



MEMORANDUM

To: Mill Brook Watershed Management Committee
From: Neal Price and Casey Chatelain, Horsley Witten Group, Inc.
Date: September 23, 2024 – Revised October 18, 2024
Re: Mill Brook Water Quantity and Quality Assessment Summary

Introduction

In conjunction with the Mill Brook Watershed Management Committee (MBWMC), the Horsley Witten Group, Inc. (HW) has been working to assess water quantity and quality conditions for Mill Brook, located in West Tisbury, Massachusetts, and its contributing watershed. This effort included a review of existing information, the development of a monitoring plan (with implementation by MBWMC), and data assessment and reporting. The goal of this project is to provide MBWMC with additional data and assessment to improve its understanding of Mill Brook flow and water quality conditions. Nutrient loading assessment is the primary goal of the MBWMC and, as such, the collection of flow and water quality data were the primary components of the field monitoring program.

Field Monitoring

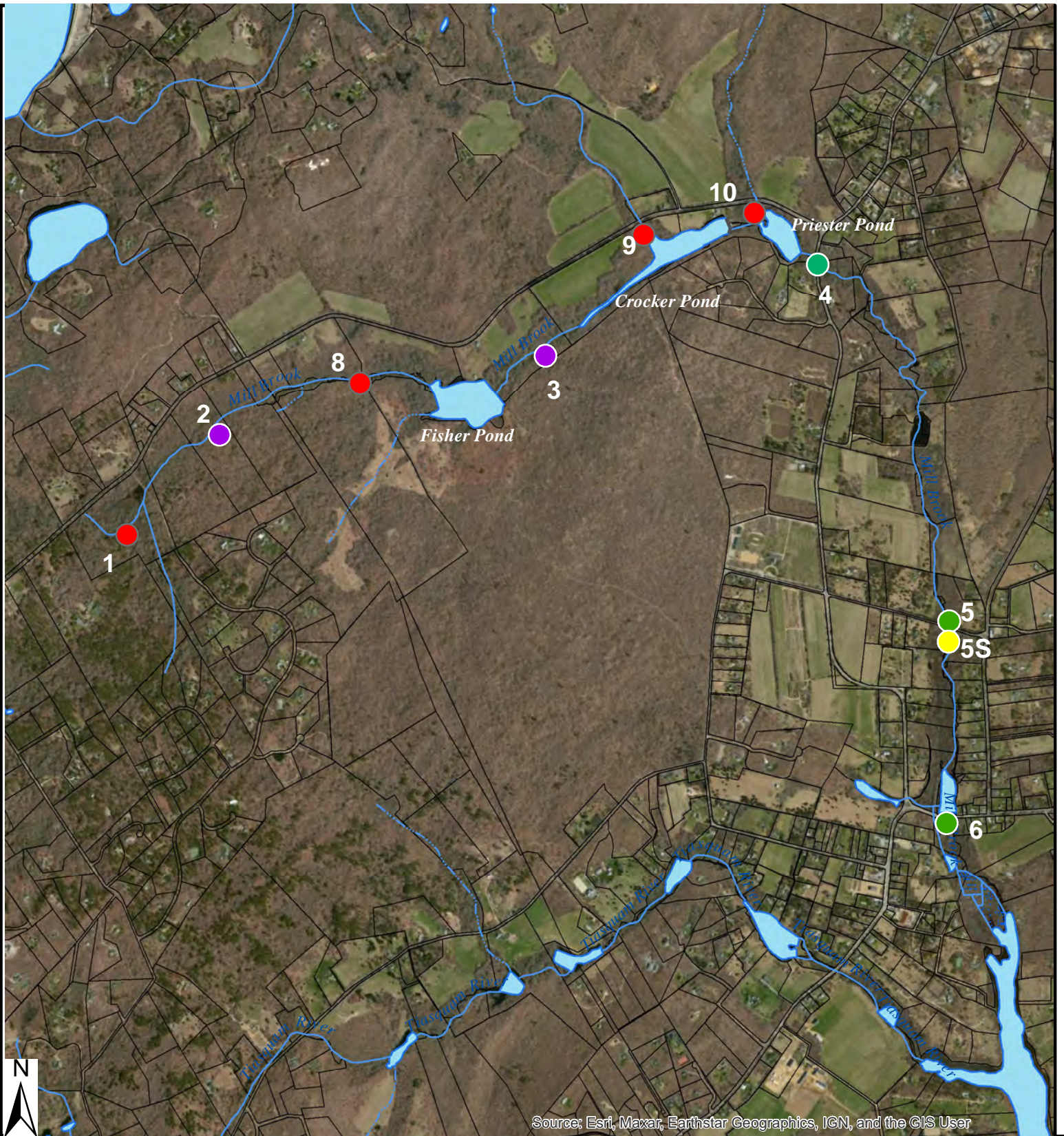
Figure 1 depicts this study's flow and water quality data collection locations. Table 1 describes the location of sampling stations and the monitoring that occurred at each station. Dates shown reflect the data available at the time of the data assessments completed to inform this report. Data collection at some of these stations by MBWMC continues as of the date of this report.

Table 1. Monitoring Stations

Station	Location Description	Latitude	Longitude	Sampling
Station 1	Roth Woodlands	41.39237003	-70.70841802	Water quality sampling April 2021-December 2021
Station 2*	Waskosim's Rock	41.39693398	-70.70519803	Water quality sampling April 2021-July 2021 Streamflow measurements May 2021-July 2021 Water level logger April -July 2021
Station 3*	Woods Property (below Fisher Pond)	41.39914697	-70.69014598	Water quality sampling April 2021-November 2021

Station	Location Description	Latitude	Longitude	Sampling
				Streamflow measurements May 2021-November 2021 Water level logger April 2021-October 2022
Station 4	State Road Bridge	41.40205096	-70.69960598	Water quality sampling April 2021-December 2021 Streamflow measurements May 2021-September 2023 Water level logger April 2021-February 2023
Station 5	Scotchman's Bridge Lane	41.38946260	-70.67203470	Water quality sampling April 2021-December 2021 Streamflow measurements May 2021-September 2023 Water level logger April 2021-February 2023
Station 5S*	Scotchman's Bridge Lane South	41.38916957	-70.67179497	Streamflow measurements May 2021-November 2021 Water level logger April 2021-February 2023
Station 6	Below Mill Pond Dam	41.38254996	-70.67153396	Water quality sampling April 2021-December 2021 Streamflow measurements May 2021-September 2023 Water level logger May 2021-February 2023
Station 7	Varying. Blind duplicate for water quality samples			Water quality sampling April 2021-December 2021.
Station 8*	Woods Reserve (above Fisher Pond)	41.39809202	-70.69856702	Water quality sampling June 2021-July 2021 Streamflow measurements August 2021-December 2021, March and September 2023 Water level logger August 2021-February 2023
Station 9	Witch Brook	41.40334203	-70.68046303	Water quality sampling June 2021-December 2021
Station 10	Indian Hill Brook	41.382902	-70.672063	Water quality sampling June 2021-July 2021

*Streamflow measurements abandoned in late 2021 at these stations when shallow depth and low flow made consistent records difficult



Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User

<p>Red Dot Water Quality Station</p>	<p>0 0.1 0.2 0.4 0.6 0.8 Miles</p>	<p>Horsley Witten Group Sustainable Environmental Solutions 90 Route 6A • Unit 1 • Sandwich, MA 02563 508-833-6600 • horsleywitten.com</p>	
<p>Yellow Dot Limited Streamflow and Water Level Logger Station</p>			
<p>Purple Dot Water Quality, Limited Streamflow, and Water Level Logger Station</p>			
<p>Green Dot Water Quality, Extended Streamflow, and Water Level Logger Station</p>			
<p>Mill Brook Sampling Stations</p>			
<p>Data Sources: Bureau of Geographic Information (MassGIS), ESRI</p>		<p>Date: 11/21/2023</p>	<p>Figure 1</p>

Water Quality Sampling

Water quality samples were taken by MBWMC at 10 stations along the course of Mill Brook between April 25, 2021 and December 19, 2021 (Figure 1 and Table 1). Samples were sent to the Coastal Systems Program at the University of Massachusetts Dartmouth School for Marine Science and Technology for analysis. Analysis was performed for phosphate, total phosphorus, ammonium, nitrogen oxides, dissolved inorganic nitrogen, dissolved organic nitrogen, total dissolved nitrogen, particulate organic carbon, particulate organic nitrogen, carbon/nitrogen ratio, total organic nitrogen, total nitrogen, chlorophyll-a, and phaeo pigments. A summary spreadsheet of laboratory results is included herein as Attachment A.

In addition to the water quality samples collected for laboratory analyses, in-situ measurements for water quality parameters were taken by MBWMC on a monthly basis between April 25, 2021 and October 23, 2022. The field parameters measured were dissolved oxygen (in mg/l and percent saturation), specific conductivity (in microsiemens per centimeter), pH, and temperature (in degrees Celsius). A YSI multi-parameter probe was utilized to collect these field data. The results of these measurements are included in Attachment B.

Streamflow Measurements

Streamflow measurements were taken by MBWMC at a subset of the water quality stations (Figure 1 and Table 1) between May 23, 2021 and March 10, 2023. A list of the stations with streamflow measurements and their date ranges is below. At each station velocity and depth measurements were taken along a transect between fixed points marked by rebar (Appendix C). Velocity measurements were taken using a Hach Model FH950.1 portable flow meter attached to a wading rod. In addition to holding the flow meter in place the wading rod was used to measure depth at each measurement location. MBWMC's flow measurement protocol is consistent with the current-meter midsection method used by USGS.¹

Stream Stage

Measurement of water stage is an important complement to flow measurement so that an understanding can be gained of how flow varies with water level fluctuations. Manual staff gauge readings of stage at a subset of stations were collected between May 23, 2021 and March 10, 2023. Readings were recorded on a regular basis at Station 4, Station 5, and Station 6. Readings were also recorded on a less than regular basis at Station 2, Station 3, Station 5S, and Station 8. All stage measurements are included in Appendix C. In addition, HOBO brand water level data loggers were installed at 6 stations to record a continuous record of water level fluctuations (Figure 1 and Table 1).

¹ Turnipseed & Sauer

Calculations

Stream Discharge Calculations

After field flow measurements were completed, MBWMC entered transect depth and velocity measurements into an excel spreadsheet to facilitate discharge calculations. At each station, discharge was calculated for each incremental subsection along the transect using the equation below. See Figure 2 for a stream cross-section to visualize the equation.

$$q_i = v_i \left[\frac{b_{(i+1)} - b_{(i-1)}}{2} \right] d_i$$

where q_i = discharge through partial section i
 v_i = mean velocity at location i
 $b_{(i+1)}$ = distance from location i to next location
 $b_{(i-1)}$ = distance from location i to preceding location
 d_i = depth of water at location i

Functionally, the flow at each subsection is equal to the width of each rectangular subsection in feet, multiplied by the depth of water at that subsection in feet, and the measured flow velocity in feet per second in order to produce a volumetric flow rate for each subsection in the units of cubic feet per second (cfs). By summing up the computed flow rates for each subsection the total cumulative flow for each transect is calculated. Prior to using it in further analysis, HW conducted QA/QC on MBWMC flow data and discharge calculations utilizing Excel to examine for outliers and to recalculate a subset of discharge calculations at each station to ensure that the proper methodology was used.

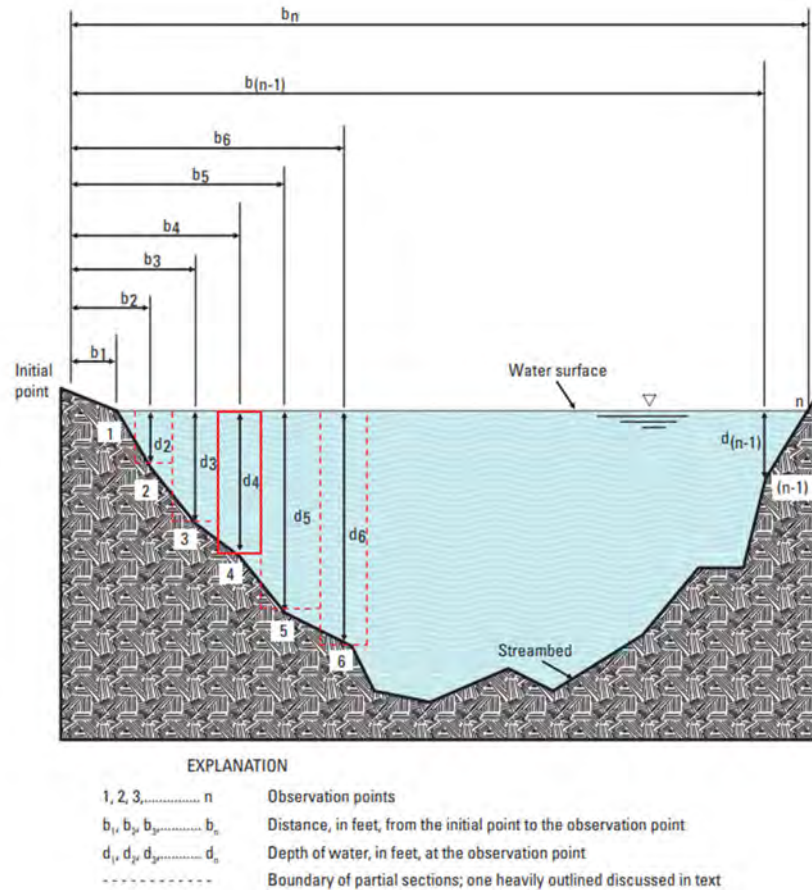


Figure 2 Sketch of current-meter midsection method (courtesy of USGS)

Stage-Discharge Relationships

Once established, stage-discharge relationships are used to estimate the discharge of a river based on stage measurements alone. This allows more easily collected stage data to be used to estimate flow at times when actual flow measurements were not made. These relationships can also be used to predict flow under a variety of conditions. In this case these stage-discharge relationships were used to convert the continuous water level logger stage data to continuous estimates of discharge for the logger monitored period.

Stage discharge relationships were calculated for Stations 4, 5, and 6 using the cumulative flow and stage data collected at those stations. Other stations were excluded from this analysis due to limited streamflow measurements. Stage-discharge relationships were established by plotting the discharge of the station on the x-axis and the stage of the station on the y-axis. Each point on the plot corresponds to a measurement date's recorded stage and discharge. A linear line of best fit and corresponding equation was used to establish the stage discharge relationship (Figures 3, 4, and 5). Larger versions of all graphs included within this report are available in Attachment A.

The figures also display mathematical expressions describing each relationship, along with the correlation coefficients for each relationship. The mathematical expressions are used to convert records of data logger water elevations to estimates of streamflow over the same time period of record. These expressions can also be used to convert a single stage measurement into a flow

estimate. For example at Station 4 when the stage is 1 foot the discharge is approximately 3.6 cfs. The correlation coefficient (R^2) is a measure of how well the expression fits the data, with a value of 1.0 indicating a perfect fit and 0.0 indicating no fit. R^2 values greater than 0.75 indicate a strong correlation between the variables. Station 4, Station 5, and Station 6 exhibit strong correlations between stage and discharge with R^2 values of 0.86, 0.75, and 0.95, respectively.

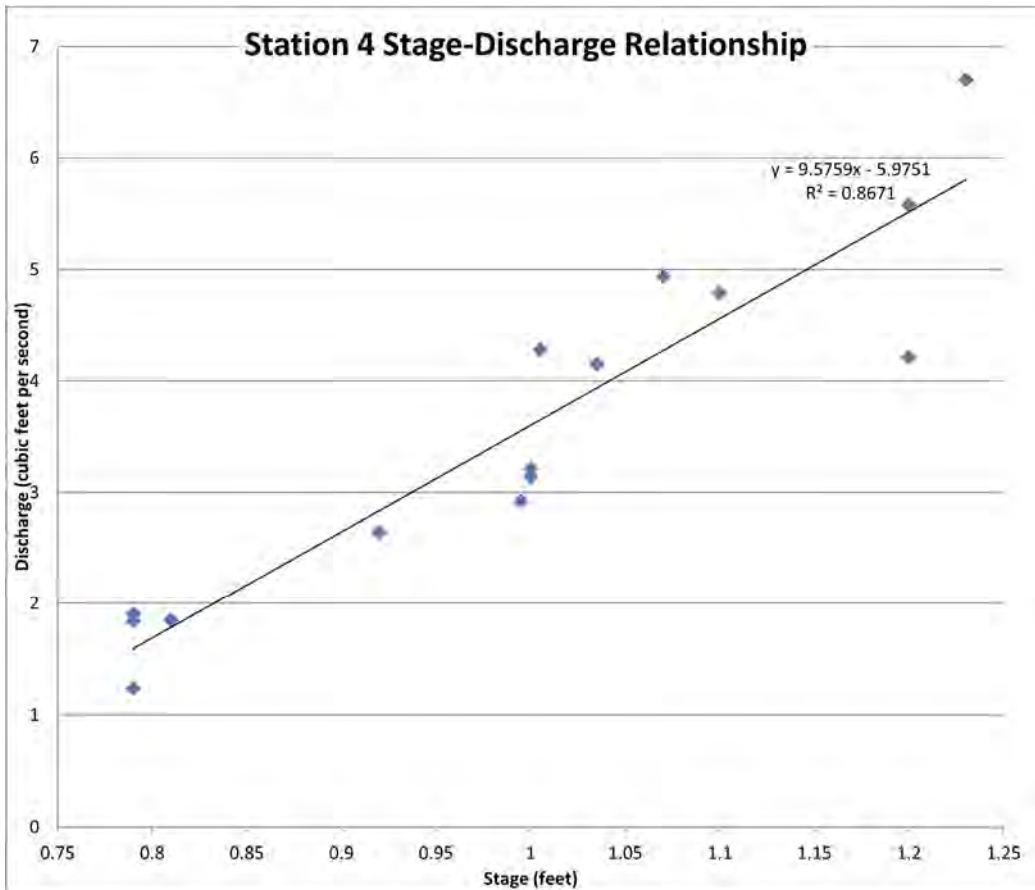


Figure 3 Station 4 Stage Discharge Relationship

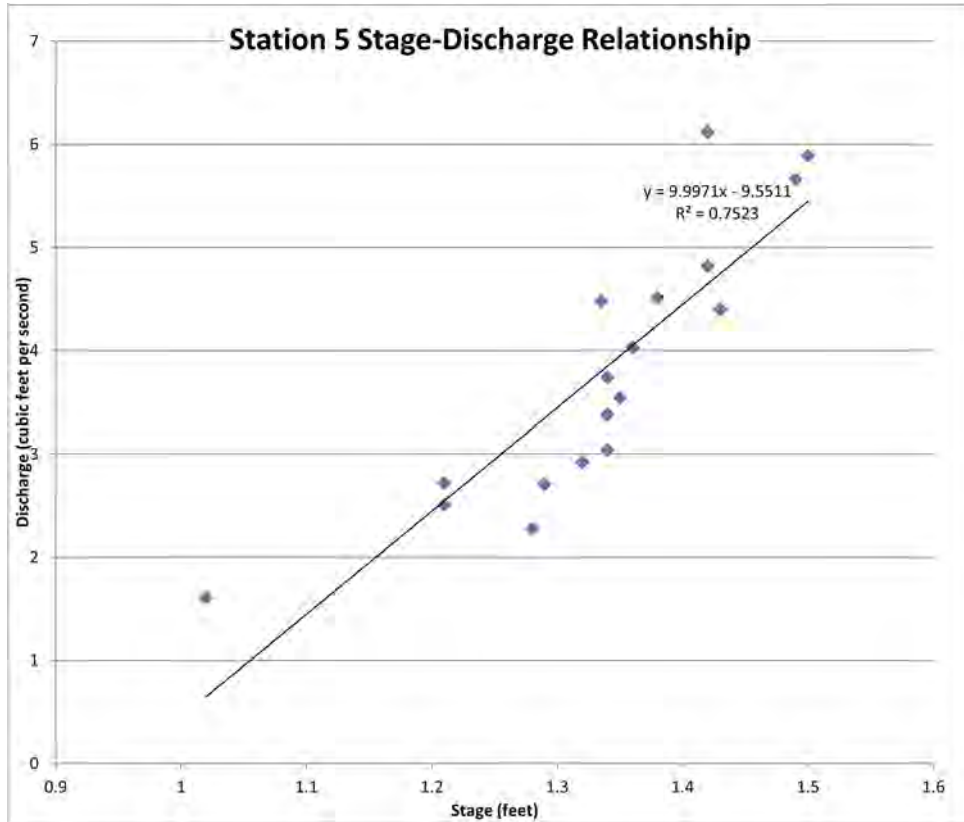


Figure 4 Station 5 Stage Discharge Relationship

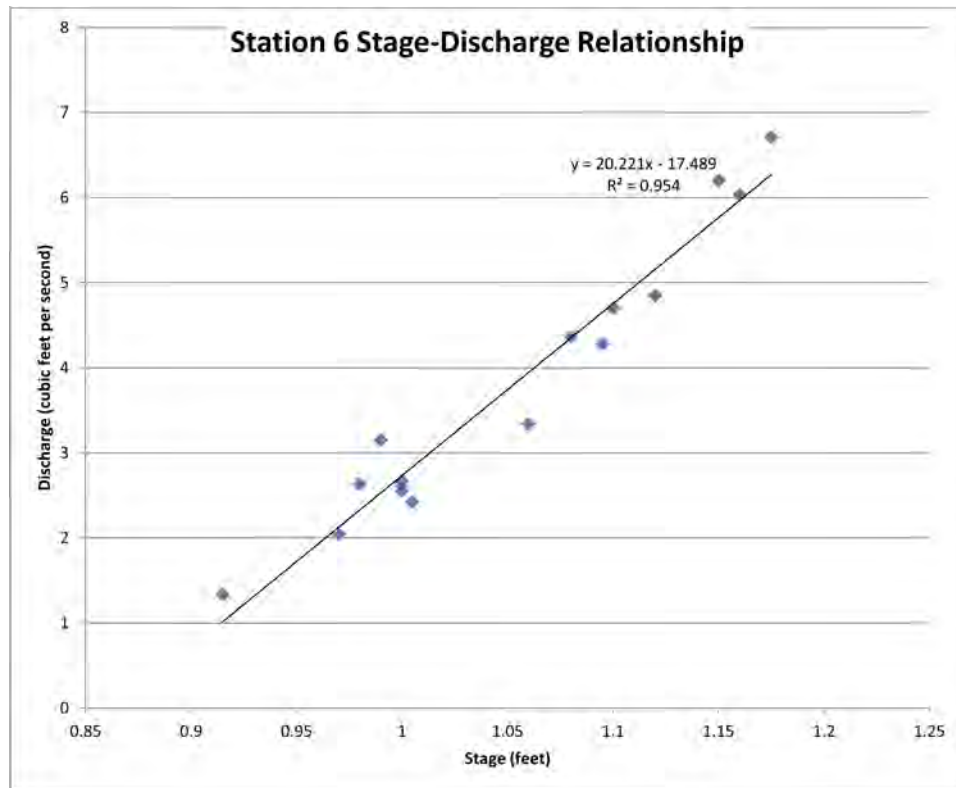


Figure 5 Station 6 Stage Discharge Relationship

Nutrient Loading Calculations

Nutrient loading calculations were run for Stations 4, 5, and 6 for both nitrogen and phosphorus. The first step was to convert the nitrogen and phosphorus concentrations from micromoles (the units the 2021 laboratory analysis results from the University of Massachusetts Dartmouth School for Marine Science and Technology were reported in) to milligrams per liter. The conversion equation is not the same for nitrogen and phosphorus, as it is dependent on the analyte's molar mass. 1µM phosphorus is equivalent to 0.0309 mg/l phosphorus while 1µM nitrogen is equivalent to 0.0140 mg/l nitrogen.

Before loading calculations could occur, the discharge values were also converted to compatible metric units. Discharge was converted from cubic feet per second to liters per day by multiplying by 2,446,575.55. With discharge in liters per day and nitrogen and phosphorus in milligrams per liter, loading calculations were performed using the following equation for both nitrogen and phosphorus:

$$\text{Nutrient load} \left(\frac{kg}{day} \right) = \frac{\text{Discharge} \left(\frac{liters}{day} \right) * \text{Nutrient Concentration} \left(\frac{mg}{liter} \right)}{1000000}$$

Results

Streamflow Measurements

In general, Mill Brook gains flow from Station 2 to Station 5. This is consistent with a gaining stream condition— a stream that “gains” water from groundwater inputs as it moves downstream, as is typical for most New England streams. On most streamflow measurement dates, however, Mill Brook loses flow between Station 5 and Station 6. This reduction in flow can likely be attributed to several factors related the Mill Pond Dam, located just upstream of Station 6:

- Flow exiting the impoundment through Factory Brook, at river right side of the dam, rather than through the main channel;
- Losing stream conditions as the elevated water head of the impoundment fosters flow from the impoundment out to groundwater which does not re-enter the brook until downstream of Station 6;
- Increased evapotranspiration due to the greater surface area and sun exposure of the Mill Pond impoundment; and
- Combinations thereof.

A localized change from a traditional New England gaining stream situation to a losing stream situation is typical for impoundments caused by dams. These trends are reflected in the average discharges calculated for each station (Table 2). The calculations in this table reflect only field streamflow measurements.

Table 2: Streamflow Measurement Assessment

	Station 2*	Station 8*	Station 3*	Station 4	Station 5	Factory Brook	Station 6
Min. discharge (CFS)	0.13	0.22	0.78	1.24	1.61	0.09	1.33
Max. discharge (CFS)	0.25	0.8	1.57	6.69	6.12	1.75	6.71
Mean discharge (CFS)	0.19	0.468	1.19	3.40	3.83	0.67	3.77

*Stations with five or fewer streamflow measurement dates

2021 is the only time period of the flow measurement program that also included water quality sampling. As a result, the nutrient loading analyses only utilize streamflow data from 2021. Figure 6 shows week by week discharges for Station 4, Station 5, and Station 6. Other stations were excluded from the ensuing loading analysis due to a limited streamflow measurement sample size. Similar to the trends for all three years of streamflow measurements, on most sampling dates there is an increase in flow between Station 4 and Station 5 before a decrease in flow between Station 5 and Station 6.

Water Level Data Logger Analysis

Automated water level logger data was collected by MBWMC at eight total locations for varying subsets of the overall monitoring period between 4/24/2021 and 2/12/2023 (Table 1). MBWMC corrected raw logger data to account for the position of the logger within the water column, prevailing atmospheric pressure changes (by using data from a dedicated barometric logger), and to omit visibly incorrect data (e.g., if a logger was not placed back at its proper position following logger removal for download).

Using the stage discharge relationships established above in Figures 3, 4, and 5, corrected water levels were converted from water levels (in feet) to discharges (in cubic feet per second) and graphed for Stations 4, 5, and 6 (Figures 7, 8, and 9). These three stations had the most complete set of stage and flow data. Included on these graphs are precipitation events over 0.5 inches. Precipitation data is from the NOAA Martha's Vineyard Airport.

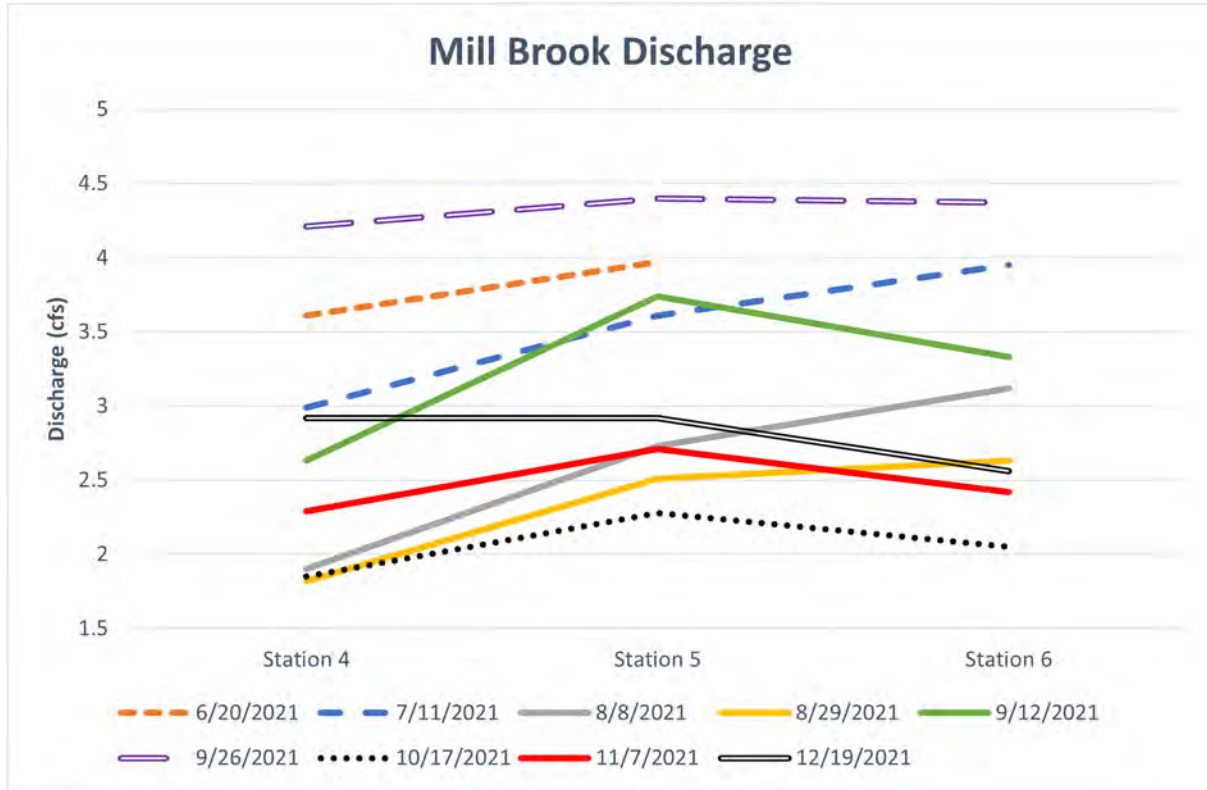


Figure 6 Mill Brook Discharge (cfs)

HW conducted a QA/QC examination of these graphs for irregularities (e.g., data gaps). Data gaps were addressed by averaging the values on each end of the gap and applying the average across the gap. Most significantly, all loggers exhibited an irregular and sudden increase in water level on October 26, 2021 and a similar sharp decrease on June 1, 2022. In between these two dates water levels for all loggers appeared to fluctuate normally, just at an overall elevated base elevation relative to the data periods before and after. Because all loggers exhibited these same two simultaneous anomalies it was determined that there must have been an error with the barometric logger used to compensate the data from all other loggers. And because the anomalies were isolated to two discrete time periods (October 26, 2021 and June 1, 2022) that resulted in an overall elevated base elevation for the period between the two anomalies, the data were corrected by shifting the entirety of this intervening, elevated section down to be consistent with the average elevations before and after the anomalous section of data.

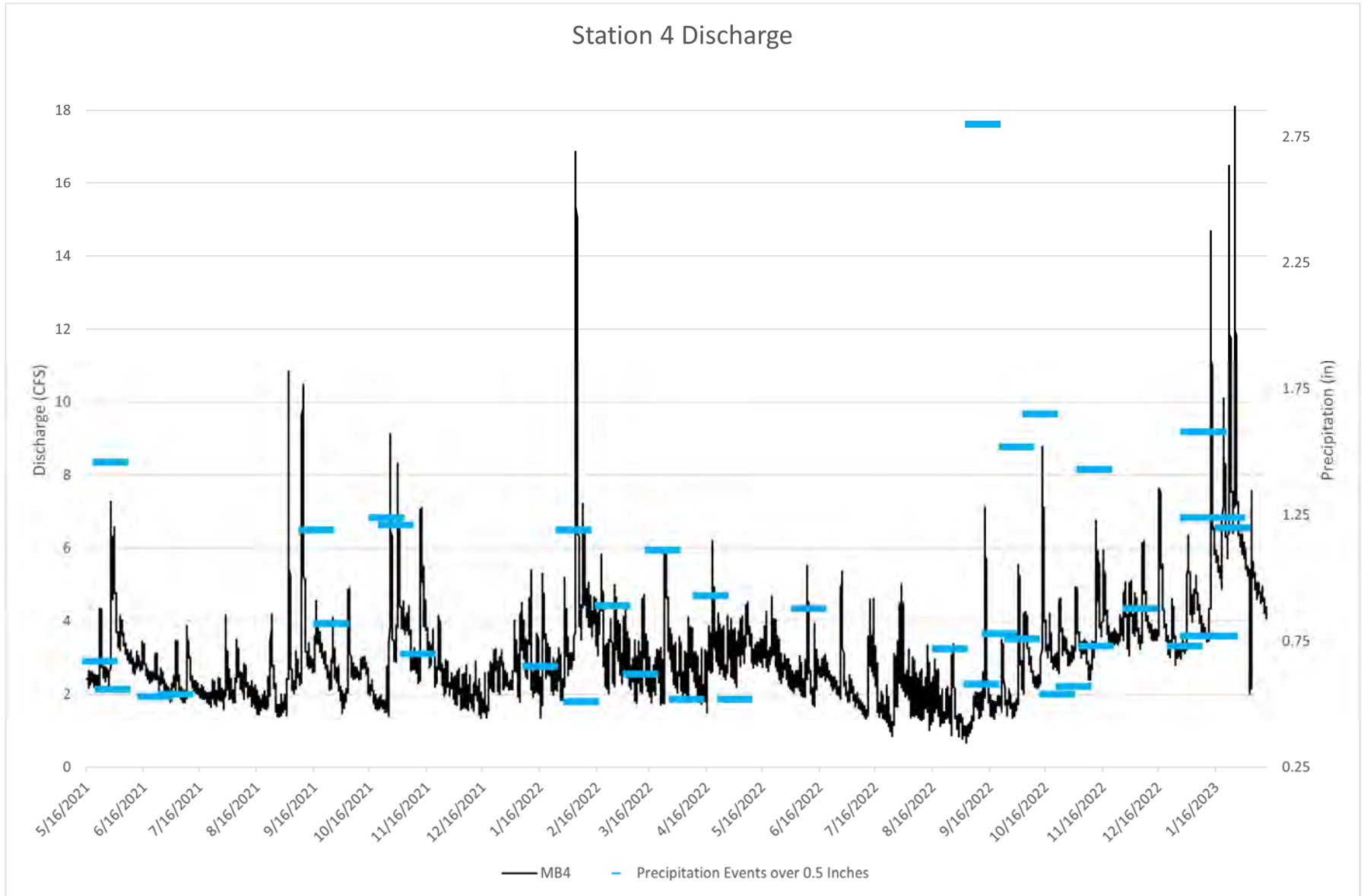


Figure 7 Station 4 Discharge Calculated from Stage-Discharge Relationship (cfs)

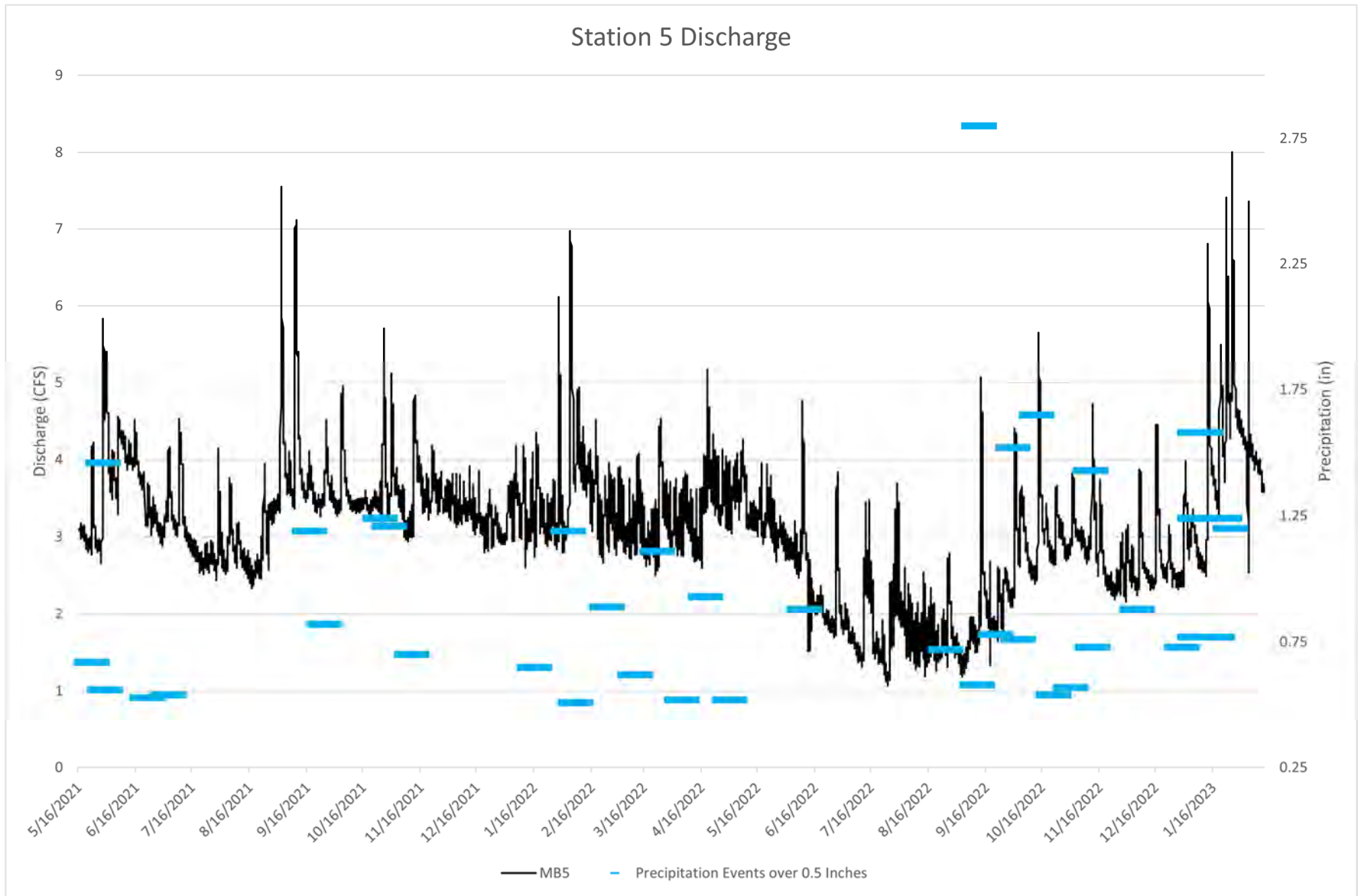


Figure 8 Station 5 Discharge Calculated from Stage-Discharge Relationship (cfs)

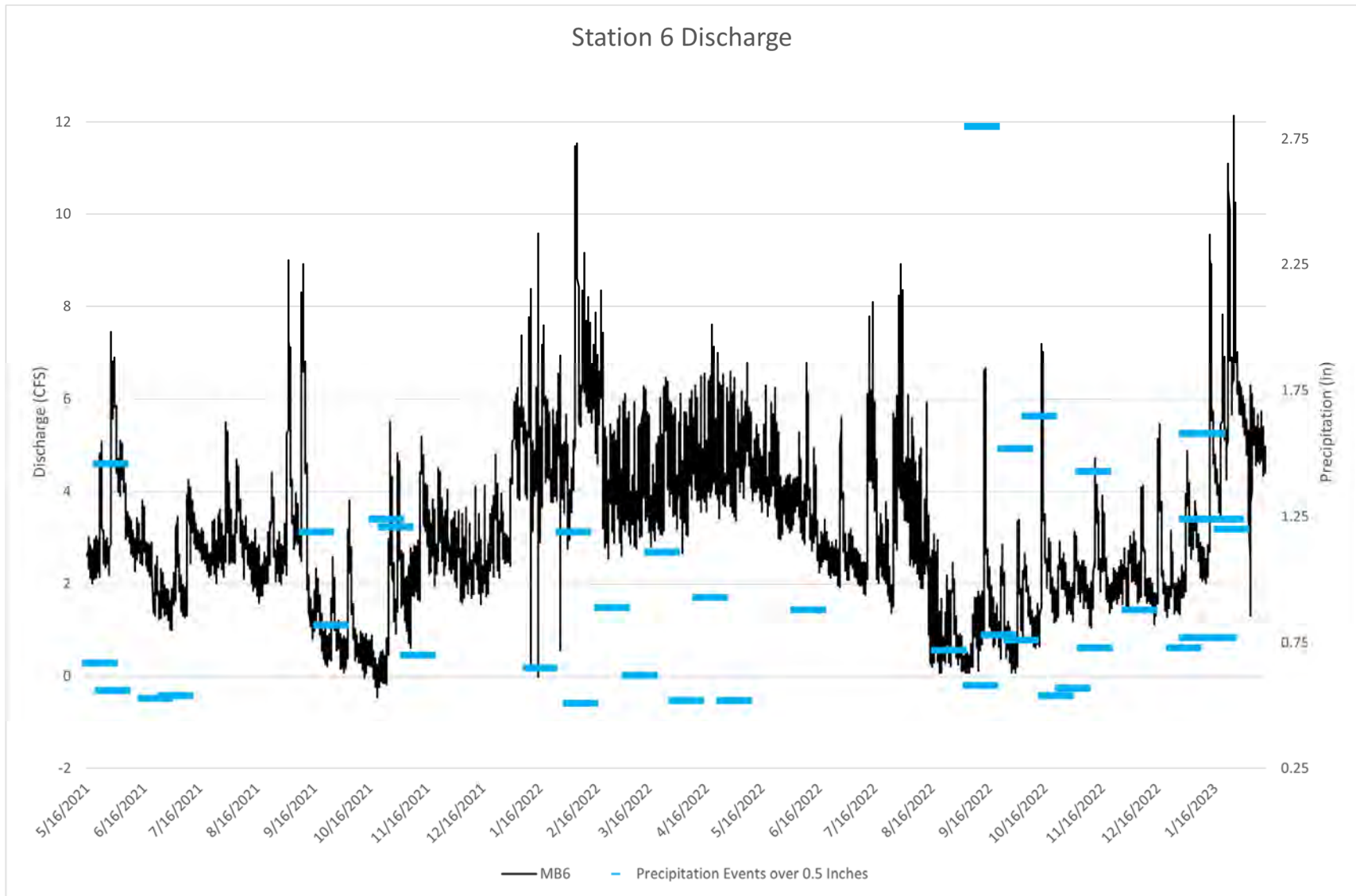


Figure 9 Station 6 Discharge Calculated from Stage-Discharge Relationship (cfs)

Station 4

The average discharge for Station 4 is 3.07 cubic feet per second. There are two notable discharge peaks, occurring on February 4th, 2022 and January 26th, 2023 (Figure 7). Examination of weather records from Martha's Vineyard Airport weather station reveal that the area experienced 1.19 inches of rain on February 4th, 2022 and 1.20 inches of rain on January 26th, 2023. Discharge decreased throughout June and July 2022 before a period of low discharge in August 2022. This is likely due to an increase in groundwater pumping within the Mill Brook watershed during these months in combination with higher evapotranspiration rates that naturally occur during summer months.

Station 5

The average discharge for Station 5 is 3.15 cubic feet per second. There are peaks associated with the storm events on February 4th, 2022 and January 26th, 2023 and a period of decreasing discharge in June, July, and August 2022 (Figure 8). This is consistent with discharge conditions observed at Station 4. Similar to Station 4, low discharge during the summer months is likely the result of a combination of increased groundwater pumping and increased evapotranspiration rates.

Station 6

The average discharge for Station 6 is 3.16 cubic feet per second. This is likely an underestimate of discharge due to flow loss to Factory Brook, though losses to groundwater and increased evapotranspiration due to the Mill Pond impoundment, as explained on page 9, could also account for a decrease in discharge. Similar to Station 4 and Station 5 there is a peak associated with the February 4th, 2022 and January 26th, 2023 storm events and an extended period of decreasing discharge in June, July, and August 2022 due to higher groundwater pumping and increased evapotranspiration rates (Figure 9).

Response to Precipitation

To better understand the response of each station to precipitation events a subset time period with significant precipitation events (early fall 2022) was plotted as Figure 10. All three stations display steep rises in discharge during and immediately after a storm event, peaking quickly before discharge levels decline more slowly. The rainfall responses of all three stations are generally similar, though Station 5 exhibits a response slightly lesser than the other two in both magnitude and slope. Overall, Mill Brook's observed streamflow responses to precipitation indicate a relatively direct rainfall/ runoff response.

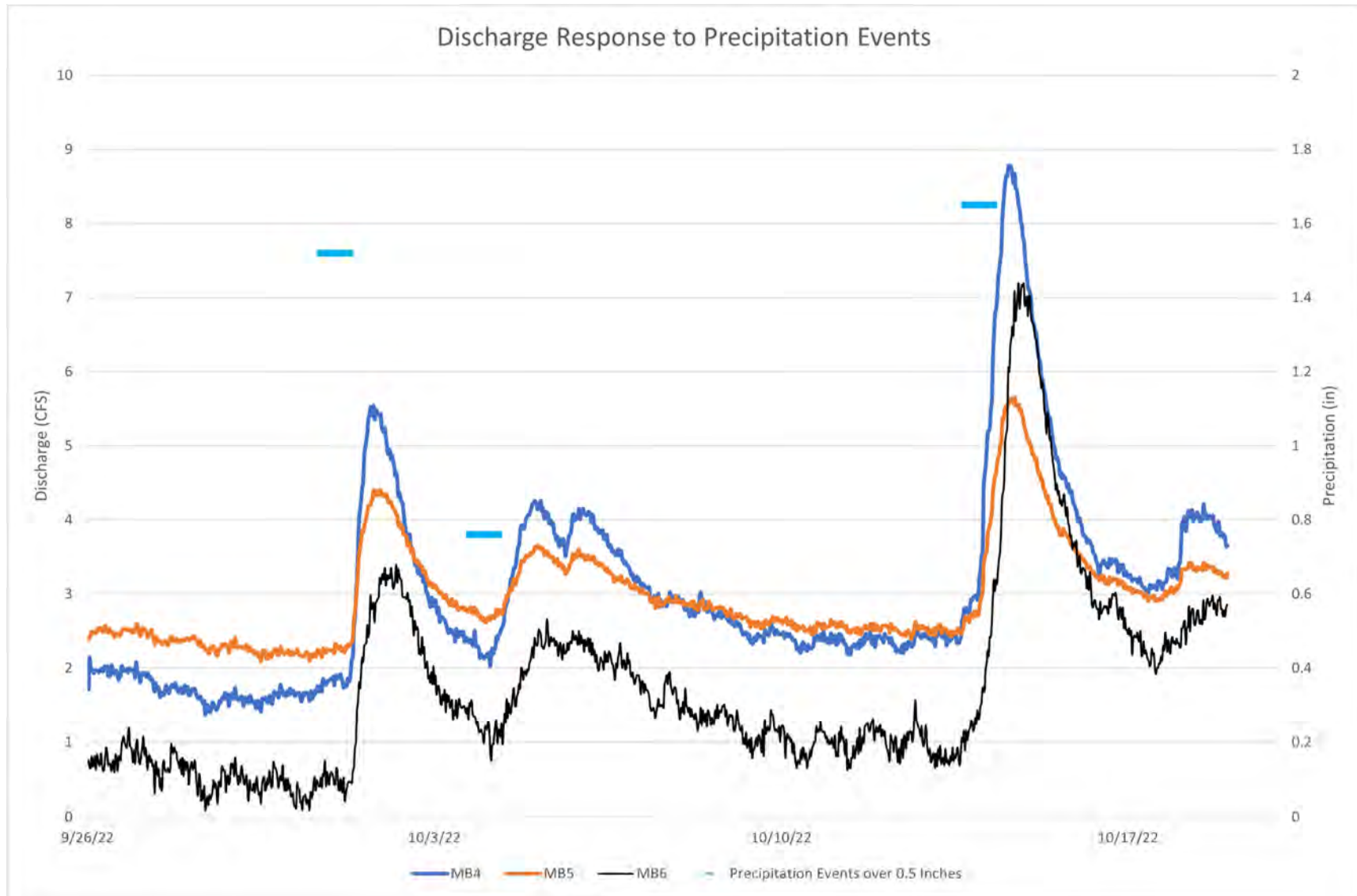


Figure 10 All Stations Discharge Response to Precipitation Events

Nitrogen Concentrations and Loading

As shown in Table 3, mean nitrogen concentrations are relatively consistent, and relatively low for all stations. These results are consistent with the relatively undeveloped land use profile of the Mill Brook watershed - conservation land (37%), agricultural land (3%), and single or two-family residential (40%).² There are no wastewater treatment plants or other point sources that would result in a concentrated groundwater nitrogen plume entering Mill Brook at any given point. It is possible that there may be nitrogen contributions via direct stormwater runoff of fertilizer from agricultural land use adjacent to Mill Brook. Potential stormwater impacts cannot be evaluated with this assessment due to the relatively low frequency and timing of water quality samples as compared to the short durations of storm events.

Nitrogen in groundwater moves conservatively – meaning that once it enters groundwater it tends to travel unattenuated at the same rate as the prevailing groundwater flow. However, nitrogen in surface water is attenuated by biological interactions with vegetation, sediment, and microbes. Therefore, as nitrogen flows through the Mill Brook system, some of that nitrogen is attenuated along the flow path. The fact that nitrogen concentrations are relatively consistent from upstream to downstream suggests that the additional nitrogen added from the watershed to the brook on its flow path is essentially offset by the attenuation occurring in the system along that same flow path and/or the volume of additional water added to the brook along that flow path keeps pace with the nitrogen inputs such that the concentrations remain similar. Nitrogen loads multiply the observed concentration by the observed flow to represent the mass of nitrogen present per unit of time. Table 4 depicts calculated nitrogen loads based on direct, simultaneous, field sampling and flow measurements for the 3 stations with the appropriate flow and nitrogen data to inform the loading calculation. The concentrations for these three stations is displayed in Figure 11.

Table 3 Mean Mill Brook nitrogen concentrations in milligrams per liter (mg/l)

Station	Mean Nitrogen Concentration (mg/l)
Station 1	0.5248
Station 2	0.5778
Station 3	0.5466
Station 4	0.4260
Station 5	0.4783
Station 6	0.4851
Station 7	0.3695
Station 8	0.4114
Station 9	0.4081
Station 10	0.4106

² Howes et al.

Table 4 Mean Mill Brook Nitrogen Load in kilograms per day (kg/day)

Station	Mean Nitrogen Load (kg/day)
Station 4	2.5833
Station 5	3.8719
Station 6	3.0538

Nitrogen loads, as is expected, follow the same general trend as discharge, with an increase in load between Station 4 and Station 5 and a decrease in nitrogen load between Station 5 and Station 6 (Figure 12). The correlation between nitrogen loads and discharge is typical because, if watershed contributed nitrogen concentrations remain similar between stations while flow changes, the resulting load will change in concert with the flow. If the mass of nitrogen entering the brook from its watershed was consistent per linear distance of flow path, then the proportion of mean flow increase from station to station would be similar to the proportion of mean load increase. Because the flow at Station 6 actually decreases relative to Station 5, such an evaluation is not informative in this case. With the reduction of flow, possibly due to losses to groundwater and/or evapotranspiration due to the Mill Pond impoundment and flow lost to Factory Brook, any proportionally excess nitrogen contributions between Stations 5 and 6 would also be lost from measurement at Station 6.

See the Consistency Review on page 26 for an evaluation of the consistency between these nitrogen sampling results and other previously published reports.

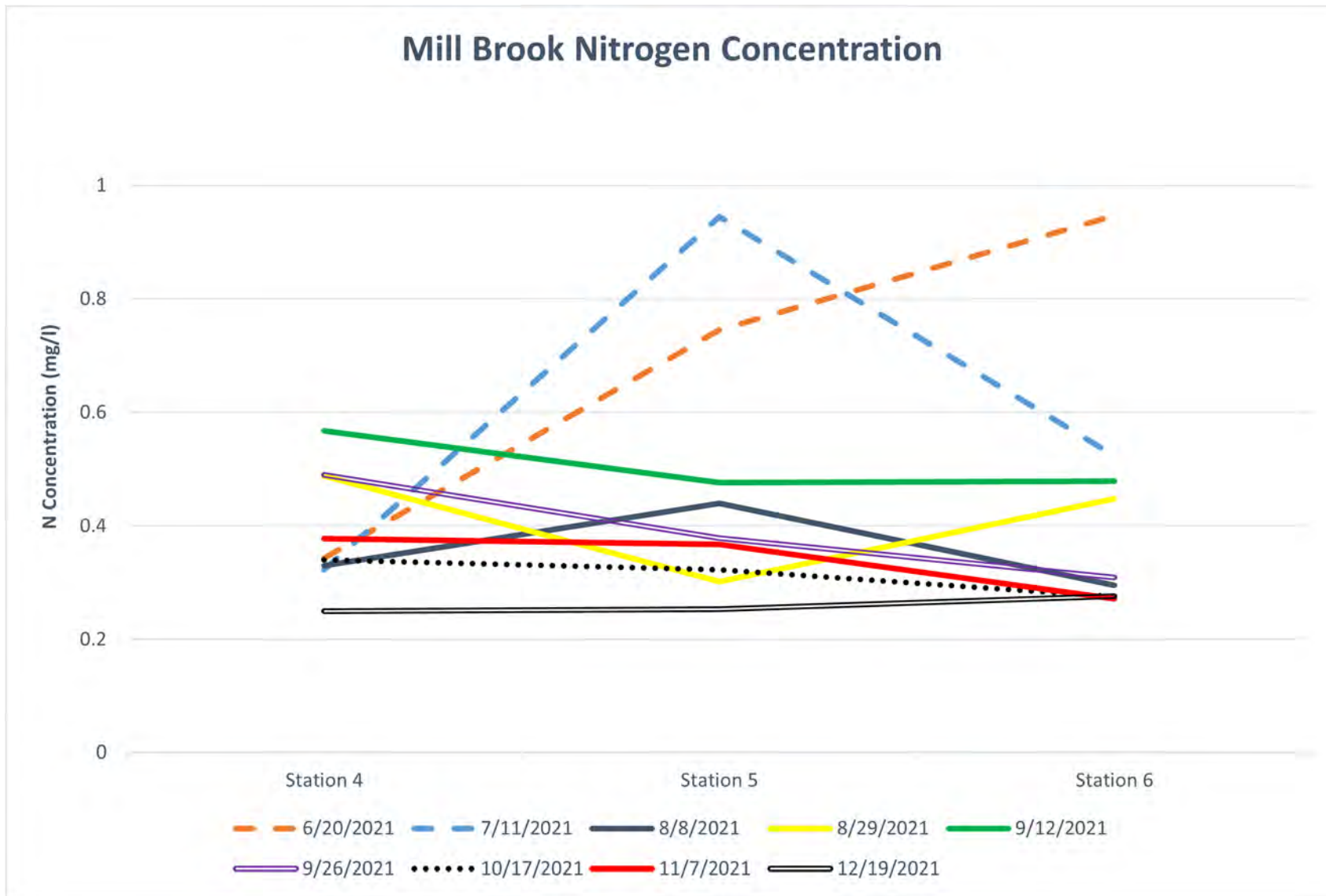


Figure 11 Mill Brook Nitrogen Concentration (mg/l)

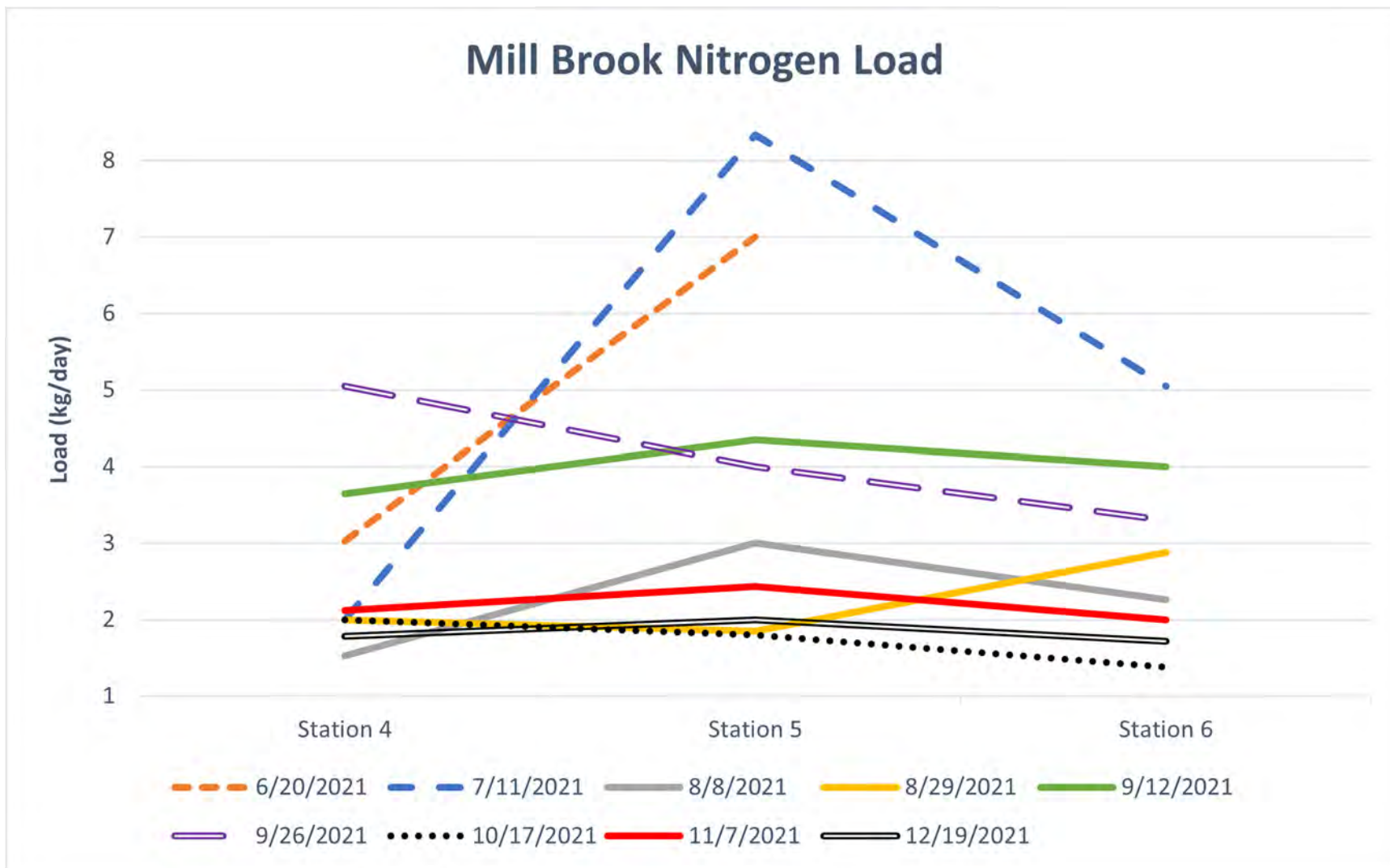


Figure 12 Mill Brook Nitrogen Load (kilograms per day)

Phosphorus Concentrations and Loading

Phosphorus behaves differently from nitrogen in groundwater. Whereas nitrogen moves freely with groundwater, phosphorus migration is retarded by sorption on iron and aluminum hydroxide sediment coatings. As a result, external phosphorus additions to Mill Brook are expected to primarily be a result of direct stormwater runoff rather than groundwater contributions. In addition, historical phosphorus inputs bound to the pond bottom sediments in impoundments can be re-released to the water body under certain geochemical conditions, primarily low dissolved oxygen levels. This internal loading is often a significant contributing factor to eutrophic water quality concerns in ponds.

Similar to nitrogen concentrations, there are no discernible trends in phosphorus concentrations moving downriver (Table 6). However, there is a noticeable decrease in concentration between Station 1 and Station 2. In addition, Station 1 is the only sampling station with a concentration of phosphorus greater than 0.1 milligram per liter. With the perched and undersized culvert at old Farm Road in the Roth Woodlands in between Stations 1 and 2, the impoundment created upstream of that perched culvert could potentially explain the drop in concentration between Stations 1 and 2 with some of the phosphorus at Station 1 being retained behind in the impoundment to accumulate in the bottom sediments due to the perched culvert limiting outflow.

Table 5 Mean Mill Brook Phosphorus Concentrations in milligrams per liter (mg/l)

Station	Mean Phosphorus Concentration (mg/l)
Station 1	0.1281
Station 2	0.0743
Station 3	0.0508
Station 4	0.0674
Station 5	0.0689
Station 6	0.0699
Station 7	0.0716
Station 8	0.0680
Station 9	0.0518
Station 10	0.0721

Table 6 Mean Mill Brook phosphorus loads in kilograms per day (kg/day)

Station	Mean Phosphorus Load (kg/day)
Station 4	0.4569
Station 5	0.5441
Station 6	0.5165

A trend is not readily discernible in either the phosphorus concentration or phosphorus load when looking at the results week by week (Figure 13 and Figure 14). In most weeks there is an increase in load between Station 4 and Station 5, but that is not always the case. Between Station 5 and Station 6 the phosphorus load increases on about half of the sampling dates and decreases on the remaining dates. When looking at the mean phosphorus load per sampling station it appears to follow the same trend as discharge and nitrogen load (Table 6).

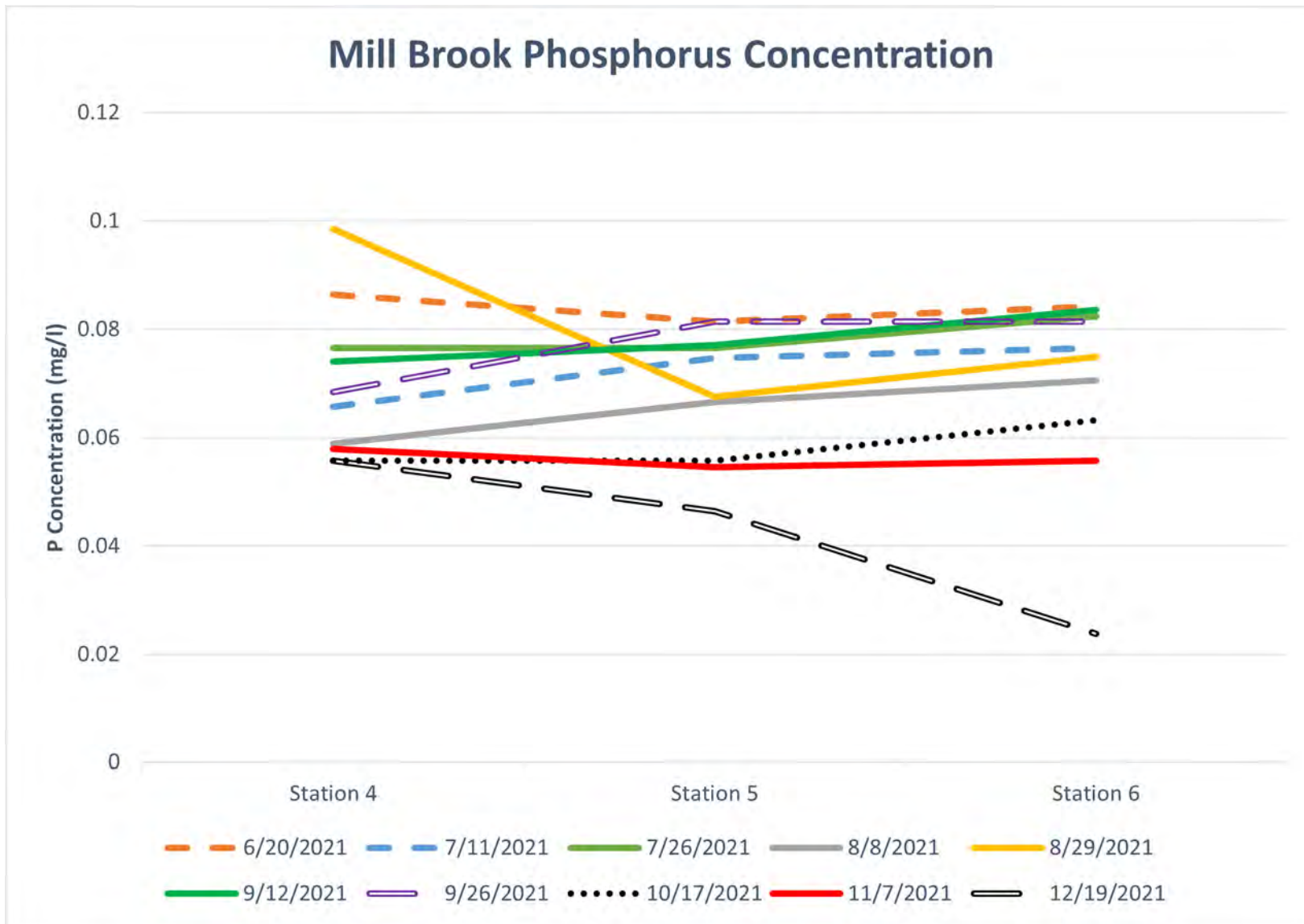


Figure 13 Mill Brook Phosphorus Concentration (mg/l)

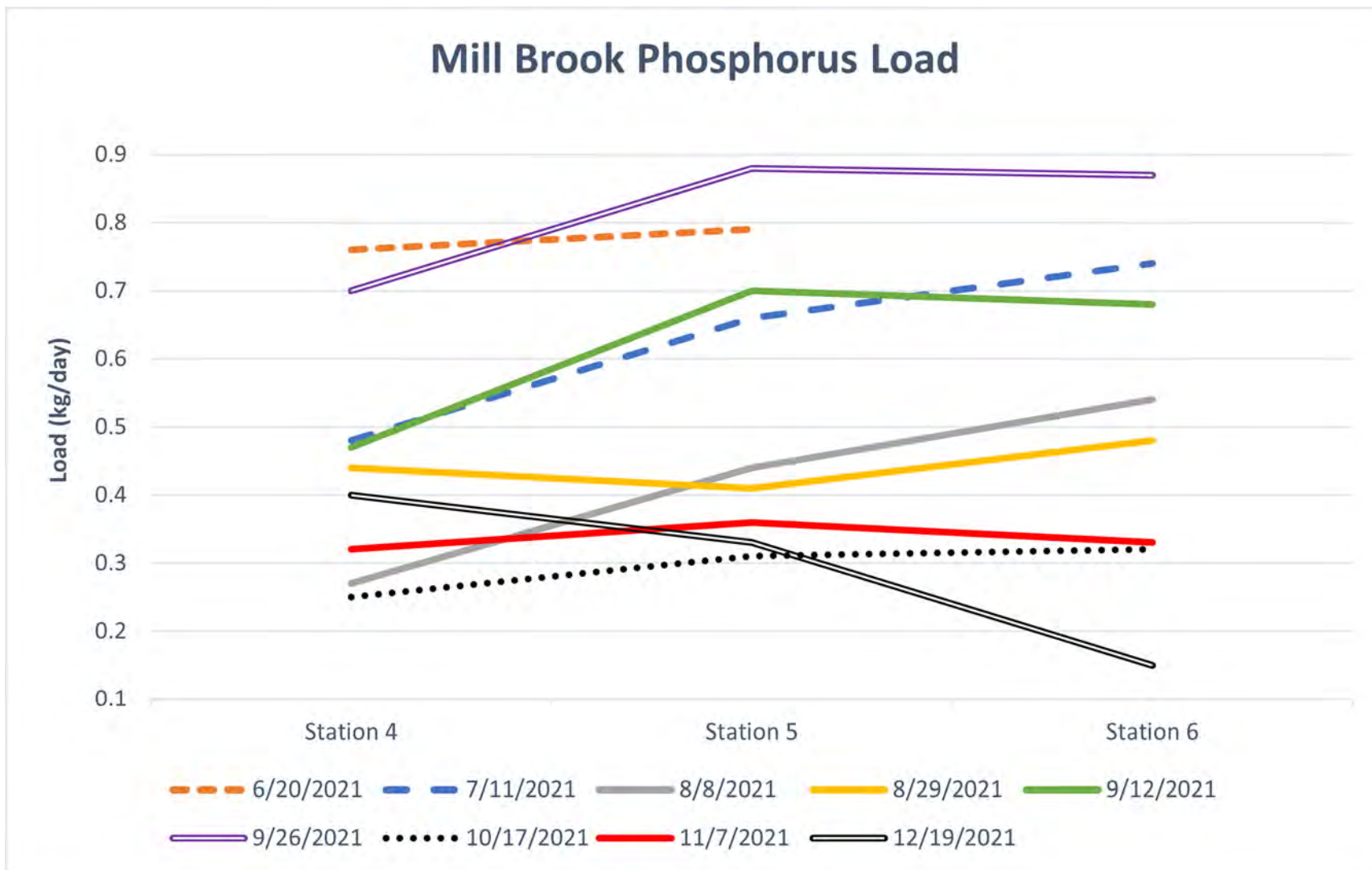


Figure 14 Mill Brook Phosphorus Load (kilograms per day)

However, given the week-by-week results displayed in Figure 14, conclusions cannot be drawn about the primary driver of phosphorus load along Mill Brook. It is important to note, however, that low dissolved oxygen levels occur within Mill Pond during summer months (Figure 15). As a result the sediments within Mill Pond should be considered as a potential source of phosphorus.

Mill Pond Dissolved Oxygen

Dissolved oxygen is a key indicator of system health. Low dissolved oxygen levels in ponds, caused by the decomposition of vegetation, is indicative of eutrophic conditions caused by excess nutrients. In flow-through ponds such as Mill Pond, the primary source of nutrients is the entering brook. In a healthy pond the standard dissolved oxygen concentration is above 6 mg/l. Dissolved oxygen in a pond tends to be diminished by biological activities such as the decomposition of vegetation. Therefore, excessive growth of algae and other vegetation (often fueled by excess nutrient concentrations) will lead to declining oxygen levels as that vegetation dies and is decomposed. To assess oxygen levels within Mill Pond, MBWMC installed a dissolved oxygen logger from May through November 2023 (Figure 15).

During this time period dissolved oxygen concentrations in Mill Pond are consistently in the healthy, over 6 mg/l range before mid-June and after mid-September. This is to be expected, as no matter the nutrient inputs the temperature and sunlight required to trigger an aquatic vegetation bloom are typically not present during these months. Between mid-June and mid-September, dissolved oxygen concentrations within Mill Pond are regularly below the 6 mg/l coldwater fisheries standard. From June 15th to September 15th the dissolved oxygen is below 6 mg/l 33% of the time and the average dissolved oxygen concentration is 6.28 mg/l.

These results indicate that dissolved oxygen levels in Mill Pond fall below healthy levels during summer months. This is likely a result of the quantity of nutrients entering the pond via Mill Brook available to fuel excess algal and other vegetative growth, the extended retention time of nutrients in the impoundment caused by the dam, and high water temperatures, also caused by the dam, with associated reduced oxygen retention capacity.

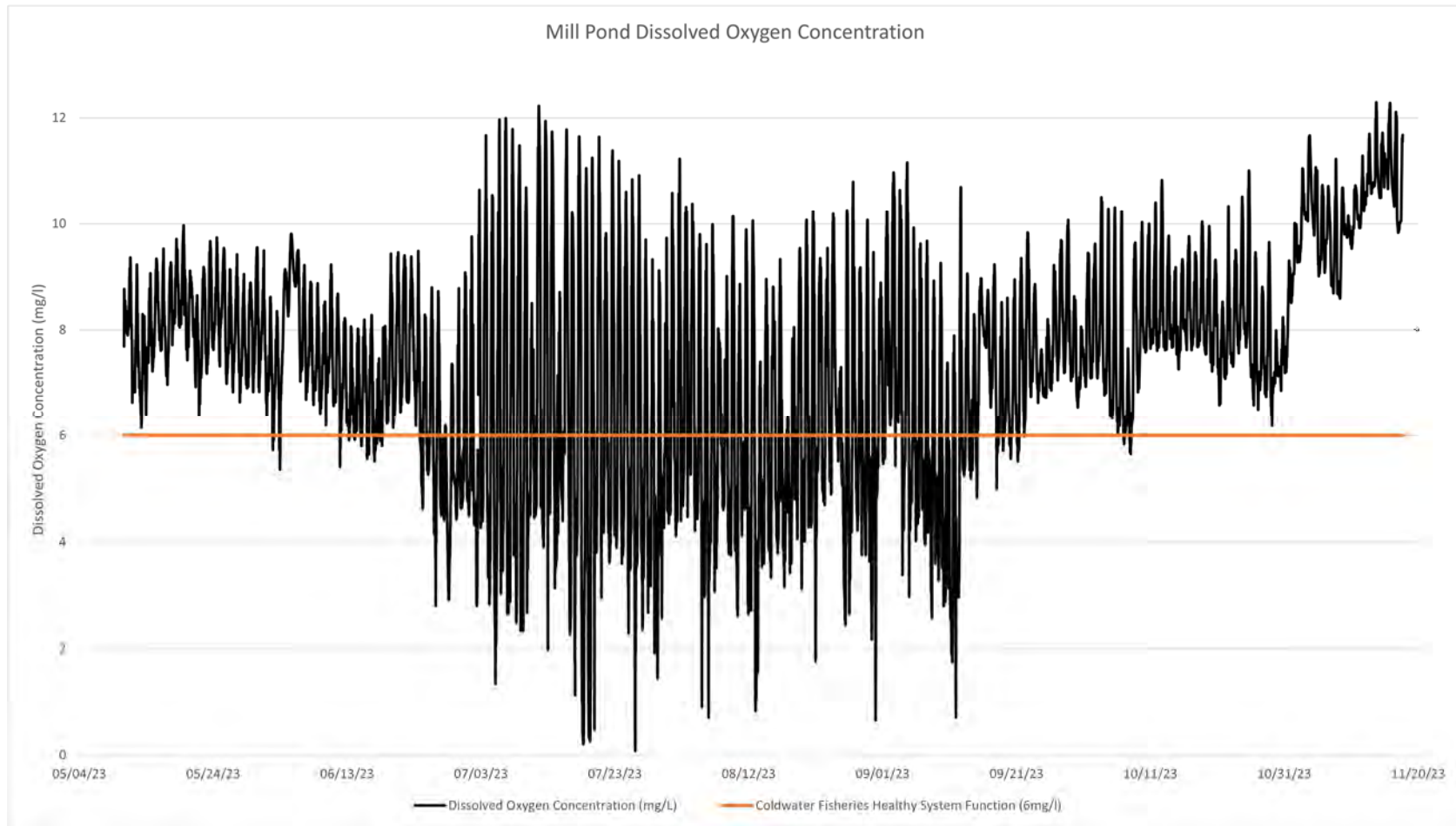


Figure 15 Mill Pond Dissolved Oxygen Concentrations (mg/l)

Temperature

Water temperature is another indicator of system health. High temperatures impact the biodiversity of the system as limited species can survive. Water at higher temperatures also hold less dissolved oxygen, contributing to the effects of low dissolved oxygen described above. This problem is exacerbated in man-made impoundments, as unnaturally increased residence times result in increased solar and atmospheric exposure. This impact is especially notable during the summer months of June, July, and August, when air temperatures are naturally higher and the amount of daylight is the longest of the year. To assess water temperatures within Mill Pond, a temperature logger was installed by MBWMC from May through November 2023 (Figure 16). The highest temperature recorded in Mill Pond through the entire period is 84.09°F while the average temperature during the summer months is 71.7°F. This is significantly higher than the overall average temperature, including summer months, of 65.9°F. Such high temperatures are not conducive to a healthy aquatic ecosystem. These conditions are not unique to Mill Pond – the impact of man-made impoundments on water temperature have been documented across Massachusetts.³

To better assess the health of Mill Pond during summer months, both the temperature data and dissolved oxygen data from mid-June to mid-September was extracted and graphed (Figure 17 and Figure 18). Included on each plot are threshold lines for healthy coldwater fisheries ecosystem function (> 6 mg/L dissolved oxygen concentration and < 68°F temperature⁴). For both parameters Mill Pond water quality is outside the bounds of healthy ecosystem function for a large portion of the time during summer months.

Water temperature data was also collected by water level loggers at other locations in Mill Brook from May 2021 into November 2023. Each station follows the same, cyclical cycle with temperatures above 70 from mid- to late-June into mid-September and temperatures below 40 from mid-November to early March (Figure 19). The temperatures throughout the cycle are so similar for each station that it is difficult to visually differentiate one station from another. The maximum recorded temperature for each station was 80.38, 89.02, 86.46, and 89.94 for Station 3, Station 4, Station 5, and Station 6, respectively. Note that none of these stations are within impoundments, indicating that the warming effects of the impoundments persist throughout the Mill Brook system. Stations 3, 4, and 6 are located shortly downstream of impoundments while Station 5 is located significantly downstream from the nearest upstream impoundment.

³ Zaidel et. al.

⁴ MassDEP

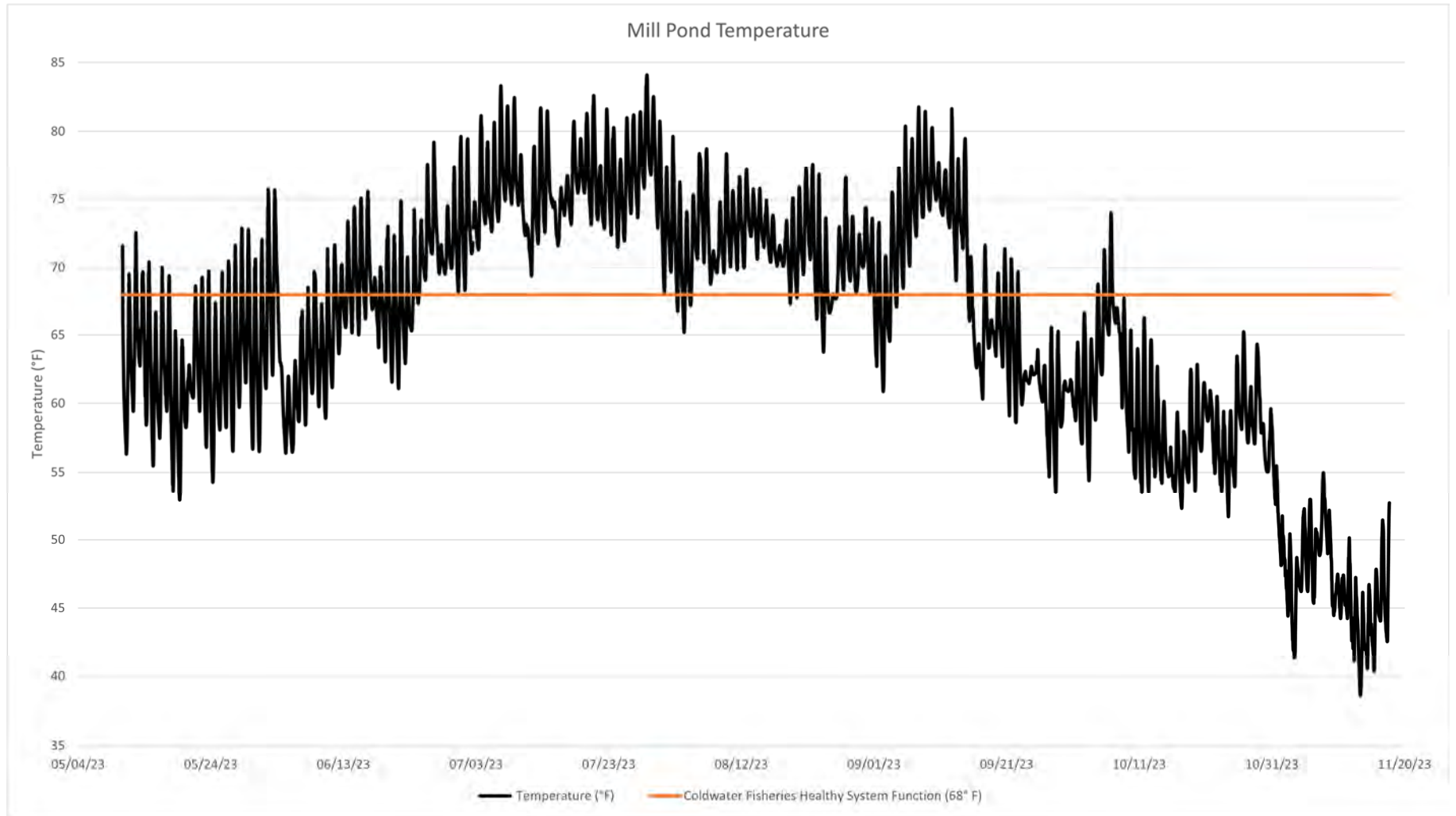


Figure 16 Mill Pond Temperature (°F)

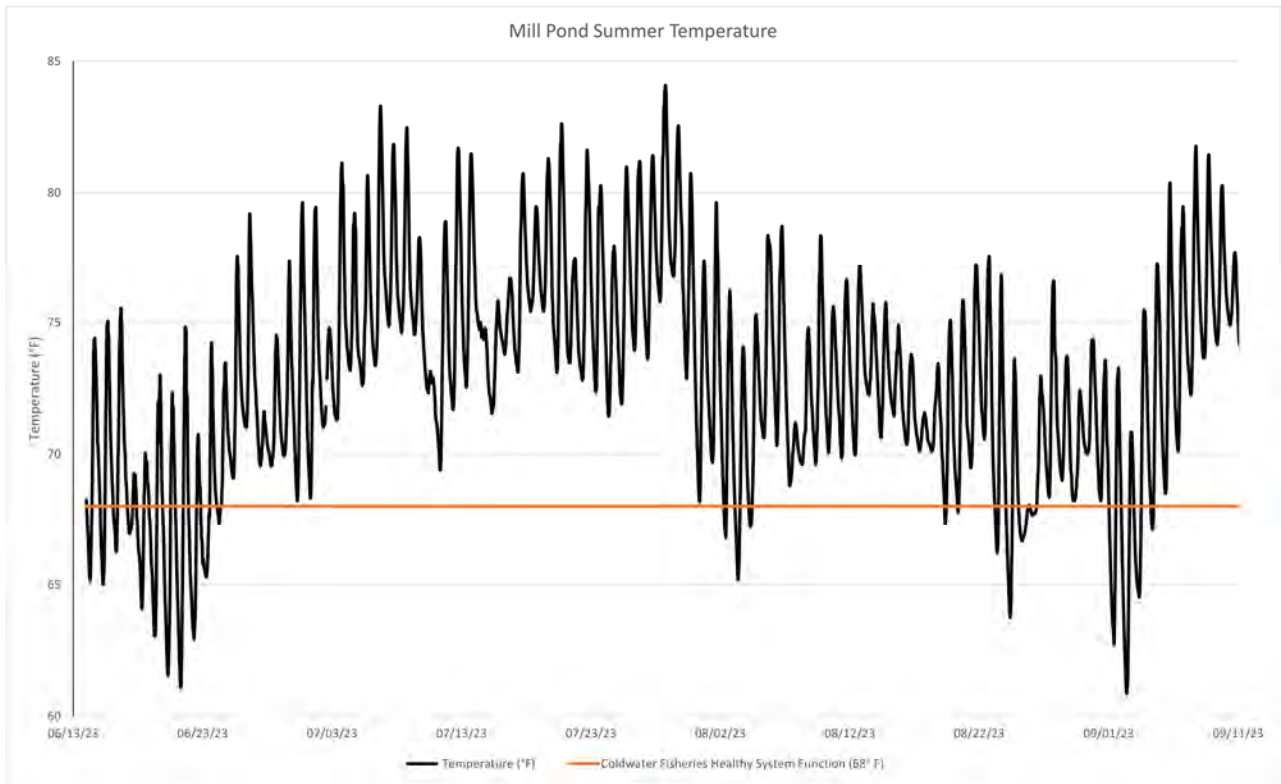


Figure 17 Mill Pond Summer Temperature (°F)

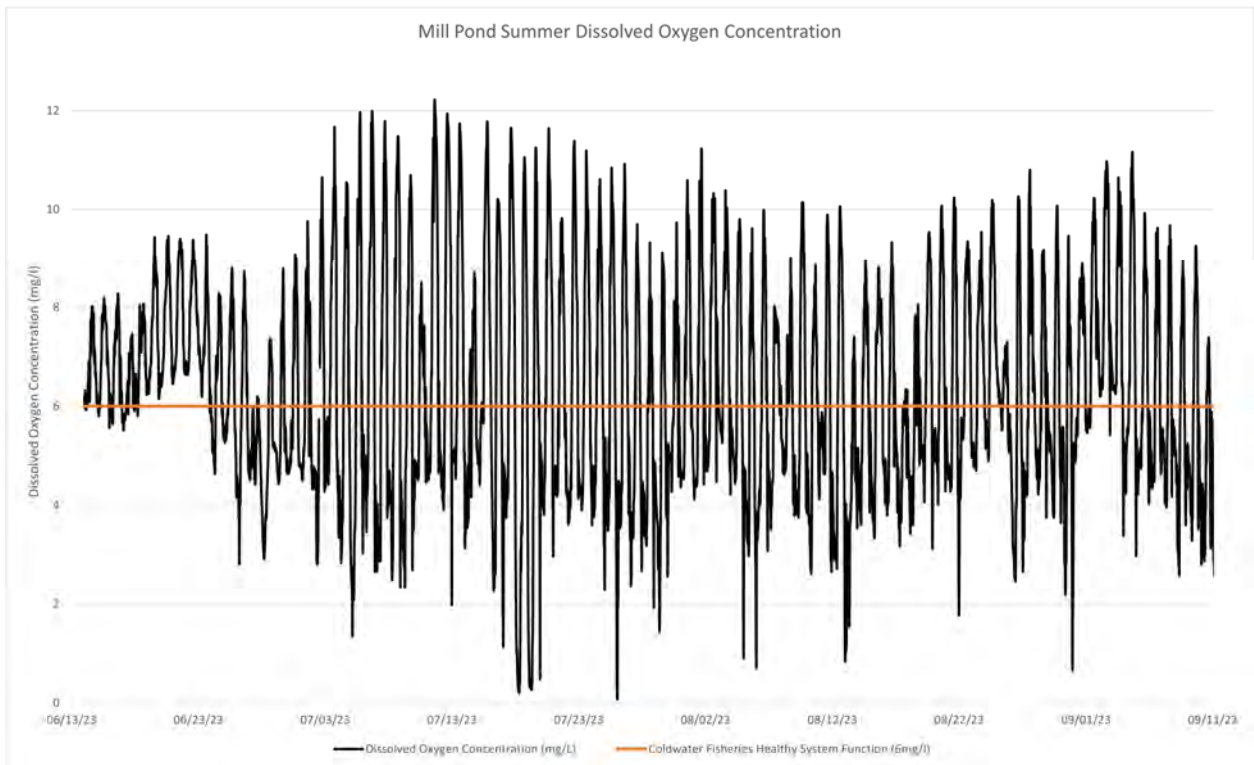


Figure 18 Mill Pond Summer Dissolved Oxygen (mg/l)

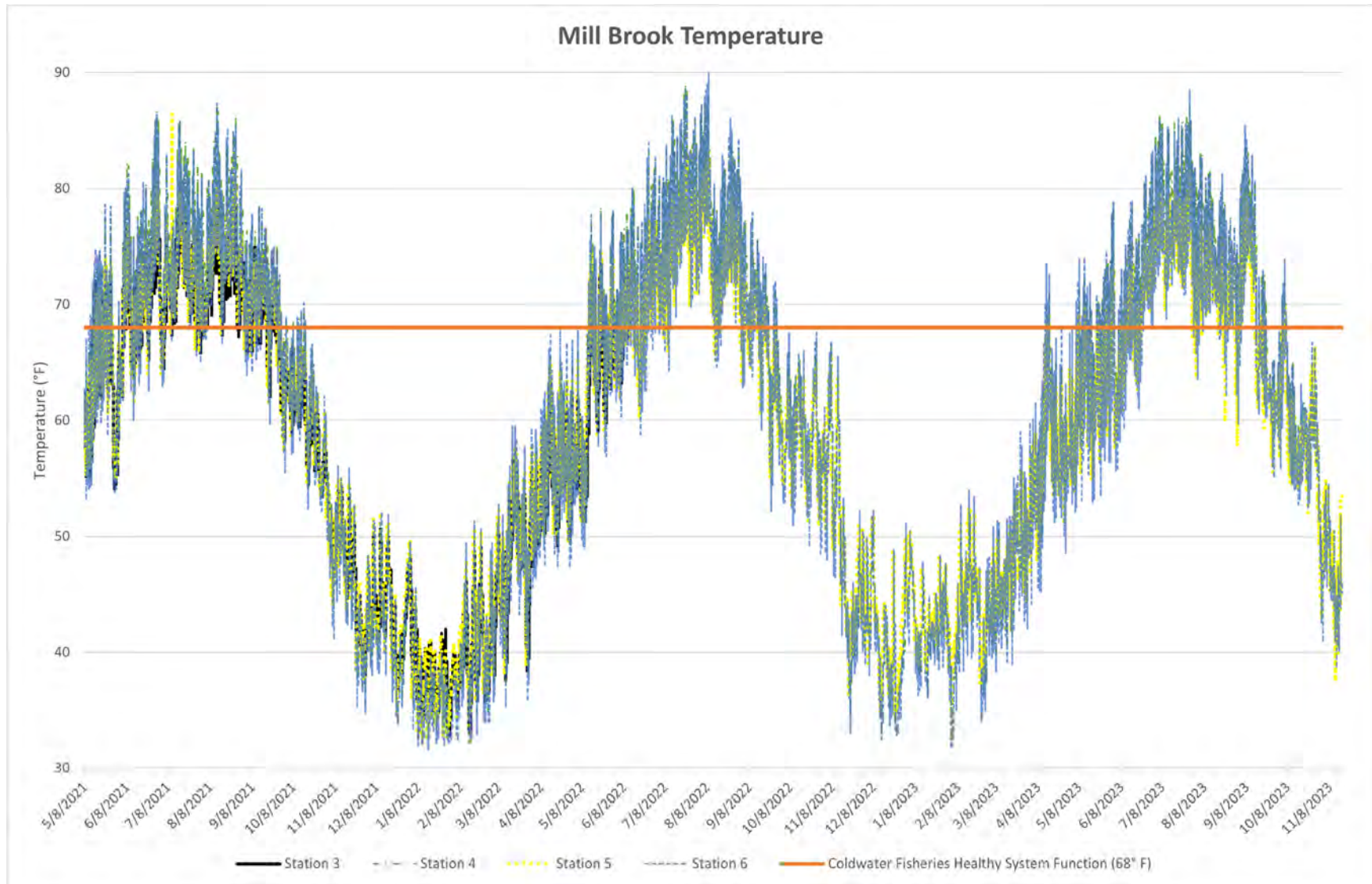


Figure 19 Mill Brook Temperature

Consistency Review

Prior to drawing conclusions, the data from this study (the present study) was compared to data presented in previously published reports to evaluate consistency. The nitrogen concentrations at Station 6 line up with concentrations from a nearby sampling station within the Massachusetts Estuaries Project (MEP) Report for Tisbury Great Pond.⁵ However, the discharge values, and thus the resultant nitrogen loading values, were not similar. The MEP Report determined that the discharge of this portion of Mill Brook was 17,363 m³ per day (7.097 cfs) and the nitrogen load to be 8.52 kg per day. On average, the present study calculated the discharge of Mill Brook at Station 6 to be 4.12 cfs and the mean nitrogen load to be 3.05 kilograms per day.

Table 7 Comparison of the Present Study and the MEP Report

	Present Study	MEP Report	% Difference
Discharge	4.12 cfs	7.097 cfs	58%
Nitrogen load	3.05 kg/day	8.52 kg/day	36%

HW looked to other previously published reports to examine this discrepancy. In 2018 the Mill Brook Watershed Management Planning Committee published the Mill Brook Watershed Study Report and Recommendations (the 2018 study).⁶ Included within the 2018 study is a reference to 17 years of flow data collected by Kent Healy, noting that there is a wide variability in flow from year to year. Figure 20, directly from the 2018 study, graphically displays that variability. It is important to note that the 2018 study did not include the data evaluated to create this graphic. As such HW could not conduct a quality check of this data nor do we know how many data points were collected in each year or overall to establish the average flows. However, the MEP report specifically notes on page 55 that Mill Brook measurements were “reconciled against historic flow measurements conducted during the 1990’s and 2000’s (K. Healy) as a check for consistency.”

⁵ Howes et al.

⁶ Town of West Tisbury Mill Brook Watershed Management Planning Committee

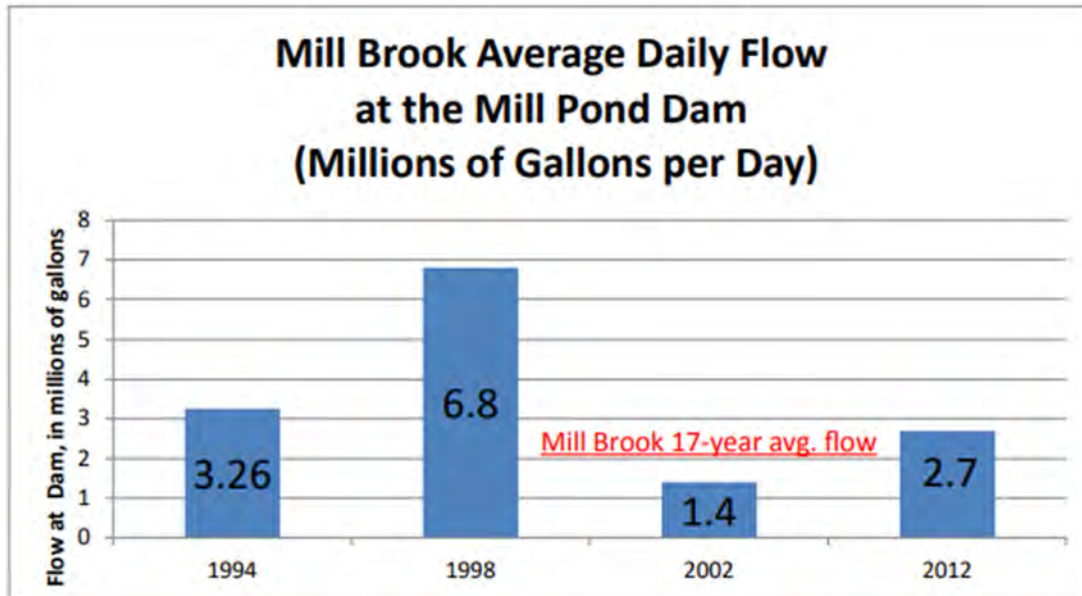


Figure 20 Mill Brook Average Daily Flow at the Mill Pond Dam (taken from the Mill Brook Watershed Study Report and Recommendations)

In order to compare the 2018 study results to the present study results, HW converted the results of the present study to units consistent with Figure 20. The present study has an average discharge of 2.66 million gallons per day at Station 6, just above the 2018 report's average flow for Mill Brook. This indicates that while the results of the present study are inconsistent with the MEP Report, which had less than two years of data, they are within the normal discharge fluctuations recorded over a long-term data set. HW examined nitrogen concentrations in order to assess the 36% difference in nitrogen loading from the present study and the MEP report. The nitrogen concentrations presented in the present study at Station 6 are consistent with those in both the MEP report and the 2018 study. This indicates that the discrepancy in nitrogen loading between the present study and the MEP report is driven by the discrepancy in discharge. As established above, the discharge included in the present study is within the normal fluctuations of Mill Brook. Therefore the nitrogen loading presented in the present study is also within the normal fluctuations of Mill Brook.

Discussion

Impoundments

Due to the documented water quality and habitat impacts from dams in general, all impoundments along Mill Brook should be evaluated to determine the feasibility of dam removal. The effects of impoundments on water quality, ecosystem biodiversity, fish passage, habitat connectivity, and climate change resilience are well documented. Studying the feasibility of removal will enable MBWMC to decide which impoundments are appropriate to remove, prioritize impoundments to remove, and lay the groundwork for the engineering required for impoundment removal.

Future Monitoring

As seen in Figures 6, 8, 9, 10, and 11, the discharge of Mill Brook is highly variable. As a result, the nutrient load of Mill Brook is also variable. A longer term dataset of both flow and nutrient concentrations would better inform assessments of water quality trends that may be occurring either naturally or in response to future water quality improvement projects. Additional monitoring will also assist in the planning and assessment of such future water quality improvement projects.

Given the transient water quality impacts that occur from stormwater runoff, designing and implementing a wet weather sampling plan would help to evaluate the potential role played by short duration runoff events on the overall water quality of Mill Brook. Such potential additional sampling should be conducted under a wet weather sampling plan to establish a process and procedure for capturing data associated with rainfall events.

Climate Change

Separate from the data assessed in this report, it is important to recognize previously identified opportunities to increase climate resilience of the Mill Brook corridor. The 2018 West Tisbury and Chilmark Municipal Vulnerability Program Grant Report identified three opportunities to increase resilience that could apply to the Mill Brook corridor.⁷

- Upgrade bridges, culverts, and other crossings to accommodate higher flows from stormwater runoff during storm events without disruption;
- Filter runoff from the road using vegetated swales and other green infrastructure techniques to preserve water quality and reduce runoff volumes; and
- Maintain and monitor dams for Priester's Pond, Mill Pond, and Looks Pond, which could threaten to wash out adjacent roads in case of failure or breach.

These are similar to actions identified by the Martha's Vineyard Commission's 2022 Climate Action Plan to support Goal #1: By 2040, critical vulnerable roads and infrastructure are protected or relocated through a network that prioritizes non-fossil fuel-based transportation and nature based strategies.⁸ Identified actions that could be implemented in the Mill Brook corridor include:

- Action 2.4 – Reimagine vulnerable roads, plan for, and find, sustainable longer-term solutions;
- Action 3.1 – Develop a pilot near-term green infrastructure project to help inform protocol; and
- Action 3.2 – Develop a protocol to assess climate impacts on roads and infrastructure and propose measures to minimize the impacts.

⁷ Dodson & Flinker

⁸ Martha's Vineyard Commission

Actions to improve climate resiliency of the corridor are not contingent on potential future data collection described above. Assessment, planning, and implementation for such projects can occur at any time.

Appendices

Appendix A: Laboratory Results

Appendix B: YSI Data

Appendix C: Flow and Stage Data

Appendix D: Graphs

References

Dodson & Flinker, (2018). Community Resilience Building Workshop Summary of Findings, West Tisbury and Chilmark, MA. Prepared for Massachusetts Executive Office of Energy and Environmental Affairs. <https://www.mass.gov/files/documents/2018/10/19/2017-2018-mvp-planning-grant-report-chilmark-west-tisbury.pdf>

Howes B.L., E.M. Eichner, R.I. Samimy, S. Kelley, J. S. Ramsey, D.R. Schlezinger, (2013). Linked Watershed-Embayment Management Modeling Approach to Determine the Critical Nitrogen Loading Threshold for the Tisbury Great Pond / Black Point Pond System, Chilmark and West Tisbury, Massachusetts. SMAST/MassDEP Massachusetts Estuaries Project, Massachusetts Department of Environmental Protection. Boston, MA.

Martha's Vineyard Commission (2022). Climate Action Plan – The Vinyard Way. https://kladas-hboard-clientsourcefiles.s3.amazonaws.com/Marthas+Vineyard/KLA_Martha_Vineyard_CAP_Design_FINAL.pdf

MassDEP. 2024. Data Requirements and Procedures to Support the Designation of Freshwater Streams and Rivers as Cold Waters in the Massachusetts Surface Water Quality Standards. CN 587.0, Massachusetts Department of Environmental Protection, Bureau of Water Resources, Division of Watershed Management, Watershed Planning Program. Worcester, MA.

Town of West Tisbury Mill Brook Watershed Management Planning Committee, (2018). Mill Brook Watershed Study Report and Recommendations. West Tisbury, MA. <https://www.westtisbury-ma.gov/sites/g/files/vyhlif8396f/uploads/mill-brook-watershed-study-report-conclusions-recommendations.pdf>

Turnipseed, D.P., and Sauer, V.B., 2010, Discharge measurements at gaging stations: U.S. Geological Survey Techniques and Methods book 3, chap. A8, p2-3. <https://pubs.usgs.gov/tm/tm3-a8/tm3a8.pdf>

Zaidel, P., Roy, H., Houle, K., Lambert, C., Letcher, B., Nislow, K., & Smith, C., (2021). Impacts of Small Dams on Stream Temperature. Ecological Indicators 120 (2021) 106878. <https://doi.org/10.1016/j.ecolind.2020.106878>

Appendix A: Laboratory Results

Dr. Brian Howes																				
Date	Sample ID	Site Name	Depth (m)	QA	uM PO4	uM TP	uM NH4	uM NOx	uM DIN	uM DON	uM TDN	uM POC	uM PON	C/N Ratio	uM TON	uM TN	Chl a ug/L	Pheo ug/L	Chla+Pheo Ratio	Total Pigments ug/L
4/25/2021	MBWT1	MB1			0.44	1.45	0.03	1.27	1.30	27.33	28.62	70.60	3.58	19.71	30.91	32.21	0.70	0.31	70%	1.01
5/16/2021	MBWT1	MB1			0.51	1.27	0.03	0.13	0.16	19.53	19.69	51.35	2.37	21.65	21.90	22.06	0.99	1.10	47%	2.08
6/6/2021	MBWT1	MB1			0.54	1.84	1.81	2.85	4.66	23.68	28.33	74.66	3.46	21.57	27.14	31.79	0.58	0.24	71%	0.83
6/20/2021	MBWT1	MB1			0.61	2.53	1.00	2.91	3.91	28.79	32.71	111.31	5.23	21.29	34.02	37.93	0.59	0.24	71%	0.83
7/1/2021	MBWT1	MB1			0.72	4.18	2.71	3.32	6.03	42.70	48.74	126.76	5.47	23.17	48.17	54.21	4.56	0.03	99%	4.58
7/26/2021	MBWT1	MB1			1.21	4.43	2.46	6.74	9.20	27.88	37.08	106.74	4.94	21.62	32.81	42.02	0.61	0.34	64%	0.95
8/8/2021	MBWT1	MB1			1.00	4.68	2.14	6.91	9.04	22.79	31.83	142.68	7.32	19.49	30.11	39.15	0.60	0.19	75%	0.79
8/29/2021	MBWT1	MB1			1.2	5.77	2.00	5.52	7.52	19.94	27.46	214.66	10.31	20.82	30.25	37.77	0.96	0.28	78%	1.24
9/12/2021	MBWT1	MB1			0.84	4.29	0.91	2.20	3.11	24.34	27.46	158.24	7.16	22.08	31.51	34.62	0.25	0.25	50%	0.50
9/26/2021	MBWT1	MB1			1.19	7.41	1.27	4.76	6.03	32.51	38.54	304.25	17.22	17.67	49.73	55.76	1.15	0.60	66%	1.75
10/17/2021	MBWT1	MB1			1.75	6.84	1.52	1.07	2.59	23.27	25.86	208.32	10.80	19.30	34.06	36.65	0.59	0.16	79%	0.75
11/7/2021	MBWT1	MB1			0.95	3.01	0.27	0.02	0.28	15.95	16.24	102.62	4.16	24.68	20.11	20.39	0.29	0.04	89%	0.32
12/19/2021	MBWT1	MB1			0.90	3.20	0.03	0.99	1.02	17.87	18.89	101.59	4.55	22.32	22.42	23.44	0.44	0.12	79%	0.56
6/20/2021	MBWT10	MB10			1.54	2.22	2.33	7.29	9.62	24.25	33.87	47.14	2.37	19.87	26.63	36.24	0.50	0.19	72%	0.70
7/26/2021	MBWT10	MB10			1.63	2.12	3.01	6.97	9.98	12.52	22.50	64.79	2.08	31.12	14.60	24.59	0.26	0.26	50%	0.51
8/29/2021	MBWT10	MB10			2.11	3.60	1.65	10.77	12.42	11.54	23.96	76.17	5.70	13.37	17.24	29.66	0.75	0.15	84%	0.89
9/26/2021	MBWT10	MB10			1.05	2.39	1.27	2.26	3.53	22.47	26.00	110.25	9.03	12.21	31.50	35.03	2.26	1.25	64%	3.51
10/17/2021	MBWT10	MB10			1.64	2.28	2.33	10.38	12.71	13.58	26.29	34.36	2.34	14.71	15.92	28.63	0.42	0.53	44%	0.95
12/19/2021	MBWT10	MB10			0.85	1.36	0.47	4.26	4.72	14.86	19.59	33.47	2.15	15.54	17.02	21.74	0.61	0.21	75%	0.82
4/25/2021	MBWT2	MB2			0.46	1.01	0.03	0.60	0.63	41.70	42.32	67.59	3.22	20.99	44.92	45.54	1.47	0.35	81%	1.82
5/16/2021	MBWT2	MB2			0.82	1.39	0.11	1.23	1.34	15.71	17.05	81.05	3.58	22.62	19.30	20.64	1.14	0.63	64%	1.78
6/6/2021	MBWT2	MB2			0.97	2.34	0.78	1.67	2.45	38.41	40.87	147.64	5.95	24.79	44.37	46.82	3.25	0.90	78%	4.15
6/20/2021	MBWT2	MB2			0.98	3.48	2.07	2.63	4.70	22.17	26.88	77.63	6.00	12.93	28.18	32.88	1.67	0.45	79%	2.12
7/1/2021	MBWT2	MB2			0.85	3.42	1.13	1.62	2.75	42.79	45.53	156.26	6.92	22.57	49.71	52.45	6.55	0.03	100%	6.57
7/26/2021	MBWT2	MB2			1.83	2.75	2.76	3.02	5.78	39.76	45.53	112.22	3.65	30.77	43.40	49.18	0.20	0.37	35%	0.57
8/8/2021	MBWT2	MB8			0.67	1.49	1.73	4.04	5.77	12.31	18.07	48.98	2.15	22.82	14.45	20.22	0.35	0.54	39%	0.88
8/29/2021	MBWT2	MB8			0.87	2.04	1.82	3.99	5.82	11.31	17.13	63.70	2.95	21.57	14.26	20.08	0.42	0.15	74%	0.57
9/12/2021	MBWT2	MB8			1.00	2.35	0.25	2.32	2.57	23.14	25.71	127.94	6.20	20.65	29.34	31.91	5.12	0.12	98%	5.24
9/26/2021	MBWT2	MB8			0.80	3.32	1.36	2.27	3.63	49.48	53.11	265.99	13.65	19.49	63.12	66.76	2.26	0.67	77%	2.93
10/17/2021	MBWT2	MB8			0.76	3.53	0.43	1.89	2.32	14.21	16.53	80.36	3.48	23.07	17.69	20.01	0.54	0.19	74%	0.73
11/7/2021	MBWT2	MB8			0.83	1.31	0.42	0.86	1.28	14.23	15.51	73.10	3.06	23.91	17.28	18.57	0.28	0.18	61%	0.45
12/19/2021	MBWT2	MB8			0.55	1.40	0.24	1.69	1.94	13.13	15.07	93.61	3.85	24.32	16.98	18.92	0.77	0.67	53%	1.44
4/25/2021	MBWT3	MB3			0.49	1.75	0.22	0.08	0.30	70.30	70.60	80.45	5.76	13.97	76.06	76.36	5.18	2.25	70%	7.43
5/16/2021	MBWT3	MB3			0.62	1.52	0.11	0.17	0.28	31.26	31.54	90.65	7.82	11.59	39.08	39.36	4.52	2.80	62%	7.32
6/6/2021	MBWT3	MB3			0.69	1.58	1.23	1.36	2.59	27.50	30.08	57.44	4.31	13.33	31.80	34.39	11.22	9.00	55%	20.22
6/20/2021	MBWT3	MB3			0.91	1.84	1.62	1.91	3.53	45.21	48.74	210.30	7.89	26.65	53.10	56.63	2.67	2.42	52%	5.08
7/1/2021	MBWT3	MB3			0.70	1.74	1.05	2.72	3.76	29.52	33.29	56.10	5.16	10.88	34.68	38.44	2.64	1.63	62%	4.27
8/8/2021	MBWT3	MB3			0.80	1.49	0.70	2.99	3.69	19.69	23.38	56.01	3.44	16.30	23.13	26.82	2.05	0.74	73%	2.79
8/29/2021	MBWT3	MB3			0.72	1.80	2.79	3.65	6.44	11.80	18.25	210.11	12.64	16.63	24.44	30.88	1.78	1.38	56%	3.17

9/12/2021	MBWT3	MB3			0.84	2.07	0.91	1.82	2.73	30.26	33.00	72.98	5.28	13.83	35.54	38.27	4.34	3.16	58%	7.50
10/17/2021	MBWT3	MB3			0.87	1.38	1.47	2.90	4.37	21.92	26.29	42.53	2.82	15.08	24.74	29.11	4.49	1.43	76%	5.92
11/7/2021	MBWT3	MB3			0.83	1.24	0.65	0.44	1.09	15.35	16.44	47.72	3.51	13.58	18.86	19.96	1.59	1.24	56%	2.83
4/25/2021	MBWT4	MB4			0.81	1.58	1.17	2.09	3.26	27.12	30.37	58.82	4.91	11.97	32.03	35.29	2.95	2.50	54%	5.45
5/16/2021	MBWT4	MB4			0.88	1.96	1.05	0.11	1.16	14.58	15.74	81.94	7.58	10.82	22.16	23.32	4.52	2.57	64%	7.09
6/6/2021	MBWT4	MB4			0.99	2.22	0.65	0.97	1.61	51.50	53.11	72.88	6.49	11.23	57.98	59.60	5.15	2.89	64%	8.04
6/20/2021	MBWT4	MB4			1.37	2.79	0.44	0.57	1.01	18.56	19.57	57.09	4.91	11.62	23.48	24.49	1.94	1.39	58%	3.33
7/1/2021	MBWT4	MB4			0.85	2.12	0.89	0.79	1.68	15.87	17.55	59.96	5.52	10.87	21.39	23.07	2.76	2.68	51%	5.44
7/26/2021	MBWT4	MB4			1.43	2.47	1.43	0.71	2.15	15.93	18.07	101.60	8.49	11.97	24.41	26.56	4.12	2.84	59%	6.96
8/8/2021	MBWT4	MB4			0.82	1.90	1.07	0.89	1.96	13.43	15.39	79.54	8.20	9.70	21.63	23.59	5.84	4.06	59%	9.89
8/29/2021	MBWT4	MB4			0.72	3.18	1.38	2.06	3.45	21.68	25.13	83.70	9.73	8.60	31.41	34.86	3.09	2.21	58%	5.29
9/12/2021	MBWT4	MB4			0.84	2.39	1.57	1.77	3.34	29.95	33.29	97.78	7.21	13.56	37.16	40.50	8.07	3.25	71%	11.31
9/26/2021	MBWT4	MB4			0.90	2.21	3.07	2.02	5.09	22.22	27.31	83.92	7.70	10.90	29.92	35.01	6.75	2.38	74%	9.14
10/17/2021	MBWT4	MB4			0.87	1.80	1.76	1.40	3.15	15.04	18.19	67.05	6.09	11.01	21.12	24.28	4.14	2.52	62%	6.67
11/7/2021	MBWT4	MB4			1.17	1.87	1.11	2.94	4.05	17.87	21.92	70.44	5.06	13.92	22.93	26.98	2.92	0.48	86%	3.40
12/19/2021	MBWT4	MB4			0.90	1.80	0.99	2.41	3.40	10.68	14.08	43.07	3.79	11.37	14.47	17.87	3.50	1.94	64%	5.44
4/25/2021	MBWT5	MB5			0.81	1.98	0.55	3.39	3.94	10.98	14.92	67.88	4.91	13.81	15.89	19.83	4.02	1.46	73%	5.48
5/16/2021	MBWT5	MB5			0.98	2.34	0.03	2.87	2.89	12.00	14.89	69.07	5.03	13.72	17.03	19.92	2.82	1.36	67%	4.17
6/6/2021	MBWT5	MB5			0.89	2.60	2.17	4.76	6.93	20.31	27.24	130.35	7.58	17.20	27.89	34.82	4.30	1.75	71%	6.06
6/20/2021	MBWT5	MB5			1.32	2.63	1.26	4.63	5.89	42.56	48.45	72.39	4.79	15.10	47.35	53.24	2.35	1.29	65%	3.64
7/1/2021	MBWT5	MB5			0.60	2.41	0.42	5.12	5.53	58.93	64.46	45.02	2.98	15.12	61.91	67.44	1.68	0.93	64%	2.61
7/26/2021	MBWT5	MB5			1.43	2.47	0.88	5.48	6.36	13.52	19.88	49.22	2.98	16.53	16.49	22.86	1.69	0.96	64%	2.65
8/8/2021	MBWT5	MB5			1.20	2.15	0.50	5.44	5.94	21.52	27.46	54.33	3.92	13.85	25.44	31.38	3.40	0.99	77%	4.38
8/29/2021	MBWT5	MB5			1.23	2.18	3.15	5.70	8.85	9.52	18.36	42.88	3.20	13.42	12.71	21.56	0.73	0.43	63%	1.16
9/12/2021	MBWT5	MB5			1.16	2.49	0.75	5.75	6.49	23.30	29.79	66.74	4.19	15.94	27.49	33.98	4.51	0.39	92%	4.90
9/26/2021	MBWT5	MB5			1.10	2.63	0.28	2.99	3.27	16.18	19.44	82.73	7.58	10.92	23.75	27.02	6.17	4.84	56%	11.01
10/17/2021	MBWT5	MB5			0.97	1.80	0.38	3.67	4.05	15.36	19.41	41.39	3.61	11.48	18.97	23.02	1.86	0.97	66%	2.83
11/7/2021	MBWT5	MB5			1.11	1.76	0.34	3.70	4.05	19.04	23.09	51.64	3.12	16.54	22.16	26.21	0.93	0.29	76%	1.22
12/19/2021	MBWT5	MB5			0.60	1.50	0.80	4.79	5.59	9.97	15.57	34.34	2.52	13.64	12.49	18.08	1.63	1.82	47%	3.45
4/25/2021	MBWT6	MB6			0.96	1.81	0.32	3.21	3.53	66.49	70.02	59.62	3.82	15.59	70.31	73.84	2.80	1.04	73%	3.85
5/16/2021	MBWT6	MB6			0.72	2.34	0.95	3.24	4.19	30.56	34.75	72.29	5.16	14.02	35.71	39.90	3.27	0.89	79%	4.16
6/6/2021	MBWT6	MB6			0.99	2.69	2.17	5.30	7.47	16.49	23.96	77.68	5.64	13.77	22.13	29.60	3.94	1.83	68%	5.77
6/20/2021	MBWT6	MB6			1.20	2.72	1.62	4.90	6.51	56.51	63.02	67.78	4.55	14.90	61.06	67.57	1.93	0.96	67%	2.88
7/1/2021	MBWT6	MB6			1.15	2.47	0.93	4.31	5.24	28.05	33.29	53.68	4.07	13.20	32.11	37.36	1.14	1.24	48%	2.38
7/26/2021	MBWT6	MB6			1.13	2.66	0.88	3.96	4.84	23.34	28.19	77.91	5.58	13.95	28.93	33.77	3.40	2.72	55%	6.12
8/8/2021	MBWT6	MB6			0.67	2.28	0.37	4.22	4.60	13.33	17.93	52.09	3.20	16.30	16.53	21.12	2.12	1.00	68%	3.12
8/29/2021	MBWT6	MB6			1.23	2.42	1.29	6.18	7.47	18.82	26.29	65.15	5.70	11.44	24.51	31.99	1.79	0.98	65%	2.77
9/12/2021	MBWT6	MB6			1.05	2.70	0.33	4.12	4.45	25.92	30.37	64.02	3.82	16.74	29.75	34.20	3.86	2.42	61%	6.29
9/26/2021	MBWT6	MB6			0.55	2.63	0.73	3.18	3.91	13.23	17.14	64.12	4.91	13.05	18.14	22.05	2.06	0.80	72%	2.86
10/17/2021	MBWT6	MB6			1.07	2.04	0.57	2.35	2.92	12.97	15.89	51.22	3.79	13.52	16.76	19.68	1.70	0.71	71%	2.41
11/7/2021	MBWT6	MB6			1.06	1.80	0.34	2.36	2.70	13.77	16.47	52.72	2.94	17.93	16.71	19.41	1.27	0.10	92%	1.37
12/19/2021	MBWT6	MB6			0.65	1.70	0.77	4.70	5.47	9.89	15.36	58.94	4.33	13.60	14.23	19.70	2.45	1.39	64%	3.84
4/25/2021	MBWT7	MB7			0.86	2.25	0.36	3.32	3.69	12.36	16.05	67.24	4.55	14.78	16.91	20.60	3.80	1.79	68%	5.60
5/16/2021	MBWT7	MB7			0.90	2.34	0.71	2.69	3.40	14.20	17.60	63.97	4.91	13.02	19.12	22.51	3.55	0.96	79%	4.51
6/6/2021	MBWT7	MB7			0.89	2.60	2.35	4.74	7.09	18.69	25.78	73.72	5.03	14.64	23.73	30.81	3.18	2.39	57%	5.57
6/20/2021	MBWT7	MB7			0.81	3.54	0.90	0.58	1.49	18.39	19.88	62.29	5.03	12.37	23.43	24.92	1.67	1.17	59%	2.85
7/1/2021	MBWT7	MB7			1.20	2.41	0.42	5.20	5.62	38.46	44.07	45.66	2.86	15.99	41.31	46.93	1.69	1.32	56%	3.01

7/26/2021	MBWT7	MB7			1.48	2.47	1.43	0.83	2.26	17.27	19.53	58.58	5.03	11.63	22.30	24.57	3.01	3.69	45%	6.69
8/8/2021	MBWT7	MB7			0.77	1.90	1.19	0.89	2.09	13.98	16.06	67.23	6.50	10.34	20.48	22.57	6.13	4.30	59%	10.43
8/29/2021	MBWT7	MB7			1.13	2.42	0.59	3.82	4.41	19.92	24.33	58.68	5.05	11.62	24.97	29.38	1.53	0.99	61%	2.52
9/12/2021	MBWT7	MB7			1.05	2.45	0.33	6.05	6.38	23.99	30.37	45.66	2.61	17.47	26.60	32.99	2.64	1.20	69%	3.84
9/26/2021	MBWT7	MB7			0.55	2.70	0.38	2.94	3.32	15.77	19.09	77.29	7.09	10.90	22.86	26.19	5.77	5.03	53%	10.80
10/17/2021	MBWT7	MB7			0.87	1.76	1.76	1.31	3.07	17.10	20.17	54.70	5.36	10.20	22.46	25.53	4.33	1.88	70%	6.20
11/7/2021	MBWT7	MB7			0.83	1.73	0.65	0.47	1.12	12.56	13.67	48.90	3.47	14.11	16.02	17.14	1.97	0.99	67%	2.96
12/19/2021	MBWT7	MB7			0.70	1.50	0.80	4.95	5.76	10.34	16.09	39.36	2.76	14.26	13.09	18.85	1.68	1.76	49%	3.44
6/20/2021	MBWT8	MB8			0.56	2.34	1.46	3.28	4.74	33.21	37.95	128.34	4.50	28.51	37.71	42.45	0.74	0.66	53%	1.40
7/26/2021	MBWT8	MB8			0.43	1.52	1.90	3.96	5.87	7.43	13.29	77.05	2.84	27.13	10.27	16.13	1.04	0.38	73%	1.41
6/20/2021	MBWT9	MB9			0.74	1.27	0.75	2.04	2.79	43.03	45.82	94.86	3.95	24.04	46.98	49.77	0.33	0.44	43%	0.77
7/26/2021	MBWT9	MB9			1.01	1.52	1.39	3.81	5.20	15.85	21.05	171.10	5.71	29.95	21.56	26.76	0.78	1.60	33%	2.38
8/29/2021	MBWT9	MB9			1.13	2.28	0.59	3.65	4.24	16.22	20.46	133.39	6.99	19.09	23.21	27.45	0.79	0.13	86%	0.92
9/26/2021	MBWT9	MB9			0.90	2.35	0.46	0.22	0.68	32.90	33.58	83.37	5.28	15.80	38.17	38.86	0.69	0.37	65%	1.06
10/17/2021	MBWT9	MB9			1.13	1.52	0.67	0.83	1.50	13.37	14.87	32.31	1.67	19.34	15.04	16.54	0.20	0.13	61%	0.33
12/19/2021	MBWT9	MB9			0.60	1.09	0.17	0.03	0.19	13.22	13.41	39.09	2.03	19.22	15.25	15.44	0.49	0.18	74%	0.67

Appendix B: YSI Data

Date	Station	Time	Dissolved Oxygen mg/l	Dissolved Oxygen % saturatic uS	Cond uS	Specific conductivity uS/cm	pH	Temperature C	Sample Depth Feet	Staff Reading Feet	Notes
12/19/2021	1	9:05	10.44	86.3	62	95	8.72	7.11	0.5		
	2	9:25	9.82	84.3	66	97	8.2	8.64	0.33		
	3	NA									
	4	10:10	10.48	87.2	57	85	9.78	7.38	0.67		
	5	10:25	11.28	94.2	64	97	7.73	7.54	0.67	1.32	
	5S		11.33	94.6	64	97	7.65	7.5	0.33	0.51	
	6	10:55	11.36	93.9	64	97	7.58	7.13	0.67	1.01	
	9	9:47	11.04	91.9	55	88	8.11	7.4	0.5		
	10	9:57	8.45	71.7	67	100	7.68	8.18	0.95		
		#1 impoundment									
	#9 north										
	#10 north										
11/7/2021	1	9:05	11.04	87.1	61	97	7.77	5.41	0.5		
	2	9:22	9.77	82	65	97	7.4	7.76	0.33	0.65	
	3	9:55	9.25	80	60	87	7.18	8.94	0.5	0.75	
	4	10:47	9.92	86	60	88	7.05	8.59	0.95	1.1	
	5	11:15	10.68	90.2	67	99	7.18	7.92	1		
	5S	12:05	11	92.4	67	99	7.14	7.78	0.67		
	6										
	9										
	10										
		#1 impoundment									
	#9 north										
	#10 north										
10/17/2021	1	9:10	7.32	73.1	79	97	7.03	15.27	0.33		
	2	9:30	8.32	81.2	82	104	6.89	14.22	0.42	0.55	
	3	9:50	7.83	80.1	74	88	6.65	16.53	0.42	0.52	
	4	10:43	7.63	80.6	74	86	6.94	18.02	0.58	0.84	
	5	11:00	7.86	82.2	87	102	6.7	17.51	1	1.29	
	5S	11:00	8.23	86	86	101	6.62	17.51	0.33	0.475	
	6	11:15	8.08	85.5	90	104	6.78	18.09	0.67	0.965	
	9	10:15	8.71	86.4	66	82	6.85	15	0.5		
	10	10:25	5.55	54	81	102	6.23	13.97	0.42		
		#1 impoundment									
	#9 north										
	#10 north	10:30	7.73	76.9	69	85	6.1	15.18	0.21		
9/26/2021	1	9:03	7.21	76	82	95	7.5	17.92	0.67		Rain previous 24 hours was 0.88"
	2	9:38	8.65	82.6	74	88	5.69	16.62	0.50	0.68	

NOTE site #2 (Waskosims) moved to site #8 locus and named site 2

NOTE site #2 (Waskosims) moved to site #8 locus and named site 2

		3 NA									No access
		4	10:39	7.08	84	79	86	6.66	20.95	0.55	1.02
		5	11:35	7.6	87.6	90	100	6.6	20.24	1.50	1.43
	5S		12:20	7.95	88.4	92	100	6.68	20.58	0.67	0.58
		6	12:52	7.61	87.6	97	102	6.39	22.3	1.00	1.08 Factory Brook is receiving limited flow
		7									
		8									
		9	10:06	8.48	88.4	70	81	6.79	17.32	0.55	
		10	10:20	6.02	65	81	93	6.39	18.73	0.50	
		#1 impoun	9:13	2.77	30.9	79	86	6.92	20.54	1.00	
		#9 north		8.58	89.4	70	82	6.39	17.32	0.33	
		#10 north									
	9/12/2021	1	9:12	7.76	81.3	86	100	7.45	17.72	0.5	
		2	9:32	8.37	85.9	84	100	6.56	16.59	0.33	NOTE site #2 (Waskosims) moved to site #8 locus and named site 2
		3	10:07	7.79	84.7	76	86	6.82	19.43	0.5	0.51
		4	11:05	7.17	80.4	81	87	7.1	21	0.67	0.92
		5	11:35	8.15	89.6	101	92	6.75	20.02	1.1	1.34
	5S		12:09	8.24	91	94	103	6.17	20.26	0.25	0.54 No flow to Whiting canal
		6	12:30	7.7	87.8	95	102	6.76	21.87	0.5	1.06
		7									
		8									
		9									
		10									
		#1 impoundment									
	8/29/2021	1	9:11	8.4	86.7		92	7.69	17.1		Rain in previous 24 hr is 0.35
		2		8.94	89.2		100	7.65	15.27		NOTE site #2 (Waskosims) moved to site #8 locus and named site 2
		3		7.65	85.5		89	7.24	20.8		0.46
		4		6.21	71.1		88	6.62	22		0.83 Field data also on 8/26 this site
		5		7.84	76.1		102	6.62	19.99		1.23 Field data also on 8/26 this site
	5S			8.01	88.1		103	6.68	20.01		0.49
		6	11:32	7.22	80.3		101	6.62	16.35		0.96 Field data also on 8/26 this site
		7									
		8									
		9		8.92	90.8		76	7.51	12.35		
		10		1.25	11.8		105	6.07	17.52		DO on north side of culvert much higher - 8.16 mg/l
		#1 impoundment									
		#9 north									
		#10 north		8.16	85.6	69	80	6.34	17.52	0.16	
	8/26/2021	1									
		2									
		3									
		4	4:20	6.3	81.9	92	86	7.1	28.73	0.25	
		5	5:25	6.86	83.5	101	101	5.8	25.4	0.67	
	5S		5:45	6.9	84	100	99	6.72	25.34	0.25	
		6	6:20	7.8	101.3	109	101	6.6	28.94	0.25	
	8/6/2021	1	9:10	7.4	79.9		96	7.09	19.07		

NOTE site #2 (Waskosims) moved to site #8 locus and named site 2

	2		8.47	86.2		105	6.34	16.21	
	3		7.38	84.1		93	6.49	21.8	
	4		6.5	76.3		85	6.21	23.38	
	5		7.36	84.2		101	6.52	21.97	
5S	6	12:30	7.69	88.1		103	6.16	22.07	0.2
	7		8.06	95.1		103	7.02	23.7	
	8								
	9								
	10								
	#1 impoundment		4.2	48.7		88	6.46	22.84	

0.53
0.46
0.79
Logger at this site was fouled

7/25/2021

	1	9:00	8.36	87.2	82	95	7.48	17.33	0.25
	2	9:25	6.58	64.8	80	100	7.04	14.7	0.17
	3	No Sample							
	4	10:40	6.55	76.2	86	90	7.2	22.88	0.33
	5	11:00	7.39	82.1	95	103	7.71	20.42	0.33
5S	6	11:15	7.79	86.5	95	104	7	20.42	0.18
	7	11:20	7.35	81.5	93	102	7.4	20.42	0.33
	8	DUPE							
	9								
	10								
	#1 impoundment								

0.55 NOTE this is actual site #2 at Waskosims

0.78
1.22
0.49
0.97 M Pond logger reads 2.46 and then 4.9 mg/l DO

NOTE DO was 8.48 mg/l on N side of road

7/11/2021

	1		8.78	89.4		86	8.76	16.27	
	2		7.05	72.6		88	7.25	16.66	
	3		7.73	86.2		96	7.2	20.75	
	4		7.75	88.9		94	7.77	22.62	
	5		8.2	91.6		104	6.68	20.7	
5S	6		8.67	96.5		103	6.71	20.59	
	7								
	8	9:45	8.7	86.3	84	104	7.44	15.02	0.5
	9	10:05	9.11	93.1	66	79	7.63	16.42	0.35
10 south	10	10:25	1.55	14.1	76	103	6.64	11.29	0.15
10 north			8.48	87.7	72	85	6.51	16.98	

0.65 NOTE this is actual site #2 at Waskosims

Finger nail clams appear dead at this site

6/20/2021

	1	9:03	8.23	83		96	7.78	16.35	
	2		6.86	67.8		104	6.37	14.7	
	3		7.38	82.1		92	7.09	20.3	
	4		7.5	87.4		88	6.99	23.05	
	5		7.9	90		96	7.14	21.66	
5S	6	10:30	8.47	96.4	90	96	6.77	21.73	0.6
	7	10:54	8.28	99		101	6.63	23.86	1
	8								
	9		8.89	87.2		101	7.25	14.53	
	10		9.18	93.6		82	7.81	16.4	
			5.77	55		92	6.42	13.67	

0.62 NOTE this is actual site #2 at Waskosims

0.525
0.87
1.3
0.6
1

This site recorded as site 2 above starting on 8/6

south side of road

#1 impoundment									
6/13/2021	1								
	2	6.56	63.5	74	95	7.65	13.84		0.7
	3	7.7	82	72	82	7.23	18.73		0.555
	4	7.67	83.9	71	80	7.21	19.53		0.92
	5	8.08	85.5	77	88	6.7	18.05		1.34
5S		8.25	87.5	77	88	6.48	18.25		0.615
	6	8	88.5	82	89	7.75	20.22		1.01
	7								
	8								
	9								
	10								

#1 impoundment									
6/6/2021	1	9.05	8.95	74.5		83	8.12	15.17	
	2		6.67	66.5		86	6.38	15.3	0.74
	3		7.5	83		50	7.16	20.35	0.58
	4		7.39	84.4		78	7.48	21.82	0.95
	5		7.18	80		85	7	20.05	1.4
5S			7.93	88.3		85	6.48	20.66	0.66
	6		7.6	88.2		88	6.36	22.8	1.05
	7								
	8								
	9								
	10								

Data also collected on 6/13
 Staff gauge on 6/10 read 0.65 NOTE this is actual site #2 at Waskosims

#1 impoundment									
5/16/2021	1	9:20	9.84	92	66	87	7.29	12.66	0.33
	2	9:55	7.59	72.8		89.5	5.76	13.49	0.33
	3	10:30	8.44	89.1		81	6.2	17.95	0.33
	4	11:00	8.24	88.5		80	6.28	18.89	0.33
	5	11:20	8.68	92.5		89	6.56	18.38	0.33
5S		11:40	8.71	92.9		85	6.41	18.54	0.33
	6	11:55	8.46	91.7		92	6.25	19.27	0.33
	7								
	8								
	9								
	10								

NOTE this is actual site #2 at Waskosims

#1 impoundment									
4/25/2021	1	18:03				55		9.3	
	2					61		10.15	1.17
	3					61		11.94	
	4					58		11.93	
	5					64		11.43	1.54
5S									0.71
	6					64		11.29	
	7								
	8								

rainfall 0.14 inches by 8:00 a.m. but no rain during
 NOTE this is actual site #2 at Waskosims

9

10 19:29

#1 impoundment

Appendix C: Flow and Stage Data

MB3 Woods property

Measurement Results:

Time	Station	Location (f Method	Depth (ft)	Edge Facto	Surface (ft),0.2 (ft/s)	0.4 (ft/s)	0.6 (ft/s)	0.8 (ft/s)	Bed (ft/s)	Average Vε	Area (ft^2)	Flow (ft^3/s)	STAFF- feet	INSTRUMENT SUMMARY
2021Nov07														
10:52:41	1	2.25 0 point	0 -		0	0	0	0	0	0	0	0		0.72 Station Entry: Non-fixed
10:53:12	2	3 1 point	0.42 -		0	0	0	0.05	0	0	0.05	0.26	0.01	Flow Calculation: Mid-section
10:53:47	3	3.5 1 point	0.45 -		0	0	0	0.05	0	0	0.05	0.22	0.01	Start Edge: Right edge water
10:54:19	4	4 1 point	0.45 -		0	0	0	0.42	0	0	0.42	0.34	0.14	# of Stations: 14
10:54:51	5	5 1 point	0.5 -		0	0	0	0.27	0	0	0.27	0.5	0.14	Stream Width: 11.75 ft
10:55:21	6	6 1 point	0.52 -		0	0	0	0.04	0	0	0.04	0.52	0.02	Total Discharge: 0.79 ft^3/s
10:55:57	7	7 1 point	0.5 -		0	0	0	0.09	0	0	0.09	0.5	0.04	Total Area: 4.87 ft^2
10:56:30	8	8 1 point	0.49 -		0	0	0	0.16	0	0	0.16	0.49	0.08	Mean Depth: 0.41 ft
10:57:02	9	9 1 point	0.42 -		0	0	0	0.34	0	0	0.34	0.42	0.14	
10:57:40	10	10 1 point	0.4 -		0	0	0	0.27	0	0	0.27	0.4	0.11	
10:58:17	11	11 1 point	0.35 -		0	0	0	0.15	0	0	0.15	0.35	0.05	
10:58:53	12	12 1 point	0.42 -		0	0	0	0.07	0	0	0.07	0.42	0.03	
10:59:44	13	13 1 point	0.45 -		0	0	0	0.02	0	0	0.02	0.45	0.01	
10:59:59	14	14 0 point	0 -		0	0	0	0	0	0	0	0		
0.78														
2021Oct23														
10:05:00	1	2 0 point	0 -		0	0	0	0	0	0	0	0		0.52 Station Entry: Non-fixed
10:06:58	2	2.5 1 point	0.25 -		0	0	0	0.21	0	0	0.21	0.19	0.04	Flow Calculation: Mid-section
10:08:45	3	3.5 1 point	0.25 -		0	0	0	0	0	0	0	0.19	0	Start Edge: Right edge water
10:09:23	4	4 1 point	0.25 -		0	0	0	0.24	0	0	0.24	0.12	0.03	# of Stations: 21
10:10:05	5	4.5 1 point	0.35 -		0	0	0	0.22	0	0	0.22	0.17	0.04	Stream Width: 12.00 ft
10:11:01	6	5 1 point	0.3 -		0	0	0	0.42	0	0	0.42	0.15	0.06	Total Discharge: 1.17 ft^3/s
10:11:36	7	5.5 1 point	0.35 -		0	0	0	0.24	0	0	0.24	0.17	0.04	Total Area: 2.81 ft^2
10:12:18	8	6 1 point	0.35 -		0	0	0	0.84	0	0	0.84	0.17	0.15	Mean Depth: 0.23 ft
10:13:00	9	6.5 1 point	0.3 -		0	0	0	0.76	0	0	0.76	0.15	0.11	
10:13:42	10	7 1 point	0.25 -		0	0	0	0.67	0	0	0.67	0.12	0.08	
10:14:17	11	7.5 1 point	0.25 -		0	0	0	0.64	0	0	0.64	0.12	0.08	
10:15:04	12	8 1 point	0.25 -		0	0	0	0.89	0	0	0.89	0.12	0.11	
10:15:39	13	8.5 1 point	0.25 -		0	0	0	0.75	0	0	0.75	0.12	0.09	
10:16:22	14	9 1 point	0.21 -		0	0	0	0.51	0	0	0.51	0.1	0.05	
10:18:01	15	9.5 1 point	0.2 -		0	0	0	0.58	0	0	0.58	0.1	0.06	
10:18:47	16	10 1 point	0.21 -		0	0	0	0.14	0	0	0.14	0.1	0.01	
10:19:32	17	10.5 1 point	0.2 -		0	0	0	0.64	0	0	0.64	0.1	0.06	
10:20:33	18	11 1 point	0.15 -		0	0	0	0.31	0	0	0.31	0.11	0.03	
10:21:04	19	12 1 point	0.18 -		0	0	0	0.28	0	0	0.28	0.18	0.05	
10:21:48	20	13 1 point	0.28 -		0	0	0	0.19	0	0	0.19	0.28	0.05	
10:22:09	21	14 0 point	0 -		0	0	0	0	0	0	0	0		
1.14														
11-Jul														
10:34:03	1	2 0 point	0 -		0	0	0	0	0	0	0	0		0.54 Station Entry: Non-fixed
10:35:16	2	2.5 1 point	0.2 -		0	0	0	0.01	0	0	0.01	0.1	0	Flow Calculation: Mid-section
10:36:25	3	3 1 point	0.24 -		0	0	0	0.12	0	0	0.12	0.12	0.01	Start Edge: Right edge water
10:37:07	4	3.5 1 point	0.22 -		0	0	0	0.23	0	0	0.23	0.11	0.02	# of Stations: 15
10:38:30	5	4 1 point	0.22 -		0	0	0	0.62	0	0	0.62	0.16	0.1	Stream Width: 12.00 ft
10:39:31	6	5 1 point	0.25 -		0	0	0	0.38	0	0	0.38	0.25	0.09	Total Discharge: 1.14 ft^3/s
10:40:30	7	6 1 point	0.4 -		0	0	0	0.41	0	0	0.41	0.4	0.17	Total Area: 2.89 ft^2
10:44:01	8	7 1 point	0.31 -		0	0	0	0.65	0	0	0.65	0.31	0.2	Mean Depth: 0.24 ft
10:45:20	9	8 1 point	0.29 -		0	0	0	0.52	0	0	0.52	0.29	0.15	
10:46:09	10	9 1 point	0.25 -		0	0	0	0.56	0	0	0.56	0.25	0.14	
10:46:47	11	10 1 point	0.25 -		0	0	0	0.37	0	0	0.37	0.25	0.09	

10:47:58	12	11 1 point	0.15 -	0	0	0	0.41	0	0	0.41	0.15	0.06
10:48:39	13	12 1 point	0.2 -	0	0	0	0.31	0	0	0.31	0.2	0.06
10:49:28	14	13 1 point	0.3 -	0	0	0	0.1	0	0	0.1	0.3	0.03
10:49:54	15	14 0 point	0 -	0	0	0	0	0	0	0	0	0

1.12

2021 June 27 NA

Station Entry: Non-fixed
NO ACCESS THIS DATE

2021 June 13

9:57:04	1	2.5 0 point	0.25	0.5	0	0	0	0	0	0	0.19	0.02
9:58:37	2	4 1 point	0.22 -	0	0	0	0.18	0	0	0.18	0.38	0.07
9:59:34	3	6 1 point	0.35 -	0	0	0	0.65	0	0	0.65	0.7	0.46
10:00:35	4	8 1 point	0.25 -	0	0	0	0.72	0	0	0.72	0.5	0.36
10:01:22	5	10 1 point	0.3 -	0	0	0	0.69	0	0	0.69	0.6	0.41
10:02:16	6	12 1 point	0.21 -	0	0	0	0.39	0	0	0.39	0.4	0.16
10:03:23	7	13.85 1 point	0.41 -	0	0	0	0.19	0	0	0.19	0.49	0.09
10:04:11	8	14.4 0 point	0 -	0	0	0	0	0	0	0	0	0

0.555 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 8
Stream Width: 11.90 ft
Total Discharge: 1.57 ft³/s
Total Area: 3.27 ft²
Mean Depth: 0.27 ft

1.57

2021 May 23

10:25

10:05:13	9	1.5 0 point	0.1	0.6	0	0	0	0	0	0	0.22	0
10:08:54	10	3 1 point	0.2 -	0	0	0	0.19	0	0	0.19	0.25	0.05
10:10:26	11	4 1 point	0.2 -	0	0	0	0.32	0	0	0.32	0.2	0.06
10:11:20	12	5 1 point	0.2 -	0	0	0	0.41	0	0	0.41	0.2	0.08
10:12:04	13	6 1 point	0.2 -	0	0	0	0.64	0	0	0.64	0.2	0.13
10:13:18	14	7 1 point	0.3 -	0	0	0	0.67	0	0	0.67	0.3	0.2
10:14:20	15	8 1 point	0.25 -	0	0	0	0.76	0	0	0.76	0.25	0.19
10:16:06	16	9 1 point	0.2 -	0	0	0	0.73	0	0	0.73	0.2	0.15
10:16:56	17	10 1 point	0.2 -	0	0	0	0.27	0	0	0.27	0.2	0.05
10:17:42	18	11 1 point	0.2 -	0	0	0	0.93	0	0	0.93	0.2	0.18
10:18:22	19	12 1 point	0.2 -	0	0	0	0.58	0	0	0.58	0.2	0.11
10:19:09	20	13 1 point	0.3 -	0	0	0	0.32	0	0	0.32	0.3	0.1
10:19:51	21	14 1 point	0.4 -	0	0	0	0.18	0	0	0.18	0.26	0.05 corrected

0.54

1.35

MB4 N. Tisbury below Priesters

Measurement Results:

Time	Station	Location (ft)	Method	Depth (ft)	Edge	Facto	Surface (ft/0.2 (ft/s)	0.4 (ft/s)	0.6 (ft/s)	0.8 (ft/s)	Bed (ft/s)	Average V	Area (ft^2)	Flow (ft^3/s)	STAFF- feet
2023 March 10															
16:37:00	1	3.5	0 point	0 -			0	0	0	0	0	0	0	0	0.96 Station Entry: Non-fixed
16:40:21	2	4	1 point	0.55 -			0	0	0.02	0	0	0.02	0.41	0.01	Flow Calculation: Mid-section
16:41:33	3	5	1 point	0.65 -			0	0	0.42	0	0	0.42	0.81	0.35	Start Edge: Right edge water
16:42:33	4	6.5	1 point	0.74 -			0	0	0.47	0	0	0.47	1.11	0.52	# of Stations: 14
16:43:24	5	8	1 point	0.7 -			0	0	0.52	0	0	0.52	1.22	0.63	Stream Width: 17.17 ft
16:44:05	6	10	1 point	0.7 -			0	0	0.56	0	0	0.56	1.22	0.69	Total Discharge: 3.41 ft^3/s
16:44:53	7	11.5	1 point	0.72 -			0	0	0.44	0	0	0.44	1.08	0.48	Total Area: 11.07 ft^2
16:45:39	8	13	1 point	0.7 -			0	0	0.31	0	0	0.31	1.05	0.32	Mean Depth: 0.64 ft
16:46:41	9	14.5	1 point	0.73 -			0	0	0.19	0	0	0.19	1.09	0.21	
16:47:53	10	16	1 point	0.7 -			0	0	0.03	0	0	0.03	1.08	0.03	
16:49:08	11	17.6	1 point	0.61 -			0	0	0.11	0	0	0.11	0.91	0.1	
16:50:03	12	19	1 point	0.55 -			0	0	0.05	0	0	0.05	0.66	0.03	
16:51:05	13	20	1 point	0.48 -			0	0	0.07	0	0	0.07	0.4	0.03	
16:51:35	14	20.67	0 point	0 -			0	0	0	0	0	0	0	0	
2022Aug18															
13:38:38	1	3.67	0 point	0 -			0	0	0	0	0	0	0	0	0.79 Station Entry: Non-fixed
13:40:00	2	4.5	1 point	0.45 -			0	0	0.23	0	0	0.23	0.52	0.12	Flow Calculation: Mid-section
13:40:55	3	6	1 point	0.52 -			0	0	0.16	0	0	0.16	0.65	0.1	Start Edge: Right edge water
13:41:48	4	7	1 point	0.54 -			0	0	0.18	0	0	0.18	0.54	0.1	# of Stations: 16
13:42:30	5	8	1 point	0.54 -			0	0	0.25	0	0	0.25	0.54	0.13	Stream Width: 17.00 ft
13:43:10	6	9	1 point	0.55 -			0	0	0.3	0	0	0.3	0.55	0.16	Total Discharge: 1.24 ft^3/s
13:43:54	7	10	1 point	0.53 -			0	0	0.26	0	0	0.26	0.53	0.14	Total Area: 7.90 ft^2
13:44:41	8	11	1 point	0.53 -			0	0	0.37	0	0	0.37	0.66	0.24	Mean Depth: 0.46 ft
13:45:42	9	12.5	1 point	0.51 -			0	0	0.17	0	0	0.17	0.76	0.13	
13:46:42	10	14	1 point	0.51 -			0	0	0.04	0	0	0.04	0.64	0.02	
13:47:35	11	15	1 point	0.5 -			0	0	0.02	0	0	0.02	0.5	0.01	
13:48:19	12	16	1 point	0.52 -			0	0	0.01	0	0	0.01	0.52	0.01	
13:49:04	13	17	1 point	0.45 -			0	0	0.06	0	0	0.06	0.56	0.03	
13:49:55	14	18.5	1 point	0.4 -			0	0	0.04	0	0	0.04	0.6	0.02	
13:51:40	15	20	1 point	0.29 -			0	0	0.02	0	0	0.02	0.31	0.01	
13:52:09	16	20.67	0 point	0 -			0	0	0	0	0	0	0	0	
2022June10															
9:28:43	1	3.5	0 point	0 -			0	0	0	0	0	0	0	0	1.11 Station Entry: Non-fixed
9:30:05	2	4.5	1 point	0.77 -			0	0	0.27	0	0	0.27	0.77	0.21	Flow Calculation: Mid-section
9:30:56	3	5.5	1 point	0.85 -			0	0	0.5	0	0	0.5	0.85	0.43	Start Edge: Right edge water
9:31:39	4	6.5	1 point	0.9 -			0	0	0.44	0	0	0.44	0.9	0.39	# of Stations: 18
9:32:19	5	7.5	1 point	0.91 -			0	0	0.38	0	0	0.38	0.91	0.35	Stream Width: 17.17 ft
9:33:12	6	8.5	1 point	0.9 -			0	0	0.52	0	0	0.52	0.9	0.47	Total Discharge: 4.79 ft^3/s
9:33:45	7	9.5	1 point	0.9 -			0	0	0.64	0	0	0.64	0.9	0.58	Total Area: 13.47 ft^2
9:34:46	8	10.5	1 point	0.84 -			0	0	0.42	0	0	0.42	0.84	0.35	Mean Depth: 0.78 ft
9:36:05	9	11.5	1 point	0.83 -			0	0	0.41	0	0	0.41	0.83	0.34	
9:36:58	10	12.5	1 point	0.85 -			0	0	0.43	0	0	0.43	0.85	0.36	
9:37:48	11	13.5	1 point	0.8 -			0	0	0.24	0	0	0.24	1	0.24	
9:38:36	12	15	1 point	0.86 -			0	0	0.35	0	0	0.35	1.07	0.37	

9:40:04	13	16 1 point	0.87 -	0	0	0	0.21	0	0	0.21	0.87	0.18
9:40:50	14	17 1 point	0.87 -	0	0	0	0.21	0	0	0.21	0.87	0.18
9:41:39	15	18 1 point	0.73 -	0	0	0	0.18	0	0	0.18	0.73	0.13
9:42:32	16	19 1 point	0.67 -	0	0	0	0.15	0	0	0.15	0.67	0.1
9:43:12	17	20 1 point	0.61 -	0	0	0	0.21	0	0	0.21	0.51	0.1
9:43:38	18	20.67 0 point	0 -	0	0	0	0	0	0	0	0	0

2022May15

8:37:16	1	3.67 0 point	0 -	0	0	0	0	0	0	0	0	0
8:38:40	2	4 1 point	0.6 -	0	0	0	0.13	0	0	0.13	0.4	0.05
8:39:28	3	5 1 point	0.72 -	0	0	0	0.29	0	0	0.29	0.9	0.26
8:40:22	4	6.5 1 point	0.86 -	0	0	0	0.33	0	0	0.33	1.29	0.42
8:41:15	5	8 1 point	0.82 -	0	0	0	0.36	0	0	0.36	1.02	0.37
8:42:00	6	9 1 point	0.82 -	0	0	0	0.5	0	0	0.5	1.02	0.51
8:42:55	7	10.5 1 point	0.76 -	0	0	0	0.64	0	0	0.64	0.95	0.6
8:43:56	8	11.5 1 point	0.8 -	0	0	0	0.62	0	0	0.62	0.8	0.5
8:44:38	9	12.5 1 point	0.8 -	0	0	0	0.48	0	0	0.48	0.8	0.38
8:45:19	10	13.5 1 point	0.8 -	0	0	0	0.52	0	0	0.52	0.8	0.41
8:46:17	11	14.5 1 point	0.76 -	0	0	0	0.12	0	0	0.12	0.76	0.09
8:48:45	12	15.5 1 point	0.8 -	0	0	0	0.15	0	0	0.15	0.8	0.12
8:49:40	13	16.5 1 point	0.8 -	0	0	0	0.11	0	0	0.11	0.8	0.09
8:50:25	14	17.5 1 point	0.7 -	0	0	0	0.18	0	0	0.18	0.7	0.12
8:51:25	15	18.5 1 point	0.7 -	0	0	0	0.18	0	0	0.18	0.7	0.13
8:52:22	16	19.5 1 point	0.58 -	0	0	0	0.12	0	0	0.12	0.63	0.07
8:52:57	17	20.67 0 point	0 -	0	0	0	0	0	0	0	0	0

1.035 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 17
Stream Width: 17.00 ft
Total Discharge: 4.15 ft³/s
Total Area: 12.38 ft²
Mean Depth: 0.73 ft

2022Apr16

8:48:06	1	3.9 0 point	0 -	0	0	0	0	0	0	0	0	0
8:49:11	2	4.5 1 point	0.65 -	0	0	0	0.21	0	0	0.21	0.52	0.11
8:50:04	3	5.5 1 point	0.75 -	0	0	0	0.37	0	0	0.37	0.75	0.28
8:50:53	4	6.5 1 point	0.8 -	0	0	0	0.46	0	0	0.46	0.8	0.37
8:51:33	5	7.5 1 point	0.8 -	0	0	0	0.56	0	0	0.56	0.8	0.45
8:52:06	6	8.5 1 point	0.8 -	0	0	0	0.58	0	0	0.58	0.8	0.47
8:52:43	7	9.5 1 point	0.8 -	0	0	0	0.56	0	0	0.56	0.8	0.45
8:53:40	8	10.5 1 point	0.71 -	0	0	0	0.63	0	0	0.63	0.71	0.45
8:54:28	9	11.5 1 point	0.8 -	0	0	0	0.55	0	0	0.55	0.8	0.44
8:55:15	10	12.5 1 point	0.76 -	0	0	0	0.26	0	0	0.26	0.76	0.2
8:56:03	11	13.5 1 point	0.78 -	0	0	0	0.19	0	0	0.19	0.97	0.19
8:56:58	12	15 1 point	0.75 -	0	0	0	0.2	0	0	0.2	0.94	0.19
8:57:39	13	16 1 point	0.77 -	0	0	0	0.23	0	0	0.23	0.77	0.18
8:58:26	14	17 1 point	0.73 -	0	0	0	0.31	0	0	0.31	0.73	0.23
8:59:10	15	18 1 point	0.66 -	0	0	0	0.26	0	0	0.26	0.66	0.17
8:59:59	16	19 1 point	0.62 -	0	0	0	0.14	0	0	0.14	0.62	0.08
9:00:56	17	20 1 point	0.53 -	0	0	0	0.06	0	0	0.06	0.4	0.02
9:01:19	18	20.5 0 point	0 -	0	0	0	0	0	0	0	0	0

1.01 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 18
Stream Width: 16.60 ft
Total Discharge: 4.28 ft³/s
Total Area: 11.83 ft²
Mean Depth: 0.71 ft

2022Mar31

12:24:34	1	3.75 0 point	0 -	0	0	0	0	0	0	0	0	0
12:25:50	2	4.5 1 point	0.7 -	0	0	0	0.35	0	0	0.35	0.61	0.22
12:26:41	3	5.5 1 point	0.84 -	0	0	0	0.36	0	0	0.36	0.84	0.31
12:27:28	4	6.5 1 point	0.86 -	0	0	0	0.34	0	0	0.34	0.97	0.33

1.065 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 18

12:28:23	5	7.75	1 point	0.81	-	0	0	0	0.51	0	0	0.51	0.81	0.41
12:29:20	6	8.5	1 point	0.85	-	0	0	0	0.54	0	0	0.54	0.74	0.4
12:30:04	7	9.5	1 point	0.85	-	0	0	0	0.57	0	0	0.57	0.85	0.48
12:30:47	8	10.5	1 point	0.81	-	0	0	0	0.54	0	0	0.54	0.81	0.44
12:31:33	9	11.5	1 point	0.82	-	0	0	0	0.66	0	0	0.66	0.82	0.54
12:32:17	10	12.5	1 point	0.83	-	0	0	0	0.49	0	0	0.49	0.83	0.4
12:32:58	11	13.5	1 point	0.83	-	0	0	0	0.51	0	0	0.51	1.04	0.53
12:33:43	12	15	1 point	0.82	-	0	0	0	0.33	0	0	0.33	1.02	0.33
12:34:17	13	16	1 point	0.83	-	0	0	0	0.06	0	0	0.06	0.83	0.05
12:35:00	14	17	1 point	0.8	-	0	0	0	0.25	0	0	0.25	0.8	0.2
12:35:43	15	18	1 point	0.72	-	0	0	0	0.26	0	0	0.26	0.72	0.18
12:36:41	16	19	1 point	0.55	-	0	0	0	0.04	0	0	0.04	0.55	0.02
12:37:25	17	20	1 point	0.6	-	0	0	0	0.13	0	0	0.13	0.52	0.07
12:37:56	18	20.75	0 point	0	-	0	0	0	0	0	0	0	0	0

Stream Width: 17.00 ft
Total Discharge: 4.94 ft³/s
Total Area: 12.77 ft²
Mean Depth: 0.75 ft

2022Feb23

13:32:42	1	3.67	0 point	0	-	0	0	0	0	0	0	0	0	0
13:34:09	2	4.5	1 point	0.83	-	0	0	0	0.31	0	0	0.31	0.76	0.24
13:34:57	3	5.5	1 point	0.92	-	0	0	0	0.4	0	0	0.4	1.15	0.46
13:35:45	4	7	1 point	0.98	-	0	0	0	0.42	0	0	0.42	1.22	0.51
13:36:35	5	8	1 point	0.93	-	0	0	0	0.4	0	0	0.4	0.93	0.37
13:37:20	6	9	1 point	0.95	-	0	0	0	0.32	0	0	0.32	1.19	0.38
13:38:24	7	10.5	1 point	0.92	-	0	0	0	0.5	0	0	0.5	1.15	0.58
13:39:14	8	11.5	1 point	0.93	-	0	0	0	0.57	0	0	0.57	0.93	0.53
13:39:56	9	12.5	1 point	0.94	-	0	0	0	0.65	0	0	0.65	0.94	0.61
13:40:45	10	13.5	1 point	0.96	-	0	0	0	0.75	0	0	0.75	1.2	0.89
13:41:55	11	15	1 point	0.91	-	0	0	0	0.05	0	0	0.05	1.14	0.06
13:42:42	12	16	1 point	0.95	-	0	0	0	0.06	0	0	0.06	1.19	0.07
13:43:24	13	17.5	1 point	0.84	-	0	0	0	0.43	0	0	0.43	0.84	0.36
13:44:01	14	18	1 point	0.84	-	0	0	0	0.35	0	0	0.35	0.63	0.22
13:44:50	15	19	1 point	0.7	-	0	0	0	0.26	0	0	0.26	0.52	0.14
13:45:41	16	19.5	1 point	0.7	-	0	0	0	0.15	0	0	0.15	0.52	0.08
13:46:30	17	20.5	1 point	0.63	-	0	0	0	0.16	0	0	0.16	0.41	0.06
13:47:16	18	20.8	0 point	0	-	0	0	0	0	0	0	0	0	0

1.2 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 18
Stream Width: 17.13 ft
Total Discharge: 5.58 ft³/s
Total Area: 14.73 ft²
Mean Depth: 0.86 ft

2022Feb09

14:35:32	1	3.75	0 point	0	-	0	0	0	0	0	0	0	0	0
14:36:24	2	5	1 point	0.92	-	0	0	0	0.49	0	0	0.49	1.26	0.62
14:37:17	3	6.5	1 point	0.97	-	0	0	0	0.54	0	0	0.54	1.45	0.78
14:37:50	4	8	1 point	0.97	-	0	0	0	0.35	0	0	0.35	1.7	0.59
14:38:40	5	10	1 point	0.93	-	0	0	0	0.54	0	0	0.54	1.16	0.63
14:39:23	6	10.5	1 point	0.93	-	0	0	0	0.62	0	0	0.62	0.73	0.4526
14:40:19	7	11.5	1 point	0.98	-	0	0	0	0.76	0	0	0.76	0.98	0.7448
14:40:53	8	12.5	1 point	0.97	-	0	0	0	0.74	0	0	0.74	0.98	0.7252
14:41:56	9	13	1 point	0.98	-	0	0	0	0.9	0	0	0.9	0.73	0.66
14:42:28	10	14	1 point	0.98	-	0	0	0	0.77	0	0	0.77	0.98	0.75
14:43:49	11	15	1 point	0.96	-	0	0	0	0.3	0	0	0.3	1.44	0.43
14:44:39	12	17	1 point	0.93	-	0	0	0	0.26	0	0	0.26	1.39	0.36
14:45:21	13	18	1 point	0.9	-	0	0	0	0.13	0	0	0.13	0.9	0.11
14:46:08	14	19	1 point	0.86	-	0	0	0	0.19	0	0	0.19	1.15	0.22
14:46:32	15	20.67	0 point	0	-	0	0	0	0	0	0	0	0	0

1.23 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 15
Stream Width: 16.92 ft
Total Discharge: 19.52 ft³/s
Total Area: 31.97 ft²
Mean Depth: 1.89 ft

2022Feb09

14:15:03	1	3.75	0 point	0 -	0	0	0	0	0	0	0	0	0
14:18:11	2	4.5	1 point	0.88 -	0	0	0	0.52	0	0	0.52	0.99	0.51
14:19:30	3	6	1 point	0.97 -	0	0	0	0.48	0	0	0.48	1.21	0.58
14:20:27	4	7	1 point	0.97 -	0	0	0	0.4	0	0	0.4	0.97	0.39
14:21:04	5	8	1 point	0.98 -	0	0	0	0.31	0	0	0.31	0.98	0.31
14:21:40	6	9	1 point	0.98 -	0	0	0	0.34	0	0	0.34	0.98	0.34
14:22:29	7	10	1 point	0.92 -	0	0	0	0.5	0	0	0.5	0.92	0.46
14:23:12	8	11	1 point	1 -	0	0	0	0.86	0	0	0.86	1	0.86
14:23:50	9	12	1 point	1 -	0	0	0	0.91	0	0	0.91	1	0.91
14:24:34	10	13	1 point	1.01 -	0	0	0	0.88	0	0	0.88	1.01	0.89
14:25:32	11	14	1 point	0.91 -	0	0	0	0.35	0	0	0.35	0.68	0.24
14:26:31	12	14.5	1 point	0.92 -	0	0	0	0.2	0	0	0.2	0.69	0.14
14:27:39	13	15.5	1 point	0.96 -	0	0	0	0.25	0	0	0.25	1.2	0.3
14:28:25	14	17	1 point	0.9 -	0	0	0	0.3	0	0	0.3	1.12	0.34
14:29:06	15	18	1 point	0.87 -	0	0	0	0.16	0	0	0.16	1.09	0.17
14:30:04	16	19.5	1 point	0.81 -	0	0	0	0.23	0	0	0.23	1.11	0.25
14:30:42	17	20.75	0 point	0 -	0	0	0	0	0	0	0	0	0

1.23 Station Entry: Non-fixed
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 17
 Stream Width: 17.00 ft
 Total Discharge: 6.70 ft³/s
 Total Area: 14.96 ft²
 Mean Depth: 0.88 ft

2021Dec16

10:52:34	1	3.8	0 point	0 -	0	0	0	0	0	0	0	0	0
10:53:48	2	4.5	1 point	0.6 -	0	0	0	0.13	0	0	0.13	0.66	0.09
10:54:44	3	6	1 point	0.74 -	0	0	0	0.14	0	0	0.14	0.92	0.13
10:56:18	4	7	1 point	0.8 -	0	0	0	0.03	0	0	0.03	0.8	0.02
10:57:07	5	8	1 point	0.73 -	0	0	0	0.06	0	0	0.06	0.73	0.04
10:57:51	6	9	1 point	0.75 -	0	0	0	0.27	0	0	0.27	0.75	0.2
10:58:39	7	10	1 point	0.76 -	0	0	0	0.45	0	0	0.45	0.76	0.34
10:59:30	8	11	1 point	0.72 -	0	0	0	0.57	0	0	0.57	0.72	0.41
11:00:49	9	12	1 point	0.74 -	0	0	0	0.69	0	0	0.69	0.74	0.51
11:01:40	10	13	1 point	0.73 -	0	0	0	0.85	0	0	0.85	0.73	0.62
11:02:28	11	14	1 point	0.63 -	0	0	0	0.22	0	0	0.22	0.63	0.14
11:03:24	12	15	1 point	0.73 -	0	0	0	0.35	0	0	0.35	0.73	0.25
11:04:13	13	16	1 point	0.74 -	0	0	0	0.18	0	0	0.18	0.74	0.13
11:05:00	14	17	1 point	0.6 -	0	0	0	0.05	0	0	0.05	0.6	0.03
11:05:48	15	18	1 point	0.61 -	0	0	0	0	0	0	0	0.61	0
11:07:01	16	19	1 point	0.62 -	0	0	0	-0.01	0	0	-0.01	0.83	-0.01
11:07:31	17	20.67	0 point	0 -	0	0	0	0	0	0	0	0	0

0.99 Station Entry: Non-fixed
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 17
 Stream Width: 16.87 ft
 Total Discharge: 2.92 ft³/s
 Total Area: 10.95 ft²
 Mean Depth: 0.65 ft

2.9

2021Dec02

11:01:38	1	3.3	0 point	0 -	0	0	0	0	0	0	0	0	0
11:02:39	2	5.5	1 point	0.73 -	0	0	0	0.09	0	0	0.09	1.53	0.14
11:03:25	3	7.5	1 point	0.75 -	0	0	0	0.17	0	0	0.17	1.5	0.26
11:04:15	4	9.5	1 point	0.73 -	0	0	0	0.4	0	0	0.4	1.28	0.52
11:05:02	5	11	1 point	0.74 -	0	0	0	0.54	0	0	0.54	1.29	0.7
11:05:46	6	13	1 point	0.75 -	0	0	0	0.78	0	0	0.78	1.12	0.88
11:06:31	7	14	1 point	0.6 -	0	0	0	0.35	0	0	0.35	0.75	0.26
11:07:17	8	15.5	1 point	0.73 -	0	0	0	0.33	0	0	0.33	0.91	0.3
11:08:02	9	16.5	1 point	0.68 -	0	0	0	0.18	0	0	0.18	0.85	0.16
11:08:45	10	18	1 point	0.6 -	0	0	0	0	0	0	0	0.9	0

1 Station Entry: Non-fixed
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 12
 Stream Width: 17.37 ft
 Total Discharge: 3.21 ft³/s
 Total Area: 11.02 ft²
 Mean Depth: 0.63 ft

11:09:32	11	19.5 1 point	0.66 -	0	0	0	-0.02	0	0	-0.02	0.88	-0.01
11:09:52	12	20.67 0 point	0 -	0	0	0	0	0	0	0	0	0

3.21

2021Dec02

10:44:29	1	3.25 0 point	0 -	0	0	0	0	0	0	0	0	0
10:46:08	2	4.5 1 point	0.6 -	0	0	0	-0.01	0	0	-0.01	0.67	-0.01
10:47:00	3	5.5 1 point	0.72 -	0	0	0	0.11	0	0	0.11	0.72	0.08
10:48:00	4	6.5 1 point	0.8 -	0	0	0	0.1	0	0	0.1	1	0.1
10:49:14	5	8 1 point	0.74 -	0	0	0	0.06	0	0	0.06	0.92	0.05
10:50:10	6	9 1 point	0.77 -	0	0	0	0.14	0	0	0.14	0.77	0.11
10:50:50	7	10 1 point	0.8 -	0	0	0	0.46	0	0	0.46	0.8	0.37
10:51:45	8	11 1 point	0.73 -	0	0	0	0.5	0	0	0.5	0.73	0.36
10:52:34	9	12 1 point	0.78 -	0	0	0	0.57	0	0	0.57	0.78	0.44
10:53:28	10	13 1 point	0.74 -	0	0	0	0.79	0	0	0.79	0.74	0.59
10:54:31	11	14 1 point	0.67 -	0	0	0	0.34	0	0	0.34	0.84	0.29
10:55:26	12	15.5 1 point	0.72 -	0	0	0	0.48	0	0	0.48	0.9	0.43
10:56:21	13	16.5 1 point	0.7 -	0	0	0	0.43	0	0	0.43	0.7	0.3
10:57:16	14	17.5 1 point	0.64 -	0	0	0	0	0	0	0	0.8	0
10:58:07	15	19 1 point	0.6 -	0	0	0	0.01	0	0	0.01	0.95	0.01
10:58:35	16	20.67 0 point	0 -	0	0	0	0	0	0	0	0	0

3.12

1 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 16
Stream Width: 17.42 ft
Total Discharge: 3.14 ft³/s
Total Area: 11.33 ft²
Mean Depth: 0.65 ft

2021Nov07

11:39:55	1	4 0 point	0 -	0	0	0	0	0	0	0	0	0
11:41:08	2	5 1 point	0.78 -	0	0	0	0	0	0	0	0.78	0
11:41:50	3	6 1 point	0.85 -	0	0	0	0.07	0	0	0.07	0.85	0.06
11:42:34	4	7 1 point	0.89 -	0	0	0	0.05	0	0	0.05	0.89	0.04
11:43:24	5	8 1 point	0.84 -	0	0	0	0.11	0	0	0.11	0.84	0.09
11:44:00	6	9 1 point	0.82 -	0	0	0	0.01	0	0	0.01	0.82	0.01
11:44:39	7	10 1 point	0.87 -	0	0	0	0.09	0	0	0.09	0.87	0.08
11:45:15	8	11 1 point	0.82 -	0	0	0	0.2	0	0	0.2	0.82	0.17
11:45:56	9	12 1 point	0.85 -	0	0	0	0.28	0	0	0.28	0.85	0.23
11:46:29	10	13 1 point	0.87 -	0	0	0	0.35	0	0	0.35	0.87	0.3
11:46:58	11	14 1 point	0.87 -	0	0	0	0.27	0	0	0.27	0.87	0.23
11:47:45	12	15 1 point	0.78 -	0	0	0	0.46	0	0	0.46	0.78	0.36
11:48:24	13	16 1 point	0.74 -	0	0	0	0.5	0	0	0.5	0.74	0.37
11:49:07	14	17 1 point	0.72 -	0	0	0	0.03	0	0	0.03	0.72	0.02
11:49:48	15	18 1 point	0.76 -	0	0	0	0.25	0	0	0.25	0.76	0.19
11:50:38	16	19 1 point	0.73 -	0	0	0	0.14	0	0	0.14	0.91	0.13
11:51:01	17	20.5 0 point	0 -	0	0	0	0	0	0	0	0	0

2.28

1.1 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 17
Stream Width: 16.50 ft
Total Discharge: 2.29 ft³/s
Total Area: 12.37 ft²
Mean Depth: 0.75 ft

0.717059

2021Oct23

9:50:04	1	3.67 0 point	0 -	0	0	0	0	0	0	0	0	0
9:51:16	2	4.5 1 point	0.4 -	0	0	0	0.18	0	0	0.18	0.37	0.07
9:52:02	3	5.5 1 point	0.5 -	0	0	0	0.44	0	0	0.44	0.5	0.22
9:52:58	4	6.5 1 point	0.61 -	0	0	0	0.22	0	0	0.22	0.61	0.13
9:53:56	5	7.5 1 point	0.55 -	0	0	0	0.21	0	0	0.21	0.55	0.12
9:55:03	6	8.5 1 point	0.6 -	0	0	0	0.28	0	0	0.28	0.6	0.17
9:56:12	7	9.5 1 point	0.6 -	0	0	0	0.37	0	0	0.37	0.6	0.22
9:57:22	8	10.5 1 point	0.56 -	0	0	0	0.34	0	0	0.34	0.56	0.19
9:58:13	9	11.5 1 point	0.54 -	0	0	0	0.42	0	0	0.42	0.54	0.23

0.81 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 17
Stream Width: 17.00 ft
Total Discharge: 1.85 ft³/s
Total Area: 8.12 ft²
Mean Depth: 0.48 ft

9:59:01	10	12.5 1 point	0.56 -	0	0	0	0.42	0	0	0.42	0.56	0.24	
10:00:16	11	13.5 1 point	0.54 -	0	0	0	0.12	0	0	0.12	0.54	0.06	
10:01:29	12	14.5 1 point	0.53 -	0	0	0	0.09	0	0	0.09	0.66	0.06	
10:02:21	13	16 1 point	0.46 -	0	0	0	0.12	0	0	0.12	0.57	0.07	
10:03:10	14	17 1 point	0.46 -	0	0	0	0.05	0	0	0.05	0.46	0.02	
10:04:35	15	18 1 point	0.42 -	0	0	0	0.02	0	0	0.02	0.42	0.01	
10:05:56	16	19 1 point	0.43 -	0	0	0	0.07	0	0	0.07	0.57	0.04	
10:06:41	17	20.67 0 point	0 -	0	0	0	0	0	0	0	0	0	
			0.456471										1.85

2021Sep26

10:40:02	1	4 0 point	0 -	0	0	0	0	0	0	0	0	0	
10:41:19	2	5 1 point	0.7 -	0	0	0	0.51	0	0	0.51	0.7	0.36	
10:42:21	3	6 1 point	0.8 -	0	0	0	0.49	0	0	0.49	0.8	0.39	
10:43:20	4	7 1 point	0.74 -	0	0	0	0.31	0	0	0.31	0.74	0.23	
10:44:12	5	8 1 point	0.8 -	0	0	0	0.37	0	0	0.37	0.8	0.3	
10:45:06	6	9 1 point	0.76 -	0	0	0	0.41	0	0	0.41	0.76	0.31	
10:46:07	7	10 1 point	0.77 -	0	0	0	0.44	0	0	0.44	0.77	0.34	
10:46:55	8	11 1 point	0.78 -	0	0	0	0.58	0	0	0.58	0.78	0.45	
10:47:51	9	12 1 point	0.8 -	0	0	0	0.67	0	0	0.67	0.8	0.53	
10:48:52	10	13 1 point	0.72 -	0	0	0	0.74	0	0	0.74	0.72	0.53	
10:49:46	11	14 1 point	0.7 -	0	0	0	0.18	0	0	0.18	0.7	0.13	
10:50:40	12	15 1 point	0.74 -	0	0	0	0.27	0	0	0.27	0.74	0.2	
10:51:31	13	16 1 point	0.7 -	0	0	0	0.03	0	0	0.03	1.05	0.03	
10:52:21	14	18 1 point	0.65 -	0	0	0	0.22	0	0	0.22	0.97	0.22	
10:53:06	15	19 1 point	0.5 -	0	0	0	0.29	0	0	0.29	0.62	0.18	
10:53:32	16	20.5 0 point	0 -	0	0	0	0	0	0	0	0	0	
			0.635										4.2

1.02 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 16
Stream Width: 16.50 ft
Total Discharge: 4.21 ft³/s
Total Area: 10.96 ft²
Mean Depth: 0.66 ft

2021Sep12

11:05:46	1	4 0 point	0 -	0	0	0	0	0	0	0	0	0	
11:06:53	2	5 1 point	0.45 -	0	0	0	0.56	0	0	0.56	0.45	0.25	
11:07:35	3	6 1 point	0.7 -	0	0	0	0.48	0	0	0.48	0.7	0.33	
11:08:13	4	7 1 point	0.66 -	0	0	0	0.39	0	0	0.39	0.66	0.26	
11:08:54	5	8 1 point	0.64 -	0	0	0	0.16	0	0	0.16	0.64	0.1	
11:09:27	6	9 1 point	0.65 -	0	0	0	0.26	0	0	0.26	0.49	0.13	
11:09:56	7	9.5 1 point	0.66 -	0	0	0	0.27	0	0	0.27	0.33	0.09	
11:10:34	8	10 1 point	0.65 -	0	0	0	0.41	0	0	0.41	0.32	0.13	
11:11:09	9	10.5 1 point	0.67 -	0	0	0	0.47	0	0	0.47	0.33	0.16	
11:11:46	10	11 1 point	0.66 -	0	0	0	0.32	0	0	0.32	0.33	0.11	
11:12:19	11	11.5 1 point	0.66 -	0	0	0	0.13	0	0	0.13	0.33	0.04	
11:12:50	12	12 1 point	0.66 -	0	0	0	0.26	0	0	0.26	0.49	0.13	
11:13:23	13	13 1 point	0.63 -	0	0	0	0.41	0	0	0.41	0.63	0.26	
11:13:57	14	14 1 point	0.62 -	0	0	0	0.29	0	0	0.29	0.62	0.18	
11:14:26	15	15 1 point	0.65 -	0	0	0	0.2	0	0	0.2	0.65	0.13	
11:14:55	16	16 1 point	0.6 -	0	0	0	0.02	0	0	0.02	0.6	0.01	
11:16:38	17	17 1 point	0.54 -	0	0	0	0.04	0	0	0.04	0.54	0.02	
11:17:09	18	18 1 point	0.55 -	0	0	0	0.23	0	0	0.23	0.55	0.12	
11:17:39	19	19 1 point	0.5 -	0	0	0	0.29	0	0	0.29	0.62	0.18	
11:17:55	20	20.5 0 point	0 -	0	0	0	0	0	0	0	0	0	
													2.63

0.92 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 20
Stream Width: 16.50 ft
Total Discharge: 2.64 ft³/s
Total Area: 9.30 ft²
Mean Depth: 0.56 ft

2021Aug26

16:12:07	1	3.67	0 point	0 -	0	0	0	0	0	0	0	0	
16:14:30	2	4.5	1 point	0.4 -	0	0	0	0.2	0	0	0.2	0.37	0.07
16:16:02	3	5.5	1 point	0.5 -	0	0	0	0.4	0	0	0.4	0.62	0.25
16:17:25	4	7	1 point	0.5 -	0	0	0	0.41	0	0	0.41	0.62	0.25
16:18:22	5	8	1 point	0.5 -	0	0	0	0.49	0	0	0.49	0.5	0.25
16:19:10	6	9	1 point	0.5 -	0	0	0	0.35	0	0	0.35	0.5	0.17
16:20:17	7	10	1 point	0.55 -	0	0	0	0.48	0	0	0.48	0.55	0.26
16:21:15	8	11	1 point	0.55 -	0	0	0	0.31	0	0	0.31	0.55	0.17
16:22:02	9	12	1 point	0.55 -	0	0	0	0.23	0	0	0.23	0.55	0.12
16:23:08	10	13	1 point	0.55 -	0	0	0	0.22	0	0	0.22	0.55	0.12
16:24:20	11	14	1 point	0.53 -	0	0	0	0.01	0	0	0.01	0.53	0.01
16:26:30	12	15	1 point	0.5 -	0	0	0	-0.04	0	0	-0.04	0.56	-0.02
16:27:54	13	16.25	1 point	0.5 -	0	0	0	0.13	0	0	0.13	0.5	0.06
16:29:33	14	17	1 point	0.48 -	0	0	0	0.07	0	0	0.07	0.42	0.03
16:30:30	15	18	1 point	0.43 -	0	0	0	0.1	0	0	0.1	0.32	0.03
16:31:15	16	18.5	1 point	0.44 -	0	0	0	0.08	0	0	0.08	0.59	0.05
16:32:25	17	20.67	0 point	0 -	0	0	0	0	0	0	0	0	0

0.79 Station Entry: Non-fixed
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 17
 Stream Width: 17.00 ft
 Total Discharge: 1.84 ft^3/s
 Total Area: 7.74 ft^2
 Mean Depth: 0.45 ft

1.82

2021Aug08

11:04:58	1	4	0 point	0 -	0	0	0	0	0	0	0	0	0
11:05:45	2	5	1 point	0.49 -	0	0	0	0.6	0	0	0.6	0.49	0.29
11:06:19	3	6	1 point	0.54 -	0	0	0	0.48	0	0	0.48	0.54	0.26
11:07:02	4	7	1 point	0.49 -	0	0	0	0.23	0	0	0.23	0.49	0.11
11:07:40	5	8	1 point	0.53 -	0	0	0	0.44	0	0	0.44	0.53	0.23
11:08:22	6	9	1 point	0.55 -	0	0	0	0.52	0	0	0.52	0.55	0.29
11:09:01	7	10	1 point	0.54 -	0	0	0	0.24	0	0	0.24	0.54	0.13
11:09:42	8	11	1 point	0.51 -	0	0	0	0.36	0	0	0.36	0.51	0.19
11:10:18	9	12	1 point	0.55 -	0	0	0	0.24	0	0	0.24	0.55	0.13
11:10:58	10	13	1 point	0.52 -	0	0	0	0.13	0	0	0.13	0.52	0.07
11:11:26	11	14	1 point	0.52 -	0	0	0	0.08	0	0	0.08	0.52	0.04
11:11:53	12	15	1 point	0.52 -	0	0	0	0.02	0	0	0.02	0.52	0.01
11:12:35	13	16	1 point	0.44 -	0	0	0	0.04	0	0	0.04	0.44	0.01
11:13:05	14	17	1 point	0.45 -	0	0	0	0.17	0	0	0.17	0.45	0.08
11:13:45	15	18	1 point	0.42 -	0	0	0	0.02	0	0	0.02	0.42	0.01
11:14:20	16	19	1 point	0.41 -	0	0	0	0.1	0	0	0.1	0.41	0.04
11:14:33	17	20	0 point	0 -	0	0	0	0	0	0	0	0	0

0.79 Station Entry: Non-fixed
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 17
 Stream Width: 16.00 ft
 Total Discharge: 1.90 ft^3/s
 Total Area: 7.48 ft^2
 Mean Depth: 0.47 ft

1.89

2021 July 11

11:22:24	1	4	0 point	0 -	0	0	0	0	0	0	0	0	0
11:23:11	2	5	1 point	0.4 -	0	0	0	0.59	0	0	0.59	0.4	0.23
11:23:56	3	6	1 point	0.61 -	0	0	0	0.56	0	0	0.56	0.61	0.34
11:25:07	4	7	1 point	0.65 -	0	0	0	0.28	0	0	0.28	0.65	0.18
11:25:48	5	8	1 point	0.62 -	0	0	0	0.53	0	0	0.53	0.62	0.33
11:26:26	6	9	1 point	0.6 -	0	0	0	0.56	0	0	0.56	0.6	0.34
11:26:58	7	10	1 point	0.6 -	0	0	0	0.42	0	0	0.42	0.6	0.25
11:27:35	8	11	1 point	0.64 -	0	0	0	0.36	0	0	0.36	0.64	0.23
11:28:07	9	12	1 point	0.64 -	0	0	0	0.32	0	0	0.32	0.64	0.2

0.89 Station Entry: Non-fixed
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 16
 Stream Width: 16.00 ft
 Total Discharge: 2.99 ft^3/s
 Total Area: 8.33 ft^2
 Mean Depth: 0.52 ft

11:28:46	10	13 1 point	0.6 -	0	0	0	0.31	0	0	0.31	0.6	0.19
11:29:20	11	14 1 point	0.6 -	0	0	0	0.17	0	0	0.17	0.6	0.1
11:29:59	12	15 1 point	0.59 -	0	0	0	0.26	0	0	0.26	0.59	0.15
11:30:33	13	16 1 point	0.56 -	0	0	0	-0.03	0	0	-0.03	0.56	-0.02
11:31:12	14	17 1 point	0.47 -	0	0	0	0.44	0	0	0.44	0.47	0.21
11:31:51	15	18 1 point	0.5 -	0	0	0	0.32	0	0	0.32	0.75	0.24
11:32:13	16	20 0 point	0 -	0	0	0	0	0	0	0	0	0

2.97

2021 June 27

9:27:31	1	3.25 0 point	0.4	0.6	0	0	0	0	0	0	0.15	0.03
9:29:00	2	4 1 point	0.45 -	0	0	0	0.3	0	0	0.3	0.39	0.12
9:29:51	3	5 1 point	0.52 -	0	0	0	0.51	0	0	0.51	0.52	0.27
9:30:47	4	6 1 point	0.63 -	0	0	0	0.16	0	0	0.16	0.79	0.13
9:31:38	5	7.5 1 point	0.6 -	0	0	0	0.67	0	0	0.67	0.75	0.5
9:32:26	6	8.5 1 point	0.6 -	0	0	0	0.8	0	0	0.8	0.75	0.6
9:33:33	7	10 1 point	0.6 -	0	0	0	0.75	0	0	0.75	0.75	0.56
9:34:17	8	11 1 point	0.6 -	0	0	0	0.41	0	0	0.41	0.9	0.37
9:35:15	9	13 1 point	0.56 -	0	0	0	0.27	0	0	0.27	0.84	0.23
9:36:05	10	14 1 point	0.55 -	0	0	0	0.09	0	0	0.09	0.55	0.05
9:37:06	11	15 1 point	0.5 -	0	0	0	0.13	0	0	0.13	0.58	0.08
9:38:20	12	16.33 1 point	0.5 -	0	0	0	0.23	0	0	0.23	0.75	0.17
9:39:15	13	18 1 point	0.45 -	0	0	0	0.31	0	0	0.31	0.49	0.15
9:40:15	14	18.5 1 point	0.42 -	0	0	0	0.13	0	0	0.13	0.57	0.07
9:41:02	15	20.7 0 point	0.3	0.7	0	0	0	0	0	0	0.33	0.03

0.84 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 15
Stream Width: 17.45 ft
Total Discharge: 3.36 ft³/s
Total Area: 9.11 ft²
Mean Depth: 0.52 ft

3.36

2021 June 13

10:24:58	1	3.67 0 point	0.47	0.7	0	0	0	0	0	0	0.08	0
10:26:41	2	4 1 point	0.5 -	0	0	0	0.11	0	0	0.11	0.33	0.04
10:27:38	3	5 1 point	0.55 -	0	0	0	0.49	0	0	0.49	0.55	0.27
10:28:25	4	6 1 point	0.7 -	0	0	0	0.35	0	0	0.35	0.7	0.24
10:29:16	5	7 1 point	0.75 -	0	0	0	0.47	0	0	0.47	0.75	0.35
10:30:22	6	8 1 point	0.7 -	0	0	0	0.55	0	0	0.55	0.7	0.38
10:31:25	7	9 1 point	0.65 -	0	0	0	0.69	0	0	0.69	0.65	0.45
10:32:15	8	10 1 point	0.65 -	0	0	0	0.71	0	0	0.71	0.65	0.46
10:32:59	9	11 1 point	0.65 -	0	0	0	0.71	0	0	0.71	0.65	0.46
10:33:58	10	12 1 point	0.7 -	0	0	0	0.69	0	0	0.69	0.7	0.49
10:34:51	11	13 1 point	0.65 -	0	0	0	0.48	0	0	0.48	0.65	0.31
10:35:46	12	14 1 point	0.6 -	0	0	0	-0.02	0	0	-0.02	0.6	-0.01
10:36:46	13	15 1 point	0.63 -	0	0	0	0.4	0	0	0.4	0.63	0.25
10:37:30	14	16 1 point	0.6 -	0	0	0	0	0	0	0	0.6	0
10:38:29	15	17 1 point	0.55 -	0	0	0	0.41	0	0	0.41	0.82	0.34
10:39:23	16	19 1 point	0.5 -	0	0	0	0.18	0	0	0.18	0.75	0.14
10:40:23	17	20 1 point	0.4 -	0	0	0	0.15	0	0	0.15	0.3	0.04
10:41:17	18	20.5 0 point	0.25	0.7	0	0	0	0	0	0	0.06	0.01

0.92
Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 18
Stream Width: 16.83 ft
Total Discharge: 4.23 ft³/s
Total Area: 10.18 ft²
Mean Depth: 0.60 ft

4.22

2021 May 23

10:52:52	22	4 0 point	0.45 -	0	0	0	0	0	0	0	0.16	0	0.87
10:53:30	23	3.3 0 point	0.45 -	0	0	0	0	0	0	0	0.31	0	
10:54:26	24	4 1 point	0.5 -	0	0	0	0.07	0	0	0.07	0.42	0.03	
10:55:26	25	5 1 point	0.55 -	0	0	0	0.55	0	0	0.55	0.55	0.3	
10:56:27	26	6 1 point	0.6 -	0	0	0	0.4	0	0	0.4	0.6	0.24	
10:57:37	27	7 1 point	0.6 -	0	0	0	0.3	0	0	0.3	0.6	0.18	
10:58:25	28	8 1 point	0.6 -	0	0	0	0.49	0	0	0.49	0.6	0.29	
10:59:17	29	9 1 point	0.5 -	0	0	0	0.68	0	0	0.68	0.5	0.34	
11:00:15	30	10 1 point	0.6 -	0	0	0	0.58	0	0	0.58	0.6	0.35	
11:01:03	31	11 1 point	0.6 -	0	0	0	0.54	0	0	0.54	0.6	0.32	
11:02:15	32	12 1 point	0.6 -	0	0	0	0.54	0	0	0.54	0.6	0.32	
11:03:00	33	13 1 point	0.6 -	0	0	0	0.38	0	0	0.38	0.6	0.23	
11:03:44	34	14 1 point	0.6 -	0	0	0	0.45	0	0	0.45	0.6	0.27	
11:04:35	35	15 1 point	0.58 -	0	0	0	0.05	0	0	0.05	0.58	0.03	
11:05:57	36	16 1 point	0.55 -	0	0	0	-0.01	0	0	-0.01	0.82	-0.01	
11:07:05	37	18 1 point	0.5 -	0	0	0	0.09	0	0	0.09	0.75	0.06	
11:08:19	38	19 1 point	0.3 -	0	0	0	0.05	0	0	0.05	2.5	0.11	

3.06

2022Apr16													
9:16:32	1	3.45	0 point	0 -	0	0	0	0	0	0	0	0	
9:18:37	2	4.25	1 point	0.9 -	0	0	0	-0.06	0	0	-0.06	0.92	-0.06
9:19:43	3	5.5	1 point	1.03 -	0	0	0	0.44	0	0	0.44	1.16	0.51
9:20:36	4	6.5	1 point	1.1 -	0	0	0	0.64	0	0	0.64	1.1	0.7
9:21:23	5	7.5	1 point	1.2 -	0	0	0	0.74	0	0	0.74	0.9	0.67
9:22:17	6	8	1 point	1.21 -	0	0	0	0.65	0	0	0.65	0.6	0.39
9:23:13	7	8.5	1 point	1.15 -	0	0	0	0.54	0	0	0.54	0.57	0.31
9:23:56	8	9	1 point	1.16 -	0	0	0	0.88	0	0	0.88	0.58	0.51
9:24:39	9	9.5	1 point	1.18 -	0	0	0	0.88	0	0	0.88	0.88	0.78
9:25:33	10	10.5	1 point	1.25 -	0	0	0	0.57	0	0	0.57	0.94	0.54
9:26:44	11	11	1 point	1.12 -	0	0	0	0.32	0	0	0.32	0.56	0.18
9:28:09	12	11.5	1 point	0.85 -	0	0	0	-0.07	0	0	-0.07	0.3	-0.02
9:28:25	13	11.7	0 point	0 -	0	0	0	0	0	0	0	0	0

1.38 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 13
Stream Width: 8.25 ft
Total Discharge: 4.51 ft³/s
Total Area: 8.52 ft²
Mean Depth: 1.03 ft

2022Mar31													
12:53:55	1	3	0 point	0 -	0	0	0	0	0	0	0	0	0
12:55:23	2	4	1 point	0.92 -	0	0	0	-0.06	0	0	-0.06	1.15	-0.07
12:56:05	3	5.5	1 point	1 -	0	0	0	0.39	0	0	0.39	1	0.39
12:56:56	4	6	1 point	1.07 -	0	0	0	0.46	0	0	0.46	0.53	0.25
12:57:38	5	6.5	1 point	1.12 -	0	0	0	0.74	0	0	0.74	0.56	0.42
12:58:17	6	7	1 point	1.2 -	0	0	0	0.93	0	0	0.93	0.6	0.55
12:59:05	7	7.5	1 point	1.22 -	0	0	0	0.96	0	0	0.96	0.61	0.59
12:59:45	8	8	1 point	1.2 -	0	0	0	0.74	0	0	0.74	0.9	0.67
13:00:27	9	9	1 point	1.22 -	0	0	0	0.92	0	0	0.92	1.22	1.12
13:01:18	10	10	1 point	1.32 -	0	0	0	0.47	0	0	0.47	0.99	0.46
13:01:53	11	10.5	1 point	1.31 -	0	0	0	0.75	0	0	0.75	0.65	0.49
13:03:19	12	11	1 point	1.14 -	0	0	0	-0.07	0	0	-0.07	0.74	-0.05
13:03:52	13	11.8	0 point	0 -	0	0	0	0	0	0	0	0	0

1.42 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 13
Stream Width: 8.80 ft
Total Discharge: 4.82 ft³/s
Total Area: 8.96 ft²
Mean Depth: 1.02 ft

2022Feb23													
14:04:28	1	3.25	0 point	0 -	0	0	0	0	0	0	0	0	0
14:05:54	2	4.5	1 point	1.1 -	0	0	0	0.11	0	0	0.11	0.96	0.11
14:06:34	3	5	1 point	1.12 -	0	0	0	0.32	0	0	0.32	0.84	0.27
14:07:37	4	6	1 point	1.2 -	0	0	0	0.52	0	0	0.52	1.2	0.62
14:08:20	5	7	1 point	1.2 -	0	0	0	0.8	0	0	0.8	1.2	0.96
14:09:07	6	8	1 point	1.32 -	0	0	0	0.88	0	0	0.88	0.99	0.87
14:10:02	7	8.5	1 point	1.25 -	0	0	0	0.66	0	0	0.66	0.62	0.41
14:10:42	8	9	1 point	1.24 -	0	0	0	0.85	0	0	0.85	0.62	0.53
14:11:32	9	9.5	1 point	1.28 -	0	0	0	1.05	0	0	1.05	0.96	1.01
14:12:45	10	10.5	1 point	1.38 -	0	0	0	0.73	0	0	0.73	1.03	0.76
14:13:40	11	11	1 point	1.23 -	0	0	0	0.12	0	0	0.12	0.92	0.11
14:14:04	12	12	0 point	0 -	0	0	0	0	0	0	0	0	0

1.49 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 12
Stream Width: 8.75 ft
Total Discharge: 5.66 ft³/s
Total Area: 9.35 ft²
Mean Depth: 1.07 ft

2022Feb09													
15:02:25	1	3.33	0 point	0 -	0	0	0	0	0	0	0	0	0
15:03:46	2	4.5	1 point	1.12 -	0	0	0	0.24	0	0	0.24	1.21	0.29

1.5 Station Entry: Non-fixed
Flow Calculation: Mid-section

15:05:01	3	5.5 1 point	1.15 -	0	0	0	0.57	0	0	0.57	1.44	0.82	Start Edge: Right edge water # of Stations: 9 Stream Width: 8.67 ft Total Discharge: 5.89 ft^3/s Total Area: 9.39 ft^2 Mean Depth: 1.08 ft
15:06:04	4	7 1 point	1.23 -	0	0	0	0.94	0	0	0.94	1.54	1.45	
15:06:55	5	8 1 point	1.26 -	0	0	0	1.12	0	0	1.12	1.26	1.41	
15:07:49	6	9 1 point	1.32 -	0	0	0	0.59	0	0	0.59	1.32	0.78	
15:08:34	7	10 1 point	1.32 -	0	0	0	0.79	0	0	0.79	1.32	1.04	
15:10:06	8	11 1 point	1.3 -	0	0	0	0.07	0	0	0.07	1.3	0.09	
15:10:36	9	12 0 point	0 -	0	0	0	0	0	0	0	0	0	

2021Dec16

11:33:59	1	3.5 0 point	0 -	0	0	0	0	0	0	0	0	0	1.32 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 9 Stream Width: 8.30 ft Total Discharge: 2.92 ft^3/s Total Area: 7.67 ft^2 Mean Depth: 0.92 ft
11:35:03	2	5 1 point	0.96 -	0	0	0	0.16	0	0	0.16	1.2	0.2	
11:36:12	3	6 1 point	1.02 -	0	0	0	0.24	0	0	0.24	1.02	0.24	
11:36:55	4	7 1 point	1.1 -	0	0	0	0.67	0	0	0.67	1.1	0.73	
11:37:47	5	8 1 point	1.14 -	0	0	0	0.69	0	0	0.69	1.14	0.78	
11:38:36	6	9 1 point	1.07 -	0	0	0	0.52	0	0	0.52	1.07	0.56	
11:39:19	7	10 1 point	1.15 -	0	0	0	0.37	0	0	0.37	1.15	0.42	
11:40:27	8	11 1 point	1.1 -	0	0	0	-0.02	0	0	-0.02	0.99	-0.02	
11:40:55	9	11.8 0 point	0 -	0	0	0	0	0	0	0	0	0	

2.91

2021Dec02

11:35:31	1	3.5 0 point	0 -	0	0	0	0	0	0	0	0	0	1.34 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 9 Stream Width: 1.80 ft Total Discharge: 3.04 ft^3/s Total Area: 12.73 ft^2 Mean Depth: 7.07 ft
11:36:23	2	5.5 1 point	1.01 -	0	0	0	0.37	0	0	0.37	1.51	0.57	
11:37:05	3	6.5 1 point	1 -	0	0	0	0.54	0	0	0.54	1	0.54	
11:37:49	4	7.5 1 point	1.18 -	0	0	0	0.74	0	0	0.74	1.18	0.88	
11:38:28	5	8.5 1 point	1.21 -	0	0	0	0.3	0	0	0.3	0.91	0.27	
11:39:10	6	9 1 point	1.2 -	0	0	0	0.41	0	0	0.41	0.9	0.37	
11:40:06	7	10 1 point	1.25 -	0	0	0	0.42	0	0	0.42	1.25	0.52	
11:41:17	8	11 1 point	1.16 -	0	0	0	-0.02	0	0	-0.02	5.97	-0.11	
11:41:43	9	11.97 0 point	0 -	0	0	0	0	0	0	0	0	0	

3.04

2021Dec02

11:24:35	1	3.5 0 point	0 -	0	0	0	0	0	0	0	0	0	1.34 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 10 Stream Width: 8.50 ft Total Discharge: 3.38 ft^3/s Total Area: 7.92 ft^2 Mean Depth: 0.93 ft
11:25:56	2	4.5 1 point	0.85 -	0	0	0	-0.07	0	0	-0.07	0.64	-0.04	
11:26:43	3	5 1 point	0.97 -	0	0	0	0.06	0	0	0.06	0.73	0.04	
11:27:28	4	6 1 point	1 -	0	0	0	0.43	0	0	0.43	1	0.43	
11:28:18	5	7 1 point	1.05 -	0	0	0	0.52	0	0	0.52	1.05	0.55	
11:29:06	6	8 1 point	1.21 -	0	0	0	0.84	0	0	0.84	1.21	1.01	
11:30:00	7	9 1 point	1.14 -	0	0	0	0.4	0	0	0.4	1.14	0.46	
11:30:46	8	10 1 point	1.18 -	0	0	0	0.61	0	0	0.61	0.88	0.54	
11:31:39	9	10.5 1 point	1.27 -	0	0	0	0.3	0	0	0.3	1.27	0.38	
11:32:12	10	12 0 point	0 -	0	0	0	0	0	0	0	0	0	

3.37

2021Nov07

12:10:16	1	3.25 0 point	0 -	0	0	0	0	0	0	0	0	0	1.37 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 13 Stream Width: 8.60 ft
12:11:37	2	4 1 point	0.7 -	0	0	0	-0.04	0	0	-0.04	0.61	-0.02	
12:12:58	3	5 1 point	0.97 -	0	0	0	0.01	0	0	0.01	0.97	0.01	
12:13:53	4	6 1 point	1 -	0	0	0	0.35	0	0	0.35	1	0.35	
12:15:06	5	7 1 point	1.1 -	0	0	0	0.32	0	0	0.32	0.82	0.26	

12:16:00	6	7.5 1 point	1.23 -	0	0	0	0.58	0	0	0.58	0.61	0.36	Total Discharge: 2.71 ft ³ /s Total Area: 8.44 ft ² Mean Depth: 0.98 ft
12:16:47	7	8 1 point	1.24 -	0	0	0	0.64	0	0	0.64	0.93	0.59	
12:17:35	8	9 1 point	1.21 -	0	0	0	0.45	0	0	0.45	0.91	0.41	
12:18:20	9	9.5 1 point	1.2 -	0	0	0	0.51	0	0	0.51	0.6	0.3	
12:18:55	10	10 1 point	1.2 -	0	0	0	0.47	0	0	0.47	0.6	0.28	
12:19:38	11	10.5 1 point	1.26 -	0	0	0	0.23	0	0	0.23	0.63	0.14	
12:20:49	12	11 1 point	1.12 -	0	0	0	0.01	0	0	0.01	0.75	0.01	
12:21:31	13	11.85 0 point	0 -	0	0	0	0	0	0	0	0	0	

2.69

2021Oct23

10:19:58	1	3.5 0 point	0 -	0	0	0	0	0	0	0	0	0	1.28 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 11 Stream Width: 8.50 ft Total Discharge: 2.28 ft ³ /s Total Area: 7.58 ft ² Mean Depth: 0.89 ft
10:21:52	2	4.5 1 point	0.8 -	0	0	0	0	0	0	0	0.8	0	
10:22:44	3	5.5 1 point	0.85 -	0	0	0	0.14	0	0	0.14	0.64	0.09	
10:23:30	4	6 1 point	0.92 -	0	0	0	0.16	0	0	0.16	0.69	0.11	
10:24:18	5	7 1 point	1.05 -	0	0	0	0.44	0	0	0.44	1.05	0.46	
10:25:22	6	8 1 point	1.1 -	0	0	0	0.61	0	0	0.61	0.82	0.5	
10:26:14	7	8.5 1 point	1.02 -	0	0	0	0.32	0	0	0.32	0.51	0.16	
10:26:57	8	9 1 point	1.08 -	0	0	0	0.42	0	0	0.42	0.81	0.34	
10:27:42	9	10 1 point	1.18 -	0	0	0	0.52	0	0	0.52	1.12	0.58	
10:28:49	10	10.9 1 point	1.14 -	0	0	0	0.02	0	0	0.02	1.14	0.02	
10:29:16	11	12 0 point	0 -	0	0	0	0	0	0	0	0	0	

2.26

2021Sep26

11:39:48	1	3 0 point	0 -	0	0	0	0	0	0	0	0	0	1.43 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 18 Stream Width: 9.00 ft Total Discharge: 4.40 ft ³ /s Total Area: 9.30 ft ² Mean Depth: 1.03 ft
11:42:11	2	4 1 point	0.8 -	0	0	0	0.11	0	0	0.11	0.6	0.06	
11:43:27	3	4.5 1 point	1 -	0	0	0	0.12	0	0	0.12	0.5	0.06	
11:45:12	4	5 1 point	1 -	0	0	0	0.32	0	0	0.32	0.5	0.16	
11:46:58	5	5.5 1 point	1 -	0	0	0	0.61	0	0	0.61	0.5	0.3	
11:49:34	6	6 1 point	1.05 -	0	0	0	0.51	0	0	0.51	0.52	0.27	
11:51:45	7	6.5 1 point	1.15 -	0	0	0	0.44	0	0	0.44	0.57	0.25	
11:52:53	8	7 1 point	1.15 -	0	0	0	0.41	0	0	0.41	0.57	0.24	
11:55:02	9	7.5 1 point	1.25 -	0	0	0	0.59	0	0	0.59	0.62	0.37	
11:56:35	10	8 1 point	1.3 -	0	0	0	0.59	0	0	0.59	0.65	0.38	
11:58:20	11	8.5 1 point	1.2 -	0	0	0	0.64	0	0	0.64	0.6	0.38	
11:59:56	12	9 1 point	1.15 -	0	0	0	0.9	0	0	0.9	0.57	0.51	
12:02:11	13	9.5 1 point	1.25 -	0	0	0	0.64	0	0	0.64	0.62	0.4	
12:03:24	14	10 1 point	1.15 -	0	0	0	0.7	0	0	0.7	0.57	0.4	
12:04:53	15	10.5 1 point	1.3 -	0	0	0	0.75	0	0	0.75	0.65	0.49	
12:05:50	16	11 1 point	1.3 -	0	0	0	0.25	0	0	0.25	0.65	0.16	
12:08:50	17	11.5 1 point	1.15 -	0	0	0	-0.1	0	0	-0.1	0.57	-0.06	
12:09:54	18	12 0 point	0 -	0	0	0	0	0	0	0	0	0	

4.37

2021Sep12

11:42:04	1	3.25 0 point	0 -	0	0	0	0	0	0	0	0	0	1.34 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 11 Stream Width: 8.42 ft Total Discharge: 3.74 ft ³ /s Total Area: 8.06 ft ² Mean Depth: 0.96 ft
11:44:09	2	4 1 point	0.72 -	0	0	0	0.03	0	0	0.03	0.63	0.02	
11:45:05	3	5 1 point	0.9 -	0	0	0	0.14	0	0	0.14	0.9	0.13	
11:46:09	4	6 1 point	1.03 -	0	0	0	0.46	0	0	0.46	1.03	0.47	
11:47:01	5	7 1 point	1.05 -	0	0	0	0.49	0	0	0.49	1.57	0.77	
11:48:00	6	9 1 point	1.21 -	0	0	0	0.87	0	0	0.87	1.21	1.05	
11:48:58	7	9.5 1 point	1.12 -	0	0	0	0.72	0	0	0.72	0.56	0.4	
11:49:49	8	10 1 point	1.2 -	0	0	0	0.62	0	0	0.62	0.9	0.56	

11:50:51	9	10.5 1 point	1.22 -	0	0	0	0.57	0	0	0.57	0.61	0.35
11:51:57	10	11 1 point	1.1 -	0	0	0	-0.03	0	0	-0.03	0.64	-0.02
11:52:30	11	11.67 0 point	0 -	0	0	0	0	0	0	0	0	0

3.73

2021Aug26

16:56:39	1	3.5 0 point	0 -	0	0	0	0	0	0	0	0	0
16:57:47	2	5 1 point	0.9 -	0	0	0	0.09	0	0	0.09	1.12	0.11
16:58:35	3	6 1 point	0.9 -	0	0	0	0.17	0	0	0.17	0.9	0.15
16:59:48	4	7 1 point	1.05 -	0	0	0	0.35	0	0	0.35	1.05	0.37
17:00:29	5	8 1 point	1.1 -	0	0	0	0.69	0	0	0.69	1.1	0.76
17:01:19	6	9 1 point	1.1 -	0	0	0	0.42	0	0	0.42	1.1	0.46
17:02:16	7	10 1 point	1.1 -	0	0	0	0.54	0	0	0.54	1.1	0.59
17:03:15	8	11 1 point	1.05 -	0	0	0	0.06	0	0	0.06	1.05	0.06
17:03:36	9	0 point	0 -	0	0	0	0	0	0	0	0	0

1.21 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 9
Stream Width: 8.50 ft
Total Discharge: 2.51 ft³/s
Total Area: 7.42 ft²
Mean Depth: 0.87 ft

2.5

2021Aug08

11:34:53	1	3.5 0 point	0 -	0	0	0	0	0	0	0	0	0
11:35:55	2	4 1 point	0.5 -	0	0	0	0	0	0	0	0.25	0
11:36:31	3	4.5 1 point	0.5 -	0	0	0	0.07	0	0	0.07	0.25	0.02
11:37:15	4	5 1 point	0.75 -	0	0	0	0.18	0	0	0.18	0.37	0.07
11:38:01	5	5.5 1 point	0.8 -	0	0	0	0.15	0	0	0.15	0.4	0.06
11:39:04	6	6 1 point	0.9 -	0	0	0	0.35	0	0	0.35	0.45	0.16
11:40:32	7	6.5 1 point	0.9 -	0	0	0	0.36	0	0	0.36	0.45	0.16
11:41:02	8	7 1 point	0.9 -	0	0	0	0.46	0	0	0.46	0.45	0.21
11:41:47	9	7.5 1 point	1.1 -	0	0	0	0.46	0	0	0.46	0.55	0.25
11:42:35	10	8 1 point	1.05 -	0	0	0	0.74	0	0	0.74	0.52	0.39
11:43:09	11	8.5 1 point	1.05 -	0	0	0	0.59	0	0	0.59	0.52	0.31
11:43:50	12	9 1 point	1 -	0	0	0	0.48	0	0	0.48	0.5	0.24
11:44:30	13	9.5 1 point	1.1 -	0	0	0	0.62	0	0	0.62	0.55	0.34
11:45:19	14	10 1 point	1.05 -	0	0	0	0.41	0	0	0.41	0.52	0.22
11:46:11	15	10.5 1 point	1.1 -	0	0	0	0.49	0	0	0.49	0.55	0.27
11:46:52	16	11 1 point	1 -	0	0	0	0.03	0	0	0.03	0.75	0.03
11:47:15	17	12 0 point	0 -	0	0	0	0	0	0	0	0	0

1.21 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 17
Stream Width: 8.50 ft
Total Discharge: 2.72 ft³/s
Total Area: 7.10 ft²
Mean Depth: 0.83 ft

2.73

2021Aug05

15:43:20	1	3 0 point	0 -	0	0	0	0	0	0	0	0	0
15:47:40	2	4 1 point	0.65 -	0	0	0	-0.01	0	0	-0.01	0.49	0
15:48:37	3	4.5 1 point	0.6 -	0	0	0	0.05	0	0	0.05	0.3	0.01
15:49:26	4	5 1 point	0.9 -	0	0	0	0.32	0	0	0.32	0.45	0.14
15:50:25	5	5.5 1 point	0.95 -	0	0	0	0.45	0	0	0.45	0.47	0.21
15:51:23	6	6 1 point	1 -	0	0	0	0.49	0	0	0.49	0.5	0.25
15:53:20	7	6.5 1 point	1.1 -	0	0	0	0.57	0	0	0.57	0.55	0.31
15:55:24	8	7 1 point	1.05 -	0	0	0	0.45	0	0	0.45	0.52	0.23
15:56:03	9	7.5 1 point	1.2 -	0	0	0	0.54	0	0	0.54	0.6	0.32
15:57:11	10	8 1 point	1.2 -	0	0	0	0.77	0	0	0.77	0.6	0.46
15:57:43	11	8.5 1 point	1.2 -	0	0	0	0.63	0	0	0.63	0.6	0.38
15:58:53	12	9 1 point	1.1 -	0	0	0	0.75	0	0	0.75	0.82	0.62
15:59:41	13	10 1 point	1.2 -	0	0	0	0.73	0	0	0.73	1.2	0.87
16:01:03	14	11 1 point	1.1 -	0	0	0	0.2	0	0	0.2	1.1	0.21

1.36 Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 15
Stream Width: 9.00 ft
Total Discharge: 4.03 ft³/s
Total Area: 8.21 ft²
Mean Depth: 0.91 ft

16:01:23	15	12 0 point	0 -	0	0	0	0	0	0	0	0	0	0	4.01
2021 July 11														
12:36:05	1	3 0 point	0 -	0	0	0	0	0	0	0	0	0	0	1.35 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 10 Stream Width: 8.75 ft Total Discharge: 3.54 ft ³ /s Total Area: 8.45 ft ² Mean Depth: 0.97 ft
12:37:39	2	4 1 point	0.73 -	0	0	0	-0.03	0	0	-0.03	0.73	-0.02		
12:38:50	3	5 1 point	0.9 -	0	0	0	0.21	0	0	0.21	0.9	0.19		
12:39:49	4	6 1 point	1.05 -	0	0	0	0.38	0	0	0.38	1.05	0.4		
12:40:50	5	7 1 point	1.05 -	0	0	0	0.33	0	0	0.33	1.05	0.34		
12:42:16	6	8 1 point	1.25 -	0	0	0	0.75	0	0	0.75	1.41	1.06		
12:43:27	7	9.25 1 point	1.13 -	0	0	0	0.71	0	0	0.71	1.13	0.8		
12:44:16	8	10 1 point	1.3 -	0	0	0	0.55	0	0	0.55	1.14	0.62		
12:45:05	9	11 1 point	1.2 -	0	0	0	0.13	0	0	0.13	1.05	0.14		
12:45:59	10	11.75 0 point	0 -	0	0	0	0	0	0	0	0	0		
2021 June 27														
9:59:13	1	3.25 0 point	0 -	0	0	0	0	0	0	0	0	0	0	1.29 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 10 Stream Width: 8.55 ft Total Discharge: 3.61 ft ³ /s Total Area: 8.33 ft ² Mean Depth: 0.97 ft
10:00:41	2	4 1 point	0.6 -	0	0	0	-0.04	0	0	-0.04	0.52	-0.02		
10:01:41	3	5 1 point	0.83 -	0	0	0	0.15	0	0	0.15	0.83	0.12		
10:03:05	4	6 1 point	1.05 -	0	0	0	0.38	0	0	0.38	1.05	0.4		
10:03:56	5	7 1 point	1.09 -	0	0	0	0.51	0	0	0.51	1.09	0.56		
10:04:45	6	8 1 point	1.1 -	0	0	0	0.76	0	0	0.76	1.24	0.94		
10:05:43	7	9.25 1 point	1.13 -	0	0	0	0.63	0	0	0.63	1.41	0.89		
10:07:00	8	10.5 1 point	1.2 -	0	0	0	0.5	0	0	0.5	1.05	0.52		
10:07:51	9	11 1 point	1.13 -	0	0	0	0.19	0	0	0.19	0.73	0.14		
10:08:40	10	11.8 0 point	1 0.6	0	0	0	0	0	0	0	0.4	0.05		
2021 June 13														
11:06:19	1	3.42 0 point	0 -	0	0	0	0	0	0	0	0	0	0	1.34 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 11 Stream Width: 8.58 ft Total Discharge: 4.10 ft ³ /s Total Area: 7.76 ft ² Mean Depth: 0.90 ft
11:07:16	2	4 1 point	0.6 -	0	0	0	-0.02	0	0	-0.02	0.47	-0.01		
11:08:04	3	5 1 point	0.9 -	0	0	0	0.09	0	0	0.09	0.9	0.08		
11:08:47	4	6 1 point	1 -	0	0	0	0.44	0	0	0.44	1	0.44		
11:09:41	5	7 1 point	1.1 -	0	0	0	0.48	0	0	0.48	1.21	0.58		
11:10:37	6	8.2 1 point	1.1 -	0	0	0	1	0	0	1	1.1	1.1		
11:11:35	7	9 1 point	0.6 -	0	0	0	0.62	0	0	0.62	0.54	0.33		
11:13:07	8	10 1 point	1.2 -	0	0	0	0.72	0	0	0.72	1.2	0.87		
11:14:17	9	11 1 point	1 -	0	0	0	0.87	0	0	0.87	0.8	0.7		
11:15:07	10	11.6 1 point	1 -	0	0	0	0.02	0	0	0.02	0.5	0.01		
11:16:06	11	12 0 point	0.2 0.6	0	0	0	0	0	0	0	0.04	0		
2021 May 23														
11:30:57	39	3.33 1 point	0.3 -	0	0	0	0	0	0	0	0	0	0	1.35 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 11 Stream Width: 8.58 ft Total Discharge: 4.10 ft ³ /s Total Area: 7.76 ft ² Mean Depth: 0.90 ft
11:33:57	40	3.33 0 point	0 -	0	0	0	0	0	0	0	0	0		
11:34:36	41	4 1 point	0.3 -	0	0	0	-0.01	0	0	-0.01	0.25	0		
11:35:27	42	5 1 point	0.9 -	0	0	0	0.35	0	0	0.35	0.9	0.32		
11:36:40	43	6 1 point	1 -	0	0	0	0.4	0	0	0.4	1	0.4		
11:37:45	44	7 1 point	0.96 -	0	0	0	0.68	0	0	0.68	0.96	0.65		
11:39:21	45	8 1 point	1.1 -	0	0	0	1.03	0	0	1.03	1.1	1.14		
11:40:26	46	9 1 point	1.1 -	0	0	0	0.52	0	0	0.52	1.1	0.57		

11:41:35	47	10 1 point	1.1 -	0	0	0	0.7	0	0	0.7	1.1	0.77
11:42:52	48	11 1 point	1.1 -	0	0	0	0.15	0	0	0.15	0.82	0.12
11:44:03	49	11.5 1 point	1 -	0	0	0	0.13	0	0	0.13	4.35	0.56

4.53

2021 May 13

TRIAL RUN

12:18:22	1	3.5 0 point	0.6 -	0	0	0	0	0	0	0	0.15	0
12:19:30	2	4 1 point	0.6 -	0	0	0	0	0	0	0	0.45	0
12:20:55	3	5 1 point	0.9 -	0	0	0	0.22	0	0	0.22	0.9	0.2
12:21:46	4	6 1 point	0.9 -	0	0	0	0.53	0	0	0.53	0.9	0.47
12:22:45	5	7 1 point	1 -	0	0	0	0.42	0	0	0.42	1	0.42
12:23:31	6	8 1 point	1 -	0	0	0	0.95	0	0	0.95	1	0.95
12:24:31	7	9 1 point	1.1 -	0	0	0	0.46	0	0	0.46	1.1	0.51
12:25:33	8	10 1 point	1.2 -	0	0	0	0.4	0	0	0.4	1.2	0.48
12:27:42	9	11 1 point	1.1 -	0	0	0	0.51	0	0	0.51	1.1	0.56
12:28:16	10	12 0 point	0 -	0	0	0	0	0	0	0	0	0

3.59

1.38

Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
of Stations: 10
Stream Width: 8.50 ft
Total Discharge: 3.59 ft³/s
Total Area: 7.80 ft²
Mean Depth: 0.92 ft

MB55 South of Scotchmans

Measurement Results:

Time	Station	Location (ft)	Method	Depth (ft)	Edge	Facto	Surface (ft)	0.2 (ft/s)	0.4 (ft/s)	0.6 (ft/s)	0.8 (ft/s)	Bed (ft/s)	Average	Ve	Area (ft^2)	Flow (ft^3/s)	STAFF- feet
2021Nov07																	
12:35:12	1	4.5	0 point	0 -			0	0	0	0	0	0	0	0	0	0	0.51
12:35:51	2	5	1 point	0.15 -			0	0	0	0.21	0	0	0.21	0.07	0.01	0.01	Station Entry: Non-fixed
12:36:33	3	5.5	1 point	0.17 -			0	0	0	0.38	0	0	0.38	0.08	0.03	0.03	Flow Calculation: Mid-section
12:37:05	4	6	1 point	0.24 -			0	0	0	0.29	0	0	0.29	0.12	0.03	0.03	Start Edge: Right edge water
12:37:45	5	6.5	1 point	0.42 -			0	0	0	0.7	0	0	0.7	0.21	0.15	0.15	# of Stations: 14
12:38:22	6	7	1 point	0.53 -			0	0	0	0.89	0	0	0.89	0.4	0.35	0.35	Stream Width: 11.75 ft
12:39:08	7	8	1 point	0.54 -			0	0	0	1.35	0	0	1.35	0.54	0.73	0.73	Total Discharge: 2.99 ft^3/s
12:40:04	8	9	1 point	0.52 -			0	0	0	0.53	0	0	0.53	0.52	0.27	0.27	Total Area: 4.35 ft^2
12:40:45	9	10	1 point	0.44 -			0	0	0	1.03	0	0	1.03	0.44	0.45	0.45	Mean Depth: 0.37 ft
12:41:33	10	11	1 point	0.39 -			0	0	0	1.23	0	0	1.23	0.39	0.48	0.48	
12:42:47	11	12	1 point	0.5 -			0	0	0	0.38	0	0	0.38	0.5	0.19	0.19	
12:43:22	12	13	1 point	0.42 -			0	0	0	0.55	0	0	0.55	0.42	0.23	0.23	
12:43:52	13	14	1 point	0.4 -			0	0	0	0.08	0	0	0.08	0.65	0.05	0.05	
12:44:11	14	16.25	0 point	0 -			0	0	0	0	0	0	0	0	0	0	
2.97																	
2021Oct23																	
10:47:13	1	4	0 point	0 -			0	0	0	0	0	0	0	0	0	0	0.47
10:48:33	2	5	1 point	0.2 -			0	0	0	0.32	0	0	0.32	0.2	0.06	0.06	0.47
10:49:15	3	6	1 point	0.32 -			0	0	0	0.47	0	0	0.47	0.32	0.15	0.15	Station Entry: Non-fixed
10:50:25	4	7	1 point	0.47 -			0	0	0	0.65	0	0	0.65	0.47	0.31	0.31	Flow Calculation: Mid-section
10:51:02	5	8	1 point	0.5 -			0	0	0	1.2	0	0	1.2	0.5	0.6	0.6	Start Edge: Right edge water
10:52:02	6	9	1 point	0.49 -			0	0	0	0.71	0	0	0.71	0.49	0.35	0.35	# of Stations: 13
10:52:47	7	10	1 point	0.49 -			0	0	0	0.71	0	0	0.71	0.49	0.35	0.35	Stream Width: 12.50 ft
10:54:10	8	11	1 point	0.46 -			0	0	0	0.75	0	0	0.75	0.46	0.34	0.34	Total Discharge: 2.56 ft^3/s
10:55:09	9	12	1 point	0.46 -			0	0	0	0.33	0	0	0.33	0.46	0.15	0.15	Total Area: 4.33 ft^2
10:55:58	10	13	1 point	0.37 -			0	0	0	0.63	0	0	0.63	0.37	0.23	0.23	Mean Depth: 0.35 ft
10:56:45	11	14	1 point	0.3 -			0	0	0	0.15	0	0	0.15	0.3	0.05	0.05	
10:57:52	12	15	1 point	0.22 -			0	0	0	-0.16	0	0	-0.16	0.27	-0.04	-0.04	
10:58:19	13	16.5	0 point	0 -			0	0	0	0	0	0	0	0	0	0	
2.55																	
2021sep26																	
12:17:40	1	4	0 point	0 -			0	0	0	0	0	0	0	0	0	0	0.58
12:18:45	2	5	1 point	0.3 -			0	0	0	0.48	0	0	0.48	0.3	0.14	0.14	0.58
12:19:28	3	6	1 point	0.34 -			0	0	0	0.99	0	0	0.99	0.34	0.34	0.34	Station Entry: Non-fixed
12:20:17	4	7	1 point	0.5 -			0	0	0	1.28	0	0	1.28	0.5	0.64	0.64	Flow Calculation: Mid-section
12:21:18	5	8	1 point	0.5 -			0	0	0	1.86	0	0	1.86	0.5	0.93	0.93	Start Edge: Right edge water
12:22:08	6	9	1 point	0.6 -			0	0	0	1.5	0	0	1.5	0.6	0.9	0.9	# of Stations: 13
12:22:53	7	10	1 point	0.55 -			0	0	0	1.08	0	0	1.08	0.55	0.59	0.59	Stream Width: 12.67 ft
12:23:51	8	11	1 point	0.55 -			0	0	0	1.11	0	0	1.11	0.55	0.61	0.61	Total Discharge: 4.96 ft^3/s
12:24:38	9	12	1 point	0.52 -			0	0	0	0.6	0	0	0.6	0.52	0.31	0.31	Total Area: 5.02 ft^2
12:25:56	10	13	1 point	0.43 -			0	0	0	0.62	0	0	0.62	0.43	0.27	0.27	Mean Depth: 0.40 ft
12:26:50	11	14	1 point	0.4 -			0	0	0	0.32	0	0	0.32	0.4	0.13	0.13	
12:27:48	12	15	1 point	0.25 -			0	0	0	0.28	0	0	0.28	0.33	0.09	0.09	
12:28:31	13	16.67	0 point	0 -			0	0	0	0	0	0	0	0	0	0	
4.95																	

2021Sep12														
11:59:57	1	4	0 point	0 -	0	0	0	0	0	0	0	0	0.54 Station Entry: Non-fixed	
12:01:03	2	5	1 point	0.25 -	0	0	0	0.79	0	0	0.79	0.25	0.2	Flow Calculation: Mid-section
12:02:06	3	6	1 point	0.4 -	0	0	0	1.03	0	0	1.03	0.4	0.41	Start Edge: Right edge water
12:02:50	4	7	1 point	0.5 -	0	0	0	1.41	0	0	1.41	0.5	0.7	# of Stations: 13
12:03:56	5	8	1 point	0.6 -	0	0	0	1.66	0	0	1.66	0.6	0.99	Stream Width: 12.67 ft
12:04:49	6	9	1 point	0.55 -	0	0	0	1.17	0	0	1.17	0.55	0.64	Total Discharge: 4.48 ft ³ /s
12:05:52	7	10	1 point	0.53 -	0	0	0	0.88	0	0	0.88	0.53	0.47	Total Area: 4.97 ft ²
12:06:51	8	11	1 point	0.46 -	0	0	0	1.17	0	0	1.17	0.46	0.54	Mean Depth: 0.39 ft
12:07:43	9	12	1 point	0.5 -	0	0	0	0.41	0	0	0.41	0.5	0.21	
12:08:48	10	13	1 point	0.4 -	0	0	0	0.12	0	0	0.12	0.4	0.05	
12:09:48	11	14	1 point	0.38 -	0	0	0	0.22	0	0	0.22	0.38	0.08	
12:10:45	12	15	1 point	0.3 -	0	0	0	0.45	0	0	0.45	0.4	0.18	
12:11:19	13	16.67	0 point	0 -	0	0	0	0	0	0	0	0	0	

4.47

2021Aug26														
17:37:04	1	4	0 point	0 -	0	0	0	0	0	0	0	0	0	0.48 Station Entry: Non-fixed
17:37:51	2	6	1 point	0.35 -	0	0	0	0.19	0	0	0.19	0.61	0.12	Flow Calculation: Mid-section
17:38:37	3	7.5	1 point	0.45 -	0	0	0	0.94	0	0	0.94	0.67	0.63	Start Edge: Right edge water
17:39:24	4	9	1 point	0.42 -	0	0	0	1.32	0	0	1.32	0.52	0.69	# of Stations: 11
17:40:03	5	10	1 point	0.46 -	0	0	0	0.77	0	0	0.77	0.46	0.35	Stream Width: 12.75 ft
17:40:50	6	11	1 point	0.5 -	0	0	0	0.4	0	0	0.4	0.5	0.2	Total Discharge: 2.37 ft ³ /s
17:41:43	7	12	1 point	0.4 -	0	0	0	0.35	0	0	0.35	0.4	0.14	Total Area: 4.14 ft ²
17:42:27	8	13	1 point	0.35 -	0	0	0	0.48	0	0	0.48	0.35	0.17	Mean Depth: 0.32 ft
17:43:13	9	14	1 point	0.3 -	0	0	0	0.06	0	0	0.06	0.3	0.02	
17:43:57	10	15	1 point	0.23 -	0	0	0	0.15	0	0	0.15	0.32	0.05	
17:44:26	11	16.75	0 point	0 -	0	0	0	0	0	0	0	0	0	

2.37

11:56:03	1	3.67	0 point	0 -	0	0	0	0	0	0	0	0	0	0.47 Station Entry: Non-fixed
11:57:15	2	5	1 point	0.21 -	0	0	0	0.4	0	0	0.4	0.24	0.1	Flow Calculation: Mid-section
11:58:17	3	6	1 point	0.36 -	0	0	0	0.44	0	0	0.44	0.36	0.16	Start Edge: Right edge water
11:59:10	4	7	1 point	0.33 -	0	0	0	0.97	0	0	0.97	0.25	0.24	# of Stations: 15
12:00:19	5	7.5	1 point	0.42 -	0	0	0	1.31	0	0	1.31	0.21	0.27	Stream Width: 11.83 ft
12:01:00	6	8	1 point	0.4 -	0	0	0	1.09	0	0	1.09	0.3	0.33	Total Discharge: 2.98 ft ³ /s
12:01:49	7	9	1 point	0.37 -	0	0	0	1.29	0	0	1.29	0.28	0.36	Total Area: 3.63 ft ²
12:02:33	8	9.5	1 point	0.37 -	0	0	0	1.54	0	0	1.54	0.18	0.28	Mean Depth: 0.31 ft
12:03:43	9	10	1 point	0.33 -	0	0	0	1.26	0	0	1.26	0.25	0.31	
12:04:54	10	11	1 point	0.38 -	0	0	0	1.11	0	0	1.11	0.38	0.42	
12:06:06	11	12	1 point	0.36 -	0	0	0	0.64	0	0	0.64	0.36	0.23	
12:07:21	12	13	1 point	0.35 -	0	0	0	0.46	0	0	0.46	0.35	0.16	
12:08:46	13	14	1 point	0.32 -	0	0	0	0.16	0	0	0.16	0.32	0.05	
12:09:29	14	15	1 point	0.2 -	0	0	0	0.36	0	0	0.36	0.15	0.05	
12:10:02	15	15.5	0 point	0 -	0	0	0	0	0	0	0	0	0	

2.96

2021Aug05														
15:14:15	1	3.67	0 point	0 -	0	0	0	0	0	0	0	0	0	0.59 Station Entry: Non-fixed

15:15:32	2	5 1 point	0.22 -	0	0	0	0.45	0	0	0.45	0.26	0.11	Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 14 Stream Width: 13.00 ft Total Discharge: 5.16 ft ³ /s Total Area: 4.45 ft ² Mean Depth: 0.34 ft
15:16:31	3	6 1 point	0.42 -	0	0	0	1.05	0	0	1.05	0.42	0.44	
15:17:35	4	7 1 point	0.48 -	0	0	0	1.38	0	0	1.38	0.48	0.66	
15:18:21	5	8 1 point	0.45 -	0	0	0	2.16	0	0	2.16	0.45	0.97	
15:19:08	6	9 1 point	0.42 -	0	0	0	1.86	0	0	1.86	0.42	0.78	
15:19:54	7	10 1 point	0.43 -	0	0	0	1.56	0	0	1.56	0.43	0.67	
15:20:48	8	11 1 point	0.4 -	0	0	0	1.52	0	0	1.52	0.4	0.61	
15:21:45	9	12 1 point	0.36 -	0	0	0	1.16	0	0	1.16	0.36	0.42	
15:22:49	10	13 1 point	0.37 -	0	0	0	0.73	0	0	0.73	0.37	0.27	
15:23:50	11	14 1 point	0.4 -	0	0	0	0.21	0	0	0.21	0.4	0.08	
15:24:46	12	15 1 point	0.3 -	0	0	0	0.31	0	0	0.31	0.3	0.09	
15:26:02	13	16 1 point	0.2 -	0	0	0	0.22	0	0	0.22	0.17	0.04	
15:26:27	14	16.67 0 point	0 -	0	0	0	0	0	0	0	0	0	

5.14

2021 July 11

11:50:23	1	3 0 point	0 -	0	0	0	0	0	0	0	0	0	0.64 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Left edge water # of Stations: 13 Stream Width: 12.00 ft Total Discharge: 3.81 ft ³ /s Total Area: 3.69 ft ² Mean Depth: 0.31 ft
11:52:50	2	4 1 point	0.28 -	0	0	0	0.37	0	0	0.37	0.28	0.1	
11:53:59	3	5 1 point	0.23 -	0	0	0	0.26	0	0	0.26	0.23	0.06	
11:54:50	4	6 1 point	0.25 -	0	0	0	0.85	0	0	0.85	0.25	0.21	
11:55:27	5	7 1 point	0.32 -	0	0	0	0.69	0	0	0.69	0.32	0.22	
11:56:05	6	8 1 point	0.25 -	0	0	0	1.75	0	0	1.75	0.25	0.44	
11:56:46	7	9 1 point	0.38 -	0	0	0	1.3	0	0	1.3	0.38	0.49	
11:57:19	8	10 1 point	0.43 -	0	0	0	1.53	0	0	1.53	0.43	0.66	
11:57:54	9	11 1 point	0.45 -	0	0	0	1.67	0	0	1.67	0.45	0.75	
11:58:33	10	12 1 point	0.43 -	0	0	0	1.06	0	0	1.06	0.43	0.45	
11:59:15	11	13 1 point	0.42 -	0	0	0	0.61	0	0	0.61	0.42	0.26	
12:00:09	12	14 1 point	0.25 -	0	0	0	0.63	0	0	0.63	0.25	0.16	
12:00:28	13	15 0 point	0 -	0	0	0	0	0	0	0	0	0	

3.8

2021 June 27

10:16:38	1	3.67 0 point	0 -	0	0	0	0	0	0	0	0	0	0.6 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 12 Stream Width: 13.00 ft Total Discharge: 3.99 ft ³ /s Total Area: 4.01 ft ² Mean Depth: 0.31 ft
10:17:50	2	5 1 point	0.3 -	0	0	0	0.58	0	0	0.58	0.35	0.2	
10:18:34	3	6 1 point	0.4 -	0	0	0	0.98	0	0	0.98	0.4	0.39	
10:19:33	4	7 1 point	0.42 -	0	0	0	1.32	0	0	1.32	0.42	0.55	
10:20:32	5	8 1 point	0.5 -	0	0	0	1.56	0	0	1.56	0.5	0.78	
10:21:26	6	9 1 point	0.4 -	0	0	0	1.42	0	0	1.42	0.4	0.57	
10:22:22	7	10 1 point	0.36 -	0	0	0	1.42	0	0	1.42	0.45	0.64	
10:23:09	8	11.5 1 point	0.36 -	0	0	0	0.87	0	0	0.87	0.45	0.39	
10:23:57	9	12.5 1 point	0.3 -	0	0	0	0.62	0	0	0.62	0.37	0.23	
10:25:37	10	14 1 point	0.3 -	0	0	0	0.22	0	0	0.22	0.37	0.08	
10:26:42	11	15 1 point	0.22 -	0	0	0	0.49	0	0	0.49	0.29	0.14	
10:27:26	12	16.67 0 point	0 -	0	0	0	0	0	0	0	0	0	

3.97

2021 June 13

11:25:32	1	3.83 0 point	0 -	0	0	0	0	0	0	0	0	0	0.61 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 13
11:26:03	2	5 1 point	0.2 -	0	0	0	0.65	0	0	0.65	0.22	0.14	
11:27:09	3	6 1 point	0.4 -	0	0	0	0.65	0	0	0.65	0.4	0.26	
11:27:56	4	7 1 point	0.45 -	0	0	0	1.21	0	0	1.21	0.45	0.54	
11:28:56	5	8 1 point	0.5 -	0	0	0	1.78	0	0	1.78	0.5	0.89	

11:29:45	6	9 1 point	0.45 -	0	0	0	1.35	0	0	1.35	0.45	0.61	Stream Width: 13.17 ft Total Discharge: 5.05 ft ³ /s Total Area: 4.22 ft ² Mean Depth: 0.32 ft
11:30:34	7	10 1 point	0.43 -	0	0	0	1.51	0	0	1.51	0.43	0.65	
11:31:36	8	11 1 point	0.43 -	0	0	0	1.68	0	0	1.68	0.43	0.72	
11:32:36	9	12 1 point	0.34 -	0	0	0	1.43	0	0	1.43	0.34	0.49	
11:33:23	10	13 1 point	0.32 -	0	0	0	1.24	0	0	1.24	0.32	0.4	
11:34:05	11	14 1 point	0.31 -	0	0	0	0.6	0	0	0.6	0.31	0.18	
11:34:53	12	15 1 point	0.25 -	0	0	0	0.43	0	0	0.43	0.37	0.16	
11:35:28	13	17 0 point	0 -	0	0	0	0	0	0	0	0	0	

5.04

2021 May 23

12:25:20	1	4 0 point	0 -	0	0	0	0	0	0	0	0	0	0.62 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Right edge water # of Stations: 14 Stream Width: 13.00 ft Total Discharge: 4.19 ft ³ /s Total Area: 4.07 ft ² Mean Depth: 0.31 ft
12:27:06	2	5 1 point	0.2 -	0	0	0	0.39	0	0	0.39	0.2	0.08	
12:28:14	3	6 1 point	0.32 -	0	0	0	0.57	0	0	0.57	0.32	0.18	
12:29:04	4	7 1 point	0.45 -	0	0	0	1.47	0	0	1.47	0.45	0.66	
12:29:47	5	8 1 point	0.5 -	0	0	0	1.62	0	0	1.62	0.5	0.81	
12:30:42	6	9 1 point	0.42 -	0	0	0	1.34	0	0	1.34	0.42	0.56	
12:31:51	7	10 1 point	0.42 -	0	0	0	1.28	0	0	1.28	0.42	0.54	
12:33:00	8	11 1 point	0.36 -	0	0	0	0.89	0	0	0.89	0.36	0.32	
12:33:41	9	12 1 point	0.35 -	0	0	0	1.09	0	0	1.09	0.35	0.38	
12:34:25	10	13 1 point	0.32 -	0	0	0	1.12	0	0	1.12	0.32	0.36	
12:35:15	11	14 1 point	0.25 -	0	0	0	0.62	0	0	0.62	0.25	0.15	
12:36:24	12	15 1 point	0.28 -	0	0	0	0.27	0	0	0.27	0.28	0.07	
12:37:46	13	16 1 point	0.2 -	0	0	0	0.27	0	0	0.27	0.2	0.05	
12:38:23	14	17 0 point	0 -	0	0	0	0	0	0	0	0	0	

4.16

Compared to 4.19 R25

2021 May 13

TRIAL RUN

12:39:52	1	2.5 0 point	0 -	0	0	0	0	0	0	0	0	0	0.65 Station Entry: Non-fixed Flow Calculation: Mid-section Start Edge: Left edge water # of Stations: 12 Stream Width: 13.00 ft Total Discharge: 4.87 ft ³ /s Total Area: 4.40 ft ² Mean Depth: 0.34 ft
12:41:17	2	3 1 point	0.3 -	0	0	0	0.21	0	0	0.21	0.37	0.08	
12:42:07	3	5 1 point	0.3 -	0	0	0	0.79	0	0	0.79	0.6	0.47	
12:42:53	4	7 1 point	0.3 -	0	0	0	1.24	0	0	1.24	0.45	0.56	
12:43:50	5	8 1 point	0.4 -	0	0	0	1	0	0	1	0.4	0.4	
12:44:32	6	9 1 point	0.4 -	0	0	0	1.23	0	0	1.23	0.4	0.49	
12:45:27	7	10 1 point	0.5 -	0	0	0	1.65	0	0	1.65	0.5	0.82	
12:46:03	8	11 1 point	0.5 -	0	0	0	2.03	0	0	2.03	0.5	1.02	
12:47:04	9	12 1 point	0.4 -	0	0	0	1.08	0	0	1.08	0.4	0.43	
12:47:52	10	13 1 point	0.4 -	0	0	0	1.43	0	0	1.43	0.4	0.57	
12:48:56	11	14 1 point	0.3 -	0	0	0	0.07	0	0	0.07	0.37	0.03	
12:49:28	12	15.5 0 point	0 -	0	0	0	0	0	0	0	0	0	

4.87

MB6 South of Mill Pond dam

Measurement Results:

Time	Station	Location (ft Method)	Depth (ft)	Edge Facto	Surface (ft/0.2 (ft/s)	0.4 (ft/s)	0.6 (ft/s)	0.8 (ft/s)	Bed (ft/s)	Average V	Area (ft^2)	Flow (ft^3/s)	STAFF- feet	FACTORY BROOK ADD-IN VOLUME
2023 March 10														
17:34:54	1	2 0 point	0 -		0	0	0	0	0	0	0	0	1.115 Station Entry: Non-fixed	
17:36:05	2	4 1 point	0.5 -		0	0	0	0.07	0	0	0.07	0.75	Flow Calculation: Mid-section	
17:36:50	3	5 1 point	0.62 -		0	0	0	0.87	0	0	0.87	0.62	Start Edge: Right edge water	
17:38:01	4	6 1 point	0.73 -		0	0	0	1.04	0	0	1.04	0.73	# of Stations: 9	
17:38:55	5	7 1 point	0.9 -		0	0	0	0.89	0	0	0.89	0.9	Stream Width: 9.90 ft	
17:39:49	6	8 1 point	0.9 -		0	0	0	0.72	0	0	0.72	0.9	Total Discharge: 4.35 ft^3/s	Note Flow at Factory Brook measures 0.98 CFS
17:41:29	7	9 1 point	0.9 -		0	0	0	0.66	0	0	0.66	0.9	Total Area: 6.55 ft^2	
17:43:20	8	10 1 point	0.78 -		0	0	0	0.54	0	0	0.54	1.13	Mean Depth: 0.66 ft	
17:45:23	9	11.9 1 point	0.65 -		0	0	0	0	0	0	0	0.62		
2022 Aug 18														
14:31:18	1	3.75 0 point	0 -		0	0	0	0	0	0	0	0	0.915 Station Entry: Non-fixed	Note Flow at Factory Brook not measurable
14:32:21	2	4.5 1 point	0.45 -		0	0	0	0.31	0	0	0.31	0.39	Flow Calculation: Mid-section	
14:33:10	3	5.5 1 point	0.5 -		0	0	0	0.28	0	0	0.28	0.5	Start Edge: Right edge water	
14:33:56	4	6.5 1 point	0.71 -		0	0	0	0.4	0	0	0.4	0.71	# of Stations: 9	
14:34:51	5	7.5 1 point	0.65 -		0	0	0	0.63	0	0	0.63	0.65	Stream Width: 7.50 ft	
14:35:59	6	8.5 1 point	0.72 -		0	0	0	0.36	0	0	0.36	0.72	Total Discharge: 1.33 ft^3/s	
14:37:30	7	9.5 1 point	0.73 -		0	0	0	0.18	0	0	0.18	0.55	Total Area: 4.05 ft^2	
14:38:39	8	10 1 point	0.6 -		0	0	0	0.02	0	0	0.02	0.52	Mean Depth: 0.54 ft	
14:39:06	9	11.25 0 point	0 -		0	0	0	0	0	0	0	0		
2022 June 10														
10:24:46	1	1.33 0 point	0 -		0	0	0	0	0	0	0	0	1.16 Station Entry: Non-fixed	Note Flow at Factory Brook not measurable
10:26:06	2	4.25 1 point	0.6 -		0	0	0	0.48	0	0	0.48	1.1	Flow Calculation: Mid-section	
10:27:16	3	5 1 point	0.73 -		0	0	0	0.99	0	0	0.99	0.64	Start Edge: Right edge water	
10:28:33	4	6 1 point	0.92 -		0	0	0	1.53	0	0	1.53	0.92	# of Stations: 9	
10:29:47	5	7 1 point	0.95 -		0	0	0	1.18	0	0	1.18	0.95	Stream Width: 10.34 ft	
10:30:45	6	8 1 point	0.96 -		0	0	0	1.55	0	0	1.55	0.96	Total Discharge: 6.03 ft^3/s	
10:31:44	7	9 1 point	0.97 -		0	0	0	0.85	0	0	0.85	0.97	Total Area: 6.63 ft^2	
10:33:40	8	10 1 point	0.82 -		0	0	0	0.02	0	0	0.02	1.09	Mean Depth: 0.64 ft	
10:34:25	9	11.67 0 point	0 -		0	0	0	0	0	0	0	0		
2022 May 15														
9:36:00	1	3.5 0 point	0 -		0	0	0	0	0	0	0	0	1.095 Station Entry: Non-fixed	Note Flow at Factory Brook 0.34 CFS
9:37:01	2	4.5 1 point	0.6 -		0	0	0	0.43	0	0	0.43	0.6	Flow Calculation: Mid-section	
9:37:55	3	5.5 1 point	0.7 -		0	0	0	0.85	0	0	0.85	0.7	Start Edge: Right edge water	
9:39:07	4	6.5 1 point	0.83 -		0	0	0	1.13	0	0	1.13	0.83	# of Stations: 10	
9:39:55	5	7.5 1 point	0.95 -		0	0	0	1.23	0	0	1.23	0.95	Stream Width: 8.00 ft	
9:41:00	6	8.5 1 point	0.92 -		0	0	0	0.94	0	0	0.94	0.69	Total Discharge: 4.28 ft^3/s	
9:41:55	7	9 1 point	0.85 -		0	0	0	0.67	0	0	0.67	0.64	Total Area: 5.49 ft^2	
9:43:04	8	10 1 point	0.75 -		0	0	0	0.38	0	0	0.38	0.56	Mean Depth: 0.69 ft	
9:44:32	9	10.5 1 point	0.7 -		0	0	0	0.04	0	0	0.04	0.52		
9:45:01	10	11.5 0 point	0 -		0	0	0	0	0	0	0	0		
2022 Apr 16														
9:42:26	1	3.5 0 point	0 -		0	0	0	0	0	0	0	0	1.12 Station Entry: Non-fixed	Note Flow at Factory Brook 0.49 CFS
9:43:35	2	4 1 point	0.5 -		0	0	0	0.49	0	0	0.49	0.37	Flow Calculation: Mid-section	
9:44:18	3	5 1 point	0.6 -		0	0	0	0.81	0	0	0.81	0.45	Start Edge: Right edge water	
9:45:11	4	5.5 1 point	0.71 -		0	0	0	0.91	0	0	0.91	0.53	# of Stations: 14	
9:46:07	5	6.5 1 point	0.82 -		0	0	0	1.03	0	0	1.03	0.61	Stream Width: 8.17 ft	
9:47:05	6	7 1 point	0.93 -		0	0	0	1.45	0	0	1.45	0.7	Total Discharge: 4.85 ft^3/s	
9:48:11	7	8 1 point	0.97 -		0	0	0	0.95	0	0	0.95	0.73	Total Area: 5.82 ft^2	
9:48:55	8	8.5 1 point	0.92 -		0	0	0	0.85	0	0	0.85	0.46	Mean Depth: 0.71 ft	
9:50:27	9	9 1 point	0.94 -		0	0	0	0.57	0	0	0.57	0.47		
9:51:20	10	9.5 1 point	0.81 -		0	0	0	0.92	0	0	0.92	0.4		
9:52:22	11	10 1 point	0.76 -		0	0	0	0.6	0	0	0.6	0.38		
9:54:03	12	10.5 1 point	0.79 -		0	0	0	0.66	0	0	0.66	0.39		

9:55:28	13	11 1 point	0.53 -	0	0	0	-0.14	0	0	-0.14	0.31	-0.04
9:56:09	14	11.67 0 point	0 -	0	0	0	0	0	0	0	0	0

2022Mar31

13:20:36	1	2 0 point	0 -	0	0	0	0	0	0	0	0	0
13:22:23	2	3.5 1 point	0.5 -	0	0	0	0	0	0	0	0.62	0
13:23:17	3	4.5 1 point	0.6 -	0	0	0	0.47	0	0	0.47	0.6	0.28
13:24:08	4	5.5 1 point	0.7 -	0	0	0	0.9	0	0	0.9	0.52	0.47
13:25:02	5	6 1 point	0.77 -	0	0	0	1.18	0	0	1.18	0.77	0.91
13:26:03	6	7.5 1 point	1 -	0	0	0	1.06	0	0	1.06	1	1.06
13:26:38	7	8 1 point	1 -	0	0	0	0.91	0	0	0.91	0.75	0.68
13:27:32	8	9 1 point	0.94 -	0	0	0	0.88	0	0	0.88	0.7	0.62
13:28:31	9	9.5 1 point	0.81 -	0	0	0	0.68	0	0	0.68	0.4	0.28
13:29:50	10	10 1 point	0.79 -	0	0	0	0.67	0	0	0.67	0.39	0.26
13:31:12	11	10.5 1 point	0.71 -	0	0	0	0.24	0	0	0.24	0.6	0.14
13:31:43	12	11.7 0 point	0 -	0	0	0	0	0	0	0	0	0

1.1 Station Entry: Non-fixed
 Note Flow at Factory Brook 0.62 CFS
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 12
 Stream Width: 9.70 ft
 Total Discharge: 4.70 ft^3/s
 Total Area: 6.38 ft^2
 Mean Depth: 0.66 ft

2022Feb23

14:30:25	1	1.7 0 point	0 -	0	0	0	0	0	0	0	0	0
14:32:39	2	4 1 point	0.6 -	0	0	0	0.45	0	0	0.45	0.99	0.45
14:33:36	3	5 1 point	0.67 -	0	0	0	1.22	0	0	1.22	0.5	0.61
14:34:22	4	5.5 1 point	0.71 -	0	0	0	1.14	0	0	1.14	0.53	0.6
14:35:14	5	6.5 1 point	0.9 -	0	0	0	1.23	0	0	1.23	0.67	0.83
14:36:00	6	7 1 point	0.99 -	0	0	0	1.43	0	0	1.43	0.74	1.06
14:37:03	7	8 1 point	1.01 -	0	0	0	1.17	0	0	1.17	1.01	1.19
14:37:58	8	9 1 point	0.97 -	0	0	0	1	0	0	1	0.97	0.97
14:39:00	9	10 1 point	0.85 -	0	0	0	0.63	0	0	0.63	0.74	0.47
14:40:33	10	10.75 1 point	0.7 -	0	0	0	0.01	0	0	0.01	0.61	0.01
14:41:11	11	11.75 0 point	0 -	0	0	0	0	0	0	0	0	0

1.15 Station Entry: Non-fixed
 Note Flow at Factory Brook 0.65 CFS
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 11
 Stream Width: 10.05 ft
 Total Discharge: 6.20 ft^3/s
 Total Area: 6.78 ft^2
 Mean Depth: 0.67 ft

2022Feb09

15:24:24	1	1.5 0 point	0 -	0	0	0	0	0	0	0	0	0
15:25:59	2	4 1 point	0.5 -	0	0	0	0.73	0	0	0.73	0.87	0.64
15:26:54	3	5 1 point	0.66 -	0	0	0	1.19	0	0	1.19	0.66	0.78
15:27:42	4	6 1 point	0.8 -	0	0	0	1.47	0	0	1.47	0.8	1.17
15:29:05	5	7 1 point	0.95 -	0	0	0	1.41	0	0	1.41	0.95	1.34
15:29:56	6	8 1 point	1.04 -	0	0	0	1.4	0	0	1.4	1.04	1.46
15:30:56	7	9 1 point	0.95 -	0	0	0	0.7	0	0	0.7	0.95	0.67
15:32:04	8	10 1 point	0.85 -	0	0	0	0.77	0	0	0.77	0.85	0.65
15:33:56	9	11 1 point	0.7 -	0	0	0	-0.01	0	0	-0.01	0.58	-0.01
15:34:22	10	11.67 0 point	0 -	0	0	0	0	0	0	0	0	0

1.175 Station Entry: Non-fixed
 Note Flow at Factory Brook 1.0 CFS
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 10
 Stream Width: 10.17 ft
 Total Discharge: 6.72 ft^3/s
 Total Area: 6.71 ft^2
 Mean Depth: 0.66 ft

2021Dec17

10:11:19	1	3.75 0 point	0 -	0	0	0	0	0	0	0	0	0
10:13:10	2	5 1 point	0.53 -	0	0	0	0.52	0	0	0.52	0.6	0.31
10:13:58	3	6 1 point	0.6 -	0	0	0	0.72	0	0	0.72	0.45	0.32
10:14:46	4	6.5 1 point	0.7 -	0	0	0	0.61	0	0	0.61	0.35	0.21
10:15:37	5	7 1 point	0.81 -	0	0	0	0.75	0	0	0.75	0.4	0.3
10:16:22	6	7.5 1 point	0.81 -	0	0	0	0.85	0	0	0.85	0.4	0.34
10:17:00	7	8 1 point	0.82 -	0	0	0	0.87	0	0	0.87	0.61	0.53
10:18:00	8	9 1 point	0.77 -	0	0	0	0.47	0	0	0.47	0.77	0.37
10:18:58	9	10 1 point	0.65 -	0	0	0	0.26	0	0	0.26	0.49	0.13
10:19:49	10	10.5 1 point	0.55 -	0	0	0	0.08	0	0	0.08	0.41	0.03
10:20:15	11	11.5 0 point	0 -	0	0	0	0	0	0	0	0	0

1 Station Entry: Non-fixed
 Note Flow at Factory Brook 0.34CFS
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 11
 Stream Width: 7.75 ft
 Total Discharge: 2.56 ft^3/s
 Total Area: 4.49 ft^2
 Mean Depth: 0.58 ft

2.54

2021Dec02

12:06:55	1	4 0 point	0 -	0	0	0	0	0	0	0	0	0
12:08:30	2	5 1 point	0.53 -	0	0	0	0.53	0	0	0.53	0.66	0.35
12:09:15	3	6.5 1 point	0.68 -	0	0	0	0.62	0	0	0.62	0.85	0.53
12:09:59	4	7.5 1 point	0.76 -	0	0	0	1.11	0	0	1.11	0.76	0.84
12:10:41	5	8.5 1 point	0.79 -	0	0	0	0.56	0	0	0.56	0.59	0.33
12:11:24	6	9 1 point	0.79 -	0	0	0	0.48	0	0	0.48	0.59	0.28
12:12:09	7	10 1 point	0.64 -	0	0	0	0.31	0	0	0.31	0.88	0.28

1 Station Entry: Non-fixed
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 8
 Stream Width: 7.75 ft
 Total Discharge: 2.61 ft^3/s
 Total Area: 4.34 ft^2

3.94

2021 June 27

10:42:55	1	2.8 0 point	0 -	0	0	0	0	0	0	0	0	0
10:43:52	2	4 1 point	0.4 -	0	0	0	0.88	0	0	0.88	0.44	0.39
10:45:07	3	5 1 point	0.6 -	0	0	0	1	0	0	1	0.6	0.6
10:46:25	4	6 1 point	0.65 -	0	0	0	1.05	0	0	1.05	0.65	0.68
10:48:27	5	7 1 point	0.7 -	0	0	0	1.03	0	0	1.03	0.7	0.72
10:49:39	6	8 1 point	0.8 -	0	0	0	1.05	0	0	1.05	0.8	0.84
10:51:12	7	9 1 point	0.81 -	0	0	0	0.44	0	0	0.44	0.81	0.36
10:52:10	8	10 1 point	0.72 -	0	0	0	0.46	0	0	0.46	0.61	0.28
10:53:08	9	10.7 1 point	0.52 -	0	0	0	0.31	0	0	0.31	0.32	0.1
10:53:39	10	11.25 0 point	0 -	0	0	0	0	0	0	0	0	0

1.1 Station Entry: Non-fixed
 Flow Calculation: Mid-section
 Start Edge: Left edge water
 # of Stations: 10
 Stream Width: 8.45 ft
 Total Discharge: 3.97 ft³/s
 Total Area: 4.94 ft²
 Mean Depth: 0.58 ft

3.97

2021 June 13

11:48:39	1	2 0 point	0 -	0	0	0	0	0	0	0	0	0
11:50:21	2	4 1 point	0.4 -	0	0	0	0.98	0	0	0.98	0.6	0.59
11:51:25	3	5 1 point	0.45 -	0	0	0	1.25	0	0	1.25	0.45	0.56
11:52:16	4	6 1 point	0.57 -	0	0	0	1.08	0	0	1.08	0.57	0.62
11:53:10	5	7 1 point	0.74 -	0	0	0	1.09	0	0	1.09	0.74	0.81
11:53:53	6	8 1 point	0.7 -	0	0	0	1.32	0	0	1.32	0.7	0.92
11:55:02	7	9 1 point	0.8 -	0	0	0	0.68	0	0	0.68	0.8	0.54
11:55:57	8	10 1 point	0.73 -	0	0	0	0.52	0	0	0.52	0.73	0.38
12:02:15	9	11 1 point	0.43 -	0	0	0	0.35	0	0	0.35	0.34	0.12
12:02:34	10	11.6 0 point	0 -	0	0	0	0	0	0	0	0	0

1.01 Station Entry: Non-fixed
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 10
 Stream Width: 9.60 ft
 Total Discharge: 4.54 ft³/s
 Total Area: 4.93 ft²
 Mean Depth: 0.51 ft

4.54

2021 May 23

12:52:22	1	2.6 0 point	0 -	0	0	0	0	0	0	0	0	0
12:53:20	2	4 1 point	0.35 -	0	0	0	0.92	0	0	0.92	0.42	0.39
12:54:21	3	5 1 point	0.35 -	0	0	0	1.25	0	0	1.25	0.26	0.33
12:55:14	4	5.5 1 point	0.55 -	0	0	0	0.81	0	0	0.81	0.27	0.22
12:56:05	5	6 1 point	0.58 -	0	0	0	1.14	0	0	1.14	0.29	0.33
12:57:32	6	6.5 1 point	0.6 -	0	0	0	0.9	0	0	0.9	0.3	0.27
12:58:52	7	7 1 point	0.7 -	0	0	0	1.15	0	0	1.15	0.35	0.4
12:59:46	8	7.5 1 point	0.65 -	0	0	0	1.22	0	0	1.22	0.32	0.4
13:01:20	9	8 1 point	0.7 -	0	0	0	0.96	0	0	0.96	0.35	0.34
13:02:23	10	8.5 1 point	0.88 -	0	0	0	0.66	0	0	0.66	0.44	0.29
13:03:27	11	9 1 point	0.78 -	0	0	0	0.77	0	0	0.77	0.58	0.45
13:04:47	12	10 1 point	0.7 -	0	0	0	0.77	0	0	0.77	0.7	0.54
13:06:01	13	11 1 point	0.4 -	0	0	0	0.55	0	0	0.55	0.36	0.2
13:06:28	14	11.8 0 point	0 -	0	0	0	0	0	0	0	0	0

0.99 Station Entry: Non-fixed
 Flow Calculation: Mid-section
 Start Edge: Right edge water
 # of Stations: 14
 Stream Width: 9.20 ft
 Total Discharge: 4.16 ft³/s
 Total Area: 4.66 ft²
 Mean Depth: 0.51 ft

4.16

Station 8 Located at TTOR property up stream of stone bridge

This equipment was at MB2 at Waskosim's

Time	Station	Location (ft)	Method	Depth (ft)	Edge	Facto	Surface (ft/0.2 (ft/s)	0.4 (ft/s)	0.6 (ft/s)	0.8 (ft/s)	Bed (ft/s)	Average V _e	Area (ft^2)	Flow (ft^3/ Flow sum	Staff- feet	
2023Mar16																
16:21:52	1	1.75	0 point	0 -			0	0	0	0	0	0	0	0	0.78	Station Entry: Non-fixed
16:23:38	2	2.75	1 point	0.7 -			0	0	-0.07	0	0	-0.07	0.61	-0.04		Flow Calculation: Mid-section
16:25:11	3	3.5	1 point	0.83 -			0	0	0.01	0	0	0.01	0.73	0.01		Start Edge: Right edge water
16:26:18	4	4.5	1 point	0.98 -			0	0	0.46	0	0	0.46	0.73	0.34		# of Stations: 11
16:27:19	5	5	1 point	0.82 -			0	0	0.74	0	0	0.74	0.41	0.3		Stream Width: 8.00 ft
16:28:16	6	5.5	1 point	0.61 -			0	0	0.21	0	0	0.21	0.3	0.06		Total Discharge: 0.80 ft^3/s
16:29:24	7	6	1 point	0.53 -			0	0	0.22	0	0	0.22	0.4	0.08		Total Area: 4.57 ft^2
16:30:46	8	7	1 point	0.64 -			0	0	0.05	0	0	0.05	0.64	0.03		Mean Depth: 0.57 ft
16:31:58	9	8	1 point	0.62 -			0	0	0.02	0	0	0.02	0.46	0.01		
16:33:14	10	8.5	1 point	0.32 -			0	0	-0.01	0	0	-0.01	0.28	0		
16:33:45	11	9.75	0 point	0 -			0	0	0	0	0	0	0	0		
2021Dec19																
10:18:00	1	2	0 point	0 -			0	0	0	0	0	0	0	0	0.68	Station Entry: Non-fixed
10:18:57	2	3	1 point	0.52 -			0	0	0.01	0	0	0.01	0.39	0		Flow Calculation: Mid-section
10:19:48	3	3.5	1 point	0.54 -			0	0	0.07	0	0	0.07	0.27	0.02		Start Edge: Right edge water
10:20:29	4	4	1 point	0.52 -			0	0	0.47	0	0	0.47	0.26	0.12		# of Stations: 10
10:21:16	5	4.5	1 point	0.55 -			0	0	0.41	0	0	0.41	0.27	0.11		Stream Width: 7.25 ft
10:21:55	6	5	1 point	0.53 -			0	0	0.17	0	0	0.17	0.26	0.04		Total Discharge: 0.28 ft^3/s
10:22:58	7	5.5	1 point	0.51 -			0	0	0.08	0	0	0.08	0.25	0.02		Total Area: 2.92 ft^2
10:24:27	8	6	1 point	0.48 -			0	0	-0.03	0	0	-0.03	0.36	-0.01		Mean Depth: 0.40 ft
10:25:54	9	7	1 point	0.52 -			0	0	-0.03	0	0	-0.03	0.84	-0.03		
10:26:34	10	9.25	0 point	0 -			0	0	0	0	0	0	0	0		
0.27																
2021Nov07																
10:18:38	1	2	0 point	0 -			0	0	0	0	0	0	0	0	0.65	Station Entry: Non-fixed
10:20:20	2	2.5	1 point	0.5 -			0	0	-0.04	0	0	-0.04	0.25	-0.01		Flow Calculation: Mid-section
10:20:58	3	3	1 point	0.52 -			0	0	0.13	0	0	0.13	0.26	0.03		Start Edge: Right edge water
10:21:34	4	3.5	1 point	0.5 -			0	0	0.06	0	0	0.06	0.25	0.01		# of Stations: 12
10:22:10	5	4	1 point	0.62 -			0	0	0.03	0	0	0.03	0.31	0.01		Stream Width: 7.25 ft
10:22:46	6	4.5	1 point	0.64 -			0	0	0.31	0	0	0.31	0.32	0.1		Total Discharge: 0.25 ft^3/s
10:23:40	7	5	1 point	0.49 -			0	0	0.34	0	0	0.34	0.24	0.08		Total Area: 3.17 ft^2
10:24:14	8	5.5	1 point	0.45 -			0	0	0.07	0	0	0.07	0.22	0.01		Mean Depth: 0.44 ft
10:25:10	9	6	1 point	0.4 -			0	0	-0.02	0	0	-0.02	0.2	0		
10:26:17	10	6.5	1 point	0.56 -			0	0	-0.01	0	0	-0.01	0.56	-0.01		
10:27:02	11	8	1 point	0.4 -			0	0	0.02	0	0	0.02	0.55	0.01		
10:27:18	12	9.25	0 point	0 -			0	0	0	0	0	0	0	0		
0.23																
2021Oct23																
9:23:35	1	1.9	0 point	0 -			0	0	0	0	0	0	0	0	0.53	Station Entry: Non-fixed
9:26:03	2	3	1 point	0.3 -			0	0	0	0	0	0	0.24	0		Flow Calculation: Mid-section
9:26:52	3	3.5	1 point	0.3 -			0	0	0.06	0	0	0.06	0.15	0.01		Start Edge: Right edge water
9:27:46	4	4	1 point	0.3 -			0	0	0.26	0	0	0.26	0.22	0.06		# of Stations: 10
9:28:35	5	5	1 point	0.33 -			0	0	0.54	0	0	0.54	0.25	0.13		Stream Width: 6.60 ft
9:29:14	6	5.5	1 point	0.33 -			0	0	0.5	0	0	0.5	0.16	0.08		Total Discharge: 0.31 ft^3/s
9:30:22	7	6	1 point	0.35 -			0	0	0.18	0	0	0.18	0.17	0.03		Total Area: 1.95 ft^2
9:31:26	8	6.5	1 point	0.43 -			0	0	0	0	0	0	0.32	0		Mean Depth: 0.30 ft

9:32:18	9	7.5 1 point	0.43 -	0	0	0	0	0	0	0	0.43	0	
9:32:59	10	8.5 0 point	0 -	0	0	0	0	0	0	0	0	0	
0.31													
2021sep26													
9:30:50	1	2 0 point	0 -	0	0	0	0	0	0	0	0	0	
9:32:01	2	2.5 1 point	0.54 -	0	0	0	0.01	0	0	0.01	0.27	0	0.68 Station Entry: Non-fixed
9:32:56	3	3 1 point	0.5 -	0	0	0	0.14	0	0	0.14	0.25	0.03	Flow Calculation: Mid-section
9:33:51	4	3.5 1 point	0.49 -	0	0	0	0.46	0	0	0.46	0.24	0.11	Start Edge: Right edge water
9:34:57	5	4 1 point	0.44 -	0	0	0	0.51	0	0	0.51	0.33	0.17	# of Stations: 11
9:35:40	6	5 1 point	0.52 -	0	0	0	0.95	0	0	0.95	0.39	0.37	Stream Width: 7.33 ft
9:36:30	7	5.5 1 point	0.52 -	0	0	0	0.69	0	0	0.69	0.26	0.18	Total Discharge: 1.01 ft^3/s
9:37:07	8	6 1 point	0.52 -	0	0	0	0.31	0	0	0.31	0.39	0.12	Total Area: 3.22 ft^2
9:38:32	9	7 1 point	0.6 -	0	0	0	0.01	0	0	0.01	0.6	0	Mean Depth: 0.44 ft
9:39:57	10	8 1 point	0.42 -	0	0	0	0.03	0	0	0.03	0.49	0.01	
9:40:21	11	9.33 0 point	0 -	0	0	0	0	0	0	0	0	0	
0.99													
2021Sep12													
9:29:42	1	2 0 point	0 -	0	0	0	0	0	0	0	0	0	
9:30:38	2	3 1 point	0.48 -	0	0	0	0.2	0	0	0.2	0.38	0.08	0.62 Station Entry: Non-fixed
9:32:08	3	3.6 1 point	0.4 -	0	0	0	0.4	0	0	0.4	0.2	0.08	Flow Calculation: Mid-section
9:32:58	4	4 1 point	0.36 -	0	0	0	0.47	0	0	0.47	0.16	0.08	Start Edge: Right edge water
9:34:02	5	4.5 1 point	0.4 -	0	0	0	0.62	0	0	0.62	0.2	0.12	# of Stations: 12
9:34:55	6	5 1 point	0.4 -	0	0	0	0.71	0	0	0.71	0.2	0.14	Stream Width: 7.00 ft
9:35:33	7	5.5 1 point	0.4 -	0	0	0	0.38	0	0	0.38	0.2	0.08	Total Discharge: 0.72 ft^3/s
9:36:19	8	6 1 point	0.43 -	0	0	0	0.41	0	0	0.41	0.32	0.13	Total Area: 2.52 ft^2
9:37:19	9	7 1 point	0.52 -	0	0	0	0.02	0	0	0.02	0.39	0.01	Mean Depth: 0.36 ft
9:38:33	10	7.5 1 point	0.48 -	0	0	0	0.03	0	0	0.03	0.24	0.01	
9:40:07	11	8 1 point	0.3 -	0	0	0	-0.02	0	0	-0.02	0.22	0	
9:40:41	12	9 0 point	0 -	0	0	0	0	0	0	0	0	0	
0.73													
2021Aug08													
9:37:39	1	2 0 point	0 -	0	0	0	0	0	0	0	0	0	
9:39:25	2	2.5 1 point	0.4 -	0	0	0	0	0	0	0	0.2	0	0.53 Station Entry: Non-fixed
9:40:01	3	3 1 point	0.45 -	0	0	0	0.06	0	0	0.06	0.22	0.01	Flow Calculation: Mid-section
9:40:50	4	3.5 1 point	0.5 -	0	0	0	0.08	0	0	0.08	0.25	0.02	Start Edge: Right edge water
9:41:29	5	4 1 point	0.5 -	0	0	0	0.23	0	0	0.23	0.25	0.06	# of Stations: 13
9:42:09	6	4.5 1 point	0.4 -	0	0	0	0.27	0	0	0.27	0.2	0.05	Stream Width: 6.50 ft
9:42:47	7	5 1 point	0.3 -	0	0	0	0.33	0	0	0.33	0.15	0.05	Total Discharge: 0.22 ft^3/s
9:43:28	8	5.5 1 point	0.25 -	0	0	0	0.17	0	0	0.17	0.12	0.02	Total Area: 2.05 ft^2
9:44:03	9	6 1 point	0.25 -	0	0	0	0.03	0	0	0.03	0.12	0	Mean Depth: 0.31 ft
9:44:39	10	6.5 1 point	0.3 -	0	0	0	0	0	0	0	0.15	0	
9:46:02	11	7 1 point	0.3 -	0	0	0	0.01	0	0	0.01	0.15	0	
9:46:56	12	7.5 1 point	0.3 -	0	0	0	-0.01	0	0	-0.01	0.22	0	
9:47:21	13	8.5 0 point	0 -	0	0	0	0	0	0	0	0	0	
0.21													
2021Aug05													
14:29:49	1	1.67 0 point	0 -	0	0	0	0	0	0	0	0	0	
14:31:28	2	2.5 1 point	0.55 -	0	0	0	0.05	0	0	0.05	0.36	0.02	0.61 Station Entry: Non-fixed
14:32:31	3	3 1 point	0.58 -	0	0	0	0.29	0	0	0.29	0.43	0.12	Flow Calculation: Mid-section
14:34:16	4	4 1 point	0.6 -	0	0	0	0.52	0	0	0.52	0.45	0.23	Start Edge: Right edge water
14:35:42	5	4.5 1 point	0.6 -	0	0	0	0.8	0	0	0.8	0.3	0.24	# of Stations: 11
Stream Width: 7.00 ft													

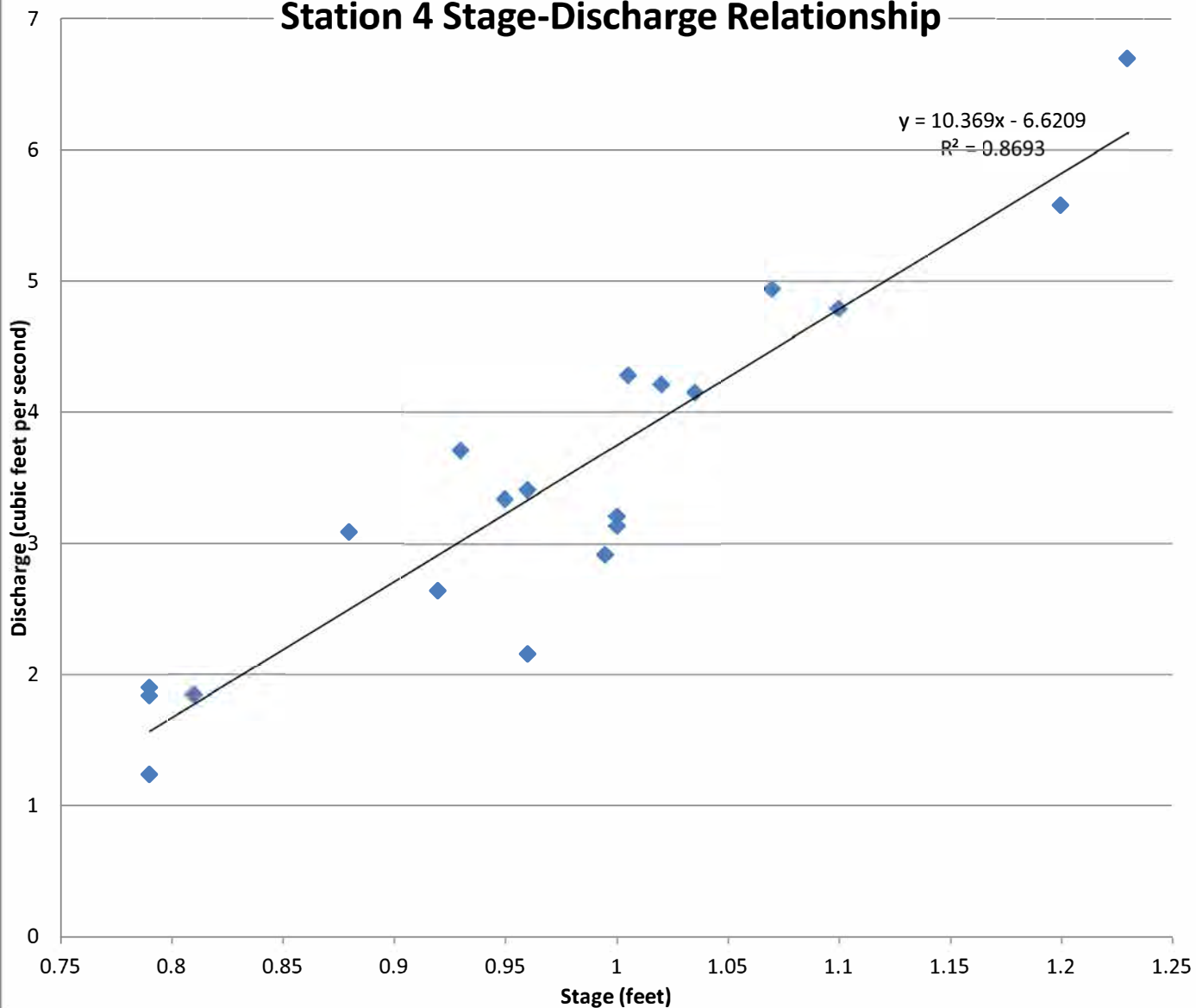
14:36:40	6	5 1 point	0.43 -	0	0	0	0.15	0	0	0.15	0.21	0.03
14:38:10	7	5.5 1 point	0.43 -	0	0	0	-0.03	0	0	-0.03	0.21	0
14:39:14	8	6 1 point	0.42 -	0	0	0	0.1	0	0	0.1	0.31	0.03
14:40:32	9	7 1 point	0.48 -	0	0	0	-0.06	0	0	-0.06	0.48	-0.03
14:41:46	10	8 1 point	0.4 -	0	0	0	0	0	0	0	0.33	0
14:42:23	11	8.67 0 point	0 -	0	0	0	0	0	0	0	0	0

Total Discharge: 0.65 ft³/s
Total Area: 3.11 ft²
Mean Depth: 0.44 ft

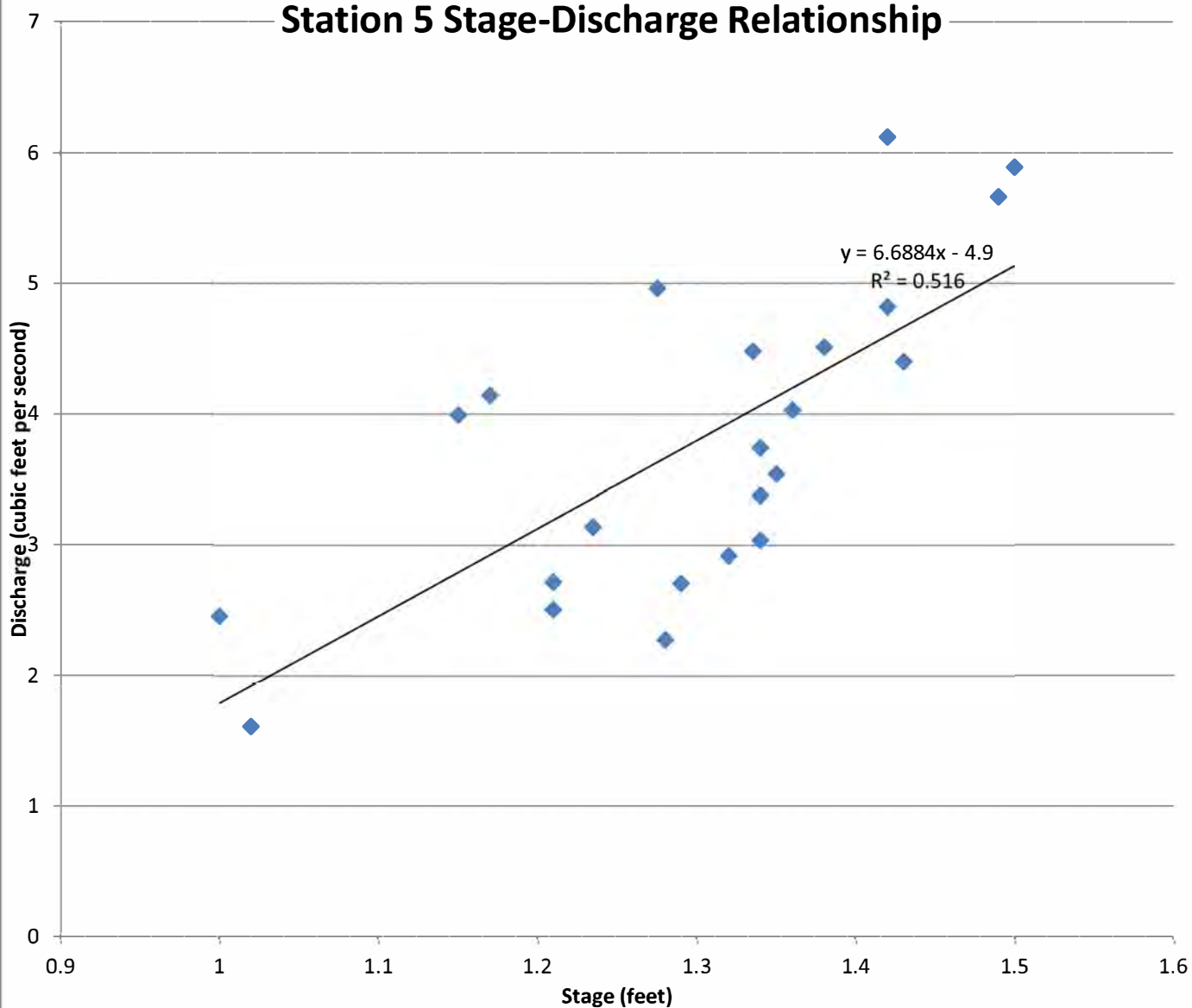
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Appendix D: Graphs

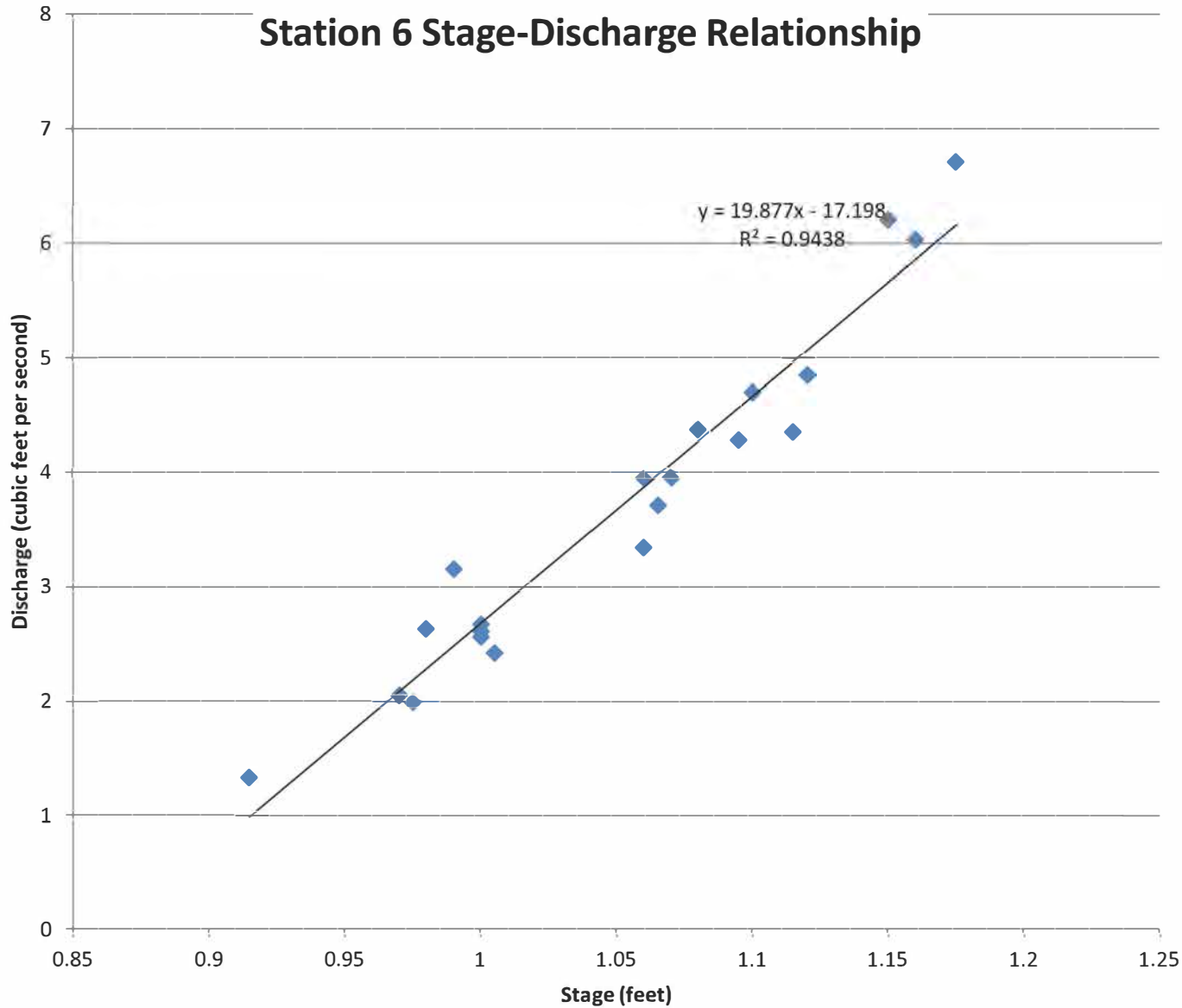
Station 4 Stage-Discharge Relationship



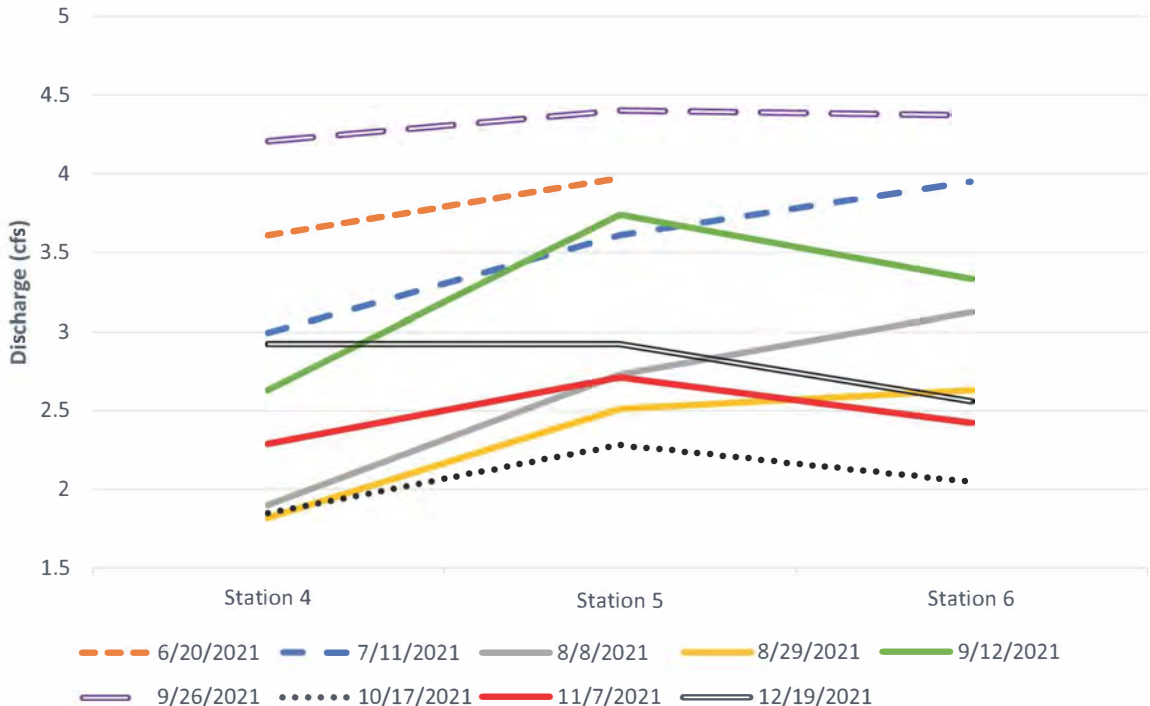
Station 5 Stage-Discharge Relationship



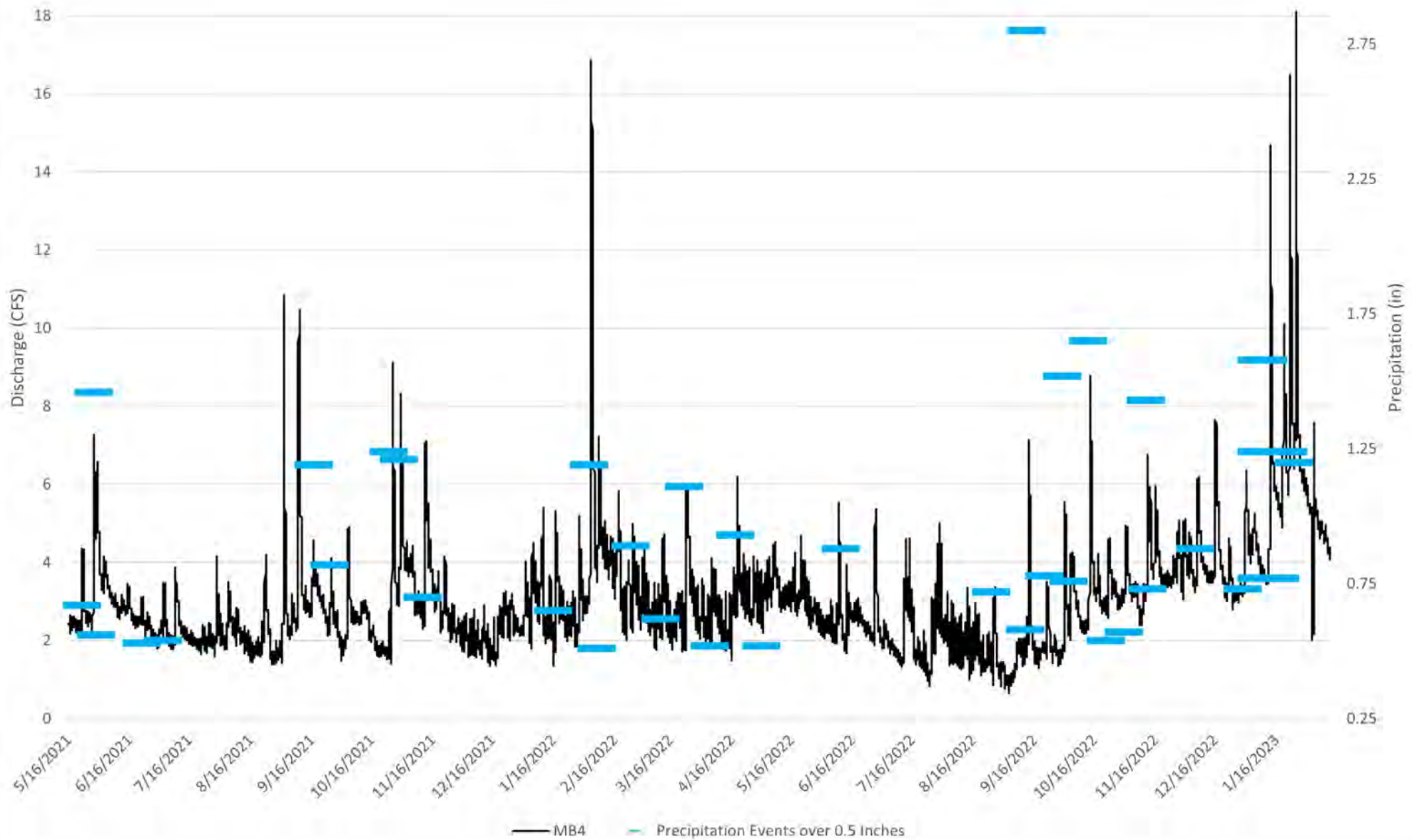
Station 6 Stage-Discharge Relationship



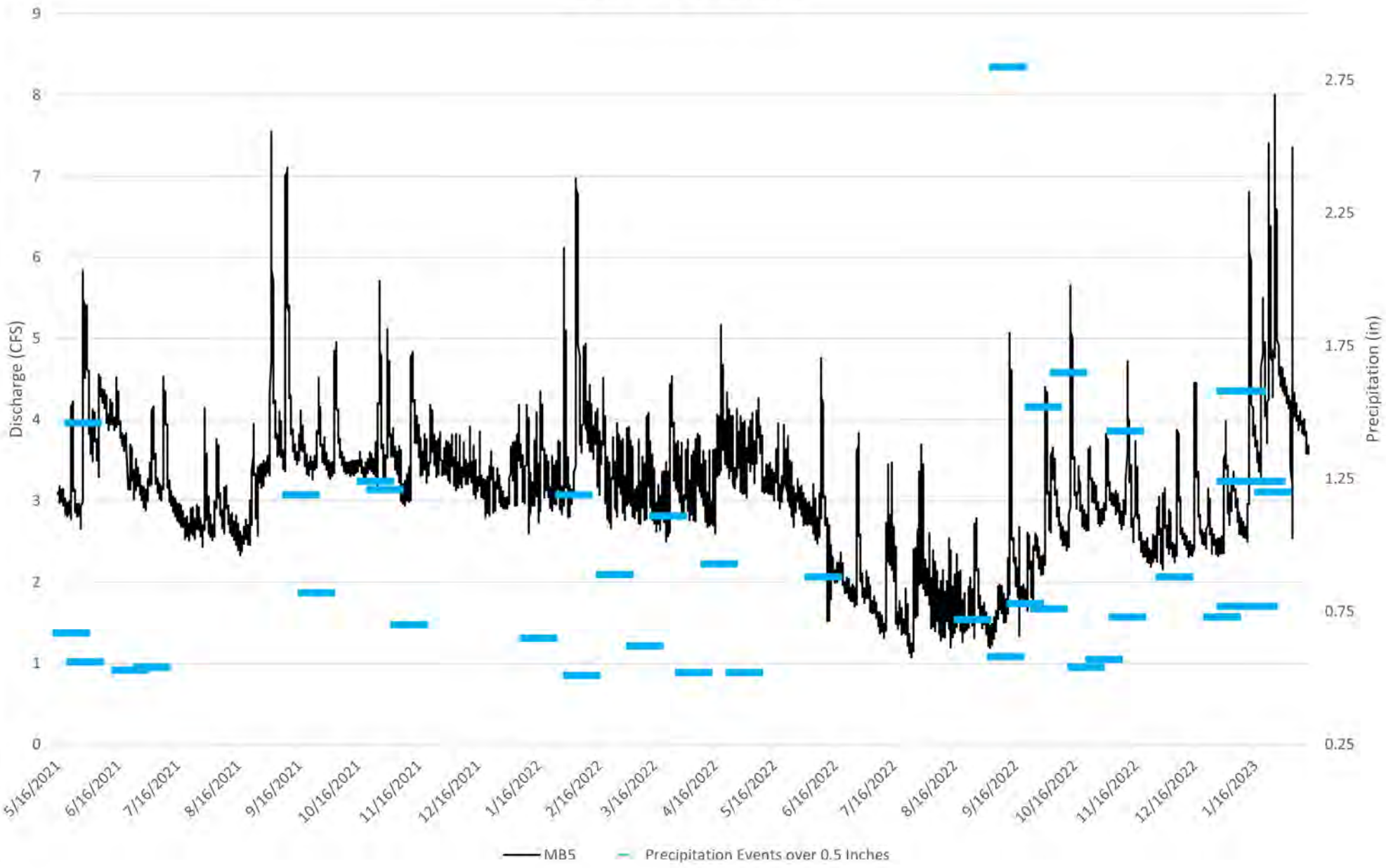
Mill Brook Discharge



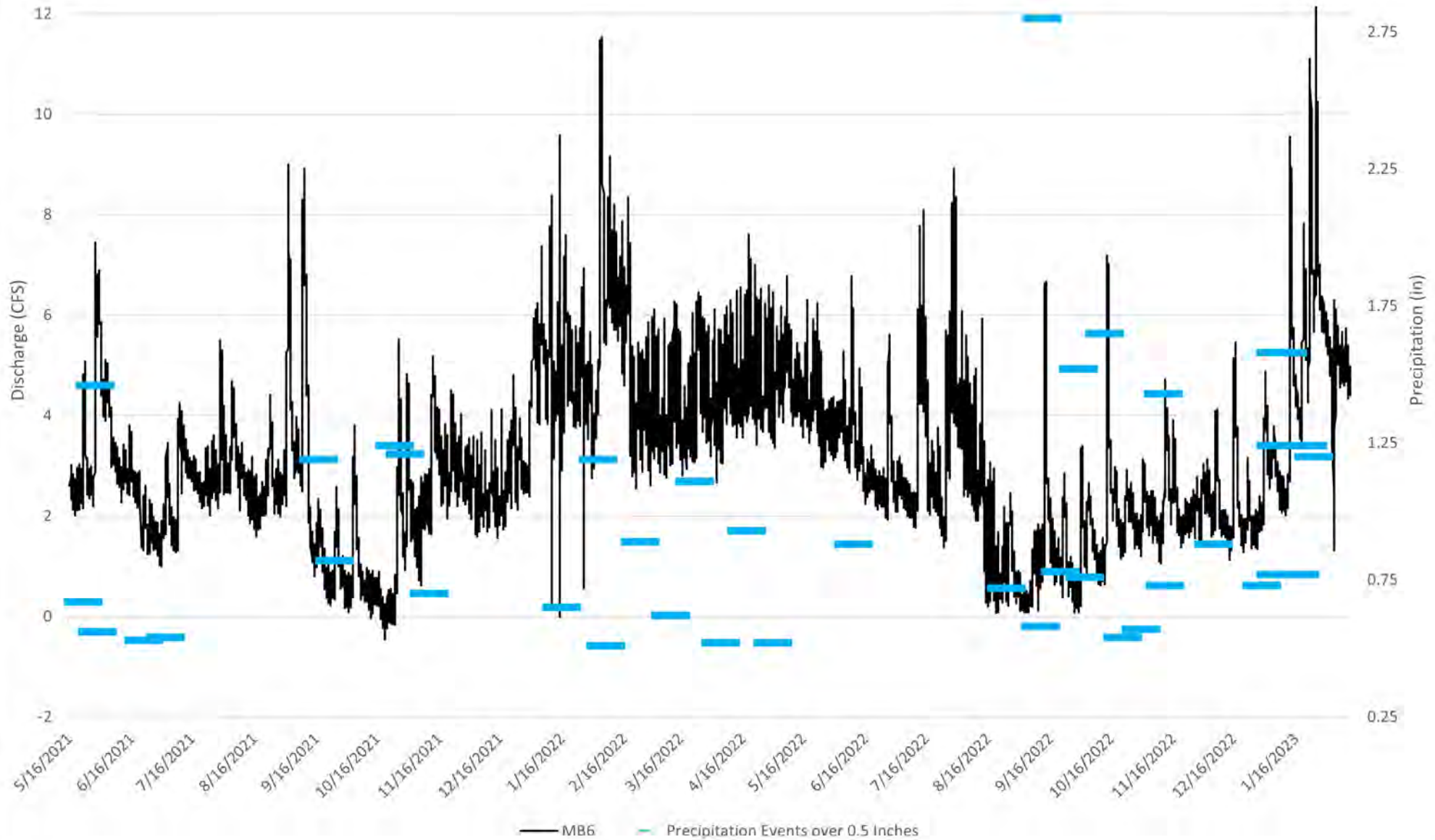
Station 4 Discharge



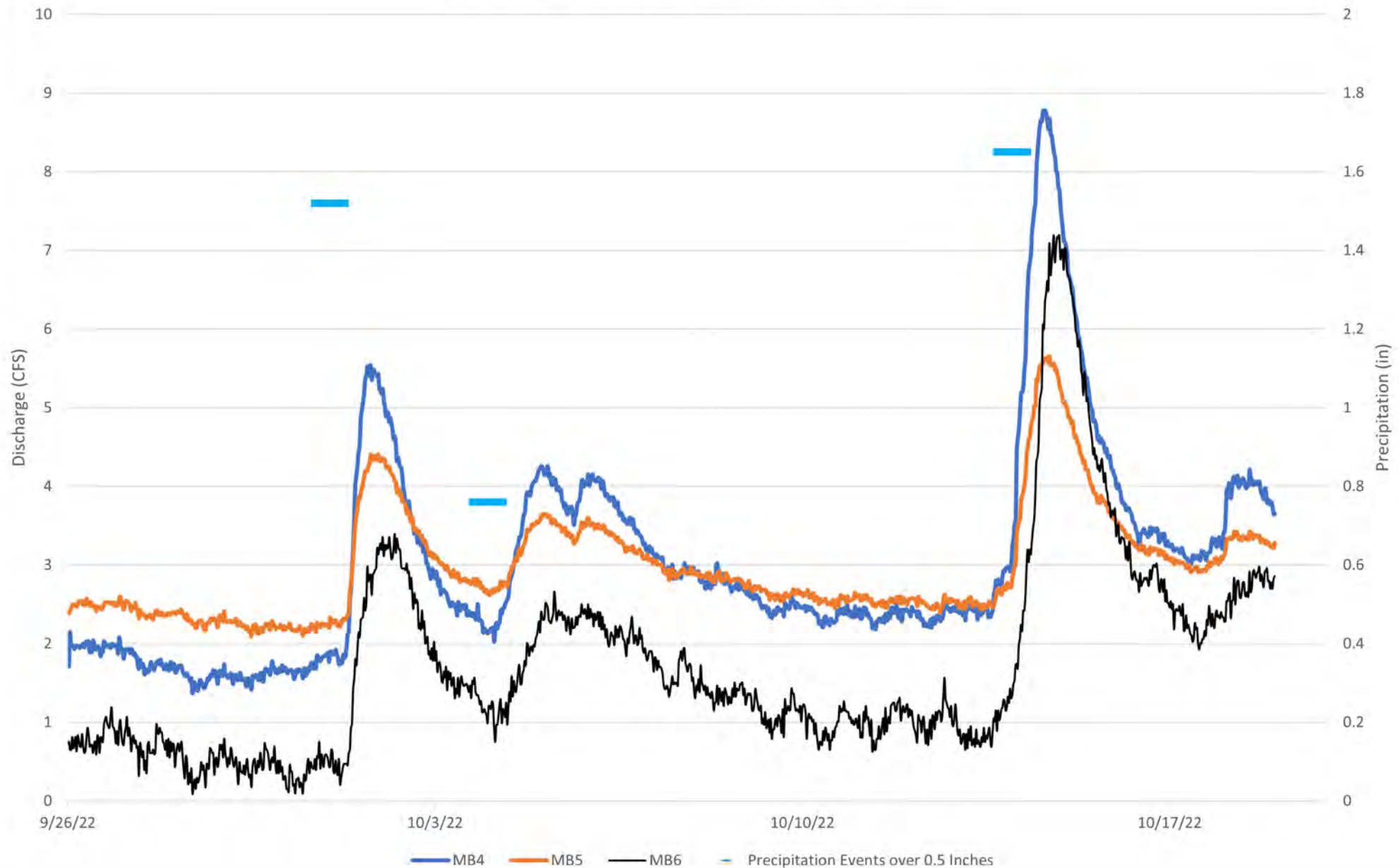
Station 5 Discharge



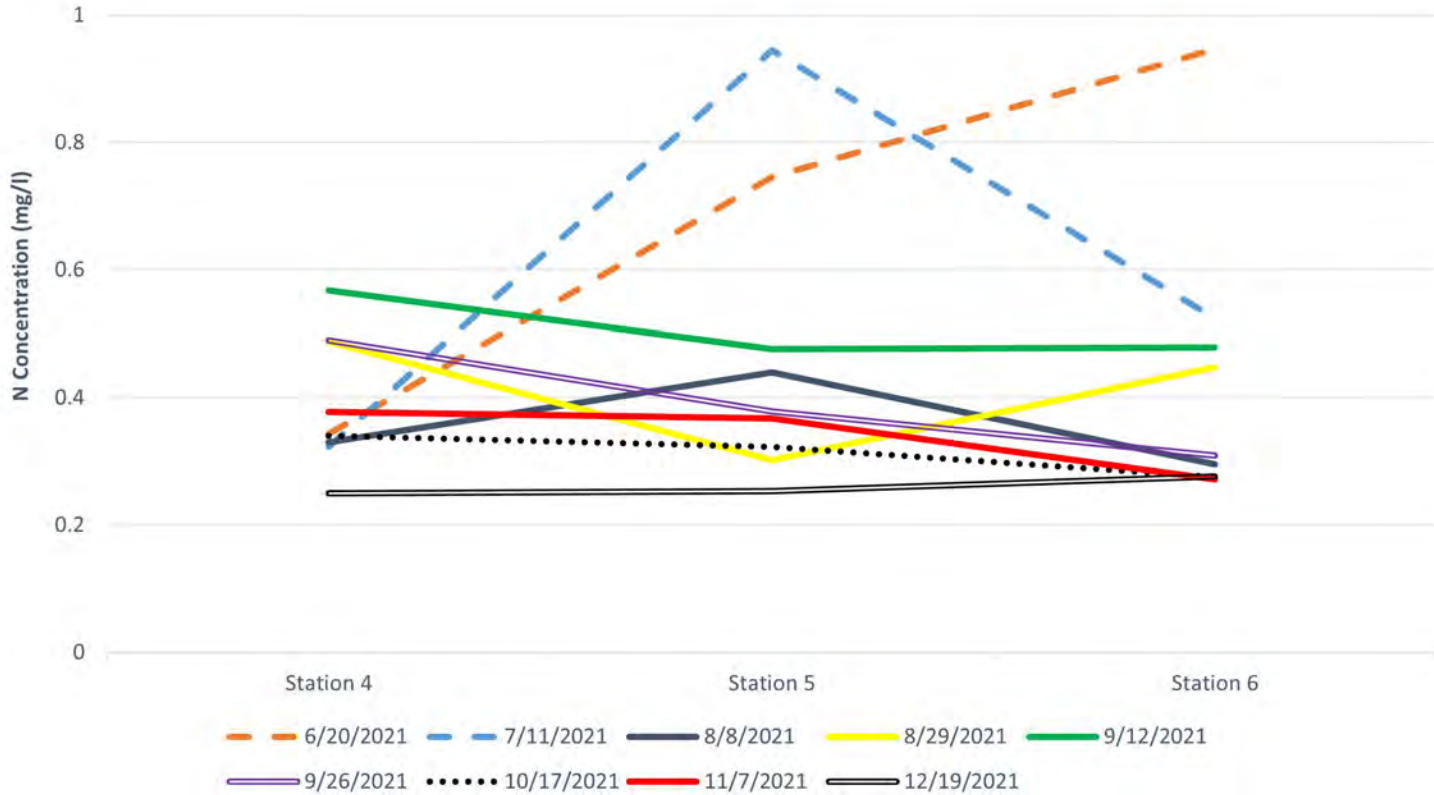
Station 6 Discharge



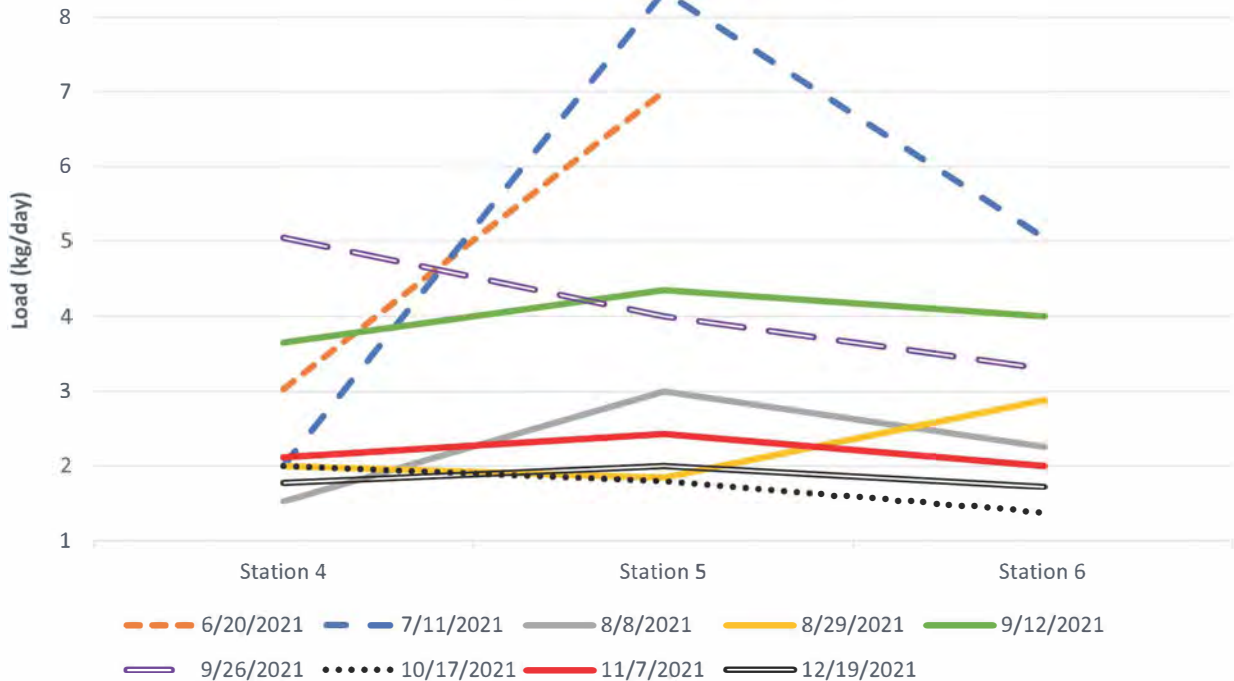
Discharge Response to Precipitation Events



Mill Brook Nitrogen Concentration



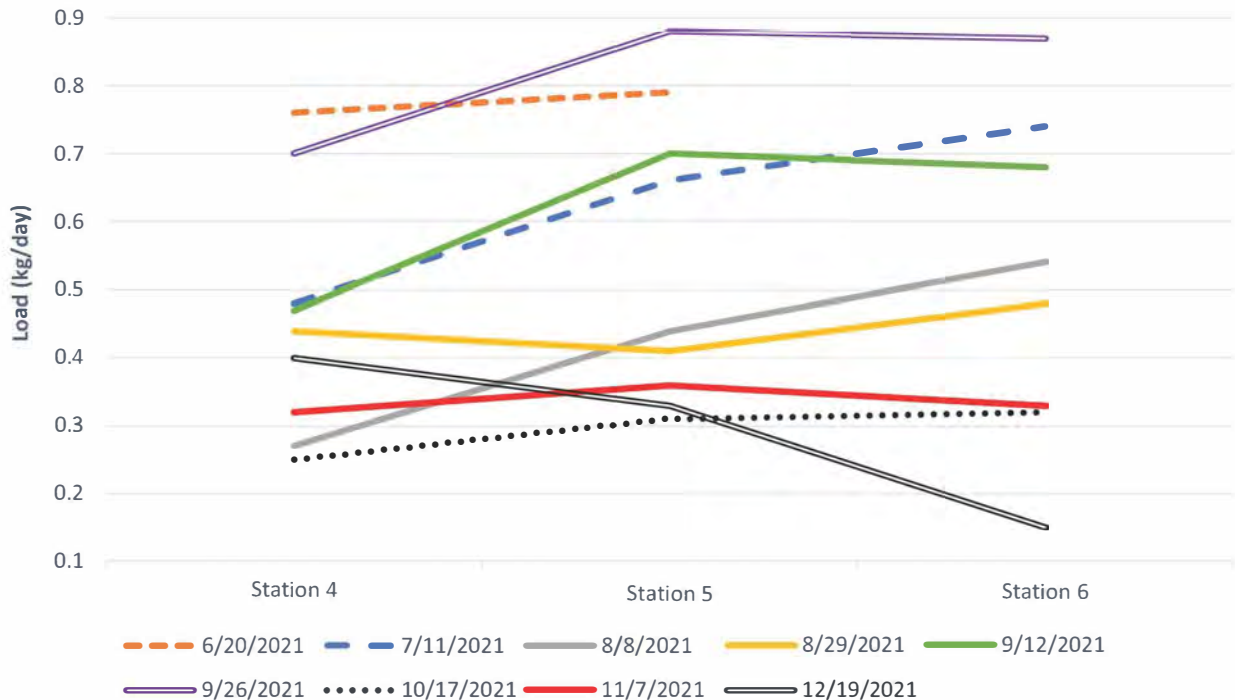
Mill Brook Nitrogen Load



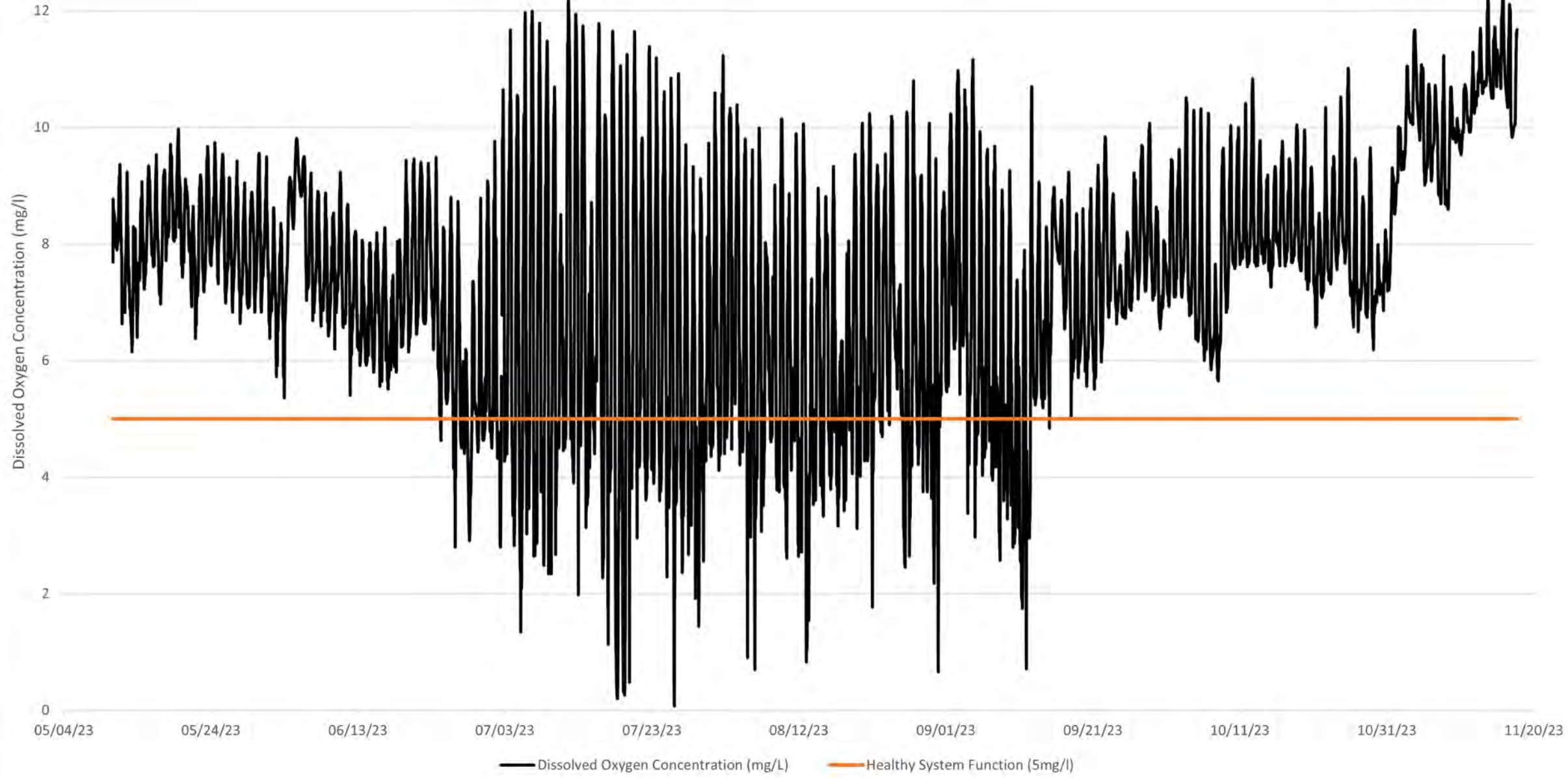
Mill Brook Phosphorus Concentration



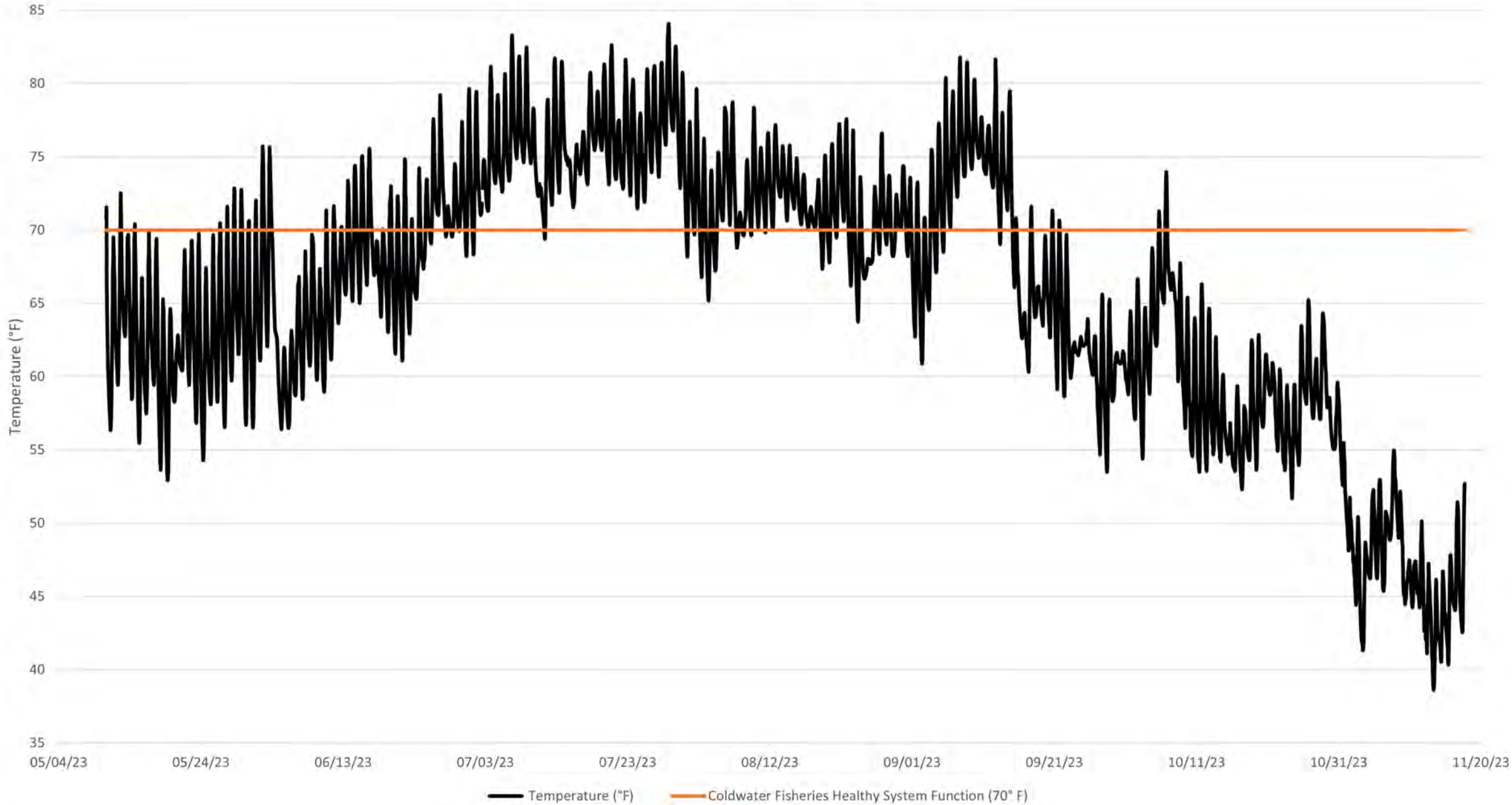
Mill Brook Phosphorus Load



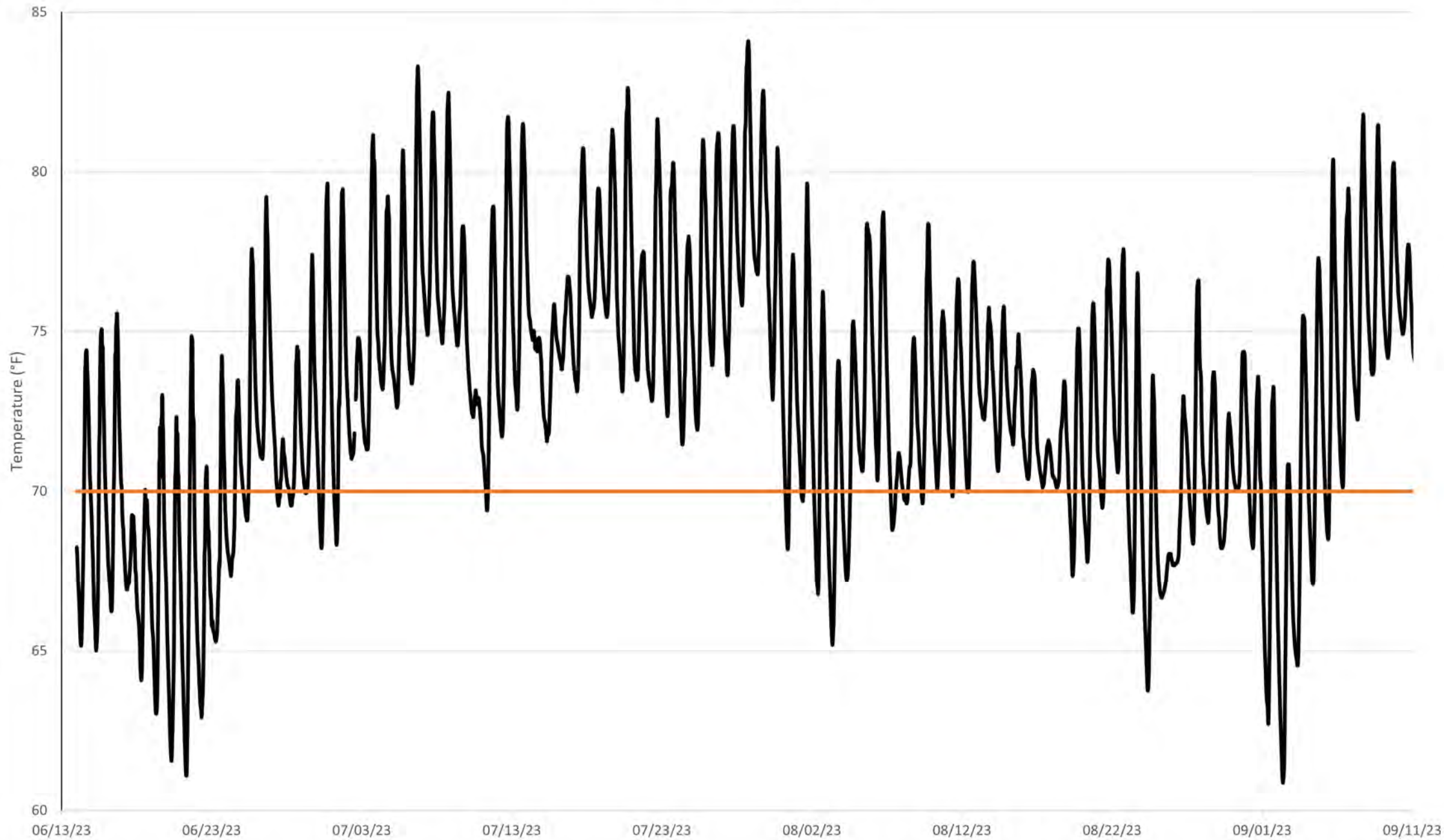
Mill Pond Dissolved Oxygen Concentration



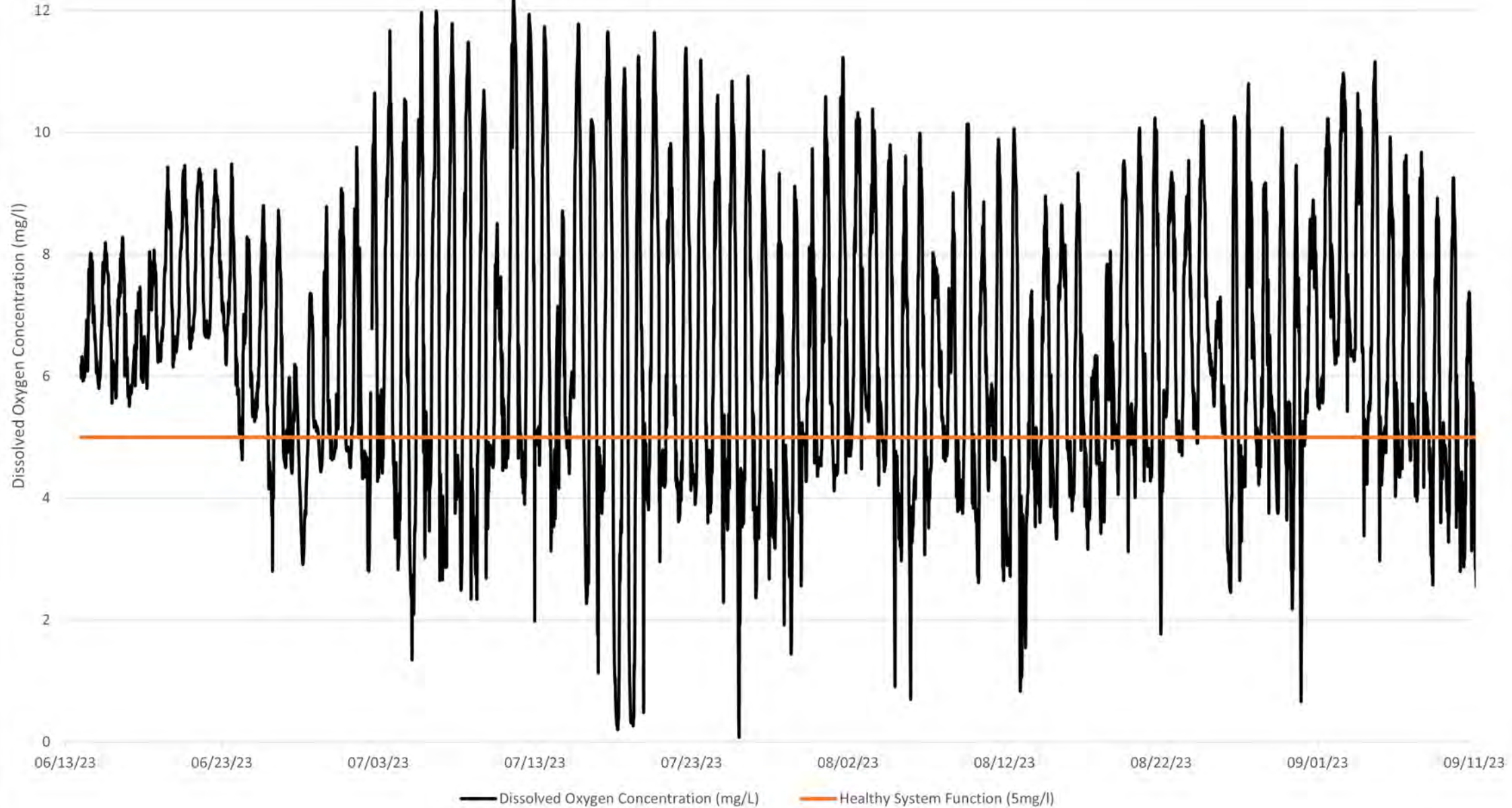
Mill Pond Temperature



Mill Pond Summer Temperature



Mill Pond Summer Dissolved Oxygen Concentration



Mill Brook Temperature

