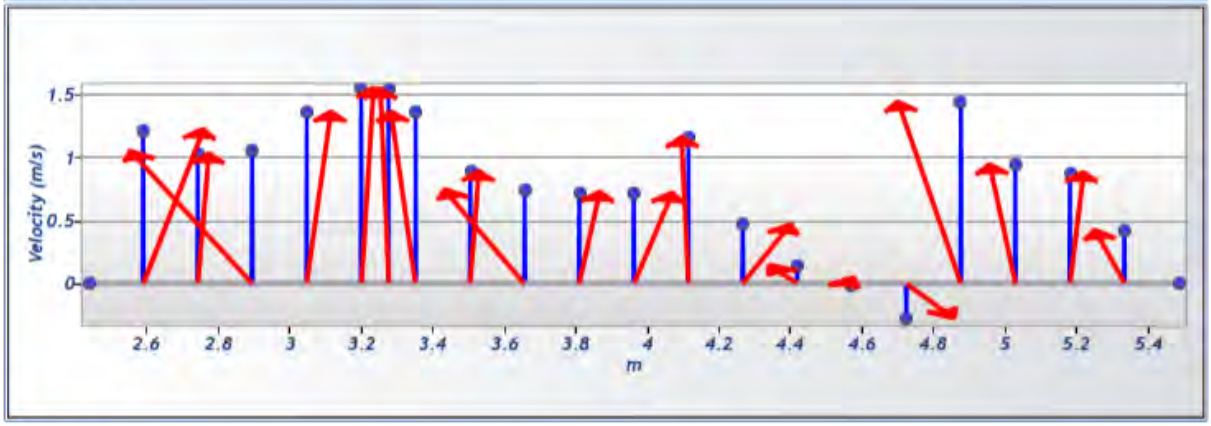
Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

Quality Control Settings

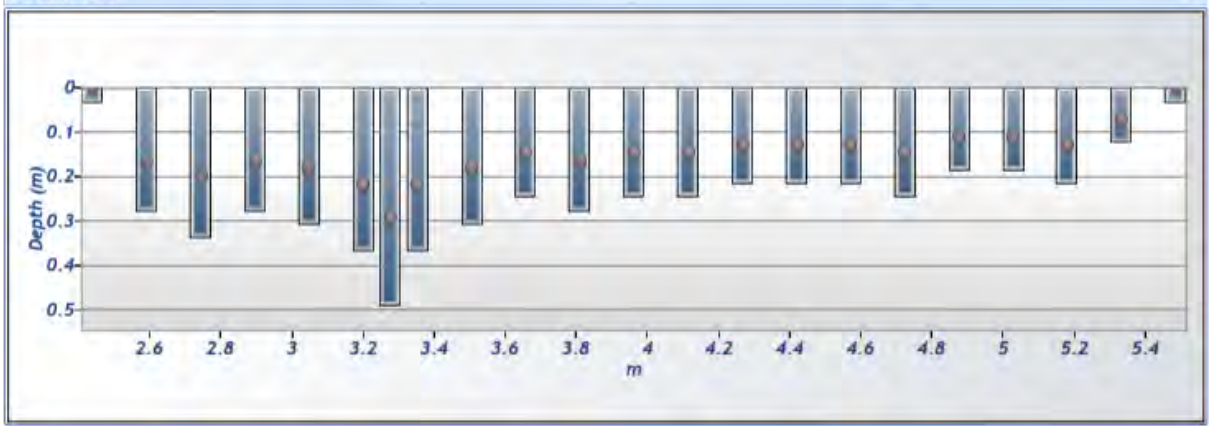
SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

Discharge chart

Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q
0	2:04 PM	2.438	None	0.030	0.000	0.000	0	0.000	1.000	1.220	0.002	0.003	0.420
1	2:05 PM	2.591	0.6	0.274	0.600	0.165	80	1.220	1.000	1.220	0.042	0.051	7.565
2	2:06 PM	2.743	0.6	0.335	0.600	0.201	80	1.030	1.000	1.030	0.051	0.053	7.808
3	2:07 PM	2.896	0.6	0.274	0.600	0.165	80	1.052	1.000	1.052	0.042	0.044	6.523
4	2:09 PM	3.048	0.6	0.305	0.600	0.183	80	1.355	1.000	1.355	0.046	0.063	9.341
5	2:10 PM	3.200	0.6	0.366	0.600	0.219	80	1.549	1.000	1.549	0.042	0.065	9.609
6	2:30 PM	3.277	0.6	0.488	0.600	0.293	80	1.542	1.000	1.542	0.037	0.057	8.502
7	2:11 PM	3.353	0.6	0.366	0.600	0.219	80	1.356	1.000	1.356	0.042	0.057	8.414
8	2:13 PM	3.505	0.6	0.305	0.600	0.183	80	0.888	1.000	0.888	0.046	0.041	6.118
9	2:14 PM	3.658	0.6	0.244	0.600	0.146	80	0.740	1.000	0.740	0.037	0.028	4.081
10	2:15 PM	3.810	0.6	0.274	0.600	0.165	80	0.724	1.000	0.724	0.042	0.030	4.494
11	2:16 PM	3.962	0.6	0.244	0.600	0.146	80	0.714	1.000	0.714	0.037	0.027	3.937
12	2:18 PM	4.115	0.6	0.244	0.600	0.146	80	1.158	1.000	1.158	0.037	0.043	6.384
13	2:19 PM	4.267	0.6	0.213	0.600	0.128	80	0.468	1.000	0.468	0.033	0.015	2.256
14	2:21 PM	4.420	0.6	0.213	0.600	0.128	80	0.143	1.000	0.143	0.033	0.005	0.691
15	2:22 PM	4.572	0.6	0.213	0.600	0.128	80	-0.010	1.000	-0.010	0.033	0.000	-0.050
16	2:24 PM	4.724	0.6	0.244	0.600	0.146	80	-0.275	1.000	-0.275	0.037	-0.010	-1.517
17	2:25 PM	4.877	0.6	0.183	0.600	0.110	80	1.442	1.000	1.442	0.028	0.040	5.962
18	2:26 PM	5.029	0.6	0.183	0.600	0.110	80	0.942	1.000	0.942	0.028	0.026	3.897
19	2:27 PM	5.182	0.6	0.213	0.600	0.128	80	0.880	1.000	0.880	0.033	0.029	4.248
20	2:29 PM	5.334	0.6	0.122	0.600	0.073	80	0.424	1.000	0.424	0.019	0.008	1.170
21	2:30 PM	5.486	None	0.030	0.000	0.000	0	0.000	1.000	0.424	0.002	0.001	0.146

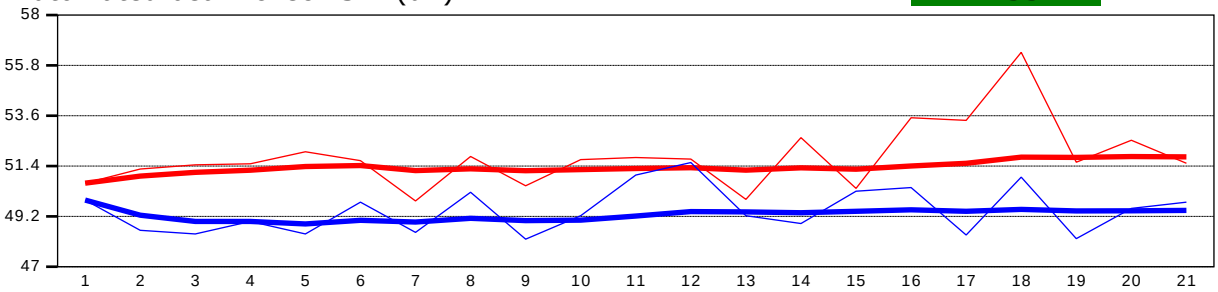
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	2:05 PM	2.591	0.6	0.274	0.600	0.165	Standard Error > QC
2	2:06 PM	2.743	0.6	0.335	0.600	0.201	Standard Error > QC
3	2:07 PM	2.896	0.6	0.274	0.600	0.165	Standard Error > QC
4	2:09 PM	3.048	0.6	0.305	0.600	0.183	Standard Error > QC
5	2:10 PM	3.200	0.6	0.366	0.600	0.219	Standard Error > QC
6	2:30 PM	3.277	0.6	0.488	0.600	0.293	Standard Error > QC
7	2:11 PM	3.353	0.6	0.366	0.600	0.219	Standard Error > QC
8	2:13 PM	3.505	0.6	0.305	0.600	0.183	Standard Error > QC
9	2:14 PM	3.658	0.6	0.244	0.600	0.146	Standard Error > QC
10	2:15 PM	3.810	0.6	0.274	0.600	0.165	Standard Error > QC
11	2:16 PM	3.962	0.6	0.244	0.600	0.146	Standard Error > QC
12	2:18 PM	4.115	0.6	0.244	0.600	0.146	Standard Error > QC
13	2:19 PM	4.267	0.6	0.213	0.600	0.128	Standard Error > QC,High % Spikes
14	2:21 PM	4.420	0.6	0.213	0.600	0.128	Standard Error > QC,Velocity Angle > QC
15	2:22 PM	4.572	0.6	0.213	0.600	0.128	Standard Error > QC
16	2:24 PM	4.724	0.6	0.244	0.600	0.146	Standard Error > QC,Velocity Angle > QC
17	2:25 PM	4.877	0.6	0.183	0.600	0.110	Standard Error > QC
18	2:26 PM	5.029	0.6	0.183	0.600	0.110	Standard Error > QC
19	2:27 PM	5.182	0.6	0.213	0.600	0.128	Standard Error > QC
20	2:29 PM	5.334	0.6	0.122	0.600	0.073	Boundary Interference

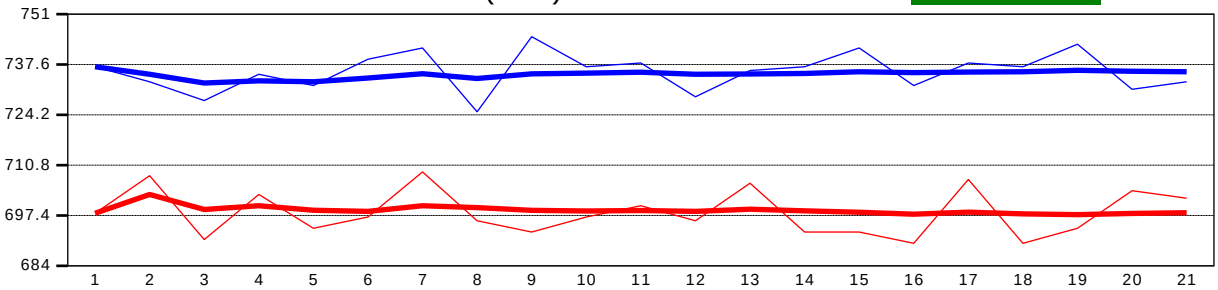
1/19/2023 12:19:36 PM

Automated beam check Start time 6/21/2022 2:04:24 PM

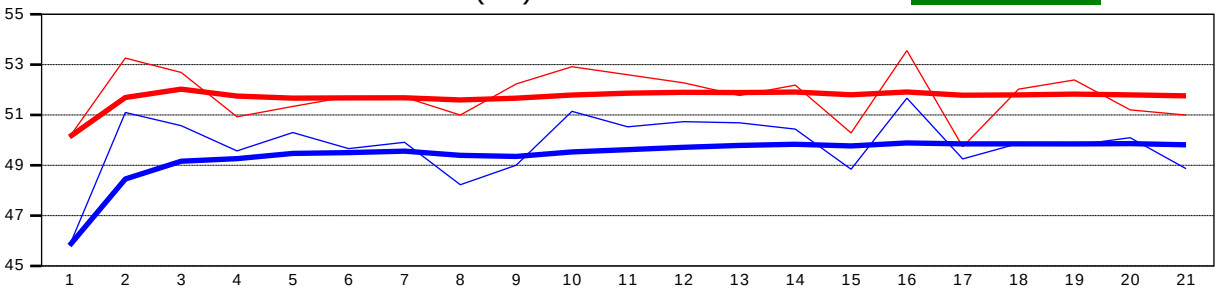
Automated beam check SNR(dB) PASS



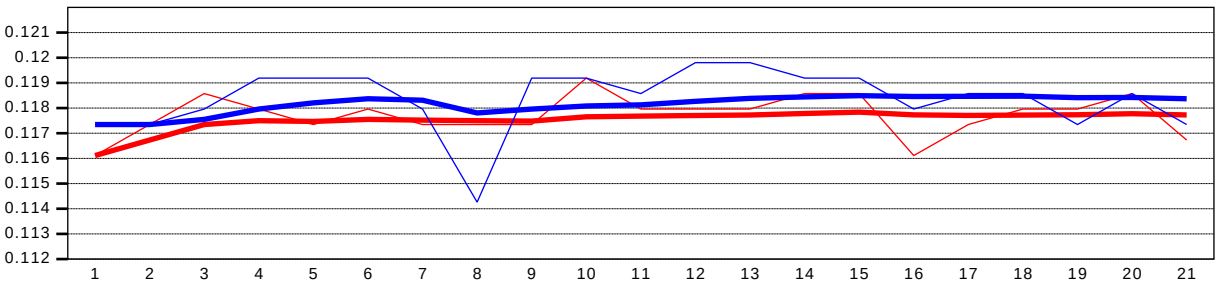
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC-111B_20220621-140645.ft
Start date and time	6/21/2022 1:38 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	6/21/2022 1:39:55 PM	End time	6/21/2022 2:02:37 PM
# Stations	22	Avg interval	40
Mean depth	0.187 m		
Mean velocity	0.631 m/s	Total width	4.877 m
Mean SNR	49.952 dB	Total area	0.912 m²
Mean temp	7.878 °C	Total discharge	0.575 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025005
Probe serial number	FT2P2024003
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC-111B
Site number	CSC-111B
Operator(s)	CG
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.4%	3.6%
Velocity	0.8%	6.2%
Width	0.1%	0.1%
Method	1.9%	
# Stations	2.3%	
Overall	3.2%	7.2%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

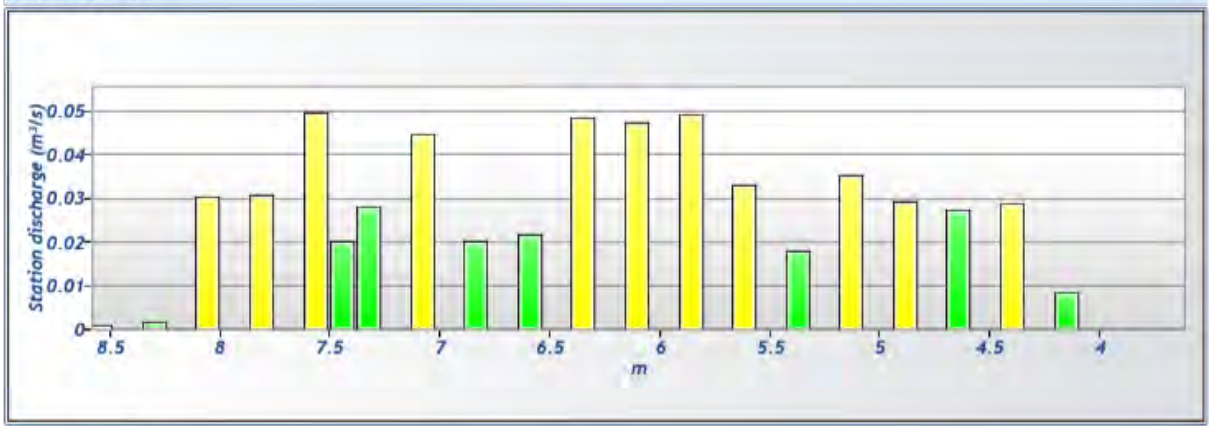
Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

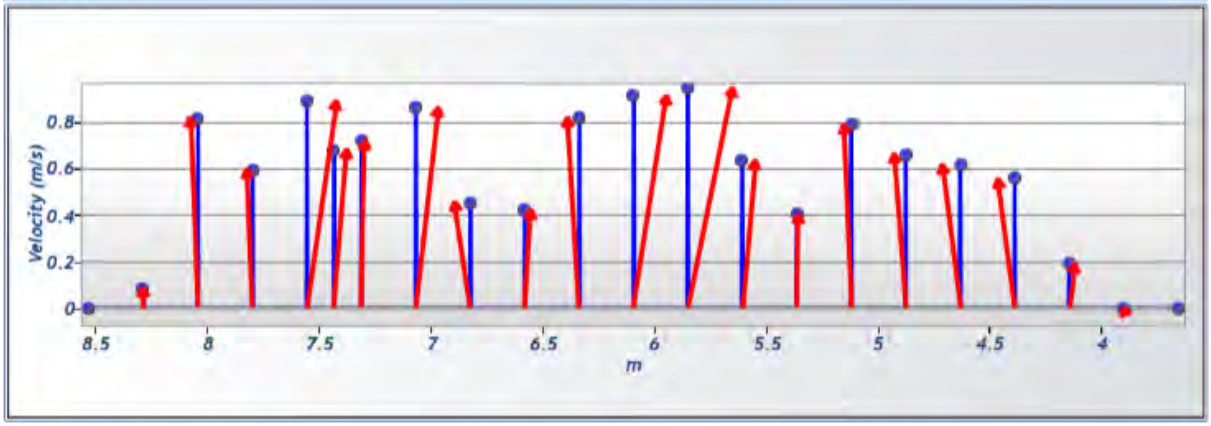
Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

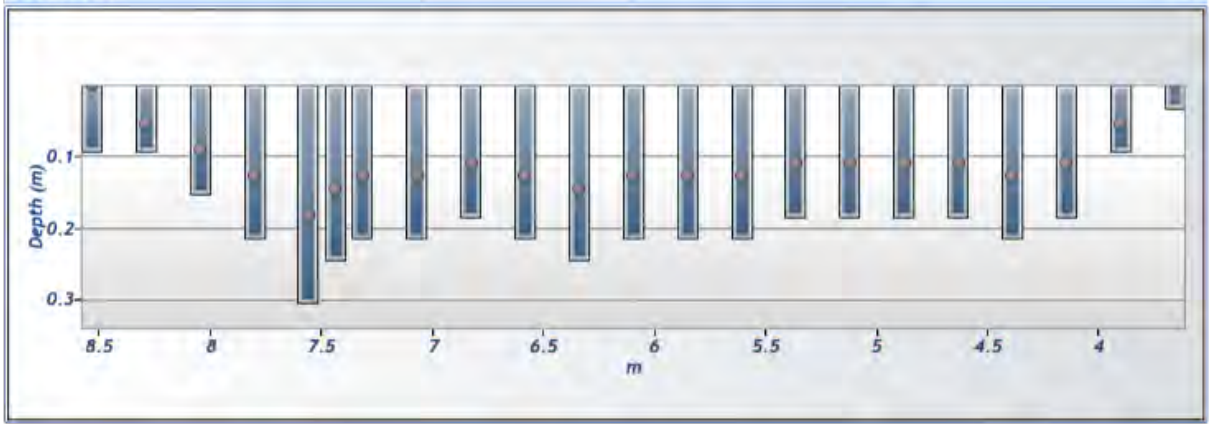
Discharge chart



Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q
0	1:39 PM	3.658	None	0.030	0.000	0.000	0	0.000	1.000	0.002	0.004	0.000	0.001
1	1:40 PM	3.901	0.6	0.091	0.600	0.055	80	0.002	1.000	0.002	0.022	0.000	0.008
2	1:41 PM	4.145	0.6	0.183	0.600	0.110	80	0.191	1.000	0.191	0.045	0.009	1.483
3	1:42 PM	4.389	0.6	0.213	0.600	0.128	80	0.556	1.000	0.556	0.052	0.029	5.029
4	1:43 PM	4.633	0.6	0.183	0.600	0.110	80	0.613	1.000	0.613	0.045	0.027	4.756
5	1:44 PM	4.877	0.6	0.183	0.600	0.110	80	0.661	1.000	0.661	0.045	0.029	5.124
6	1:46 PM	5.121	0.6	0.183	0.600	0.110	80	0.791	1.000	0.791	0.045	0.035	6.132
7	1:47 PM	5.364	0.6	0.183	0.600	0.110	80	0.403	1.000	0.403	0.045	0.018	3.127
8	1:48 PM	5.608	0.6	0.213	0.600	0.128	80	0.635	1.000	0.635	0.052	0.033	5.740
9	1:49 PM	5.852	0.6	0.213	0.600	0.128	80	0.946	1.000	0.946	0.052	0.049	8.556
10	1:50 PM	6.096	0.6	0.213	0.600	0.128	80	0.911	1.000	0.911	0.052	0.047	8.243
11	1:51 PM	6.340	0.6	0.244	0.600	0.146	80	0.818	1.000	0.818	0.059	0.049	8.451
12	1:52 PM	6.584	0.6	0.213	0.600	0.128	80	0.423	1.000	0.423	0.052	0.022	3.828
13	1:54 PM	6.828	0.6	0.183	0.600	0.110	80	0.454	1.000	0.454	0.045	0.020	3.517
14	1:55 PM	7.071	0.6	0.213	0.600	0.128	80	0.861	1.000	0.861	0.052	0.045	7.785
15	1:56 PM	7.315	0.6	0.213	0.600	0.128	80	0.720	1.000	0.720	0.039	0.028	4.884
16	2:02 PM	7.437	0.6	0.244	0.600	0.146	80	0.682	1.000	0.682	0.030	0.020	3.526
17	1:57 PM	7.559	0.6	0.305	0.600	0.183	80	0.890	1.000	0.890	0.056	0.050	8.626
18	1:58 PM	7.803	0.6	0.213	0.600	0.128	80	0.598	1.000	0.598	0.052	0.031	5.405
19	1:59 PM	8.047	0.6	0.152	0.600	0.091	80	0.817	1.000	0.817	0.037	0.030	5.276
20	2:01 PM	8.291	0.6	0.091	0.600	0.055	80	0.086	1.000	0.086	0.022	0.002	0.335
21	2:02 PM	8.534	None	0.091	0.000	0.000	0	0.000	1.000	0.086	0.011	0.001	0.167

Quality control warnings

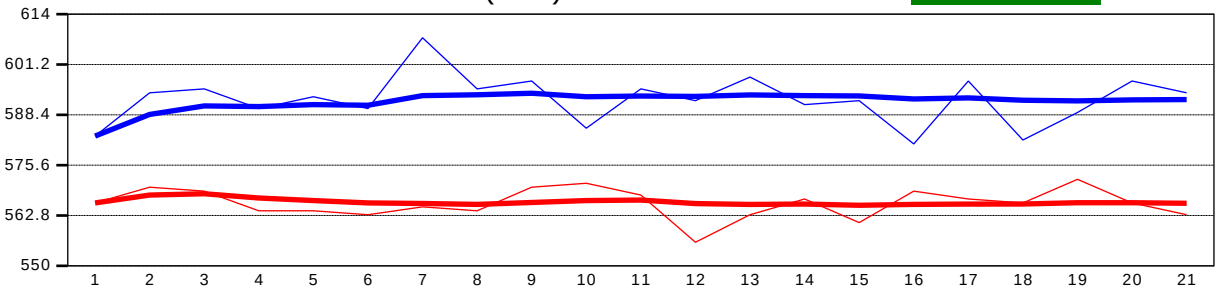
St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	1:40 PM	3.901	0.6	0.091	0.600	0.055	SNR Threshold Variation
2	1:41 PM	4.145	0.6	0.183	0.600	0.110	Standard Error > QC
3	1:42 PM	4.389	0.6	0.213	0.600	0.128	Standard Error > QC
4	1:43 PM	4.633	0.6	0.183	0.600	0.110	Standard Error > QC
5	1:44 PM	4.877	0.6	0.183	0.600	0.110	Standard Error > QC
6	1:46 PM	5.121	0.6	0.183	0.600	0.110	Standard Error > QC
7	1:47 PM	5.364	0.6	0.183	0.600	0.110	Standard Error > QC
8	1:48 PM	5.608	0.6	0.213	0.600	0.128	Standard Error > QC
9	1:49 PM	5.852	0.6	0.213	0.600	0.128	Standard Error > QC
10	1:50 PM	6.096	0.6	0.213	0.600	0.128	Standard Error > QC
11	1:51 PM	6.340	0.6	0.244	0.600	0.146	Standard Error > QC
12	1:52 PM	6.584	0.6	0.213	0.600	0.128	Standard Error > QC
13	1:54 PM	6.828	0.6	0.183	0.600	0.110	Standard Error > QC
14	1:55 PM	7.071	0.6	0.213	0.600	0.128	Standard Error > QC
15	1:56 PM	7.315	0.6	0.213	0.600	0.128	Standard Error > QC
16	2:02 PM	7.437	0.6	0.244	0.600	0.146	Standard Error > QC
17	1:57 PM	7.559	0.6	0.305	0.600	0.183	Standard Error > QC
18	1:58 PM	7.803	0.6	0.213	0.600	0.128	Standard Error > QC
19	1:59 PM	8.047	0.6	0.152	0.600	0.091	Standard Error > QC
20	2:01 PM	8.291	0.6	0.091	0.600	0.055	Standard Error > QC

1/19/2023 12:19:15 PM

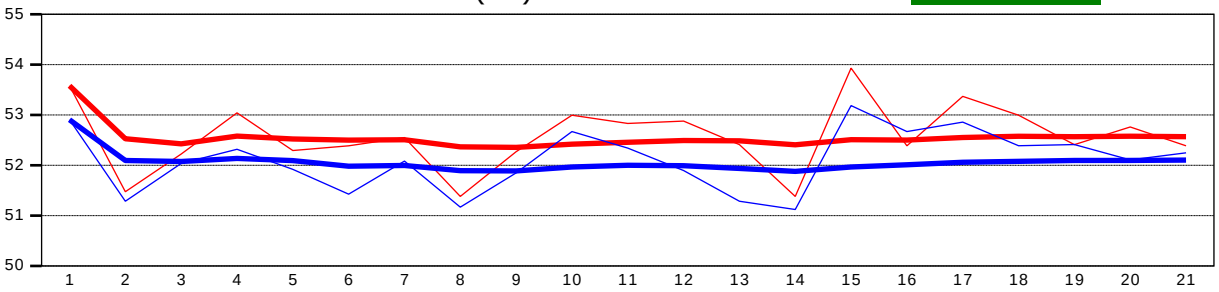
Automated beam check Start time 6/21/2022 1:39:25 PM

Automated beam check SNR(dB) PASS

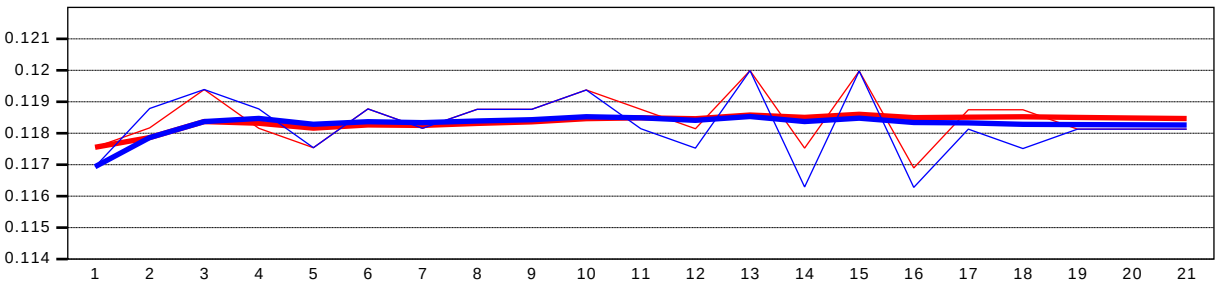
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC-111A_20220621-133832.ft
Start date and time	6/21/2022 12:58 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	6/21/2022 1:00:01 PM	End time	6/21/2022 1:28:01 PM
# Stations	24	Avg interval	40
Mean depth	0.255 m		
Mean velocity	0.657 m/s	Total width	3.048 m
Mean SNR	49.878 dB	Total area	0.778 m²
Mean temp	7.446 °C	Total discharge	0.511 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025005
Probe serial number	FT2P2024003
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC-111A
Site number	CSC-111A
Operator(s)	CG
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.2%	4.7%
Velocity	1.1%	6.5%
Width	0.1%	0.1%
Method	2.0%	
# Stations	2.1%	
Overall	3.3%	8.1%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

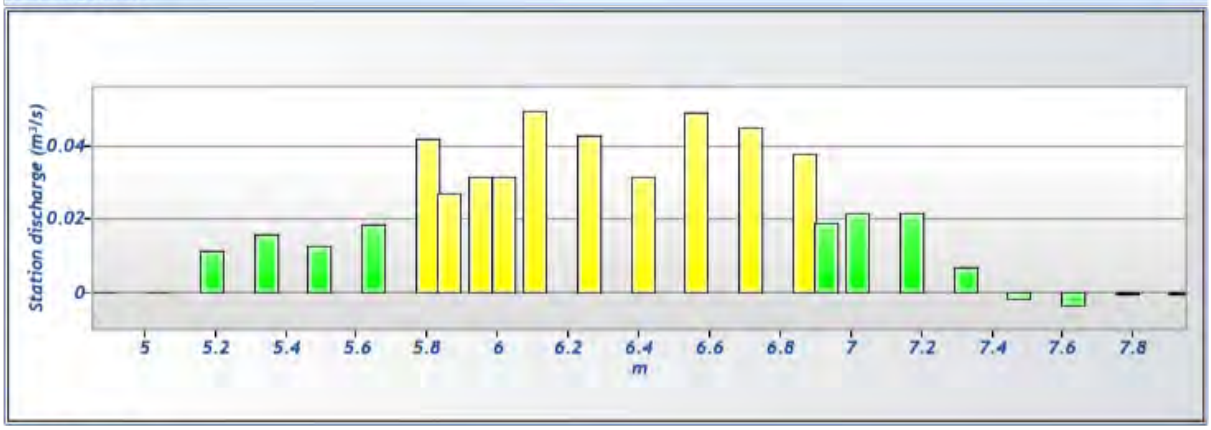
Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

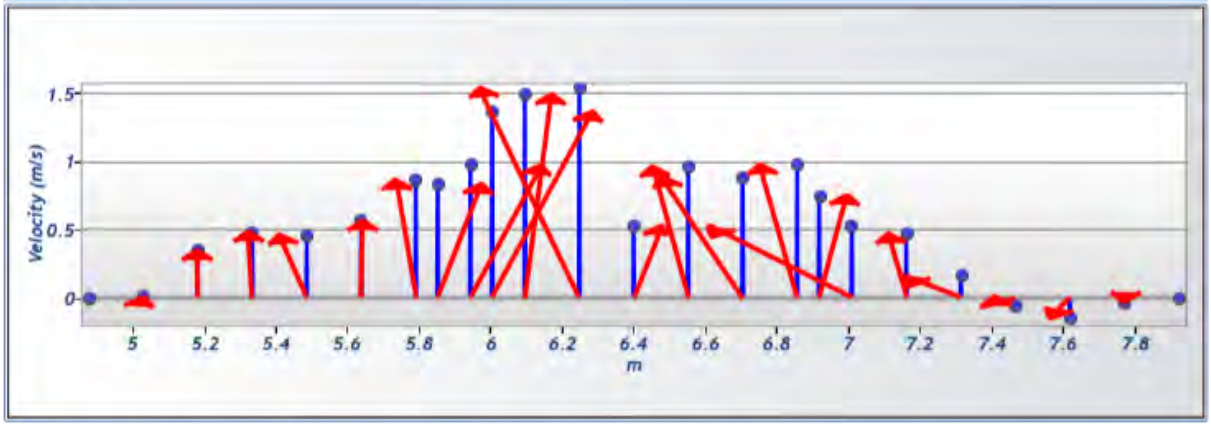
Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

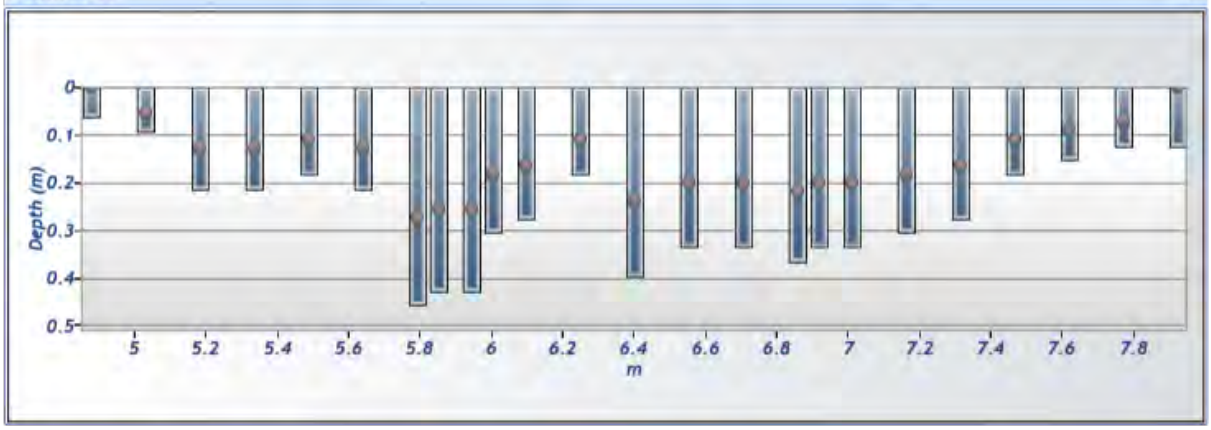
Discharge chart



Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	1:00 PM	4.877	None	0.061	0.000	0.000	0	0.000	1.000	0.009	0.005	0.000	0.008	
1	1:00 PM	5.029	0.6	0.091	0.600	0.055	80	0.009	1.000	0.009	0.014	0.000	0.025	
2	1:01 PM	5.182	0.6	0.213	0.600	0.128	80	0.348	1.000	0.348	0.033	0.011	2.216	
3	1:03 PM	5.334	0.6	0.213	0.600	0.128	80	0.483	1.000	0.483	0.033	0.016	3.071	
4	1:04 PM	5.486	0.6	0.183	0.600	0.110	80	0.461	1.000	0.461	0.028	0.013	2.512	
5	1:05 PM	5.639	0.6	0.213	0.600	0.128	80	0.567	1.000	0.567	0.033	0.018	3.607	
6	1:06 PM	5.791	0.6	0.457	0.600	0.274	80	0.862	1.000	0.862	0.049	0.042	8.229	
7	1:28 PM	5.852	0.6	0.427	0.600	0.256	80	0.832	1.000	0.832	0.033	0.027	5.295	
8	1:07 PM	5.944	0.6	0.427	0.600	0.256	80	0.971	1.000	0.971	0.033	0.032	6.180	
9	1:26 PM	6.005	0.6	0.305	0.600	0.183	80	1.361	1.000	1.361	0.023	0.032	6.186	
10	1:09 PM	6.096	0.6	0.274	0.600	0.165	80	1.490	1.000	1.490	0.033	0.050	9.753	
11	1:10 PM	6.248	0.6	0.183	0.600	0.110	80	1.538	1.000	1.538	0.028	0.043	8.387	
12	1:11 PM	6.401	0.6	0.396	0.600	0.238	80	0.525	1.000	0.525	0.060	0.032	6.209	
13	1:13 PM	6.553	0.6	0.335	0.600	0.201	80	0.964	1.000	0.964	0.051	0.049	9.637	
14	1:14 PM	6.706	0.6	0.335	0.600	0.201	80	0.882	1.000	0.882	0.051	0.045	8.824	
15	1:15 PM	6.858	0.6	0.366	0.600	0.219	80	0.973	1.000	0.973	0.039	0.038	7.433	
16	1:24 PM	6.919	0.6	0.335	0.600	0.201	80	0.752	1.000	0.752	0.026	0.019	3.757	
17	1:16 PM	7.010	0.6	0.335	0.600	0.201	80	0.532	1.000	0.532	0.041	0.022	4.252	
18	1:18 PM	7.163	0.6	0.305	0.600	0.183	80	0.469	1.000	0.469	0.046	0.022	4.265	
19	1:19 PM	7.315	0.6	0.274	0.600	0.165	80	0.166	1.000	0.166	0.042	0.007	1.358	
20	1:20 PM	7.468	0.6	0.183	0.600	0.110	80	-0.064	1.000	-0.064	0.028	-0.002	-0.350	
21	1:21 PM	7.620	0.6	0.152	0.600	0.091	80	-0.148	1.000	-0.148	0.023	-0.003	-0.673	
22	1:23 PM	7.772	0.6	0.122	0.600	0.073	80	-0.033	1.000	-0.033	0.019	-0.001	-0.121	
23	1:24 PM	7.925	None	0.122	0.000	0.000	0	0.000	1.000	-0.033	0.009	0.000	-0.061	

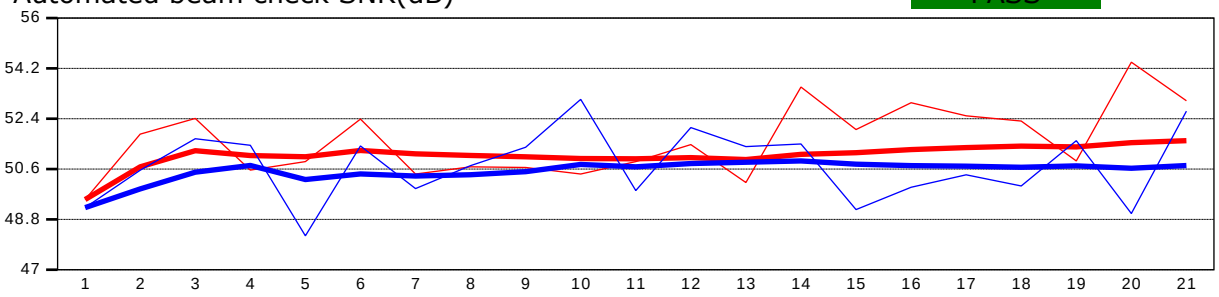
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	1:00 PM	5.029	0.6	0.091	0.600	0.055	Boundary Interference,Beam SNRs Not Similar,SNR Threshold Variation
2	1:01 PM	5.182	0.6	0.213	0.600	0.128	Standard Error > QC
3	1:03 PM	5.334	0.6	0.213	0.600	0.128	Standard Error > QC
4	1:04 PM	5.486	0.6	0.183	0.600	0.110	Standard Error > QC
5	1:05 PM	5.639	0.6	0.213	0.600	0.128	Standard Error > QC
6	1:06 PM	5.791	0.6	0.457	0.600	0.274	Standard Error > QC
7	1:28 PM	5.852	0.6	0.427	0.600	0.256	Standard Error > QC
8	1:07 PM	5.944	0.6	0.427	0.600	0.256	Standard Error > QC
9	1:26 PM	6.005	0.6	0.305	0.600	0.183	Standard Error > QC
10	1:09 PM	6.096	0.6	0.274	0.600	0.165	Standard Error > QC
11	1:10 PM	6.248	0.6	0.183	0.600	0.110	Standard Error > QC
12	1:11 PM	6.401	0.6	0.396	0.600	0.238	Standard Error > QC
13	1:13 PM	6.553	0.6	0.335	0.600	0.201	Standard Error > QC
14	1:14 PM	6.706	0.6	0.335	0.600	0.201	Standard Error > QC
15	1:15 PM	6.858	0.6	0.366	0.600	0.219	Standard Error > QC
16	1:24 PM	6.919	0.6	0.335	0.600	0.201	Standard Error > QC
17	1:16 PM	7.010	0.6	0.335	0.600	0.201	Stn Spacing > QC,Standard Error > QC,Velocity Angle > QC
18	1:18 PM	7.163	0.6	0.305	0.600	0.183	Standard Error > QC
19	1:19 PM	7.315	0.6	0.274	0.600	0.165	Standard Error > QC,Velocity Angle > QC
20	1:20 PM	7.468	0.6	0.183	0.600	0.110	Velocity Angle > QC
21	1:21 PM	7.620	0.6	0.152	0.600	0.091	Velocity Angle > QC
22	1:23 PM	7.772	0.6	0.122	0.600	0.073	Velocity Angle > QC

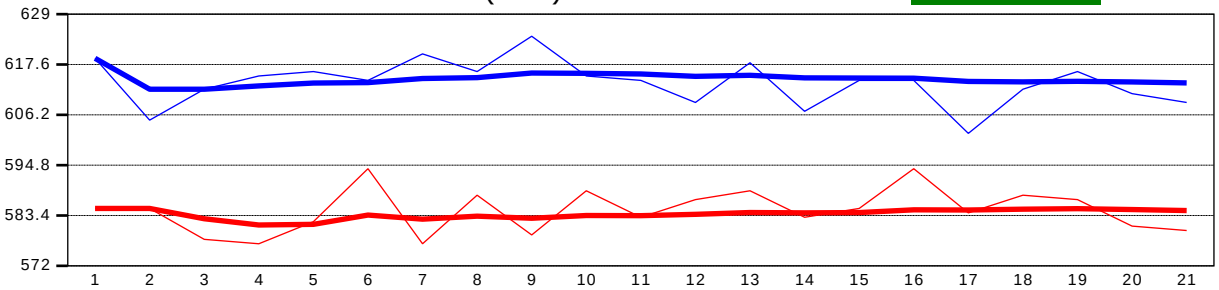
1/19/2023 12:18:48 PM

Automated beam check Start time 6/21/2022 12:59:25 PM

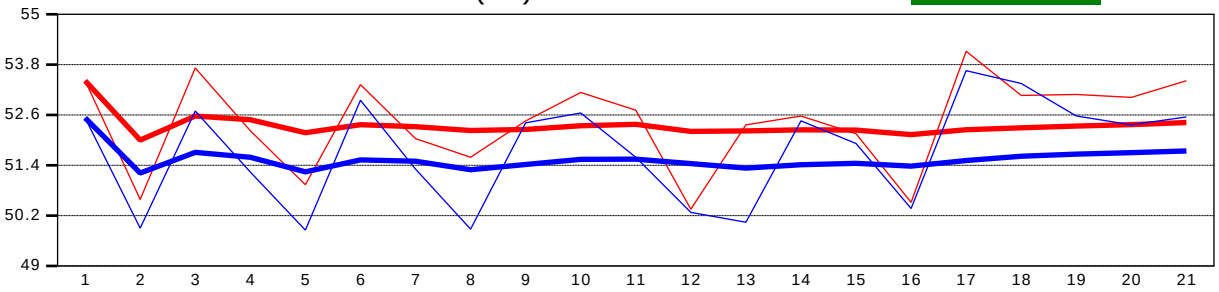
Automated beam check SNR(dB) PASS



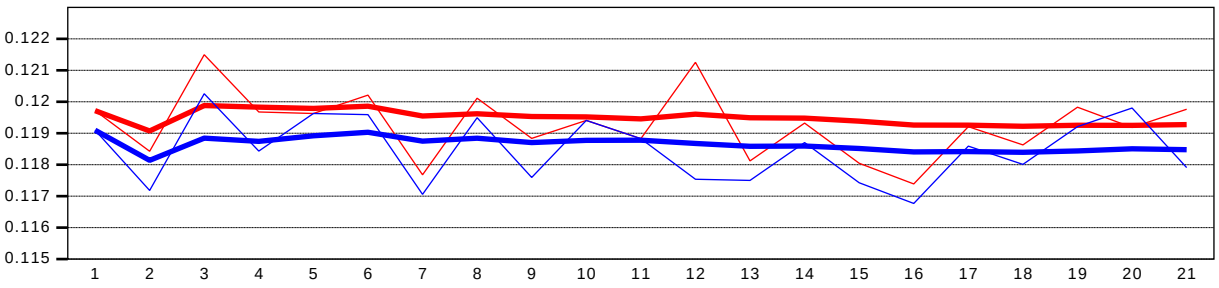
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC-105_20220621-134138.ft
Start date and time	6/21/2022 1:01 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	6/21/2022 1:02:23 PM	End time	6/21/2022 1:37:13 PM
# Stations	28	Avg interval	40
Mean depth	0.346 m		
Mean velocity	0.396 m/s	Total width	2.134 m
Mean SNR	45.471 dB	Total area	0.739 m²
Mean temp	6.730 °C	Total discharge	0.293 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025027
Probe serial number	FT2P2024006
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC-105
Site number	CSC-105
Operator(s)	RH
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.2%	1.9%
Velocity	1.7%	10.0%
Width	0.1%	0.1%
Method	2.0%	
# Stations	1.8%	
Overall	3.4%	10.2%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

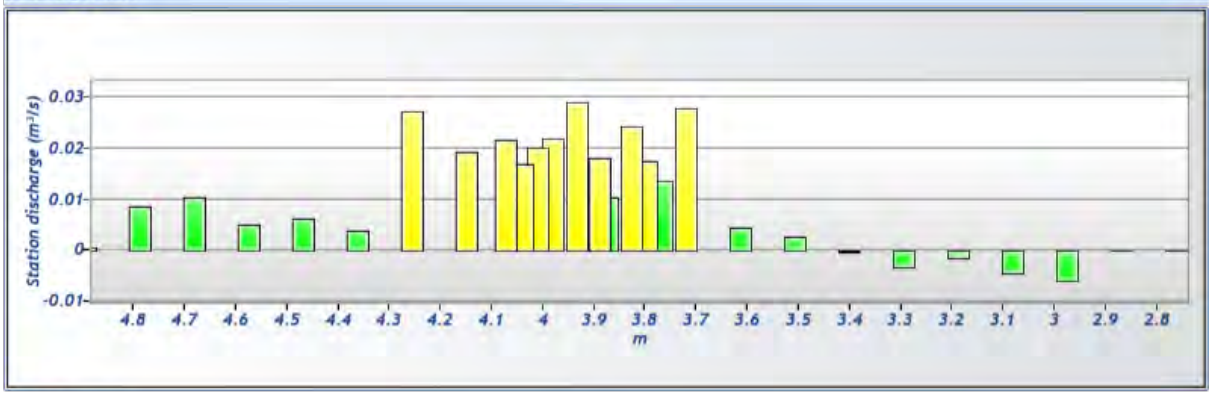
Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

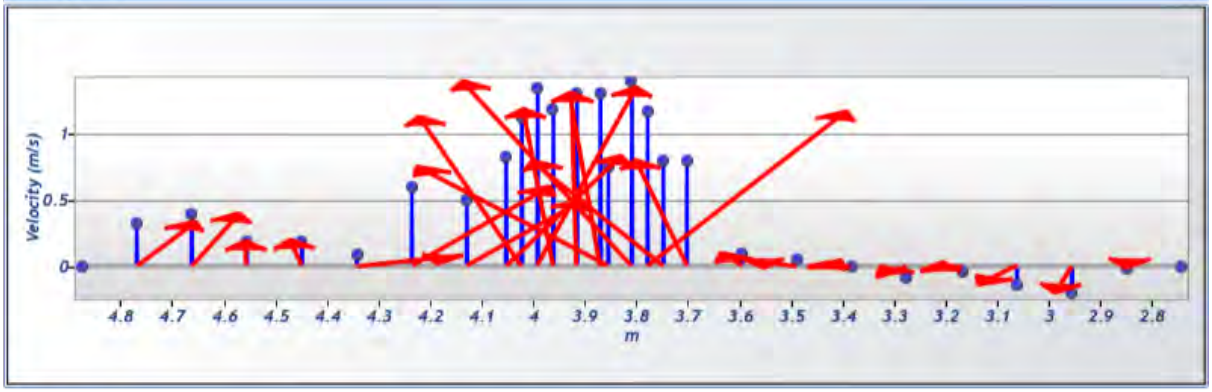
Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

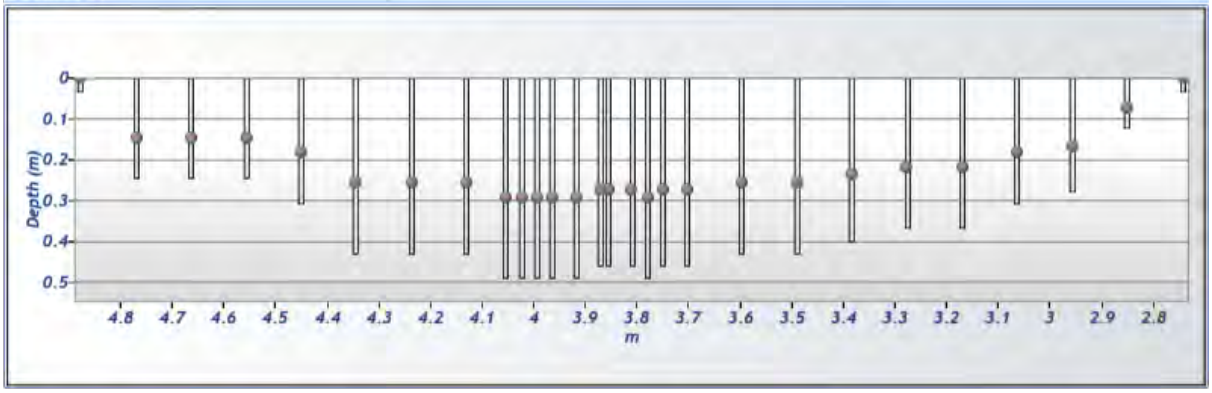
Discharge chart



Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m²)	Flow (m³/s)	%Q	
0	1:02 PM	2.743	None	0.030	0.000	0.000	0	0.000	1.000	-0.011	0.002	0.000	-0.006	✓
1	1:02 PM	2.850	0.6	0.122	0.600	0.073	80	-0.011	1.000	-0.011	0.013	0.000	-0.050	✓
2	1:04 PM	2.957	0.6	0.274	0.600	0.165	80	-0.201	1.000	-0.201	0.029	-0.006	-2.011	✓
3	1:05 PM	3.063	0.6	0.305	0.600	0.183	80	-0.138	1.000	-0.138	0.033	-0.004	-1.527	✓
4	1:07 PM	3.170	0.6	0.366	0.600	0.219	80	-0.041	1.000	-0.041	0.039	-0.002	-0.543	✓
5	1:08 PM	3.277	0.6	0.366	0.600	0.219	80	-0.084	1.000	-0.084	0.039	-0.003	-1.122	✓
6	1:09 PM	3.383	0.6	0.396	0.600	0.238	80	-0.007	1.000	-0.007	0.042	0.000	-0.106	✓
7	1:11 PM	3.490	0.6	0.427	0.600	0.256	80	0.057	1.000	0.057	0.046	0.003	0.887	✓
8	1:13 PM	3.597	0.6	0.427	0.600	0.256	80	0.095	1.000	0.095	0.046	0.004	1.482	✓
9	1:14 PM	3.703	0.6	0.457	0.600	0.274	80	0.796	1.000	0.796	0.035	0.028	9.461	✓
10	1:34 PM	3.749	0.6	0.457	0.600	0.274	80	0.787	1.000	0.787	0.017	0.014	4.681	✓
11	1:35 PM	3.780	0.6	0.488	0.600	0.293	80	1.163	1.000	1.163	0.015	0.017	5.901	✓
12	1:15 PM	3.810	0.6	0.457	0.600	0.274	80	1.392	1.000	1.392	0.017	0.024	8.280	✓
13	1:33 PM	3.856	0.6	0.457	0.600	0.274	80	0.749	1.000	0.749	0.014	0.010	3.563	✓
14	1:37 PM	3.871	0.6	0.457	0.600	0.274	80	1.301	1.000	1.301	0.014	0.018	6.189	✓
15	1:16 PM	3.917	0.6	0.488	0.600	0.293	80	1.302	1.000	1.302	0.022	0.029	9.913	✓
16	1:28 PM	3.962	0.6	0.488	0.600	0.293	80	1.180	1.000	1.180	0.019	0.022	7.485	✓
17	1:30 PM	3.993	0.6	0.488	0.600	0.293	80	1.344	1.000	1.344	0.015	0.020	6.822	✓
18	1:18 PM	4.023	0.6	0.488	0.600	0.293	80	1.125	1.000	1.125	0.015	0.017	5.710	✓
19	1:31 PM	4.054	0.6	0.488	0.600	0.293	80	0.832	1.000	0.832	0.026	0.022	7.386	✓
20	1:19 PM	4.130	0.6	0.427	0.600	0.256	80	0.494	1.000	0.494	0.039	0.019	6.575	✓
21	1:20 PM	4.237	0.6	0.427	0.600	0.256	80	0.599	1.000	0.599	0.046	0.027	9.305	✓
22	1:21 PM	4.343	0.6	0.427	0.600	0.256	80	0.083	1.000	0.083	0.046	0.004	1.295	✓
23	1:22 PM	4.450	0.6	0.305	0.600	0.183	80	0.194	1.000	0.194	0.033	0.006	2.151	✓
24	1:24 PM	4.557	0.6	0.244	0.600	0.146	80	0.187	1.000	0.187	0.026	0.005	1.665	✓
25	1:26 PM	4.663	0.6	0.244	0.600	0.146	80	0.394	1.000	0.394	0.026	0.010	3.498	✓
26	1:27 PM	4.770	0.6	0.244	0.600	0.146	80	0.330	1.000	0.330	0.026	0.009	2.934	✓
27	1:28 PM	4.877	None	0.030	0.000	0.000	0	0.000	1.000	0.330	0.002	0.001	0.183	✓

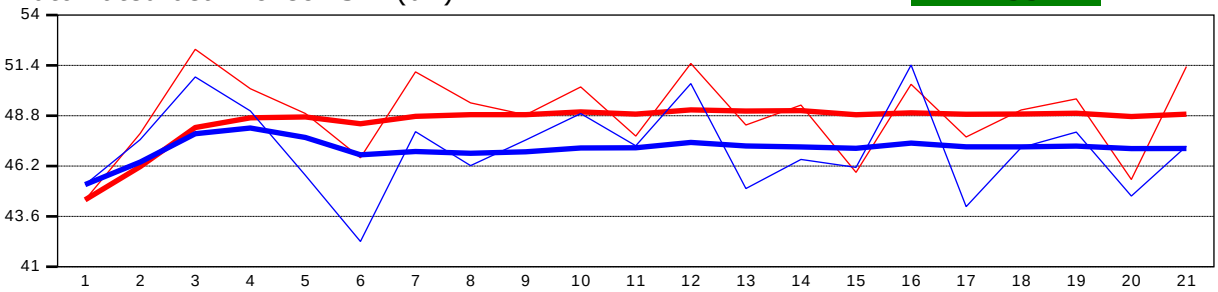
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	1:02 PM	2.850	0.6	0.122	0.600	0.073	Boundary Interference,SNR Threshold Variation,Standard Error > QC,High % Spikes
2	1:04 PM	2.957	0.6	0.274	0.600	0.165	Velocity Angle > QC
3	1:05 PM	3.063	0.6	0.305	0.600	0.183	Velocity Angle > QC
4	1:07 PM	3.170	0.6	0.366	0.600	0.219	Standard Error > QC,Velocity Angle > QC
5	1:08 PM	3.277	0.6	0.366	0.600	0.219	Standard Error > QC,Velocity Angle > QC
6	1:09 PM	3.383	0.6	0.396	0.600	0.238	Standard Error > QC
7	1:11 PM	3.490	0.6	0.427	0.600	0.256	Standard Error > QC,Velocity Angle > QC
8	1:13 PM	3.597	0.6	0.427	0.600	0.256	Standard Error > QC,Velocity Angle > QC
9	1:14 PM	3.703	0.6	0.457	0.600	0.274	Standard Error > QC
10	1:34 PM	3.749	0.6	0.457	0.600	0.274	Standard Error > QC
11	1:35 PM	3.780	0.6	0.488	0.600	0.293	Stn Spacing > QC,Standard Error > QC
12	1:15 PM	3.810	0.6	0.457	0.600	0.274	Large SNR Variation,Standard Error > QC
13	1:33 PM	3.856	0.6	0.457	0.600	0.274	Standard Error > QC,Velocity Angle > QC
14	1:37 PM	3.871	0.6	0.457	0.600	0.274	Beam SNRs Not Similar,Large SNR Variation,Standard Error > QC
15	1:16 PM	3.917	0.6	0.488	0.600	0.293	Stn Spacing > QC,Large SNR Variation,Standard Error > QC
16	1:28 PM	3.962	0.6	0.488	0.600	0.293	Boundary Interference,Beam SNRs Not Similar,Large SNR Variation,Standard Error > QC
17	1:30 PM	3.993	0.6	0.488	0.600	0.293	Beam SNRs Not Similar,Large SNR Variation,Standard Error > QC
18	1:18 PM	4.023	0.6	0.488	0.600	0.293	Standard Error > QC
19	1:31 PM	4.054	0.6	0.488	0.600	0.293	Beam SNRs Not Similar,Large SNR Variation,Standard Error > QC
20	1:19 PM	4.130	0.6	0.427	0.600	0.256	Standard Error > QC,Velocity Angle > QC
21	1:20 PM	4.237	0.6	0.427	0.600	0.256	Standard Error > QC,Velocity Angle > QC
22	1:21 PM	4.343	0.6	0.427	0.600	0.256	Standard Error > QC,Velocity Angle > QC
23	1:22 PM	4.450	0.6	0.305	0.600	0.183	Standard Error > QC
24	1:24 PM	4.557	0.6	0.244	0.600	0.146	Standard Error > QC
25	1:26 PM	4.663	0.6	0.244	0.600	0.146	Standard Error > QC
26	1:27 PM	4.770	0.6	0.244	0.600	0.146	Boundary Interference,Standard Error > QC
27	1:28 PM	4.877	None	0.030	0.000	0.000	Water Depth > QC

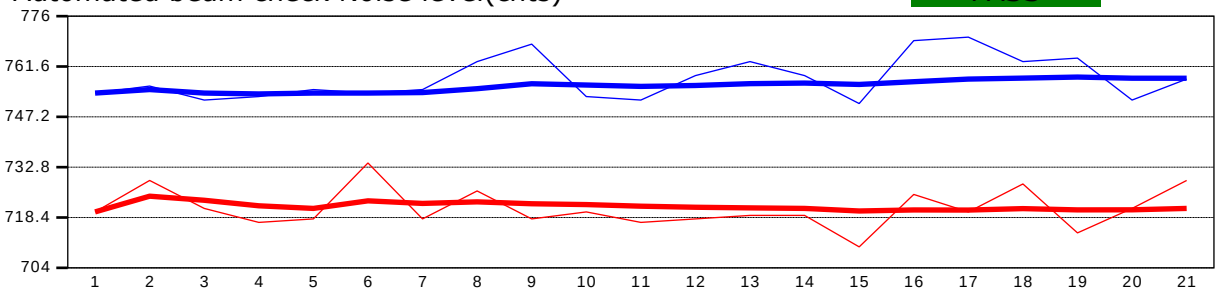
1/19/2023 12:18:28 PM

Automated beam check Start time 6/21/2022 1:02:00 PM

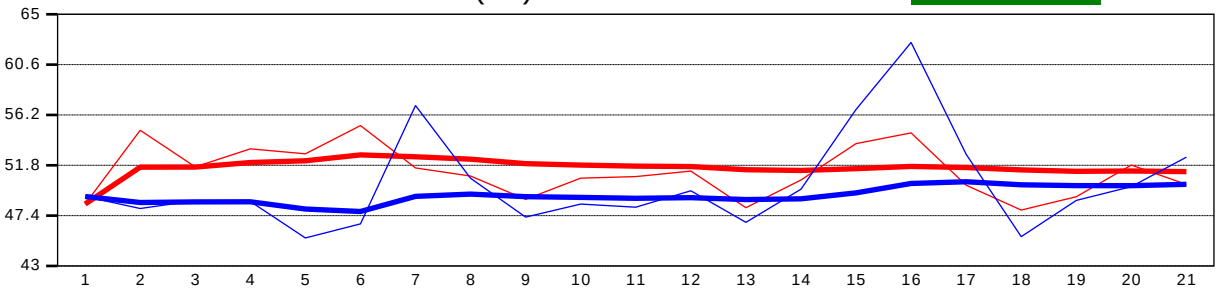
Automated beam check SNR(dB) PASS



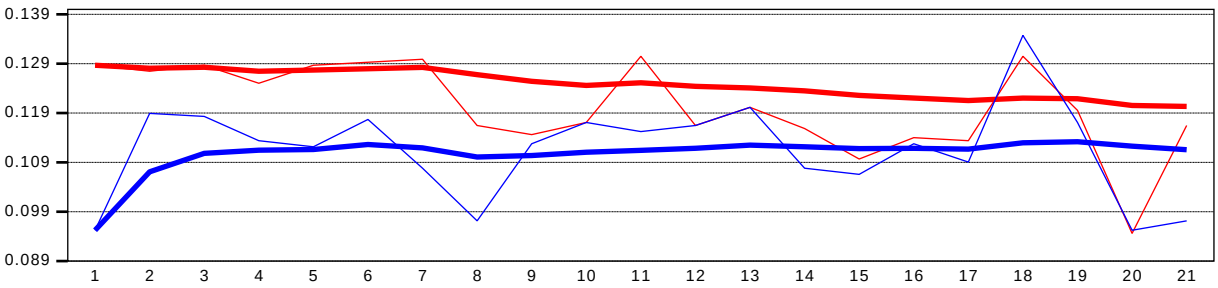
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC-104A_20220621-124649.ft
Start date and time	6/21/2022 12:03 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	6/21/2022 12:09:00 PM		End time	6/21/2022 12:44:39 PM	
# Stations	27		Avg interval	40	
Mean depth	0.170	m			
Mean velocity	0.657	m/s	Total width	5.608	m
Mean SNR	51.572	dB	Total area	0.953	m²
Mean temp	7.934	°C	Total discharge	0.626	m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025005
Probe serial number	FT2P2024003
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC-104A
Site number	CSC-104A
Operator(s)	CG
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.4%	3.9%
Velocity	0.7%	8.3%
Width	0.1%	0.1%
Method	1.8%	
# Stations	1.9%	
Overall	2.9%	9.2%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

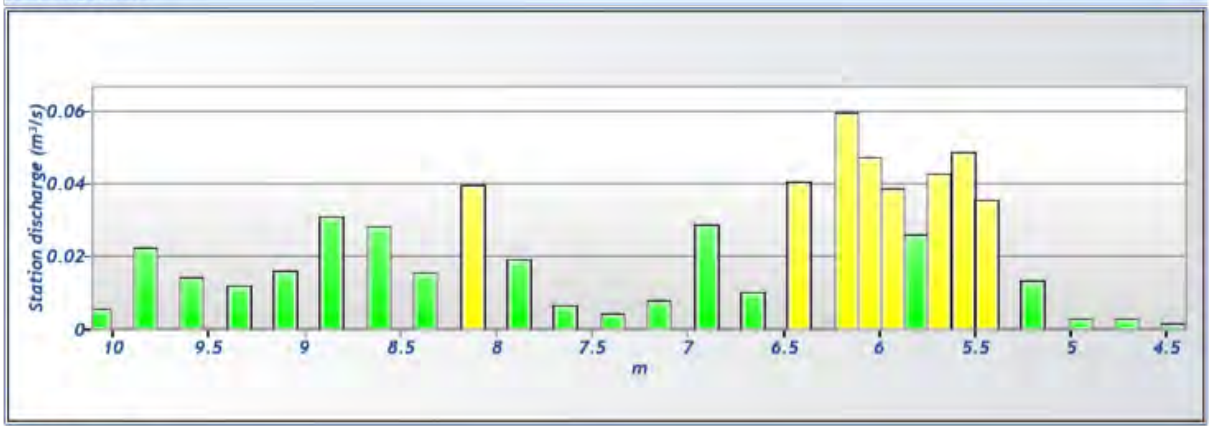
Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

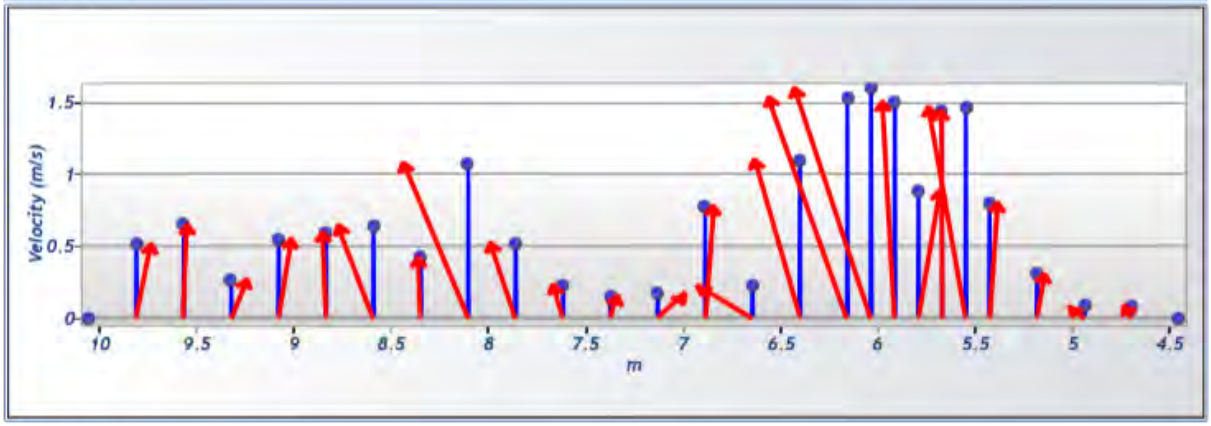
Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

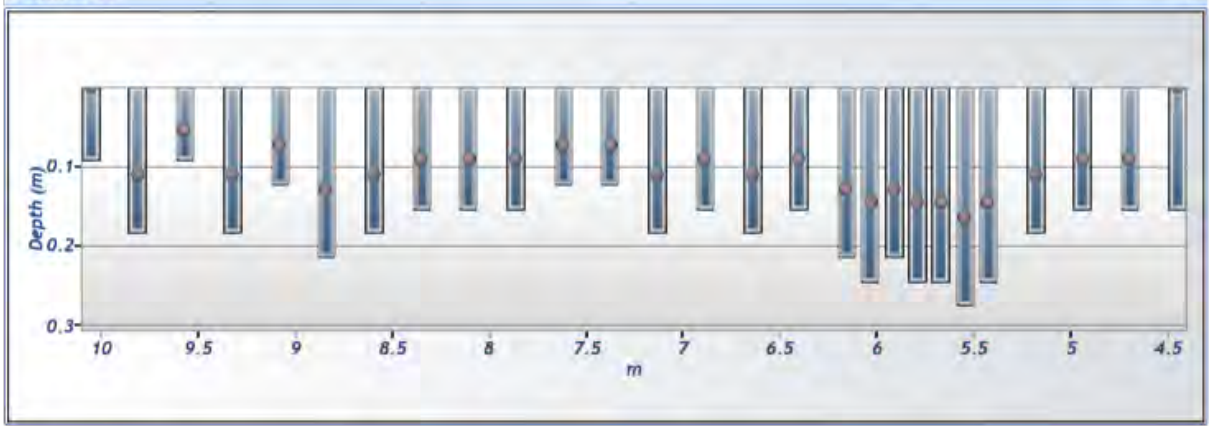
Discharge chart



Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
26	12:41 PM	4.450	None	0.152	0.000	0.000	0	0.000	1.000	0.084	0.019	0.002	0.250	✓
25	12:39 PM	4.694	0.6	0.152	0.600	0.091	80	0.084	1.000	0.084	0.037	0.003	0.500	✓
24	12:38 PM	4.938	0.6	0.152	0.600	0.091	80	0.089	1.000	0.089	0.037	0.003	0.526	✓
23	12:37 PM	5.182	0.6	0.183	0.600	0.110	80	0.306	1.000	0.306	0.045	0.014	2.175	✓
22	12:36 PM	5.425	0.6	0.244	0.600	0.146	80	0.798	1.000	0.798	0.045	0.036	5.679	✓
21	12:43 PM	5.547	0.6	0.274	0.600	0.165	80	1.465	1.000	1.465	0.033	0.049	7.821	✓
20	12:35 PM	5.669	0.6	0.244	0.600	0.146	80	1.439	1.000	1.439	0.030	0.043	6.829	✓
19	12:44 PM	5.791	0.6	0.244	0.600	0.146	80	0.884	1.000	0.884	0.030	0.026	4.195	✓
18	12:33 PM	5.913	0.6	0.213	0.600	0.128	80	1.496	1.000	1.496	0.026	0.039	6.214	✓
17	12:41 PM	6.035	0.6	0.244	0.600	0.146	80	1.594	1.000	1.594	0.030	0.047	7.564	✓
16	12:32 PM	6.157	0.6	0.213	0.600	0.128	80	1.529	1.000	1.529	0.039	0.060	9.523	✓
15	12:31 PM	6.401	0.6	0.152	0.600	0.091	80	1.095	1.000	1.095	0.037	0.041	6.498	✓
14	12:30 PM	6.645	0.6	0.183	0.600	0.110	80	0.232	1.000	0.232	0.045	0.010	1.653	✓
13	12:29 PM	6.888	0.6	0.152	0.600	0.091	80	0.780	1.000	0.780	0.037	0.029	4.625	✓
12	12:28 PM	7.132	0.6	0.183	0.600	0.110	80	0.178	1.000	0.178	0.045	0.008	1.269	✓
11	12:26 PM	7.376	0.6	0.122	0.600	0.073	80	0.156	1.000	0.156	0.030	0.005	0.741	✓
10	12:25 PM	7.620	0.6	0.122	0.600	0.073	80	0.229	1.000	0.229	0.030	0.007	1.089	✓
9	12:24 PM	7.864	0.6	0.152	0.600	0.091	80	0.520	1.000	0.520	0.037	0.019	3.085	✓
8	12:23 PM	8.108	0.6	0.152	0.600	0.091	80	1.075	1.000	1.075	0.037	0.040	6.376	✓
7	12:19 PM	8.352	0.6	0.152	0.600	0.091	80	0.420	1.000	0.420	0.037	0.016	2.490	✓
6	12:18 PM	8.595	0.6	0.183	0.600	0.110	80	0.640	1.000	0.640	0.045	0.029	4.559	✓
5	12:15 PM	8.839	0.6	0.213	0.600	0.128	80	0.597	1.000	0.597	0.052	0.031	4.955	✓
4	12:14 PM	9.083	0.6	0.122	0.600	0.073	80	0.551	1.000	0.551	0.030	0.016	2.615	✓
3	12:12 PM	9.327	0.6	0.183	0.600	0.110	80	0.269	1.000	0.269	0.045	0.012	1.912	✓
2	12:11 PM	9.571	0.6	0.091	0.600	0.055	80	0.648	1.000	0.648	0.022	0.014	2.308	✓
1	12:09 PM	9.815	0.6	0.183	0.600	0.110	80	0.511	1.000	0.511	0.045	0.023	3.639	✓
0	12:09 PM	10.058	None	0.091	0.000	0.000	0	0.000	1.000	0.511	0.011	0.006	0.910	✓

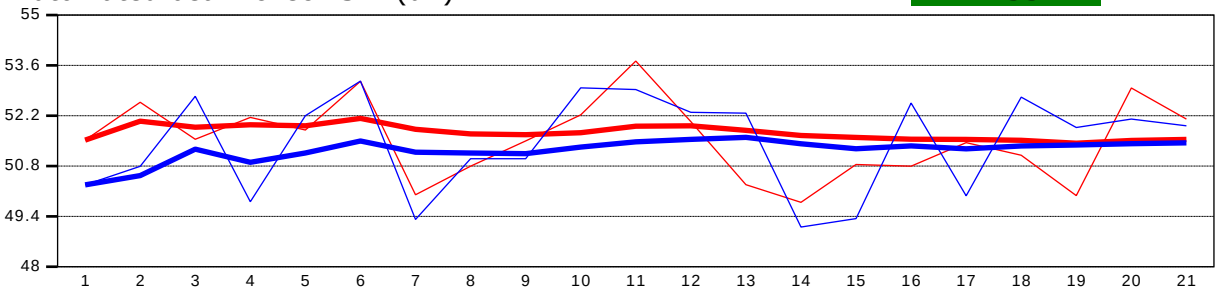
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
25	12:39 PM	4.694	0.6	0.152	0.600	0.091	Velocity Angle > QC
24	12:38 PM	4.938	0.6	0.152	0.600	0.091	Velocity Angle > QC
23	12:37 PM	5.182	0.6	0.183	0.600	0.110	Standard Error > QC
22	12:36 PM	5.425	0.6	0.244	0.600	0.146	Standard Error > QC
21	12:43 PM	5.547	0.6	0.274	0.600	0.165	Standard Error > QC
20	12:35 PM	5.669	0.6	0.244	0.600	0.146	Standard Error > QC
19	12:44 PM	5.791	0.6	0.244	0.600	0.146	Standard Error > QC
18	12:33 PM	5.913	0.6	0.213	0.600	0.128	Standard Error > QC
17	12:41 PM	6.035	0.6	0.244	0.600	0.146	Standard Error > QC
16	12:32 PM	6.157	0.6	0.213	0.600	0.128	Standard Error > QC
15	12:31 PM	6.401	0.6	0.152	0.600	0.091	Standard Error > QC
14	12:30 PM	6.645	0.6	0.183	0.600	0.110	Standard Error > QC,High % Spikes,Velocity Angle > QC
13	12:29 PM	6.888	0.6	0.152	0.600	0.091	Standard Error > QC
12	12:28 PM	7.132	0.6	0.183	0.600	0.110	Standard Error > QC,Velocity Angle > QC
9	12:24 PM	7.864	0.6	0.152	0.600	0.091	Standard Error > QC
8	12:23 PM	8.108	0.6	0.152	0.600	0.091	Standard Error > QC
7	12:19 PM	8.352	0.6	0.152	0.600	0.091	Standard Error > QC
6	12:18 PM	8.595	0.6	0.183	0.600	0.110	Standard Error > QC
5	12:15 PM	8.839	0.6	0.213	0.600	0.128	Standard Error > QC
4	12:14 PM	9.083	0.6	0.122	0.600	0.073	Standard Error > QC
3	12:12 PM	9.327	0.6	0.183	0.600	0.110	Standard Error > QC
2	12:11 PM	9.571	0.6	0.091	0.600	0.055	Standard Error > QC
1	12:09 PM	9.815	0.6	0.183	0.600	0.110	Standard Error > QC

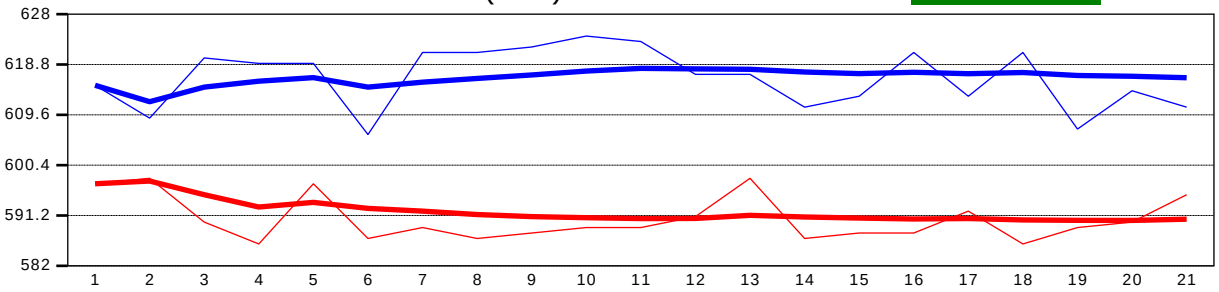
1/19/2023 12:18:05 PM

Automated beam check Start time 6/21/2022 12:08:39 PM

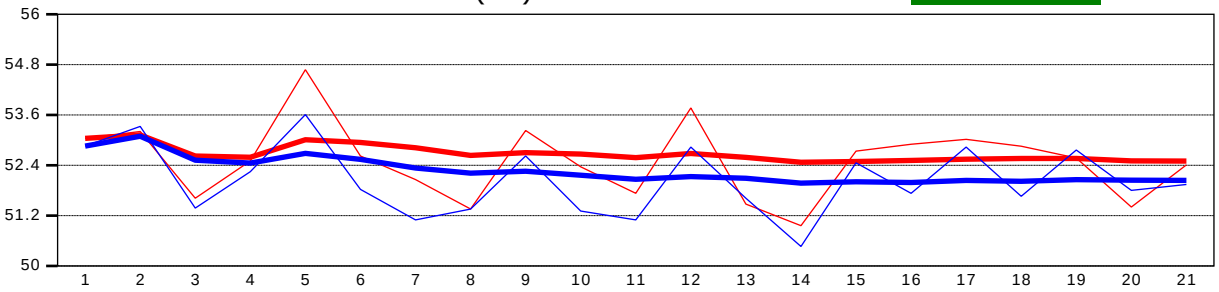
Automated beam check SNR(dB) PASS



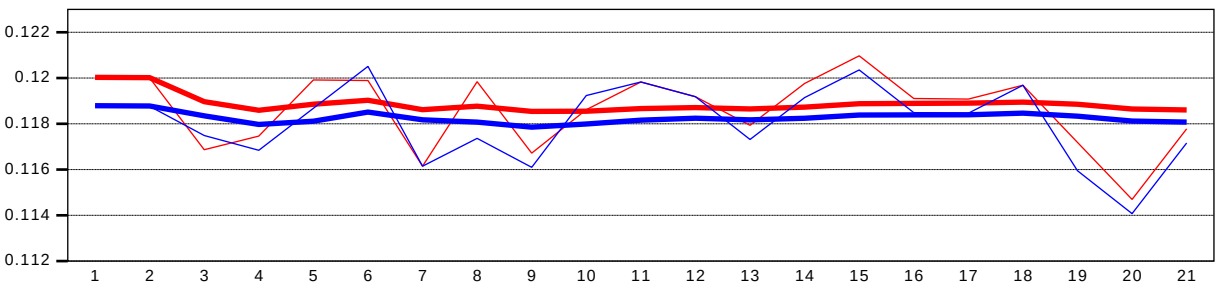
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC-104_20220621-125030.ft
Start date and time	6/21/2022 11:27 AM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	6/21/2022 11:36:39 AM		End time	6/21/2022 12:46:32 PM
# Stations	26		Avg interval	40
Mean depth	0.302	m		
Mean velocity	0.490	m/s	Total width	4.877 m
Mean SNR	49.007	dB	Total area	1.473 m²
Mean temp	7.042	°C	Total discharge	0.721 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025027
Probe serial number	FT2P2024006
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC
Site number	CSC104
Operator(s)	SA
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.2%	2.1%
Velocity	1.1%	9.8%
Width	0.1%	0.1%
Method	1.7%	
# Stations	2.0%	
Overall	3.0%	10.1%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

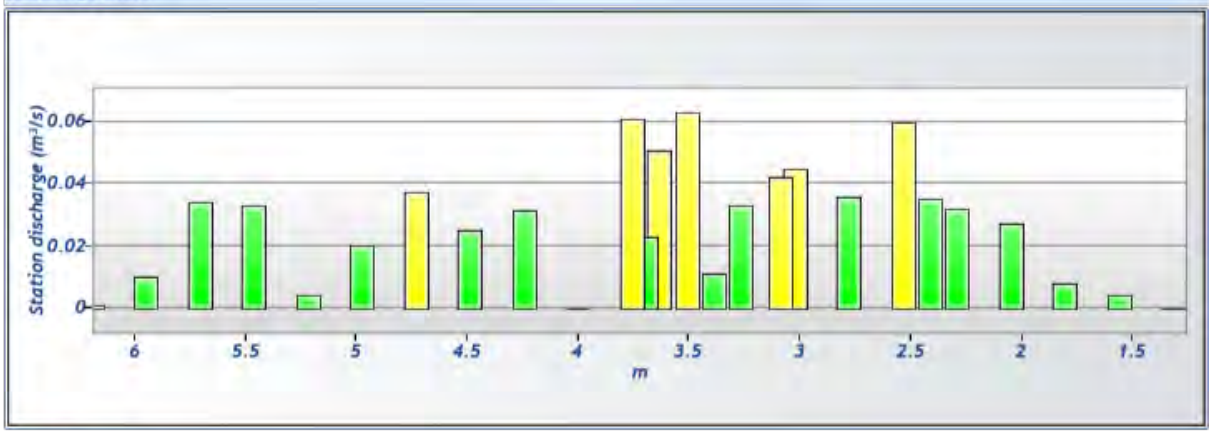
Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

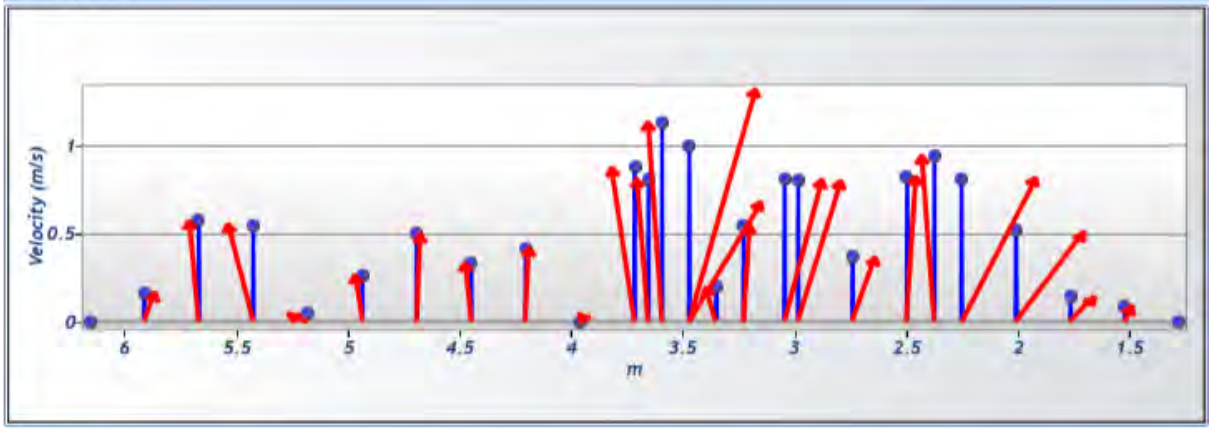
Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

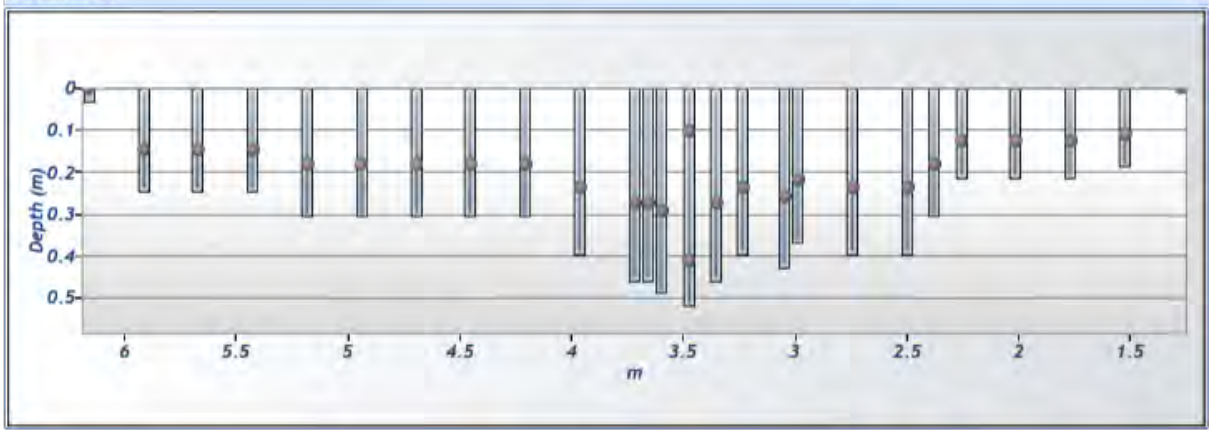
Discharge chart



Velocity chart



Depth chart



Measurement results

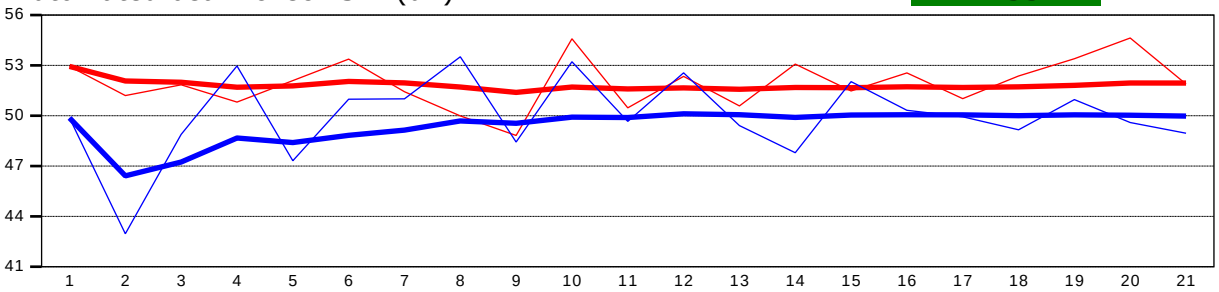
St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	11:36 AM	1.280	None	0.000	0.000	0.000	0	0.000	1.000	0.090	0.000	0.000	0.000	✓
1	11:37 AM	1.524	0.6	0.183	0.600	0.110	80	0.090	1.000	0.090	0.045	0.004	0.556	✓
2	11:38 AM	1.768	0.6	0.213	0.600	0.128	80	0.146	1.000	0.146	0.052	0.008	1.053	✓
3	11:39 AM	2.012	0.6	0.213	0.600	0.128	80	0.516	1.000	0.516	0.052	0.027	3.721	✓
4	11:40 AM	2.256	0.6	0.213	0.600	0.128	80	0.815	1.000	0.815	0.039	0.032	4.410	✓
5	12:46 PM	2.377	0.6	0.305	0.600	0.183	80	0.942	1.000	0.942	0.037	0.035	4.854	✓
6	11:41 AM	2.499	0.6	0.396	0.600	0.238	80	0.825	1.000	0.825	0.072	0.060	8.286	✓
7	11:43 AM	2.743	0.6	0.396	0.600	0.238	80	0.366	1.000	0.366	0.097	0.035	4.901	✓
8	11:45 AM	2.987	0.6	0.366	0.600	0.219	80	0.799	1.000	0.799	0.056	0.045	6.175	✓
9	12:45 PM	3.048	0.6	0.427	0.600	0.256	80	0.808	1.000	0.808	0.052	0.042	5.825	✓
10	12:22 PM	3.231	0.6	0.396	0.600	0.238	80	0.548	1.000	0.548	0.060	0.033	4.586	✓
11	12:41 PM	3.353	0.6	0.457	0.600	0.274	80	0.195	1.000	0.195	0.056	0.011	1.505	✓
12	12:23 PM	3.475	0.2/0.8	0.518	0.200	0.104	80	1.317	1.000	0.997	0.063	0.063	8.731	✓
12	12:23 PM	3.475	0.2/0.8	0.518	0.800	0.415	80	0.676	1.000	0.997	0.063	0.063	8.731	✓
13	12:43 PM	3.597	0.6	0.488	0.600	0.293	80	1.132	1.000	1.132	0.045	0.051	7.002	✓
14	12:39 PM	3.658	0.6	0.457	0.600	0.274	80	0.809	1.000	0.809	0.028	0.023	3.125	✓
15	12:26 PM	3.719	0.6	0.457	0.600	0.274	80	0.874	1.000	0.874	0.070	0.061	8.440	✓
16	12:27 PM	3.962	0.6	0.396	0.600	0.238	80	-0.001	1.000	-0.001	0.097	0.000	-0.016	✓
17	12:28 PM	4.206	0.6	0.305	0.600	0.183	80	0.418	1.000	0.418	0.074	0.031	4.307	✓
18	12:30 PM	4.450	0.6	0.305	0.600	0.183	80	0.334	1.000	0.334	0.074	0.025	3.443	✓
19	12:31 PM	4.694	0.6	0.305	0.600	0.183	80	0.498	1.000	0.498	0.074	0.037	5.134	✓
20	12:32 PM	4.938	0.6	0.305	0.600	0.183	80	0.267	1.000	0.267	0.074	0.020	2.748	✓
21	12:33 PM	5.182	0.6	0.305	0.600	0.183	80	0.052	1.000	0.052	0.074	0.004	0.538	✓
22	12:35 PM	5.425	0.6	0.244	0.600	0.146	80	0.552	1.000	0.552	0.059	0.033	4.547	✓
23	12:36 PM	5.669	0.6	0.244	0.600	0.146	80	0.571	1.000	0.571	0.059	0.034	4.707	✓
24	12:37 PM	5.913	0.6	0.244	0.600	0.146	80	0.162	1.000	0.162	0.059	0.010	1.339	✓
25	12:38 PM	6.157	None	0.030	0.000	0.000	0	0.000	1.000	0.162	0.004	0.001	0.084	✓

Quality control warnings

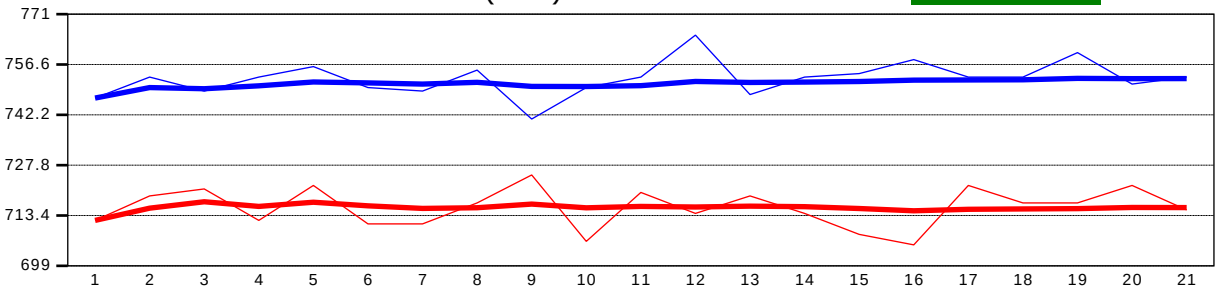
St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	11:37 AM	1.524	0.6	0.183	0.600	0.110	Velocity Angle > QC,Rod Angle > QC
2	11:38 AM	1.768	0.6	0.213	0.600	0.128	Standard Error > QC,Velocity Angle > QC,Rod Angle > QC
3	11:39 AM	2.012	0.6	0.213	0.600	0.128	Standard Error > QC,Velocity Angle > QC,Rod Angle > QC
4	11:40 AM	2.256	0.6	0.213	0.600	0.128	Standard Error > QC,Velocity Angle > QC
5	12:46 PM	2.377	0.6	0.305	0.600	0.183	Standard Error > QC
6	11:41 AM	2.499	0.6	0.396	0.600	0.238	Standard Error > QC,Rod Angle > QC
7	11:43 AM	2.743	0.6	0.396	0.600	0.238	Standard Error > QC,Rod Angle > QC
8	11:45 AM	2.987	0.6	0.366	0.600	0.219	Standard Error > QC
9	12:45 PM	3.048	0.6	0.427	0.600	0.256	Standard Error > QC
10	12:22 PM	3.231	0.6	0.396	0.600	0.238	Standard Error > QC
11	12:41 PM	3.353	0.6	0.457	0.600	0.274	Standard Error > QC
12	12:23 PM	3.475	0.2/0.8	0.518	0.200	0.104	Standard Error > QC,Velocity Angle > QC,Rod Angle > QC
12	12:23 PM	3.475	0.2/0.8	0.518	0.800	0.415	Standard Error > QC,Velocity Angle > QC,Rod Angle > QC
13	12:43 PM	3.597	0.6	0.488	0.600	0.293	Standard Error > QC
14	12:39 PM	3.658	0.6	0.457	0.600	0.274	Standard Error > QC
15	12:26 PM	3.719	0.6	0.457	0.600	0.274	Standard Error > QC
16	12:27 PM	3.962	0.6	0.396	0.600	0.238	Beam SNRs Not Similar,SNR Threshold Variation,High % Spikes
17	12:28 PM	4.206	0.6	0.305	0.600	0.183	Standard Error > QC
18	12:30 PM	4.450	0.6	0.305	0.600	0.183	Standard Error > QC
19	12:31 PM	4.694	0.6	0.305	0.600	0.183	Standard Error > QC
20	12:32 PM	4.938	0.6	0.305	0.600	0.183	Standard Error > QC
21	12:33 PM	5.182	0.6	0.305	0.600	0.183	Standard Error > QC,Velocity Angle > QC
22	12:35 PM	5.425	0.6	0.244	0.600	0.146	Standard Error > QC
23	12:36 PM	5.669	0.6	0.244	0.600	0.146	Standard Error > QC
24	12:37 PM	5.913	0.6	0.244	0.600	0.146	Standard Error > QC
25	12:38 PM	6.157	None	0.030	0.000	0.000	Water Depth > QC

Automated beam check Start time 6/21/2022 11:27:55 AM

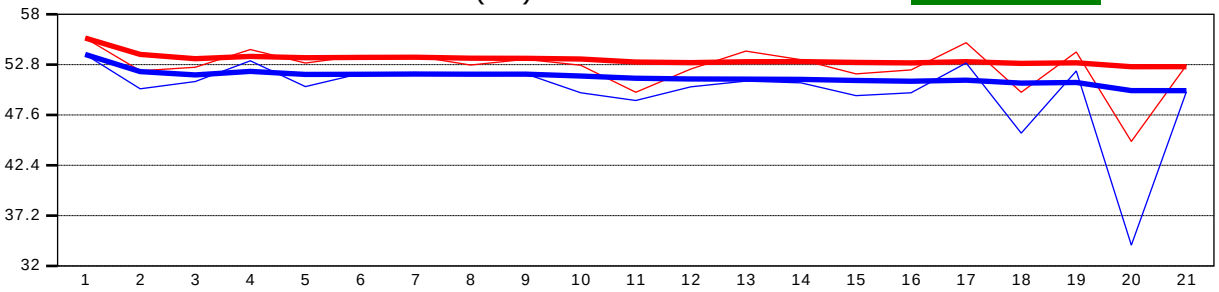
Automated beam check SNR(dB) PASS



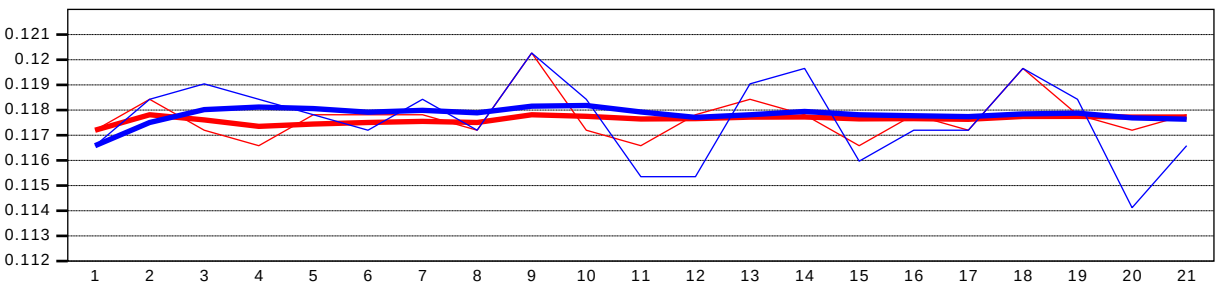
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC-103_20220621-120320.ft
Start date and time	6/21/2022 11:22 AM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	6/21/2022 11:24:09 AM	End time	6/21/2022 11:45:44 AM
# Stations	21	Avg interval	40
Mean depth	0.136 m		
Mean velocity	1.630 m/s	Total width	4.572 m
Mean SNR	50.486 dB	Total area	0.624 m²
Mean temp	7.017 °C	Total discharge	1.017 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025005
Probe serial number	FT2P2024003
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC-103
Site number	CSC-103
Operator(s)	CG
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.4%	5.3%
Velocity	0.5%	5.9%
Width	0.1%	0.1%
Method	1.8%	
# Stations	2.4%	
Overall	3.2%	8.0%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

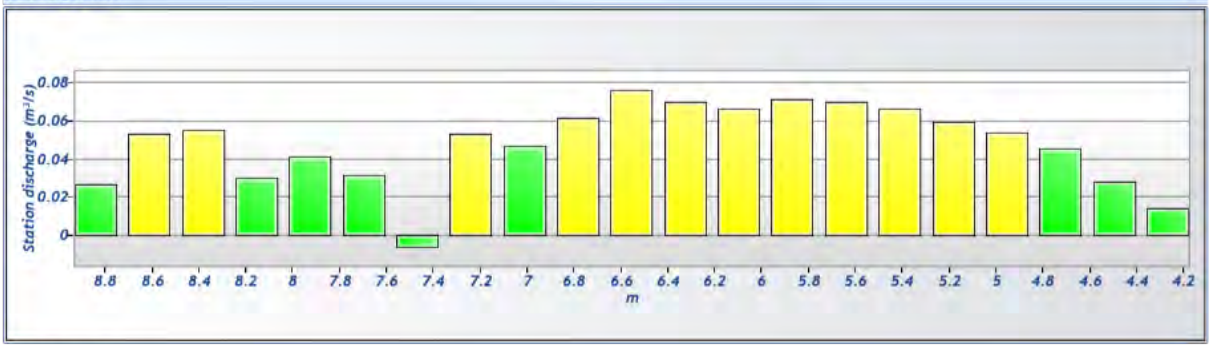
Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

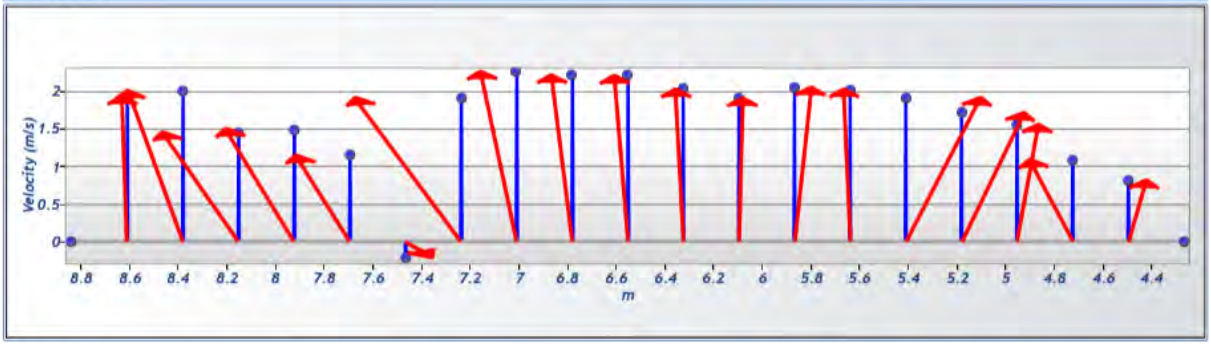
Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

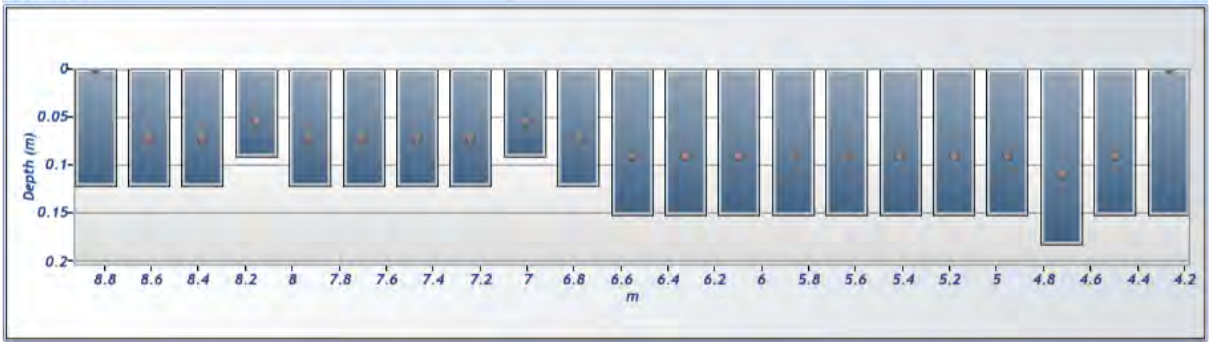
Discharge chart



Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	11:24 AM	4.267	None	0.152	0.000	0.000	0	0.000	1.000	0.809	0.017	0.014	1.385	✓
1	11:24 AM	4.496	0.6	0.152	0.600	0.091	80	0.809	1.000	0.809	0.035	0.028	2.771	✓
2	11:26 AM	4.724	0.6	0.183	0.600	0.110	80	1.084	1.000	1.084	0.042	0.045	4.457	✓
3	11:27 AM	4.953	0.6	0.152	0.600	0.091	80	1.552	1.000	1.552	0.035	0.054	5.320	✓
4	11:28 AM	5.182	0.6	0.152	0.600	0.091	80	1.706	1.000	1.706	0.035	0.059	5.847	✓
5	11:29 AM	5.410	0.6	0.152	0.600	0.091	80	1.904	1.000	1.904	0.035	0.066	6.525	✓
6	11:30 AM	5.639	0.6	0.152	0.600	0.091	80	2.011	1.000	2.011	0.035	0.070	6.893	✓
7	11:31 AM	5.867	0.6	0.152	0.600	0.091	80	2.043	1.000	2.043	0.035	0.071	7.003	✓
8	11:32 AM	6.096	0.6	0.152	0.600	0.091	80	1.902	1.000	1.902	0.035	0.066	6.518	✓
9	11:33 AM	6.325	0.6	0.152	0.600	0.091	80	2.018	1.000	2.018	0.035	0.070	6.916	✓
10	11:34 AM	6.553	0.6	0.152	0.600	0.091	80	2.196	1.000	2.196	0.035	0.076	7.524	✓
11	11:35 AM	6.782	0.6	0.122	0.600	0.073	80	2.200	1.000	2.200	0.028	0.061	6.031	✓
12	11:36 AM	7.010	0.6	0.091	0.600	0.055	80	2.249	1.000	2.249	0.021	0.047	4.624	✓
13	11:37 AM	7.239	0.6	0.122	0.600	0.073	80	1.900	1.000	1.900	0.028	0.053	5.210	✓
14	11:39 AM	7.468	0.6	0.122	0.600	0.073	80	-0.209	1.000	-0.209	0.028	-0.006	-0.574	✓
15	11:40 AM	7.696	0.6	0.122	0.600	0.073	80	1.147	1.000	1.147	0.028	0.032	3.144	✓
16	11:41 AM	7.925	0.6	0.122	0.600	0.073	80	1.488	1.000	1.488	0.028	0.041	4.080	✓
17	11:42 AM	8.153	0.6	0.091	0.600	0.055	80	1.443	1.000	1.443	0.021	0.030	2.968	✓
18	11:43 AM	8.382	0.6	0.122	0.600	0.073	80	1.996	1.000	1.996	0.028	0.056	5.473	✓
19	11:44 AM	8.611	0.6	0.122	0.600	0.073	80	1.917	1.000	1.917	0.028	0.053	5.257	✓
20	11:45 AM	8.839	None	0.122	0.000	0.000	0	0.000	1.000	1.917	0.014	0.027	2.628	✓

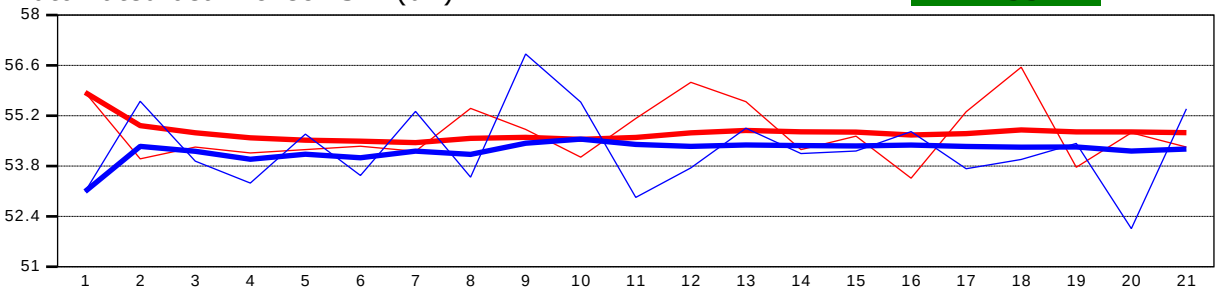
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	11:24 AM	4.496	0.6	0.152	0.600	0.091	Standard Error > QC
2	11:26 AM	4.724	0.6	0.183	0.600	0.110	Standard Error > QC
3	11:27 AM	4.953	0.6	0.152	0.600	0.091	Standard Error > QC
4	11:28 AM	5.182	0.6	0.152	0.600	0.091	Standard Error > QC
5	11:29 AM	5.410	0.6	0.152	0.600	0.091	Standard Error > QC
6	11:30 AM	5.639	0.6	0.152	0.600	0.091	Standard Error > QC
7	11:31 AM	5.867	0.6	0.152	0.600	0.091	Standard Error > QC
8	11:32 AM	6.096	0.6	0.152	0.600	0.091	Standard Error > QC
9	11:33 AM	6.325	0.6	0.152	0.600	0.091	Standard Error > QC
10	11:34 AM	6.553	0.6	0.152	0.600	0.091	Standard Error > QC
11	11:35 AM	6.782	0.6	0.122	0.600	0.073	Large SNR Variation,Standard Error > QC
12	11:36 AM	7.010	0.6	0.091	0.600	0.055	Large SNR Variation,Standard Error > QC
13	11:37 AM	7.239	0.6	0.122	0.600	0.073	Beam SNRs Not Similar,Large SNR Variation,SNR Threshold Variation,Standard Error > QC
14	11:39 AM	7.468	0.6	0.122	0.600	0.073	Boundary Interference,Beam SNRs Not Similar,Large SNR Variation,Standard Error > QC,Velocity Angle > QC
15	11:40 AM	7.696	0.6	0.122	0.600	0.073	Beam SNRs Not Similar,Large SNR Variation,Standard Error > QC
16	11:41 AM	7.925	0.6	0.122	0.600	0.073	Beam SNRs Not Similar,Large SNR Variation,SNR Threshold Variation,Standard Error > QC
17	11:42 AM	8.153	0.6	0.091	0.600	0.055	Large SNR Variation,Standard Error > QC
18	11:43 AM	8.382	0.6	0.122	0.600	0.073	Large SNR Variation,Standard Error > QC
19	11:44 AM	8.611	0.6	0.122	0.600	0.073	Large SNR Variation,Standard Error > QC

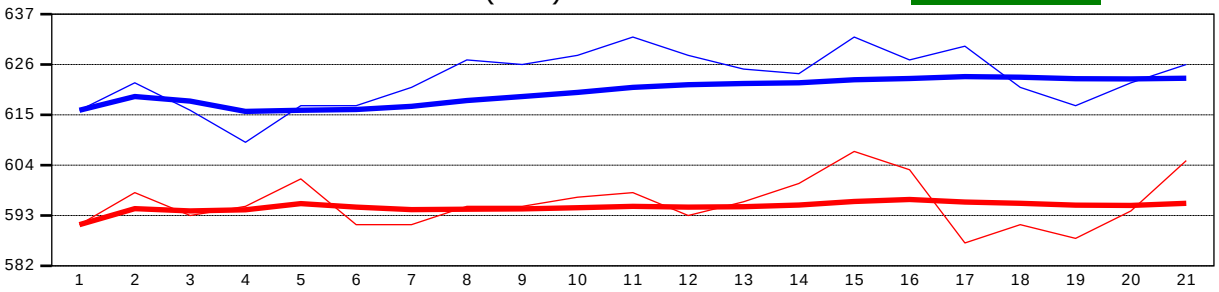
1/19/2023 12:17:19 PM

Automated beam check Start time 6/21/2022 11:23:46 AM

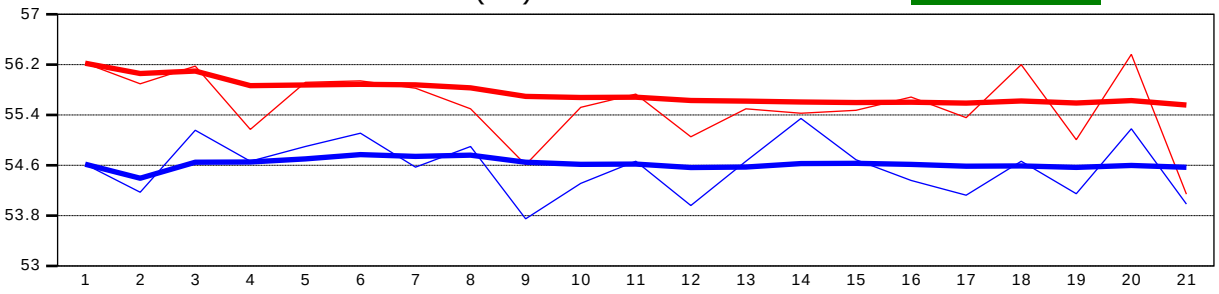
Automated beam check SNR(dB) PASS



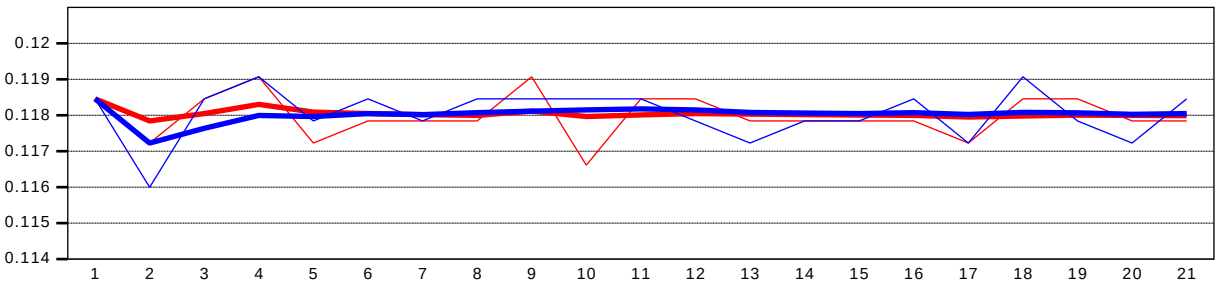
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	ST010A_20220920-183955.ft
Start date and time	9/20/2022 6:08 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	9/20/2022 6:09:54 PM		End time	9/20/2022 6:38:07 PM
# Stations	25		Avg interval	40
Mean depth	0.253	m		
Mean velocity	0.265	m/s	Total width	4.877 m
Mean SNR	37.136	dB	Total area	1.234 m^2
Mean temp	7.707	°C	Total discharge	0.327 m^3/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025005
Probe serial number	FT2P2024008
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	ST010A
Site number	ST010A
Operator(s)	SA
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.3%	2.6%
Velocity	1.0%	7.3%
Width	0.1%	0.1%
Method	1.8%	
# Stations	2.0%	
Overall	3.1%	7.8%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

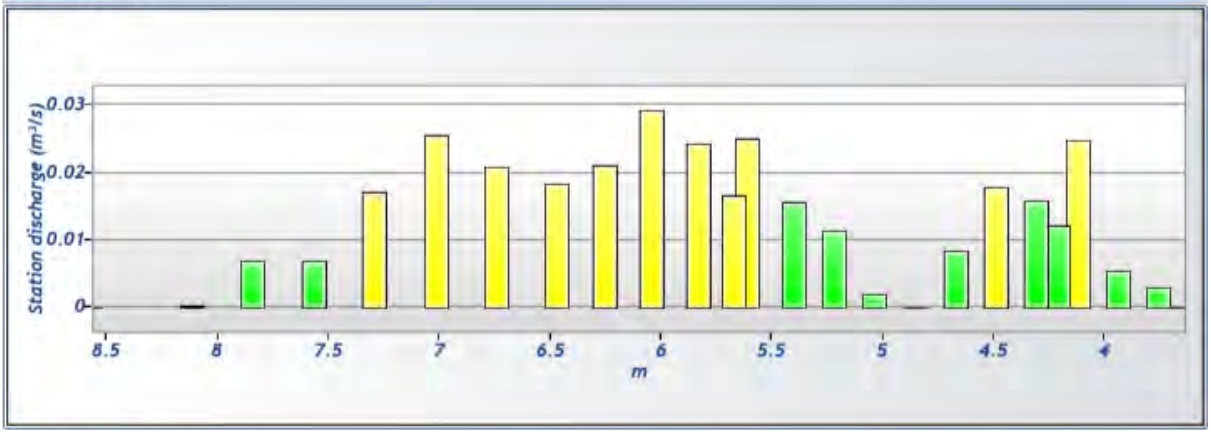
Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

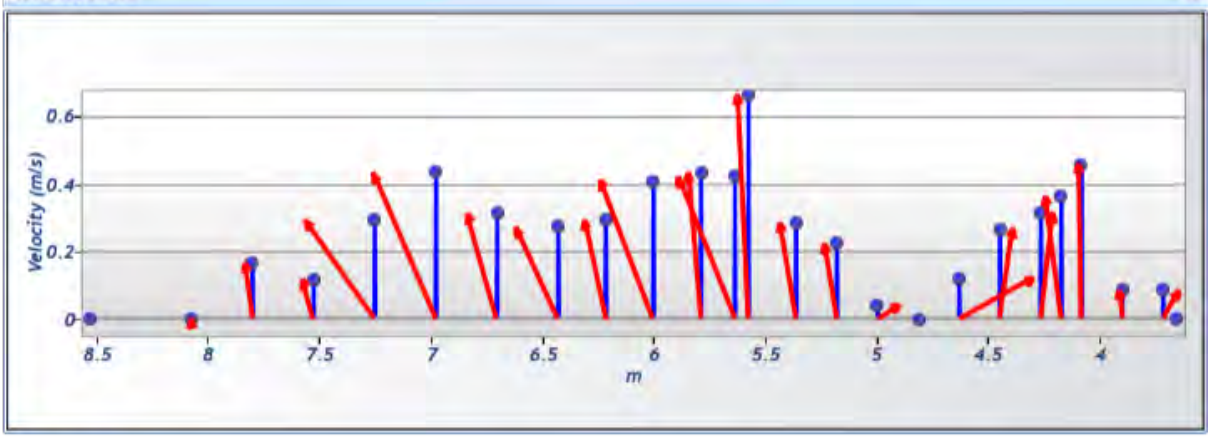
Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

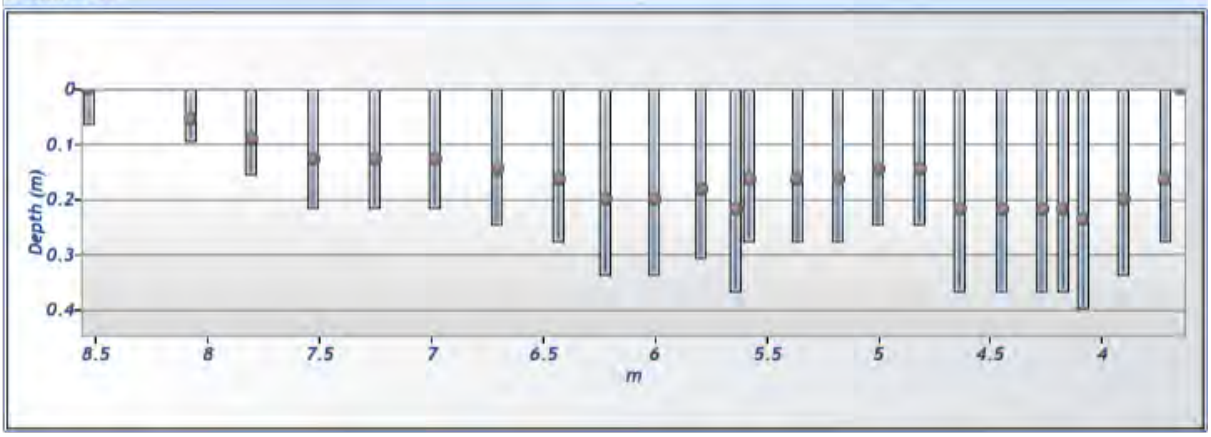
Discharge chart



Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	6:09 PM	3.658	None	0.000	0.000	0.000	0	0.000	1.000	0.086	0.000	0.000	0.000	
1	6:10 PM	3.719	0.6	0.274	0.600	0.165	80	0.086	1.000	0.086	0.033	0.003	0.883	
2	6:11 PM	3.901	0.6	0.335	0.600	0.201	80	0.086	1.000	0.086	0.061	0.005	1.615	
3	6:12 PM	4.084	0.6	0.396	0.600	0.238	80	0.457	1.000	0.457	0.054	0.025	7.596	
4	6:38 PM	4.176	0.6	0.366	0.600	0.219	80	0.362	1.000	0.362	0.033	0.012	3.701	
5	6:14 PM	4.267	0.6	0.366	0.600	0.219	80	0.315	1.000	0.315	0.050	0.016	4.839	
6	6:15 PM	4.450	0.6	0.366	0.600	0.219	80	0.266	1.000	0.266	0.067	0.018	5.453	
7	6:16 PM	4.633	0.6	0.366	0.600	0.219	80	0.123	1.000	0.123	0.067	0.008	2.517	
8	6:17 PM	4.816	0.6	0.244	0.600	0.146	80	0.000	1.000	0.000	0.045	0.000	-0.006	
9	6:19 PM	4.999	0.6	0.244	0.600	0.146	80	0.043	1.000	0.043	0.045	0.002	0.580	
10	6:20 PM	5.182	0.6	0.274	0.600	0.165	80	0.223	1.000	0.223	0.050	0.011	3.429	
11	6:21 PM	5.364	0.6	0.274	0.600	0.165	80	0.286	1.000	0.286	0.054	0.016	4.749	
12	6:22 PM	5.578	0.6	0.274	0.600	0.165	80	0.663	1.000	0.663	0.038	0.025	7.637	
13	6:36 PM	5.639	0.6	0.366	0.600	0.219	80	0.422	1.000	0.422	0.039	0.016	5.039	
14	6:23 PM	5.791	0.6	0.305	0.600	0.183	80	0.433	1.000	0.433	0.056	0.024	7.391	
15	6:24 PM	6.005	0.6	0.335	0.600	0.201	80	0.409	1.000	0.409	0.072	0.029	8.948	
16	6:26 PM	6.218	0.6	0.335	0.600	0.201	80	0.293	1.000	0.293	0.072	0.021	6.410	
17	6:27 PM	6.431	0.6	0.274	0.600	0.165	80	0.272	1.000	0.272	0.067	0.018	5.571	
18	6:28 PM	6.706	0.6	0.244	0.600	0.146	80	0.312	1.000	0.312	0.067	0.021	6.386	
19	6:29 PM	6.980	0.6	0.213	0.600	0.128	80	0.435	1.000	0.435	0.059	0.025	7.797	
20	6:31 PM	7.254	0.6	0.213	0.600	0.128	80	0.292	1.000	0.292	0.059	0.017	5.228	
21	6:32 PM	7.529	0.6	0.213	0.600	0.128	80	0.118	1.000	0.118	0.059	0.007	2.107	
22	6:33 PM	7.803	0.6	0.152	0.600	0.091	80	0.165	1.000	0.165	0.042	0.007	2.112	
23	6:34 PM	8.077	0.6	0.091	0.600	0.055	80	0.001	1.000	0.001	0.033	0.000	0.014	
24	6:35 PM	8.534	None	0.061	0.000	0.000	0	0.000	1.000	0.001	0.014	0.000	0.006	

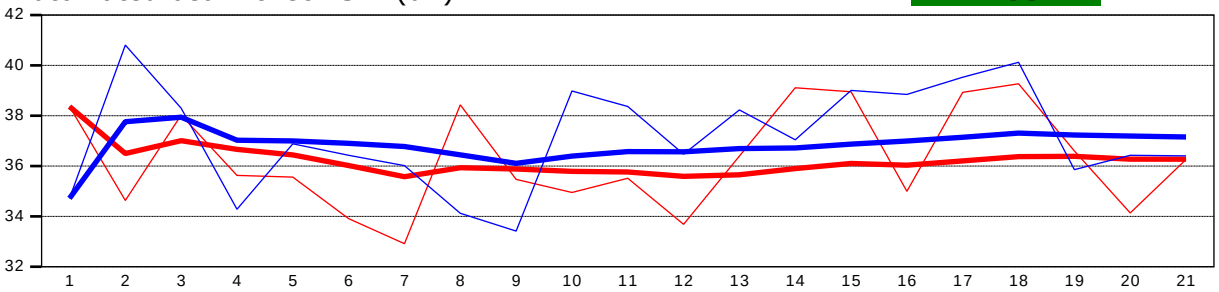
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	6:10 PM	3.719	0.6	0.274	0.600	0.165	Velocity Angle > QC
2	6:11 PM	3.901	0.6	0.335	0.600	0.201	Rod Angle > QC
3	6:12 PM	4.084	0.6	0.396	0.600	0.238	Standard Error > QC
4	6:38 PM	4.176	0.6	0.366	0.600	0.219	Standard Error > QC
5	6:14 PM	4.267	0.6	0.366	0.600	0.219	Standard Error > QC
6	6:15 PM	4.450	0.6	0.366	0.600	0.219	Standard Error > QC
7	6:16 PM	4.633	0.6	0.366	0.600	0.219	Standard Error > QC,Velocity Angle > QC
8	6:17 PM	4.816	0.6	0.244	0.600	0.146	Beam SNRs Not Similar,Large SNR Variation
9	6:19 PM	4.999	0.6	0.244	0.600	0.146	Standard Error > QC,Velocity Angle > QC
10	6:20 PM	5.182	0.6	0.274	0.600	0.165	Standard Error > QC
11	6:21 PM	5.364	0.6	0.274	0.600	0.165	Standard Error > QC
12	6:22 PM	5.578	0.6	0.274	0.600	0.165	Standard Error > QC
13	6:36 PM	5.639	0.6	0.366	0.600	0.219	Standard Error > QC,Velocity Angle > QC
14	6:23 PM	5.791	0.6	0.305	0.600	0.183	Stn Spacing > QC,Standard Error > QC
15	6:24 PM	6.005	0.6	0.335	0.600	0.201	Standard Error > QC,Velocity Angle > QC
16	6:26 PM	6.218	0.6	0.335	0.600	0.201	Standard Error > QC
17	6:27 PM	6.431	0.6	0.274	0.600	0.165	Velocity Angle > QC
18	6:28 PM	6.706	0.6	0.244	0.600	0.146	Standard Error > QC,Velocity Angle > QC
19	6:29 PM	6.980	0.6	0.213	0.600	0.128	Velocity Angle > QC
20	6:31 PM	7.254	0.6	0.213	0.600	0.128	Standard Error > QC,Velocity Angle > QC
21	6:32 PM	7.529	0.6	0.213	0.600	0.128	Standard Error > QC,Velocity Angle > QC
23	6:34 PM	8.077	0.6	0.091	0.600	0.055	Boundary Interference

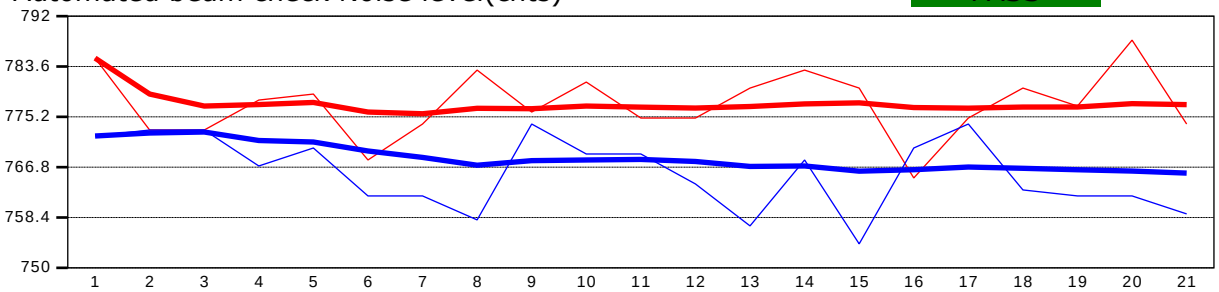
1/19/2023 12:16:00 PM

Automated beam check Start time 9/20/2022 6:09:27 PM

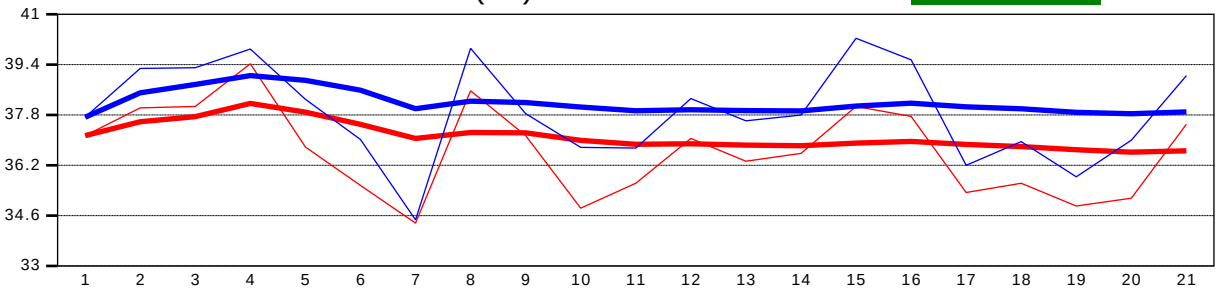
Automated beam check SNR(dB) PASS



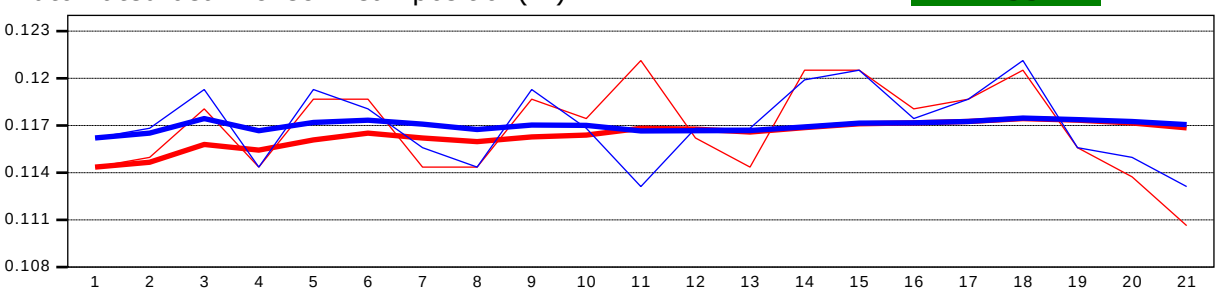
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	Csc-120a_20220920-161442.ft
Start date and time	9/20/2022 3:54 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	9/20/2022 3:56:01 PM	End time	9/20/2022 4:13:04 PM
# Stations	22	Avg interval	40
Mean depth	0.096 m		
Mean velocity	0.176 m/s	Total width	0.914 m
Mean SNR	45.172 dB	Total area	0.088 m²
Mean temp	6.354 °C	Total discharge	0.015 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025004
Probe serial number	FT2P1733022
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	Csc-120a
Site number	CSC-120A
Operator(s)	Rh
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.4%	8.2%
Velocity	1.2%	7.5%
Width	0.1%	0.1%
Method	2.0%	
# Stations	2.3%	
Overall	3.4%	11.1%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

Data Collection Settings

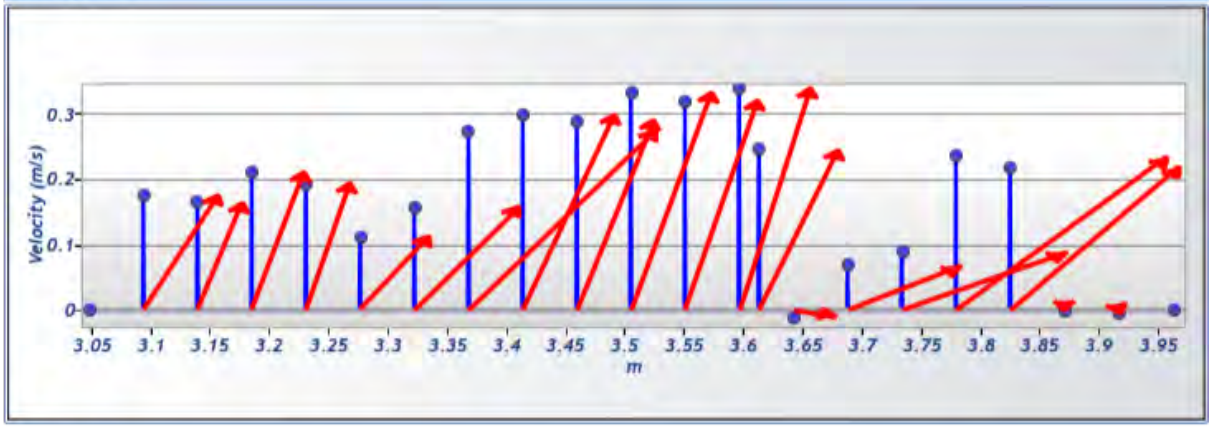
Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

Quality Control Settings

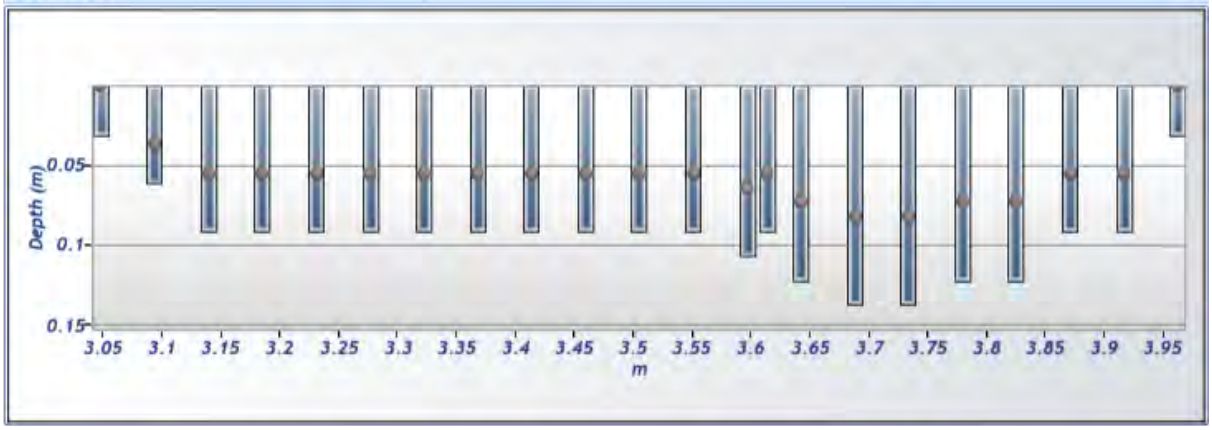
SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

Discharge chart

Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	3:56 PM	3.048	None	0.030	0.000	0.000	0	0.000	1.000	0.174	0.001	0.000	0.784	
1	3:56 PM	3.094	0.6	0.061	0.600	0.037	41	0.174	1.000	0.174	0.003	0.000	3.138	
2	3:57 PM	3.139	0.6	0.091	0.600	0.055	42	0.164	1.000	0.164	0.004	0.001	4.427	
3	3:58 PM	3.185	0.6	0.091	0.600	0.055	40	0.210	1.000	0.210	0.004	0.001	5.681	
4	3:58 PM	3.231	0.6	0.091	0.600	0.055	41	0.194	1.000	0.194	0.004	0.001	5.229	
5	3:59 PM	3.277	0.6	0.091	0.600	0.055	41	0.111	1.000	0.111	0.004	0.000	3.006	
6	4:00 PM	3.322	0.6	0.091	0.600	0.055	40	0.157	1.000	0.157	0.004	0.001	4.242	
7	4:01 PM	3.368	0.6	0.091	0.600	0.055	41	0.274	1.000	0.274	0.004	0.001	7.388	
8	4:01 PM	3.414	0.6	0.091	0.600	0.055	40	0.298	1.000	0.298	0.004	0.001	8.049	
9	4:02 PM	3.459	0.6	0.091	0.600	0.055	40	0.289	1.000	0.289	0.004	0.001	7.814	
10	4:03 PM	3.505	0.6	0.091	0.600	0.055	21	0.331	1.000	0.331	0.004	0.001	8.946	
11	4:04 PM	3.551	0.6	0.091	0.600	0.055	40	0.319	1.000	0.319	0.004	0.001	8.614	
12	4:05 PM	3.597	0.6	0.107	0.600	0.064	41	0.338	1.000	0.338	0.003	0.001	7.280	
13	4:13 PM	3.613	0.6	0.091	0.600	0.055	41	0.244	1.000	0.244	0.002	0.001	3.299	
14	4:05 PM	3.642	0.6	0.122	0.600	0.073	79	-0.011	1.000	-0.011	0.005	0.000	-0.324	
15	4:07 PM	3.688	0.6	0.137	0.600	0.082	79	0.068	1.000	0.068	0.006	0.000	2.742	
16	4:08 PM	3.734	0.6	0.137	0.600	0.082	41	0.088	1.000	0.088	0.006	0.001	3.571	
17	4:09 PM	3.780	0.6	0.122	0.600	0.073	60	0.234	1.000	0.234	0.006	0.001	8.440	
18	4:09 PM	3.825	0.6	0.122	0.600	0.073	40	0.219	1.000	0.219	0.006	0.001	7.883	
19	4:10 PM	3.871	0.6	0.091	0.600	0.055	79	-0.002	1.000	-0.002	0.004	0.000	-0.041	
20	4:11 PM	3.917	0.6	0.091	0.600	0.055	41	-0.005	1.000	-0.005	0.004	0.000	-0.143	
21	4:12 PM	3.962	None	0.030	0.000	0.000	0	0.000	1.000	-0.005	0.001	0.000	-0.024	

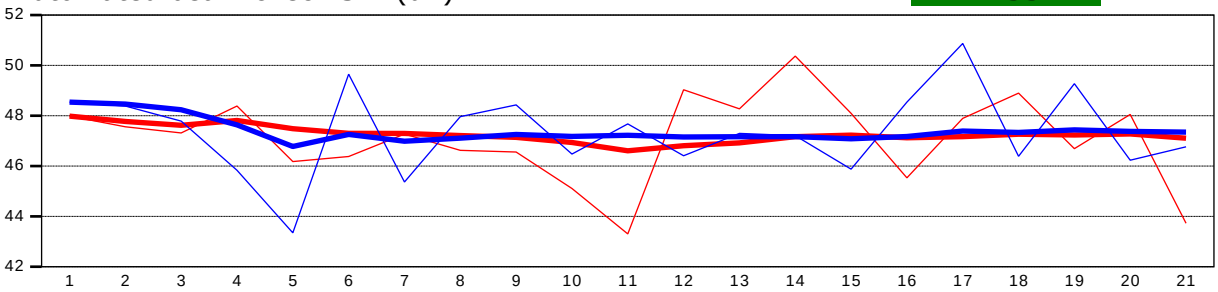
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
3	3:58 PM	3.185	0.6	0.091	0.600	0.055	Standard Error > QC
4	3:58 PM	3.231	0.6	0.091	0.600	0.055	Standard Error > QC
5	3:59 PM	3.277	0.6	0.091	0.600	0.055	Velocity Angle > QC
6	4:00 PM	3.322	0.6	0.091	0.600	0.055	Velocity Angle > QC
7	4:01 PM	3.368	0.6	0.091	0.600	0.055	Standard Error > QC,Velocity Angle > QC
8	4:01 PM	3.414	0.6	0.091	0.600	0.055	Standard Error > QC
9	4:02 PM	3.459	0.6	0.091	0.600	0.055	Standard Error > QC
10	4:03 PM	3.505	0.6	0.091	0.600	0.055	Standard Error > QC
12	4:05 PM	3.597	0.6	0.107	0.600	0.064	Standard Error > QC
13	4:13 PM	3.613	0.6	0.091	0.600	0.055	Standard Error > QC
14	4:05 PM	3.642	0.6	0.122	0.600	0.073	Stn Spacing > QC
15	4:07 PM	3.688	0.6	0.137	0.600	0.082	Velocity Angle > QC
16	4:08 PM	3.734	0.6	0.137	0.600	0.082	Standard Error > QC,Velocity Angle > QC
17	4:09 PM	3.780	0.6	0.122	0.600	0.073	Velocity Angle > QC
18	4:09 PM	3.825	0.6	0.122	0.600	0.073	Boundary Interference,Standard Error > QC,Velocity Angle > QC
20	4:11 PM	3.917	0.6	0.091	0.600	0.055	Boundary Interference,SNR Threshold Variation

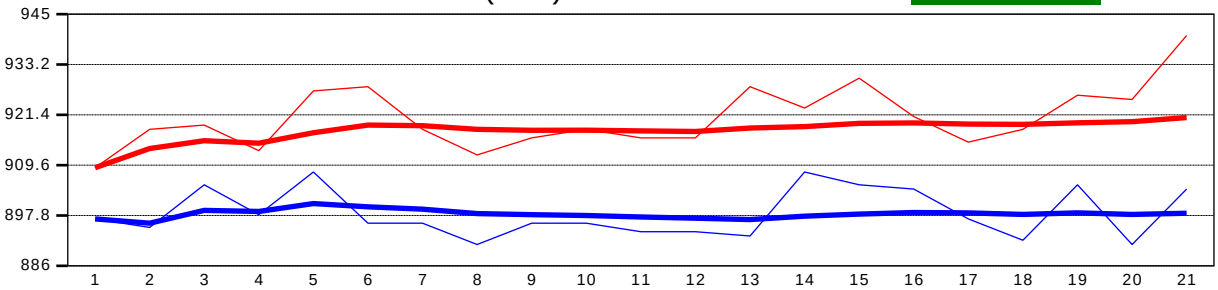
1/19/2023 12:15:11 PM

Automated beam check Start time 9/20/2022 3:55:40 PM

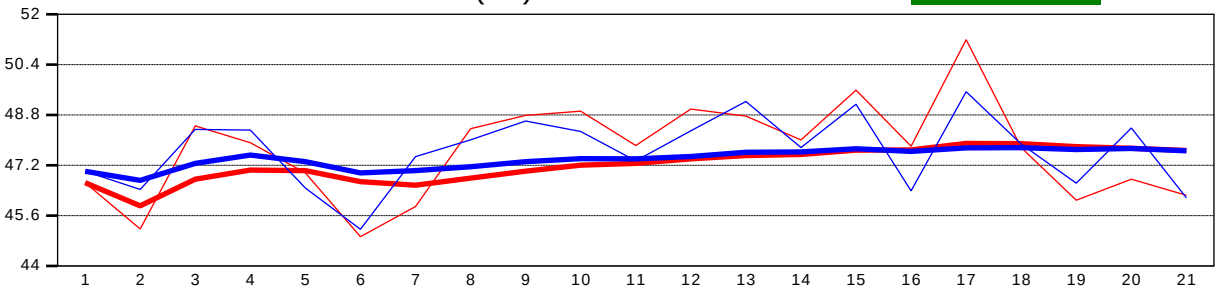
Automated beam check SNR(dB) PASS



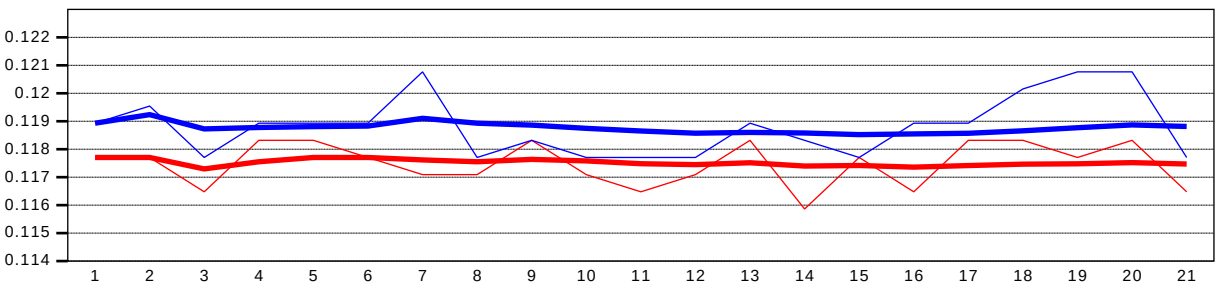
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	Csc-116_20220920-153541.ft
Start date and time	9/20/2022 3:10 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	9/20/2022 3:11:06 PM		End time	9/20/2022 3:33:51 PM
# Stations	25		Avg interval	40
Mean depth	0.164	m		
Mean velocity	0.076	m/s	Total width	1.524 m
Mean SNR	38.489	dB	Total area	0.250 m^2
Mean temp	6.814	°C	Total discharge	0.019 m^3/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025004
Probe serial number	FT2P1733022
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	Csc-116
Site number	CSC-116
Operator(s)	Rh
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.4%	4.0%
Velocity	1.1%	8.0%
Width	0.1%	0.1%
Method	2.0%	
# Stations	2.0%	
Overall	3.2%	9.0%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

Data Collection Settings

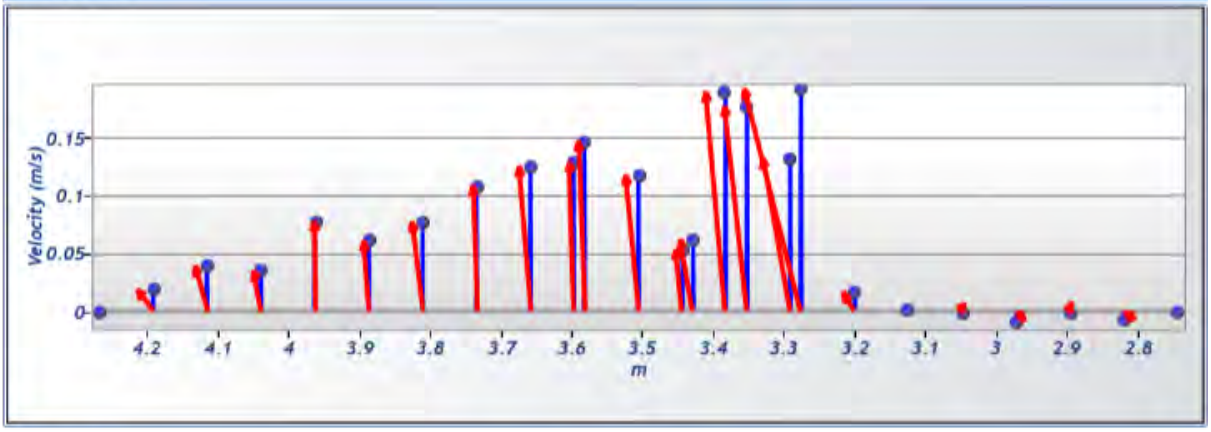
Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

Quality Control Settings

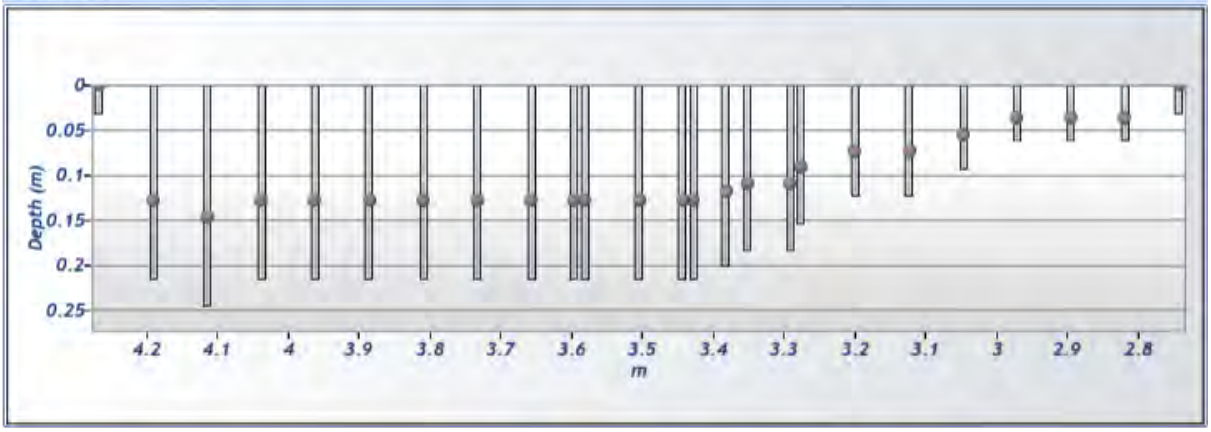
SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

Discharge chart

Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q
0	3:11 PM	2.743	None	0.030	0.000	0.000	0	0.000	1.000	-0.008	0.001	0.000	-0.049
1	3:11 PM	2.819	0.6	0.061	0.600	0.037	41	-0.008	1.000	-0.008	0.005	0.000	-0.196
2	3:12 PM	2.896	0.6	0.061	0.600	0.037	41	-0.002	1.000	-0.002	0.005	0.000	-0.041
3	3:13 PM	2.972	0.6	0.061	0.600	0.037	41	-0.009	1.000	-0.009	0.005	0.000	-0.227
4	3:13 PM	3.048	0.6	0.091	0.600	0.055	41	-0.002	1.000	-0.002	0.007	0.000	-0.062
5	3:14 PM	3.124	0.6	0.122	0.600	0.073	41	0.000	1.000	0.000	0.009	0.000	0.020
6	3:15 PM	3.200	0.6	0.122	0.600	0.073	79	0.017	1.000	0.017	0.009	0.000	0.843
7	3:16 PM	3.277	0.6	0.152	0.600	0.091	78	0.192	1.000	0.192	0.007	0.001	7.046
8	3:32 PM	3.292	0.6	0.183	0.600	0.110	41	0.132	1.000	0.132	0.007	0.001	4.848
9	3:18 PM	3.353	0.6	0.183	0.600	0.110	79	0.177	1.000	0.177	0.008	0.001	7.791
10	3:33 PM	3.383	0.6	0.198	0.600	0.119	40	0.189	1.000	0.189	0.008	0.001	7.532
11	3:19 PM	3.429	0.6	0.213	0.600	0.128	79	0.062	1.000	0.062	0.007	0.000	2.114
12	3:31 PM	3.444	0.6	0.213	0.600	0.128	41	0.053	1.000	0.053	0.008	0.000	2.272
13	3:20 PM	3.505	0.6	0.213	0.600	0.128	79	0.117	1.000	0.117	0.015	0.002	9.045
14	3:21 PM	3.581	0.6	0.213	0.600	0.128	79	0.147	1.000	0.147	0.010	0.001	7.540
15	3:30 PM	3.597	0.6	0.213	0.600	0.128	40	0.129	1.000	0.129	0.008	0.001	5.525
16	3:22 PM	3.658	0.6	0.213	0.600	0.128	79	0.125	1.000	0.125	0.015	0.002	9.640
17	3:23 PM	3.734	0.6	0.213	0.600	0.128	61	0.108	1.000	0.108	0.016	0.002	9.251
18	3:24 PM	3.810	0.6	0.213	0.600	0.128	79	0.077	1.000	0.077	0.016	0.001	6.622
19	3:25 PM	3.886	0.6	0.213	0.600	0.128	41	0.061	1.000	0.061	0.016	0.001	5.223
20	3:26 PM	3.962	0.6	0.213	0.600	0.128	79	0.077	1.000	0.077	0.016	0.001	6.632
21	3:27 PM	4.039	0.6	0.213	0.600	0.128	40	0.035	1.000	0.035	0.016	0.001	3.016
22	3:28 PM	4.115	0.6	0.244	0.600	0.146	59	0.039	1.000	0.039	0.019	0.001	3.861
23	3:29 PM	4.191	0.6	0.213	0.600	0.128	60	0.019	1.000	0.019	0.016	0.000	1.639
24	3:30 PM	4.267	None	0.030	0.000	0.000	0	0.000	1.000	0.019	0.001	0.000	0.117

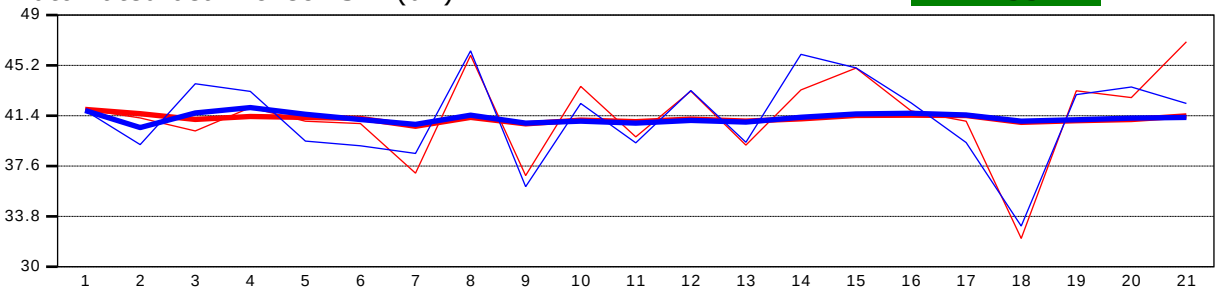
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
4	3:13 PM	3.048	0.6	0.091	0.600	0.055	Boundary Interference,Beam SNRs Not Similar
5	3:14 PM	3.124	0.6	0.122	0.600	0.073	Boundary Interference
7	3:16 PM	3.277	0.6	0.152	0.600	0.091	Boundary Interference,Velocity Angle > QC
8	3:32 PM	3.292	0.6	0.183	0.600	0.110	Boundary Interference
13	3:20 PM	3.505	0.6	0.213	0.600	0.128	Stn Spacing > QC
16	3:22 PM	3.658	0.6	0.213	0.600	0.128	Stn Spacing > QC
22	3:28 PM	4.115	0.6	0.244	0.600	0.146	Velocity Angle > QC

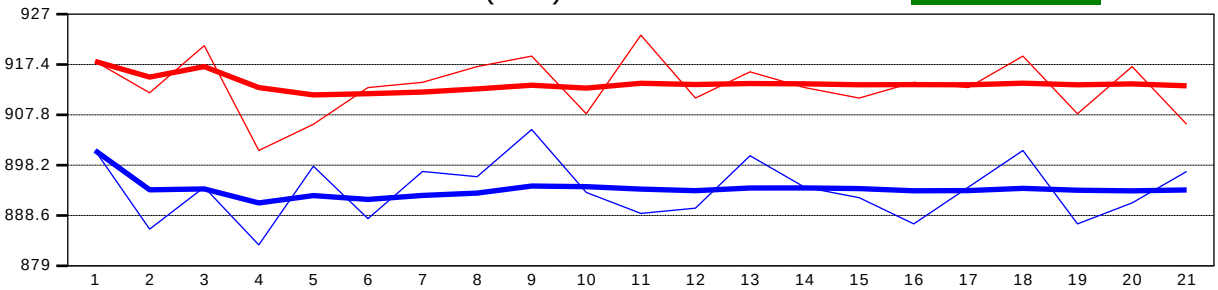
1/19/2023 12:14:50 PM

Automated beam check Start time 9/20/2022 3:10:41 PM

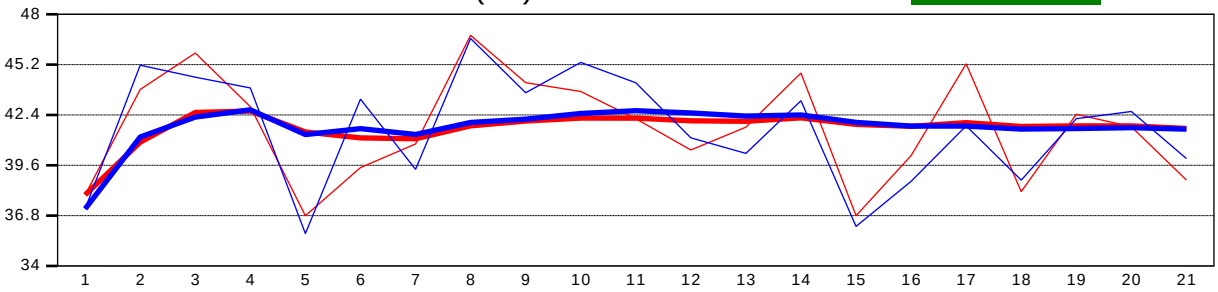
Automated beam check SNR(dB) PASS



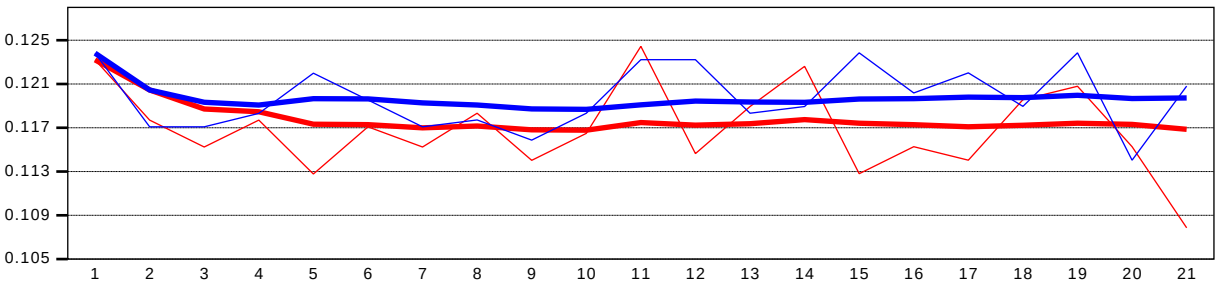
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC111A_20220920-143416.ft
Start date and time	9/20/2022 2:01 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	9/20/2022 2:02:55 PM	End time	9/20/2022 2:33:44 PM
# Stations	24	Avg interval	40
Mean depth	0.123 m		
Mean velocity	0.132 m/s	Total width	1.554 m
Mean SNR	37.903 dB	Total area	0.191 m²
Mean temp	8.178 °C	Total discharge	0.025 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025005
Probe serial number	FT2P2024008
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC111A
Site number	CSC111A
Operator(s)	SA
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.4%	5.3%
Velocity	0.8%	5.8%
Width	0.1%	0.1%
Method	1.8%	
# Stations	2.1%	
Overall	3.1%	7.9%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

Data Collection Settings

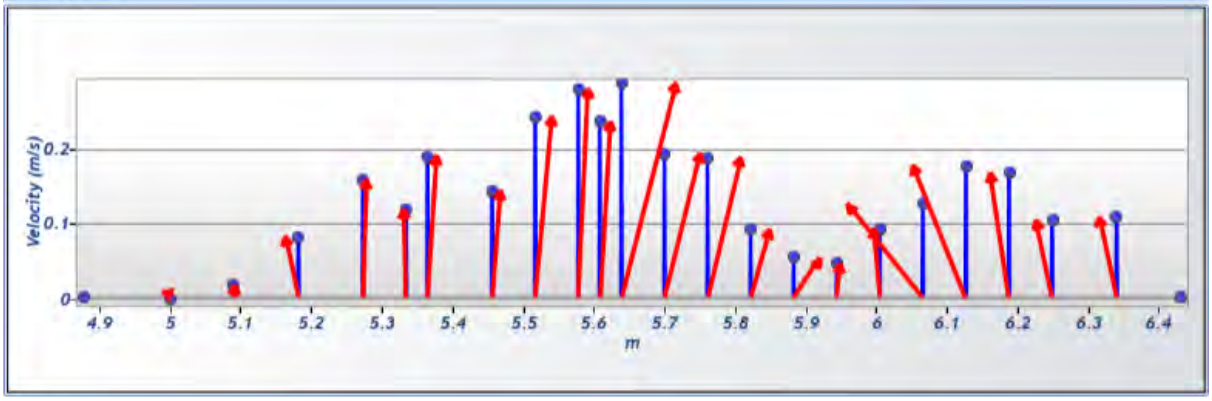
Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

Quality Control Settings

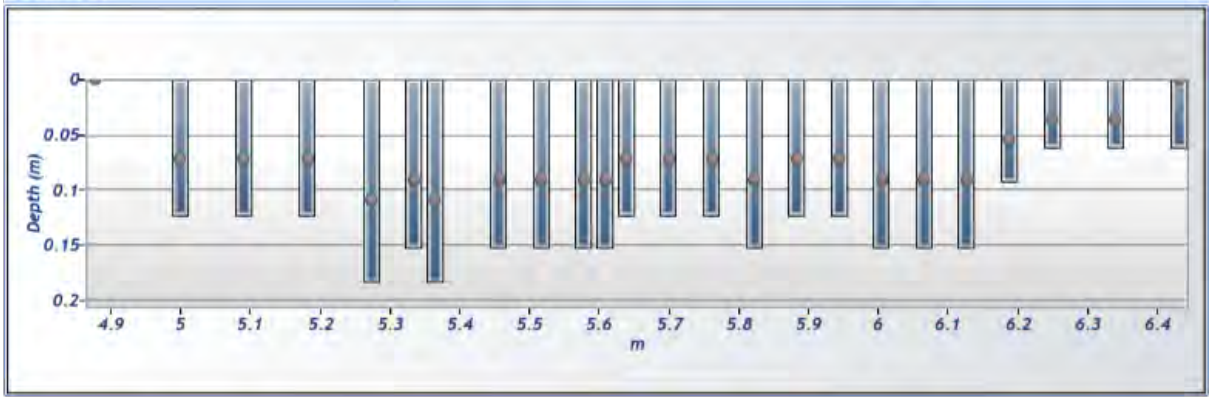
SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

Discharge chart

Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	2:02 PM	4.877	None	0.000	0.000	0.000	0	0.000	1.000	-0.002	0.000	0.000	0.000	
1	2:03 PM	4.999	0.6	0.122	0.600	0.073	80	-0.002	1.000	-0.002	0.013	0.000	-0.078	
2	2:04 PM	5.090	0.6	0.122	0.600	0.073	80	0.017	1.000	0.017	0.011	0.000	0.758	
3	2:05 PM	5.182	0.6	0.122	0.600	0.073	80	0.083	1.000	0.083	0.011	0.001	3.646	
4	2:07 PM	5.273	0.6	0.183	0.600	0.110	80	0.159	1.000	0.159	0.014	0.002	8.758	
5	2:32 PM	5.334	0.6	0.152	0.600	0.091	80	0.119	1.000	0.119	0.007	0.001	3.272	
6	2:08 PM	5.364	0.6	0.183	0.600	0.110	80	0.190	1.000	0.190	0.011	0.002	8.389	
7	2:09 PM	5.456	0.6	0.152	0.600	0.091	80	0.144	1.000	0.144	0.012	0.002	6.597	
8	2:10 PM	5.517	0.6	0.152	0.600	0.091	80	0.243	1.000	0.243	0.009	0.002	8.921	
9	2:12 PM	5.578	0.6	0.152	0.600	0.091	80	0.280	1.000	0.280	0.007	0.002	7.716	
10	2:29 PM	5.608	0.6	0.152	0.600	0.091	80	0.237	1.000	0.237	0.005	0.001	4.350	
11	2:13 PM	5.639	0.6	0.122	0.600	0.073	80	0.288	1.000	0.288	0.006	0.002	6.357	
12	2:14 PM	5.700	0.6	0.122	0.600	0.073	80	0.193	1.000	0.193	0.007	0.001	5.683	
13	2:15 PM	5.761	0.6	0.122	0.600	0.073	80	0.188	1.000	0.188	0.007	0.001	5.525	
14	2:16 PM	5.822	0.6	0.152	0.600	0.091	80	0.092	1.000	0.092	0.009	0.001	3.375	
15	2:17 PM	5.883	0.6	0.122	0.600	0.073	80	0.054	1.000	0.054	0.007	0.000	1.599	
16	2:18 PM	5.944	0.6	0.122	0.600	0.073	80	0.046	1.000	0.046	0.007	0.000	1.359	
17	2:20 PM	6.005	0.6	0.152	0.600	0.091	80	0.092	1.000	0.092	0.009	0.001	3.394	
18	2:21 PM	6.066	0.6	0.152	0.600	0.091	80	0.127	1.000	0.127	0.009	0.001	4.681	
19	2:22 PM	6.126	0.6	0.152	0.600	0.091	80	0.177	1.000	0.177	0.009	0.002	6.503	
20	2:23 PM	6.187	0.6	0.091	0.600	0.055	80	0.168	1.000	0.168	0.006	0.001	3.707	
21	2:25 PM	6.248	0.6	0.061	0.600	0.037	80	0.104	1.000	0.104	0.005	0.000	1.910	
22	2:26 PM	6.340	0.6	0.061	0.600	0.037	80	0.108	1.000	0.108	0.006	0.001	2.388	
23	2:33 PM	6.431	None	0.061	0.000	0.000	0	0.000	1.000	0.108	0.003	0.000	1.194	

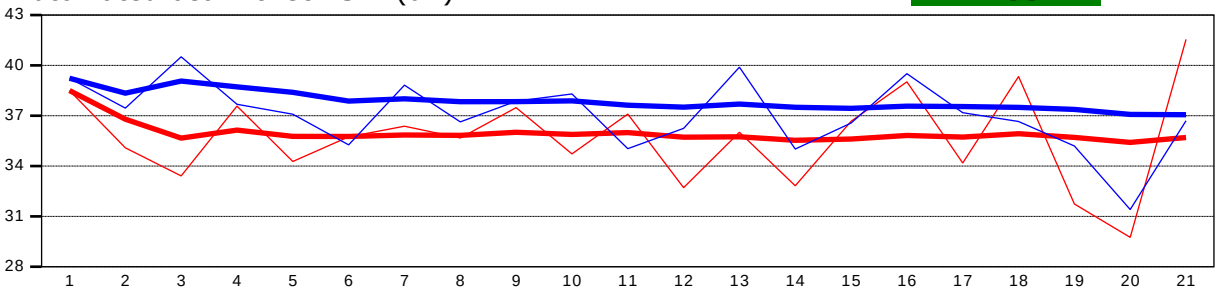
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	2:03 PM	4.999	0.6	0.122	0.600	0.073	Boundary Interference,Large SNR Variation,SNR Threshold Variation,Rod Angle > QC
14	2:16 PM	5.822	0.6	0.152	0.600	0.091	Rod Angle > QC
15	2:17 PM	5.883	0.6	0.122	0.600	0.073	Velocity Angle > QC
17	2:20 PM	6.005	0.6	0.152	0.600	0.091	Rod Angle > QC
18	2:21 PM	6.066	0.6	0.152	0.600	0.091	Velocity Angle > QC
19	2:22 PM	6.126	0.6	0.152	0.600	0.091	Velocity Angle > QC

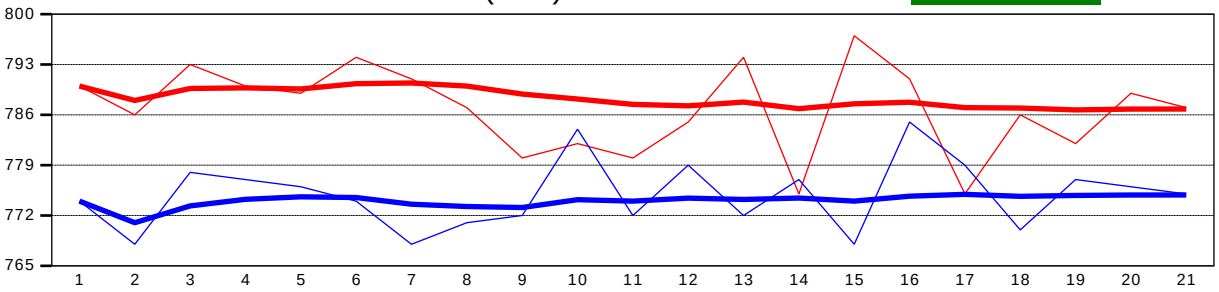
1/19/2023 12:14:11 PM

Automated beam check Start time 9/20/2022 2:02:16 PM

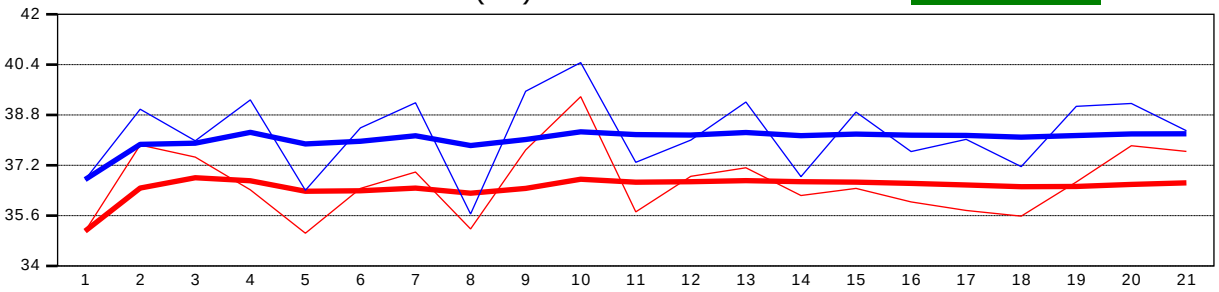
Automated beam check SNR(dB) PASS



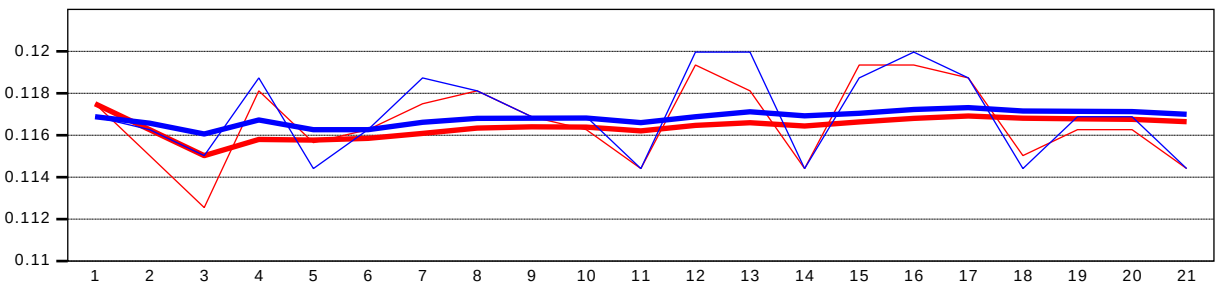
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	Csc-105_20220920-141019.ft
Start date and time	9/20/2022 1:42 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	9/20/2022 1:43:14 PM	End time	9/20/2022 2:09:11 PM
# Stations	29	Avg interval	40
Mean depth	0.145 m		
Mean velocity	0.046 m/s	Total width	2.743 m
Mean SNR	41.030 dB	Total area	0.397 m²
Mean temp	6.803 °C	Total discharge	0.018 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025004
Probe serial number	FT2P1733022
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	Csc-105
Site number	CSC-105
Operator(s)	Rh
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.4%	6.3%
Velocity	2.9%	41.6%
Width	0.1%	0.1%
Method	2.0%	
# Stations	1.8%	
Overall	4.1%	42.1%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

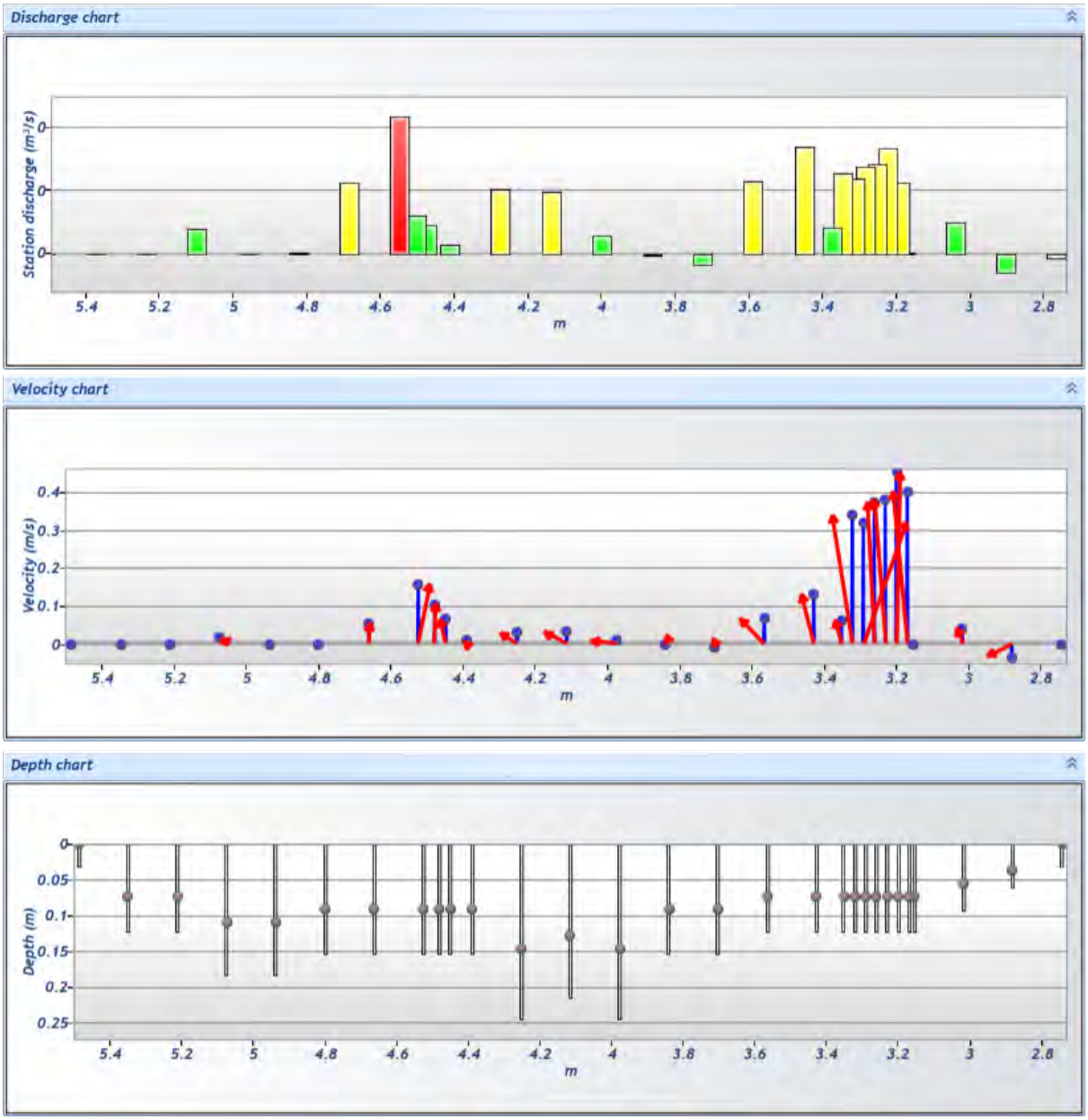
No changes were made to this file
Quality control warnings

Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg


Discharge chart
Station discharge (m³/s)
0
0
0
5.4
5.2
5
4.8
4.6
4.4
4.2
4
3.8
3.6
3.4
3.2
3
2.8
m
Velocity chart
Velocity (m/s)
0.4
0.3
0.2
0.1
0
5.4
5.2
5
4.8
4.6
4.4
4.2
4
3.8
3.6
3.4
3.2
3
2.8
m
Depth chart
Depth (m)
0
0.05
0.1
0.15
0.2
0.25
5.4
5.2
5
4.8
4.6
4.4
4.2
4
3.8
3.6
3.4
3.2
3
2.8
m

Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	1:43 PM	2.743	None	0.030	0.000	0.000	0	0.000	1.000	-0.036	0.002	0.000	-0.406	√
1	1:43 PM	2.880	0.6	0.061	0.600	0.037	60	-0.036	1.000	-0.036	0.008	0.000	-1.623	√
2	1:44 PM	3.018	0.6	0.091	0.600	0.055	69	0.040	1.000	0.040	0.013	0.001	2.738	√
3	1:45 PM	3.155	0.6	0.122	0.600	0.073	79	0.000	1.000	0.000	0.009	0.000	0.007	√
4	2:08 PM	3.170	0.6	0.122	0.600	0.073	21	0.401	1.000	0.401	0.003	0.001	6.097	√
5	2:05 PM	3.200	0.6	0.122	0.600	0.073	21	0.451	1.000	0.451	0.004	0.002	9.141	√
6	2:07 PM	3.231	0.6	0.122	0.600	0.073	21	0.380	1.000	0.380	0.004	0.001	7.695	√
7	2:05 PM	3.261	0.6	0.122	0.600	0.073	40	0.372	1.000	0.372	0.004	0.001	7.529	√
8	1:47 PM	3.292	0.6	0.122	0.600	0.073	79	0.319	1.000	0.319	0.004	0.001	6.463	√
9	2:07 PM	3.322	0.6	0.122	0.600	0.073	40	0.339	1.000	0.339	0.004	0.001	6.873	√
10	2:03 PM	3.353	0.6	0.122	0.600	0.073	40	0.062	1.000	0.062	0.007	0.000	2.207	√
11	1:48 PM	3.429	0.6	0.122	0.600	0.073	79	0.131	1.000	0.131	0.013	0.002	9.254	√
12	1:49 PM	3.566	0.6	0.122	0.600	0.073	79	0.068	1.000	0.068	0.017	0.001	6.231	√
13	1:50 PM	3.703	0.6	0.152	0.600	0.091	79	-0.008	1.000	-0.008	0.021	0.000	-0.952	√
14	1:52 PM	3.840	0.6	0.152	0.600	0.091	41	-0.001	1.000	-0.001	0.021	0.000	-0.123	√
15	1:53 PM	3.978	0.6	0.244	0.600	0.146	60	0.009	1.000	0.009	0.033	0.000	1.573	√
16	1:54 PM	4.115	0.6	0.213	0.600	0.128	41	0.034	1.000	0.034	0.029	0.001	5.361	√
17	1:55 PM	4.252	0.6	0.244	0.600	0.146	40	0.030	1.000	0.030	0.033	0.001	5.531	√
18	1:56 PM	4.389	0.6	0.152	0.600	0.091	40	0.008	1.000	0.008	0.015	0.000	0.696	√
19	2:02 PM	4.450	0.6	0.152	0.600	0.091	40	0.064	1.000	0.064	0.007	0.000	2.435	√
20	2:09 PM	4.481	0.6	0.152	0.600	0.091	21	0.104	1.000	0.104	0.006	0.001	3.298	√
21	1:57 PM	4.526	0.6	0.152	0.600	0.091	40	0.156	1.000	0.156	0.014	0.002	11.870	√
22	1:57 PM	4.663	0.6	0.152	0.600	0.091	40	0.053	1.000	0.053	0.021	0.001	6.072	√
23	1:58 PM	4.801	0.6	0.152	0.600	0.091	40	0.000	1.000	0.000	0.021	0.000	0.045	√
24	1:59 PM	4.938	0.6	0.183	0.600	0.110	41	0.000	1.000	0.000	0.025	0.000	-0.017	√
25	2:00 PM	5.075	0.6	0.183	0.600	0.110	41	0.015	1.000	0.015	0.025	0.000	2.098	√
26	2:00 PM	5.212	0.6	0.122	0.600	0.073	40	0.000	1.000	0.000	0.017	0.000	-0.014	√
27	2:01 PM	5.349	0.6	0.122	0.600	0.073	39	-0.001	1.000	-0.001	0.017	0.000	-0.070	√
28	2:02 PM	5.486	None	0.030	0.000	0.000	0	0.000	1.000	-0.001	0.002	0.000	-0.009	√

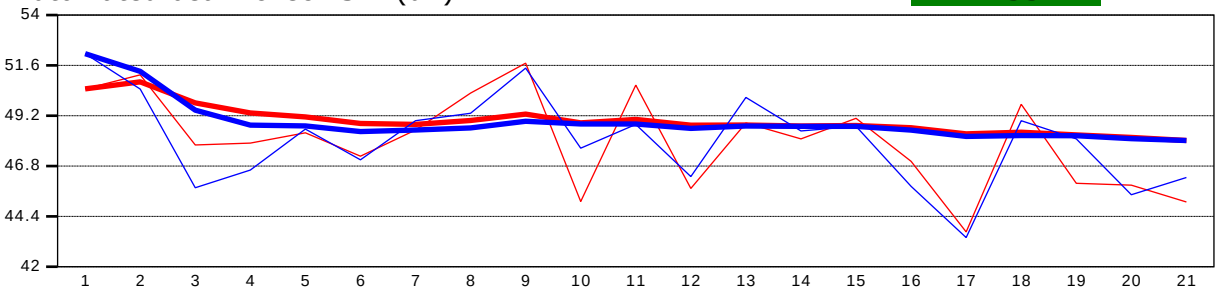
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	1:43 PM	2.880	0.6	0.061	0.600	0.037	Velocity Angle > QC
2	1:44 PM	3.018	0.6	0.091	0.600	0.055	Boundary Interference,Velocity Angle > QC
3	1:45 PM	3.155	0.6	0.122	0.600	0.073	SNR Threshold Variation
4	2:08 PM	3.170	0.6	0.122	0.600	0.073	Standard Error > QC
5	2:05 PM	3.200	0.6	0.122	0.600	0.073	Stn Spacing > QC,Standard Error > QC
6	2:07 PM	3.231	0.6	0.122	0.600	0.073	Standard Error > QC
7	2:05 PM	3.261	0.6	0.122	0.600	0.073	Standard Error > QC
8	1:47 PM	3.292	0.6	0.122	0.600	0.073	Velocity Angle > QC
9	2:07 PM	3.322	0.6	0.122	0.600	0.073	Standard Error > QC
12	1:49 PM	3.566	0.6	0.122	0.600	0.073	Velocity Angle > QC
13	1:50 PM	3.703	0.6	0.152	0.600	0.091	SNR Threshold Variation
14	1:52 PM	3.840	0.6	0.152	0.600	0.091	Boundary Interference
16	1:54 PM	4.115	0.6	0.213	0.600	0.128	Velocity Angle > QC
17	1:55 PM	4.252	0.6	0.244	0.600	0.146	Velocity Angle > QC
18	1:56 PM	4.389	0.6	0.152	0.600	0.091	Standard Error > QC
20	2:09 PM	4.481	0.6	0.152	0.600	0.091	Stn Spacing > QC,Standard Error > QC
21	1:57 PM	4.526	0.6	0.152	0.600	0.091	Standard Error > QC,High Stn % Discharge
24	1:59 PM	4.938	0.6	0.183	0.600	0.110	Boundary Interference,Beam SNRs Not Similar,Large SNR Variation,SNR Threshold Variation
25	2:00 PM	5.075	0.6	0.183	0.600	0.110	Beam SNRs Not Similar
26	2:00 PM	5.212	0.6	0.122	0.600	0.073	Low SNR,Approaching Low SNR,SNR Threshold Variation
27	2:01 PM	5.349	0.6	0.122	0.600	0.073	Boundary Interference,Low SNR,Approaching Low SNR,SNR Threshold Variation

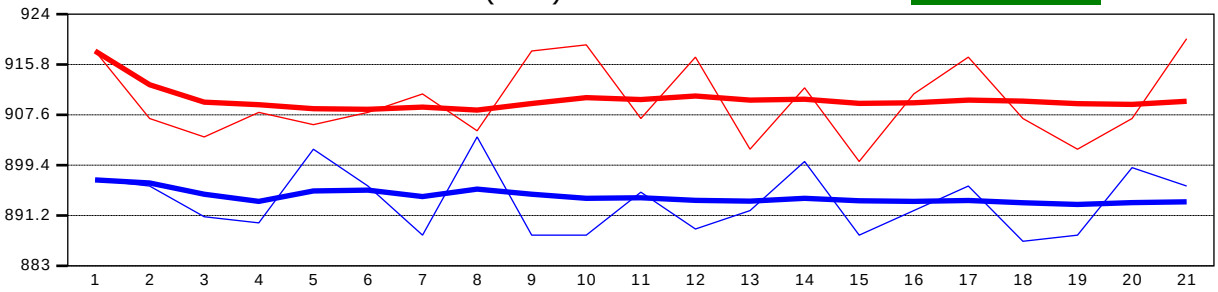
1/19/2023 12:13:45 PM

Automated beam check Start time 9/20/2022 1:42:47 PM

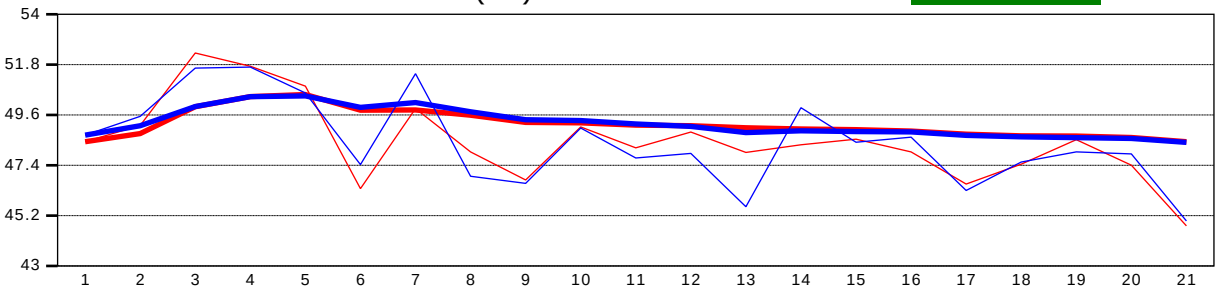
Automated beam check SNR(dB) PASS



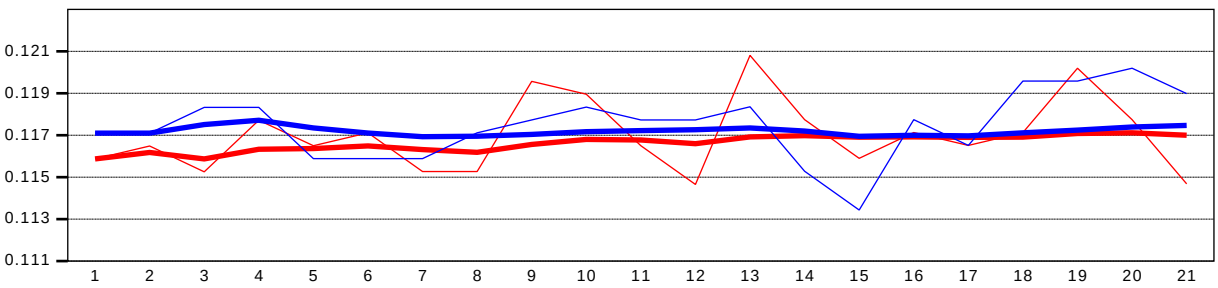
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	Csc-104a_20220920-144320.ft
Start date and time	9/20/2022 2:14 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	9/20/2022 2:16:01 PM	End time	9/20/2022 2:41:01 PM
# Stations	27	Avg interval	40
Mean depth	0.133 m		
Mean velocity	0.100 m/s	Total width	3.658 m
Mean SNR	40.974 dB	Total area	0.486 m²
Mean temp	8.076 °C	Total discharge	0.049 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025004
Probe serial number	FT2P1733022
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	Csc-104a
Site number	CSC-104A
Operator(s)	Rh
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.6%	6.6%
Velocity	1.8%	19.2%
Width	0.2%	0.2%
Method	2.8%	
# Stations	1.9%	
Overall	4.0%	20.3%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

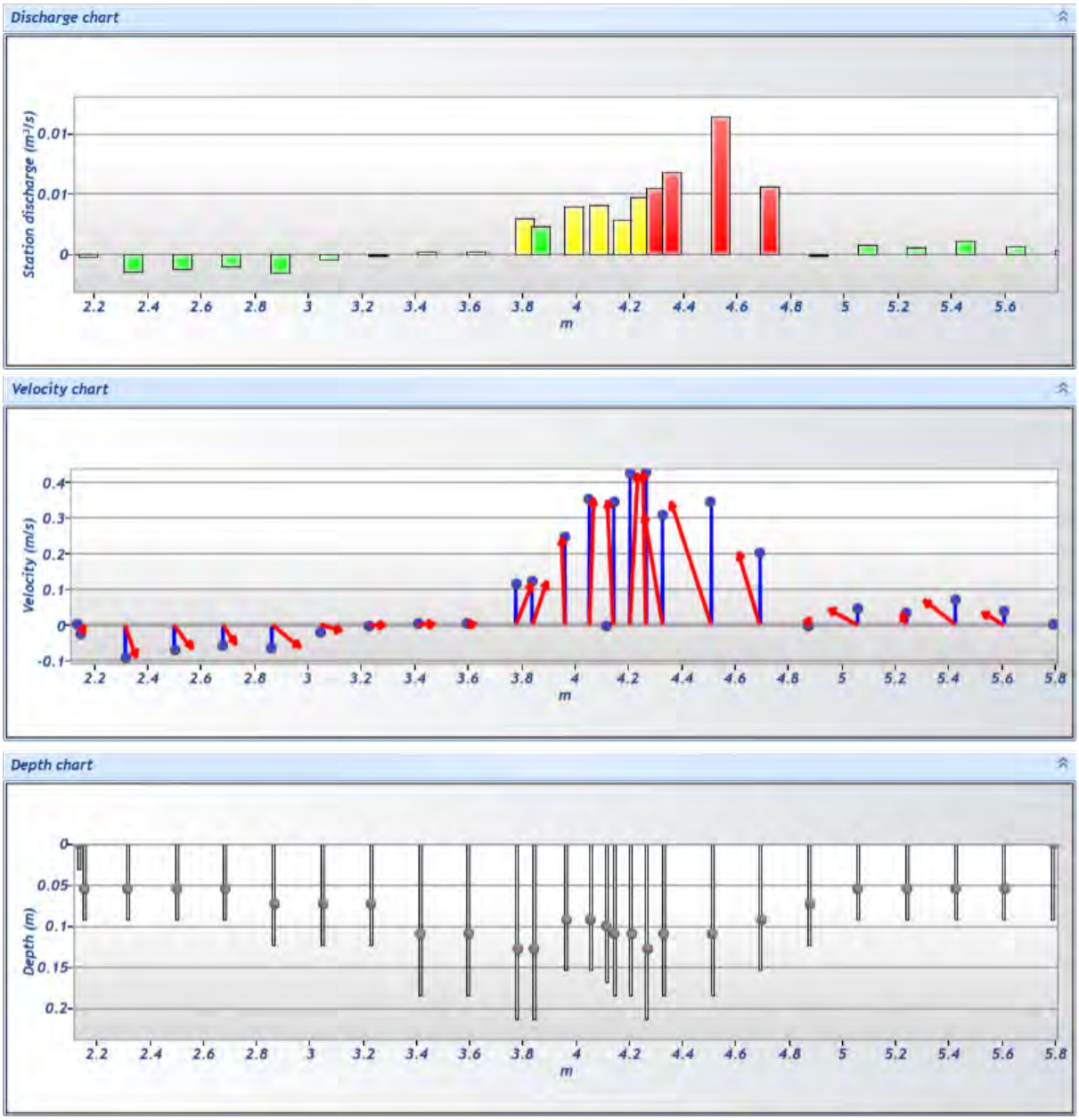
No changes were made to this file
Quality control warnings

Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg


Discharge chart
Station discharge (m³/s)
0.01
0.01
0
2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6
m
Velocity chart
Velocity (m/s)
0.4
0.3
0.2
0.1
0
-0.1
2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8
m
Depth chart
Depth (m)
0
0.05
0.1
0.15
0.2
2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8
m

Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m²)	Flow (m³/s)	%Q	
0	2:16 PM	2.134	None	0.030	0.000	0.000	0	0.000	1.000	-0.023	0.000	0.000	-0.013	✓
1	2:16 PM	2.152	0.6	0.091	0.600	0.055	41	-0.023	1.000	-0.023	0.008	0.000	-0.396	✓
2	2:18 PM	2.316	0.6	0.091	0.600	0.055	17	-0.092	1.000	-0.092	0.016	-0.001	-2.992	✓
3	2:19 PM	2.499	0.6	0.091	0.600	0.055	25	-0.069	1.000	-0.069	0.017	-0.001	-2.369	✓
4	2:20 PM	2.682	0.6	0.091	0.600	0.055	40	-0.057	1.000	-0.057	0.017	-0.001	-1.940	✓
5	2:20 PM	2.865	0.6	0.122	0.600	0.073	41	-0.067	1.000	-0.067	0.022	-0.001	-3.046	✓
6	2:21 PM	3.048	0.6	0.122	0.600	0.073	40	-0.019	1.000	-0.019	0.022	0.000	-0.865	✓
7	2:22 PM	3.231	0.6	0.122	0.600	0.073	22	-0.002	1.000	-0.002	0.022	0.000	-0.114	✓
8	2:23 PM	3.414	0.6	0.183	0.600	0.110	79	0.006	1.000	0.006	0.033	0.000	0.424	✓
9	2:24 PM	3.597	0.6	0.183	0.600	0.110	41	0.006	1.000	0.006	0.033	0.000	0.419	✓
10	2:25 PM	3.780	0.6	0.213	0.600	0.128	40	0.115	1.000	0.115	0.026	0.003	6.146	✓
11	2:37 PM	3.840	0.6	0.213	0.600	0.128	41	0.122	1.000	0.122	0.020	0.002	4.893	✓
12	2:26 PM	3.962	0.6	0.152	0.600	0.091	60	0.244	1.000	0.244	0.016	0.004	8.135	✓
13	2:36 PM	4.054	0.6	0.152	0.600	0.091	60	0.355	1.000	0.355	0.012	0.004	8.453	✓
14	2:38 PM	4.115	0.6	0.168	0.600	0.101	41	-0.001	1.000	-0.001	0.008	0.000	-0.009	✓
15	2:27 PM	4.145	0.6	0.183	0.600	0.110	79	0.347	1.000	0.347	0.008	0.003	5.944	✓
16	2:39 PM	4.206	0.6	0.183	0.600	0.110	40	0.424	1.000	0.424	0.011	0.005	9.696	✓
17	2:41 PM	4.267	0.6	0.213	0.600	0.128	40	0.426	1.000	0.426	0.013	0.006	11.364	✓
18	2:28 PM	4.328	0.6	0.183	0.600	0.110	78	0.308	1.000	0.308	0.022	0.007	14.068	✓
19	2:30 PM	4.511	0.6	0.183	0.600	0.110	79	0.345	1.000	0.345	0.033	0.012	23.618	✓
20	2:31 PM	4.694	0.6	0.152	0.600	0.091	79	0.202	1.000	0.202	0.028	0.006	11.561	✓
21	2:32 PM	4.877	0.6	0.122	0.600	0.073	40	-0.002	1.000	-0.002	0.022	0.000	-0.092	✓
22	2:33 PM	5.060	0.6	0.091	0.600	0.055	42	0.046	1.000	0.046	0.017	0.001	1.578	✓
23	2:33 PM	5.243	0.6	0.091	0.600	0.055	40	0.034	1.000	0.034	0.017	0.001	1.152	✓
24	2:34 PM	5.425	0.6	0.091	0.600	0.055	41	0.070	1.000	0.070	0.017	0.001	2.414	✓
25	2:35 PM	5.608	0.6	0.091	0.600	0.055	41	0.038	1.000	0.038	0.017	0.001	1.315	✓
26	2:35 PM	5.791	None	0.091	0.000	0.000	0	0.000	1.000	0.038	0.008	0.000	0.657	✓

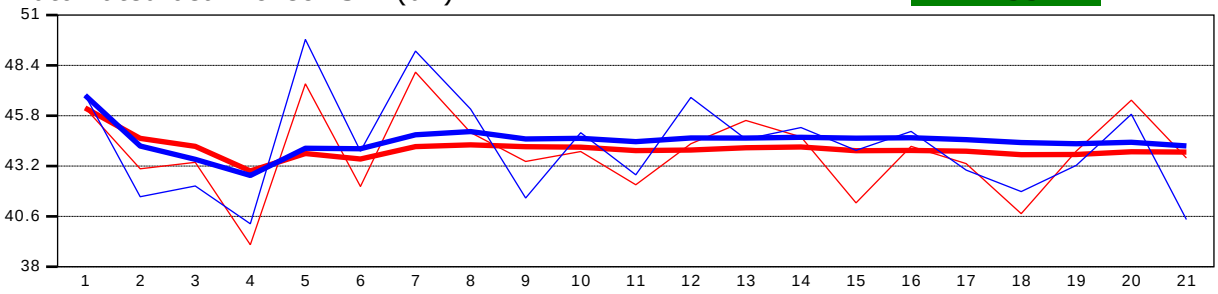
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	2:16 PM	2.152	0.6	0.091	0.600	0.055	Velocity Angle > QC
2	2:18 PM	2.316	0.6	0.091	0.600	0.055	Velocity Angle > QC
3	2:19 PM	2.499	0.6	0.091	0.600	0.055	Velocity Angle > QC
4	2:20 PM	2.682	0.6	0.091	0.600	0.055	Velocity Angle > QC
5	2:20 PM	2.865	0.6	0.122	0.600	0.073	Velocity Angle > QC
10	2:25 PM	3.780	0.6	0.213	0.600	0.128	Velocity Angle > QC
11	2:37 PM	3.840	0.6	0.213	0.600	0.128	Standard Error > QC,Velocity Angle > QC
13	2:36 PM	4.054	0.6	0.152	0.600	0.091	Standard Error > QC
14	2:38 PM	4.115	0.6	0.168	0.600	0.101	SNR Threshold Variation
15	2:27 PM	4.145	0.6	0.183	0.600	0.110	Standard Error > QC
16	2:39 PM	4.206	0.6	0.183	0.600	0.110	Boundary Interference,Standard Error > QC
17	2:41 PM	4.267	0.6	0.213	0.600	0.128	Beam SNRs Not Similar,Standard Error > QC,High Stn % Discharge
18	2:28 PM	4.328	0.6	0.183	0.600	0.110	Boundary Interference,SNR Threshold Variation,Standard Error > QC,High Stn % Discharge
19	2:30 PM	4.511	0.6	0.183	0.600	0.110	Standard Error > QC,Velocity Angle > QC,High Stn % Discharge
20	2:31 PM	4.694	0.6	0.152	0.600	0.091	Standard Error > QC,Velocity Angle > QC,High Stn % Discharge
21	2:32 PM	4.877	0.6	0.122	0.600	0.073	Boundary Interference,SNR Threshold Variation
22	2:33 PM	5.060	0.6	0.091	0.600	0.055	Velocity Angle > QC
23	2:33 PM	5.243	0.6	0.091	0.600	0.055	Velocity Angle > QC
24	2:34 PM	5.425	0.6	0.091	0.600	0.055	Velocity Angle > QC
25	2:35 PM	5.608	0.6	0.091	0.600	0.055	Velocity Angle > QC

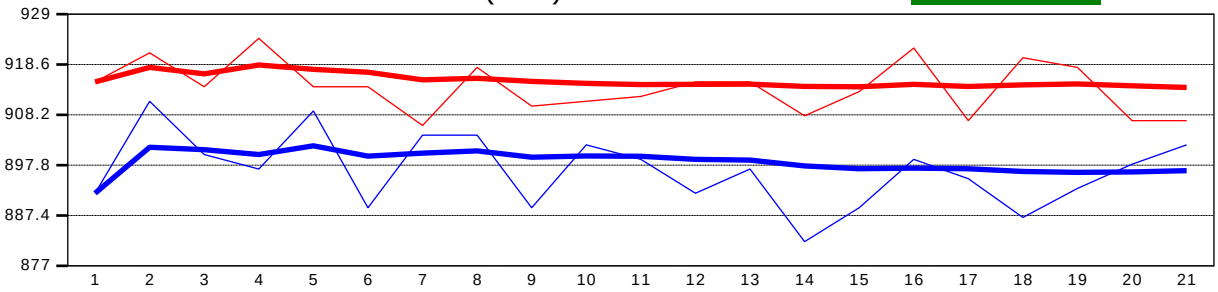
1/19/2023 12:12:54 PM

Automated beam check Start time 9/20/2022 2:15:41 PM

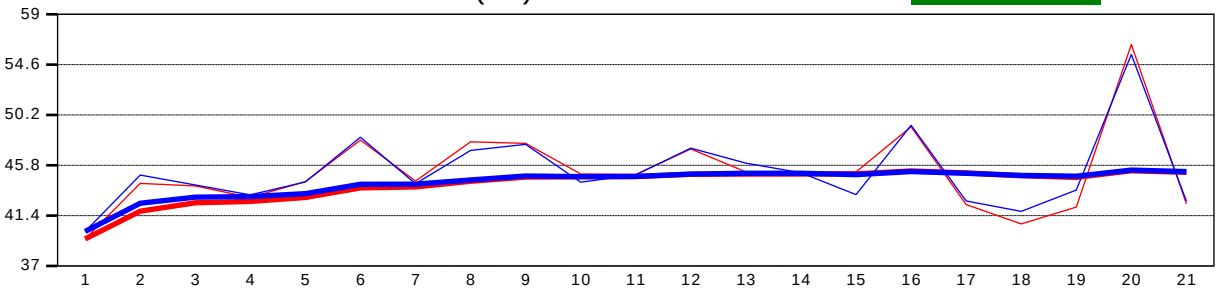
Automated beam check SNR(dB) PASS



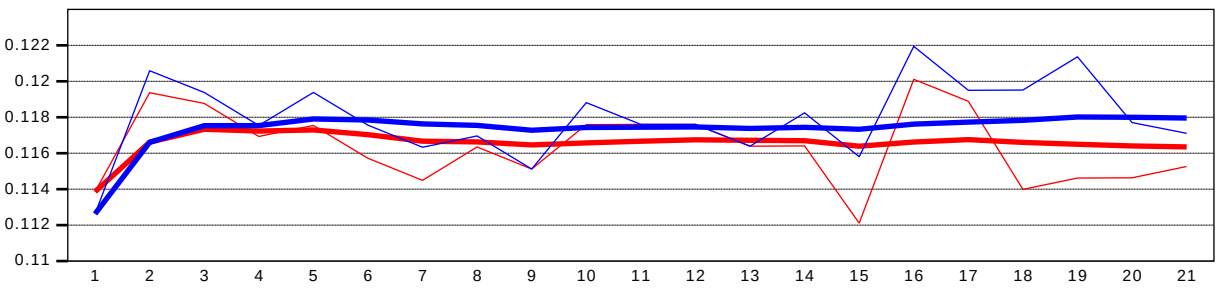
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC-104_20220920-133004.ft
Start date and time	9/20/2022 1:04 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	9/20/2022 1:05:18 PM	End time	9/20/2022 1:28:35 PM
# Stations	26	Avg interval	40
Mean depth	0.106 m		
Mean velocity	0.099 m/s	Total width	4.267 m
Mean SNR	38.336 dB	Total area	0.451 m²
Mean temp	7.496 °C	Total discharge	0.045 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025004
Probe serial number	FT2P1733022
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC-104
Site number	CSC-104
Operator(s)	Rh
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.4%	5.9%
Velocity	1.1%	6.9%
Width	0.1%	0.1%
Method	1.8%	
# Stations	2.0%	
Overall	3.1%	9.1%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

Data Collection Settings

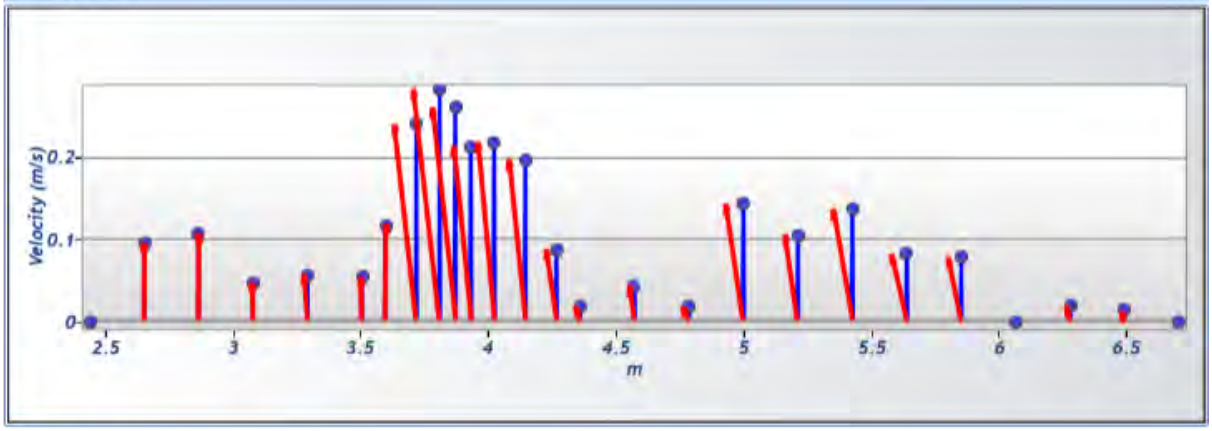
Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

Quality Control Settings

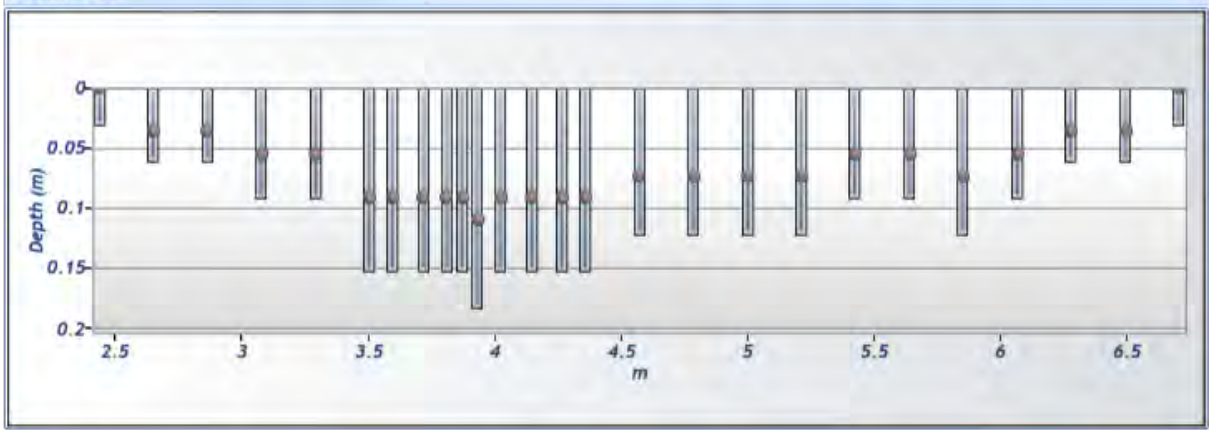
SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

Discharge chart

Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	1:05 PM	2.438	None	0.030	0.000	0.000	0	0.000	1.000	0.095	0.003	0.000	0.697	
1	1:05 PM	2.652	0.6	0.061	0.600	0.037	41	0.095	1.000	0.095	0.013	0.001	2.788	
2	1:06 PM	2.865	0.6	0.061	0.600	0.037	41	0.107	1.000	0.107	0.013	0.001	3.128	
3	1:07 PM	3.078	0.6	0.091	0.600	0.055	41	0.047	1.000	0.047	0.020	0.001	2.045	
4	1:07 PM	3.292	0.6	0.091	0.600	0.055	79	0.057	1.000	0.057	0.020	0.001	2.497	
5	1:08 PM	3.505	0.6	0.152	0.600	0.091	79	0.054	1.000	0.054	0.023	0.001	2.793	
6	1:27 PM	3.597	0.6	0.152	0.600	0.091	40	0.118	1.000	0.118	0.016	0.002	4.308	
7	1:10 PM	3.719	0.6	0.152	0.600	0.091	79	0.240	1.000	0.240	0.016	0.004	8.760	
8	1:26 PM	3.810	0.6	0.152	0.600	0.091	36	0.283	1.000	0.283	0.012	0.003	7.376	
9	1:25 PM	3.871	0.6	0.152	0.600	0.091	61	0.261	1.000	0.261	0.009	0.002	5.435	
10	1:11 PM	3.932	0.6	0.183	0.600	0.110	79	0.213	1.000	0.213	0.014	0.003	6.674	
11	1:23 PM	4.023	0.6	0.152	0.600	0.091	79	0.218	1.000	0.218	0.016	0.004	7.965	
12	1:12 PM	4.145	0.6	0.152	0.600	0.091	79	0.196	1.000	0.196	0.019	0.004	8.184	
13	1:28 PM	4.267	0.6	0.152	0.600	0.091	40	0.087	1.000	0.087	0.016	0.001	3.182	
14	1:13 PM	4.359	0.6	0.152	0.600	0.091	79	0.019	1.000	0.019	0.023	0.000	0.968	
15	1:14 PM	4.572	0.6	0.122	0.600	0.073	79	0.043	1.000	0.043	0.026	0.001	2.511	
16	1:16 PM	4.785	0.6	0.122	0.600	0.073	40	0.018	1.000	0.018	0.026	0.000	1.045	
17	1:16 PM	4.999	0.6	0.122	0.600	0.073	60	0.143	1.000	0.143	0.026	0.004	8.335	
18	1:17 PM	5.212	0.6	0.122	0.600	0.073	41	0.105	1.000	0.105	0.026	0.003	6.133	
19	1:18 PM	5.425	0.6	0.091	0.600	0.055	41	0.137	1.000	0.137	0.020	0.003	5.985	
20	1:19 PM	5.639	0.6	0.091	0.600	0.055	41	0.082	1.000	0.082	0.020	0.002	3.584	
21	1:20 PM	5.852	0.6	0.122	0.600	0.073	42	0.079	1.000	0.079	0.026	0.002	4.618	
22	1:21 PM	6.066	0.6	0.091	0.600	0.055	22	-0.001	1.000	-0.001	0.020	0.000	-0.032	
23	1:21 PM	6.279	0.6	0.061	0.600	0.037	39	0.019	1.000	0.019	0.013	0.000	0.548	
24	1:22 PM	6.492	0.6	0.061	0.600	0.037	41	0.013	1.000	0.013	0.013	0.000	0.378	
25	1:23 PM	6.706	None	0.030	0.000	0.000	0	0.000	1.000	0.013	0.003	0.000	0.095	

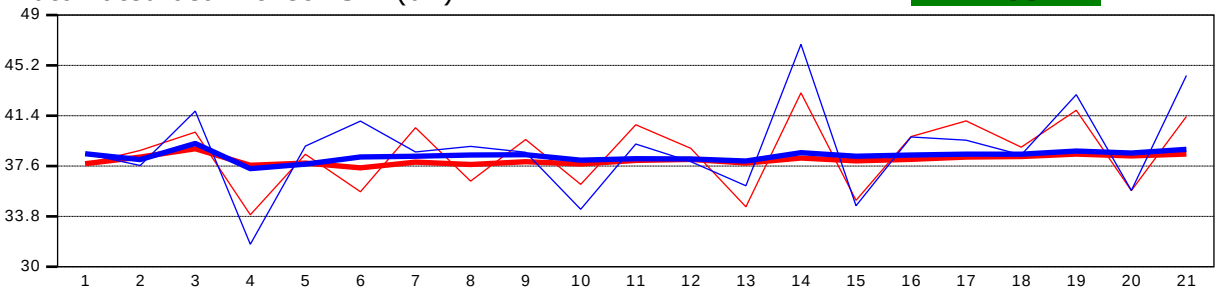
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
8	1:26 PM	3.810	0.6	0.152	0.600	0.091	Standard Error > QC
9	1:25 PM	3.871	0.6	0.152	0.600	0.091	Standard Error > QC
10	1:11 PM	3.932	0.6	0.183	0.600	0.110	Standard Error > QC
11	1:23 PM	4.023	0.6	0.152	0.600	0.091	Standard Error > QC
13	1:28 PM	4.267	0.6	0.152	0.600	0.091	Velocity Angle > QC
15	1:14 PM	4.572	0.6	0.122	0.600	0.073	Velocity Angle > QC
17	1:16 PM	4.999	0.6	0.122	0.600	0.073	Velocity Angle > QC
18	1:17 PM	5.212	0.6	0.122	0.600	0.073	Velocity Angle > QC
19	1:18 PM	5.425	0.6	0.091	0.600	0.055	Velocity Angle > QC
20	1:19 PM	5.639	0.6	0.091	0.600	0.055	Velocity Angle > QC
21	1:20 PM	5.852	0.6	0.122	0.600	0.073	Velocity Angle > QC
24	1:22 PM	6.492	0.6	0.061	0.600	0.037	Boundary Interference

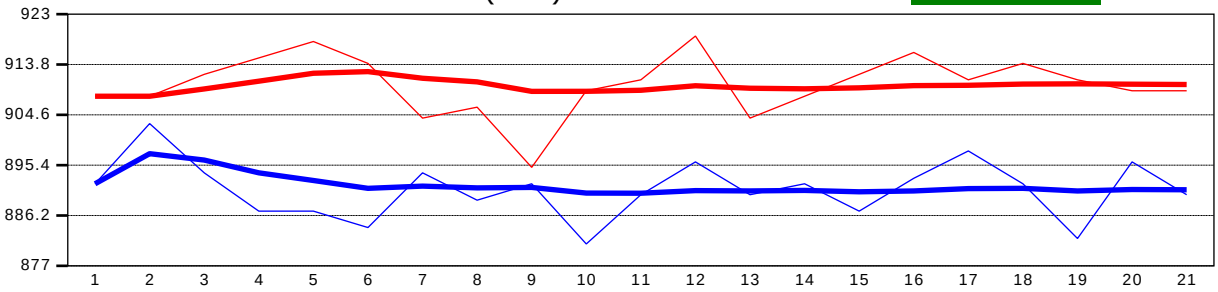
1/19/2023 12:11:55 PM

Automated beam check Start time 9/20/2022 1:04:55 PM

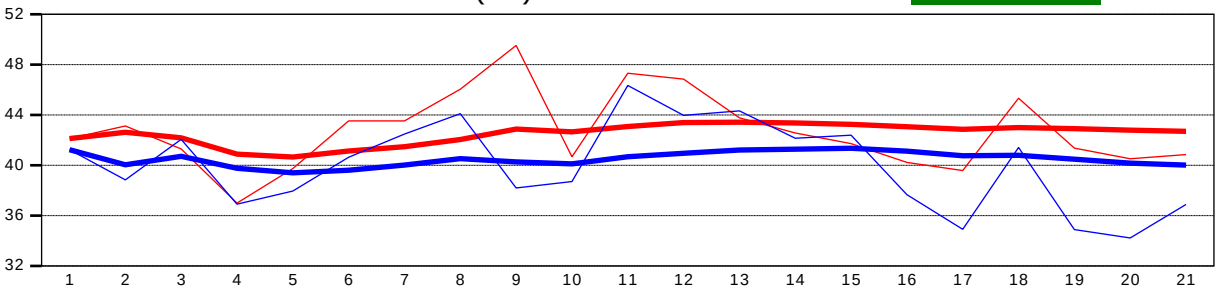
Automated beam check SNR(dB) PASS



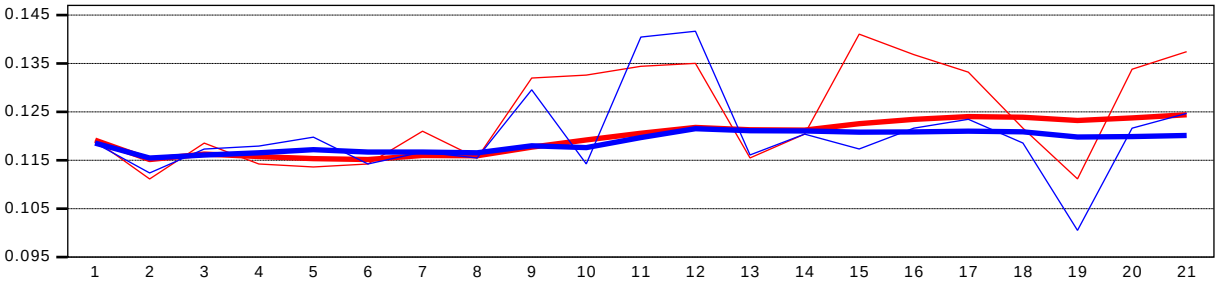
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC102_20220920-131654.ft
Start date and time	9/20/2022 12:41 PM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	9/20/2022 12:42:50 PM	End time	9/20/2022 1:15:56 PM
# Stations	25	Avg interval	40
Mean depth	0.229 m		
Mean velocity	0.328 m/s	Total width	6.706 m
Mean SNR	34.032 dB	Total area	1.533 m²
Mean temp	7.715 °C	Total discharge	0.503 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025005
Probe serial number	FT2P2024008
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC102
Site number	CSC102
Operator(s)	SA
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.3%	4.0%
Velocity	1.0%	13.9%
Width	0.1%	0.1%
Method	1.9%	
# Stations	2.0%	
Overall	3.1%	14.5%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

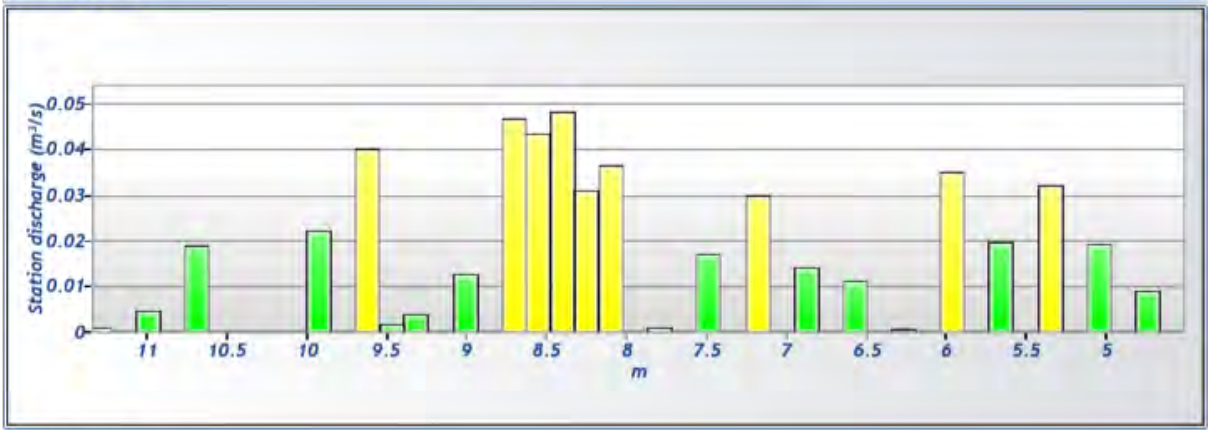
Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

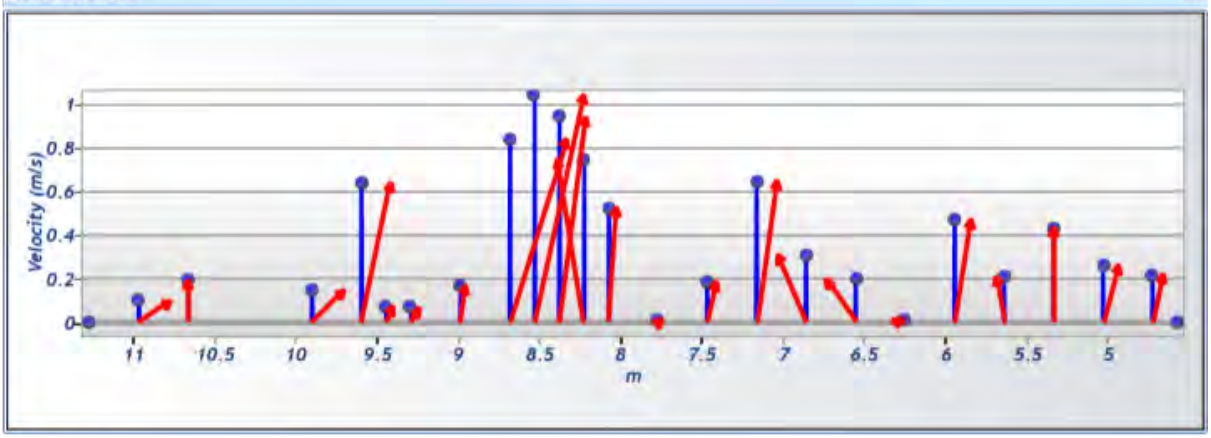
Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

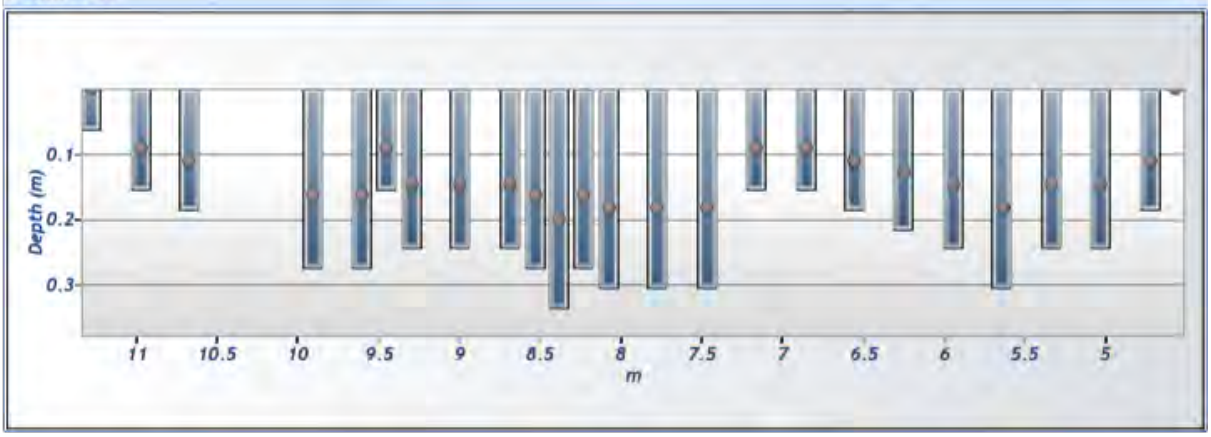
Discharge chart



Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	12:42 PM	4.572	None	0.000	0.000	0.000	0	0.000	1.000	0.222	0.000	0.000	0.000	✓
1	12:43 PM	4.724	0.6	0.183	0.600	0.110	80	0.222	1.000	0.222	0.042	0.009	1.843	✓
2	12:44 PM	5.029	0.6	0.244	0.600	0.146	80	0.262	1.000	0.262	0.074	0.019	3.867	✓
3	12:46 PM	5.334	0.6	0.244	0.600	0.146	80	0.436	1.000	0.436	0.074	0.032	6.431	✓
4	12:47 PM	5.639	0.6	0.305	0.600	0.183	80	0.214	1.000	0.214	0.093	0.020	3.945	✓
5	12:48 PM	5.944	0.6	0.244	0.600	0.146	80	0.473	1.000	0.473	0.074	0.035	6.990	✓
6	12:49 PM	6.248	0.6	0.213	0.600	0.128	80	0.013	1.000	0.013	0.065	0.001	0.162	✓
7	12:50 PM	6.553	0.6	0.183	0.600	0.110	80	0.201	1.000	0.201	0.056	0.011	2.222	✓
8	12:52 PM	6.858	0.6	0.152	0.600	0.091	80	0.311	1.000	0.311	0.046	0.014	2.868	✓
9	12:53 PM	7.163	0.6	0.152	0.600	0.091	80	0.650	1.000	0.650	0.046	0.030	6.003	✓
10	12:54 PM	7.468	0.6	0.305	0.600	0.183	80	0.185	1.000	0.185	0.093	0.017	3.419	✓
11	12:55 PM	7.772	0.6	0.305	0.600	0.183	80	0.011	1.000	0.011	0.093	0.001	0.194	✓
12	12:56 PM	8.077	0.6	0.305	0.600	0.183	80	0.527	1.000	0.527	0.070	0.037	7.298	✓
13	1:11 PM	8.230	0.6	0.274	0.600	0.165	80	0.749	1.000	0.749	0.042	0.031	6.223	✓
14	12:57 PM	8.382	0.6	0.335	0.600	0.201	80	0.944	1.000	0.944	0.051	0.048	9.582	✓
15	1:08 PM	8.534	0.6	0.274	0.600	0.165	80	1.043	1.000	1.043	0.042	0.044	8.662	✓
16	12:59 PM	8.687	0.6	0.244	0.600	0.146	80	0.840	1.000	0.840	0.056	0.047	9.305	✓
17	1:00 PM	8.992	0.6	0.244	0.600	0.146	80	0.170	1.000	0.170	0.074	0.013	2.511	✓
18	1:01 PM	9.296	0.6	0.244	0.600	0.146	80	0.071	1.000	0.071	0.056	0.004	0.786	✓
19	1:13 PM	9.449	0.6	0.152	0.600	0.091	80	0.076	1.000	0.076	0.023	0.002	0.351	✓
20	1:02 PM	9.601	0.6	0.274	0.600	0.165	80	0.643	1.000	0.643	0.063	0.040	8.007	✓
21	1:03 PM	9.906	0.6	0.274	0.600	0.165	80	0.153	1.000	0.153	0.146	0.022	4.445	✓
22	1:05 PM	10.668	0.6	0.183	0.600	0.110	80	0.195	1.000	0.195	0.098	0.019	3.777	✓
23	1:06 PM	10.973	0.6	0.152	0.600	0.091	80	0.100	1.000	0.100	0.046	0.005	0.925	✓
24	1:15 PM	11.278	None	0.061	0.000	0.000	0	0.000	1.000	0.100	0.009	0.001	0.185	✓

Quality control warnings

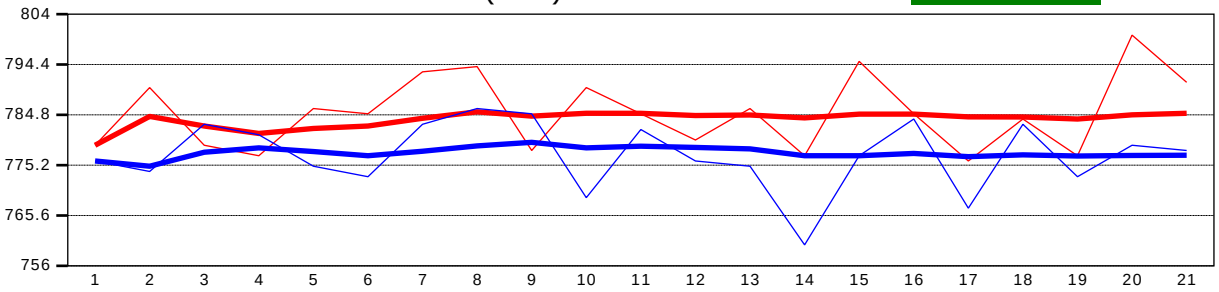
St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	12:43 PM	4.724	0.6	0.183	0.600	0.110	Rod Angle > QC
2	12:44 PM	5.029	0.6	0.244	0.600	0.146	Standard Error > QC
3	12:46 PM	5.334	0.6	0.244	0.600	0.146	Standard Error > QC
4	12:47 PM	5.639	0.6	0.305	0.600	0.183	Standard Error > QC
5	12:48 PM	5.944	0.6	0.244	0.600	0.146	Standard Error > QC
7	12:50 PM	6.553	0.6	0.183	0.600	0.110	Standard Error > QC,Velocity Angle > QC
8	12:52 PM	6.858	0.6	0.152	0.600	0.091	Standard Error > QC,Velocity Angle > QC
9	12:53 PM	7.163	0.6	0.152	0.600	0.091	Standard Error > QC
10	12:54 PM	7.468	0.6	0.305	0.600	0.183	Standard Error > QC
11	12:55 PM	7.772	0.6	0.305	0.600	0.183	Standard Error > QC
12	12:56 PM	8.077	0.6	0.305	0.600	0.183	Standard Error > QC
13	1:11 PM	8.230	0.6	0.274	0.600	0.165	Standard Error > QC
14	12:57 PM	8.382	0.6	0.335	0.600	0.201	Standard Error > QC
15	1:08 PM	8.534	0.6	0.274	0.600	0.165	Standard Error > QC
16	12:59 PM	8.687	0.6	0.244	0.600	0.146	Standard Error > QC,Velocity Angle > QC
17	1:00 PM	8.992	0.6	0.244	0.600	0.146	Standard Error > QC
18	1:01 PM	9.296	0.6	0.244	0.600	0.146	Standard Error > QC,Velocity Angle > QC
19	1:13 PM	9.449	0.6	0.152	0.600	0.091	Velocity Angle > QC
20	1:02 PM	9.601	0.6	0.274	0.600	0.165	Standard Error > QC
21	1:03 PM	9.906	0.6	0.274	0.600	0.165	Standard Error > QC,Velocity Angle > QC
23	1:06 PM	10.973	0.6	0.152	0.600	0.091	Velocity Angle > QC

1/19/2023 12:11:30 PM

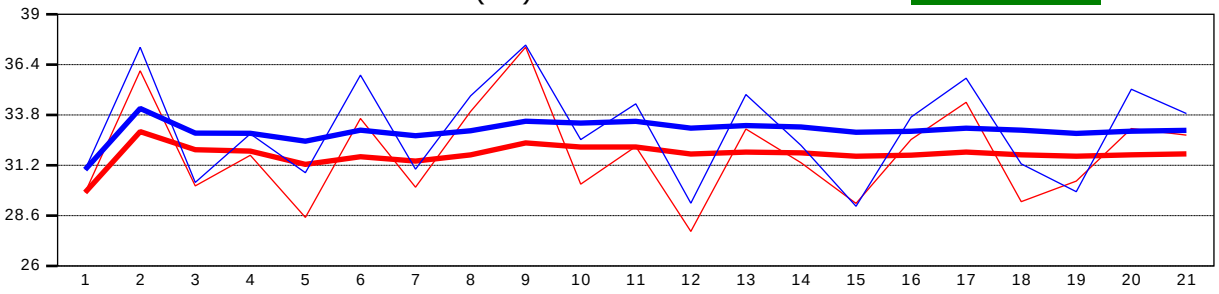
Automated beam check Start time 9/20/2022 12:42:24 PM

Automated beam check SNR(dB) PASS

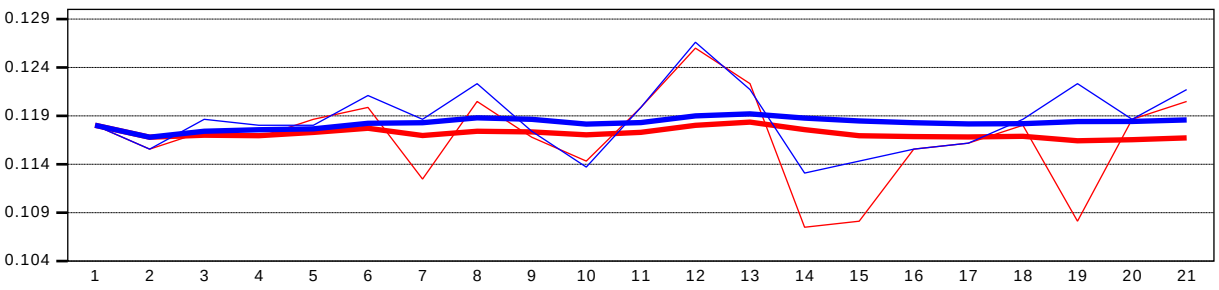
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Discharge Measurement Summary

File Information

File name	CSC_20220920-122652.ft
Start date and time	9/20/2022 11:53 AM
Calculations engine	FlowTracker2
Data collection mode	Discharge

Discharge Summary

Start time	9/20/2022 11:55:09 AM	End time	9/20/2022 12:26:03 PM
# Stations	25	Avg interval	40
Mean depth	0.322 m		
Mean velocity	0.220 m/s	Total width	6.401 m
Mean SNR	33.595 dB	Total area	2.062 m²
Mean temp	7.693 °C	Total discharge	0.454 m³/s

System Information

Sensor type	Top Setting
Handheld serial number	FT2H2025005
Probe serial number	FT2P2024008
Probe firmware	1.30
Handheld software	1.6.4

Site Details

Site name	CSC
Site number	CSC101
Operator(s)	SA
Comment	

Discharge Uncertainty

Category	ISO	IVE
Accuracy	1.0%	1.0%
Depth	0.1%	2.9%
Velocity	1.3%	14.8%
Width	0.1%	0.1%
Method	1.9%	
# Stations	2.0%	
Overall	3.2%	15.1%

Discharge Settings

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Station Warning Settings

Station discharge caution	5.000	%
Station discharge warning	10.000	%
Maximum depth change	50.000	%
Maximum spacing change	100.000	%

Summary overview

No changes were made to this file
Quality control warnings

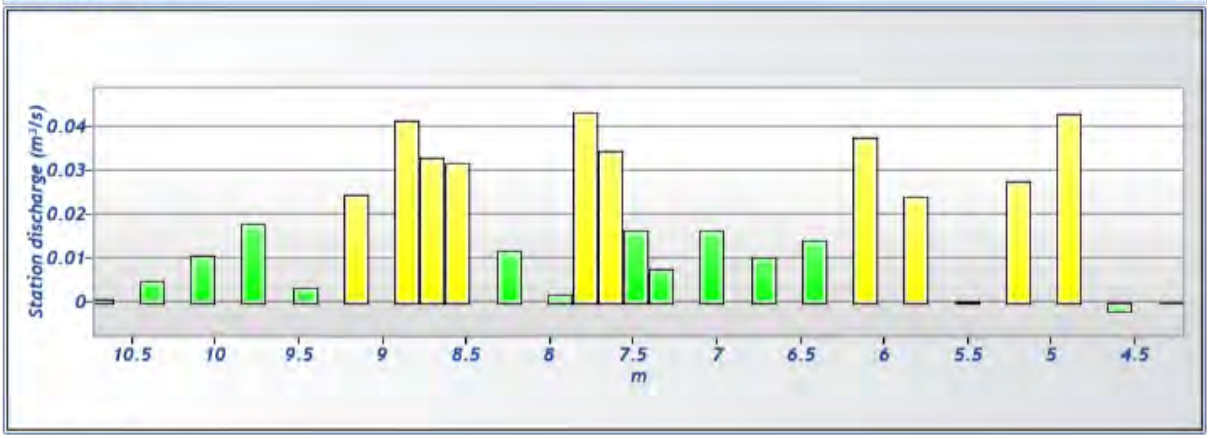
Data Collection Settings

Salinity	0.000	PSS-78
Temperature		°C
Sound speed		m/s
Mounting correction	0.000	%

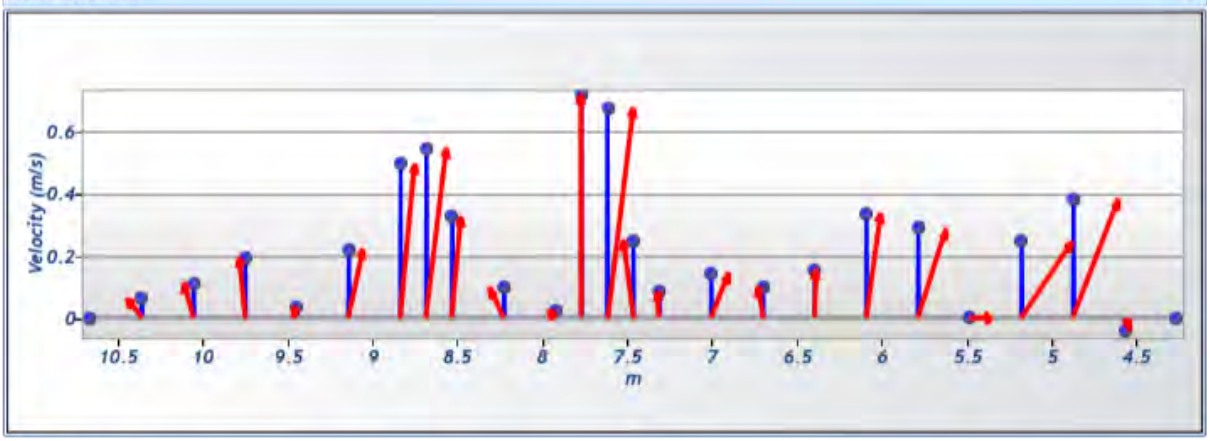
Quality Control Settings

SNR threshold	10.000	dB
Standard error threshold	0.010	m/s
Spike threshold	10.000	%
Maximum velocity angle	20.000	deg
Maximum tilt angle	5.000	deg

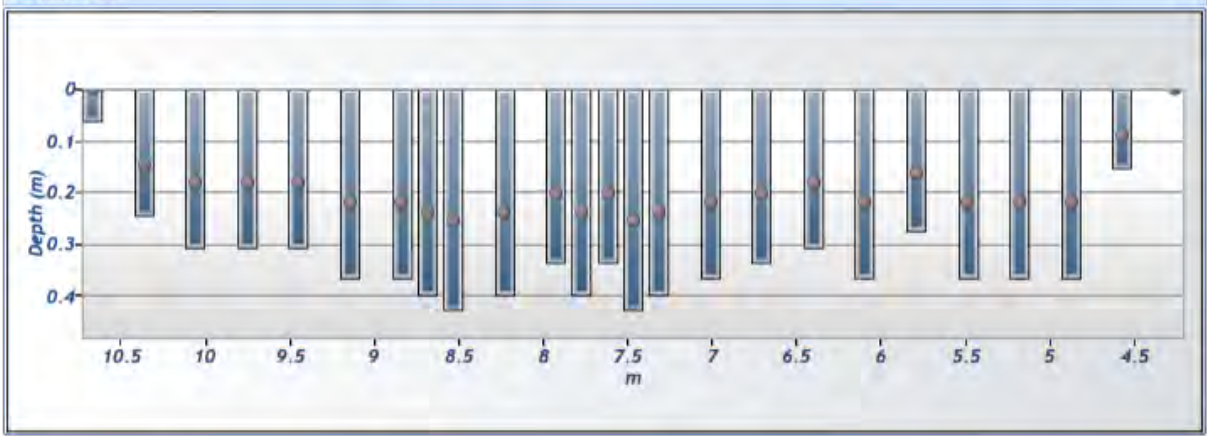
Discharge chart



Velocity chart



Depth chart



Measurement results

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Samples	Velocity (m/s)	Correction	Mean Velocity (m/s)	Area (m^2)	Flow (m^3/s)	%Q	
0	11:55 AM	4.267	None	0.000	0.000	0.000	0	0.000	1.000	-0.042	0.000	0.000	0.000	√
1	11:55 AM	4.572	0.6	0.152	0.600	0.091	80	-0.042	1.000	-0.042	0.046	-0.002	-0.427	√
2	11:56 AM	4.877	0.6	0.366	0.600	0.219	80	0.384	1.000	0.384	0.111	0.043	9.425	√
3	11:58 AM	5.182	0.6	0.366	0.600	0.219	80	0.247	1.000	0.247	0.111	0.028	6.064	√
4	11:59 AM	5.486	0.6	0.366	0.600	0.219	80	0.002	1.000	0.002	0.111	0.000	0.053	√
5	12:00 PM	5.791	0.6	0.274	0.600	0.165	80	0.288	1.000	0.288	0.084	0.024	5.308	√
6	12:02 PM	6.096	0.6	0.366	0.600	0.219	80	0.336	1.000	0.336	0.111	0.037	8.254	√
7	12:03 PM	6.401	0.6	0.305	0.600	0.183	80	0.153	1.000	0.153	0.093	0.014	3.133	√
8	12:04 PM	6.706	0.6	0.335	0.600	0.201	80	0.100	1.000	0.100	0.102	0.010	2.245	√
9	12:05 PM	7.010	0.6	0.366	0.600	0.219	80	0.146	1.000	0.146	0.111	0.016	3.592	√
10	12:07 PM	7.315	0.6	0.396	0.600	0.238	80	0.084	1.000	0.084	0.091	0.008	1.685	√
11	12:24 PM	7.468	0.6	0.427	0.600	0.256	80	0.249	1.000	0.249	0.065	0.016	3.569	√
12	12:08 PM	7.620	0.6	0.335	0.600	0.201	80	0.674	1.000	0.674	0.051	0.034	7.590	√
13	12:23 PM	7.772	0.6	0.396	0.600	0.238	80	0.718	1.000	0.718	0.060	0.043	9.549	√
14	12:09 PM	7.925	0.6	0.335	0.600	0.201	80	0.025	1.000	0.025	0.077	0.002	0.421	√
15	12:10 PM	8.230	0.6	0.396	0.600	0.238	80	0.099	1.000	0.099	0.121	0.012	2.624	√
16	12:12 PM	8.534	0.6	0.427	0.600	0.256	80	0.326	1.000	0.326	0.098	0.032	7.005	√
17	12:21 PM	8.687	0.6	0.396	0.600	0.238	80	0.544	1.000	0.544	0.060	0.033	7.238	√
18	12:13 PM	8.839	0.6	0.366	0.600	0.219	80	0.496	1.000	0.496	0.084	0.041	9.136	√
19	12:15 PM	9.144	0.6	0.366	0.600	0.219	80	0.219	1.000	0.219	0.111	0.024	5.383	√
20	12:16 PM	9.449	0.6	0.305	0.600	0.183	80	0.034	1.000	0.034	0.093	0.003	0.700	√
21	12:17 PM	9.754	0.6	0.305	0.600	0.183	80	0.195	1.000	0.195	0.093	0.018	3.982	√
22	12:18 PM	10.058	0.6	0.305	0.600	0.183	80	0.113	1.000	0.113	0.093	0.010	2.303	√
23	12:19 PM	10.363	0.6	0.244	0.600	0.146	80	0.063	1.000	0.063	0.074	0.005	1.036	√
24	12:26 PM	10.668	None	0.061	0.000	0.000	0	0.000	1.000	0.063	0.009	0.001	0.130	√

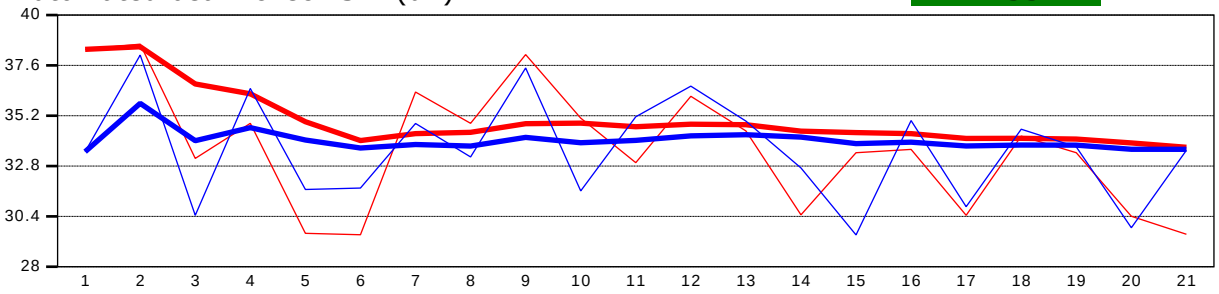
Quality control warnings

St#	Time	Location (m)	Method	Depth (m)	%Depth	Measured Depth (m)	Warnings
1	11:55 AM	4.572	0.6	0.152	0.600	0.091	Velocity Angle > QC,Rod Angle > QC
2	11:56 AM	4.877	0.6	0.366	0.600	0.219	Velocity Angle > QC
3	11:58 AM	5.182	0.6	0.366	0.600	0.219	Standard Error > QC,Velocity Angle > QC
4	11:59 AM	5.486	0.6	0.366	0.600	0.219	Standard Error > QC
5	12:00 PM	5.791	0.6	0.274	0.600	0.165	Standard Error > QC,Velocity Angle > QC
6	12:02 PM	6.096	0.6	0.366	0.600	0.219	Standard Error > QC
7	12:03 PM	6.401	0.6	0.305	0.600	0.183	Standard Error > QC
8	12:04 PM	6.706	0.6	0.335	0.600	0.201	Standard Error > QC
9	12:05 PM	7.010	0.6	0.366	0.600	0.219	Standard Error > QC,Velocity Angle > QC
10	12:07 PM	7.315	0.6	0.396	0.600	0.238	Standard Error > QC
11	12:24 PM	7.468	0.6	0.427	0.600	0.256	Standard Error > QC
12	12:08 PM	7.620	0.6	0.335	0.600	0.201	Standard Error > QC
13	12:23 PM	7.772	0.6	0.396	0.600	0.238	Standard Error > QC
14	12:09 PM	7.925	0.6	0.335	0.600	0.201	Standard Error > QC,Velocity Angle > QC
15	12:10 PM	8.230	0.6	0.396	0.600	0.238	Standard Error > QC,Velocity Angle > QC
16	12:12 PM	8.534	0.6	0.427	0.600	0.256	Standard Error > QC
17	12:21 PM	8.687	0.6	0.396	0.600	0.238	Standard Error > QC
18	12:13 PM	8.839	0.6	0.366	0.600	0.219	Standard Error > QC
19	12:15 PM	9.144	0.6	0.366	0.600	0.219	Standard Error > QC,Velocity Angle > QC
20	12:16 PM	9.449	0.6	0.305	0.600	0.183	Standard Error > QC,Velocity Angle > QC
21	12:17 PM	9.754	0.6	0.305	0.600	0.183	Standard Error > QC
22	12:18 PM	10.058	0.6	0.305	0.600	0.183	Standard Error > QC,Velocity Angle > QC
23	12:19 PM	10.363	0.6	0.244	0.600	0.146	Velocity Angle > QC

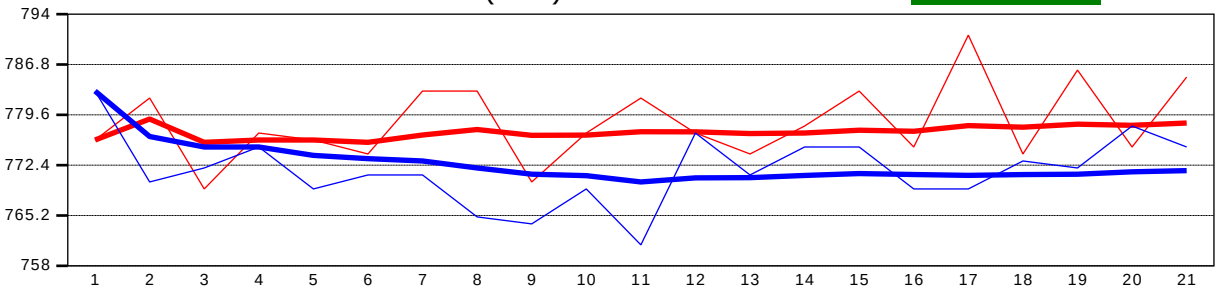
1/19/2023 12:10:41 PM

Automated beam check Start time 9/20/2022 11:54:43 AM

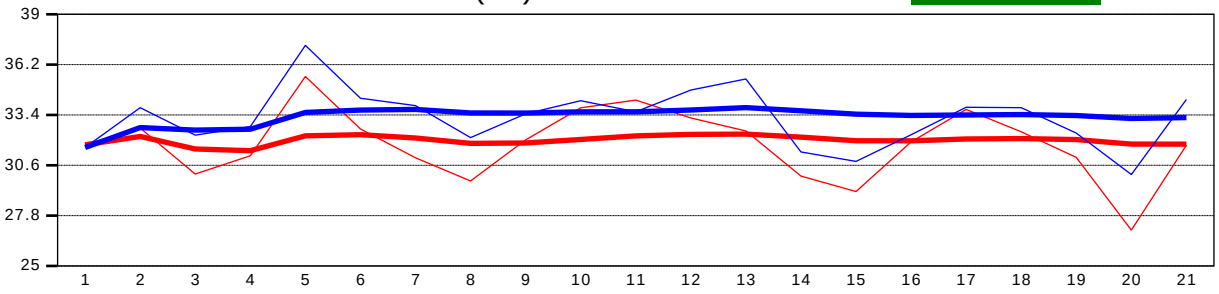
Automated beam check SNR(dB) PASS



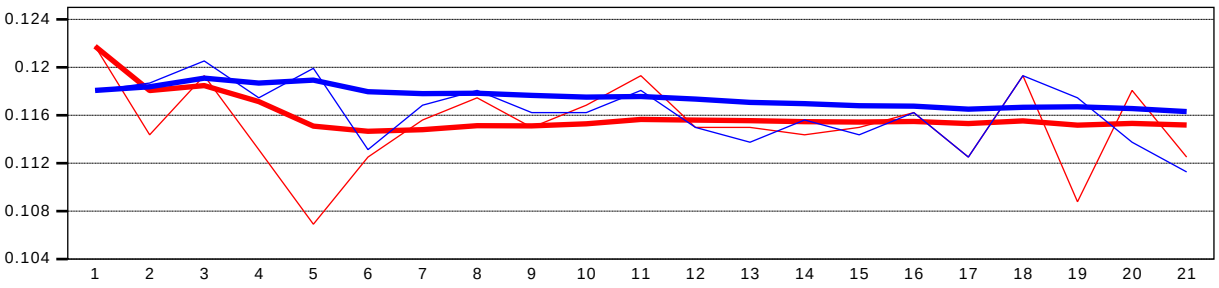
Automated beam check Noise level(cnts) PASS



Automated beam check Peak level(dB) PASS



Automated beam check Peak position(m) PASS



Automated beam check Quality control warnings

No quality control warnings

Attachment B
Electronic Data Collection Device Entries

Attachment B Electronic Data Collection Device Field Notes June 2022

Location	Event Date	Event Time	Author's Name	Sampler's Name	Bottle Lot Number - Total Recoverable Metals	Bottle Lot Number - Dissolved Metals	Bottle Lot Number - Alk/Anions	Sample Matrix	Temperature (Celsius)	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm)	pH	Oxidation Reduction Potential (mV)	Ststic Water level	Flow (cfs)	Stream Condition	Substrate Condition	Substrate Staining	Visibility - Weather Conditions	Weather Conditions	Wind Conditions	Miscellanious
CSC-101	6/21/2022	11:19	Race Houston	Race Houston	1305897	1315956	VHC060521	SW	5.9	12.64	94.3	6.65	57.0						PartlySunny	NoPrecip	Low_Wind	
CSC-104	6/21/2022	11:44	Race Houston	Race Houston	1305897	1315956	VHC060521	SW	6.7	11.90	89.6	7.23	116.2		25.4717				PartlySunny	NoPrecip	No_Wind	
CSC-105	6/21/2022	12:29	Gary Newhart	Race Houston	1305897	1315956	VHC060521	SW	9.3	9.78	131.1	6.82	158.2		10.3452				PartlySunny	NoPrecip	Low_Wind	
CSC-111C	6/21/2022	14:29	Gary Newhart	Race Houston	1305897	1315956	VHC060521	SW	9.5	9.52	87.4	7.29	139.5		23.7998				Sunny		Low_Wind	
CSC-111D	6/21/2022	14:50	Gary Newhart	Race Houston	1305897	1315956	VHC060521	SW	13.3	9.27	88.7	7.19	147.3		19.2777				Sunny		Low_Wind	
CSC-117A	6/21/2022	15:56	Race Houston	Race Houston	1305897	1315956	VHC060521	SW	13.0	8.60	814.0	5.36	214.1						Sunny		Low_Wind	
CSC-120A	6/21/2022	16:40	Gary Newhart	Race Houston	1305897	1315956	VHC060521	SW	7.4	9.65	56.8	7.01	136.1		18.3976				Sunny		No_Wind	
CSC-119	6/21/2022	17:19	Gary Newhart	Race Houston	1305897	1315956	VHC060521	SW	10.6	9.14	93.2	7.57	122.9		9.1728				Sunny		Low_Wind	
MW-1	6/22/2022	08:34	Gary Newhart	Race Houston	1305897	1315956	VHC060521	GW	4.2	4.99	119.0	6.48	129.3	8.12					Sunny		Low_Wind	
MW-2	6/22/2022	09:21	Gary Newhart	Race Houston	1305897	1315956	VHC060521	GW	5.1	8.01	108.4	6.41	130.9	7.48					Sunny		Low_Wind	
MW-3	6/22/2022	09:59	Gary Newhart	Race Houston	1305897	1315956	VHC060521	GW	6.0	0.29	210.6	6.62	109.6	5.67					Sunny		Low_Wind	
MW-4A	6/22/2022	10:48	Gary Newhart	Race Houston	1305897	1315956	VHC060521	GW	6.6	0.8	86.8	6.12	103.4	4.19					Sunny		Low_Wind	
MW-6A	6/22/2022	11:15	Gary Newhart	Race Houston	1305897	1315956	VHC060521	GW	6.6	8.9	52.4	5.73	137.4	9.68					Sunny		Low_Wind	
MW-6	6/22/2022	12:10	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	8.4	0.6	999.0	6.54	143.6	22.7					Sunny		Low_Wind	
MW-5	6/22/2022	12:51	Gary Newhart	Race Houston	1305897	1315956	VHC060521	GW	7.2	6.6	96.9	6.00	112.5	5.92					Sunny		Low_Wind	
MW-8	6/22/2022	13:47	Gary Newhart	Race Houston	1305897	1315956	VHC060521	GW	6.9	0.7	166.0	6.39	7.6	4.61					Sunny		Low_Wind	
CSC-15	6/22/2022	14:36	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	5.6	0.4	218.6	6.15	27.2	6.55					Sunny		Low_Wind	
MW-11	6/22/2022	15:24	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	6.6	6.8	78.4	6.47	64.9	5.03					Sunny		Low_Wind	
CSC-107	6/21/2022	13:12	Steve auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	8.1	10.1	227.1	6.13	87.8						PartlySunny	NoPrecip	No_Wind	
CSC-108	6/21/2022	13:25	Steve auer	Roger hoogerdeide	1305897	1315956	VHC060521	SW	5.4	10.9	143.2	7.16	131.8			Clear	Cobble	Staining,Orange	PartlySunny	NoPrecip	No_Wind	
07-157-006	6/21/2022	13:48	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	4.9	11.9	107.8	7.28	124.7			Cascading,Clear	Sandy,Cobble,Gravel	Staining,Orange	PartlySunny	NoPrecip	No_Wind	
07-167-AD1	6/21/2022	14:29	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	1.8	10.2	73.9	6.94	75.7			Adit	Sandy,Gravel	Staining,Orange	PartlySunny	NoPrecip	No_Wind	New point collected
07-156-AD3	6/21/2022	14:58	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	4.1	6.6	744.3	5.63	80.0			Adit	NA	Staining,Orange	PartlySunny	NoPrecip	Low_Wind	
07-156-Seep2	6/21/2022	15:11	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	2.3	12.6	39.7	6.69	86.2			Other	NA	No_Staining	PartlySunny	NoPrecip	Low_Wind	
07-157-003	6/21/2022	15:33	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	3.8	10.7	258.3	4.95	208.2			Clear	Gravel,Cobble,Boulder	Staining,Orange	PartlySunny	NoPrecip	Low_Wind	
07-157-001	6/21/2022	15:53	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	4.3	10.9	262.4	6.49	157.3			Clear,Cascading	Cobble	Staining,Orange	PartlySunny	NoPrecip	No_Wind	
07-157-AD1	6/21/2022	16:10	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	2.8	9.0	268.8	5.06	268.9			Adit,Clear,PVC_Pipe	Algae_Present,Boulder,Gravel	Staining,Orange	PartlySunny	NoPrecip	No_Wind	
ST015	6/21/2022	17:31	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	10.1	10.5	270.9	6.98	100.2		0.893	Clear	Sandy,Gravel	No_Staining	PartlySunny	NoPrecip	No_Wind	
CSC-102	6/21/2022	11:20	Brendan Flannery	Conor Goulding	1305897	1315956	VHC060521	SW	6.7	12.9	93.1	5.81	198.2			Cascading,Clear	Cobble,Boulder,Gravel	No_Staining	Sunny		Low_Wind	
CSC-103	6/21/2022	11:30	Brendan Flannery	Brendan Flannery	1305897	1315956	VHC060521	SW	7.0	11.7	92.6	5.88	190.1		35.9009	Cascading,Clear	Cobble,Boulder	No_Staining	Sunny		Low_Wind	
ST016	6/21/2022	17:52	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	11.1	9.3	323.5	7.80	86.4		7.5088	Cascading	Cobble,Gravel,Boulder	No_Staining	PartlySunny	NoPrecip	No_Wind	
07-079-AD1	6/23/2022	08:00	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	6.2	11.4	843.0	6.43	177.7			Clear	Algae_Present,Gravel,Cobble	No_Staining	Sunny		No_Wind	
CSC-104A	6/21/2022	12:20	Brendan Flannery	Brendan Flannery	1305897	1315956	VHC060521	SW	8.0	10.3	90.2	6.59	349.0		22.1214	Calm,Cascading	Cobble,Boulder	No_Staining	PartlySunny	NoPrecip	Low_Wind	
07-084-AD1	6/23/2022	08:30	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	6.4	4.2	745.7	6.13	54.2			Trickle	Sandy,Gravel	Staining,Orange	Sunny		No_Wind	
07-084-001	6/23/2022	08:41	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	6.9	8.6	296.1	6.77	77.2			Cascading	Cobble,Gravel	No_Staining	Sunny		No_Wind	North side of pile and directly NW of wooden structures
CSC-111A	6/21/2022	13:10	Brendan Flannery	Brendan Flannery	1305897	1315956	VHC060521	SW	7.9	12.6	185.4	6.02	124.2		18.0466	Cascading,Clear	Boulder,Cobble	No_Staining	PartlyCloudy	NoPrecip	Low_Wind	
07-084-AD1	6/23/2022	09:07	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	6	9.8	458.4	7.29	458.7			Clear,Trickle	Gravel,Sandy,Algae_Present	No_Staining	Sunny		No_Wind	
CSC-111B	6/21/2022	13:55	Brendan Flannery	Brendan Flannery	1305897	1315956	VHC060521	SW	8.0	11.8	15.0	6.75	125		20.3153	Cascading,Clear	Boulder,Cobble	No_Staining	PartlySunny	NoPrecip	Low_Wind	
NG STAR DOWNSTI	6/23/2022	09:34	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	7.5	11.1	531.8	7.73	104.4			Trickle	Cobble,Boulder	No_Staining	Sunny		No_Wind	
ing Star upper loca	6/23/2022	09:43	Steve Auer	Roger Hoogerheide	1305897	1315956	VHC060521	SW	7.4	6.5	777.0	6.77	55.1			Pool	Cobble	Staining,Orange	Sunny		No_Wind	Evening Star Upper location
CSC-114	6/21/2022	14:40	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	SW	9.3	11.3	144.1	6.88	117		0.3798	Calm,Cascading	Algae_Present,Cobble,Gravel,Marsh	No_Staining	PartlySunny	NoPrecip	Low_Wind	
CSC-115	6/21/2022	14:50	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	SW	9.8	10.5	116.7	7.03	116.2		0.3798	Cascading,Calm,Clear	Algae_Present,Cobble,Gravel,Marsh	No_Staining	Sunny		Low_Wind	
CSC-117	6/21/2022	15:25	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	SW	13.0	7.8	683.0	5.19	12			Cascading,Clear	Cobble,Boulder	No_Staining	Sunny		Low_Wind	
CSC-116	6/21/2022	15:55	Brendan Flannery	Brendan Flannery	1305897	1315956	VHC060521	SW	6.9	11.6	58.4	6.54	103.6		12.9421	Cascading,Clear	Boulder,Cobble	No_Staining	PartlyCloudy	NoPrecip	Low_Wind	
CSC-119B	6/21/2022	17:00	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	SW	7.1	11.5	63.1	7.06	111.6		0.1688	Calm,Cascading,Clear	Algae_Present,Cobble,Boulder,Gravel,Mars	No_Staining	PartlySunny	NoPrecip	Low_Wind	
ST010A	6/21/2022	18:00	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	SW	7.8	11.4	119.3	7.64	117			Cascading,Turbulent,Cloudy	Algae_Present,Boulder,Cobble,Gravel	No_Staining	PartlySunny	NoPrecip	Low_Wind	
CSC-106	6/22/2022	09:30	Brendan Flannery	Brendan Flannery	1305897	1315956	VHC060521	SW	4.8	10.5	116.3	6.48	166.1			Cascading,Clear			Sunny		No_Wind	
MW-13	6/22/2022	10:59	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	GW	5.1	7.8	70.9	5.86	153.8	5.52					Sunny		Low_Wind	
MW-14	6/22/2022	00:05	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	GW	5.4	8.2	281.7	4.85	152	4.47					Sunny		Low_Wind	
CSC-25	6/22/2022	13:22	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	GW	8.2	0.3	542.3	6.37	28	5.17					Sunny		Low_Wind	
CSC-5	6/22/2022	13:30	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	GW	13.9	3.3	441.7	5.95	73.2	28.18					Sunny		Low_Wind	
MW-12	6/22/2022	14:03	Conor Goulding	Brendan Flannery															Sunny		Low_Wind	
MW-9	6/22/2022	14:40	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	GW	7.1	3.4	558.5	4.74	96.7	6.97					Sunny		Low_Wind	
MW-9A	6/22/2022	14:39	Conor Goulding	Brendan Flannery															Sunny		Low_Wind	
MW-10	6/22/2022	15:20	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521	GW	7.9	6.4	508.4	5.66	109.6	13.92					Sunny		Low_Wind	
Blank	6/21/2022	12:40	Brendan Flannery	Brendan Flannery	1305897	1315956	VHC060521												PartlySunny	NoPrecip	Low_Wind	
Blank	6/22/2022	12:30	Conor Goulding	Brendan Flannery	1305897	1315956	VHC060521												Sunny		Low_Wind	

Attachment B Electronic Data Collection Device Field Notes September 2022

Location	Event Date	Event Time	Author's Name	Sampler's Name	Bottle Lot Number - Total Recoverable Metals	Bottle Lot Number - Dissolved Metals	Bottle Lot Number - Alk/Anions	Sample Matrix	Temperature (Celsius)	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm)	pH	Oxidation Reduction Potential (mV)	Ststic Water level	Flow (cfs)	Stream Condition	Substrate Condition	Substrate Staining	Visibility - Weather Conditions	Weather Conditions	Wind Conditions	Miscellanious
CSC-104	9/20/2022	12:51	Gary Newhart	Race Houston	1305897	1315956	VHC060521	SW,SED	7.6	9.93	200.0	7.48	121.6		1.57	Clear,Cascading	Algae_Present,Boulder,Cobble	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-105	9/20/2022	13:50	Gary Newhart	Race Houston	1305897	1315956	VHC060521	SED,SW	6.8	10.05	151.9	7.55	117.9		0.65	Clear,Cascading	Algae_Present,Boulder,Cobble,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-104A	9/20/2022	14:16	Gary Newhart	Roger H	1305897	1315956	VHC060521	SED,SW	8.1	9.87	222.8	7.77	117.9		1.7236	Clear,Cascading	Algae_Present,Boulder,Cobble,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-111C	9/20/2022	14:44	Landon Bailey	Landon Bailey															PartlyCloudy	Rain	Low_Wind	Dry
CSC-114	9/20/2022	14:59	Gary Newhart	Roger H	1305897	1315956	VHC060521	SED,SW	7.1	9.20	186.6	7.39	90.1		0.0208	Clear,Calm	Algae_Present,Cobble,Gravel,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-115	9/20/2022	15:15	Gary Newhart	Roger H	1305897	1315956	VHC060521	SED,SW	7.2	9.35	175.8	7.52	72.2			Calm,Clear	Algae_Present,Cobble,Gravel,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-117	9/20/2022	15:29	Gary Newhart	Roger H	1305897	1315956	VHC060521	SW,SED	8.4	9.08	1403.0	4.47	239.8			Calm	Algae_Present,Sandy,Marsh	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-116	9/20/2022	15:50	Gary Newhart	Roger H	1305897	1315956	VHC060521	SED,SW	6.8	9.86	94.6	7.45	118.6		0.67	Turbulent,Clear,Pool	Boulder,Cobble,Gravel,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-119	9/20/2022	16:04	Gary Newhart	Roger H	1305897	1315956	VHC060521	SED,SW	8.3	9.49	137.6	7.63	124.1		0.7488	Cascading,Clear	Boulder,Cobble,Gravel,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-120A	9/20/2022	16:25	Gary Newhart	Roger H	1305897	1315956	VHC060521	SED,SW	6.4	9.96	85.5	7.83	79.1		0.5467	Cascading,Clear,Turbulent	tae_Present,Boulder,Cobble,Gravel,San	No_Staining	PartlyCloudy	Rain	Low_Wind	
ST015	9/20/2022	17:25	Gary Newhart	Race Houston	1305897	1315956	VHC060521	SED,SW	10.4	9.35	382.0	6.99	106.0			Clear,Cascading	Algae_Present,Cobble,Gravel,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	Unable. Pooling. Narrow
ST016	9/20/2022	17:55	Gary Newhart	Race Houston	1305897	1315956	VHC060521	SW	8.6	9.60	472.6	7.79	90.9			Clear,Calm	Gravel,Algae_Present	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-119B	9/20/2022	17:10	Race Houston	Race Houston	1305897	1315956	VHC060521	SED,SW	6.9	8.81	98.8	7.54	90.2						PartlyCloudy	NoPrecip	No_Wind	
CSC-101	9/20/2022	12:03	Landon Bailey	Landon Bailey	1305897	1315956	VHC060521	SW,SED	7.7	11.58	174.3	5.86	-78.9		16.03	Cascading	Boulder,Cobble,Gravel,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-102	9/20/2022	12:52	Landon Bailey	Landon Bailey	1305897	1315956	VHC060521	SED,SW	7.6	9.80	242.9	7.82	137.6		17.77	Cascading	Boulder,Gravel,Cobble,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-103	9/20/2022	13:30	Landon Bailey	Landon Bailey	1305897	1315956	VHC060521	SED,SW	7.9	9.19	266.1	6.86	136.5			Cascading	Cobble,Boulder,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	Most flow lost under rocks. Abundant boulders. Not laminar flow
CSC-111A	9/20/2022	14:07	Landon Bailey	Landon Bailey	1305897	1315956	VHC060521	SED,SW	8.1	9.79	286.1	7.09	133.3		11.543	Cascading	Cobble,Algae_Present,Gravel,Sandy	No_Staining	PartlyCloudy	Rain	Low_Wind	
CSC-111B	9/20/2022	14:44	Landon Bailey	Landon Bailey															PartlyCloudy	Rain	Low_Wind	Dry
CSC-117A	9/20/2022	15:36	Landon Bailey	Landon Bailey	1305897	1315956	VHC060521	SED,SW	8.5	8.42	1926.0	3.52	391.4		0.0208	Cascading	Cobble,Gravel,Sandy	Staining,Orange	PartlyCloudy	Rain	Low_Wind	
07-079-AD1	9/20/2022	11:36	Rachel Melton	Rachel Melton	1305897	1315956	VHC060521	SW	6.0	7.15	892.0	6.58	43.7			Adit,Trickle	Algae_Present,Cobble	No_Staining	PartlyCloudy	Rain	Low_Wind	Insufficient flow
07-084-001	9/20/2022	12:00	Bryan Lobar	Roger Hoogerheide	1305897	1315956	VHC060521	SW	6.9	1.52	628.7	6.29	13.1			Adit,Trickle	Gravel	Staining,Orange	PartlyCloudy	Rain	Low_Wind	Insufficient flow
07-084-AD1	9/20/2022	12:40	Rachel Melton	Bryan Loear	1305897	1315956	VHC060521	SW	5.5	9.29	412.1	7.16	44.1			Adit,Trickle	Algae_Present,Marsh	No_Staining	PartlyCloudy	Rain	No_Wind	Insufficient flow
07-167-AD1	9/20/2022	14:25	Rachel Melton	Rachel Melton	1305897	1315956	VHC060521	SW	1.8	8.14	121.7	6.82	32.3			Adit,Clear,Trickle	Algae_Present	No_Staining	PartlyCloudy	Rain	No_Wind	
07-156-Seep2	9/20/2022	15:00	Rachel Melton	Rachel Melton	1305897	1315956	VHC060521	SW	4	7.6	1549	5.98	0.9			Trickle	Algae_Present,Gravel	Staining,Red	PartlyCloudy	Rain	No_Wind	
07-157-AD1	9/20/2022	15:30	Bryan Lobar	Rachel Melton	1305897	1315956	VHC060521	SW	2.7	9.15	396	5.64	177.1			Adit,Clear,Cascading	Cobble,Algae_Present	Staining,Orange	PartlyCloudy	Rain	Low_Wind	
07-157-001	9/20/2022	16:00	Bryan Lobar	Rachel Melton	1305897	1315956	VHC060521	SW	3.0	10.9	391.5	6.55	1290.0			Cascading,Clear	Cobble,Boulder,Marsh	Staining,White	PartlyCloudy	Rain	Low_Wind	
07-157-006	9/20/2022	16:10	Rachel Melton	Rachel Melton	1305897	1315956	VHC060521	SW	11.1	11.1	1111.0	11.10	1111.0			Dry			PartlyCloudy	Rain	No_Wind	
07-157-004	9/20/2022	16:44	Rachel Melton	Rachel Melton												Dry			PartlyCloudy	Rain	No_Wind	No water
07-157-003	9/20/2022	16:55	Bryan Lobar	Rachel Melton	1305897	1315956	VHC060521	SED,SW	3.0	8.0	392.6	6.60	119.5			Trickle	Gravel,Boulder	Staining,Orange	PartlyCloudy	Rain	Low_Wind	
GE-SW-001	9/21/2022	08:20	Rachel Melton	Roger H	1305897	1315956	VHC060521	SW	5.7	12.8	15.7	6.68	101.5			Clear,Cascading	Cobble,Gravel	No_Staining	PartlyCloudy	NoPrecip	Low_Wind	
CSC-106	9/21/2022	10:45	Race Houston	Race Houston	1305897	1315956	VHC060521	SED,SW	6.4	10.5	232.6	7.07	109.8		0.2232	Clear	Boulder,Cobble	Staining,Red	PartlySunny	NoPrecip	No_Wind	
MW-14	9/21/2022	12:01	Gary Newhart	Race Houston	1305897	1315956	VHC060521	GW	5.8	7.6	379.5	6.04	119.8	13.01					Sunny		No_Wind	Bailed well
MW-13	9/21/2022	12:46	Gary Newhart	Race Houston	1305897	1315956	VHC060521	GW	8.7	6.2	357.1	5.76	120.4	6.98					Sunny		No_Wind	
CSC-107	9/21/2022	13:20	Race Houston	Race Houston	1305897	1315956	VHC060521	SW	8.4	9.3	438.8	5.71	124.1						Sunny		No_Wind	
CSC-108	9/21/2022	13:55	Race Houston	Race Houston	1305897	1315956	VHC060521	SW	6.6	11.8	299.8	6.00	110.2						Sunny		No_Wind	
MW-11	9/21/2022	14:46	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	9.2	3.0	182.0	6.48	86.5	7.6					Sunny		No_Wind	
MW-10	9/21/2022	15:21	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	8.9	4.1	272.8	5.78	95.3	15.08					Sunny		No_Wind	
MW-9A	9/21/2022	16:05	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	8.8	2.29	394.5	5.06	89.1	7.57					Sunny		No_Wind	
MW-9	9/21/2022	16:43	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	10.5	4	525.7	4.65	96.5	7.98					Sunny		No_Wind	
MW-8	9/21/2022	17:00	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	8.1	0.38	143.6	6.1	20.9	5.52					Sunny		No_Wind	
CSC-15	9/21/2022	17:33	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	9.1	0.39	138.6	6.01	19	8.79					Sunny		No_Wind	
CSC-5	9/21/2022	18:15	Race Houston	Race Houston															PartlySunny	NoPrecip	Low_Wind	Insufficient water
MW-3	9/22/2022	09:35	Rachel Melton	Rachel Melton	1305897	1315956	VHC060521	GW	9.7	0.45	300	6.46	68.7	6.7					PartlySunny	NoPrecip	Low_Wind	
MW-5	9/22/2022	10:25	Roger hoogerheide	Rachel Melton	1305897	1315956	VHC060521	GW	12.7	3.32	100.4	5.69	116.2	7.51					PartlySunny	NoPrecip	Med_Wind	
MW-6	9/22/2022	11:47	Roger Hoogerheide	Rachel MELTON															PartlySunny	NoPrecip	Med_Wind	Started pumping, went dry
MW-1	9/22/2022	08:22	Race Houston	Rachel Melton	1305897	1315956	VHC060521	GW	10.6	3.2	222.4	6.04	109.6	9.08					PartlyCloudy	NoPrecip	Low_Wind	
MW-2	9/22/2022	09:31	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	8.7	5	212	6.02	128.3	8.67					PartlyCloudy	NoPrecip	Low_Wind	
MW-4A	9/22/2022	10:08	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	10.6	0.33	327.5	5.64	86.7	6.35					Sunny		No_Wind	
MW-6A	9/22/2022	10:41	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	8.9	1.85	152.8	5.63	87.6	11.29					PartlySunny	NoPrecip	Med_Wind	
CSC-25	9/22/2022	11:27	Race Houston	Race Houston	1305897	1315956	VHC060521	GW	9	0.39	627	6.22	8	5.71					PartlyCloudy	NoPrecip	Low_Wind	
Blank	9/20/2022	15:54	Landon Bailey	Landon Bailey	1305897	1315956	VHC060521												PartlyCloudy	Rain	Low_Wind	

Attachment C
Site Photos

Carpenter June 2022

Photo # 1 07-079-AD1
Downstream

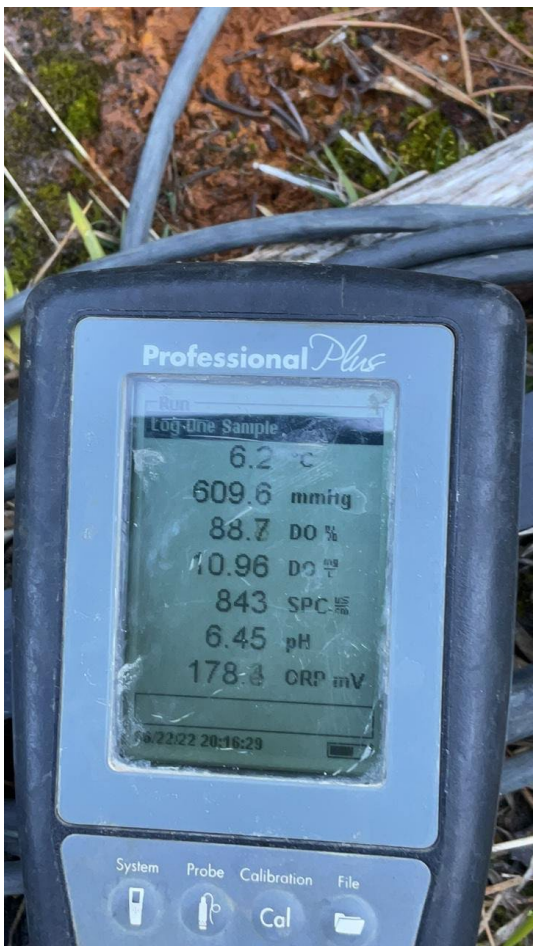


Photo # 2 07-079-AD1
Surface Water Quality
Meter Screen Shot

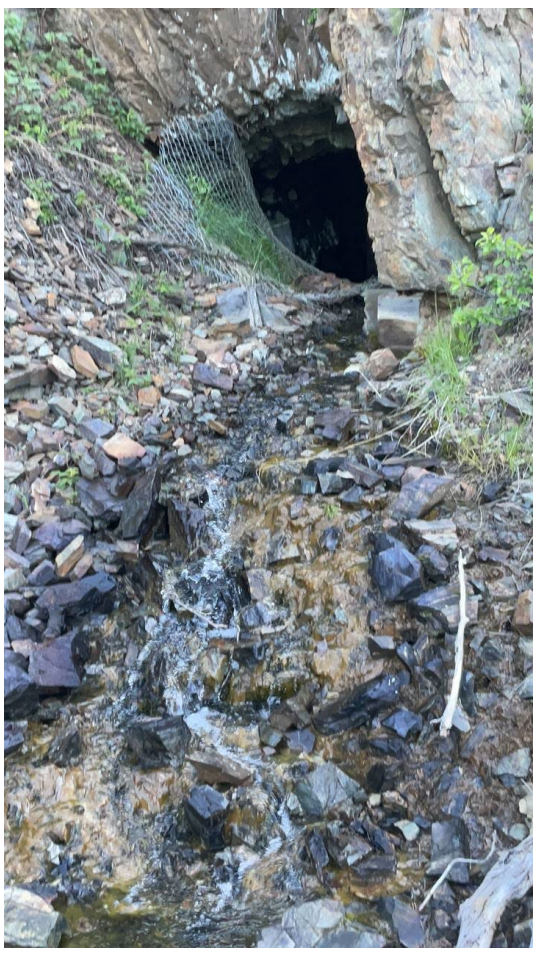


Photo # 3 07-079-AD1
Upstream

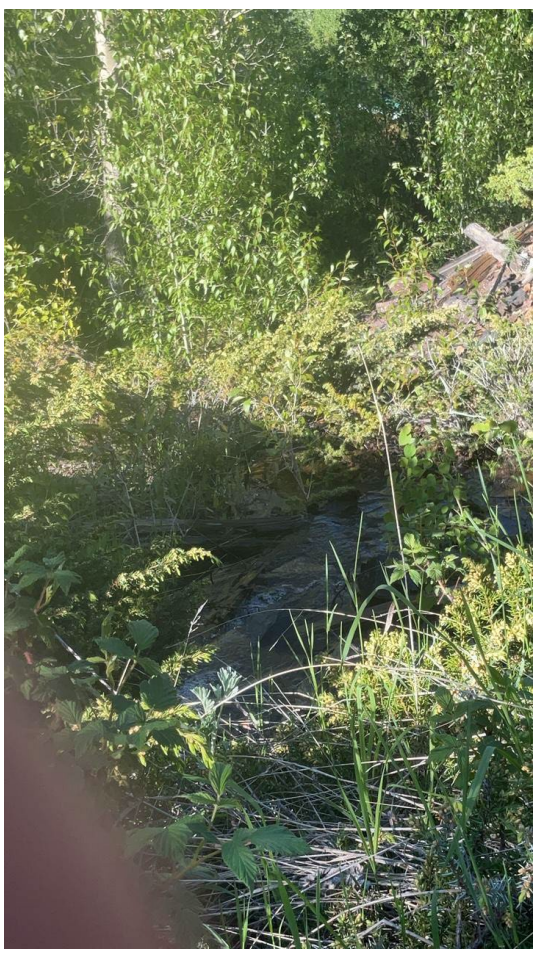


Photo # 4 07-084-001
Downstream

Carpenter June 2022

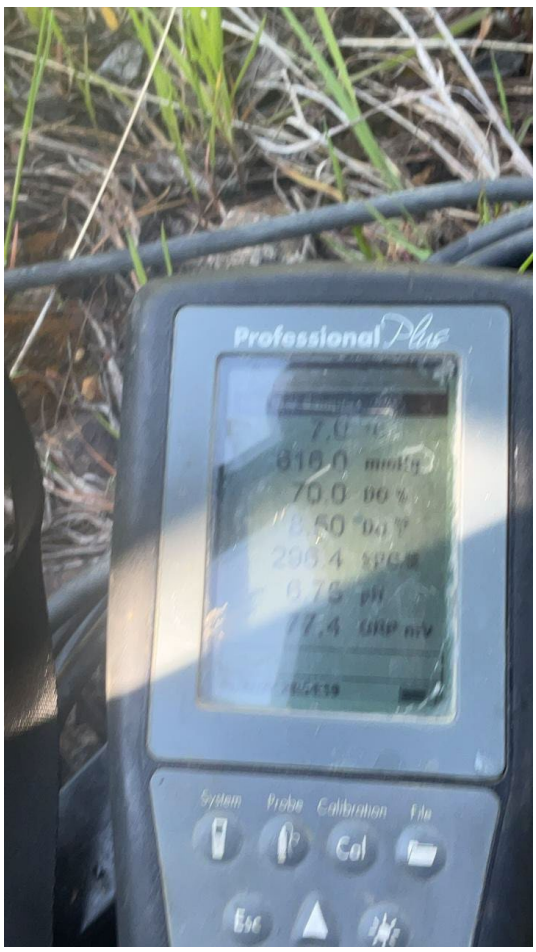


Photo # 5 07-084-001
Surface Water Quality
Meter Screen Shot

Photo # 6 07-084-001
Upstream

Photo # 7 07-084-AD1
Downstream

Photo # 8 07-084-AD1
Downstream

Carpenter June 2022

Photo # 9 07-084-AD1 Surface Water Quality Meter Screen Shot

Photo # 10 07-084-AD1 Surface Water Quality Meter Screen Shot

Photo # 11 07-084-AD1 Upstream

Photo # 12 07-084-AD1 Upstream

Carpenter June 2022

Photo # 13 07-156-AD3 Downstream

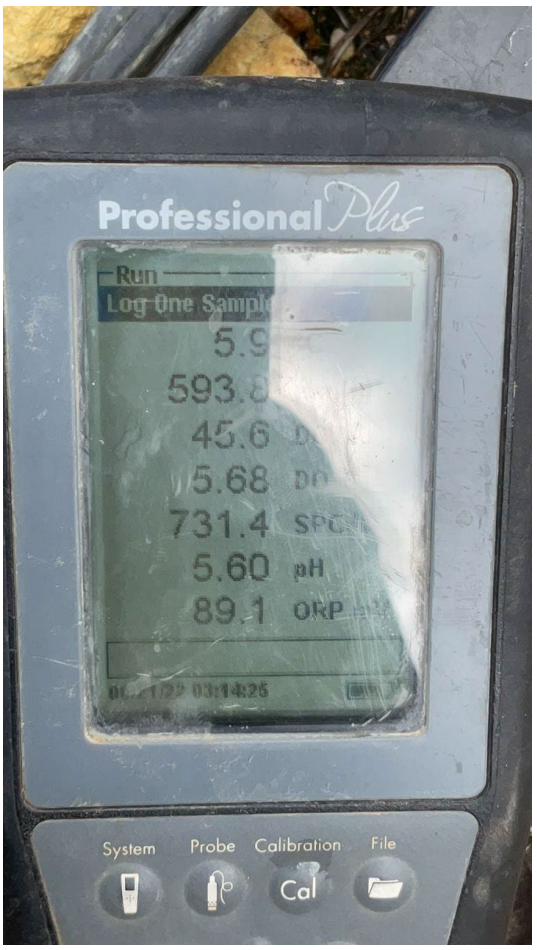


Photo # 14 07-156-AD3 Surface Water Quality Meter Screen Shot

Photo # 15 07-156-AD3 Upstream

Photo # 16 07-156-Seep2 Downstream

Carpenter June 2022

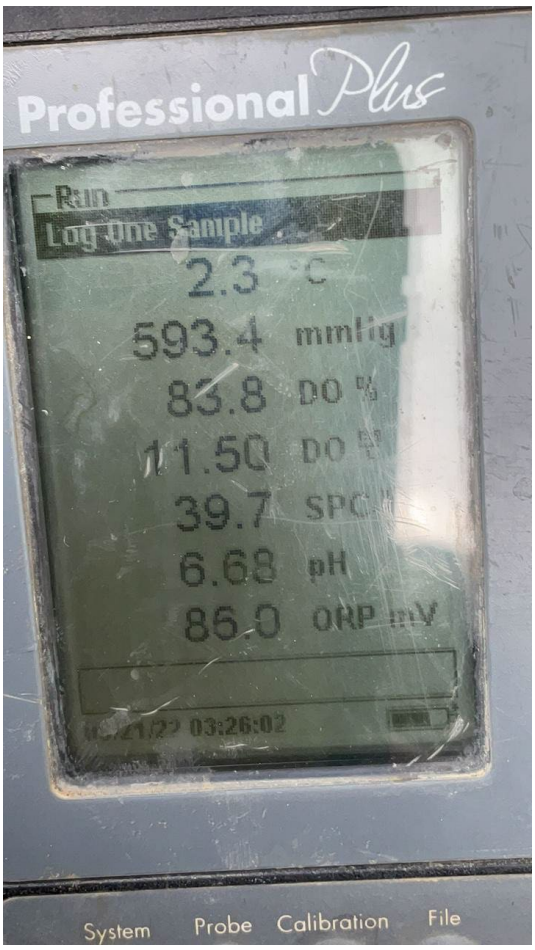


Photo # 17 07-156-Seep2 Surface Water Quality Meter Screen Shot

Photo # 18 07-156-Seep2 Upstream

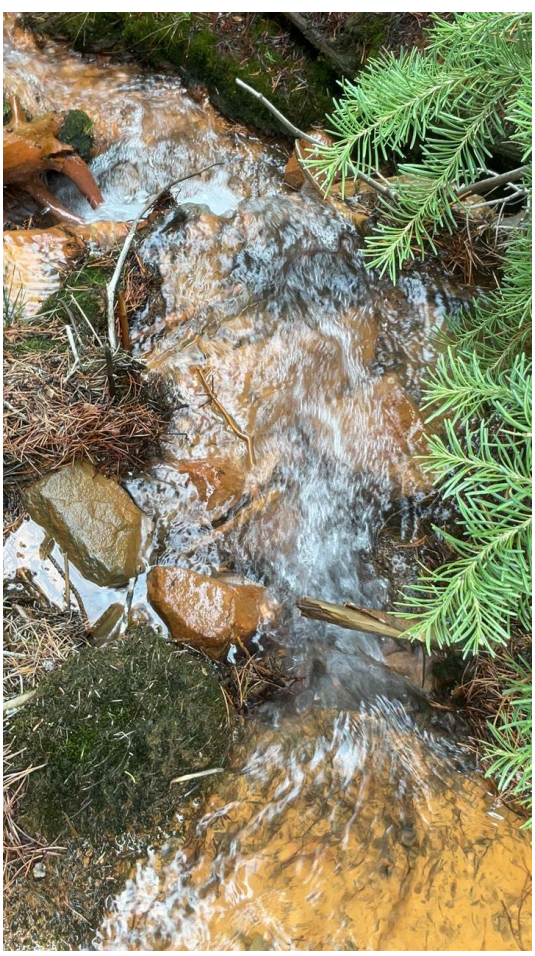


Photo # 19 07-157-001 Downstream

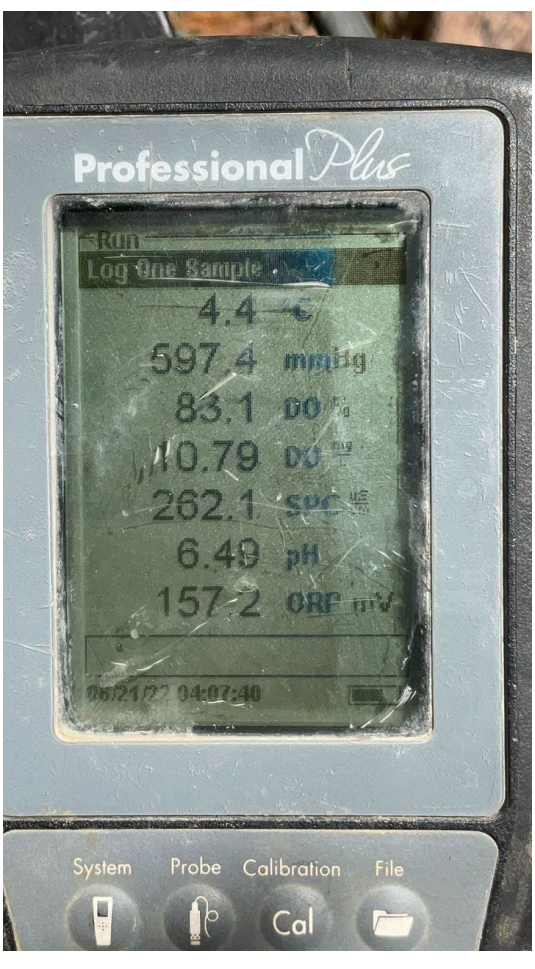


Photo # 20 07-157-001 Surface Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 21 07-157-001 Upstream

Photo # 22 07-157-003 Downstream

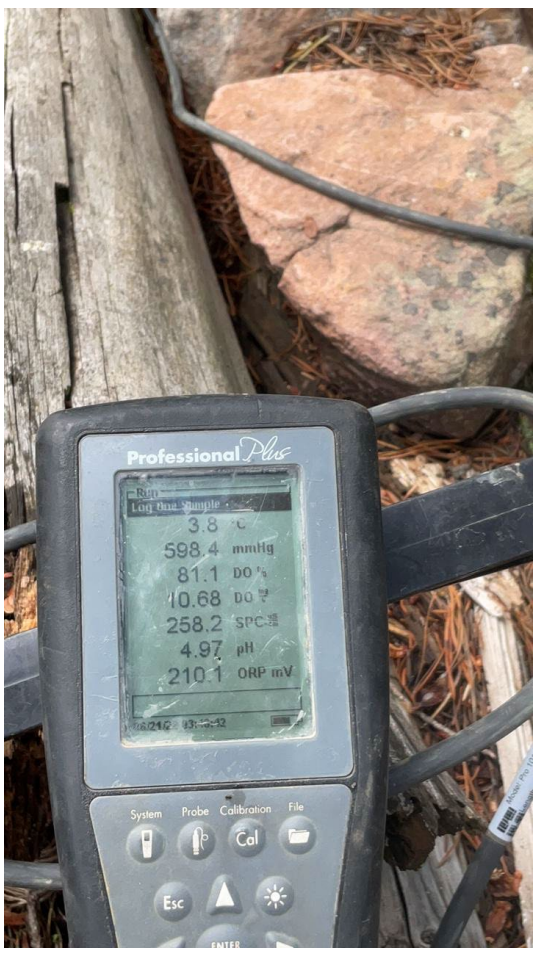


Photo # 23 07-157-003 Surface Water Quality Meter Screen Shot

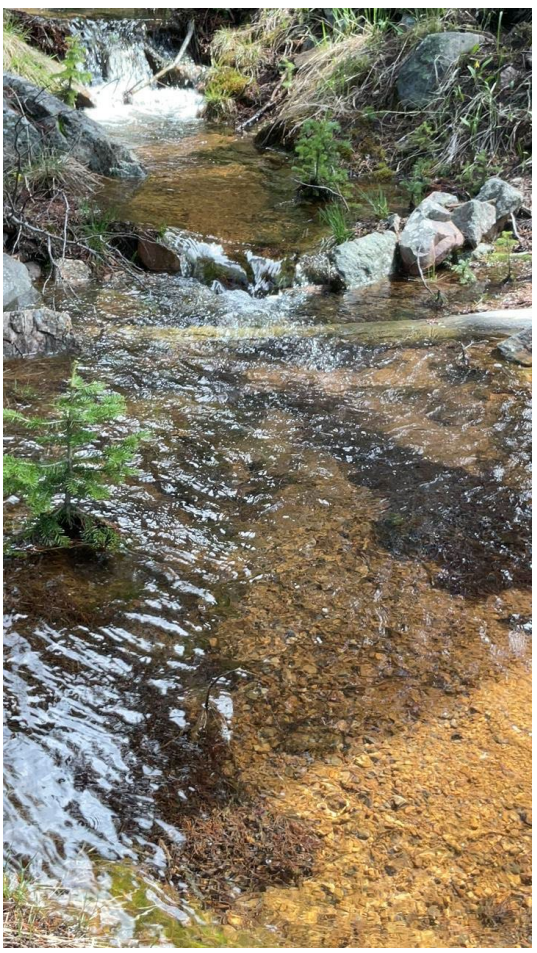


Photo # 24 07-157-003 Upstream

Carpenter June 2022

Photo # 25 07-157-006 Downstream

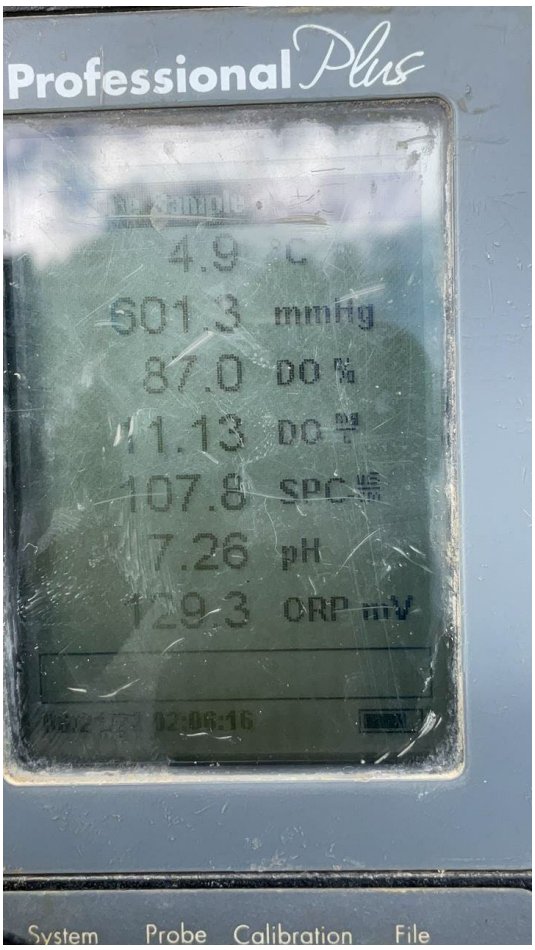


Photo # 26 07-157-006 Surface Water Quality Meter Screen Shot

Photo # 27 07-157-006 Upstream

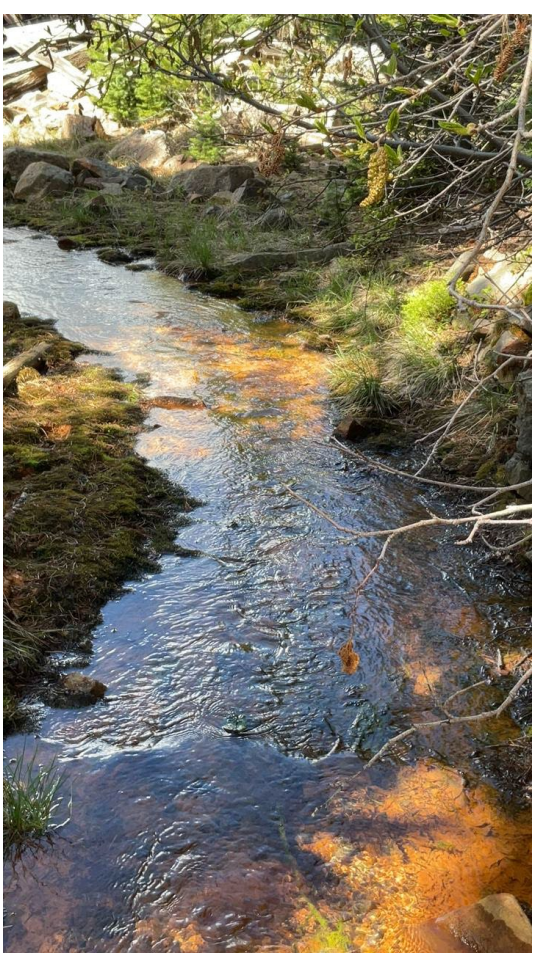


Photo # 28 07-157-AD1 Downstream

Carpenter June 2022

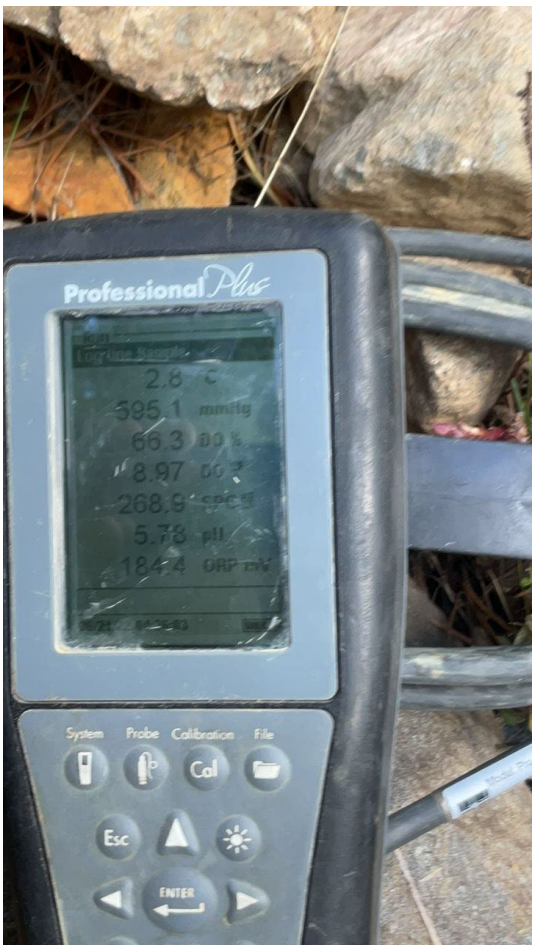


Photo # 29 07-157-AD1 Surface Water Quality Meter Screen Shot

Photo # 30 07-157-AD1 Upstream

Photo # 31 07-167-AD1 Downstream

Photo # 32 07-167-AD1 Surface Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 33 07-167-AD1 Upstream

Photo # 34 CSC-5 Downstream

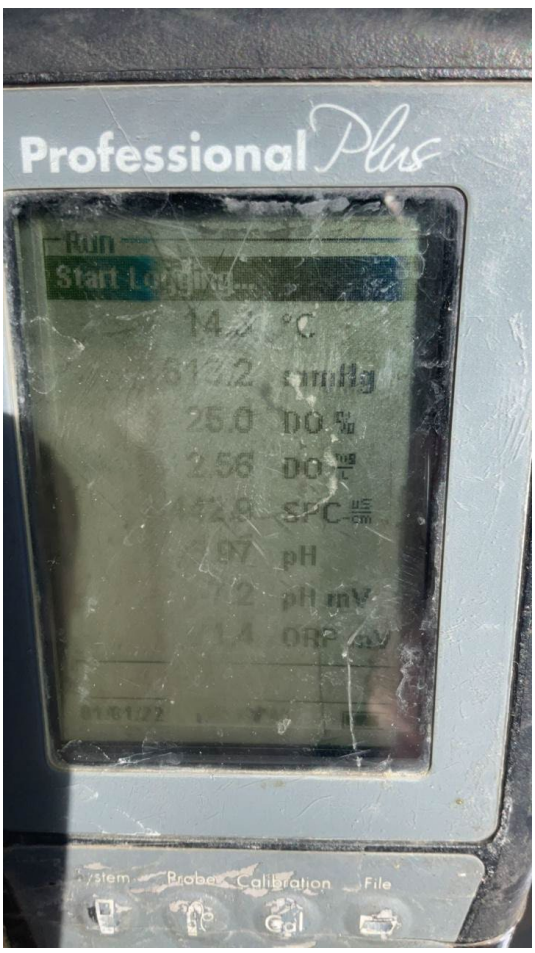


Photo # 35 CSC-5 Ground Water Quality Meter Screen Shot

Photo # 36 CSC-5 Upstream

Carpenter June 2022

Photo # 37 CSC-15 Downstream

Photo # 38 CSC-15 Ground Water Quality Meter Screen Shot

Photo # 39 CSC-15 Upstream

Photo # 40 CSC-25 Downstream

Carpenter June 2022

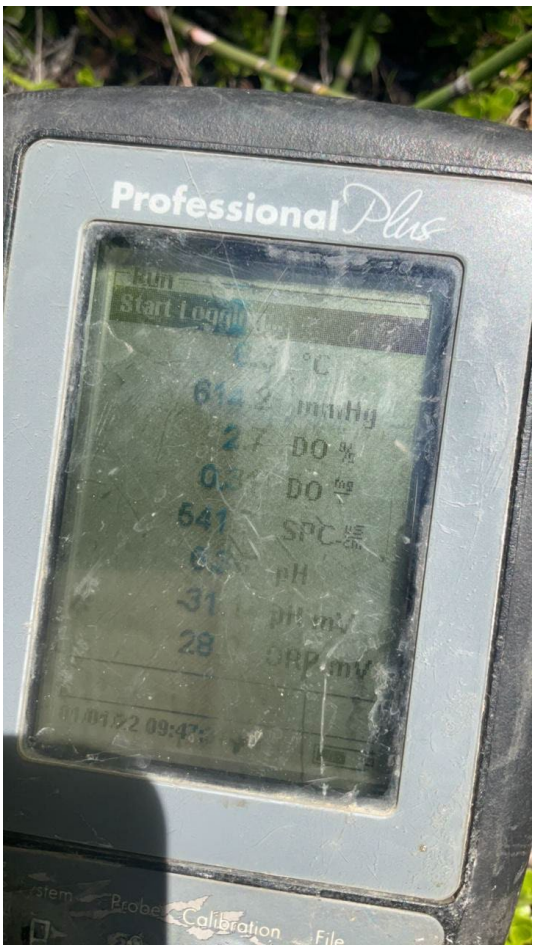


Photo # 41 CSC-25 Ground Water Quality Meter Screen Shot

Photo # 42 CSC-25 Upstream

Photo # 43 CSC-101 Downstream

Photo # 44 CSC-101 Surface Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 45 CSC-101 Upstream

Photo # 46 CSC-102 Downstream

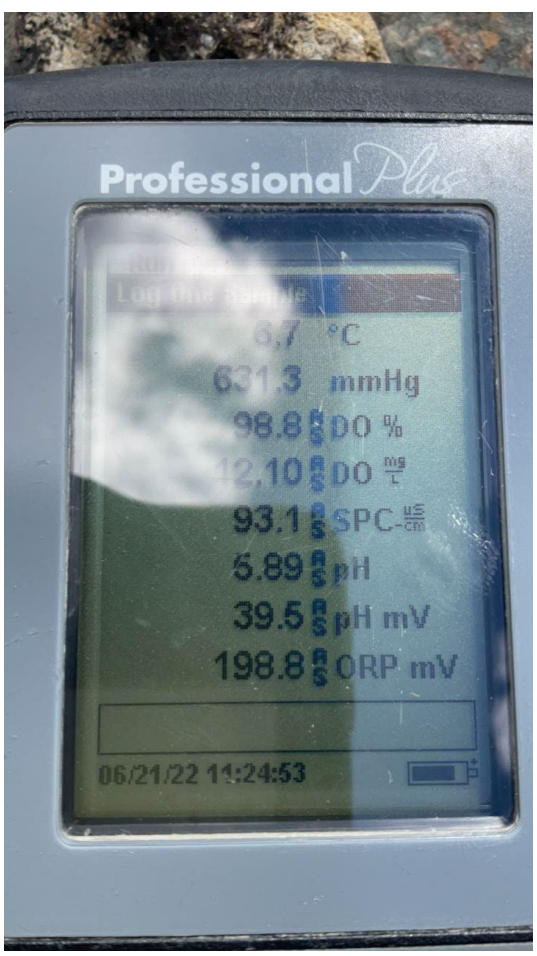


Photo # 47 CSC-102 Surface Water Quality Meter Screen Shot

Photo # 48 CSC-102 Upstream

Carpenter June 2022

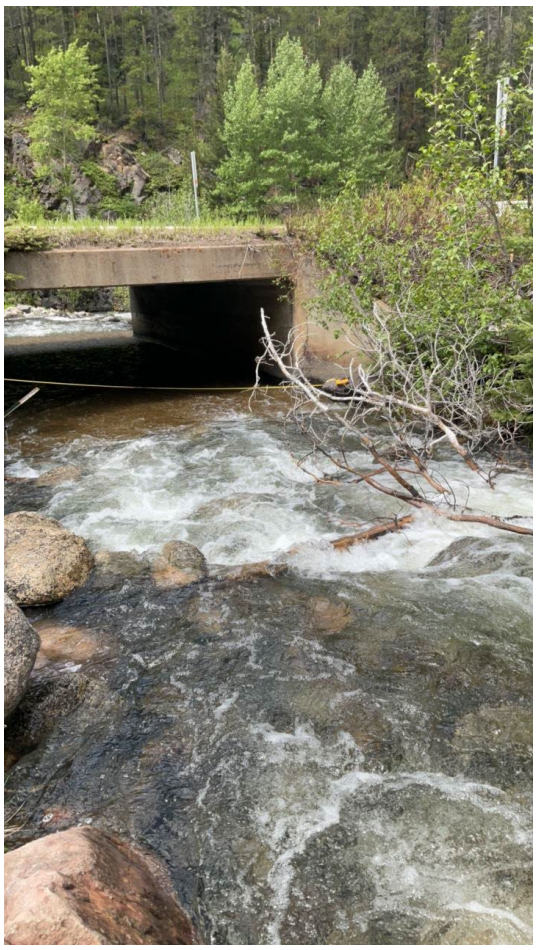


Photo # 49 CSC-103 Downstream

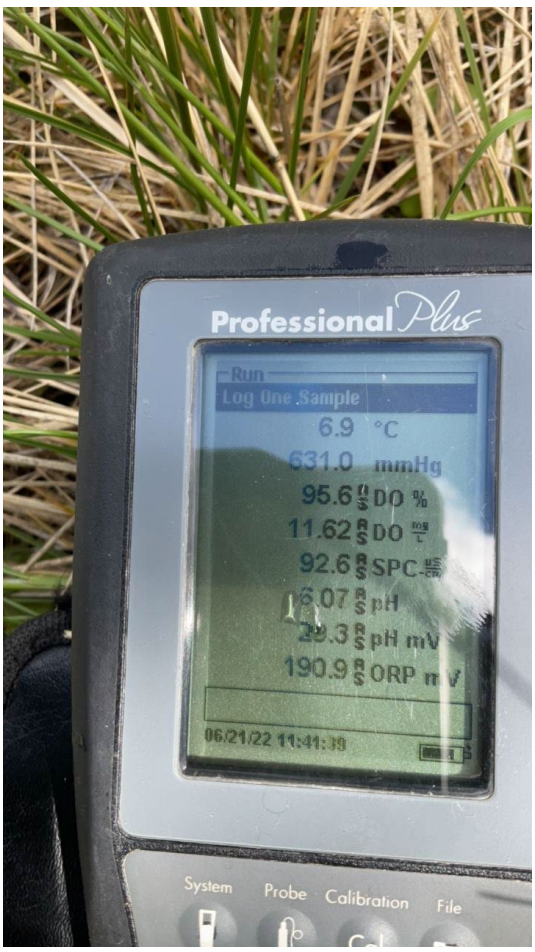


Photo # 50 CSC-103 Surface Water Quality Meter Screen Shot

Photo # 51 CSC-103 Upstream

Photo # 52 CSC-104 Downstream

Carpenter June 2022

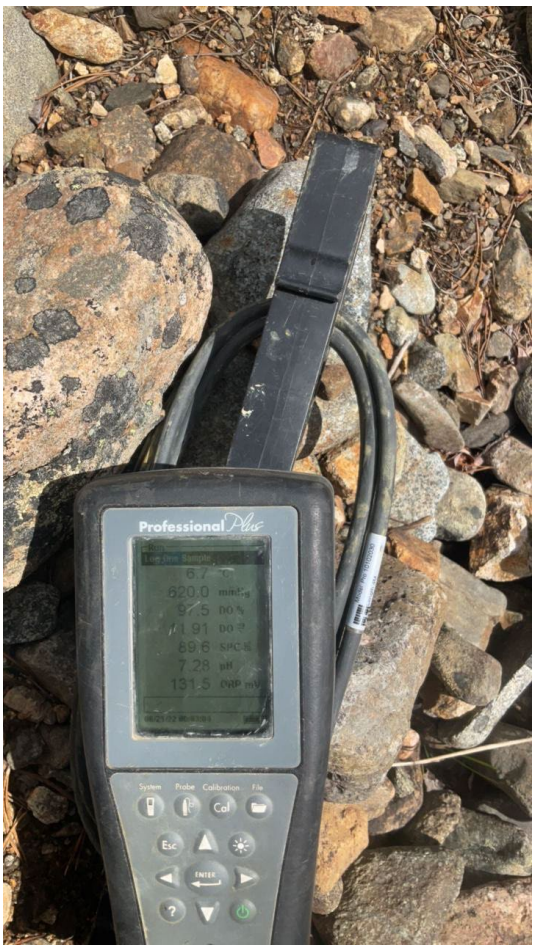


Photo # 53 CSC-104 Surface Water Quality Meter Screen Shot

Photo # 54 CSC-104 Upstream

Photo # 55 CSC-104A Downstream

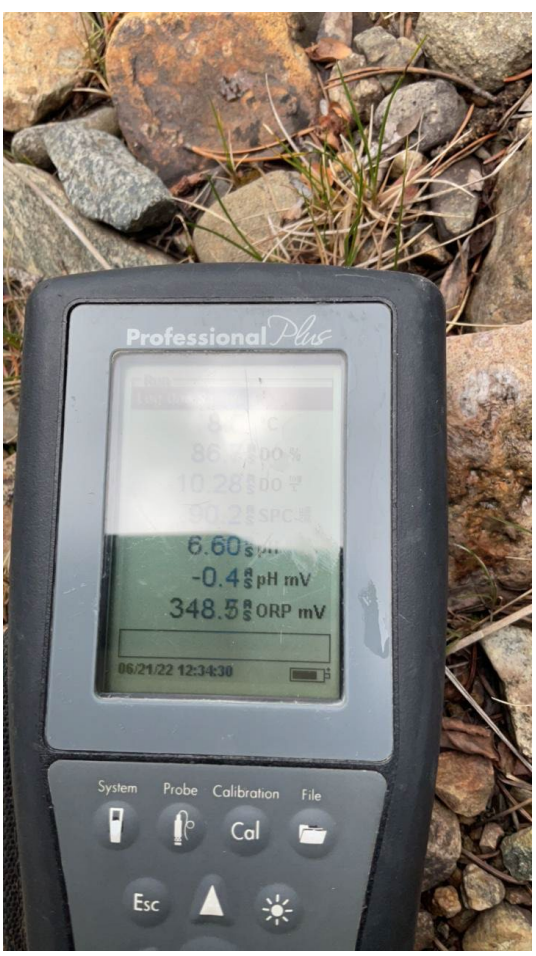


Photo # 56 CSC-104A Surface Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 57 CSC-104A Upstream

Photo # 58 CSC-105 Downstream

Photo # 59 CSC-105 Surface Water Quality Meter Screen Shot

Photo # 60 CSC-105 Upstream

Carpenter June 2022

Photo # 61 CSC-106 Downstream

Photo # 62 CSC-106 Surface Water Quality Meter Screen Shot

Photo # 63 CSC-106 Upstream

Photo # 64 CSC-107 Downstream

Carpenter June 2022

Photo # 65 CSC-107 Surface Water Quality Meter Screen Shot

Photo # 66 CSC-107 Upstream

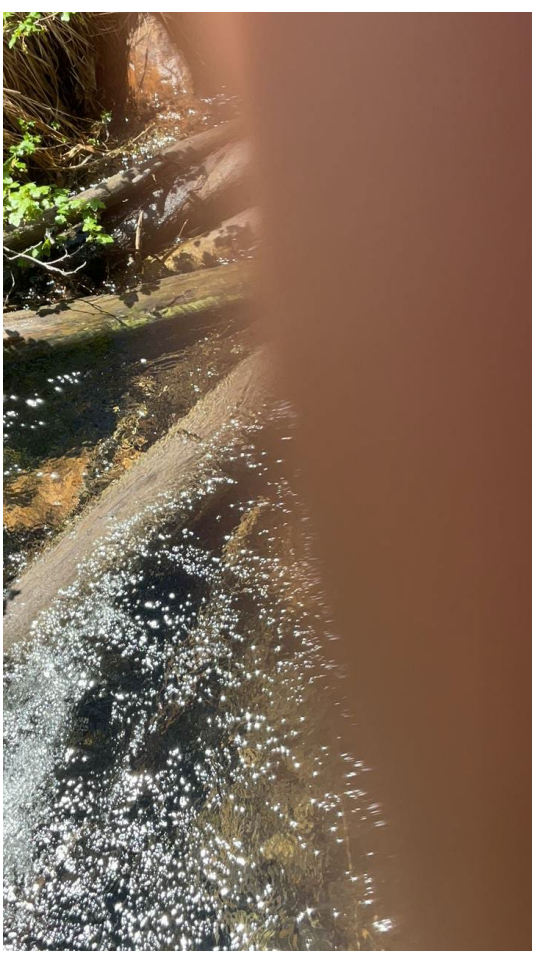


Photo # 67 CSC-108 Downstream

Photo # 68 CSC-108 Surface Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 69 CSC-108
Upstream

Photo # 70 CSC-111A
Downstream

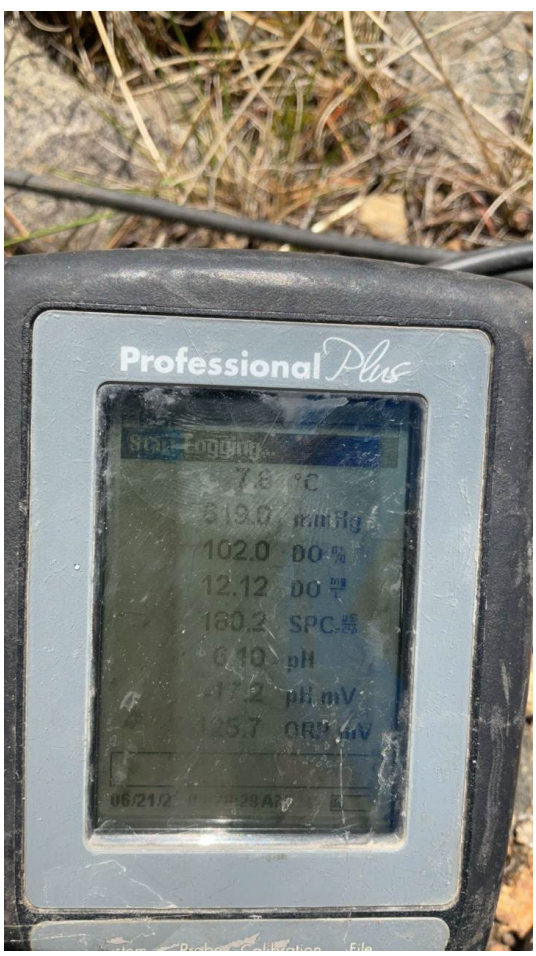


Photo # 71 CSC-111A
Surface Water Quality
Meter Screen Shot

Photo # 72 CSC-111A
Upstream

Carpenter June 2022

Photo # 73 CSC-111B Downstream

Photo # 74 CSC-111B Surface Water Quality Meter Screen Shot

Photo # 75 CSC-111B Upstream

Photo # 76 CSC-111C Downstream

Carpenter June 2022

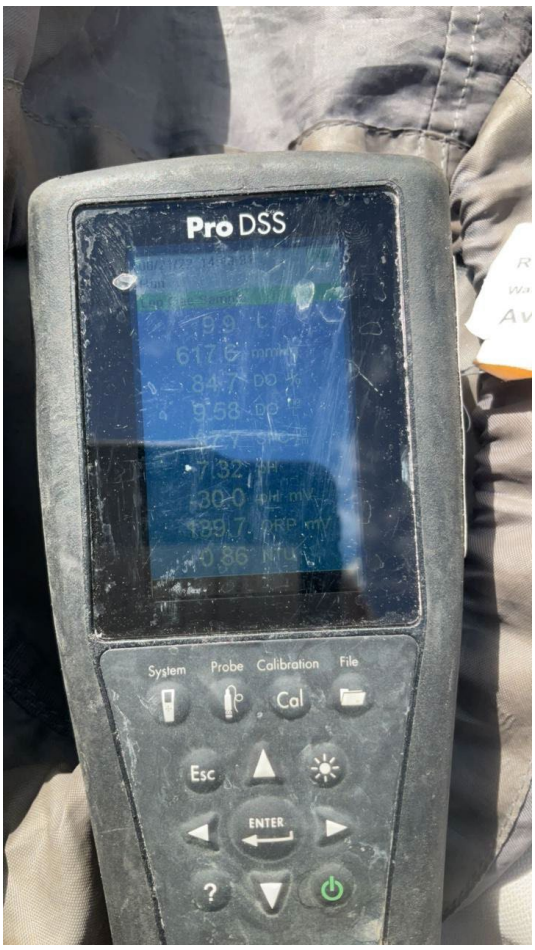


Photo # 77 CSC-111C
Surface Water Quality
Meter Screen Shot

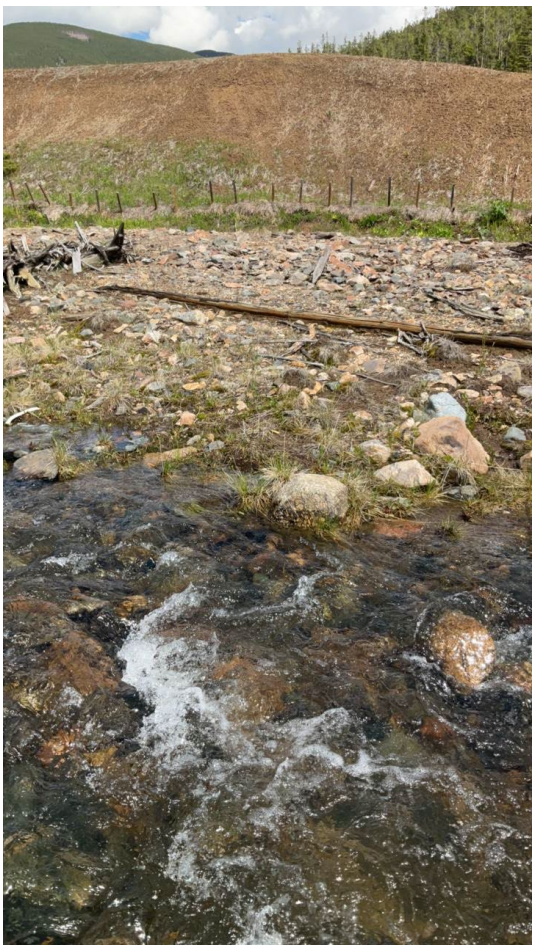


Photo # 78 CSC-111C
Upstream

Photo # 79 CSC-111D
Downstream

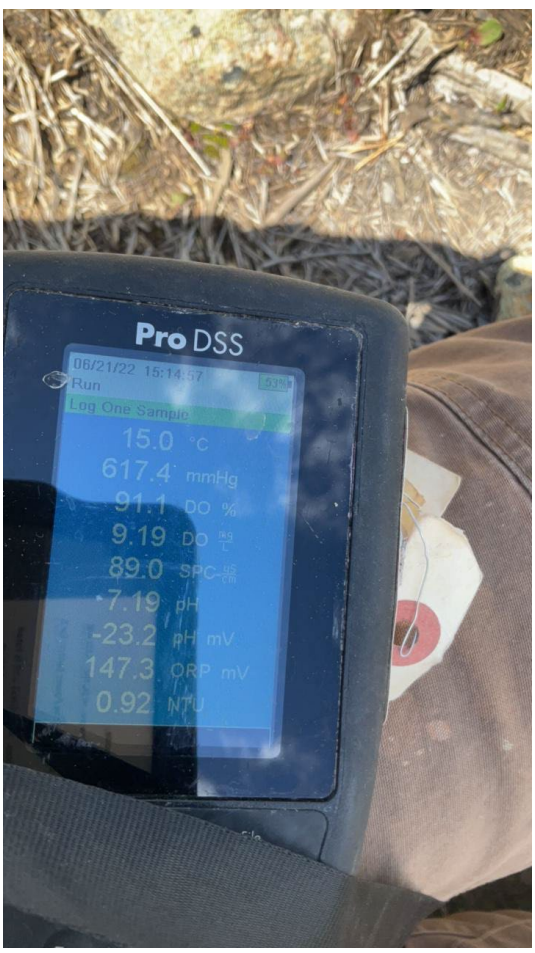


Photo # 80 CSC-111D
Surface Water Quality
Meter Screen Shot

Carpenter June 2022

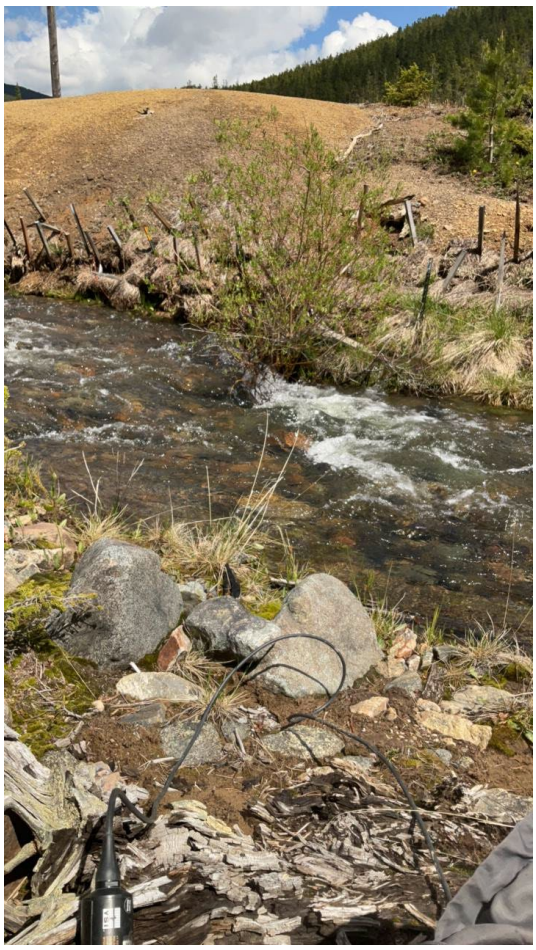


Photo # 81 CSC-111D Upstream

Photo # 82 CSC-114 Downstream

Photo # 83 CSC-114 Flume

Photo # 84 CSC-114 Surface Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 85 CSC-114 Upstream

Photo # 86 CSC-115 Downstream

Photo # 87 CSC-115 Flume

Photo # 88 CSC-115 Surface Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 89 CSC-115 Upstream

Photo # 90 CSC-116 Downstream

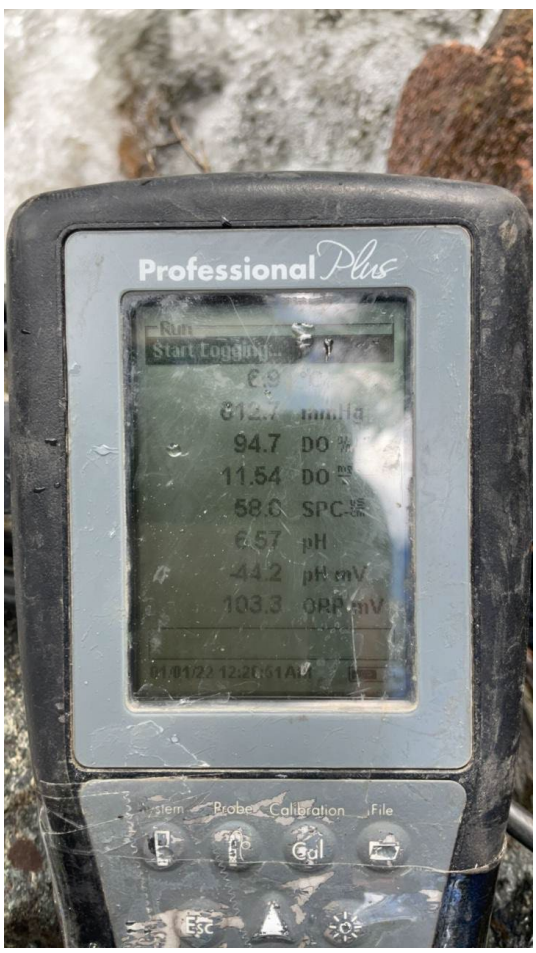


Photo # 91 CSC-116 Surface Water Quality Meter Screen Shot

Photo # 92 CSC-116 Upstream

Carpenter June 2022

Photo # 93 CSC-117 Downstream

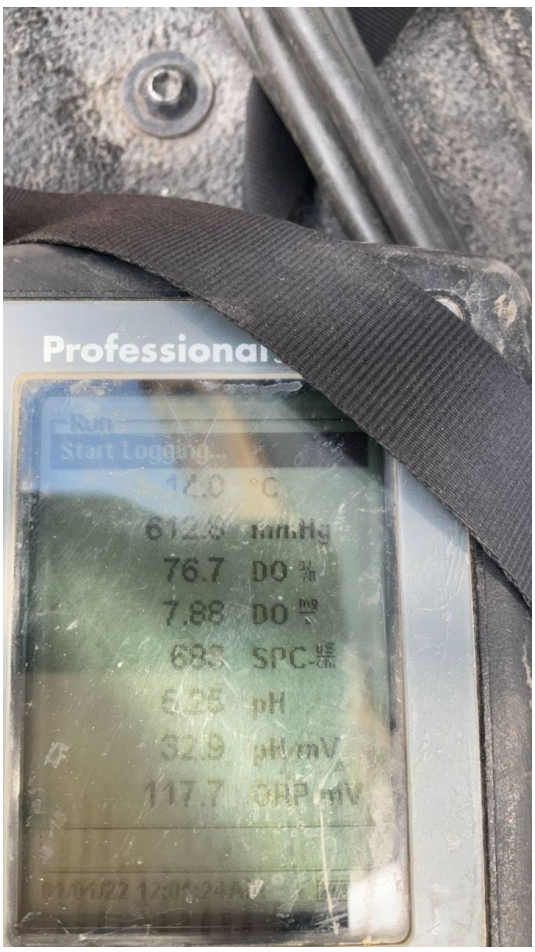


Photo # 94 CSC-117 Surface Water Quality Meter Screen Shot

Photo # 95 CSC-117 Upstream

Photo # 96 CSC-117A Downstream

Carpenter June 2022

Photo # 97 CSC-117A
Surface Water Quality
Meter Screen Shot

Photo # 98 CSC-117A
Upstream

Photo # 99 CSC-119
Downstream

Photo # 100 CSC-119
Flume

Carpenter June 2022

Photo # 101 CSC-119
Surface Water Quality
Meter Screen Shot

Photo # 102 CSC-119
Upstream

Photo # 103 CSC-119B
Downstream

Photo # 104 CSC-119B
Flume

Carpenter June 2022

Photo # 105 CSC-119B Surface Water Quality Meter Screen Shot

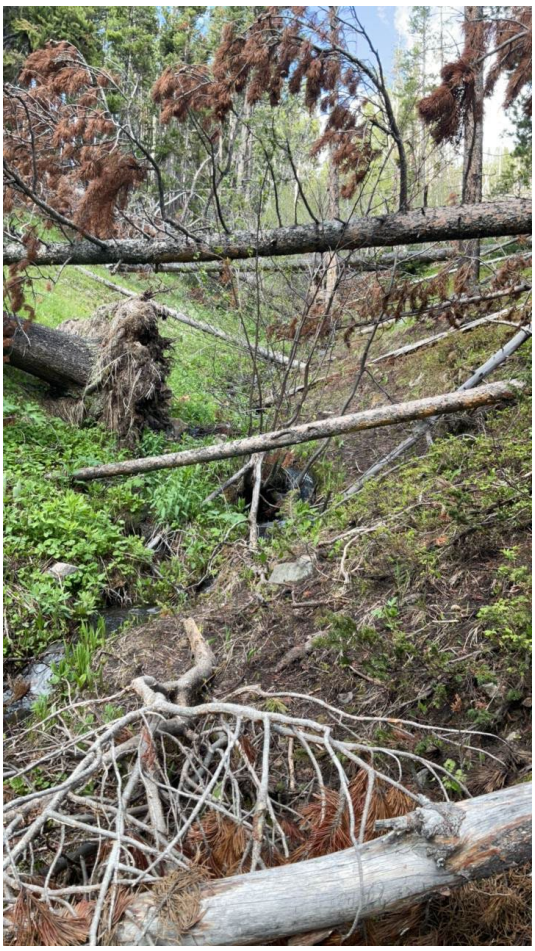


Photo # 106 CSC-119B Upstream

Photo # 107 CSC-120A Downstream

Photo # 108 CSC-120A Surface Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 109 CSC-120A Upstream

Photo # 110 07-087-AD1 Downstream

Photo # 111 07-087-AD1 Surface Water Quality Meter Screen Shot

Photo # 112 07-087-AD1 Upstream

Carpenter June 2022

Photo # 113 07-087-001 Downstream

Photo # 114 07-087-001 Surface Water Quality Meter Screen Shot

Photo # 115 07-087-001 Upstream

Photo # 116 MW-1 Downstream

Carpenter June 2022

Photo #117 MW-1 Ground Water Quality Meter Screen Shot

Photo # 118 MW-1 Upstream

Photo # 119 MW-2 Downstream

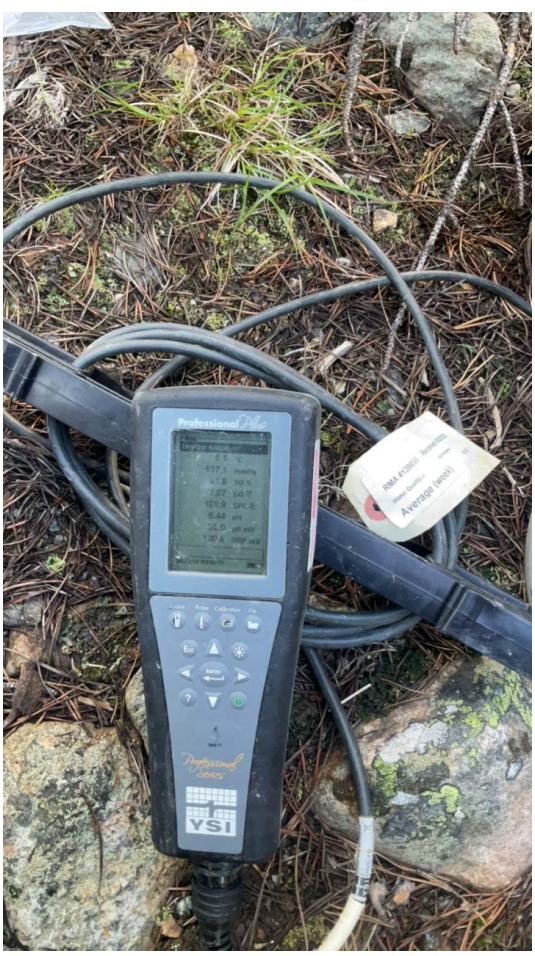


Photo # 120 MW-2 Ground Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 121 MW-2 Upstream

Photo # 122 MW-3 Downstream

Photo # 123 MW-3 Ground Water Quality Meter Screen Shot

Photo # 124 MW-3 Upstream

Carpenter June 2022

Photo # 125 MW-4A
Downstream

Photo # 126 MW-4A
Ground Water Quality
Meter Screen Shot

Photo # 127 MW-4A
Upstream

Photo # 128 MW-5
Downstream

Carpenter June 2022

Photo # 129 MW-5 Ground Water Quality Meter Screen Shot

Photo # 130 MW-5 Upstream

Photo # 131 MW-6 Downstream

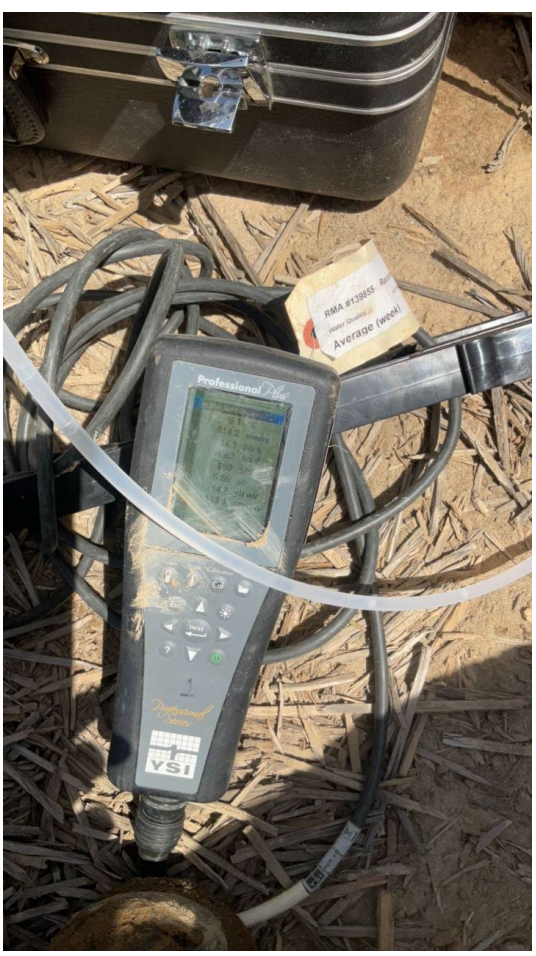


Photo # 132 MW-6 Ground Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 133 MW-6
Upstream

Photo # 134 MW-6A
Downstream

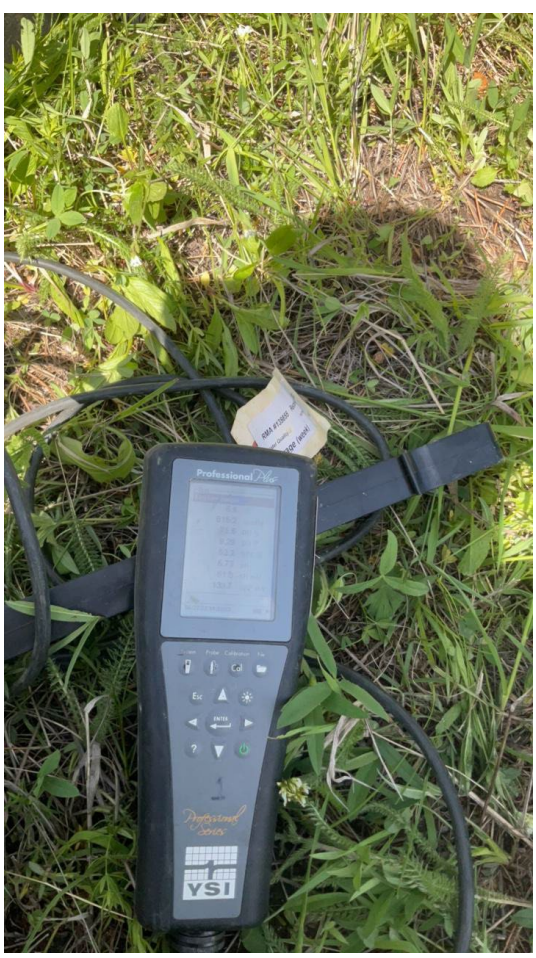


Photo # 135 MW-6A
Ground Water Quality
Meter Screen Shot

Photo # 136 MW-6A
Upstream

Carpenter June 2022

Photo # 137 MW-8 Downstream

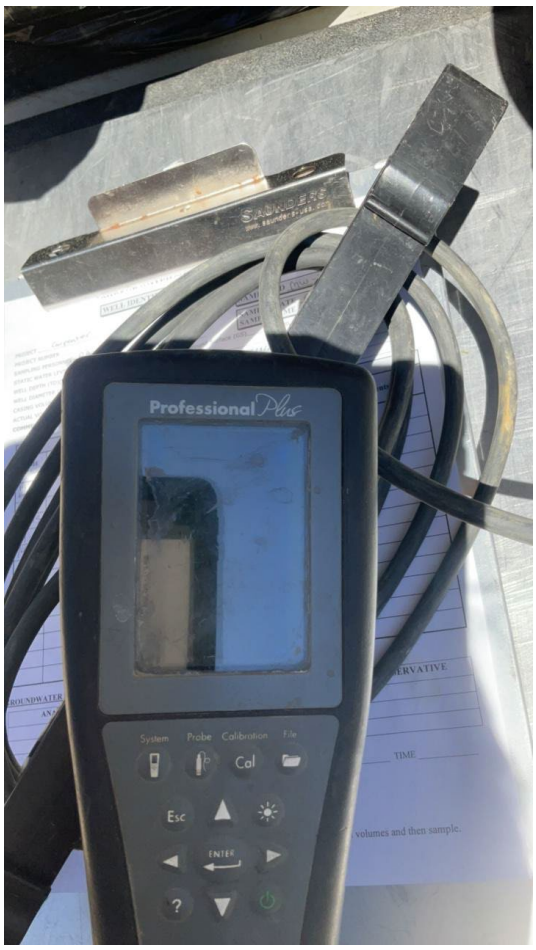


Photo # 138 MW-8 Ground Water Quality Meter Screen Shot

Photo # 139 MW-8 Upstream

Photo # 140 MW-9 Downstream

Carpenter June 2022

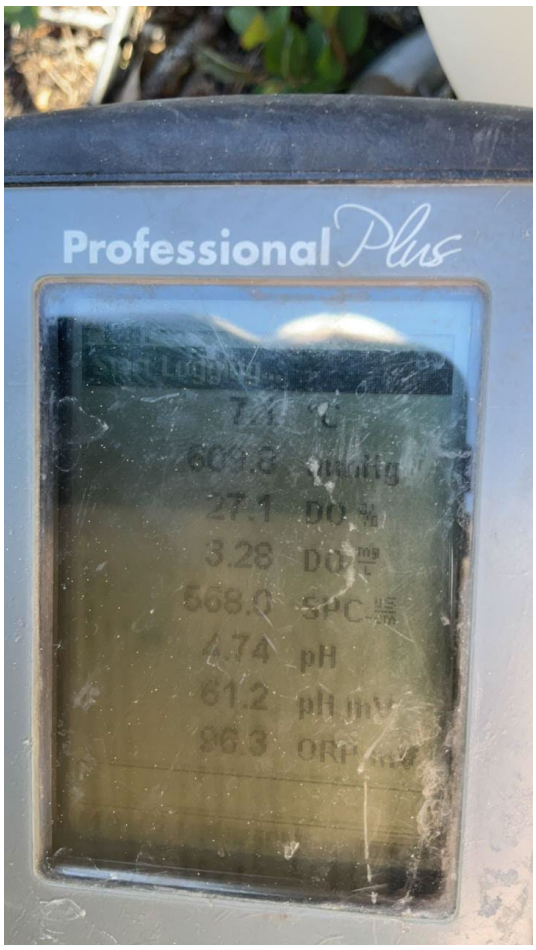


Photo # 141 MW-9 Ground Water Quality Meter Screen Shot

Photo # 142 MW-9 Upstream

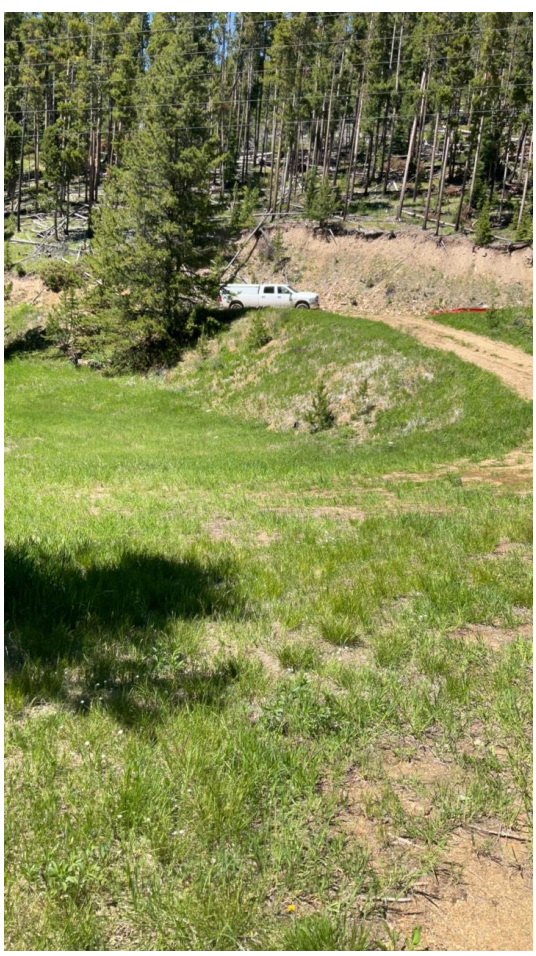


Photo # 143 MW-9A Downstream

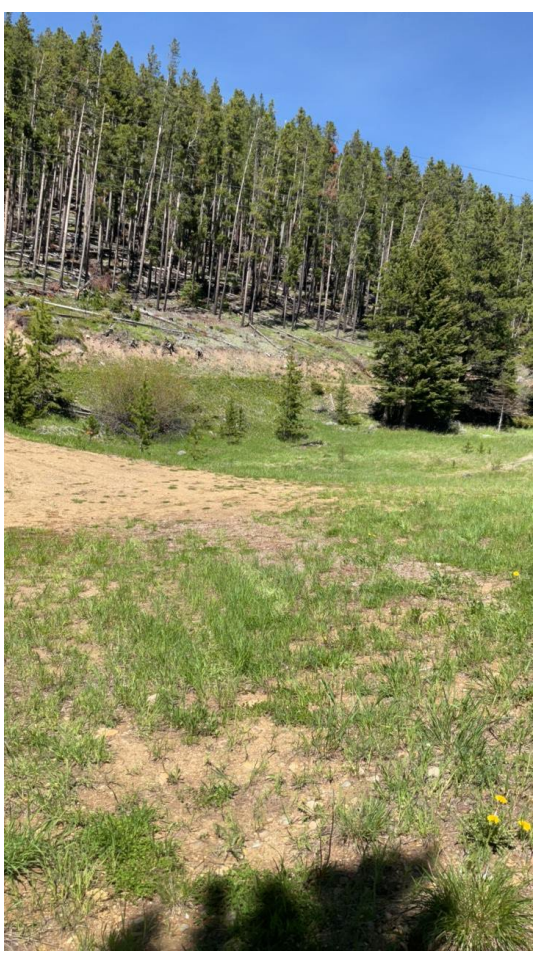


Photo # 144 MW-9A Upstream

Carpenter June 2022

Photo # 145 MW-10 Downstream

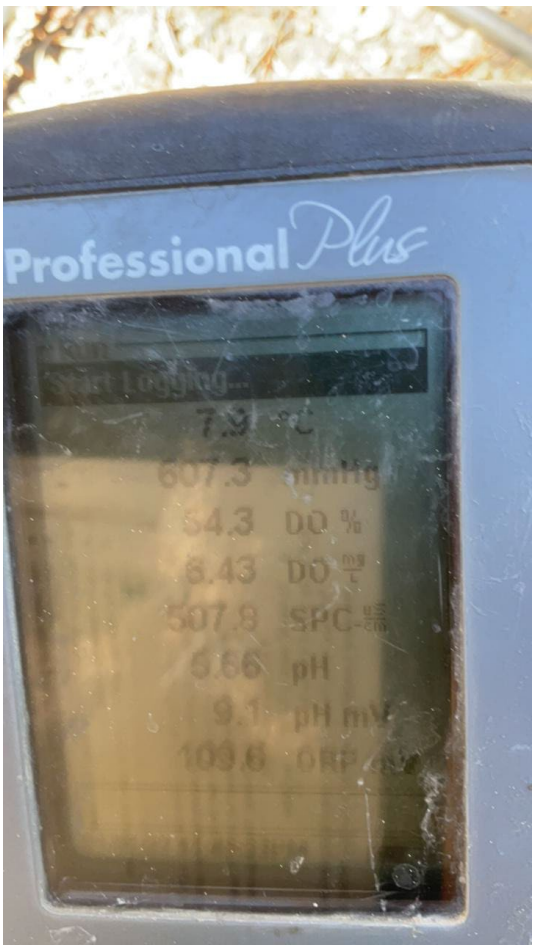


Photo # 146 MW-10 Ground Water Quality Meter Screen Shot

Photo # 147 MW-10 Upstream

Photo # 148 MW-11 Downstream

Carpenter June 2022

Photo # 149 MW-11
Ground Water Quality
Meter Screen Shot

Photo # 150 MW-11
Upstream

Photo # 151 MW-12
Downstream

Photo # 152 MW-12
Upstream

Carpenter June 2022

Photo # 153 MW-13 Downstream

Photo # 154 MW-13 Ground Water Quality Meter Screen Shot

Photo # 155 MW-13 Upstream

Photo # 156 MW-14 Downstream

Carpenter June 2022

Photo # 157 MW-14 Ground Water Quality Meter Screen Shot

Photo # 158 MW-14 Upstream

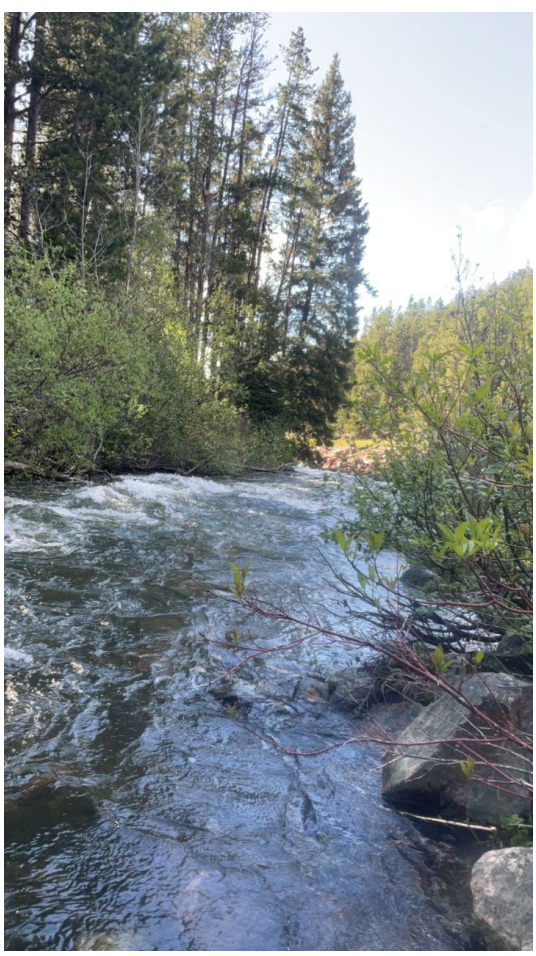


Photo # 159 ST010A Downstream

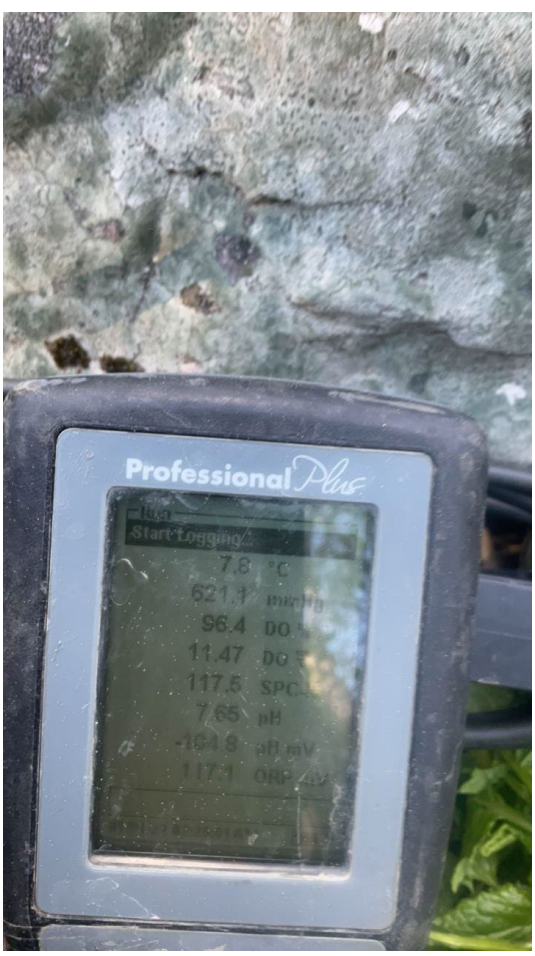


Photo # 160 ST010A Surface Water Quality Meter Screen Shot

Carpenter June 2022

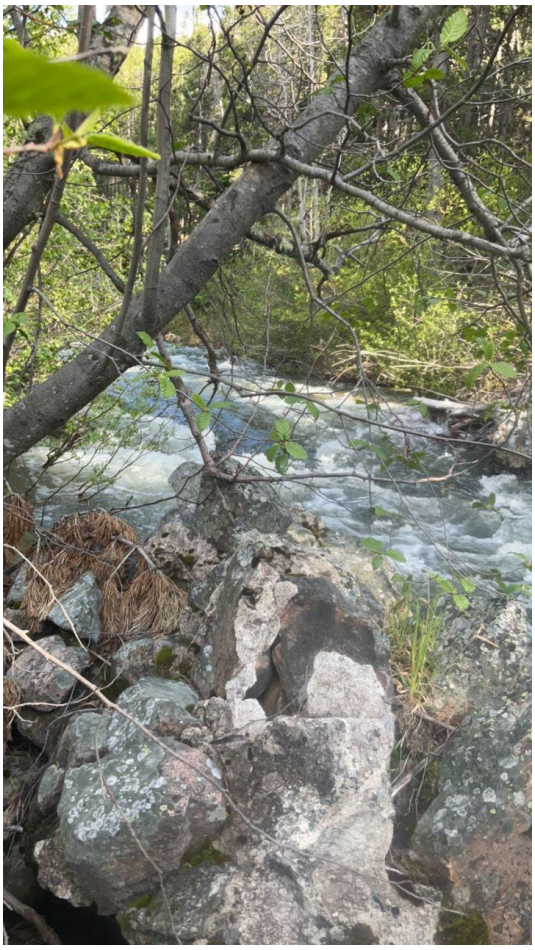


Photo # 161 ST010A Upstream

Photo # 162 ST015 Downstream

Photo # 163 ST015 Flume

Photo # 164 ST015 Surface Water Quality Meter Screen Shot

Carpenter June 2022

Photo # 165 ST015
Upstream

Photo # 166 ST016
Downstream

Photo # 167 ST016
Flume

Photo # 168 ST016
Upstream

Carpenter September 2022

07-079-AD1_Downstream

07-079-AD1_Surface Water Quality meter Screen Shot

07-079-AD1_Upstream

07-084-001_Downstream

Carpenter September 2022

07-084-001_Surface Water Quality meter Screen Shot

07-084-001_Upstream

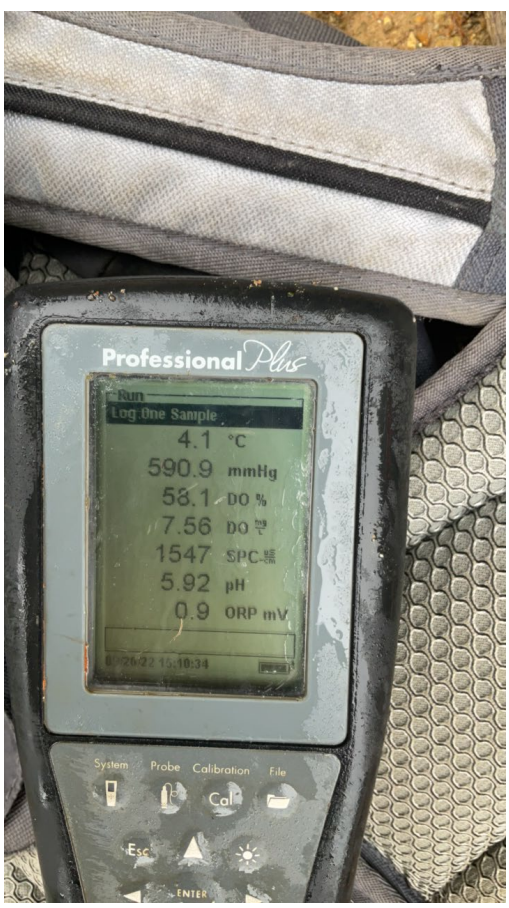
07-084-AD1_Downstream

07-084-AD1_Surface Water Quality meter Screen Shot

Carpenter September 2022

07-084-AD1_Upstream

07-156-Seep2_Downstream



07-156-Seep2_Surface Water Quality meter Screen Shot

07-156-Seep2_Upstream

Carpenter September 2022

07-157-001_Aluminum Staining

07-157-001_Downstream

07-157-001_Surface Water Quality meter Screen Shot

07-157-001_Upstream

Carpenter September 2022

07-157-003_Downstream

07-157-003_Surface Water Quality meter Screen Shot

07-157-003_Upstream

07-157-004_Downstream

Carpenter September 2022

07-157-004_Upstream

07-157-006_Downstream

07-157-006_Surface Water Quality meter Screen Shot

07-157-006_Upstream

Carpenter September 2022

07-157-AD1_Downstream

07-157-AD1_Surface Water Quality meter Screen Shot

07-157-AD1_Upstream

07-167-AD1_Downstream

Carpenter September 2022

07-167-AD1_Surface Water Quality meter Screen Shot

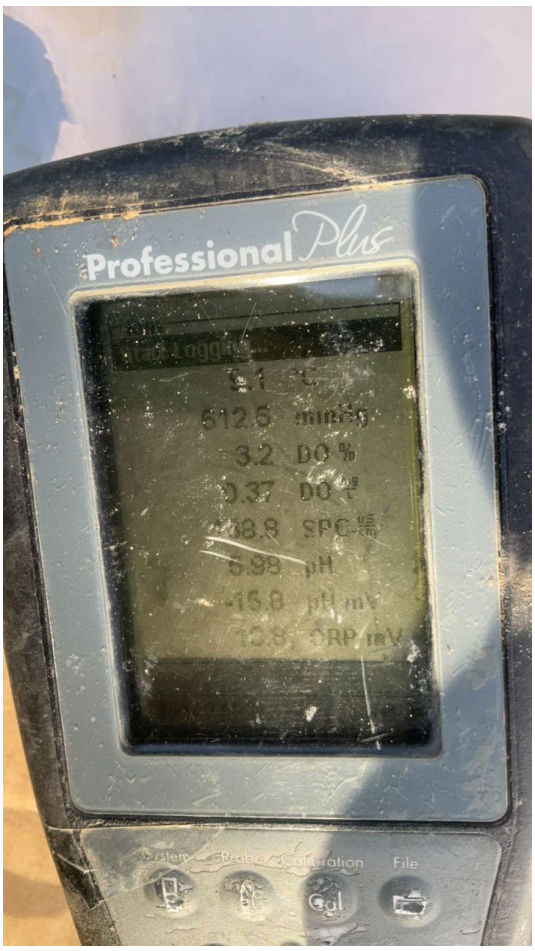
07-167-AD1_Upstream

CSC-5_Downstream

CSC-5_Upstream

Carpenter September 2022

CSC-15_Downstream



CSC-15_Ground Water Quality meter Screen Shot

CSC-15_Upstream

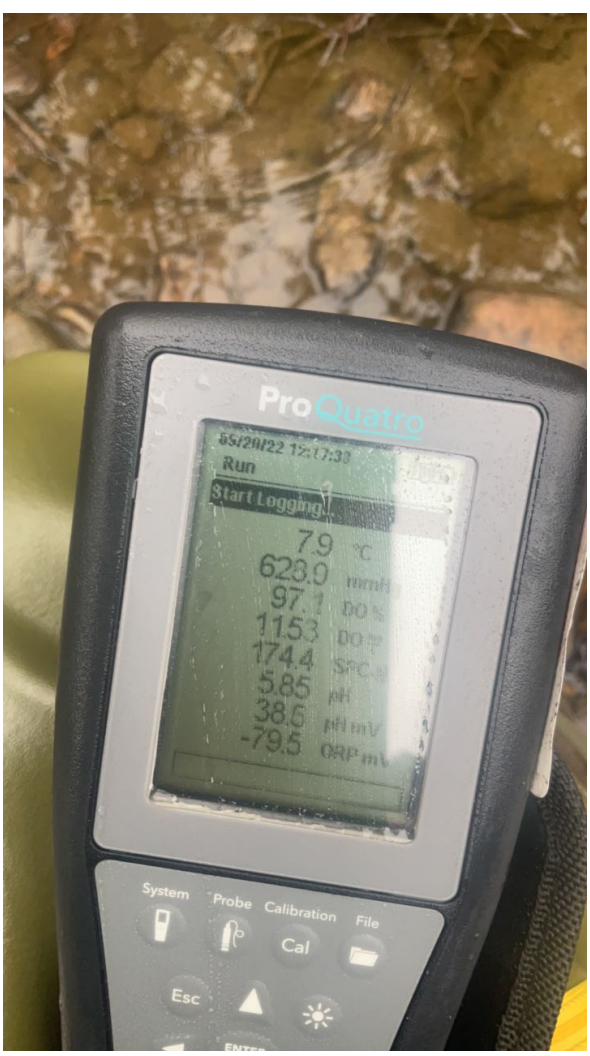
CSC-25_Downstream

Carpenter September 2022

CSC-25_Ground Water Quality meter Screen Shot

CSC-25_Upstream

CSC-101_Downstream



CSC-101_Surface Water Quality meter Screen Shot

Carpenter September 2022

CSC-101_Upstream

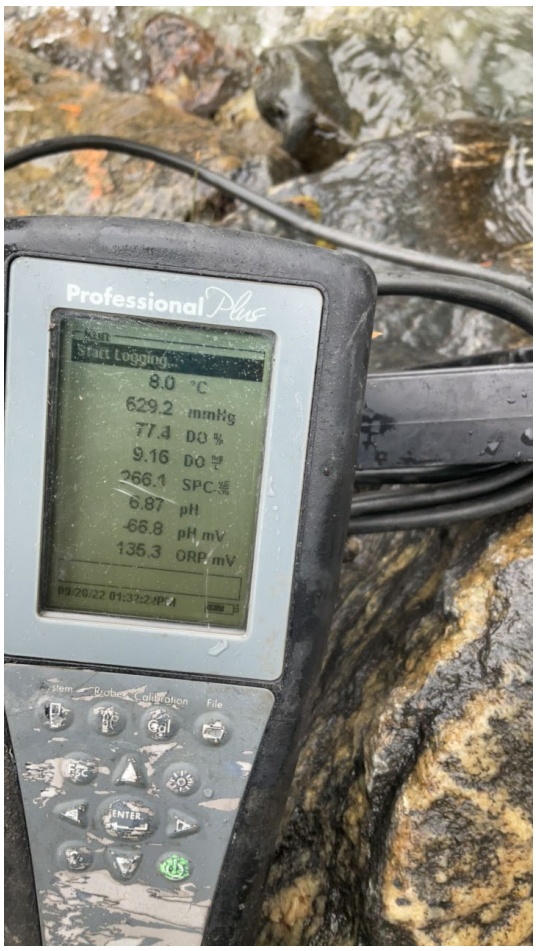
CSC-102_Downstream

CSC-102_Surface Water Quality meter Screen Shot

CSC-102_Upstream

Carpenter September 2022

CSC-103_Downstream

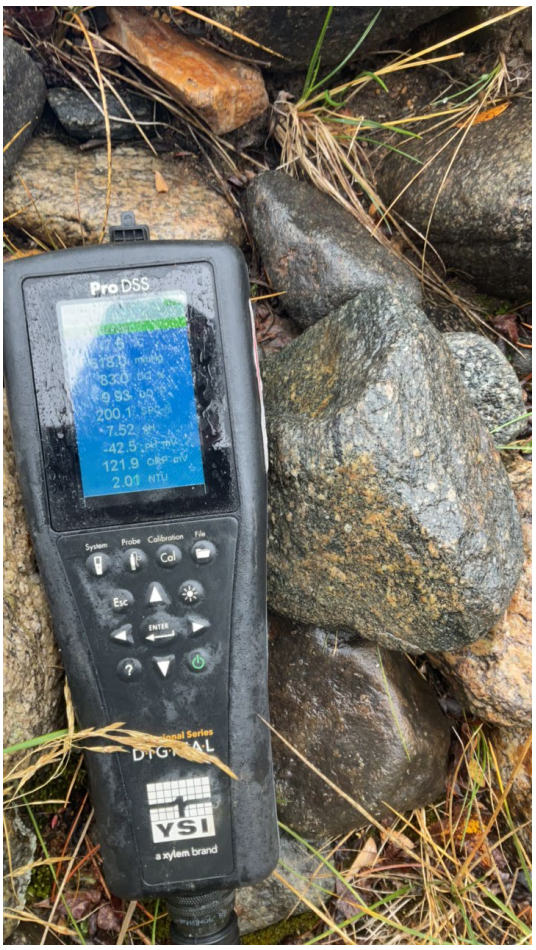


CSC-103_Surface Water Quality meter Screen Shot

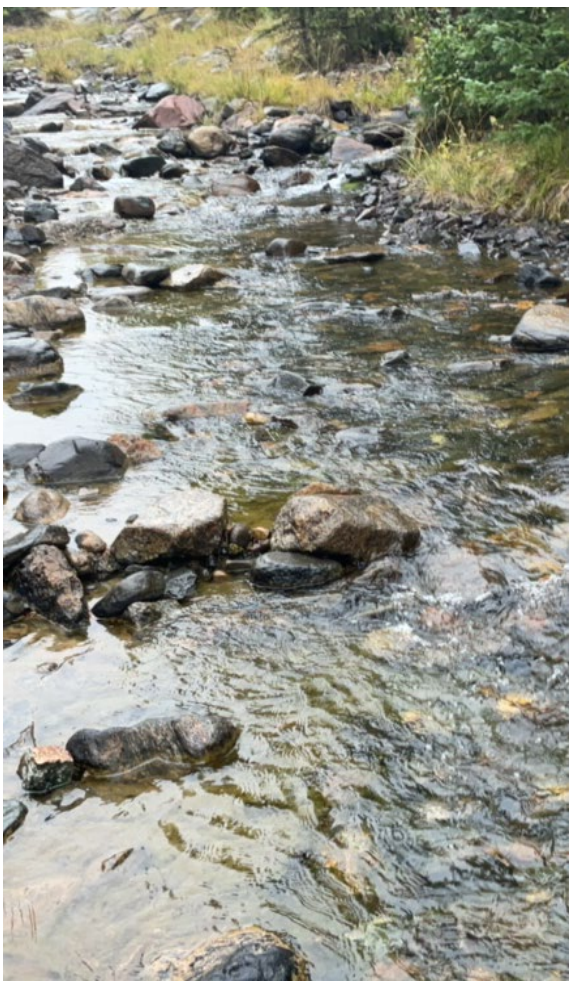
CSC-103_Upstream

CSC-104_Downstream

Carpenter September 2022



CSC-104_Surface Water Quality meter Screen Shot

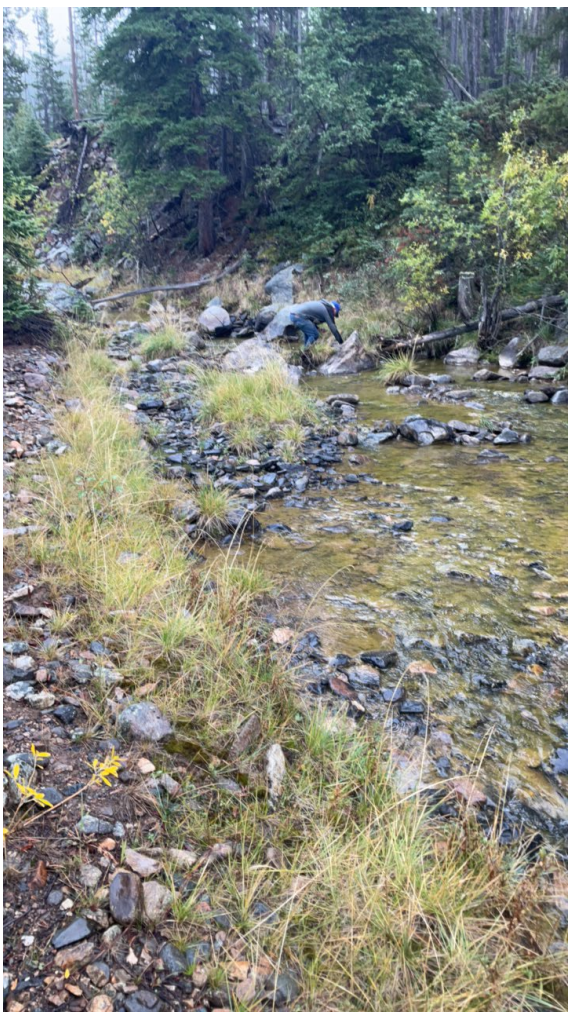


CSC-104_Upstream

CSC-104A_Downstream

CSC-104A_Surface Water Quality meter Screen Shot

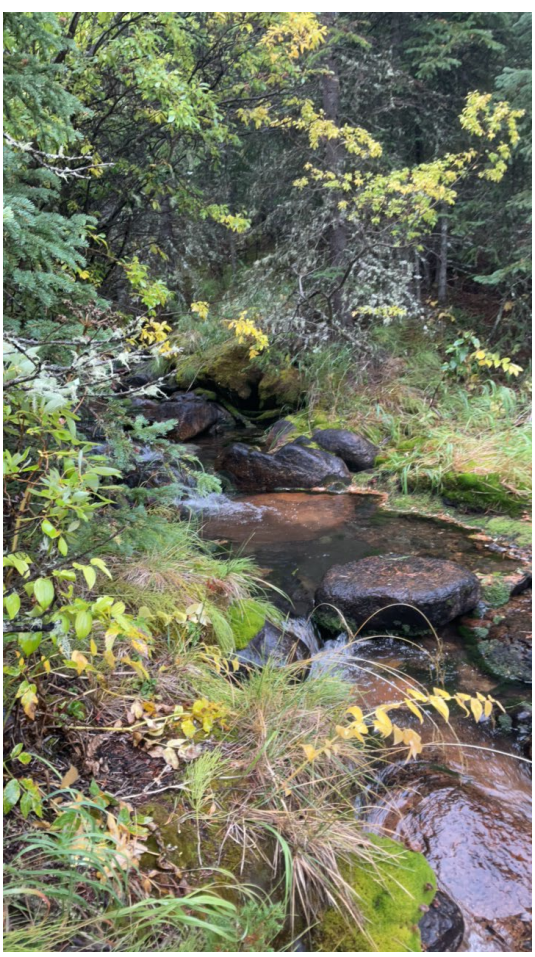
Carpenter September 2022



CSC-104A_Upstream

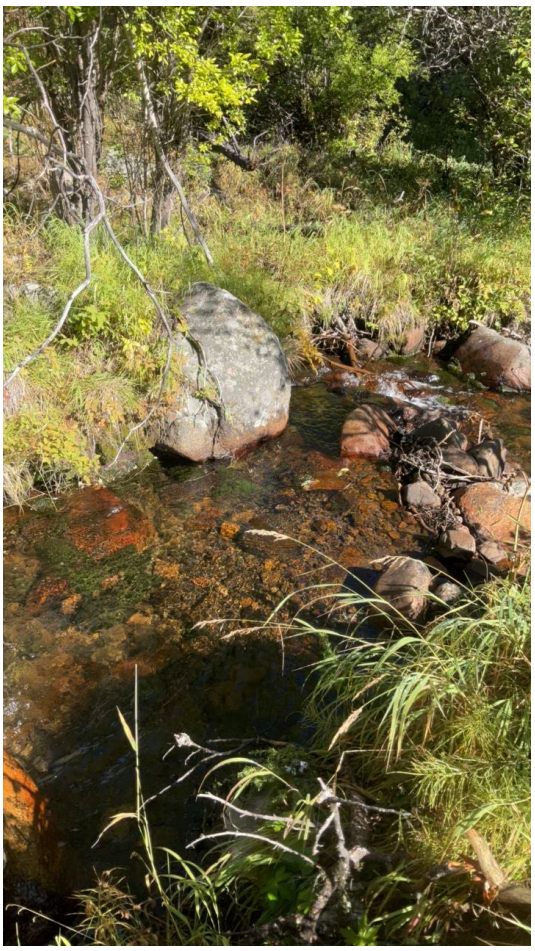
CSC-105_Downstream

CSC-105_Surface Water Quality meter Screen Shot



CSC-105_Upstream

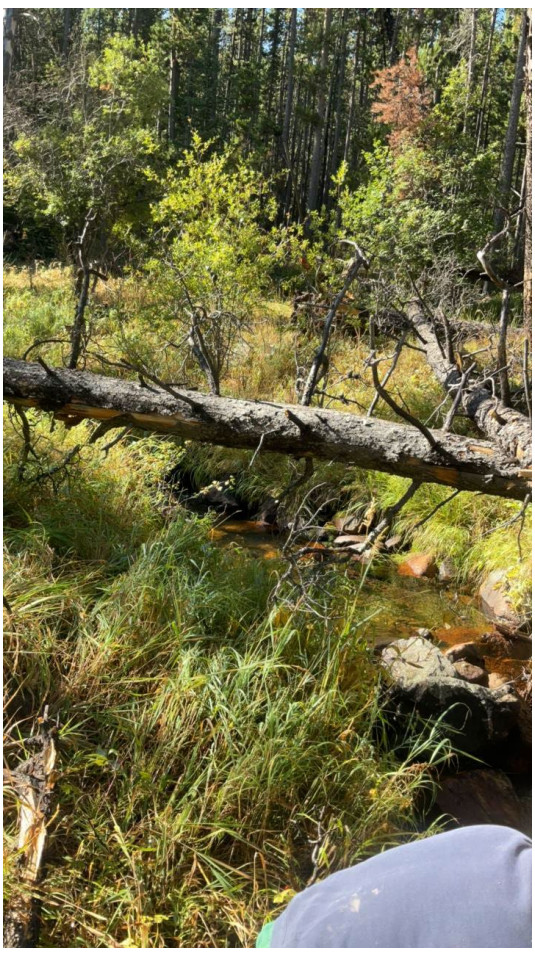
Carpenter September 2022



CSC-106_Downstream

CSC-106_Flume

CSC-106_Surface Water Quality meter Screen Shot



CSC-106_Upstream

Carpenter September 2022

CSC-107_Downstream

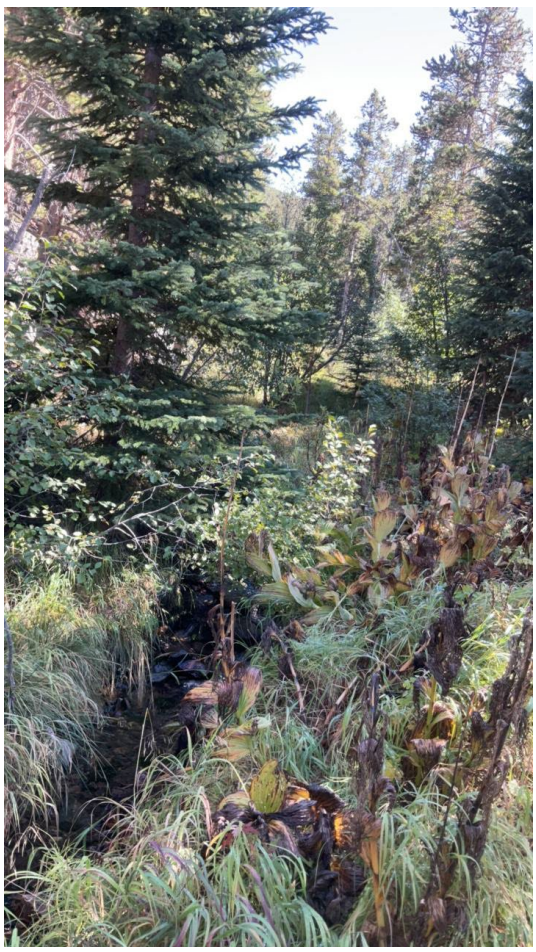
CSC-107_Surface Water Quality meter Screen Shot

CSC-107_Upstream

CSC-108_Downstream

Carpenter September 2022

CSC-108_Surface Water Quality meter Screen Shot



CSC-108_Upstream

CSC-111A_Downstream

CSC-111A_Surface Water Quality meter Screen Shot

Carpenter September 2022

CSC-111A_Upstream

CSC-111B_Downstream

CSC-111B_Upstream

CSC-111C_Downstream

Carpenter September 2022

CSC-111C_DryCulvert1

CSC-111C_DryCulvert2

CSC-111C_DryCulvert3

CSC-111C_DryCulvert4

Carpenter September 2022

CSC-111C_Upstream

CSC-114_Downstream

CSC-114_Flume

CSC-114_Surface Water Quality meter Screen Shot

Carpenter September 2022

CSC-114_Upstream

CSC-115_Downstream

CSC-115_Flume

CSC-115_Surface Water Quality meter Screen Shot

Carpenter September 2022

CSC-115_Upstream

CSC-116_Downstream

CSC-116_Surface Water Quality meter Screen Shot

CSC-116_Upstream

Carpenter September 2022

CSC-117_Downstream

CSC-117_Surface Water Quality meter Screen Shot

CSC-117_Upstream

CSC-117A_Downstream

Carpenter September 2022

CSC-117A_Flume

CSC-117A_Surface Water Quality meter Screen Shot

CSC-117A_Upstream

CSC-119_Downstream

Carpenter September 2022

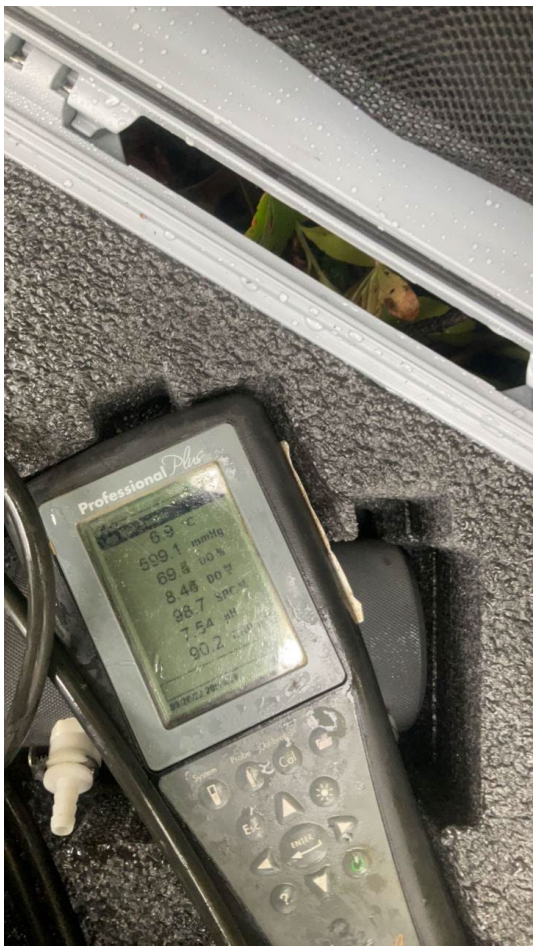
CSC-119_Flume

CSC-199_Surface Water Quality meter Screen Shot

CSC-119_Upstream

CSC-119B_Downstream

Carpenter September 2022



CSC-119B_Surface Water Quality meter Screen Shot

CSC-119B_Upstream

CSC-120A_Downstream

CSC-120A_Surface Water Quality meter Screen Shot

Carpenter September 2022

CSC-120A_Upstream

GE-SW-001_Downstream

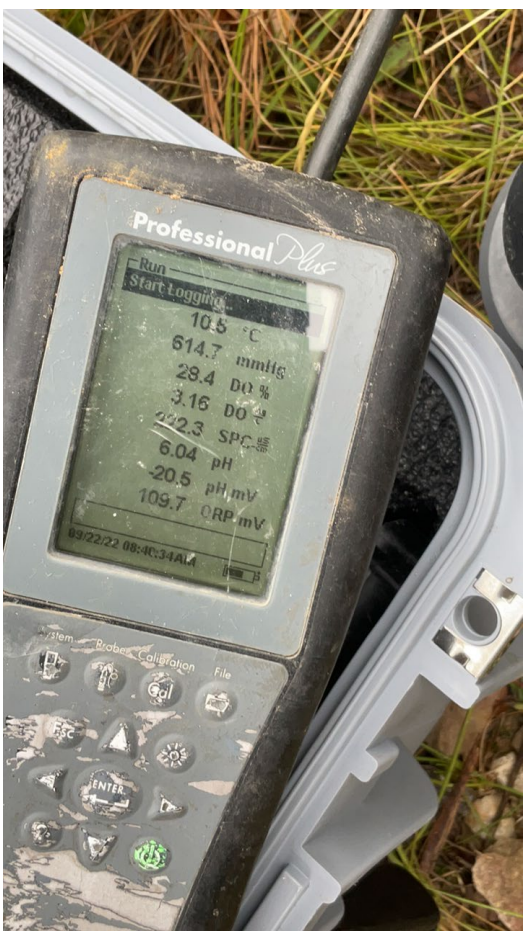
GE-SW-001_Sampling Location

GE-SW-001_Surface Water Quality meter Screen Shot

Carpenter September 2022

GE-SW-001_Upstream

MW-1_Downstream



MW-1_Ground Water Quality meter Screen Shot

MW-1_Upstream

Carpenter September 2022

MW-2_Downstream

MW-2_Ground Water Quality meter Screen Shot

MW-2_Upstream

MW-3_Down the well

Carpenter September 2022

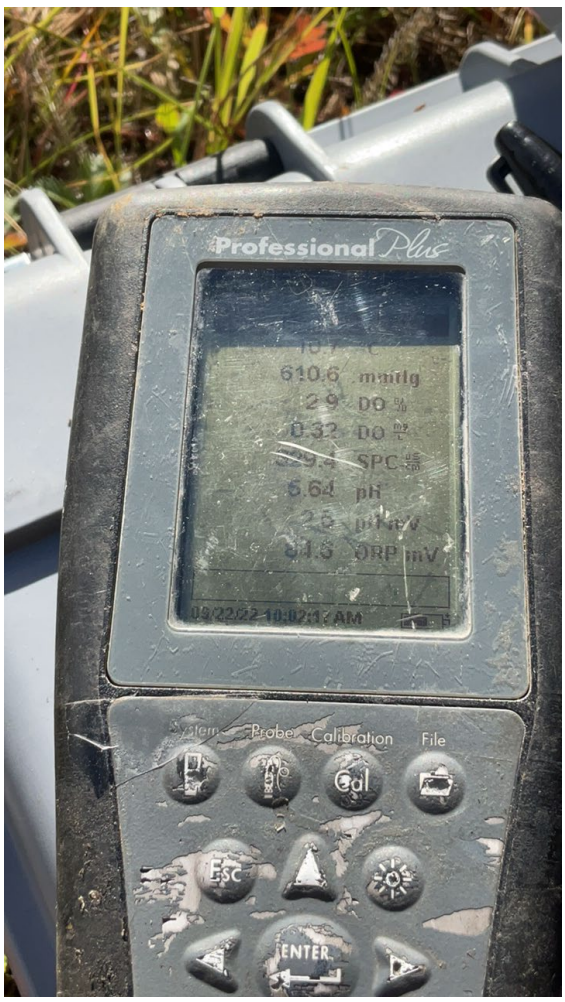
MW-3_Downstream

MW-3_Ground Water Quality meter Screen Shot

MW-3_Upstream

MW-4A_Downstream

Carpenter September 2022



MW-4A_Ground Water Quality meter Screen Shot

MW-4A_Upstream

MW-5_Downstream

MW-5_Ground Water Quality meter Screen Shot

Carpenter September 2022

MW-5_Upstream

MW-6_Downstream

MW-6_Upstream

MW-6A_Downstream

Carpenter September 2022

MW-6A_Ground Water Quality meter Screen Shot

MW-6A_Upstream

MW-8_Downstream

MW-8_Ground Water Quality meter Screen Shot

Carpenter September 2022

MW-8_Upstream

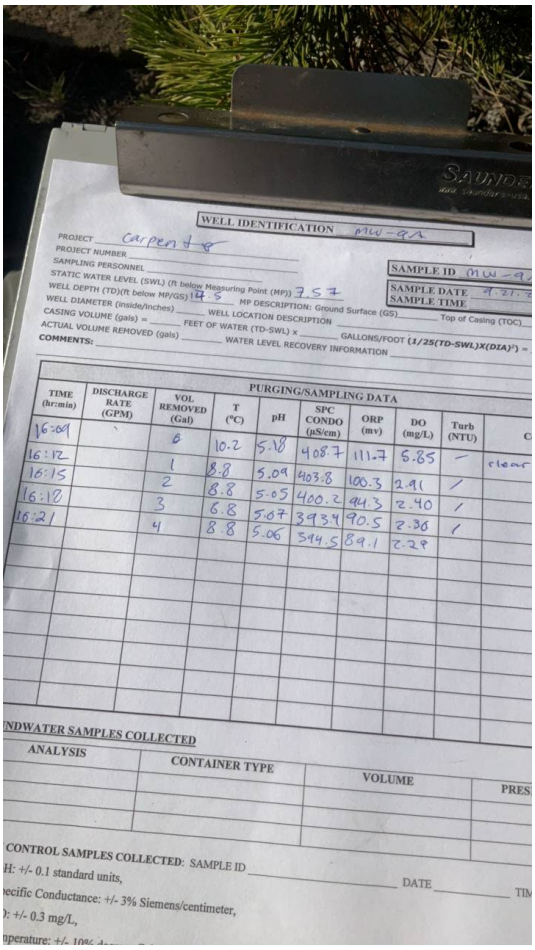
MW-9_Downstream

MW-9_Ground Water Quality meter Screen Shot

MW-9_Upstream

Carpenter September 2022

MW-9A_Downstream



WELL IDENTIFICATION MW-9A

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 7.57

WELL DEPTH (TD)(ft below MP/GS) 17.5 MP DESCRIPTION: Ground Surface (GS) Top of Casing (TOC)

WELL DIAMETER (inside/inches) WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = FEET OF WATER (TD-SWL) x GALLONS/FOOT (1/25(TD-SWL)X(DIA)²) =

ACTUAL VOLUME REMOVED (gals) WATER LEVEL RECOVERY INFORMATION

COMMENTS:

SAMPLE ID MW-9A

SAMPLE DATE 9.21.22

SAMPLE TIME

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	C
16:09		0	10.2	5.18	408.7	111.7	6.85	—	clear
16:12		1	8.8	5.09	403.8	100.3	2.91	/	
16:15		2	8.8	5.05	400.2	94.3	2.40	/	
16:18		3	6.8	5.07	393.9	90.5	2.30	/	
16:21		4	8.8	5.06	394.5	89.1	2.29		

NDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRES

CONTROL SAMPLES COLLECTED: SAMPLE ID DATE TIM

H: +/- 0.1 standard units,

ecific Conductance: +/- 3% Siemens/centimeter,

): +/- 0.3 mg/L,

perature: +/- 10%

MW-9A_Ground Water Quality meter Screen Shot

MW-9A_Upstream

MW-10_Downstream

Carpenter September 2022

MW-10_Ground Water Quality meter Screen Shot

MW-10_Upstream

MW-11_Downstream

MW-11_Ground Water Quality meter Screen Shot

Carpenter September 2022

MW-11_Upstream

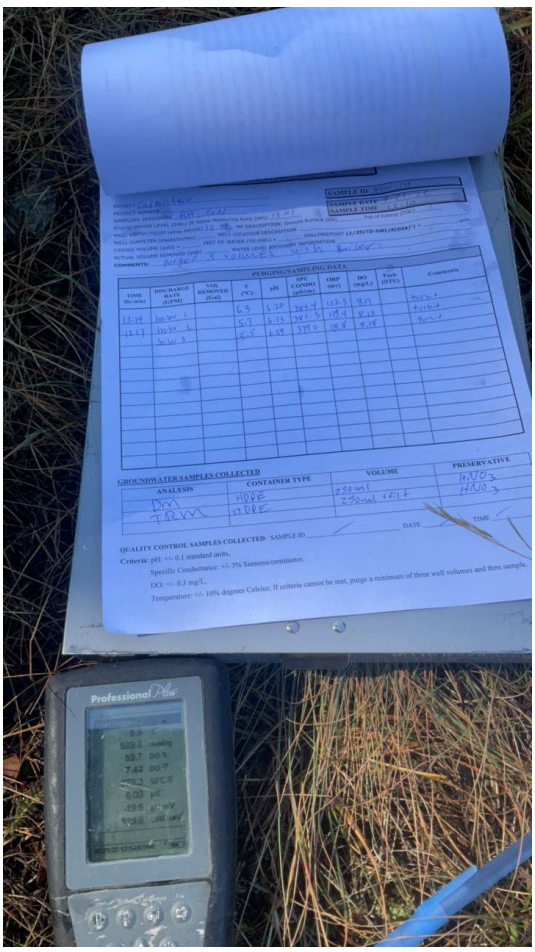
MW-13_Downstream

MW-13_Ground Water Quality meter Screen Shot

MW-13_Upstream

Carpenter September 2022

MW-14_Downstream



MW-14_Ground Water Quality meter Screen Shot

MW-14_Site location

MW-14_Upstream

Carpenter September 2022

ST010A_Downstream

ST010A_Upstream

ST015_Downstream

ST015_Surface Water Quality meter Screen Shot

Carpenter September 2022

ST015_Upstream

ST016_Downstream

ST016_Flume

ST016_Surface Water Quality meter Screen Shot

Carpenter September 2022

ST016_Upstream

Attachment D
Groundwater Data Sheets

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-10

PROJECT Carpenter Snow Creek
PROJECT NUMBER
SAMPLING PERSONNEL CG + BF
STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 13.92
WELL DEPTH (TD)(ft below MP/GS) 24.68 MP DESCRIPTION: Ground Surface (GS) Top of Casing (TOC) X
WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION
CASING VOLUME (gals) = FEET OF WATER (TD-SWL) x GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = gals
ACTUAL VOLUME REMOVED (gals) WATER LEVEL RECOVERY INFORMATION
COMMENTS: Sampled at 18ft from TOC

SAMPLE ID MW-10
SAMPLE DATE 6-22-22
SAMPLE TIME 15:20

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED ~~(Gal)~~ L	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
15:10		0	10.0	5.57	528.6	77.6	8.13		
15:12		1	8.4	5.60	522.0	89.1	6.27		
15:16		2	7.7	5.64	506.2	106.5	6.31		
15:20		3	7.9	5.66	508.4	109.6	6.44		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250ml filtered	HNO_3
TRM	HDPE	250ml	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID DATE TIME

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-9

PROJECT Carpenter Snow Creek

PROJECT NUMBER

SAMPLING PERSONNEL BF CG

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 6.97

SAMPLE ID MW-9

SAMPLE DATE 6.22.22

SAMPLE TIME 14:40

WELL DEPTH (TD)(ft below MP/GS) 16.75 MP DESCRIPTION: Ground Surface (GS)____ Top of Casing (TOC) X

WELL DIAMETER (inside/inches) ____ WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = ____ FEET OF WATER (TD-SWL) x ____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = ____ gals

ACTUAL VOLUME REMOVED (gals) ____ WATER LEVEL RECOVERY INFORMATION

COMMENTS: Sampled at 11ft from TOC

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal) L	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Commeuts
14:25		0	8.9	4.97	652.4	95.0	6.25		
14:29		1	7.5	4.68	589.1	96.3	2.97		
14:34		2	7.1	4.72	575.1	96.5	3.20		
14:40		3	7.1	4.74	558.5	96.7	3.24		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250ml filtered	HNO_3
TRM	HDPE	250ml	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID Dup-2 DATE 6-22-22 TIME 14:40

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-9A

PROJECT Carpenter Snow Creek

PROJECT NUMBER _____

SAMPLING PERSONNEL _____

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) _____

WELL DEPTH (TD)(ft below MP/GS) _____ MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: Unable to locate well location, appears to have been removed

SAMPLE ID MW-9A

SAMPLE DATE –

SAMPLE TIME –

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-12

PROJECT Carpenter Clear Creek

PROJECT NUMBER

SAMPLING PERSONNEL CG & BF

SAMPLE ID MW-12

SAMPLE DATE —

SAMPLE TIME —

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) _____

WELL DEPTH (TD)(ft below MP/GS) _____ MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: Not sampled (Instructed to not check)

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION CSC-2S

PROJECT Carpenter Snow Creek

PROJECT NUMBER

SAMPLING PERSONNEL CG + BF

SAMPLE ID CSC-2S

SAMPLE DATE 6-22-22

SAMPLE TIME Sampled @ 13:22

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 5.17

WELL DEPTH (TD)(ft below MP/GS) 1030 MP DESCRIPTION: Ground Surface (GS)____ Top of Casing (TOC) X

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = ____ FEET OF WATER (TD-SWL) x ____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = ____ gals

ACTUAL VOLUME REMOVED (gals) ____ WATER LEVEL RECOVERY INFORMATION

COMMENTS: Sampled at 8ft from TOC

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (~~Gal~~) L	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
13:07		0	10.6	6.10	594.5	70.7	5.55		
13:12		1	9.2	6.30	578.2	39.2	0.45		
13:17		2	8.8	6.36	552.6	31.4	0.30		
13:22		3	8.2	6.37	542.3	28.1	0.31		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250ml Filtered	HNO_3
TRM	HDPE	250ml	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID ____ DATE ____ TIME ____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION Csc-5

PROJECT Carpenter Snow Creek

PROJECT NUMBER

SAMPLING PERSONNEL CG & BF

SAMPLE ID Csc-5

SAMPLE DATE 6-22-22

SAMPLE TIME 13:30

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 28.18

WELL DEPTH (TD)(ft below MP/GS) 32.00 MP DESCRIPTION: Ground Surface (GS)____ Top of Casing (TOC) X

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = ____ FEET OF WATER (TD-SWL) x ____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = ____ gals

ACTUAL VOLUME REMOVED (gals) ____ WATER LEVEL RECOVERY INFORMATION

COMMENTS: Bailer used

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED ~~(Gal)~~	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
13:30		0	17.9	5.95	441.7	73.2	3.32		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250ml filtered	HNO_3
TRM	HDPE	250ml	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID ____ DATE ____ TIME ____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-14

PROJECT Carpenter Snow Creek

PROJECT NUMBER

SAMPLING PERSONNEL CG + BF

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 4.47

WELL DEPTH (TD)(ft below MP/GS) 16.48 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC) X

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION

COMMENTS: Sampled at 11ft from TOC

SAMPLE ID MW-1

SAMPLE DATE 6-22-22

SAMPLE TIME 12:05

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal) L	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Commeuts
11:51		0	7.1	5.00	286.6	154.1	13.05		
11:55		1	5.9	4.88	283.0	149.9	8.35		
12:00		2	5.4	4.88	281.8	152.0	8.45		
12:05		3	5.4	4.85	281.7	152.0	8.19		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250ml filtered	HNO_3
TRM	HDPE	250ml	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-13

PROJECT Carpenter Snow Creek

PROJECT NUMBER

SAMPLING PERSONNEL CG & BF

SAMPLE ID MW-13

SAMPLE DATE 6-22-22

SAMPLE TIME 10:59

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 5.25

WELL DEPTH (TD)(ft below MP/GS) 18.35 MP DESCRIPTION: Ground Surface (GS)____ Top of Casing (TOC) X

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = ____ FEET OF WATER (TD-SWL) x ____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = ____ gals

ACTUAL VOLUME REMOVED (gals) ____ WATER LEVEL RECOVERY INFORMATION

COMMENTS: Sampled at 12ft from TOC

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal) L	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
10:48		0	5.5	5.79	605.3	158.5	10.99		
10:52		1	5.1	5.90	77.5	154.8	7.88		
10:55		2	5.1	5.89	73.2	154.1	7.80		
10:59		3	5.1	5.86	70.9	153.8	7.77		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HPPE	250ml filtered	HNO_3
TRM	HDPE	250ml filtered	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID ____ DATE ____ TIME ____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-10

12.5 - 22.5

PROJECT _____

PROJECT NUMBER _____

SAMPLING PERSONNEL R.H. GN

SAMPLE ID _____

SAMPLE DATE _____

SAMPLE TIME _____

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 15.08

WELL DEPTH (TD)(ft below MP/GS) 22.5 MP DESCRIPTION: Ground Surface (GS) _____ Top of Casing (TOC) 15.08 ✓

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION MW-10

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: 9-21-22

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
15:21			9.5	5.67	351.6	112.0	4.24	clear	Ø
15:24	1L/3min	1 Liter	8.9	5.71	342.7	108.1	3.97	clear	1 L collected
15:28	1L/~~4min~~ 4min	2 Liters	9.1	5.74	317.0	104.0	4.07	clear	2 L collected
15:31	1L/3min	3 Liters	9.0	5.73	298.0	101.4	3.97	clear	3 L collected
15:35	1L/4min	4 Liters	8.9	5.73	281.0	99.4	4.12	clear	4 L collected
15:38	1L/3min	5 Liters	9.1	5.75	276.9	97.3	4.08	clear	5 L collected
15:42	1L/4min	6 Liters	8.9	5.78	272.8	95.3	4.10	clear	6 L collected

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-11

PROJECT _____

PROJECT NUMBER _____

SAMPLING PERSONNEL R.H., GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 7.60

SAMPLE ID _____

SAMPLE DATE _____

SAMPLE TIME _____

WELL DEPTH (TD)(ft below MP/GS) 14.5 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC) ✓

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION MW-11

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
14:49	4min/1L	Ø	11.0	6.31	182.5	98.3	3.15	clear	Begin pumping Ø
14:53		1L	9.7	6.44	179.6	92.0	2.84	clear	1 Liter collected
14:57	4min/L	2L	9.4	6.46	182.3	89.0	2.72	clear	2 Liter collected
1500	1L/3min	3L	9.2	6.48	182.0	86.5	2.98	clear	3 Liter collected

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-8

7.5 - 12.5

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GV

SAMPLE ID MW-8

SAMPLE DATE 9.21.22

SAMPLE TIME 17:18

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 5.52

WELL DEPTH (TD)(ft below MP/GS) 12.5 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION

COMMENTS:

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
17:00		0	11.8	5.78	149.6	47.4	8.32	/	clear
17:03		1	10.7	6.38	84.5	41.2	7.00	~	
17:06		2	10.0	6.40	134.7	41.3	4.21	~	
17:09		3	9.0	6.13	141.5	30.2	1.38	~	
17:12		4	8.6	6.08	142.9	21.5	0.50	~	
17:15		5	8.3	6.10	144.3	21.0	0.42	~	
17:18		6	8.1	6.10	143.6	20.9	0.38	~	

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250ml (F:LT)	HNO_3
TRM	HDPE	250ml	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID ~ DATE ~ TIME ~

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-9

PROJECT carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 7.98

SAMPLE ID MW-9

SAMPLE DATE 9.21.22

SAMPLE TIME 16:43

WELL DEPTH (TD)(ft below MP/GS) 15 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION west of log cabin

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION Good

COMMENTS:

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
16:34		0	10.8	4.68	548.3	76.3	4.74	✓	clear water
16:37		1	10.4	4.65	532.3	61.1	4.25	✓	3 mins / Litre
16:40		2	10.5	4.65	527.2	91.8	4.00	✓	
16:43		3	10.5	4.65	525.6	96.5	4.00	✓	

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250 ml (Filt)	HNO_3
TRM	HDPE	250 ml	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ ✓ DATE _____ ✓ TIME _____ ✓

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-9A

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL

SAMPLE ID MW-9A

SAMPLE DATE 9.21.22

SAMPLE TIME

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 7.57

WELL DEPTH (TD)(ft below MP/GS) 14.5 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION

COMMENTS:

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
16:09		0	10.2	5.18	408.7	111.7	5.85	—	clear
16:12		1	8.8	5.09	403.8	100.3	2.91	/	
16:15		2	8.8	5.05	400.2	94.3	2.40	/	
16:18		3	6.8	5.07	393.4	90.5	2.36	/	
16:21		4	8 8	5.06	394.5	89.1	2.29		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION CSC-15

PROJECT _____

PROJECT NUMBER _____

SAMPLING PERSONNEL RH / GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 8.79

SAMPLE ID _____

SAMPLE DATE _____

SAMPLE TIME _____

WELL DEPTH (TD)(ft below MP/GS) 14.5 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC) ✓

WELL DIAMETER (inside/inches) 2" WELL LOCATION DESCRIPTION CSC-15

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
17:32		0	9.3	5.91	138.2	33.6	1.52	clear	start
17:35		1L	9.2	5.96	137.2	26.3	0.93	clear	
17:38		2L	9.1	5.98	138.2	21.8	0.64	clear	
17:41		3L	9.1	5.97	138.3	20.2	0.56	clear	
17:44		4L	9.1	6.01	138.6	19.0	0.39	clear	collect samples

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-6A

SAMPLE ID MW-6A

SAMPLE DATE 9-22-22
SAMPLE TIME 10:41

PROJECT CARPENTER
PROJECT NUMBER
SAMPLING PERSONNEL R.H.
STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP))
WELL DEPTH (TD)(ft below MP/GS) MP DESCRIPTION: Ground Surface (GS) Top of Casing (TOC)
WELL DIAMETER (inside/inches) WELL LOCATION DESCRIPTION MW-6A
CASING VOLUME (gals) = FEET OF WATER (TD-SWL) x GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = gals
ACTUAL VOLUME REMOVED (gals) WATER LEVEL RECOVERY INFORMATION
COMMENTS:

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
10:26		0	9.5	5.80	167.7	97.1	4.10	clear	tweaked pump ↓
10:28		1L	8.7	5.68	163.2	93.0	2.62	clear	
10:32		2L	8.8	5.66	161.4	91.1	2.42	clear	
10:35		3L	8.9	5.62	159.0	92.0	2.09	clear	
10:39		4L	8.9	5.67	156.9	88.4	1.97	clear	
10:41		5L	8.9	5.63	152.8	87.6	1.85	clear	

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250ml + filt	HNO_3
TRM	↓	250ml	↓

DATE TIME

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION CSC - 25

2.3 - 7.3 screen interval

SAMPLE ID CSC - 25

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

SAMPLE DATE 9.22.22

SAMPLE TIME 11:27

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 5.71

WELL DEPTH (TD)(ft below MP/GS) 7.7 MP DESCRIPTION: Ground Surface (GS) / Top of Casing (TOC) /

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION In Bushes near old housing structures

CASING VOLUME (gals) = / FEET OF WATER (TD-SWL) x / GALLONS/FOOT **(1/25(TD-SWL)X(DIA)^2)** = gals

ACTUAL VOLUME REMOVED (gals) / WATER LEVEL RECOVERY INFORMATION

COMMENTS:

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
11:14	/	0	9.8	5.78	809	72.2	1.89	cloudy	Red sediment in water
11:18	/	1	9.1	6.17	755	21.2	0.50	clear	water cleared up
11:21	/	2	9.0	6.21	629	13.4	0.48		
11:24	/	3	9.0	6.22	638.3	10.6	0.43		
11:27	/	4	9.0	6.22	627.0	8.0	0.36		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250ml + filt	HNO_3
TRM	↓	250ml	↓

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID / DATE / TIME /

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-13

PROJECT carpenter

PROJECT NUMBER

SAMPLING PERSONNEL BH, GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 6.96

WELL DEPTH (TD)(ft below MP/GS) 16.0 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION

COMMENTS:

SAMPLE ID MW-13

SAMPLE DATE

SAMPLE TIME 13:08

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
12:52		0	8.8	5.77	355.5	133.8	8.72	clear	start - 0
12:55	1L/3min	1L	8.7	5.73	356.1	124.3	6.48	clear	@ 1 Liter collected
12:59	1L/3min	2L	8.6	5.74	356.3	122.2	6.22	clear	@ 2 Liter collected
13:02	1L/3min	3L	8.6	5.73	356.7	121.5	6.18	clear	@ 3 Liter collected
13:05	1L/3min	4L	8.6	5.72	357.0	121.2	6.18	clear	@ 4 Liter collected
13:08	1L/3min	5L	8.6	5.72	357.3	120.4	6.21	clear	@ 5 Liters collected

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE

SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

tandard units,

luctance: +/- 3% Siemens/centimeter,

g/L,

+/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION mw-1

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 9.08

WELL DEPTH (TD)(ft below MP/GS) 22.02 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION

COMMENTS:

SAMPLE ID mw-1

SAMPLE DATE 9/22/22

SAMPLE TIME 8:47

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
8:35		0	10.7	5.55	218.1	193.5	4.51	—	
8:38		1	10.6	5.89	222.0	119.5	3.52	—	
8:41		2	10.5	5.98	222.9	112.6	3.02	—	
8:44		3	10.5	6.01	222.7	110.6	3.14	—	
8:47		4	10.6	6.04	222.9	109.6	3.20	—	

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250 mL	HNO_3
TRM	HDPE	250 mL	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-5

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL Rachael Melton Roger Hoagenfeldt

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 7.51

WELL DEPTH (TD)(ft below MP/GS) 17.94 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

SAMPLE ID MW-5

SAMPLE DATE 9/22/22

SAMPLE TIME 10:25

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
10:12		0	13.0	5.73	107.4	92.7	5.55	—	
10:14		1	12.8	5.56	101.8	104.4	4.65	—	
10:17		2	12.8	5.61	100.8	109.9	3.90	—	
10:20		3	12.7	5.64	100.4	112.6	3.59	—	
10:23		4	12.7	5.68	100.6	114.8	3.36	—	
10:25		5	12.7	5.69	100.4	116.2	3.32	—	

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250 mL	HNO_3
TRM	HDPE	250 mL	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-3

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL Rachael Melton / Roger Hoogerheide

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 6.7ft

WELL DEPTH (TD)(ft below MP/GS) 16.64 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION Between Road + Creek

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

SAMPLE ID MW-3

SAMPLE DATE 9/22/22

SAMPLE TIME 9:42

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
9:28		0	10.0	6.14	290	105.6	3.45	—	
9:30		1	9.7	6.22	303.2	106.8	2.38	—	
9:33		2	9.5	6.34	307.5	99.9	1.05	—	
9:36		3	9.6	6.4	301.6	84.7	0.71	—	
9:39		4	9.6	6.44	301.0	75.6	0.54	—	
9:42		5	9.7	6.46	300	68.7	0.45	—	

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250 mL	HNO_3
TRM	HDPE	250 mL	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID — DATE — TIME —

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-6

PROJECT Carpenter

PROJECT NUMBER MW-6

SAMPLING PERSONNEL Rachel Melton / Roger Hoogerheide

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 22.8

SAMPLE ID MW-6

SAMPLE DATE 9/22/22

SAMPLE TIME

WELL DEPTH (TD)(ft below MP/GS) 27.6 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
10:51		0	9.1	6.12	904	120.5	5.27	—	
10:54		1	7.0	6.22	895	131.4	1.87		
11:09		2	9.7	6.56	927	123.1	1.15		
11:45		2	12.8	6.93	11.3	107.8	3.28		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250 mL	HNO_3
TRM	HDPE	250 mL	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID — DATE — TIME —

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-14

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 13.01

SAMPLE ID MW-14

SAMPLE DATE 9.21.22

SAMPLE TIME 12:10

WELL DEPTH (TD)(ft below MP/GS) 13.04 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: purged 3 volumes with Bailer

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
12:14	bailer 1		6.3	6.20	384.4	122.3	8.19		turbid
12:17	bailer 2		5.7	6.13	382.3	119.4	8.13		turbid
	bailer 3		5.5	6.09	379.0	119.8	8.18		turbid

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250ml	HNO_3
TRM	HDPE	250ml + filt	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-4A 5-15

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 6.35

SAMPLE ID MW-4A

SAMPLE DATE 9.22.22

SAMPLE TIME 10:08

WELL DEPTH (TD)(ft below MP/GS) 15 MP DESCRIPTION: Ground Surface (GS) ~ Top of Casing (TOC) ~

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION in field/clearing North of Carpenter

CASING VOLUME (gals) = ~ FEET OF WATER (TD-SWL) x ~ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = ~ gals

ACTUAL VOLUME REMOVED (gals) ~ WATER LEVEL RECOVERY INFORMATION Good Recovery

COMMENTS: Dup collected here

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
9:56		0	10.4	5.55	321.2	124.3	3.12	✓	clear, no odor
9:59		1	10.4	5.59	325.6	103.3	0.68	✓	
10:02		2	10.5	5.62	324.7	95.7	0.45	✓	
10:05		3	10.5	5.63	325.4	91.0	0.39	✓	
10:08		4	10.6	5.64	327.5	86.7	0.33	✓	

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250ml (filt)	HNO_3
TRM	HDPE	250ml	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID MW-4A Dup DATE 9.22.22 TIME 10:08

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-2

~~8-13~~ 6.4 - 16.4

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 8.67

SAMPLE ID MW-2

SAMPLE DATE 9.22.22

SAMPLE TIME

WELL DEPTH (TD)(ft below MP/GS) 16.9 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION

COMMENTS:

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (Gal)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
9:23		0	8.8	6.09	212.2	140.7	6.29	1	clear, no odor
9:25		1	8.7	6.03	212.1	132.5	5.17	1	
9:28		2	8.7	6.04	211.6	129.9	5.08	1	
9:31		3	8.7	6.02	212.0	128.3	5.00	1	

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
DM	HDPE	250 ml + 8:1	HNO_3
TRH	↓	250ml	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-6A

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 9.68

SAMPLE ID MW-6A

SAMPLE DATE 6.22.22

SAMPLE TIME 11:31

WELL DEPTH (TD)(ft below MP/GS) 18.05 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC) ✓

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION

COMMENTS:

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (L)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
11:22		0	7.8	6.00	56.7	112.6	10.06		
11:25		1	6.5	5.68	53.1	125.4	8.59		
11:28		2	6.6	5.70	53.0	132.8	8.67		
11:31		3	6.6	5.73	52.4	137.4	8.94		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
TRM	HDPE	250 ml	HNO_3
DM	HDPE	250ml + filt	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-4A

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

SAMPLE ID MW-4A

SAMPLE DATE 6.22.22

SAMPLE TIME 11:03

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 4.19

WELL DEPTH (TD)(ft below MP/GS) ~~4.19~~ 17.64 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC) ✓

WELL DIAMETER (inside/inches) 2 WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION

COMMENTS: DTW = 4.19' TD = 17.64

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (L)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
10:54		0	8.0	6.49	93.3	94.5	4.03	✓	
10:57		1	6.5	6.05	87.0	97.7	0.74	✓	
11:00		2	6.5	6.08	87.1	99.7	0.66	✓	
11:03		3	6.6	6.12	86.8	103.4	0.77	✓	

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
TRM	HDPE	250ml	HNO_3
DM	HDPE	250ml + filt	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-3

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 5.67

WELL DEPTH (TD)(ft below MP/GS) 16.65 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

SAMPLE ID MW-3

SAMPLE DATE 6.22.22

SAMPLE TIME 10:14

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (L)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
10:02		0	7.4	6.53	216.2	134.6	5.22	—	
10:05		1	6.3	6.56	262.5	136.3	1.32		
10:08		2	5.9	6.59	311.2	127.1	0.46		
10:11		3	6.0	6.61	309.7	116.1	0.36		
10:14		4	6.0	6.62	310.6	109.6	0.29		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
TRM	HDPE	250ml	HNO_3
DM	HDPE	250ml FILT	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID Dup-01 DATE 6.22.22 TIME 10:14

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

10-15

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-2

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL AH, CJN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 7.48

WELL DEPTH (TD)(ft below MP/GS) 19.25 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION

COMMENTS:

SAMPLE ID MW-2

SAMPLE DATE 6.22.22

SAMPLE TIME 9:38

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (L)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
9:29		0	6.1	6.49	113.0	125.5	10.04	—	
9:32		1	5.1	6.39	109.4	130.4	8.29		
9:35		2	5.1	6.41	108.7	130.5	8.00		
9:38		3	5.1	6.41	108.4	130.9	8.01		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
TRM	HDPE	250 ml	HNO3
DM	HDPE	250ml + filt	HNO3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

6.4 - 16.4

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION _____

PROJECT Carpenter

PROJECT NUMBER _____

SAMPLING PERSONNEL BH, GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 5.92

WELL DEPTH (TD)(ft below MP/GS) 17.90 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

SAMPLE ID MW-5

SAMPLE DATE 6.22.22

SAMPLE TIME 13:07

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (L)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
12:55		0	9.2	7.17	128.9	90.2	8.91	/	
12:58		1	7.6	6.27	99.0	90.9	6.97	-	
13:01		2	7.4	6.03	99.2	100.5	6.83	/	
13:04		3	7.4	6.01	98.41	105.9	6.88	/	
13:07		4	7.2	6.00	96.9	112.5	6.62		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
TRM	HDPE	250ml	HNO_3
Dm	HDPE	250ml + filt	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-1

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

SAMPLE ID MW-1

SAMPLE DATE 6.22.22

SAMPLE TIME 8:48

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 8.12

WELL DEPTH (TD)(ft below MP/GS) 22.0 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (L)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
8:38		0	5.4	6.19	128.5	154.1	8.04	—	
8:41		1	4.4	6.39	122.0	137.7	5.33		
8:45		2	4.2	6.46	120.8	130.5	5.10		
8:48		3	4.2	6.48	119.0	129.3	4.99		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
TRM	HDPE	250ml	HNO3
DM	HDPE	250ml	HNO3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a mimimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

18.7 - 26.7 interval

WELL IDENTIFICATION MW-6

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 22.70

WELL DEPTH (TD)(ft below MP/GS) 28.75 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION

SAMPLE ID MW-6

SAMPLE DATE 6.22.22

SAMPLE TIME 12:31

COMMENTS: ~~Outside of screening interval (CS 18FT)~~ Bullett Damage on well, lock destroyed. Low recovery. RH

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (L)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
12:16		0	10.3	2.30	1023	875.3	1.51	—	
12:19		1	7.7	2.32	1021	874.4	0.67	—	
12:20		1.5	7.9	6.07	1013	174.6	0.56	/	
12:22		2	7.8	5.99	1014	179.2	0.55		
12:25		3	7.8	6.68	1012	150.9	0.54		
12:28		4	8.1	6.62	1008	137.7	0.69		
12:31		5	8.4	6.55	999	143.6	0.58		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
TRM	HDPE	250 ml	HNO_3
DM	HDPE	250 ml + F.H	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a mimimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET 7-12

WELL IDENTIFICATION CSC-15

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 6.55

SAMPLE ID CSC-15

SAMPLE DATE 6.22.22

SAMPLE TIME 14:54

WELL DEPTH (TD)(ft below MP/GS) 14.3 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)²)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (L)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
14:46		0	7.9	6.15	223.9	38.0	3.62	/	
14:48		1	6.0	6.11	202.2	30.9	0.54		
14:51		2	5.7	6.14	207.7	30.1	0.52		
14:54		3	5.6	6.15	218.5	27.2	0.36		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
TRM	HDPE	250ml	HNO_3
DM	HDPE	250ml filt	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-8 7.5 - 12.5

PROJECT Carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

SAMPLE ID MW-8

SAMPLE DATE 6.22.22

SAMPLE TIME 14:21

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 4.61

WELL DEPTH (TD)(ft below MP/GS) 15.0 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (L)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
~~14:09~~ ~~13:51~~		0	8.4	5.38	154.1	72.5	3.72	–	
14:12		1	7.2	6.15	183.5	20.3	0.56		
14:15		2	7.2	6.31	177.4	1.1	0.60		
14:18		3	7.2	6.42	169.1	4.9	0.82		
14:21		4	6.9	6.39	166.0	7.6	0.66		

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE
TRm	HDPE	250 ml	HNO_3
Dm	HDPE	250mL + filt	HNO_3

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.

GROUNDWATER SAMPLING DATA SHEET

WELL IDENTIFICATION MW-11

PROJECT carpenter

PROJECT NUMBER

SAMPLING PERSONNEL RH, GN

STATIC WATER LEVEL (SWL) (ft below Measuring Point (MP)) 5.03

WELL DEPTH (TD)(ft below MP/GS) 15.40 MP DESCRIPTION: Ground Surface (GS)_____ Top of Casing (TOC)_____

WELL DIAMETER (inside/inches) _____ WELL LOCATION DESCRIPTION _____

CASING VOLUME (gals) = _____ FEET OF WATER (TD-SWL) x _____ GALLONS/FOOT ***(1/25(TD-SWL)X(DIA)^2)*** = _____ gals

ACTUAL VOLUME REMOVED (gals) _____ WATER LEVEL RECOVERY INFORMATION _____

COMMENTS: _____

SAMPLE ID MW-11

SAMPLE DATE 6.22.22

SAMPLE TIME _____

PURGING/SAMPLING DATA

TIME (hr:min)	DISCHARGE RATE (GPM)	VOL REMOVED (L)	T (°C)	pH	SPC CONDO (µS/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Comments
15:30		0	8.8	6.04	88.8	56.3	10.21	/	
15:32		1	6.5	6.47	80.7	59.9	6.78	—	
15:35		2	6.4	6.47	78.7	63.0	6.82	-	
15:38		3	6.6	6.47	78.4	64.9	6.80	—	

GROUNDWATER SAMPLES COLLECTED

ANALYSIS	CONTAINER TYPE	VOLUME	PRESERVATIVE

QUALITY CONTROL SAMPLES COLLECTED: SAMPLE ID _____ DATE _____ TIME _____

Criteria: pH: +/- 0.1 standard units,

Specific Conductance: +/- 3% Siemens/centimeter,

DO: +/- 0.3 mg/L,

Temperature: +/- 10% degrees Celsius; If criteria cannot be met, purge a minimum of three well volumes and then sample.