



October 2019

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## 2019 Tributary and Groundwater Sampling Program for Pennichuck Water Works

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*Prepared for:*



**PENNICHUCK**

25 Manchester Street  
Merrimack, NH 03054

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## ATTACHMENTS

Attachment A: 2019 Pennichuck Brook Watershed Project Prioritization Chart

Attachment B: Tributary Sampling Data, 2007 through 2019

Attachment C: Groundwater Sampling Data, 2013 through 2019

Attachment D: Tributary Graphs, 2015-2019

Attachment E: Groundwater Graphs, 2014-2019

Attachment F: Comparison of Stream Gage Data and Groundwater Levels, 2013-2019

## EXECUTIVE SUMMARY

In 2019, water quality sampling was conducted by Comprehensive Environmental Inc. (CEI) at 10 locations in the Pennichuck watershed on April 25, June 10, July 11, July 31, August 27, and September 18. Major findings and recommendations from this sampling effort are as follows:

### Tributary Phosphorus Levels:

The table to the right summarizes tributary total phosphorus (TP) results. Most of the TP averages for 2007-2019 are within a relatively narrow range, with seven of the ten locations separated by the small margin of 0.007 mg/L (0.026 mg/L - 0.033 mg/L), all within the NHDES “**more than desirable**” category for TP. 2019 tributary TP data was generally consistent with the averages for 2007-2019, although 2019 results at 01-HAY were higher.

- These results support **continued efforts to reduce TP loads** through best management practices and improved land use management, with a goal of reducing TP to 0.025 mg/L or lower at all locations. A prioritized list of recommended actions from several recent and ongoing projects in the Pennichuck Brook watershed is provided as Attachment A.
- Additional field investigations are recommended to **identify potential pollutant sources** that may contribute to the historically erratic tributary TP results at 02-WCH, 12-PEN, and 09T-PEN. Field efforts could include identification of land use activities associated with high pollutant loads and potential opportunities for nutrient attenuation through stormwater best management practices.

| Tributary Sampling Location | 2019 Avg. TP* (mg/L) | 2007-2019 Avg. TP* (mg/L) | Note: NHDES TP (mg/L) categories:                                                                                                                                                                       |
|-----------------------------|----------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 02-WCH                      | 0.015                | 0.018                     | <ul style="list-style-type: none"> <li>• 0.011 - 0.025: Average</li> <li>• 0.026 – 0.049: <b>More than desirable</b></li> </ul> <p>*Data from April - August only</p> <p>** Data for 2016-2019 only</p> |
| 01-HAY**                    | 0.038                | 0.022                     |                                                                                                                                                                                                         |
| 12-PEN                      | 0.016                | 0.025                     |                                                                                                                                                                                                         |
| 01-XWB                      | 0.025                | 0.026                     |                                                                                                                                                                                                         |
| 09-PEN                      | 0.024                | 0.028                     |                                                                                                                                                                                                         |
| 09-XPB                      | 0.030                | 0.028                     |                                                                                                                                                                                                         |
| 01-WCH                      | 0.024                | 0.029                     |                                                                                                                                                                                                         |
| 01-MUD                      | 0.024                | 0.032                     |                                                                                                                                                                                                         |
| 09T-PEN                     | 0.036                | 0.033                     |                                                                                                                                                                                                         |
| 01-BFB                      | 0.037                | 0.033                     |                                                                                                                                                                                                         |
| <b>Averages</b>             | <b>0.027</b>         | <b>0.027</b>              |                                                                                                                                                                                                         |

### Groundwater Monitoring / Groundwater Phosphorus Levels:

2019 groundwater TP results continued to significantly exceed the typical ranges for groundwater TP, in some cases by more than an order of magnitude. To continue to improve the groundwater sampling program and reduce the potential for TP results that are skewed high by suspended solids in sample water, CEI has modified the groundwater sampling protocol to include turbidity measurements as of October 2019. Groundwater samples will be collected and measured for turbidity with an *in-situ* turbidity meter, and groundwater samples will be accepted only if turbidity is ≤5 NTUs.

### Tributary Conductivity:

Conductivity at 01-BFB, 09-XPB, and 09-PEN is categorized by NHDES as either having moderate impact (09-PEN, 09-XPB) or high impact (01-BFB) for both 2019 and the 2007-2019 period of record.

- Investigate potential opportunities to **reduce elevated conductivity levels at the locations listed above**. These investigations should include coordination with local highway departments to determine road salting practices and opportunities to safely reduce use of de-icing salt (e.g., reduced salt zones, alternative de-icing products, etc.) in road areas nearest to the streams.

### Bacteria:

*E. coli* levels at 01-BFB have a 2007-2018 geometric mean that exceeds New Hampshire Class A Water Quality Standards. 01-XWB and 01-WCH are close to this threshold. 01-BFB and 01-XWB have the highest rate *E. coli* exceedances, indicating persistent sources of bacterial contamination.

- **Investigate potential land use and wastewater issues** that could be contributing to elevated indicator bacteria levels at 01-BFB, 01-WCH, and 01-XWB.

## 1.0 BACKGROUND

Pennichuck Water Works (PWW) has been collecting data from its supply watershed since 1991. Sampling locations and parameters were varied until around 2005, when a sampling program was developed using a specific set of water quality parameters for nine tributary locations within the watershed. This program was further refined in 2007 to include continuous flow monitoring. Since then, water quality sampling and flow measurements at tributary locations have been ongoing, with modifications and adjustments made as needed.

In 2013, PWW initiated a pilot groundwater sampling program to compare water quality parameters to those found in the tributaries. The sampling program has undergone some modifications over the past several years; including the addition and removal of locations, the replacement of monitoring wells, and the analysis of various parameters through multiple laboratories.

## 2.0 MONITORING LOCATIONS

The ten groundwater and tributary sampling locations are shown on Figure 1 with descriptions provided in Table 1.

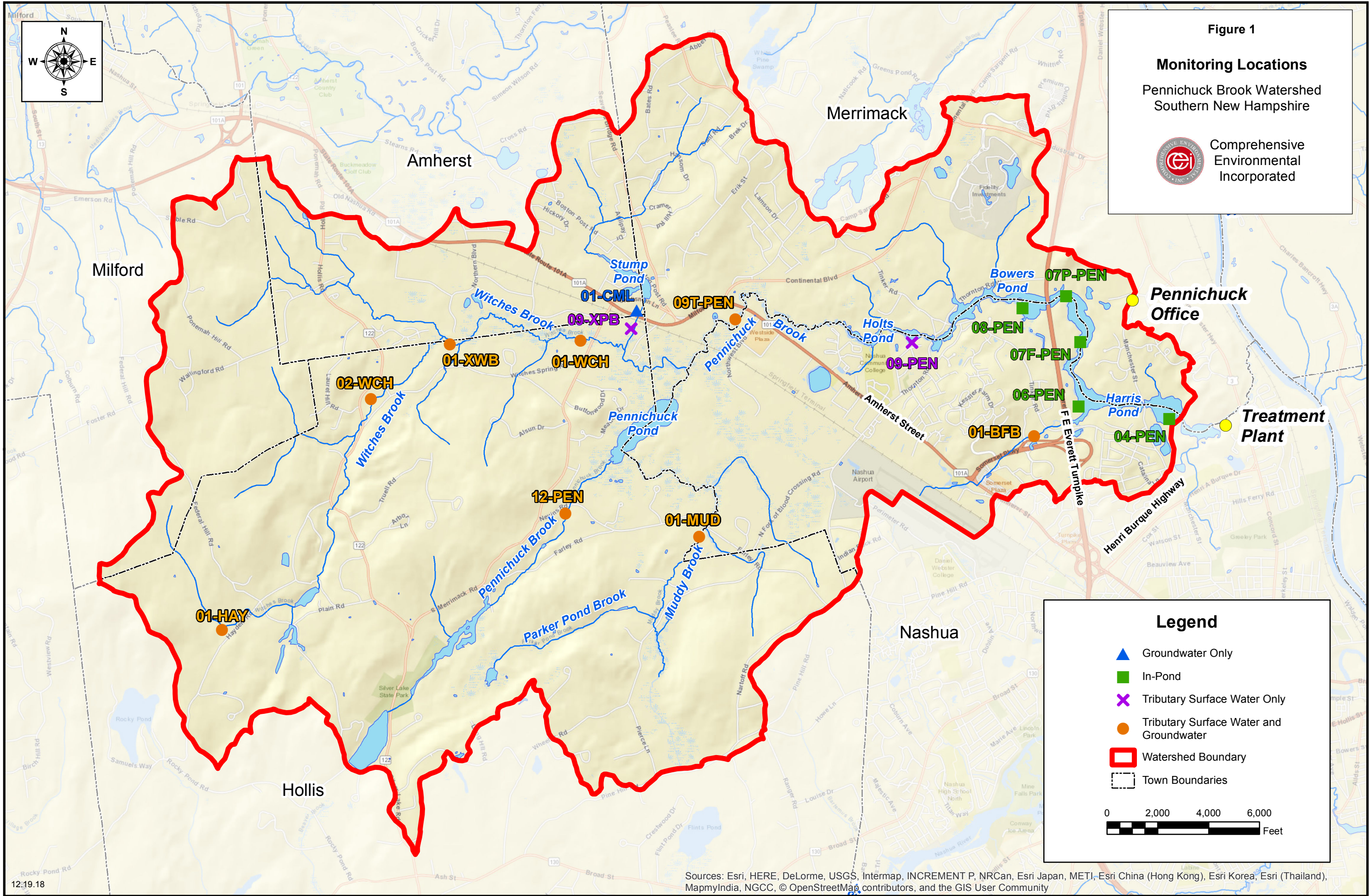
**Table 1 – Groundwater and Tributary Sampling Locations**

| Sampling Location    | Tributary Station ID | Groundwater Station ID | Location / Description                                                    |
|----------------------|----------------------|------------------------|---------------------------------------------------------------------------|
| 01-BFB               | 01-BFB-T             | 01-BFB-MW              | Boire Field Brook, Tinker Road                                            |
| 09-PEN               | 09-PEN-T             | N/A <sup>1</sup>       | Holts Pond Dam                                                            |
| 09T-PEN <sup>2</sup> | 09T-PEN-T            | 09T-PEN-MW             | Route 101A Bridge                                                         |
| 09-XPB               | 09-XPB-T             | 09-XPB-MW<br>(01-CML)  | Unnamed Tributary to Pennichuck Brook on 101A.<br>(Craftsman Lane Bridge) |
| 01-WCH               | 01-WCH-T             | 01-WCH-MW              | South Merrimack Road Bridge                                               |
| 01-XWB               | 01-XWB-T             | 01-XWB-MW              | Unnamed Tributary to Witches Brook                                        |
| 12-PEN               | 12-PEN-T             | 12-PEN-MW              | Nevins Road Bridge                                                        |
| 01-MUD               | 01-MUD-T             | 01-MUD-MW              | Farley Road Bridge                                                        |
| 02-WCH               | 02-WCH-T             | 02-WCH-MW              | Ames Road Bridge on Route 122                                             |
| 01-HAY <sup>3</sup>  | 01-HAY-T             | 01-HAY-MW              | Hayden Road in Eversource power line right-of-way                         |

<sup>1</sup>Groundwater monitoring discontinued in 2016 due to poor recharge through locally restrictive soils.

<sup>2</sup>Groundwater monitoring well not installed adjacent to tributary sampling locations.

<sup>3</sup>Groundwater and tributary monitoring was added in 2016.



### 3.0 DATA COLLECTION

In 2019, water quality sampling was conducted by Comprehensive Environmental Inc. (CEI) at 10 locations in the Pennichuck watershed on April 25, June 10, July 11, July 31, August 27, and September 18. Historically, the tributary and groundwater sampling program has included an average of 7 sampling events per year, spanning from April to November/December. In 2019, the reporting schedule was adjusted to provide the annual monitoring report in early October. The 2019 report includes data from 6 sampling events spanning from April to August, as September laboratory results were not yet available at the time of report preparation and mid-October monitoring had not yet occurred. For this reason, data comparisons within this report were only examined for sampling dates between April and August for the entire 12-year dataset.

There was one occurrence of poor well recharge during the 2019 sampling program in which the monitoring well location at 01-HAY did not have enough groundwater present for sample collection. The parameters analyzed both in the field by CEI and in the lab by Granite State Analytical and Chemserve are summarized in Table 2.

**Table 2 – Sampling Parameters**

| Field Analysis                                                                                                                                                             | Laboratory Analysis                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Groundwater and Tributaries                                                                                                                                                | Tributaries                                                                                                                                                                                                                                                                                          | Groundwater                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>Conductivity</li> <li>Dissolved Oxygen</li> <li>pH</li> <li>Temperature</li> <li>Groundwater Level / Staff Gauge Reading</li> </ul> | <ul style="list-style-type: none"> <li>Ammonia-Nitrogen</li> <li>Chloride</li> <li>E. Coli</li> <li>Fecal Coliform</li> <li>Nitrate-Nitrogen</li> <li>Nitrite-Nitrogen</li> <li>Total Kjeldahl Nitrogen</li> <li>Total Nitrogen</li> <li>Total Phosphorus</li> <li>Total Suspended Solids</li> </ul> | <ul style="list-style-type: none"> <li>Ammonia-Nitrogen</li> <li>Chloride</li> <li>Nitrate-Nitrogen</li> <li>Nitrite-Nitrogen</li> <li>Total Alkalinity</li> <li>Total Dissolved Solids</li> <li>Total Kjeldahl Nitrogen</li> <li>Total Nitrogen</li> <li>Total Phosphorus</li> </ul> |

**Sampling Equipment Notes:** Staff gauges and electronic dataloggers were previously installed at nine of the ten tributary locations (the exception being 01-HAY due to low or sometimes absent water levels) to collect year-round stream elevations, and stage-discharge relationship equations were developed based on field measurements. Data was downloaded by CEI approximately every six weeks during spring and summer months and converted to an approximate flow for each tributary. In 2019, additional calibration standards were incorporated into the *in-situ* data collected at each sampling location for parameters including conductivity, pH, temperature, and dissolved oxygen.

### 4.0 DATA ANALYSIS

The following sections provide a summary of data for each location, including graphs of phosphorus trends at each tributary sampling location and analysis of other parameters of note for each location. Note that while the graphs show the entire range of data since 2007 (with the exception of outliers), the averages listed above each graph represent data from April-August of each year for reasons described above.

The State of New Hampshire currently does not have numeric nutrient criteria for rivers and streams, but is currently in the process of developing them. The most recent national guidance on nutrient standards for streams is provided by the USEPA in Quality Criteria for Water (1986)<sup>1</sup>. According to this guidance, total phosphorus (TP) should not exceed 0.05 mg/L in any stream at the point where it enters any lake or reservoir. The New Hampshire Department of Environmental Services (NHDES) also provides guidance<sup>2</sup> that categorizes freshwater TP levels as follows:

| TP (mg/L)     | Category                         |
|---------------|----------------------------------|
| < 0.010       | Ideal                            |
| 0.011- 0.025  | Average                          |
| 0.026 - 0.049 | More than desirable              |
| ≥ 0.050       | Potential nuisance concentration |

To provide a point of reference for the TP data presented in graphs in Section 4.1, the USEPA guidance criteria for stream TP (0.050 mg/L, also the NHDES nuisance concentration threshold) is presented as a horizontal line on the graphs.

For complete sampling results for each sampling station, see the attachments at the end of this report.

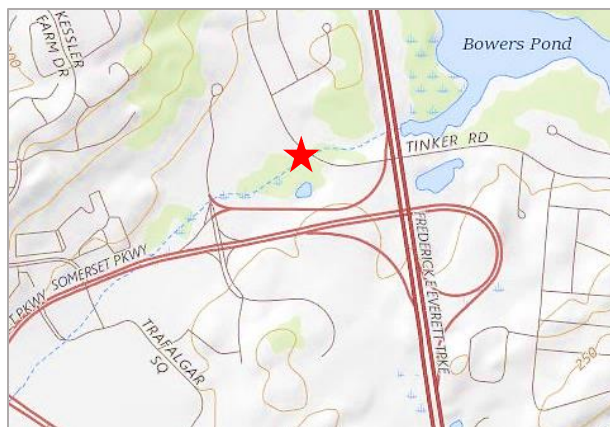


*Pennichuck Brook at sampling location 12-PEN*

<sup>1</sup> United States Environmental Protection Agency, 1986. Quality Criteria for Water (Gold Book). EPA 440/5-86-001. Office of Water, Regulations and Standards. Washington, D.C.

<sup>2</sup> New Hampshire Department of Environmental Services, 2008 (Revised 2011). Interpreting VRAP Water Quality Parameters – Chemical Parameters.

#### 4.1 01-BFB



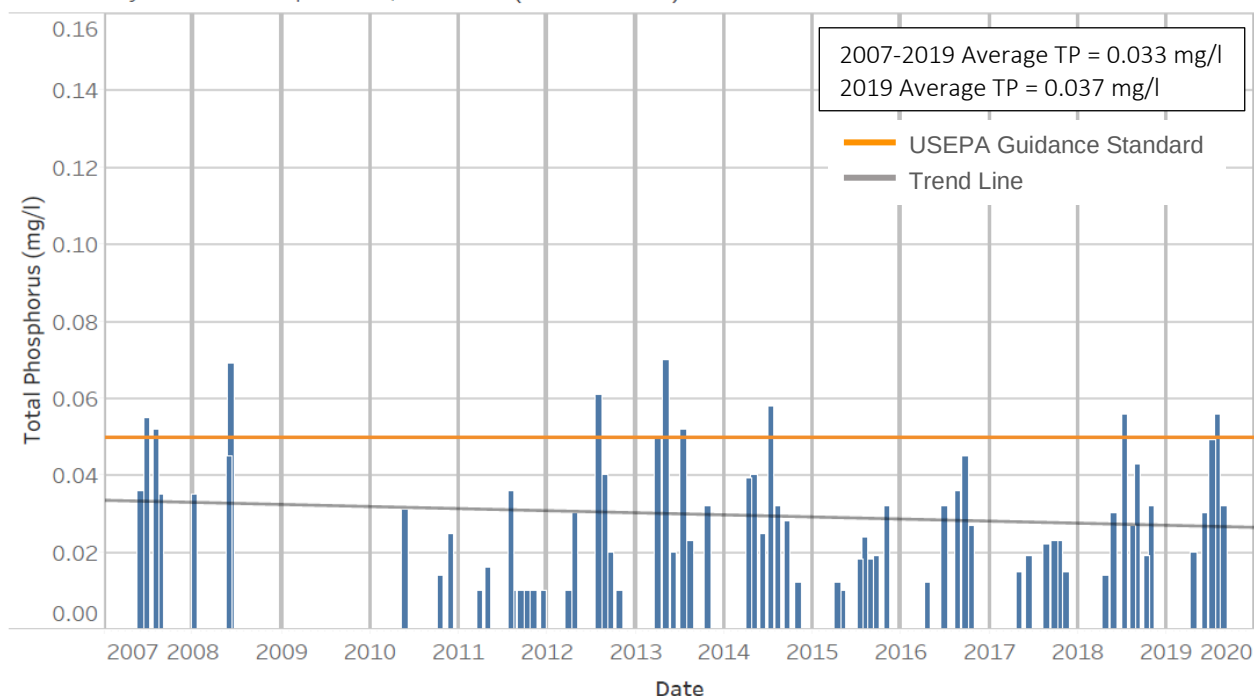
01-BFB is located at the culverted crossing of Boire Field Brook at Tinker Road. The immediate vicinity of the sampling location is forested and residential land, but the upstream watershed includes commercialized areas of Route 101A, including Nashua Municipal Airport.

##### Total Phosphorus Analysis

- The contributing watershed for 01-BFB is the smallest and most heavily developed of the sampling locations. TP results since 2014 for this location have been relatively stable, and the 2007-2019 period of record has exhibited a decreasing trend in TP.
- TP levels at 01-BFB have historically been similar to, but just slightly higher than, most of the sampling stations. From April to August 2019, average TP was 0.037 mg/l, the second-highest value among all stations. The 2019 average was generally consistent with, but slightly higher than, the average for the 2007-2019 period of record (0.033 mg/L).
- 2019 tributary TP measurements exceeded the USEPA stream guidance standard once (July 31, 2019).
- Groundwater phosphorus levels at 01-BFB were mid-range when compared to other sampling locations within the watershed.

A detailed assessment of potential pollutant sources and potential stormwater improvements in the Boire Field Brook subwatershed was completed by CEI in 2019 with grant funding from a NHDES Source Water Protection Grant (SWPG). This project resulted in a variety of recommendations for structural practices to reduce watershed sources of phosphorus and other pollutants (see project prioritization table provided as Attachment A).

### Tributary Total Phosphorus, 01-BFB (2007-2019)

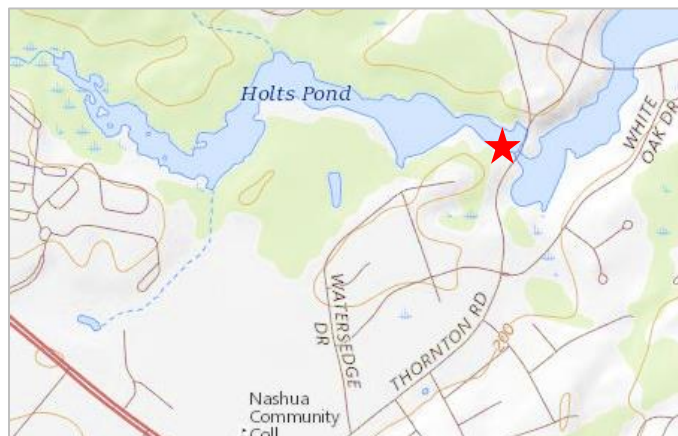


Note: Surface water data for 7/13/2010 and 6/2/2019 was removed due to outlier data/assumed lab error

### Other Analyses of Note

- pH levels for both the 01-BFB groundwater and tributary locations have consistently been higher (more basic) than other sampling locations, with highest levels (e.g. pH of 9.97) generally occurring during the mid to late summer.
- Conductivity levels for surface water at 01-BFB have historically been by far the highest among the sampling locations in the watershed. The average conductivity value for 2019 (818.3  $\mu\text{S}/\text{cm}$ ) approached the New Hampshire chronic chloride standard (835  $\mu\text{S}/\text{cm}$ ), and this location exceeds the NHDES “high impact” threshold (>501  $\mu\text{S}/\text{cm}$ ) for the 2007-2019 period of record (751.5  $\mu\text{S}/\text{cm}$ ). High conductivity levels at this location may be associated with de-icing salt applied nearby on the Everett Turnpike and at the airport that is washed into the tributary via snowmelt and storm runoff in the spring. Groundwater alkalinity was approximately 5 to 6 times higher than average among sampling locations, further indicating potential contamination from road salt.
- 01-BFB continues to have the highest levels of *E. coli* bacteria and the highest rate of *E. coli* exceedances of all tributary sampling locations. See additional discussion in Section 5 (Recommendations).
- 01-BFB continues to have the highest concentrations of nitrate among the tributary sampling locations, along with above-average nitrogen concentrations.

## 4.2 09-PEN

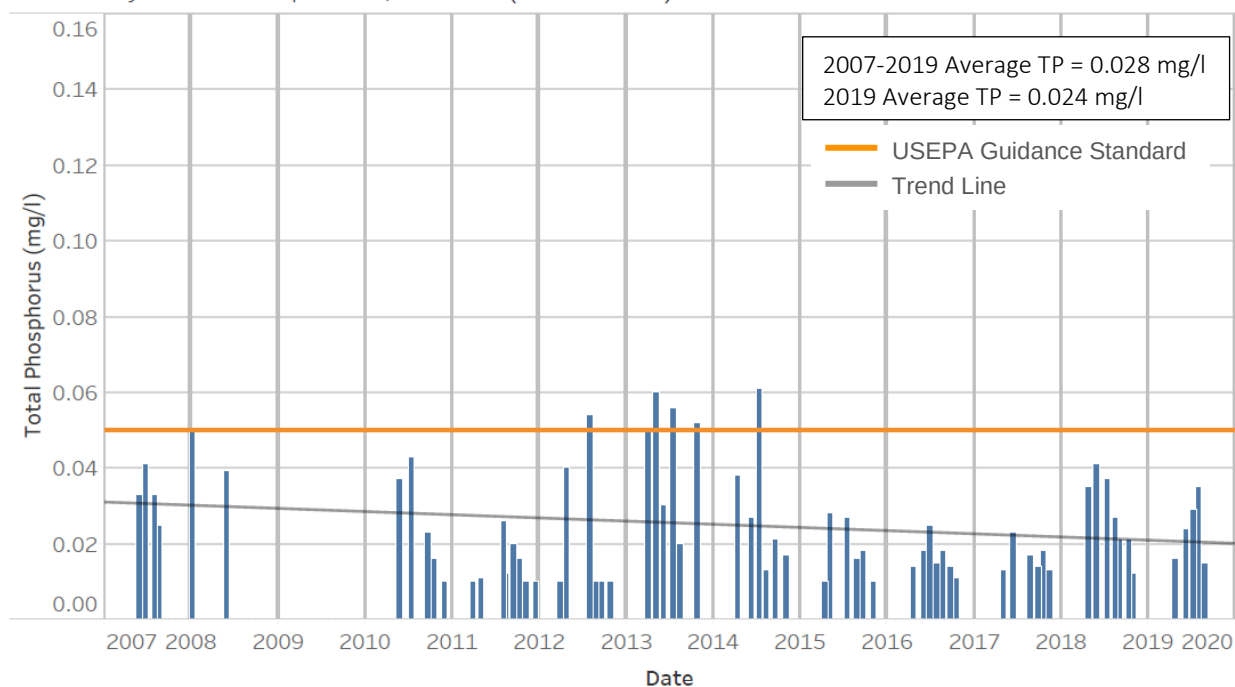


09-PEN is located at the eastern, downstream end of Holts Pond, just upstream of the dam separating Holts Pond and Bowers Pond.

### Total Phosphorus Analysis

- The 2019 TP results for 09-PEN presented a continuation of the relatively stable TP results that have been observed at this monitoring station since 2015. The average TP level for 2019 (0.024 mg/L) was comparable to the TP average for the 2007-2019 period of record at this location (0.028 mg/L) and was mid-range among all tributary locations for 2019. Overall, the 2007-2019 period of record has exhibited a decreasing trend for TP at this location.
- Because phosphorous levels in the next upstream location (09T-PEN) have generally been slightly higher than those at 09-PEN, it is likely that Holts Pond acts as a phosphorus sink, with deeper water and slower flow velocities allowing for the settling of phosphorus attached to particulate matter. Phosphorus in both sediment and the water column can also be partially absorbed by rooted aquatic plants and therefore temporarily removed during the growing season.
- TP levels at 09-PEN have remained below the USEPA stream standard (0.050 mg/L) since the summer of 2015. However, the equivalent USEPA TP guidance concentration<sup>1</sup> for this in-pond location is 0.025 mg/l for in-pond TP. 09-PEN approaches and slightly exceeds this guidance concentration for 2019 and for the 2007-2019 period of record, respectively, indicating that TP levels are sufficient to support eutrophic conditions in Holts Pond, such as abundant aquatic vegetation and high algal productivity.
- Groundwater sampling at 09-PEN was discontinued at the end of the 2015 sampling rounds, as the existing monitoring well had been historically unreliable due to poor recharge associated with silty soils.

### Tributary Total Phosphorus, 09-PEN (2007-2019)



Note: Surface water data for 5/8/2014 and 8/6/2015 was removed due to outlier data/assumed lab error.

### Other Analyses of Note

- 09-PEN has consistently exhibited conductance levels in the low end of the NHDES category for “moderate impact” (201-500  $\mu\text{S}/\text{cm}$ ), and this trend continued in 2019 with an average conductance of 228.4  $\mu\text{S}/\text{cm}$ .
- Total nitrogen levels in 2019 were significantly higher than the average for the period of record at this location, while nitrate levels were at or below laboratory detection limits, as they have been over the past five years.
- Other parameters were consistent with previous years.

### 4.3 09T-PEN

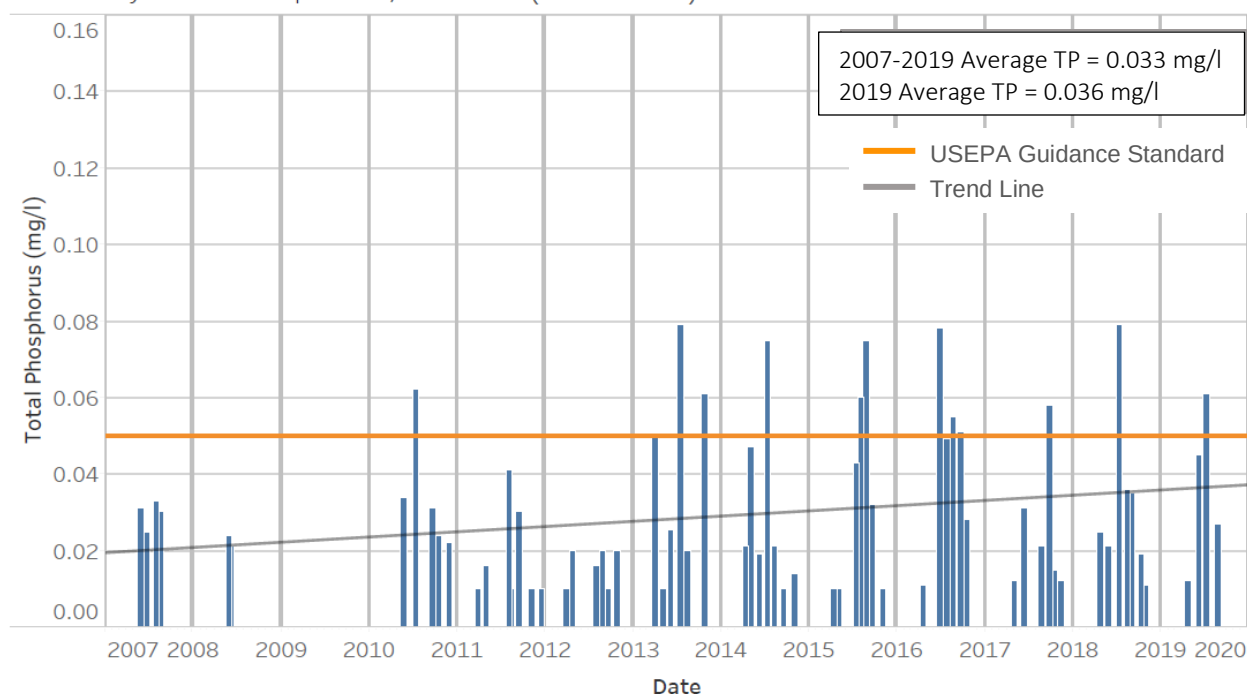


09T-PEN is located at the culvert where Pennichuck Brook passes underneath Route 101A. The contributing watershed is moderately developed and includes medium-density residential areas. The terrain at this location is unsuitable for microwell installation, so the groundwater sampling station is located a few hundred yards downstream, behind the Pennichuck Square shopping complex.

#### Total Phosphorus Analysis

- TP results for this location have been erratic over the period of record, with results fluctuating between approximately 0.01 mg/L and 0.08 mg/L over the past five years. Overall, the 2007-2019 period of record has exhibited an increasing trend in TP at this location.
- 2019 tributary TP levels (0.036 mg/L) were generally consistent with those reported since 2013, and were similar to the average for the period of record (0.033 mg/L).
- TP levels at 09T-PEN exceeded the USEPA stream standard on one sampling event in 2019 (July 11), and have exceeded that standard on at least one sampling event for each of the past seven years.
- The contributing watershed of 09T-PEN has also seen historic dumping of assorted yard wastes immediately upstream of the location in the vicinity of the groundwater well, potentially contributing to elevated phosphorus levels.

### Tributary Total Phosphorus, 09T-PEN (2007-2019)

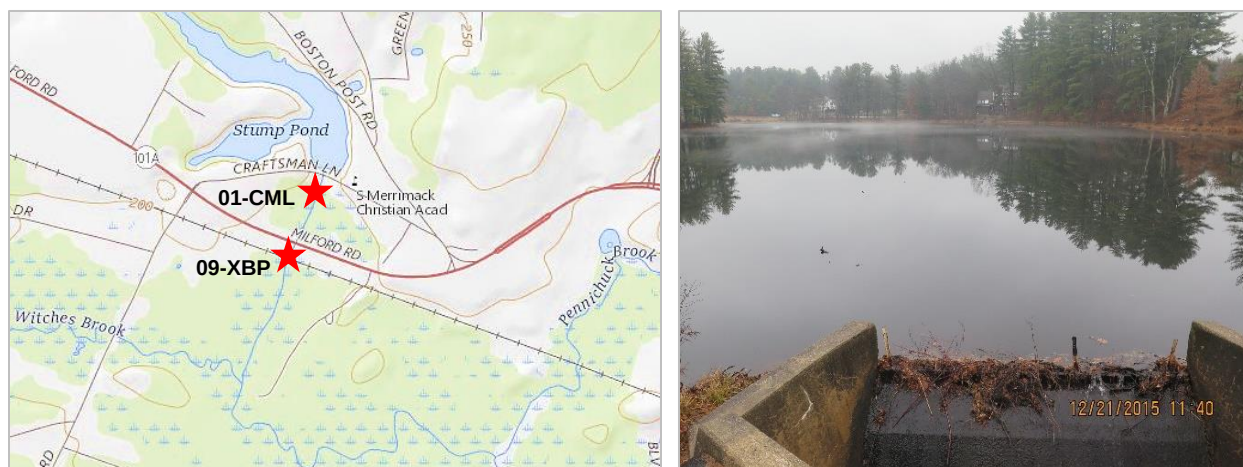


Note: Surface water data for 1/8/2008, 6/2/2016 and 7/31/2019 removed due to outlier data/lab error.

### Other Analyses of Note

- Historically, tributary pH levels at 09T-PEN have been among the highest (most basic) in the watershed. This trend continued in 2019.
- Total nitrogen levels have typically been near average within the tributary when compared to other stations, but they have risen to be among the highest levels recorded in the past 2 years.
- Dissolved oxygen levels at this location have historically been the lowest in the entire watershed for an overall average of 4.19 mg/l. The 2019 average (3.36 mg/l) was almost half the average for the period of record across all sampling stations (6.50 mg/l).
- Other groundwater parameters have remained consistent over a 5-year period and are average relative to the other the sampling locations.

#### 4.4 09-XPB / 01-CML

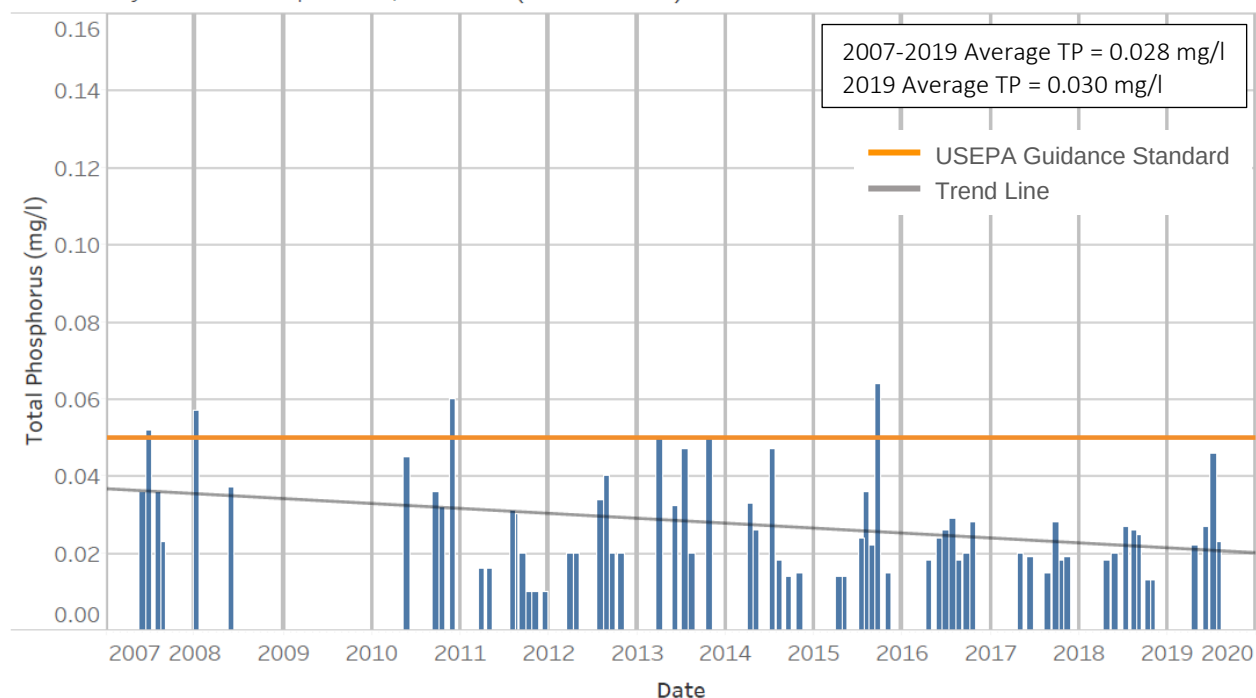


Sampling location 09-XPB is split into two sites. Groundwater and tributary monitoring are conducted at 01-CML (south of Craftsman Lane), while data logging and stage discharge readings are performed at 09-XPB, located just south of Rt. 101A. The culvert under Craftsman Lane was observed to be in generally poor condition. The contributing watershed includes a small developed area and forested, medium-density residential neighborhoods.

#### Total Phosphorus Analysis

- 09-XPB has exhibited a decreasing trend in TP concentrations over the 2007-2019 period of record. Average TP concentrations at 09-XPB have also gone from some of the highest in the Pennichuck Brook watershed to more average relative to the other sampling stations.
- TP levels at this location have been relatively stable over the last four years, compared to the more erratic results seen in earlier years.
- TP results at 09-XPB have not exceeded the USEPA stream standard for phosphorus since 2015.
- Historically, groundwater phosphorus levels for this location have been in the mid to upper range compared to other monitoring locations, and this trend continued in 2019.
- A Source Water Protection Grant application was submitted to NHDES in November 2018 to complete a more detailed subwatershed analysis in order to better understand potential impacts of stormwater and other natural contaminant sources (e.g., eroded banks). Although NHDES did not approve the grant funding, PWW is currently evaluating alternative funding sources for this study.

### Tributary Total Phosphorus, 09-XPB (2007-2019)



Note: Surface water data for 7/13/2010, 5/6/2013, 6/11/2014, and 8/27/2019 was removed due to outlier data/assumed lab error

### Other Analyses of Note

- 09-XPB has consistently exhibited conductance levels in the low end of the NHDES category for “moderate impact”, and this trend continued in 2019 with an average conductance of 245.2  $\mu\text{S}/\text{cm}$ .
- This location has historically exhibited some of the highest total nitrogen levels among all sampling stations. In 2019, total nitrogen levels were in line with the overall average. Groundwater TN levels exhibited the opposite trend, increasing over the past two years from previous levels.
- Dissolved oxygen levels at this location (3.97 mg/l) were significantly lower than the average for the period of record (5.51 mg/l). It should be noted that cooler fall temperatures typically correlate with higher dissolved oxygen levels. The shift in the 2019 reporting period did not allow for September and October results to be included in the 2019 average, likely skewing the results lower when compared to previous years.

#### 4.5 01-WCH

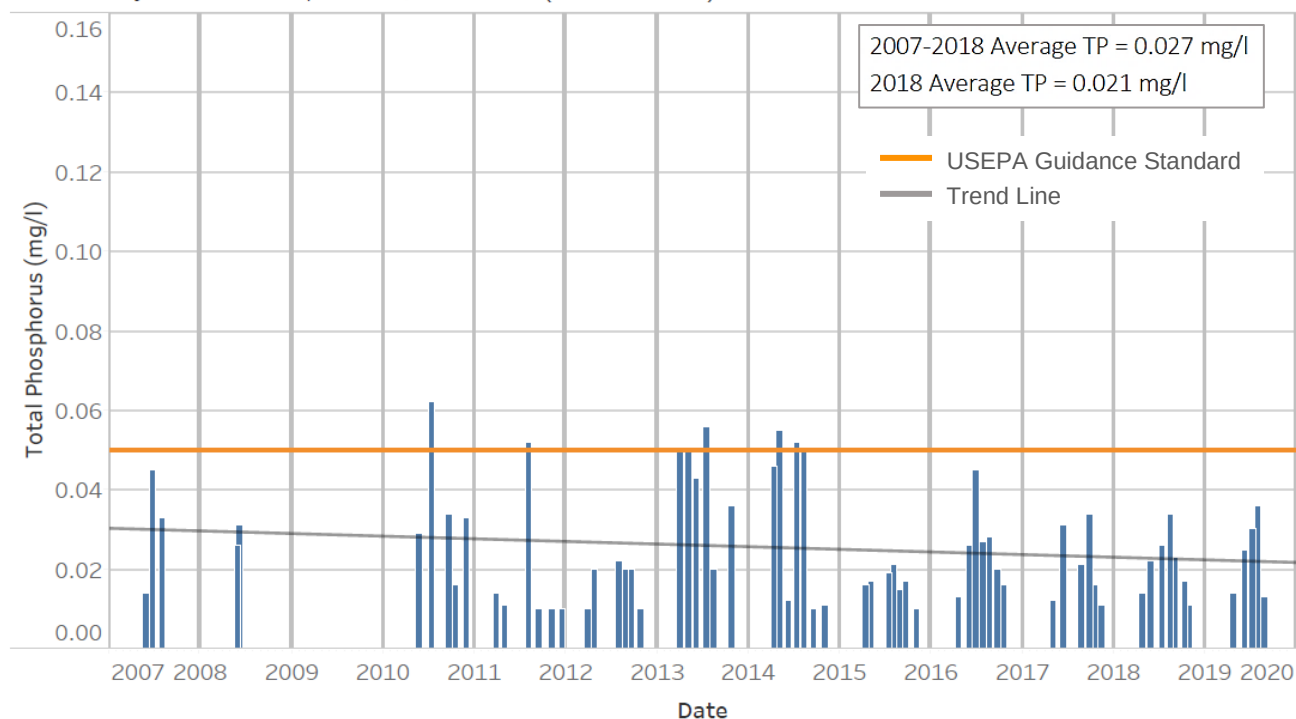


01-WCH is located at the South Merrimack Road culverted crossing of Witches Brook. Large wetlands exist on both sides of the Witches Brook culvert, with the brook forming a meandering channel through emergent vegetation. Water velocity is typically slow in this area but water levels are deep, especially after heavy rain events.

##### Total Phosphorus Analysis

- Tributary TP levels at 01-WCH have exhibited a decreasing trend over the 2007-2019 period of record.
- TP has averaged 0.029 mg/L over the period of record at this location, slightly above the NHDES “*more than desirable*” threshold of 0.026 mg/L. The 2019 average was slightly below this threshold (0.024 mg/L)
- Average TP in 2019 was comparable to 2018 (0.021 mg/L) and slightly below the average for all tributary sampling locations.
- Tributary TP has been relatively stable at this location over the past five years, and levels have been below the USEPA stream standard since 2015.
- Groundwater TP levels at this location have historically been extremely varied throughout the sampling rounds, with frequent fluctuations between the highest and lowest recorded values relative to the other locations. In 2019, groundwater TP levels exhibited minimal variation and were consistently among the lowest recorded values.

### Tributary Total Phosphorus, 01-WCH (2007-2019)



Note: Surface water data for 1/8/2008 was removed due to outlier data/assumed lab error

#### Other Analyses of Note

- Groundwater at this location continues to show higher total nitrogen concentrations than other monitoring well locations, while tributary total nitrogen was below average in both 2019 and over the entire period of record.
- In 2019, average dissolved oxygen levels at this location (3.83 mg/l) was almost half the average for the period of record across all sampling stations (6.50 mg/l)
- Other groundwater parameters have remained consistent over a 5-year period and are average relative to the other the sampling locations.

#### 4.6 01-XWB

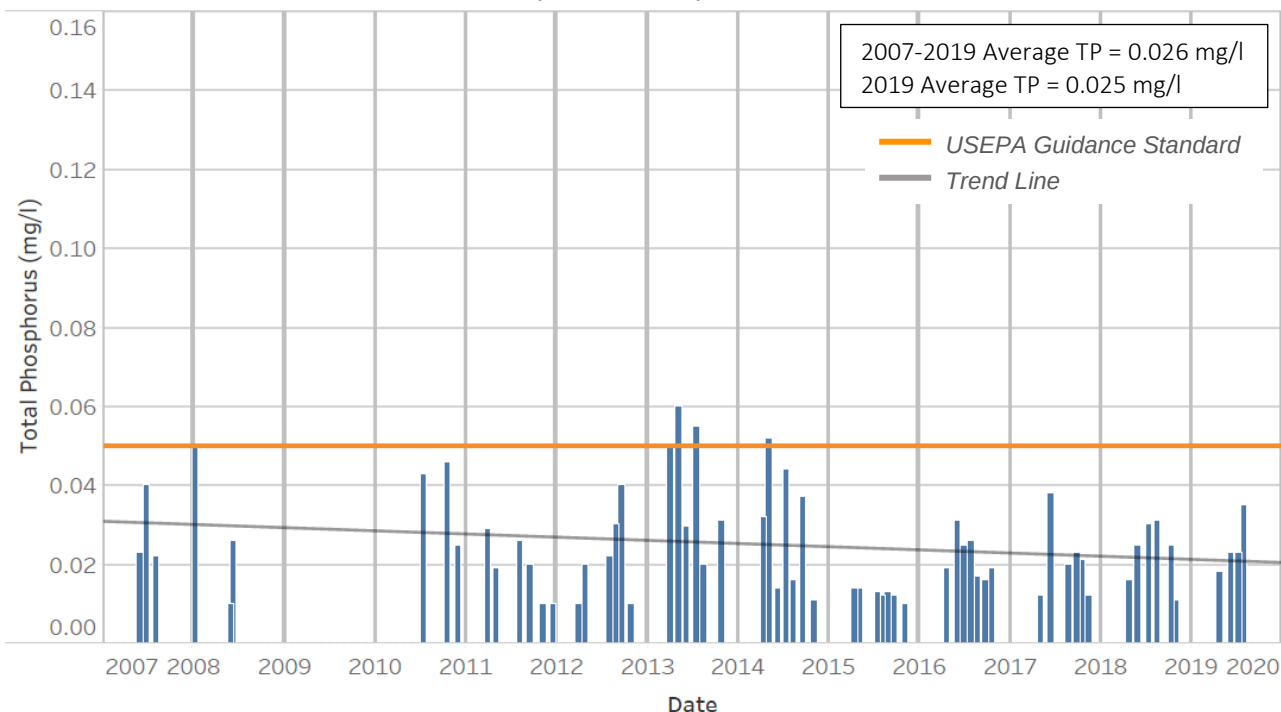


01-XWB is located along the southern side of Witches Brook, on a farm plot off of Witches Spring Road. The brook flows through a combination of wooded, residential, agricultural, and wetland areas. The farm is used for hay production and there are small livestock enclosures in the area. This portion of the brook is wide and deep but typically moves slowly.

##### **Total Phosphorus Analysis**

- TP levels at 01-XWB have been relatively stable since 2015 when compared to the more erratic results from earlier sampling years and have exhibited a decreasing trend. The 2019 average TP (0.025 mg/L) is comparable to the TP average for the 2007-2019 period of record (0.027 mg/L).
- Tributary TP levels at this location are mid-range when compared to other locations in the Pennichuck watershed and have not exceeded the USEPA stream standard since 2014.
- Groundwater phosphorus concentrations continue to be moderate to high at this location relative to the other sampling locations. See Section 5 for recommendations related to future groundwater monitoring protocols.

### Tributary Total Phosphorus, 01-XWB (2007-2019)

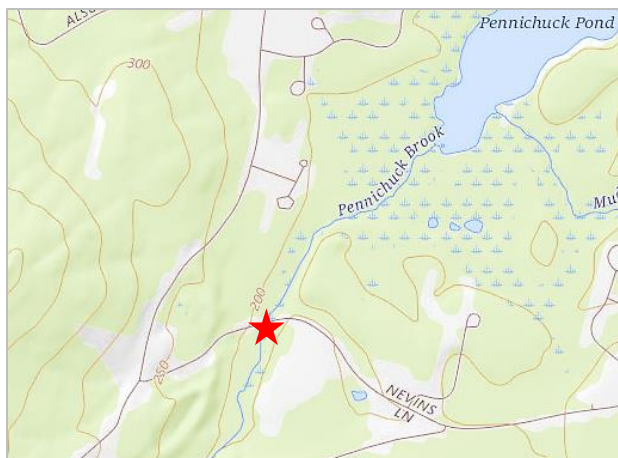


Note: Surface water data for 8/22/2007, 10/14/2011, 9/5/2018, and 8/27/2019 was removed due to outlier data/assumed lab error

#### Other Analyses of Note

- 01-XWB has historically seen some of the highest tributary *E. coli* and fecal coliform concentrations of all the sampling locations. This location is second only to 01-BFB in percentage of single sample *E. coli* exceedances from 2007-2019 (see additional discussion and table in Section 5). Livestock located nearby could contribute to these elevated concentrations, which were also observed in 2018.
- Average nitrogen in the tributary for the period of record at this location (0.6 mg/l) is below the 12-year average in the watershed. However, average nitrogen levels in 2019 were almost double the historic average (1.0 mg/l) and were among the highest in the watershed. Nitrate levels were also elevated at this location in 2019.

#### 4.7 12-PEN

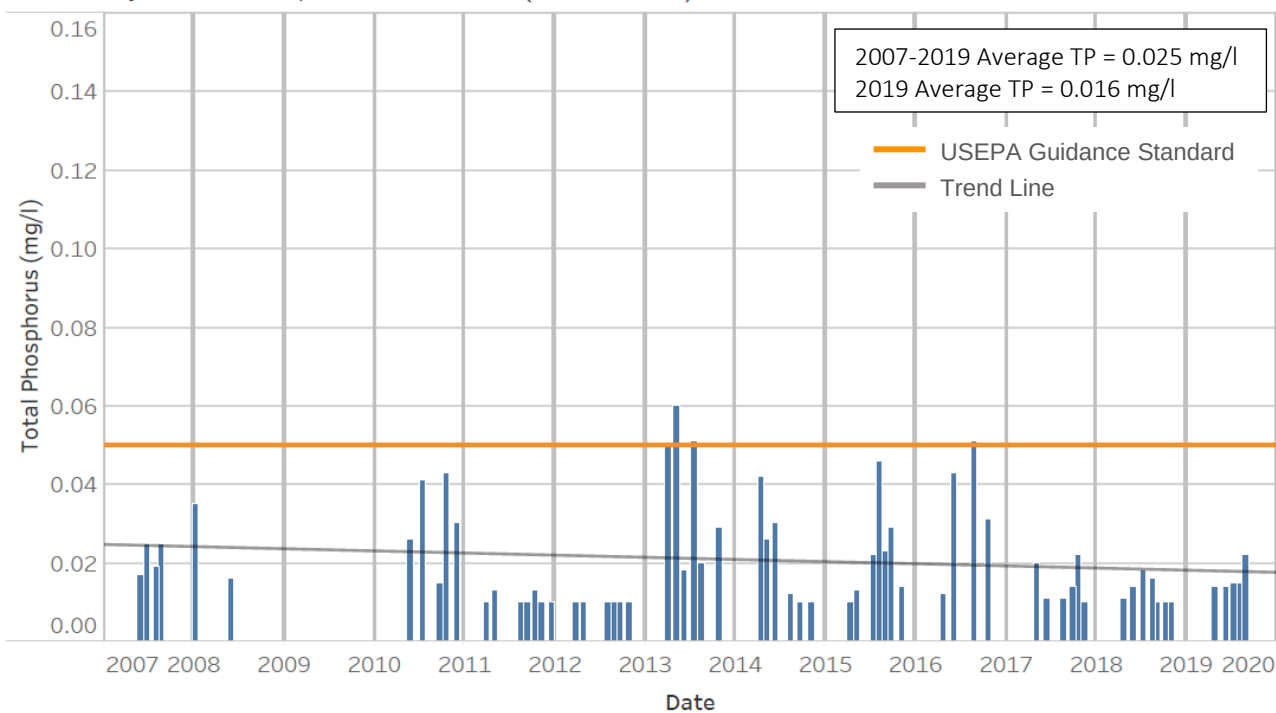


12-PEN is located at the Pennichuck Brook crossing of Nevins Road in Hollis. The contributing watershed is mostly wooded and residential, but there are some small livestock enclosures in the area. This subwatershed also includes an apple orchard (Scooter's Farm of Woodmont). Water velocity is generally high while water depth is low. However, beaver dams constructed downstream have caused the water in this area to stagnate on occasion.

#### Total Phosphorus Analysis

- In 2019, TP concentrations at this location continued the relative stability and low levels observed since 2017. This location had the second lowest average TP among all stations in 2019 (0.016 mg/l).
- TP levels at this location have begun to exhibit a modest decreasing trend for the 2007-2019 period of record.
- Although this location had one exceedance of the USEPA stream standard for TP in 2016, all measurements over the past three years have been well below the standard.
- Groundwater TP concentrations have historically been relatively average at this location, with some instances of higher-than-average concentrations. Groundwater TP levels in 2019 were more erratic than in past years.

### Tributary Total Phosphorus, 12-PEN (2007-2019)

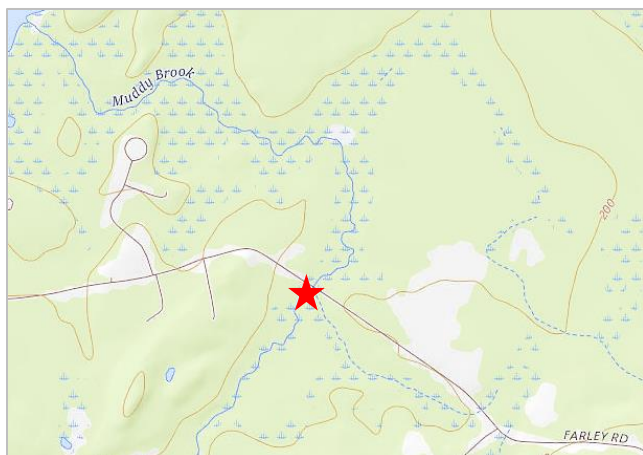


Note: Surface water data for 8/4/2011, 5/6/2013, 7/14/2014, 6/27/2016, 7/28/2016, and 9/22/2016 was removed due to outlier data/assumed lab error

### Other Analyses of Note

- In general, groundwater parameters have remained consistent over a 5-year period and are average relative to the other the sampling locations.

#### 4.8 01-MUD

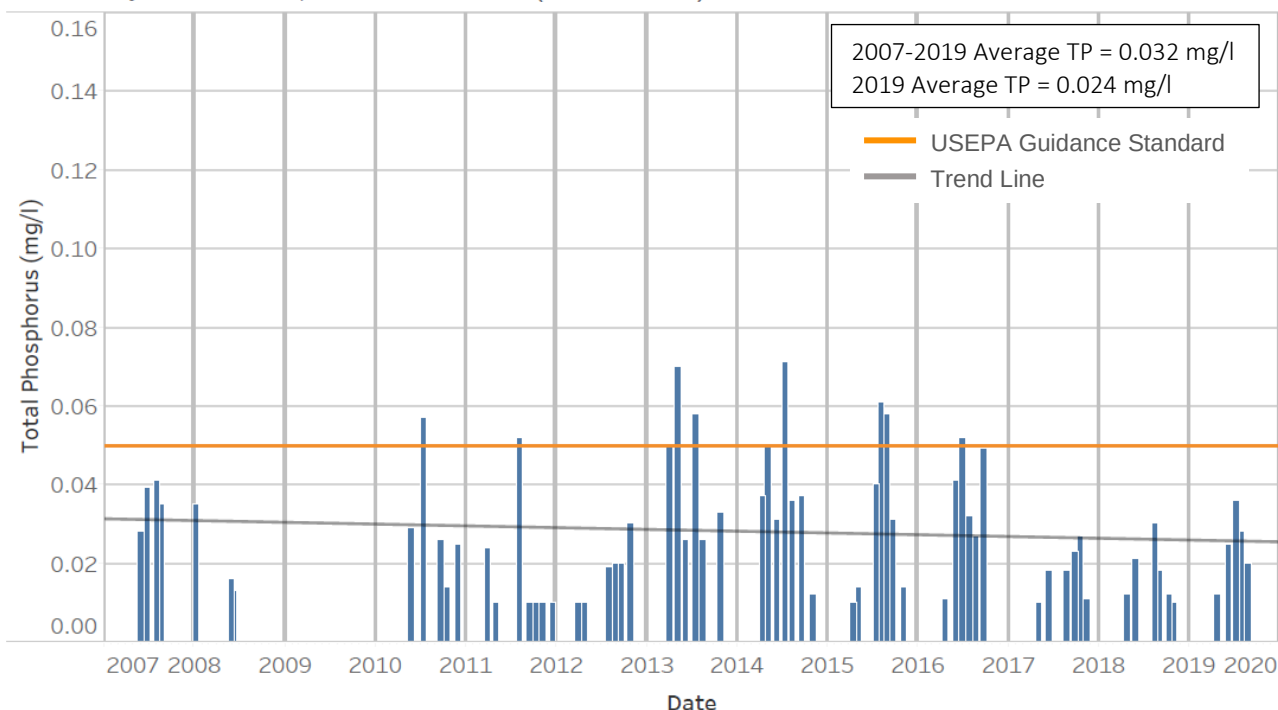


01-MUD is located at the crossing of Muddy Brook and Farley Road. Much like 01-WCH, this area is characterized by a large wetland/stream complex, with the Muddy Brook stream channel meandering through emergent and scrub/shrub wetland vegetation. Water velocity is typically low with deep water levels.

##### Total Phosphorus Analysis

- Tributary phosphorus levels at this location have been lower over the past three years (2017-2019) than most of the preceding years in the period of record. The 2019 average TP (0.024 mg/L) is moderately lower than 2007-2019 average (0.032 mg/L), and slightly below the NHDES “*more than desirable*” threshold.
- TP levels at this location have not exceeded the USEPA stream standard since 2016, after having multiple exceedances in each of the preceding four years (and six out of the nine preceding sampling years).
- Groundwater phosphorus levels at 01-MUD have historically been among the highest of all sampling locations. This trend continued in 2019, with some of the highest groundwater TP levels of the year recorded at this location.

### Tributary Total Phosphorus, 01-MUD (2007-2019)

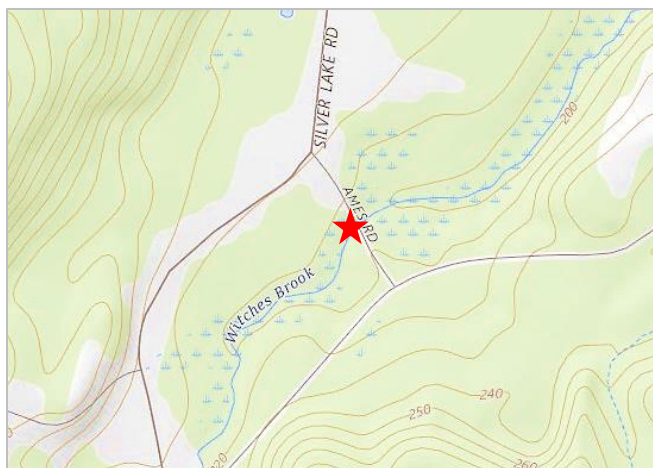


Note: Surface water data for 10/19/2016 was removed due to outlier data/assumed lab error

### Other Analyses of Note

- Groundwater at this location has the lowest (most acidic) pH (e.g. pH of 5.53) and alkalinity levels and the highest conductivity, total dissolved solids, and total phosphorus levels of all sampling locations in the watershed.
- In 2019, 01-MUD had the lowest tributary dissolved oxygen (DO) levels of all the locations. Low DO levels can occur naturally in slow moving stream/wetland areas such as 01-MUD, particularly in summer when base flows are typically low and oxygen consumption due to decomposition of organic material is at its highest.
- This location has consistently exhibited the highest levels of total dissolved solids (TDS) of all locations. TDS is a measure of the combined total of organic and inorganic substances contained in the water, including minerals, salts and organic matter.

#### 4.9 02-WCH

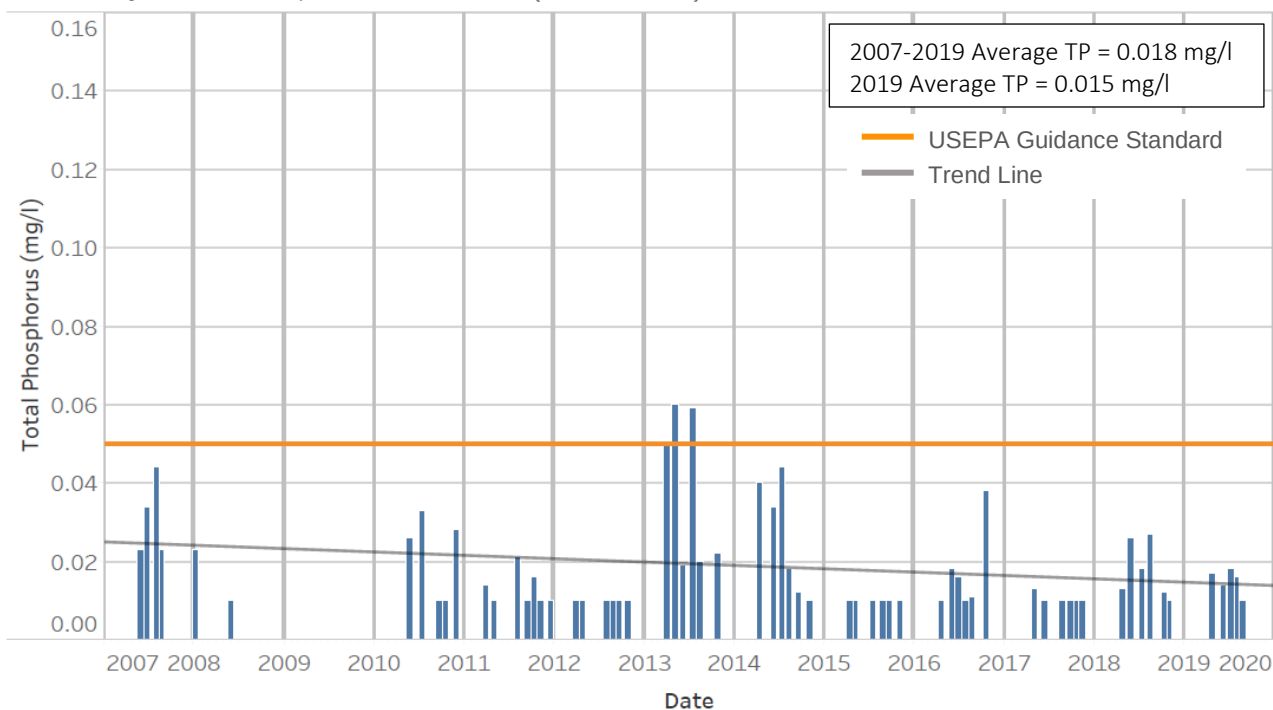


02-WCH is located at the crossing of Witches Brook and Ames Road. The brook flows through a largely wooded and residential area of Hollis, NH. This site has a groundwater well adjacent to the tributary, installed in 2016. This well has poor recharge and was often dry during parts of the year, resulting in fewer samples and associated data than other locations.

##### **Total Phosphorus Analysis**

- 2019 average TP at 02-WCH (0.015 mg/L) was the lowest of all sampling stations, and this location also has the lowest average TP for the 2007-2019 period of record (0.18 mg/L).
- TP levels have not exceeded the USEPA stream standard at this location on any sampling date since 2013.
- Groundwater phosphorus levels at this location returned to below average in 2019 after having risen to slightly above average in previous years, albeit with some variation.

### Tributary Total Phosphorus, 02-WCH (2007-2019)

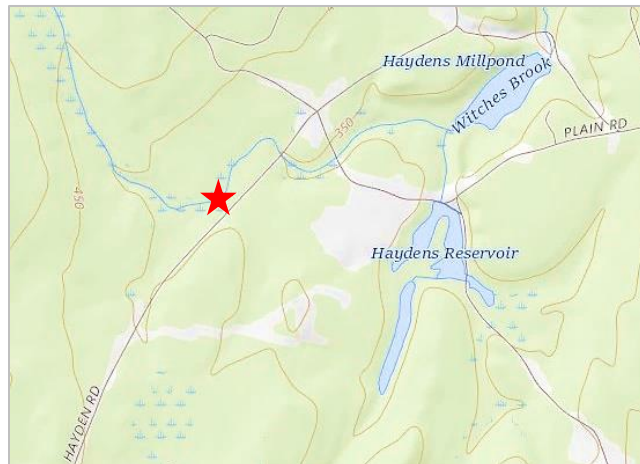


Note: Surface water data for 4/4/2013, 5/6/2013, 7/17/2013, 5/8/2014, 8/6/2015, 9/22/2016 and 9/5/2018 was removed due to outlier data/assumed lab error.

#### Other Analyses of Note

- Nitrates at this location have been historically high, with this trend continuing into 2019. However, there is no obvious reason for this location to have concentrations approximately three times higher than other locations.
- Other water quality parameters for both the groundwater and tributary at this location are either average or below average relative to the other sites, with the exception of nitrates and total nitrogen, which are present in some of the highest levels in both groundwater and tributaries of all the locations.

#### 4.10 01-HAY

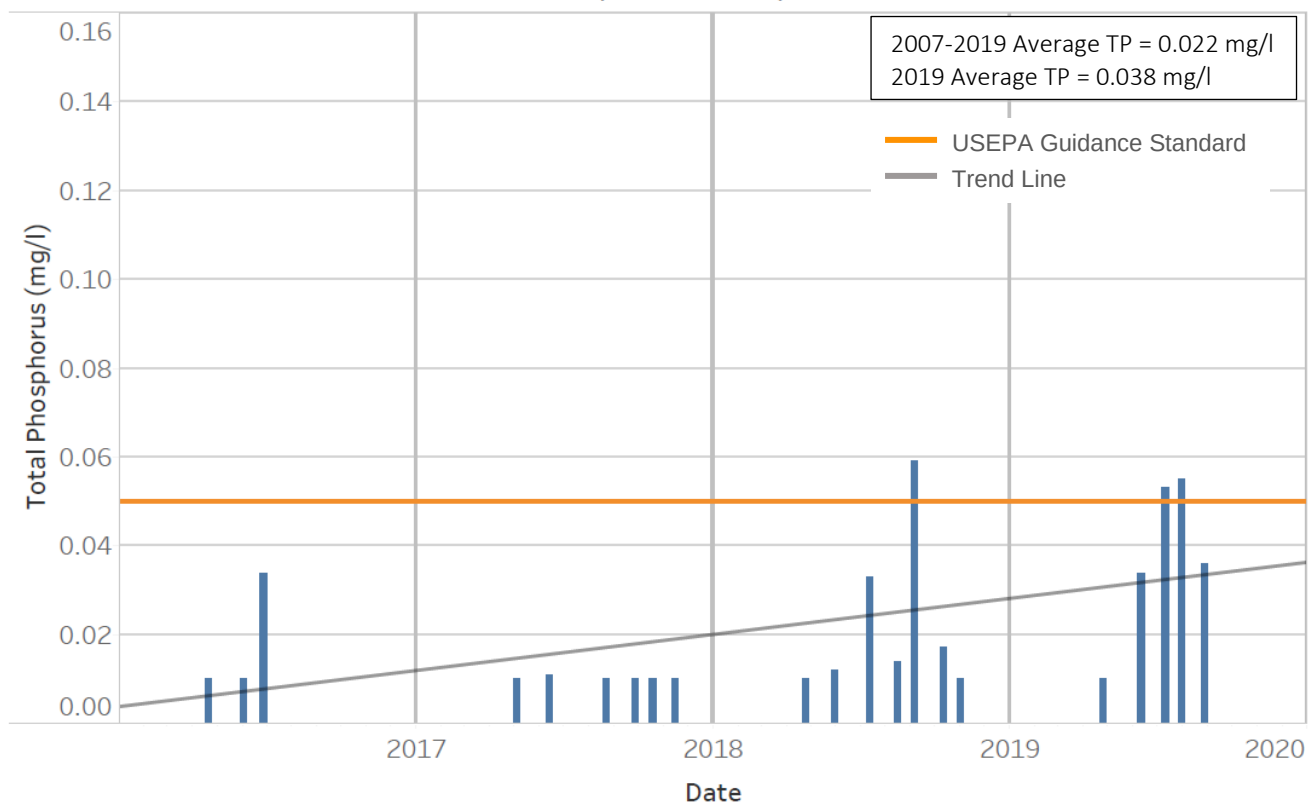


01-HAY is located at Witches Brook, just west of Hayden Road and beneath the Eversource power line right-of-way. Tributary and groundwater sampling at this site were added at the beginning of the 2016 sampling round, to allow for headwaters sampling of Witches Brook. The headwaters reach of Witches Brook runs through an area of Hollis, NH with predominantly forested land and low- to medium-density residential development.

##### **Total Phosphorus Analysis**

- Tributary phosphorus concentrations at 01-HAY were among the lowest in the watershed in 2016 and 2017, which was expected due to the relatively undeveloped surroundings towards the headwaters of the watershed. However, TP levels have been higher in the past two years, for an overall increasing trend over 4-year period of record for this location. The average TP for 01-HAY in 2019 was the highest in the entire watershed (0.038 mg/L) and was almost twice the average for the 4-year period of record (0.022 mg/L).
- In 2019, there were two sampling events that exceeded the USEPA stream standard (July 11 and July 31).
- Although groundwater sampling events at this location have been limited over the past three years due to poor well recharge, the available measurements show above-average groundwater TP levels at this location, and this trend increased in 2019. This is consistent with the overall trend of higher phosphorus levels in the southern portion of the overall watershed.

### Tributary Total Phosphorus, 01-HAY (2015-2019)



#### Other Analyses of Note

- Alkalinity measurements at 01-HAY include some of the highest concentrations of all the sites.
- Groundwater total nitrogen levels at this location were among the highest in 2019, representing a slight increase from past years, although tributary total nitrogen levels were average.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

### Tributary Phosphorus Levels

A summary of TP results for all tributary sampling locations is provided below. Sampling locations are listed below from lowest to highest average TP levels for the 2007-2019 period of record. As noted in Section 4.0, NHDES guidance categorizes TP concentrations from 0.026 mg/L – 0.049 mg/L as “*more than desirable*”.

| Tributary Sampling Location | 2019 Avg. TP* (mg/L) | 2007-2019 Avg. TP* (mg/L) | <b>Note:</b><br>NHDES TP (mg/L) categories:<br><ul style="list-style-type: none"> <li>0.011 - 0.025: Average</li> <li>0.026 – 0.049: <b>More than desirable</b></li> </ul><br>*Data from April - August only<br>** Data for 2016- 2019 only |
|-----------------------------|----------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 02-WCH                      | 0.015                | 0.018                     |                                                                                                                                                                                                                                             |
| 01-HAY**                    | 0.038                | 0.022                     |                                                                                                                                                                                                                                             |
| 12-PEN                      | 0.016                | 0.025                     |                                                                                                                                                                                                                                             |
| 01-XWB                      | 0.025                | 0.026                     |                                                                                                                                                                                                                                             |
| 09-PEN                      | 0.024                | 0.028                     |                                                                                                                                                                                                                                             |
| 09-XPB                      | 0.030                | 0.028                     |                                                                                                                                                                                                                                             |
| 01-WCH                      | 0.024                | 0.032                     |                                                                                                                                                                                                                                             |
| 01-MUD                      | 0.024                | 0.032                     |                                                                                                                                                                                                                                             |
| 09T-PEN                     | 0.036                | 0.033                     |                                                                                                                                                                                                                                             |
| 01-BFB                      | 0.037                | 0.033                     |                                                                                                                                                                                                                                             |
| <b>Averages</b>             | <b>0.027</b>         | <b>0.027</b>              |                                                                                                                                                                                                                                             |

- Although the sampling locations have varied considerably over the years with regard to the range and consistency of TP results, the TP averages for the 2007-2019 period of record are notably similar and within a relatively narrow range. Seven of the ten locations have an average TP separated by the small margin of 0.007 mg/L (0.026 mg/L - 0.033 mg/L), all of which fall in the low end of the NHDES “*more than desirable*” category for freshwater TP. These results support continued efforts to reduce TP loads through best management practices and improved land use management, with a goal of reducing TP to 0.025 mg/L or lower at all locations. A prioritized list of recommended actions from several recent and ongoing projects in the Pennichuck Brook watershed is provided as Attachment A.
- With a few exceptions, the 2019 tributary TP data was consistent with the averages for the period of record for each sampling location. 12-PEN and 01-MUD had 2019 TP averages that were modestly below their period of record averages. Although the 2019 TP results for 01-HAY were almost double the period of record average, sampling has only been conducted at this location for four years and additional data is needed to identify trends.
- 09-PEN is the only sampling location located within a pond (Holts Pond). As an in-pond location, the relevant USEPA TP guidance for 09-PEN would be 0.025 mg/L for in-pond TP. 09-PEN slightly exceeds this guidance concentration for the 2007-2019 period of record, indicating that TP levels are sufficient to support eutrophic conditions, such as abundant aquatic vegetation and high algal productivity, although TP levels in 2019 were slightly below the guidance concentration at 0.024 mg/L.
- Continued field investigations and BMP implementation are recommended to identify and mitigate pollutant sources that may contribute to the erratic tributary TP results at locations 02-WCH, 01-BFB, 01-HAY and 09T-PEN. Field investigations could include identification of land use activities

resulting in elevated pollutant loads and potential opportunities for nutrient attenuation through construction of new or upgraded stormwater management practices (e.g., pretreatment BMPs, improved vegetative buffers, etc.)

### Groundwater Monitoring / Groundwater Phosphorus Levels

- In 2019, groundwater TP results from the Pennichuck watershed sampling locations have continued to significantly exceed the typical ranges for groundwater TP. The national background concentration for groundwater TP is 0.03 mg/L, with a typical range of 0.05mg/L to 0.5 mg/L. TP results for 2019 and preceding years have regularly exceeded the high end of this range, in some cases by more than an order of magnitude.
- CEI has taken an adaptive management approach to modifying groundwater sampling protocols to improve the reliability of the groundwater sampling results, including:
  - Physical improvements (i.e., drilling deeper wells at 02-WCH and 01-HAY) to improve recharge;
  - Eliminating well sites with poor recharge from the sampling program; and
  - Establishing a sample filtering protocol to prevent inaccurate measurements due to an elevated presence of suspended solids (and associated constituents attached to particulate matter, such as phosphorus). Because of concerns that sample filtering was potentially lowering the TP results to unrepresentative levels, this approach was curtailed and only unfiltered groundwater samples have been analyzed since 2016.

To continue to improve the groundwater sampling program, the following protocol has been added as of October 2019:

- After well purging, groundwater samples will be collected and measured for turbidity with an *in-situ* turbidity meter. Groundwater samples will be accepted for further analysis only if turbidity is 5 NTUs or less.

USEPA guidance suggests that a properly constructed well with adequate recharge should be capable of yielding samples with a turbidity of 5 NTUs or less. Although total suspended solids (TSS) is a more precise measure of particulate matter in sample water, there is a strong linear relationship between TSS and turbidity, and turbidity can be quickly and easily measured in the field. As such, the recommended threshold of 5 NTUs has wide use and acceptance for this kind of environmental monitoring.

Based on the result of the groundwater sample turbidity measurements described above, CEI will evaluate if additional sampling measures are required. For sampling locations that consistently fail to meet the 5 NTU threshold, the use of low-flow sampling equipment should be considered. Low flow sampling equipment creates less disturbance within the well, and allows for better settling of solids following the well purging process that precedes sample water collection. Because this sampling protocol is more time and labor intensive, it should be employed on an as-needed at sampling locations based on well recharge conditions and the *in-situ* turbidity measurements described above. Alternatively, representative locations could be selected for low-flow sampling in order to be time sensitive to completing field sampling while meeting bacteria hold times. Well conditions will continue to be evaluated throughout 2020 sampling season and adaptive changes will be made as needed based on discussion with PWW.

## Other Recommendations

- Investigate opportunities to reduce elevated conductivity levels at sampling locations 01-BFB, 09-XPB, and 09-PEN. As shown in the table below, these locations are categorized by NHDES as either having moderate impact (09-PEN, 09-XPB) or high impact (01-BFB) for both 2019 and the 2007-2019 period of record. These investigations should include coordination with local highway departments to determine road salting practices and opportunities to safely reduce use of de-icing salt (e.g., reduced salt zones, use alternative de-icing products, etc.) in road areas near streams.

| Tributary Sampling Location | 2019 Avg. Conductivity (μS/cm) | 2007-2019 Avg. Conductivity (μS/cm) | <b>Notes:</b><br><br><b>NHDES Conductivity Categories<sup>2</sup> (μS/cm)</b><br><br>0-100: normal<br>101-200: low impact<br>201-500: moderate impact<br>>501: high impact<br>>835: exceeds chronic chloride standard<br><br><i>* Data only for 2016-2018</i> |
|-----------------------------|--------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 02-WCH                      | 170.5                          | 134.1                               |                                                                                                                                                                                                                                                               |
| 01-HAY**                    | 95.2                           | 59.7                                |                                                                                                                                                                                                                                                               |
| 12-PEN                      | 165.1                          | 146.3                               |                                                                                                                                                                                                                                                               |
| 01-XWB                      | 167.6                          | 141.1                               |                                                                                                                                                                                                                                                               |
| 09-PEN                      | 228.4                          | 228.7                               |                                                                                                                                                                                                                                                               |
| 09-XPB                      | 245.2                          | 243.9                               |                                                                                                                                                                                                                                                               |
| 01-WCH                      | 211.8                          | 192.1                               |                                                                                                                                                                                                                                                               |
| 01-MUD                      | 153.7                          | 163.8                               |                                                                                                                                                                                                                                                               |
| 09T-PEN                     | 204.0                          | 182.5                               |                                                                                                                                                                                                                                                               |
| 01-BFB                      | 818.3                          | 751.5                               |                                                                                                                                                                                                                                                               |
| <b>Averages</b>             | <b>246.0</b>                   | <b>224.4</b>                        |                                                                                                                                                                                                                                                               |

- Investigate potential land use and wastewater issues that could be contributing to elevated indicator pathogen (*E. coli*) levels at sampling locations 01-BFB, 01-WCH, and 01-XWB. As shown in the table below, 01-BFB has a geometric mean for the period of record that exceeds New Hampshire Class A Water Quality Standards, with 01-XWB and 01-WCH close to this threshold. 01-BFB and 01-XWB should be considered the highest priority because they have the highest rate of single sample *E. coli* exceedances, indicating persistent sources of bacterial contamination that need to be addressed.

| Tributary Sampling Location | % E. Coli Exceedances, 2007-2019 (single sample > 153 cts/100 ml) | E. Coli Geometric Mean, 2007-2019 | <b>Notes:</b><br><br><b>NH Water Quality Standards</b><br>(RSA 485-A:8): Class A water shall contain not more than:<br><br><ul style="list-style-type: none"> <li>a geometric mean of 47 <i>E. coli</i> cts/100 mL based on at least 3 samples obtained over a 60-day period, or</li> <li>greater than 153 <i>E. coli</i> cts/100 mL in any one sample.</li> </ul><br><i>* Data only for 2016-2018</i> |
|-----------------------------|-------------------------------------------------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 02-WCH                      | 4.2                                                               | 12.5                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
| 09-XPB                      | 7.0                                                               | 13.0                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
| 01-HAY*                     | 4.5                                                               | 19.5                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
| 09-PEN                      | 0.0                                                               | 24.7                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
| 12-PEN                      | 8.5                                                               | 27.9                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
| 01-MUD                      | 9.9                                                               | 31.5                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
| 09T-PEN                     | 8.5                                                               | 36.8                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
| 01-XWB                      | 18.8                                                              | 45.4                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
| 01-WCH                      | 7.1                                                               | 47.1                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
| 01-BFB                      | 23.5                                                              | 53.7                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Averages</b>             | <b>9.6</b>                                                        | <b>31.2</b>                       |                                                                                                                                                                                                                                                                                                                                                                                                        |

**Attachment A:**

2019 Pennichuck Brook Watershed Project Prioritization Chart

| Project                                                                                                                                       | Project Description                                                                                                                                                                                                                                                                                                                                                                                                                                         | Initial Cost                  | Cost Per Unit             | Annual Cost       | Proposed in                                                                                | Status                                                                                 | PRIORITY | Cap/Ops |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------|-------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------|---------|
| I. Ongoing Projects                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                   |                                                                                            |                                                                                        |          |         |
| a. Tributary and Groundwater Water Quality Sampling                                                                                           | Annual water quality sampling program (April - October).                                                                                                                                                                                                                                                                                                                                                                                                    | --                            | --                        | \$35,000          | Restoration Plan, 2012                                                                     | Ongoing                                                                                | HIGH     |         |
| b. School Education Program                                                                                                                   | Annual school education program in Nashua, Hollis, and Amherst.                                                                                                                                                                                                                                                                                                                                                                                             | --                            | --                        | \$23,000          | Restoration Plan, 2012                                                                     | Ongoing                                                                                | HIGH     |         |
| II. Proposed Projects                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                   |                                                                                            |                                                                                        |          |         |
| a. Sampling/Monitoring/Water Quality                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                   |                                                                                            |                                                                                        |          |         |
| - Aquatic Vegetation Monitoring / Invasive Species Control                                                                                    | Annual monitoring for invasives with focus on water chestnut.                                                                                                                                                                                                                                                                                                                                                                                               | --                            | --                        | \$6,000           | 2018 Aquatic Vegetation Assessment                                                         |                                                                                        | HIGH     |         |
| -Tributary low flow analysis                                                                                                                  | Using existing data from the long-term monitoring program, this analysis will develop flow duration records to identify times and triggers for a better understanding of flow issues. Once completed it can be updated each year in the annual report.                                                                                                                                                                                                      | \$12,000                      | --                        | --                |                                                                                            |                                                                                        | MEDIUM   |         |
| - Leakage, low flow analysis                                                                                                                  | Install 3-4 monitoring wells downstream of supply pond dam to determine permeability, seasonal variation, and calculate low flow. Locations to be determined based on review of topography, gradients, etc.                                                                                                                                                                                                                                                 | \$27,000                      | --                        | \$4,000           |                                                                                            |                                                                                        | MEDIUM   |         |
| b. Education and Outreach                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                   |                                                                                            |                                                                                        |          |         |
| - Website Update                                                                                                                              | Work with PWW to update current website. Conduct annual updates.                                                                                                                                                                                                                                                                                                                                                                                            | TBD                           | --                        | TBD               | Requested by PWW                                                                           | Pending discussion with PWW                                                            | HIGH     |         |
| - Teacher Education Program                                                                                                                   | Through the School Education Program, teachers in Hollis requested professional development classes for all teachers in the watershed, attendance at a local STEM event, and the preparation of a document linking the information presented to classes to state competencies for education.                                                                                                                                                                | --                            | --                        | \$5,000 - \$7,500 | Requested by teachers in Hollis (2019)                                                     | Pending discussion with PWW                                                            | MEDIUM   |         |
| c. Stormwater BMP Retrofits                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                   |                                                                                            |                                                                                        |          |         |
| 1. Stormwater BMPs on <u>public land</u> or <u>land owned by PWW</u>                                                                          | Over 70 stormwater BMPs and BMP retrofits have been proposed in multiple reports or identified by PWW. Of these sites, approximately four are located on public land or land owned by PWW as shown below. Those on private land should be communicated to the Nashua or other Planning Board for action when the site owner proposes retrofits or redevelopment.                                                                                            | --                            | --                        | --                | 2018 BMP Database; 2019 Boire Field Brook Report; 2020 Stump Pond BMP Evaluation (pending) |                                                                                        | MEDIUM   |         |
| a. Gravel wetland on Town of Amherst property                                                                                                 | Install gravel wetland on "undeveloped wooded property" draining to Witches Brook. BMP could handle Manhattan Drive drainage and portions of runoff from a privately owned multi-use commercial building and parking area (2-28-13). Closed drainage could be added to the project to divert runoff from an adjacent property (2-500), H&H Metals, LLC property (228-17) and Skilling's and Sons property (2-28-15).                                        | \$220,000 - \$275,000         | --                        | --                | 2018 BMP Database                                                                          | Possible 2020 grant application for a feasibility study (Source water grants due 2019) | MEDIUM   |         |
| b. Wetland expansion on Town of Amherst property (Walnut Hill Rd./ B&M Trail)                                                                 | Portions of the B&M trail could be used to expand wetland areas near the intersection of Walnut Hill Rd. Due to the linear nature of the ROW, this BMP would require trail alignment modifications or installation of raised walking platforms.                                                                                                                                                                                                             | \$90,000 - \$135,000          | --                        | --                | 2018 BMP Database                                                                          | same as above                                                                          |          |         |
| c. Gravel wetland on PWW property adjacent (west) to Stump Pond outlet tributary                                                              | Install gravel wetland to treat runoff from Craftsman Lane. Options to divert flows from Stump Pond via a new cross culvert or existing culvert retrofit could provide additional treatment for water discharging to Witches Brook. Coordination with the Town of Merrimack or NHDOT may be required. The BMP or wetland could be expanded to the abutting property (Parcel 2A-8, owned by Pennichuck).                                                     | \$40,000 - \$50,000           | --                        | --                | 2018 BMP Database                                                                          | Ongoing project scheduled for completion spring of 2020                                |          |         |
| 2. Boire Field Brook BMP Retrofit Somerset Parkway and swales feasibility analysis                                                            | Most of the BMPs proposed here are on private land and can be identified to Nashua Planning Board for actions if/when they are redeveloped. Somerset Parkway detention basin and swales should be assessed for retrofit/improvement in a small feasibility study to identify costs, schedule, feasibility and potential effectiveness for treatment.                                                                                                        | \$15,000                      | --                        | --                | 2019 Boire Field Brook BMP Report                                                          | Pending discussion with PWW                                                            |          |         |
| d. Pond Dredging                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                   |                                                                                            |                                                                                        |          |         |
| Tinker Pond Dredging                                                                                                                          | Recommendations based on feasibility study to identify dredge options, methods, disposal options, and estimated costs to improve water quality and restore treatment capabilities of the pond to protect the drinking water supply.                                                                                                                                                                                                                         | \$350,000 - \$1.5 M*          | --                        | --                | Tinkers Pond Dredging Feasibility Study, 2019                                              | On hold pending Everett Tpk. widening design                                           | LOW      |         |
| Harris Pond Dredging                                                                                                                          | Recommendations based on feasibility study to identify dredge options, methods, disposal options, and estimated costs to increase water supply capacity within the pond. Cost range (\$2.6M - \$7.7M) represents options to add 3 - 8 days of storage, with unit cost (per million gallons) similar for all options. <i>The water level adjustment and new well options listed below provide increased water supply at a significantly lower unit cost.</i> | \$2.6M - 7.7M*                | ~\$100,000/MG             | --                | Harris Pond Dredge Feasibility Study, 2019                                                 | For future consideration as a backup to Merrimack River intake                         | LOW      |         |
| e. Water-Level/Outlet Adjustment Scenarios                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                   |                                                                                            |                                                                                        |          |         |
| Harris Pond Dam                                                                                                                               | Options to raise Harris Pond dam 3-7 ft, resulting in 8-20 days of additional storage within Upper/Lower Harris Pond.                                                                                                                                                                                                                                                                                                                                       | \$2.3M - \$3.9 M*             | \$19,250/MG- \$29,500/MG  | --                | Harris Pond Dredge Feasibility Study, 2019                                                 | For future consideration as a backup to Merrimack River intake                         | LOW      |         |
|                                                                                                                                               | Install sheet pile cofferdam and embankment on the Upper Harris side of Manchester Street Bridge; Impound 3-7 feet of Upper Harris Pond and increase storage by 5-14 days.                                                                                                                                                                                                                                                                                  | \$1.7M - \$2.3 M*             | \$16,450/MG - \$31,150/MG | --                |                                                                                            |                                                                                        |          |         |
| Bowers Pond Dam                                                                                                                               | Reconstruct Bowers Pond Dam low flow outlet or install siphon to access 50% of the dead storage in Bowers Pond, resulting in 3 days of additional storage.                                                                                                                                                                                                                                                                                                  | \$1.1M                        | \$36,700/MG               | --                |                                                                                            |                                                                                        |          |         |
| f. Raw Water Supply Wells Scenarios                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                   |                                                                                            |                                                                                        |          |         |
| Install water supply wells (3 locations identified)                                                                                           | 60 MG gained storage; 6 days gained supply (each location)                                                                                                                                                                                                                                                                                                                                                                                                  | \$1.2M - 1.3M (each location) | \$19,600/MG - \$21,600/MG | --                | Harris Pond Dredge Feasibility Study, 2019                                                 | For future consideration as a backup to Merrimack River intake                         | LOW      |         |
| * Cost depends on option chosen                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                   |                                                                                            |                                                                                        |          |         |
| Note: Approximately \$17,000 remains for the Fertilizer Outreach Program. CEI recommends applying these funds to other projects listed above. |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                   |                                                                                            |                                                                                        |          |         |

**Attachment B:**

Tributary Sampling Data, 2007 through 2019

## 01-BFB Tributary Sampling Data 2007-2019

| 01-BFB Tributary Sampling Data 2007-2019 |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                | Laboratory Detection Limit            |           |        |  |
|------------------------------------------|---------------------|------------|----------|--------------|------------|-------------------|-----------------|-----------|------------|-----------------|---------------|---------------|------------|----------------|---------------------------------------|-----------|--------|--|
|                                          |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                | Expected Outlier or Equipment Failure |           |        |  |
| Date                                     | Staff Gauge Reading | Ammonia    | Chloride | Conductivity | DO         | E. coli           | Fecal Coliform  | Nitrate   | Nitrite    | Nitrate/Nitrite | pH            | Temperature   | TKN        | Total Nitrogen | Total Phosphorus                      | TSS       |        |  |
| 2007                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 5/30/2007                                |                     | 0.1 mg/L   |          |              | 6.15 mg/L  | 145 cts/100 mL    |                 |           |            |                 | 6.57 pH units | 17 °C         | 0.25 mg/L  |                | 0.036 mg/L                            | 4 mg/L    |        |  |
| 6/26/2007                                |                     | 0.263 mg/L |          | 619 µS/cm    | 6.64 mg/L  | 344.8 cts/100 mL  |                 |           |            |                 | 6.90 pH units | 21.8 °C       | 0.58 mg/L  |                | 0.055 mg/L                            |           |        |  |
| 8/2/2007                                 |                     | 0.264 mg/L |          | 496 µS/cm    | 6.11 mg/L  | 66.9 cts/100 mL   |                 |           |            |                 | 7.27 pH units | 23.1 °C       | 0.953 mg/L |                | 0.052 mg/L                            | 4 mg/L    |        |  |
| 8/22/2007                                |                     | 0.1 mg/L   |          | 704 µS/cm    | 8.25 mg/L  | 290.9 cts/100 mL  |                 |           |            |                 | 7.10 pH units | 16.7 °C       | 0.619 mg/L |                | 0.035 mg/L                            | 14 mg/L   |        |  |
| 2008                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 1/8/2008                                 |                     | 0.277 mg/L |          |              |            | 85.7 cts/100 mL   |                 |           |            |                 |               |               | 0.781 mg/L |                | 0.035 mg/L                            | 4 mg/L    |        |  |
| 5/28/2008                                |                     | 0.365 mg/L |          | 711 µS/cm    | 6.23 mg/L  | 261.3 cts/100 mL  |                 |           |            |                 | 7.18 pH units | 15.2 °C       | 0.803 mg/L |                | 0.045 mg/L                            | 4 mg/L    |        |  |
| 6/5/2008                                 |                     | 0.6 mg/L   |          |              |            |                   |                 |           |            |                 |               |               | 0.91 mg/L  |                | 0.069 mg/L                            | 4 mg/L    |        |  |
| 6/11/2008                                |                     |            |          | 0.98 µS/cm   | 6.93 mg/L  | 96 cts/100 mL     |                 |           |            |                 | 7.13 pH units | 25.7 °C       |            |                |                                       |           |        |  |
| 7/9/2008                                 |                     |            |          | 141 µS/cm    |            |                   |                 |           |            |                 | 6.36 pH units | 16.1 °C       |            |                |                                       |           |        |  |
| 8/20/2008                                |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 2010                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 5/25/2010                                |                     | 0.418 mg/L |          | 768 µS/cm    | 6.34 mg/L  | 81.6 cts/100 mL   |                 |           |            |                 | 7.19 pH units | 20.1 °C       | 0.519 mg/L |                | 0.031 mg/L                            | 16 mg/L   |        |  |
| 7/13/2010                                |                     | 0.4 mg/L   |          | 854 µS/cm    | 7.06 mg/L  | 165.8 cts/100 mL  |                 |           |            |                 | 7.77 pH units | 23.4 °C       | 0.5 mg/L   |                | 0.092 mg/L                            | 4 mg/L    |        |  |
| 9/22/2010                                |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 10/20/2010                               |                     | 0.2 mg/L   |          | 0.8 µS/cm    |            | 90.6 cts/100 mL   |                 |           |            |                 | 8.31 pH units | 9.1 °C        | 0.5 mg/L   |                | 0.014 mg/L                            | 4 mg/L    |        |  |
| 11/30/2010                               |                     | 0.2 mg/L   |          | 0.7 µS/cm    |            | 12.2 cts/100 mL   |                 |           |            |                 | 8.59 pH units | 3.8 °C        | 0.5 mg/L   |                | 0.025 mg/L                            | 4 mg/L    |        |  |
| 2011                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 3/30/2011                                |                     | 0.2 mg/L   |          | 925 µS/cm    | 11.8 mg/L  | 3.1 cts/100 mL    |                 |           |            |                 | 7.24 pH units | 5.8 °C        | 0.5 mg/L   |                | 0.01 mg/L                             | 4 mg/L    |        |  |
| 5/2/2011                                 |                     | 0.49 mg/L  |          | 858 µS/cm    | 9.65 mg/L  | 21.3 cts/100 mL   |                 |           |            |                 | 7.45 pH units | 13.4 °C       | 0.5 mg/L   |                | 0.016 mg/L                            | 4 mg/L    |        |  |
| 8/4/2011                                 |                     | 0.2 mg/L   |          | 720 µS/cm    | 7.4 mg/L   | 148.3 cts/100 mL  |                 |           |            |                 | 6.9 pH units  | 22.1 °C       | 0.5 mg/L   |                | 0.036 mg/L                            | 4 mg/L    |        |  |
| 8/16/2011                                |                     | 0.2 mg/L   |          | 544 µS/cm    | 8.51 mg/L  |                   |                 |           |            |                 | 7 pH units    |               | 0.5 mg/L   |                | 0.01 mg/L                             | 4 mg/L    |        |  |
| 9/14/2011                                |                     | 0.2 mg/L   |          | 638 µS/cm    | 7.34 mg/L  | 248.1 cts/100 mL  |                 |           |            |                 | 7.3 pH units  | 20.4 °C       | 0.5 mg/L   |                | 0.01 mg/L                             | 4 mg/L    |        |  |
| 10/14/2011                               |                     | 0.2 mg/L   |          | 566 µS/cm    | 9.28 mg/L  |                   |                 |           |            |                 | 8 pH units    |               | 0.5 mg/L   |                | 0.01 mg/L                             | 4 mg/L    |        |  |
| 11/7/2011                                |                     | 0.2 mg/L   |          | 658 µS/cm    | 10.88 mg/L | 14.5 cts/100 mL   |                 |           |            |                 | 7.17 pH units | 6.5 °C        | 0.5 mg/L   |                | 0.01 mg/L                             | 4 mg/L    |        |  |
| 12/20/2011                               |                     | 0.2 mg/L   |          | 650 µS/cm    | 11.73 mg/L | 26.5 cts/100 mL   |                 |           |            |                 | 7.21 pH units | 4.4 °C        | 0.5 mg/L   |                | 0.01 mg/L                             | 4 mg/L    |        |  |
| 2012                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 3/28/2012                                | 0.53                | 0.05 mg/L  |          | 820 µS/cm    | 10.22 mg/L | 10.1 cts/100 mL   |                 |           |            |                 | 7.16 pH units | 7.8 °C        | 0.5 mg/L   |                | 0.01 mg/L                             | 5 mg/L    |        |  |
| 4/26/2012                                | 0.54                | 0.05 mg/L  |          | 477 µS/cm    | 9.42 mg/L  | 44.1 cts/100 mL   |                 |           |            |                 | 6.99 pH units | 10.6 °C       | 0.7 mg/L   |                | 0.03 mg/L                             | 5 mg/L    |        |  |
| 8/2/2012                                 | 0.41                | 0.06 mg/L  |          | 558 µS/cm    | 6 mg/L     | 1046.2 cts/100 mL |                 |           |            |                 | 6.92 pH units | 22.7 °C       | 0.5 mg/L   |                | 0.061 mg/L                            | 3 mg/L    |        |  |
| 8/27/2012                                |                     | 0.05 mg/L  |          | 596 µS/cm    | 7.34 mg/L  | 166.4 cts/100 mL  |                 |           |            |                 | 7.2 pH units  | 20.5 °C       | 0.5 mg/L   |                | 0.04 mg/L                             | 7 mg/L    |        |  |
| 9/18/2012                                | 0.41                | 0.05 mg/L  |          | 666 µS/cm    | 8.73 mg/L  | 35 cts/100 mL     |                 |           |            |                 | 7.43 pH units | 16.9 °C       | 0.5 mg/L   |                | 0.02 mg/L                             | 5 mg/L    |        |  |
| 10/25/2012                               | 0.46                | 0.05 mg/L  |          | 576 µS/cm    | 8.06 mg/L  | 19.9 cts/100 mL   |                 |           |            |                 | 6.95 pH units | 11.7 °C       | 0.5 mg/L   |                | 0.01 mg/L                             | 5 mg/L    |        |  |
| 2013                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 4/4/2013                                 |                     | 0.2 mg/L   | 240 mg/L | 930 µS/cm    | 10.76 mg/L | 1                 | cts/100 mL      | 1         | cts/100 mL |                 | 0.5 mg/L      | 6.86 pH units | 4.8 °C     | 0.5 mg/L       | 0.8 mg/L                              | 0.05 mg/L | 6 mg/L |  |
| 5/6/2013                                 | 0.62                | 0.2 mg/L   |          | 813 µS/cm    | 10.23 mg/L | 7.3 cts/100 mL    |                 |           |            |                 | 6.87 pH units | 19.2 °C       | 0.5 mg/L   |                | 0.07 mg/L                             | 6 mg/L    |        |  |
| 6/6/2013                                 | 0.52                | 0.2 mg/L   |          | 512 µS/cm    | 6.28 mg/L  | 79.4 cts/100 mL   |                 |           |            |                 | 6.67 pH units | 18.2 °C       | 0.5 mg/L   |                | 0.02 mg/L                             | 6 mg/L    |        |  |
| 7/17/2013                                | 0.59                | 0.2 mg/L   | 167 mg/L | 718 µS/cm    | 8.35 mg/L  | 140 cts/100 mL    |                 | 0.38 mg/L | 0.38 mg/L  | 0.38 mg/L       | 6.82 pH units | 23.6 °C       | 0.5 mg/L   | 0.38 mg/L      | 0.052 mg/L                            | 6 mg/L    |        |  |
| 8/16/2013                                | 0.50                | 0.2 mg/L   | 139 mg/L | 509 µS/cm    | 7.35 mg/L  | 98.5 cts/100 mL   |                 | 0.3 mg/L  | 0.3 mg/L   | 0.3 mg/L        | 6.79 pH units | 18.4 °C       | 0.5 mg/L   | 0.3 mg/L       | 0.023 mg/L                            | 6 mg/L    |        |  |
| 9/10/2013                                | 0.48                | 0.2 mg/L   | 155 mg/L | 533 µS/cm    | 11.51 mg/L | 71.7 cts/100 mL   |                 | 0.28 mg/L | 0.28 mg/L  | 0.28 mg/L       | 6.89 pH units | 17.3 °C       | 0.5 mg/L   | 0.28 mg/L      | 0.025 mg/L                            | 6 mg/L    |        |  |
| 10/28/2013                               | 0.43                | 0.1 mg/L   | 146 mg/L | 417 µS/cm    | 10.32 mg/L | 21.3 cts/100 mL   |                 | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 6.86 pH units | 6.1 °C        | 0.5 mg/L   | 0.2 mg/L       | 0.032 mg/L                            | 6 mg/L    |        |  |
| 2014                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 4/4/2014                                 | 0.62                | 0.2 mg/L   | 259 mg/L | 990 µS/cm    |            | 17.3 cts/100 mL   | 28 cts/100 mL   | 0.55 mg/L | 0.2 mg/L   | 0.55 mg/L       | 7.45 pH units | 10.3 °C       | 0.2 mg/L   | 0.55 mg/L      | 0.039 mg/L                            | 4 mg/L    |        |  |
| 5/8/2014                                 | 0.54                | 0.2 mg/L   | 246 mg/L | 934 µS/cm    | 9.89 mg/L  | 16.1 cts/100 mL   | 10 cts/100 mL   | 0.33 mg/L | 0.2 mg/L   | 0.33 mg/L       | 7.12 pH units | 12.4 °C       | 0.2 mg/L   | 0.33 mg/L      | 0.04 mg/L                             | 4 mg/L    |        |  |
| 6/11/2014                                | 0.46                | 0.2 mg/L   | 215 mg/L | 531 µS/cm    | 8.28 mg/L  | 1300 cts/100 mL   | 1350 cts/100 mL | 0.26 mg/L | 0.2 mg/L   | 0.26 mg/L       | 7.97 pH units | 17.6 °C       | 0.2 mg/L   | 0.26 mg/L      | 0.025 mg/L                            | 4 mg/L    |        |  |
| 7/14/2014                                | 0.42                | 0.2 mg/L   | 172 mg/L | 474 µS/cm    | 7.79 mg/L  | 201 cts/100 mL    | 151 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 7.63 pH units | 23.2 °C       | 0.2 mg/L   | 0.2 mg/L       | 0.058 mg/L                            | 4 mg/L    |        |  |
| 8/12/2014                                | 0.42                | 0.2 mg/L   | 138 mg/L | 402 µS/cm    | 8.34 mg/L  | 154 cts/100 mL    | 180 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 7.20 pH units | 21.3 °C       | 0.2 mg/L   | 0.2 mg/L       | 0.032 mg/L                            | 4 mg/L    |        |  |
| 9/18/2014                                | 0.36                | 0.2 mg/L   | 164 mg/L | 418 µS/cm    | 10.61 mg/L | 24 cts/100 mL     | 24 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 6.56 pH units | 13.4 °C       | 0.2 mg/L   | 0.2 mg/L       | 0.028 mg/L                            | 4 mg/L    |        |  |
| 11/5/2014                                | 0.52                | 0.2 mg/L   | 157 mg/L | 400 µS/cm    | 11.38 mg/L | 9.6 cts/100 mL    | 14 cts/100 mL   | 0.3 mg/L  | 0.3 mg/L   | 0.3 mg/L        | 7.18 pH units | 9.7 °C        | 0.2 mg/L   | 0.3 mg/L       | 0.012 mg/L                            | 4 mg/L    |        |  |
| 2015                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 4/13/2015                                | 0.66                | 0.2 mg/L   | 257 mg/L | 1022 µS/cm   | 11.70 mg/L | 1 cts/100 mL      | 2 cts/100 mL    | 0.5 mg/L  | 0.2 mg/L   | 0.5 mg/L        | 7.66 pH units | 9.3 °C        | 1.14 mg/L  | 1.64 mg/L      | 0.012 mg/L                            | 4 mg/L    |        |  |
| 5/7/2015                                 | 0.53                | 0.2 mg/L   | 251 mg/L | 970 µS/cm    | 9.70 mg/L  | 30.9 cts/100 mL   | 34 cts/100 mL   | 0.25 mg/L | 0.2 mg/L   | 0.25 mg/L       | 7.52 pH units | 14.2 °C       | 0.557 mg/L | 0.81 mg/L      | 0.01 mg/L                             | 4 mg/L    |        |  |
| 7/16/2015                                | 0.46                | 0.2 mg/L   | 194 mg/L | 708 µS/cm    | 4.04 mg/L  | 127 cts/100 mL    | 310 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 7.52 pH units | 18.7 °C       | 0.537 mg/L | 0.537 mg/L     | 0.018 mg/L                            | 4 mg/L    |        |  |
| 8/6/2015                                 | 0.38                | 0.2 mg/L   | 207 mg/L | 774 µS/cm    | 5.35 mg/L  | 162 cts/100 mL    | 110 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 7.66 pH units | 18.9 °C       | 1.18 mg/L  | 1.18 mg/L      | 0.024 mg/L                            | 4 mg/L    |        |  |
| 8/27/2015                                | 0.32                | 0.2 mg/L   | 203 mg/L | 742 µS/cm    | 5.96 mg/L  | 55.6 cts/100 mL   | 110 cts/100 mL  | 0.28 mg/L | 0.2 mg/L   | 0.28 mg/L       | 7.62 pH units | 19.3 °C       | 0.495 mg/L | 0.78 mg/L      | 0.018 mg/L                            | 4 mg/L    |        |  |
| 9/24/2015                                | 0.32                | 0.2 mg/L   | 171 mg/L | 561 µS/cm    | 7.45 mg/L  | 53 cts/100 mL     | 50 cts/100 mL   | 0.22 mg/L | 0.2 mg/L   | 0.22 mg/L       | 8.27 pH units | 14.2 °C       | 0.569 mg/L | 0.79 mg/L      | 0.019 mg/L                            | 4 mg/L    |        |  |
| 11/5/2015                                | 0.38                | 0.2 mg/L   | 150 mg/L | 481.3 µS/cm  |            | 5.2 cts/100 mL    | 5 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 7.82 pH units | 8.9 °C        | 0.2 mg/L   | 0.2 mg/L       | 0.032 mg/L                            | 4 mg/L    |        |  |
| 2016                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 4/21/2016                                | 0.49                |            | 254 mg/L | 1059 µS/cm   |            | 8.3 cts/100 mL    | 4 cts/100 mL    | 0.21 mg/L | 0.2 mg/L   | 0.21 mg/L       | 7.53 pH units | 10.45 °C      |            |                | 0.012 mg/L                            | 4 mg/L    |        |  |
| 6/2/2016                                 | 0.41                | 0.2 mg/L   | 218 mg/L | 770 µS/cm    | 4.15 mg/L  | 116 cts/100 mL    |                 | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 8.11 pH units | 16.6 °C       | 1.98 mg/L  | 1.98 mg/L      | 0.014 mg/L                            | 4 mg/L    |        |  |
| 6/27/2016                                | 3.00                | 0.2 mg/L   | 226 mg/L | 859 µS/cm    | 4.19 mg/L  | 73.3 cts/100 mL   | 100 cts/100 mL  | 0.25 mg/L | 0.2 mg/L   | 0.25 mg/L       | 8.18 pH units | 20.7 °C       | 0.203 mg/L | 0.45 mg/L      | 0.032 mg/L                            | 4 mg/L    |        |  |
| 7/28/2016                                |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 8/25/2016                                | 0.30                | 0.2 mg/L   | 158 mg/L | 680 µS/cm    | 5.74 mg/L  | 248 cts/100 mL    | 170 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 8.19 pH units | 20.3 °C       | 0.797 mg/L | 0.8 mg/L       | 0.036 mg/L                            | 4 mg/L    |        |  |
| 9/22/2016                                | 0.30                | 0.2 mg/L   | 126 mg/L | 515 µS/cm    | 6.15 mg/L  | 121 cts/100 mL    | 93 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 8.08 pH units | 17.2 °C       | 0.45 mg/L  | 0.45 mg/L      | 0.045 mg/L                            | 4 mg/L    |        |  |
| 10/19/2016                               | 0.30                | 0.2 mg/L   | 119 mg/L | 459.9 µS/cm  | 6.98 mg/L  | 56.5 cts/100 mL   | 59 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L   | 0.2 mg/L        | 8.94 pH units | 14.7 °C       | 0.685 mg/L | 0.68 mg/L      | 0.027 mg/L                            | 4 mg/L    |        |  |
| 2017                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 5/4/2017                                 | 0.54                | 0.2 mg/L   | 244 mg/L | 723 µS/cm    | 4.40 mg/L  | 40.2 cts/100 mL   | 28 cts/100 mL   | 0.37 mg/L | 0.2 mg/L   | 0.37 mg/L       | 8.87 pH units | 11.2 °C       | 0.809 mg/L | 1.18 mg/L      | 0.015 mg/L                            | 4 mg/L    |        |  |
| 6/14/2017                                | 0.50                | 0.2 mg/L   | 267 mg/L | 983 µS/cm    | 4.86 mg/L  | 172 cts/100 mL    | 219 cts/100 mL  | 0.34 mg/L | 0.2 mg/L   | 0.34 mg/L       | 8.23 pH units | 19.3 °C       | 0.496 mg/L | 0.84 mg/L      | 0.019 mg/L                            | 4 mg/L    |        |  |
| 7/6/2017                                 | 0.51                | 0.2 mg/L   | 254 mg/L | 936 µS/cm    | 5.25 mg/L  | 261 cts/100 mL    | 326 cts/100 mL  | 0.34 mg/L | 0.2 mg/L   | 0.34 mg/L       | 9.18 pH units | 19.6 °C       | 0.2 mg/L   | 0.34 mg/L      | 0.031 mg/L                            | 4 mg/L    |        |  |
| 8/2/2017                                 | 0.45                | 0.2 mg/L   | 180 mg/L |              |            | 111 cts/100 mL    | 138 cts/100 mL  | 0.27 mg/L | 0.2 mg/L   | 0.27 mg/L       |               |               | 1.04 mg/L  | 1.31 mg/L      | 0.022 mg/L                            | 4 mg/L    |        |  |
| 9/27/2017                                | 0.38                | 0.2 mg/L   | 234 mg/L |              | 7.72 mg/L  | 126 cts/100 mL    | 184 cts/100 mL  | 0.48 mg/L | 0.2 mg/L   | 0.48 mg/L       |               |               | 0.428 mg/L | 0.891 mg/L     | 0.029 mg/L                            | 4 mg/L    |        |  |
| 10/18/2017                               | 0.40                | 0.2 mg/L   | 212 mg/L | 580 µS/cm    | 9.04 mg/L  | 28.2 cts/100 mL   | 46 cts/100 mL   | 0.3 mg/L  | 0.3 mg/L   | 0.3 mg/L        | 7.33 pH units | 10.6 °C       | 0.996 mg/L | 0.96 mg/L      | 0.023 mg/L                            | 4 mg/L    |        |  |
| 11/5/2017                                | 0.48                | 0.2 mg/L   | 195 mg/L | 516 µS/cm    | 12.30 mg/L | 13.5 cts/100 mL   | 9 cts/100 mL    | 0.33 mg/L | 0.2 mg/L   | 0.33 mg/L       | 8.68 pH units | 5.5 °C        | 0.655 mg/L | 0.98 mg/L      | 0.015 mg/L                            | 4 mg/L    |        |  |
| 2018                                     |                     |            |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |
| 4/24/2018                                | 0.54                | 0.2 mg/L   | 286 mg/L | 1070 µS/cm   | 9.60 mg/L  | 12.1 cts/100 mL   | 11 cts/100 mL   | 0.39 mg/L | 0.2 mg/L   | 0.39 mg/L       | 8.60 pH units | 10.8 °C       | 0.2 mg/L   | 0.39 mg/L      | 0.014 mg/L                            | 4 mg/L    |        |  |
| 5/30/2018                                | 0.48                | 0.2 mg/L   | 261 mg/L | 1004 µS/cm   | 6.08 mg/L  | 201 cts/100 mL    | 186 cts/100 mL  | 0.24 mg/L | 0.2 mg/L   | 0.24 mg/L       | 8.85 pH units | 17.1 °C       | 0.948 mg/L | 1.19 mg/L      | 0.030 mg/L                            | 4 mg/L    |        |  |
| 7/12/2018                                | 0.40                | 0.2 mg/L   | 245 mg/L | 829 µS/cm    | 9.53 mg/L  | 186 cts/100 mL    | 250 cts/100 mL  | 0.45 mg/L | 0.2 mg/L   | 0.45 mg/L       | 9.97 pH units | 19 °C         | 0.885 mg/L | 1.34 mg/L      | 0.056 mg/L                            | 4 mg/L    |        |  |
| 8/16/2018                                | 0.45                | 0.2 mg/L   | 158 mg/L | 657 µS/cm    | 5.49 mg/L  | 127 cts/100 mL    | 345 cts/100 mL  | 0.45 mg/L | 0.2 mg/L   | 0.45 mg/L       | 8.13 pH units | 22.3 °C       | 1.06 mg/L  | 1.51 mg/L      | 0.027 mg/L                            | 4 mg/L    |        |  |
| 9/5/2018                                 | 0.38                | 0.2 mg/L   | 234 mg/L |              | 7.72 mg/L  | 138 cts/100 mL    | 276 cts/100 mL  | 0.3 mg/L  | 0.3 mg/L   | 0.3 mg/L        | 8.18 pH units | 21.7 °C       | 1.15 mg/L  | 1.45 mg/L      | 0.021 mg/L                            | 4 mg/L    |        |  |
| 10/10/2018                               | 0.40                | 0.2 mg/L   |          |              |            |                   |                 |           |            |                 |               |               |            |                |                                       |           |        |  |

## 01-HAY Tributary Sampling Data 2016-2019

| 01-HAY Tributary Sampling Data 2016-2019 |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       | Laboratory Detection Limit            |       |      |       |      |    |      |
|------------------------------------------|---------------------|---------|----------|--------------|------|---------|----------------|---------|------------|-----------------|------------|-------------|------------|----------------|------------------|------|----------|----------|----------|------|----------|-------|------|-------|---------------------------------------|-------|------|-------|------|----|------|
|                                          |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       | Expected Outlier or Equipment Failure |       |      |       |      |    |      |
| Date                                     | Staff Gauge Reading | Ammonia | Chloride | Conductivity | DO   | E. coli | Fecal Coliform | Nitrate | Nitrite    | Nitrate/Nitrite | pH         | Temperature | TKN        | Total Nitrogen | Total Phosphorus | TSS  |          |          |          |      |          |       |      |       |                                       |       |      |       |      |    |      |
| 2016                                     |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       |                                       |       |      |       |      |    |      |
| 4/21/2016                                | 0.98                | 0.2     | mg/L     | 8            | mg/L | 51      | µS/cm          | 1       | cts/100 mL | 1               | cts/100 mL | 0.2         | mg/L       | 0.2            | mg/L             | 6.32 | pH units | 12.54    | °C       | 0.2  | mg/L     | 0.2   | mg/L | 0.01  | mg/L                                  | 4     | mg/L |       |      |    |      |
| 6/2/2016                                 | 1.71                | 0.2     | mg/L     | 8            | mg/L | 41.9    | µS/cm          | 6.75    | mg/L       | 135             | cts/100 mL |             | 0.2        | mg/L           | 0.2              | mg/L | 6.57     | pH units | 15.1     | °C   | 0.2      | mg/L  | 0.2  | mg/L  | 0.01                                  | mg/L  | 4    | mg/L  |      |    |      |
| 6/27/2016                                | 0.00                | 0.2     | mg/L     | 21           | mg/L | 107.2   | µS/cm          | 3.05    | mg/L       | 6.3             | cts/100 mL | 96          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 6.82     | pH units | 20.7 | °C       | 0.247 | mg/L | 0.25  | mg/L                                  | 0.034 | mg/L | 4     | mg/L |    |      |
| 7/28/2016                                |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       |                                       |       |      |       |      |    |      |
| 8/25/2016                                |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       |                                       |       |      |       |      |    |      |
| 9/22/2016                                |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       |                                       |       |      |       |      |    |      |
| 10/19/2016                               |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       |                                       |       |      |       |      |    |      |
| No Data                                  |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       |                                       |       |      |       |      |    |      |
| 2017                                     |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       |                                       |       |      |       |      |    |      |
| 5/4/2017                                 | 1.10                | 0.2     | mg/L     | 6            | mg/L | 32      | µS/cm          | 7.93    | mg/L       | 7.4             | cts/100 mL | 11          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 7.16 | pH units | 13    | °C   | 0.506 | mg/L                                  | 0.51  | mg/L | 0.010 | mg/L | 4  | mg/L |
| 6/14/2017                                | 0.76                | 0.31    | mg/L     | 7            | mg/L | 41      | µS/cm          | 6.03    | mg/L       | 63.8            | cts/100 mL | 63          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.53 | pH units | 20.2  | °C   | 0.46  | mg/L                                  | 0.46  | mg/L | 0.011 | mg/L | 4  | mg/L |
| 7/6/2017                                 | 0.63                | 0.2     | mg/L     | 5            | mg/L | 36.7    | µS/cm          | 5.80    | mg/L       | 22.6            | cts/100 mL | 16          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.54 | pH units | 19.7  | °C   | 0.576 | mg/L                                  | 0.58  | mg/L | 0.011 | mg/L | 4  | mg/L |
| 8/22/2017                                | 0.47                | 0.2     | mg/L     | 8            | mg/L |         |                |         |            | 36.4            | cts/100 mL | 54          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     |      |          |       |      | 3.13  | mg/L                                  | 3.13  | mg/L | 0.010 | mg/L | 4  | mg/L |
| 9/27/2017                                | 1.50                | 0.2     | mg/L     | 7            | mg/L |         |                |         |            | 199             | cts/100 mL | 185         | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     |      |          |       |      | 0.881 | mg/L                                  | 0.88  | mg/L | 0.010 | mg/L | 4  | mg/L |
| 10/19/2017                               | 0.50                | 0.2     | mg/L     | 9            | mg/L | 39      | µS/cm          | 8.11    | mg/L       | 31.3            | cts/100 mL | 45          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.40 | pH units | 12.2  | °C   | 0.2   | mg/L                                  | 0.2   | mg/L | 0.010 | mg/L | 4  | mg/L |
| 11/15/2017                               | 0.79                | 0.2     | mg/L     | 4            | mg/L | 20.2    | µS/cm          | 13.30   | mg/L       | 21.3            | cts/100 mL | 1           | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.86 | pH units | 4.8   | °C   | 0.655 | mg/L                                  | 0.66  | mg/L | 0.010 | mg/L | 4  | mg/L |
| 2018                                     |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       |                                       |       |      |       |      |    |      |
| 4/24/2018                                | 1.18                | 0.2     | mg/L     | 14           | mg/L | 62.1    | µS/cm          | 10.85   | mg/L       | 21.3            | cts/100 mL | 17          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.72 | pH units | 11.9  | °C   | 0.696 | mg/L                                  | 0.7   | mg/L | 0.010 | mg/L | 4  | mg/L |
| 5/30/2018                                | 0.55                | 0.2     | mg/L     | 6            | mg/L | 45.2    | µS/cm          | 9.94    | mg/L       | 12              | cts/100 mL | 23.1        | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 5.51 | pH units | 17.5  | °C   | 1.2   | mg/L                                  | 1.49  | mg/L | 0.012 | mg/L | 4  | mg/L |
| 7/12/2018                                | 0.00                | 0.2     | mg/L     | 15           | mg/L | 80.7    | µS/cm          | 7.71    | mg/L       | 27.2            | cts/100 mL | 74          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 7.66 | pH units | 19.9  | °C   | 0.906 | mg/L                                  | 0.91  | mg/L | 0.033 | mg/L | 4  | mg/L |
| 8/16/2018                                | 0.85                | 0.2     | mg/L     | 6            | mg/L | 41      | µS/cm          | 11.55   | mg/L       | 40.4            | cts/100 mL | 38          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 7.32 | pH units | 21.7  | °C   | 0.2   | mg/L                                  | 0.2   | mg/L | 0.014 | mg/L | 4  | mg/L |
| 9/5/2018                                 |                     | 0.2     | mg/L     | 7            | mg/L |         |                |         |            | 107             | cts/100 mL | 129         | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     |      |          |       |      | 1.81  | mg/L                                  | 1.81  | mg/L | 0.059 | mg/L | 14 | mg/L |
| 10/10/2018                               | 0.80                | 0.2     | mg/L     | 6            | mg/L | 36.6    | µS/cm          | 8.20    | mg/L       | 5.1             | cts/100 mL | 10          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.60 | pH units | 16.1  | °C   | 0.768 | mg/L                                  | 0.77  | mg/L | 0.017 | mg/L | 4  | mg/L |
| 10/31/2018                               | 1.09                | 0.2     | mg/L     | 7            | mg/L | 42.8    | µS/cm          | 14.80   | mg/L       | 12.1            | cts/100 mL | 3           | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.80 | pH units | 6.1   | °C   | 0.622 | mg/L                                  | 0.62  | mg/L | 0.01  | mg/L | 4  | mg/L |
| 2019                                     |                     |         |          |              |      |         |                |         |            |                 |            |             |            |                |                  |      |          |          |          |      |          |       |      |       |                                       |       |      |       |      |    |      |
| 4/25/2019                                | 1.25                | 0.2     | mg/L     | 7            | mg/L | 40.1    | µS/cm          | 8.83    | mg/L       | 1               | cts/100 mL | 3           | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.14 | pH units | 12.8  | °C   | 0.2   | mg/L                                  | 0.2   | mg/L | 0.010 | mg/L | 4  | mg/L |
| 6/10/2019                                | 1.70                | 0.2     | mg/L     | 7            | mg/L | 40.6    | µS/cm          | 7.89    | mg/L       | 8.6             | cts/100 mL | 1           | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.42 | pH units | 16.3  | °C   | 0.728 | mg/L                                  | 0.73  | mg/L | 0.034 | mg/L | 7  | mg/L |
| 7/11/2019                                | 1.83                | 0.2     | mg/L     | 10           | mg/L | 69      | µS/cm          | 4.79    | mg/L       | 36.9            | cts/100 mL | 20          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.36 | pH units | 19.9  | °C   | 1.04  | mg/L                                  | 1.04  | mg/L | 0.053 | mg/L | 4  | mg/L |
| 7/31/2019                                | 1.19                | 0.2     | mg/L     | 10           | mg/L | 72.8    | µS/cm          | 3.59    | mg/L       | 29.9            | cts/100 mL | 30          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 6.15 | pH units | 22.4  | °C   | 0.794 | mg/L                                  | 0.79  | mg/L | 0.055 | mg/L | 5  | mg/L |
| 8/27/2019                                | 0.31                | 0.54    | mg/L     | 25           | mg/L | 134.7   | µS/cm          | 3.09    | mg/L       | 29.5            | cts/100 mL | 22          | cts/100 mL | 0.2            | mg/L             | 0.2  | mg/L     | 0.2      | mg/L     | 2.99 | pH units | 16.3  | °C   | 0.883 | mg/L                                  | 1.42  | mg/L | 0.036 | mg/L | 6  | mg/L |
| 9/18/2019                                | -                   |         |          |              |      | 214     | µS/cm          | 0.51    | mg/L       |                 |            |             |            |                |                  |      |          |          |          | 6.15 | pH units | 13.6  | °C   |       |                                       |       |      |       |      |    |      |

## 01-MUD Tributary Sampling Data 2007-2019

| 01-MUD Tributary Sampling Data 2007-2019 |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         | Laboratory Detection Limit            |  |  |
|------------------------------------------|---------------------|------------|----------|--------------|------------|-----------------|----------------|-----------|----------|-----------------|---------------|-------------|------------|----------------|------------------|---------|---------------------------------------|--|--|
|                                          |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         | Expected Outlier or Equipment Failure |  |  |
| Date                                     | Staff Gauge Reading | Ammonia    | Chloride | Conductivity | DO         | E. coli         | Fecal Coliform | Nitrate   | Nitrite  | Nitrate/Nitrite | pH            | Temperature | TKN        | Total Nitrogen | Total Phosphorus | TSS     |                                       |  |  |
| 2007                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 5/30/2007                                |                     | 0.1 mg/L   |          |              | 4.40 mg/L  | 88 cts/100 mL   |                |           |          |                 | 7.10 pH units | 18.5 °C     | 0.684 mg/L |                | 0.028 mg/L       | 4 mg/L  |                                       |  |  |
| 6/26/2007                                |                     | 0.1 mg/L   |          | 135 µS/cm    | 3.95 mg/L  | 413 cts/100 mL  |                |           |          |                 | 7.21 pH units | 24.9 °C     | 0.915 mg/L |                | 0.039 mg/L       | 4 mg/L  |                                       |  |  |
| 8/2/2007                                 |                     | 0.285 mg/L |          | 238 µS/cm    | 2.71 mg/L  | 48 cts/100 mL   |                |           |          |                 | 6.79 pH units | 22.6 °C     | 0.717 mg/L |                | 0.041 mg/L       | 4 mg/L  |                                       |  |  |
| 8/22/2007                                |                     | 0.1 mg/L   |          | 141.2 µS/cm  | 3.31 mg/L  | 23.3 cts/100 mL |                |           |          |                 | 6.70 pH units | 15.4 °C     | 0.85 mg/L  |                | 0.035 mg/L       | 4 mg/L  |                                       |  |  |
| 2008                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 1/8/2008                                 |                     | 0.1 mg/L   |          |              |            | 17.3 cts/100 mL |                |           |          |                 |               |             | 0.617 mg/L |                | 0.035 mg/L       | 4 mg/L  |                                       |  |  |
| 5/28/2008                                |                     | 0.104 mg/L |          | 177 µS/cm    | 6.01 mg/L  | 33.4 cts/100 mL |                |           |          |                 | 6.94 pH units | 17.2 °C     | 0.38 mg/L  |                | 0.016 mg/L       | 4 mg/L  |                                       |  |  |
| 6/5/2008                                 |                     |            |          |              |            |                 |                |           |          | No Data         |               |             |            |                |                  |         |                                       |  |  |
| 6/11/2008                                |                     | 0.32 mg/L  |          |              |            |                 |                |           |          |                 |               |             | 0.767 mg/L |                | 0.013 mg/L       | 4 mg/L  |                                       |  |  |
| 7/9/2008                                 |                     |            |          | 0.14 µS/cm   | 6.72 mg/L  | 50.4 cts/100 mL |                |           |          |                 | 7.04 pH units | 28.2 °C     |            |                |                  |         |                                       |  |  |
| 8/20/2008                                |                     |            |          | 560 µS/cm    |            |                 |                |           |          |                 | 6.37 pH units | 21.2 °C     |            |                |                  |         |                                       |  |  |
| 2010                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 5/29/2010                                |                     | 0.1 mg/L   |          | 112 µS/cm    | 5.76 mg/L  | 35.8 cts/100 mL |                |           |          |                 | 6.81 pH units | 24.3 °C     | 0.5 mg/L   |                | 0.029 mg/L       | 4 mg/L  |                                       |  |  |
| 7/13/2010                                |                     | 0.4 mg/L   |          | 203.1 µS/cm  | 5.79 mg/L  | 40.8 cts/100 mL |                |           |          |                 | 6.99 pH units | 24.9 °C     | 0.5 mg/L   |                | 0.057 mg/L       | 4 mg/L  |                                       |  |  |
| 9/22/2010                                |                     | 0.2 mg/L   |          |              |            | 57.6 cts/100 mL |                |           |          |                 |               |             | 0.5 mg/L   |                | 0.026 mg/L       | 4 mg/L  |                                       |  |  |
| 10/20/2010                               |                     | 0.2 mg/L   |          |              |            | 48 cts/100 mL   |                |           |          |                 |               |             | 0.5 mg/L   |                | 0.014 mg/L       | 4 mg/L  |                                       |  |  |
| 11/30/2010                               |                     | 0.2 mg/L   |          | 0.17 µS/cm   |            | 416 cts/100 mL  |                |           |          |                 |               | 2.5 °C      | 0.5 mg/L   |                | 0.025 mg/L       | 27 mg/L |                                       |  |  |
| 2011                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 3/30/2011                                |                     | 0.2 mg/L   |          | 125.8 µS/cm  | 11.68 mg/L | 1 cts/100 mL    |                |           |          |                 | 7.06 pH units | 6.7 °C      | 0.5 mg/L   |                | 0.024 mg/L       | 4 mg/L  |                                       |  |  |
| 5/2/2011                                 |                     | 0.2 mg/L   |          | 124.2 µS/cm  | 9.02 mg/L  | 15.8 cts/100 mL |                |           |          |                 | 7.1 pH units  | 15.3 °C     | 0.5 mg/L   |                | 0.01 mg/L        | 4 mg/L  |                                       |  |  |
| 8/4/2011                                 |                     | 0.2 mg/L   |          | 121.7 µS/cm  | 8.25 mg/L  | 4.1 cts/100 mL  |                |           |          |                 | 7.24 pH units | 25.8 °C     | 0.5 mg/L   |                | 0.052 mg/L       | 13 mg/L |                                       |  |  |
| 8/16/2011                                |                     |            |          |              |            |                 |                |           |          | No Data         |               |             |            |                |                  |         |                                       |  |  |
| 9/14/2011                                |                     | 0.2 mg/L   |          | 147 µS/cm    | 6.34 mg/L  | 44.1 cts/100 mL |                |           |          |                 | 7.05 pH units | 20.5 °C     | 0.5 mg/L   |                | 0.01 mg/L        | 4 mg/L  |                                       |  |  |
| 10/14/2011                               |                     | 0.2 mg/L   |          | 144 µS/cm    | 6.92 mg/L  |                 |                |           |          |                 | 7 pH units    |             | 0.5 mg/L   |                | 0.01 mg/L        | 4 mg/L  |                                       |  |  |
| 11/7/2011                                |                     | 0.2 mg/L   |          | 128.5 µS/cm  | 10.45 mg/L | 37.3 cts/100 mL |                |           |          |                 | 7.28 pH units | 7.2 °C      | 0.5 mg/L   |                | 0.01 mg/L        | 4 mg/L  |                                       |  |  |
| 12/20/2011                               |                     | 0.2 mg/L   |          | 131.7 µS/cm  | 11.05 mg/L | 13.5 cts/100 mL |                |           |          |                 | 7.26 pH units | 2.2 °C      | 0.5 mg/L   |                | 0.01 mg/L        | 4 mg/L  |                                       |  |  |
| 2012                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 3/28/2012                                | 2.20                | 0.05 mg/L  |          | 123.2 µS/cm  | 9.43 mg/L  | 13.4 cts/100 mL |                |           |          |                 | 7.03 pH units | 5.7 °C      | 0.5 mg/L   |                | 0.01 mg/L        | 5 mg/L  |                                       |  |  |
| 4/26/2012                                | 2.29                | 0.05 mg/L  |          | 134.7 µS/cm  | 8.89 mg/L  | 24.9 cts/100 mL |                |           |          |                 | 6.92 pH units | 12.7 °C     | 0.6 mg/L   |                | 0.01 mg/L        | 5 mg/L  |                                       |  |  |
| 8/2/2012                                 | 1.69                | 0.05 mg/L  |          | 209.2 µS/cm  | 2.49 mg/L  | 7.3 cts/100 mL  |                |           |          |                 | 6.84 pH units | 22.7 °C     | 0.5 mg/L   |                | 0.019 mg/L       | 5 mg/L  |                                       |  |  |
| 8/27/2012                                |                     | 0.05 mg/L  |          | 187.4 µS/cm  | 3.13 mg/L  | 21.3 cts/100 mL |                |           |          |                 | 6.23 pH units | 20.3 °C     | 0.5 mg/L   |                | 0.02 mg/L        | 5 mg/L  |                                       |  |  |
| 9/18/2012                                | 1.67                | 0.05 mg/L  |          | 128.8 µS/cm  | 4.25 mg/L  | 24.6 cts/100 mL |                |           |          |                 | 6.84 pH units | 15.6 °C     | 0.5 mg/L   |                | 0.02 mg/L        | 5 mg/L  |                                       |  |  |
| 10/25/2012                               | 2.10                | 0.05 mg/L  |          | 106 µS/cm    | 5.89 mg/L  | 38.3 cts/100 mL |                |           |          |                 | 6.84 pH units | 9.7 °C      | 0.8 mg/L   |                | 0.03 mg/L        | 6 mg/L  |                                       |  |  |
| 2013                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 4/4/2013                                 | 2.38                | 0.2 mg/L   | 23 mg/L  | 129.7 µS/cm  | 10.37 mg/L | 2 cts/100 mL    | 4 cts/100 mL   |           |          | 0.6 mg/L        | 6.75 pH units | 6.1 °C      | 0.5 mg/L   | 0.5 mg/L       | 0.05 mg/L        | 6 mg/L  |                                       |  |  |
| 5/6/2013                                 | 2.42                | 0.2 mg/L   |          | 151.6 µS/cm  | 7.10 mg/L  | 48 cts/100 mL   | 30 cts/100 mL  |           |          |                 | 7.09 pH units | 14.3 °C     | 0.5 mg/L   |                | 0.07 mg/L        | 6 mg/L  |                                       |  |  |
| 6/6/2013                                 | 2.38                | 0.374 mg/L |          | 115.2 µS/cm  | 3.30 mg/L  | 66.9 cts/100 mL | 119 cts/100 mL |           |          |                 | 6.64 pH units | 17.8 °C     | 0.5 mg/L   |                | 0.0258 mg/L      | 6 mg/L  |                                       |  |  |
| 7/17/2013                                | 1.82                |            | 19 mg/L  | 161.9 µS/cm  | 8.95 mg/L  | 166 cts/100 mL  | 160 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.90 pH units | 25.8 °C     | 0.5 mg/L   | 0.2 mg/L       | 0.058 mg/L       | 6 mg/L  |                                       |  |  |
| 8/16/2013                                | 1.97                | 0.2 mg/L   | 25 mg/L  | 120.2 µS/cm  | 5.18 mg/L  | 43.7 cts/100 mL | 260 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.50 pH units | 18.5 °C     | 0.5 mg/L   | 0.2 mg/L       | 0.026 mg/L       | 6 mg/L  |                                       |  |  |
| 9/10/2013                                | 1.96                | 0.2 mg/L   | 15 mg/L  | 112.6 µS/cm  | 3.88 mg/L  | 33.1 cts/100 mL | 36 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.54 pH units | 12.4 °C     | 0.5 mg/L   | 0.2 mg/L       | 0.044 mg/L       | 6 mg/L  |                                       |  |  |
| 10/28/2013                               | 1.87                | 0.1 mg/L   | 33 mg/L  | 98.3 µS/cm   | 7.14 mg/L  | 5.2 cts/100 mL  | 1 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.62 pH units | 10 °C       | 0.5 mg/L   | 0.2 mg/L       | 0.033 mg/L       | 6 mg/L  |                                       |  |  |
| 2014                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 4/4/2014                                 | 2.42                | 0.2 mg/L   | 31 mg/L  | 140 µS/cm    |            | 13.4 cts/100 mL | 5 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        |               | 12.6 °C     | 0.2 mg/L   | 0.2 mg/L       | 0.037 mg/L       | 4 mg/L  |                                       |  |  |
| 5/8/2014                                 | 2.28                | 0.2 mg/L   | 23 mg/L  | 146.7 µS/cm  | 8.62 mg/L  | 41 cts/100 mL   | 53 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.85 pH units | 13.7 °C     | 0.2 mg/L   | 0.2 mg/L       | 0.05 mg/L        | 4 mg/L  |                                       |  |  |
| 6/11/2014                                | 2.29                | 0.2 mg/L   | 19 mg/L  | 96.7 µS/cm   | 4.87 mg/L  | 83.6 cts/100 mL | 50 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.68 pH units | 19.9 °C     | 0.2 mg/L   | 0.2 mg/L       | 0.031 mg/L       | 4 mg/L  |                                       |  |  |
| 7/14/2014                                | 2.22                | 0.2 mg/L   | 17 mg/L  | 168.2 µS/cm  | 3.47 mg/L  | 14.6 cts/100 mL | 9 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.72 pH units | 21.6 °C     | 0.2 mg/L   | 0.2 mg/L       | 0.071 mg/L       | 4 mg/L  |                                       |  |  |
| 8/12/2014                                | 2.22                | 0.2 mg/L   | 27 mg/L  | 126.7 µS/cm  | 4.61 mg/L  | 326 cts/100 mL  | 208 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.83 pH units | 20.1 °C     | 0.2 mg/L   | 0.2 mg/L       | 0.036 mg/L       | 4 mg/L  |                                       |  |  |
| 9/18/2014                                | 2.58                | 0.2 mg/L   | 26 mg/L  | 109.9 µS/cm  | 2.25 mg/L  | 7.3 cts/100 mL  | 3 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.49 pH units | 12.4 °C     | 0.2 mg/L   | 0.2 mg/L       | 0.037 mg/L       | 4 mg/L  |                                       |  |  |
| 11/5/2014                                | 2.48                | 0.2 mg/L   | 23 mg/L  | 85.7 µS/cm   | 8.17 mg/L  | 78.9 cts/100 mL | 36 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.36 pH units | 7.8 °C      | 0.2 mg/L   | 0.2 mg/L       | 0.012 mg/L       | 4 mg/L  |                                       |  |  |
| 2015                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 4/13/2015                                | 2.70                | 0.2 mg/L   | 23 mg/L  | 85 µS/cm     | 9.62 mg/L  | 3.1 cts/100 mL  | 2 cts/100 mL   | 0.22 mg/L | 0.2 mg/L | 0.22 mg/L       | 7.61 pH units | 9.8 °C      | 0.2 mg/L   | 0.22 mg/L      | 0.01 mg/L        | 4 mg/L  |                                       |  |  |
| 5/7/2015                                 | 2.48                | 0.2 mg/L   | 31 mg/L  | 148.8 µS/cm  | 6.91 mg/L  | 21.1 cts/100 mL | 30 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.85 pH units | 18.6 °C     | 0.458 mg/L | 0.46 mg/L      | 0.014 mg/L       | 4 mg/L  |                                       |  |  |
| 7/16/2015                                |                     | 0.2 mg/L   | 22 mg/L  | 145.4 µS/cm  | 0.48 mg/L  | 36.4 cts/100 mL | 56 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.52 pH units | 20.3 °C     | 1.03 mg/L  | 1.03 mg/L      | 0.04 mg/L        | 4 mg/L  |                                       |  |  |
| 8/6/2015                                 | 2.20                | 0.2 mg/L   | 22 mg/L  | 151.3 µS/cm  | 0.86 mg/L  | 23.1 cts/100 mL | 28 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.51 pH units | 19.3 °C     | 1.42 mg/L  | 1.42 mg/L      | 0.061 mg/L       | 9 mg/L  |                                       |  |  |
| 8/27/2015                                | 1.80                | 0.2 mg/L   | 30 mg/L  | 195 µS/cm    | 2.57 mg/L  | 3.1 cts/100 mL  | 5 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.79 pH units | 21.1 °C     | 0.593 mg/L | 0.59 mg/L      | 0.058 mg/L       | 4 mg/L  |                                       |  |  |
| 9/24/2015                                | 1.62                | 0.2 mg/L   | 28 mg/L  | 147.1 µS/cm  | 3.91 mg/L  | 10.9 cts/100 mL | 5 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.69 pH units | 16.3 °C     | 0.679 mg/L | 0.68 mg/L      | 0.031 mg/L       | 4 mg/L  |                                       |  |  |
| 11/5/2015                                | 2.01                | 0.2 mg/L   | 17 mg/L  | 82.1 µS/cm   |            | 8.6 cts/100 mL  | 10 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.48 pH units | 7.4 °C      | 0.481 mg/L | 0.48 mg/L      | 0.014 mg/L       | 4 mg/L  |                                       |  |  |
| 2016                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 4/21/2016                                | 2.36                | 0.2 mg/L   | 34 mg/L  | 184 µS/cm    |            | 3.1 cts/100 mL  | 4 cts/100 mL   | 0.22 mg/L | 0.2 mg/L | 0.22 mg/L       | 6.55 pH units | 13.03 °C    | 0.631 mg/L | 0.65 mg/L      | 0.011 mg/L       | 4 mg/L  |                                       |  |  |
| 6/2/2016                                 | 3.20                | 0.2 mg/L   | 22 mg/L  | 161.7 µS/cm  | 0.54 mg/L  | 50.4 cts/100 mL |                | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.74 pH units | 19.2 °C     | 0.747 mg/L | 0.75 mg/L      | 0.041 mg/L       | 4 mg/L  |                                       |  |  |
| 6/27/2016                                | 2.12                | 0.2 mg/L   | 28 mg/L  | 194.4 µS/cm  | 3.51 mg/L  | 313 cts/100 mL  | 210 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.91 pH units | 25.8 °C     | 0.509 mg/L | 0.51 mg/L      | 0.052 mg/L       | 7 mg/L  |                                       |  |  |
| 7/28/2016                                | 1.60                | 0.2 mg/L   | 28 mg/L  | 214.6 µS/cm  | 4.70 mg/L  | 8.5 cts/100 mL  | 15 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.00 pH units | 29 °C       | 0.542 mg/L | 0.54 mg/L      | 0.032 mg/L       | 4 mg/L  |                                       |  |  |
| 8/25/2016                                | 1.60                | 0.2 mg/L   | 19 mg/L  | 153 µS/cm    | 6.73 mg/L  | 48.7 cts/100 mL | 19 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.86 pH units | 25.6 °C     | 0.45 mg/L  | 0.45 mg/L      | 0.027 mg/L       | 4 mg/L  |                                       |  |  |
| 9/22/2016                                | 1.60                | 0.2 mg/L   | 27 mg/L  | 189.8 µS/cm  | 2.04 mg/L  | 28.2 cts/100 mL | 5 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.83 pH units | 21.2 °C     | 0.38 mg/L  | 0.38 mg/L      | 0.049 mg/L       | 4 mg/L  |                                       |  |  |
| 10/19/2016                               | 1.55                | 0.2 mg/L   | 33 mg/L  | 175.4 µS/cm  | 3.76 mg/L  | 44.1 cts/100 mL | 16 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.66 pH units | 17 °C       | 1.44 mg/L  | 1.44 mg/L      | 0.079 mg/L       | 23 mg/L |                                       |  |  |
| 2017                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 5/4/2017                                 | 2.29                | 0.2 mg/L   | 30 mg/L  | 143.4 µS/cm  | 5.85 mg/L  | 16 cts/100 mL   | 25 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.85 pH units | 14.8 °C     | 0.553 mg/L | 0.55 mg/L      | 0.010 mg/L       | 4 mg/L  |                                       |  |  |
| 6/14/2017                                | 2.27                | 0.2 mg/L   | 23 mg/L  | 167.1 µS/cm  | 1.90 mg/L  | 133 cts/100 mL  | 238 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.95 pH units | 23 °C       | 0.2 mg/L   | 0.2 mg/L       | 0.016 mg/L       | 4 mg/L  |                                       |  |  |
| 7/6/2017                                 | 2.35                | 0.2 mg/L   | 32 mg/L  | 212.7 µS/cm  | 2.66 mg/L  | 260 cts/100 mL  | 276 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.77 pH units | 21.4 °C     | 0.2 mg/L   | 0.2 mg/L       | 0.047 mg/L       | 4 mg/L  |                                       |  |  |
| 8/23/2017                                | 2.23                | 0.2 mg/L   | 17 mg/L  | 184 µS/cm    |            | 52.9 cts/100 mL | 62 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        |               |             | 2.09 mg/L  | 2.09 mg/L      | 0.018 mg/L       | 4 mg/L  |                                       |  |  |
| 9/27/2017                                | via                 | 0.2 mg/L   | 16 mg/L  |              |            | 194 cts/100 mL  | 225 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        |               |             | 0.2 mg/L   | 0.2 mg/L       | 0.022 mg/L       | 6 mg/L  |                                       |  |  |
| 10/18/2017                               | 2.72                | 0.2 mg/L   | 30 mg/L  | 144 µS/cm    | 8.48 mg/L  | 276 cts/100 mL  | 219 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 5.96 pH units | 13.5 °C     | 0.655 mg/L | 0.66 mg/L      | 0.037 mg/L       | 4 mg/L  |                                       |  |  |
| 11/15/2017                               | 2.05                | 0.2 mg/L   | 33 mg/L  | 101.7 µS/cm  | 3.46 mg/L  | 39.9 cts/100 mL | 17 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.47 pH units | 4.2 °C      | 0.315 mg/L | 0.32 mg/L      | 0.011 mg/L       | 4 mg/L  |                                       |  |  |
| 2018                                     |                     |            |          |              |            |                 |                |           |          |                 |               |             |            |                |                  |         |                                       |  |  |
| 4/24/2018                                | 2.32                | 0.2 mg/L   | 25 mg/L  | 154.1 µS/cm  | 7.76 mg/L  | 12.2 cts/100 mL | 16 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.85 pH units | 12.3 °C     | 0.78 mg/L  | 0.78 mg/L      | 0.012 mg/L       | 4 mg/L  |                                       |  |  |
| 5/30/2018                                | 2.32                | 0.2 mg/L   | 27 mg/L  | 178.4 µS/cm  | 3.75 mg/L  | 133 cts/100 mL  | 236 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.46 pH units | 20.9 °C     | 0.906 mg/L | 0.91 mg/L      | 0.021 mg/L       | 5 mg/L  |                                       |  |  |
| 7/12/2018                                | 2.24                | 0.2 mg/L   | 23 mg/L  | 182.1 µS/cm  | 3.96 mg/L  | 111 cts/100 mL  | 48 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.29 pH units | 24.3 °C     |            |                |                  |         |                                       |  |  |
| 8/16/2018                                | 2.20                | 0.2 mg/L   | 18 mg/L  | 148 µS/cm    | 6.59 mg/L  | 45.7 cts/100 mL | 37 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.91 pH units | 25.6 °C     | 1.33 mg/L  | 1.33 mg/L      | 0.030 mg/L       | 4 mg/L  |                                       |  |  |
| 9/5/2018                                 | 1.96                | 0.2 mg/L   | 23 mg/L  | 172.3 µS/cm  | 6.61 mg/L  | 42.3 cts/100 mL | 24 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.32 pH units | 28.4 °C     | 0.38 mg/L  | 0.38 mg/L      |                  |         |                                       |  |  |

| 01-WCH Tributary Sampling Data 2007-2019 |                     |            |            |              |            |                  |                |           |          |                 |               |             |            | Laboratory Detection Limit            |                  |         |
|------------------------------------------|---------------------|------------|------------|--------------|------------|------------------|----------------|-----------|----------|-----------------|---------------|-------------|------------|---------------------------------------|------------------|---------|
|                                          |                     |            |            |              |            |                  |                |           |          |                 |               |             |            | Expected Outlier or Equipment Failure |                  |         |
| Date                                     | Staff Gauge Reading | Ammonia    | Chloride   | Conductivity | DO         | E. coli          | Fecal Coliform | Nitrate   | Nitrite  | Nitrate/Nitrite | pH            | Temperature | TKN        | Total Nitrogen                        | Total Phosphorus | TSS     |
| 2007                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 5/30/2007                                |                     | 0.1 mg/L   |            |              | 6.58 mg/L  | 67.6 cts/100 mL  |                |           |          |                 | 6.73 pH units | 16.9 °C     | 0.59 mg/L  |                                       | 0.014 mg/L       | 4 mg/L  |
| 6/26/2007                                |                     | 0.1 mg/L   |            | 177 µS/cm    | 5.13 mg/L  | 145.5 cts/100 mL |                |           |          |                 | 6.58 pH units | 22.2 °C     | 1.08 mg/L  |                                       | 0.045 mg/L       | 4 mg/L  |
| 8/2/2007                                 |                     | 0.307 mg/L |            | 195.7 µS/cm  | 3.19 mg/L  | 122.3 cts/100 mL |                |           |          |                 | 6.43 pH units | 22.9 °C     | -0.5       |                                       | 0.033 mg/L       | 6 mg/L  |
| 8/22/2007                                |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| Under Construction                       |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 2008                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 1/8/2008                                 |                     | 0.164 mg/L |            |              |            | 13.4 cts/100 mL  |                |           |          |                 |               |             | 1.23 mg/L  |                                       | 0.122 mg/L       | 50 mg/L |
| 5/28/2008                                |                     | 0.456 mg/L |            | 173.4 µS/cm  | 5.54 mg/L  | 63.7 cts/100 mL  |                |           |          |                 | 6.21 pH units | 16.4 °C     | 0.753 mg/L |                                       | 0.026 mg/L       | 4 mg/L  |
| 6/5/2008                                 |                     | 0.357 mg/L |            |              |            |                  |                |           |          |                 |               |             | 0.743 mg/L |                                       | 0.031 mg/L       | 4 mg/L  |
| 6/11/2008                                |                     | 302 mg/L   |            |              |            |                  |                |           |          |                 |               |             | 0.648 mg/L |                                       | 0.015 mg/L       | 4 mg/L  |
| 7/9/2008                                 |                     |            |            | 0.48 µS/cm   | 6.49 mg/L  | 77.6 cts/100 mL  |                |           |          |                 | 7.04 pH units | 26.4 °C     |            |                                       |                  |         |
| 8/20/2008                                |                     |            |            | 130 µS/cm    |            |                  |                |           |          |                 | 6.98 pH units | 18.9 °C     |            |                                       |                  |         |
| 2010                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 5/25/2010                                |                     | 0.1 mg/L   |            | 177.5 µS/cm  | 6.66 mg/L  | 73.8 cts/100 mL  |                |           |          |                 | 6.43 pH units | 21.1 °C     | 0.5 mg/L   |                                       | 0.029 mg/L       | 4 mg/L  |
| 7/13/2010                                |                     | 0.4 mg/L   |            | 502 µS/cm    | 2.68 mg/L  | 54.8 cts/100 mL  |                |           |          |                 | 6.22 pH units | 15.3 °C     | 0.5 mg/L   |                                       | 0.062 mg/L       | 4 mg/L  |
| 9/22/2010                                |                     | 0.2 mg/L   |            | 0.26 µS/cm   |            | 93.3 cts/100 mL  |                |           |          |                 | 7.16 pH units | 14.2 °C     | 0.5 mg/L   |                                       | 0.034 mg/L       | 4 mg/L  |
| 10/20/2010                               |                     | 0.2 mg/L   |            | 0.18 µS/cm   |            | 30.1 cts/100 mL  |                |           |          |                 | 7.06 pH units | 8.4 °C      | 0.5 mg/L   |                                       | 0.016 mg/L       | 4 mg/L  |
| 11/30/2010                               |                     | 0.2 mg/L   |            | 0.15 µS/cm   |            | 21.6 cts/100 mL  |                |           |          |                 |               | 1.6 °C      | 0.5 mg/L   |                                       | 0.033 mg/L       | 4 mg/L  |
| 2011                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 3/30/2011                                |                     | 0.2 mg/L   |            | 135.2 µS/cm  | 11.42 mg/L | 1 cts/100 mL     |                |           |          |                 | 6.32 pH units | 5.5 °C      | 0.5 mg/L   |                                       | 0.014 mg/L       | 4 mg/L  |
| 5/2/2011                                 |                     | 0.4 mg/L   |            | 143.8 µS/cm  | 9.83 mg/L  | 14.8 cts/100 mL  |                |           |          |                 | 6.65 pH units | 15 °C       | 0.5 mg/L   |                                       | 0.011 mg/L       | 4 mg/L  |
| 8/4/2011                                 |                     | 0.2 mg/L   |            | 229 µS/cm    | 3.36 mg/L  | 73.3 cts/100 mL  |                |           |          |                 | 6.38 pH units | 22.1 °C     | 0.5 mg/L   |                                       | 0.052 mg/L       | 4 mg/L  |
| 8/16/2011                                |                     |            |            |              |            |                  |                |           |          |                 | No Data       |             |            |                                       |                  |         |
| 9/14/2011                                |                     | 0.2 mg/L   |            | 163 µS/cm    | 4.87 mg/L  | 178.9 cts/100 mL |                |           |          |                 | 6.39 pH units | 20.6 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |
| 10/14/2011                               |                     |            |            |              |            |                  |                |           |          |                 | No Data       |             |            |                                       |                  |         |
| 11/7/2011                                |                     | 0.2 mg/L   |            | 114.7 µS/cm  | 9.88 mg/L  | 32.3 cts/100 mL  |                |           |          |                 | 6.04 pH units | 5.4 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |
| 12/20/2011                               |                     | 0.2 mg/L   |            | 138.2 µS/cm  | 11.24 mg/L | 7.4 cts/100 mL   |                |           |          |                 | 6.73 pH units | 1 °C        | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |
| 2012                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 3/28/2012                                | 1.22                | 0.05 mg/L  |            | 144.9 µS/cm  | 8.86 mg/L  | 13 cts/100 mL    |                |           |          |                 | 5.96 pH units | 5.4 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |
| 4/26/2012                                | 0.41                | 0.05 mg/L  |            | 110.5 µS/cm  | 7.93 mg/L  | 12.1 cts/100 mL  |                |           |          |                 | 6.1 pH units  | 12.3 °C     | 0.5 mg/L   |                                       | 0.02 mg/L        | 5 mg/L  |
| 8/2/2012                                 | 0.49                | 0.06 mg/L  |            | 369 µS/cm    | 2.56 mg/L  | 122.3 cts/100 mL |                |           |          |                 | 6.26 pH units | 20.5 °C     | 0.5 mg/L   |                                       | 0.022 mg/L       | 5 mg/L  |
| 8/27/2012                                |                     | 0.5 mg/L   |            | 276 µS/cm    | 4.14 mg/L  | 53.7 cts/100 mL  |                |           |          |                 | 6.21 pH units | 19.3 °C     | 0.5 mg/L   |                                       | 0.02 mg/L        | 5 mg/L  |
| 9/18/2012                                | 0.43                | 0.5 mg/L   |            | 254 µS/cm    | 5.92 mg/L  | 95.9 cts/100 mL  |                |           |          |                 | 6.42 pH units | 14.5 °C     | 0.5 mg/L   |                                       | 0.02 mg/L        | 5 mg/L  |
| 10/25/2012                               | 1.20                | 0.5 mg/L   |            | 197.3 µS/cm  | 5.07 mg/L  | 8.5 cts/100 mL   |                |           |          |                 | 6.27 pH units | 10 °C       | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |
| 2013                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 4/4/2013                                 | 1.46                | 0.2 mg/L   | 240 mg/L   | 104.2 µS/cm  | 10.69 mg/L | 3.1 cts/100 mL   | 3 cts/100 mL   |           |          | 0.5 mg/L        | 6.20 pH units | 5.8 °C      | 0.5 mg/L   | 0.5 mg/L                              | 0.05 mg/L        | 6 mg/L  |
| 5/6/2013                                 | 1.04                | 0.2 mg/L   |            | 161.4 µS/cm  | 6.54 mg/L  | 14.6 cts/100 mL  | 2 cts/100 mL   |           |          |                 | 7.06 pH units | 15.1 °C     | 0.5 mg/L   |                                       | 0.05 mg/L        | 6 mg/L  |
| 6/6/2013                                 | 1.00                | 0.2 mg/L   |            | 122.2 µS/cm  | 4.10 mg/L  | 219 cts/100 mL   | 261 cts/100 mL |           |          |                 | 5.99 pH units | 19 °C       | 0.5 mg/L   |                                       | 0.0429 mg/L      | 6 mg/L  |
| 7/17/2013                                | 1.07                | 0.2 mg/L   | 42 mg/L    | 179.3 µS/cm  | 6.13 mg/L  | 95.9 cts/100 mL  | 120 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.27 pH units | 26.4 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.056 mg/L       | 6 mg/L  |
| 8/16/2013                                | 1.00                | 0.2 mg/L   | 39 mg/L    | 133.3 µS/cm  | 8.04 mg/L  | 111 cts/100 mL   | 120 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.27 pH units | 19.9 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.02 mg/L        | 6 mg/L  |
| 9/17/2013                                | 1.12                | 0.2 mg/L   | 48 mg/L    | 147.7 µS/cm  | 6.68 mg/L  | 190 cts/100 mL   | 0              | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 5.99 pH units | 13.2 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.03 mg/L        | 6 mg/L  |
| 10/28/2013                               | 1.48                | 0.1 mg/L   | 56 mg/L    | 146.4 µS/cm  | 6.20 mg/L  | 41 cts/100 mL    | 38 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.08 pH units | 6.4 °C      | 0.5 mg/L   | 0.2 mg/L                              | 0.036 mg/L       | 6 mg/L  |
| 2014                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 4/14/2014                                | 1.65                | 0.2 mg/L   | 28 mg/L    | 100 µS/cm    |            | 6.3 cts/100 mL   | 3 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        |               | 12.4 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.046 mg/L       | 4 mg/L  |
| 5/8/2014                                 | 1.40                | 0.2 mg/L   | 35 mg/L    | 148.3 µS/cm  | 7.84 mg/L  | 8.6 cts/100 mL   | 16 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.56 pH units | 14.4 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.055 mg/L       | 4 mg/L  |
| 6/11/2014                                | 1.44                | 0.2 mg/L   | 47 mg/L    | 123.7 µS/cm  | 5.50 mg/L  | 140 cts/100 mL   | 97 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.60 pH units | 20 °C       | 0.2 mg/L   | 0.2 mg/L                              | 0.012 mg/L       | 4 mg/L  |
| 7/14/2014                                | 1.25                | 0.2 mg/L   | 52 mg/L    | 141.5 µS/cm  | 3.56 mg/L  | 38.4 cts/100 mL  | 23 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.50 pH units | 25.5 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.052 mg/L       | 4 mg/L  |
| 8/12/2014                                | 1.08                | 0.2 mg/L   | 60 mg/L    | 155.2 µS/cm  | 5.51 mg/L  | 41.9 cts/100 mL  | 6 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.50 pH units | 21 °C       | 0.2 mg/L   | 0.2 mg/L                              | 0.05 mg/L        | 9 mg/L  |
| 9/18/2014                                | 1.12                | 0.2 mg/L   | 61 mg/L    | 146.2 µS/cm  | 6.51 mg/L  | 42.6 cts/100 mL  | 22 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.44 pH units | 14 °C       | 0.2 mg/L   | 0.2 mg/L                              | 0.01 mg/L        | 4 mg/L  |
| 11/5/2014                                | 1.59                | 0.2 mg/L   | 40 mg/L    | 105.4 µS/cm  | 5.16 mg/L  | 55.6 cts/100 mL  | 32 cts/100 mL  | 0.21 mg/L | 0.2 mg/L | 0.21 mg/L       | 6.25 pH units | 7.4 °C      | 0.2 mg/L   | 0.21 mg/L                             | 0.011 mg/L       | 4 mg/L  |
| 2015                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 4/13/2015                                | 1.90                | 0.2 mg/L   | 25 mg/L    | 113.1 µS/cm  | 10.12 mg/L | 2 cts/100 mL     | 2 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.81 pH units | 10.4 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.016 mg/L       | 4 mg/L  |
| 5/7/2015                                 | 1.49                | 0.2 mg/L   | 43 mg/L    | 171.6 µS/cm  | 6.92 mg/L  | 58.3 cts/100 mL  | 56 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.81 pH units | 18.5 °C     | 0.438 mg/L | 0.44 mg/L                             | 0.017 mg/L       | 4 mg/L  |
| 7/16/2015                                | 1.10                | 0.2 mg/L   | 51 mg/L    | 198.2 µS/cm  | 3.25 mg/L  | 39.9 cts/100 mL  | 72 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.45 pH units | 21.1 °C     | 0.672 mg/L | 0.672 mg/L                            | 0.019 mg/L       | 4 mg/L  |
| 8/6/2015                                 | 0.94                | 0.2 mg/L   | 61 mg/L    | 236.4 µS/cm  | 4.26 mg/L  | 61.3 cts/100 mL  | 106 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.42 pH units | 21.6 °C     | 1.01 mg/L  | 1.01 mg/L                             | 0.021 mg/L       | 4 mg/L  |
| 8/27/2015                                | 0.96                | 0.2 mg/L   | 64 mg/L    | 249.1 µS/cm  | 4.00 mg/L  | 131 cts/100 mL   | 105 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.30 pH units | 21.5 °C     | 0.593 mg/L | 0.59 mg/L                             | 0.015 mg/L       | 4 mg/L  |
| 9/24/2015                                | 1.00                | 0.2 mg/L   | 222.5 mg/L | 222.5 µS/cm  |            | 152 cts/100 mL   | 55 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.40 pH units | 15 °C       | 0.613 mg/L | 0.61 mg/L                             | 0.017 mg/L       | 4 mg/L  |
| 11/5/2015                                | 1.49                | 0.2 mg/L   | 60 mg/L    | 179.1 µS/cm  |            | 33.2 cts/100 mL  | 15 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.52 pH units | 8.5 °C      | 0.349 mg/L | 0.35 mg/L                             | 0.01 mg/L        | 4 mg/L  |
| 2016                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 4/21/2016                                | 1.38                | 0.2 mg/L   | 40 mg/L    | 183 µS/cm    |            | 5.2 cts/100 mL   | 10 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.22 pH units | 13.32 °C    | 0.2 mg/L   | 0.2 mg/L                              | 0.013 mg/L       | 4 mg/L  |
| 6/2/2016                                 | 1.20                | 0.2 mg/L   | 52 mg/L    | 202.6 µS/cm  | 2.18 mg/L  | 104 cts/100 mL   |                | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.72 pH units | 18.3 °C     | 0.538 mg/L | 0.54 mg/L                             | 0.026 mg/L       | 4 mg/L  |
| 6/27/2016                                | 1.24                | 0.2 mg/L   | 63 mg/L    | 277.7 µS/cm  | 2.53 mg/L  | 86.2 cts/100 mL  | 88 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.52 pH units | 25.8 °C     | 0.29 mg/L  | 0.29 mg/L                             | 0.045 mg/L       | 4 mg/L  |
| 7/28/2016                                | 1.20                | 0.2 mg/L   | 74 mg/L    | 334.2 µS/cm  | 2.55 mg/L  | 41.3 cts/100 mL  | 50 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.81 pH units | 26.5 °C     | 0.589 mg/L | 0.59 mg/L                             | 0.027 mg/L       | 4 mg/L  |
| 8/25/2016                                | 1.40                | 0.2 mg/L   | 68 mg/L    | 281.1 µS/cm  | 3.25 mg/L  | 98.7 cts/100 mL  | 24 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.85 pH units | 23.7 °C     | 0.612 mg/L | 0.61 mg/L                             | 0.028 mg/L       | 4 mg/L  |
| 9/22/2016                                | 1.50                | 0.2 mg/L   | 58 mg/L    | 226.8 µS/cm  | 3.05 mg/L  | 118 cts/100 mL   | 101 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.75 pH units | 20.7 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.02 mg/L        | 4 mg/L  |
| 10/19/2016                               | 1.50                | 0.2 mg/L   | 70 mg/L    | 234.3 µS/cm  | 2.28 mg/L  | 1410 cts/100 mL  | 173 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.63 pH units | 14.4 °C     | 0.708 mg/L | 0.71 mg/L                             | 0.016 mg/L       | 4 mg/L  |
| 2017                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 5/4/2017                                 | 1.75                | 0.2 mg/L   | 28 mg/L    | 101.3 µS/cm  | 7.55 mg/L  | 18.5 cts/100 mL  | 25 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.60 pH units | 13.8 °C     | 1.58 mg/L  | 1.58 mg/L                             | 0.012 mg/L       | 4 mg/L  |
| 6/14/2017                                | 1.20                | 0.2 mg/L   | 43 mg/L    | 194.3 µS/cm  | 3.26 mg/L  | 131 cts/100 mL   | 93 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.82 pH units | 24.5 °C     | 0.34 mg/L  | 0.34 mg/L                             | 0.031 mg/L       | 4 mg/L  |
| 7/6/2017                                 | 1.51                | 0.2 mg/L   | 49 mg/L    | 201.5 µS/cm  | 2.62 mg/L  | 61.6 mg/L        | 53 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.23 pH units | 23.6 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.029 mg/L       | 4 mg/L  |
| 8/22/2017                                | 1.46                | 0.2 mg/L   | 57 mg/L    |              |            | 77.6 cts/100 mL  | 49 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        |               |             | 0.899 mg/L | 0.91 mg/L                             | 0.029 mg/L       | 4 mg/L  |
| 9/22/2017                                | 1.46                | 0.2 mg/L   | 61 mg/L    |              |            | 22.9 cts/100 mL  | 42 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        |               |             | 0.2 mg/L   | 0.2 mg/L                              | 0.034 mg/L       | 4 mg/L  |
| 10/19/2017                               | 1.45                | 0.2 mg/L   | 64 mg/L    | 131 µS/cm    | 5.06 mg/L  | 24 cts/100 mL    | 38 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.50 pH units | 12 °C       | 0.2 mg/L   | 0.2 mg/L                              | 0.016 mg/L       | 4 mg/L  |
| 11/15/2017                               | 1.59                | 0.2 mg/L   | 43 mg/L    | 111.7 µS/cm  | 9.07 mg/L  | 115 cts/100 mL   | 62 cts/100 mL  | 0.22 mg/L | 0.2 mg/L | 0.22 mg/L       | 6.76 pH units | 3.4 °C      | 0.315 mg/L | 0.54 mg/L                             | 0.011 mg/L       | 4 mg/L  |
| 2018                                     |                     |            |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |
| 4/24/2018                                | 1.62                | 0.2 mg/L   | 38 mg/L    | 85.2 µS/cm   | 8.92 mg/L  | 6.3 cts/100 mL   | 3 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.76 pH units | 12.9 °C     | 0.717 mg/L | 0.72 mg/L                             | 0.014 mg/L       | 4 mg/L  |
| 5/30/2018                                | 1.25                | 0.2 mg/L   | 56 mg/L    | 225.3 µS/cm  | 4.20 mg/L  | 120 cts/100 mL   | 210 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.23 pH units | 20 °C       | 0.864 mg/L | 0.86 mg/L                             | 0.026 mg/L       | 4 mg/L  |
| 7/12/2018                                | 1.30                | 0.2 mg/L   | 65 mg/L    | 288.8 µS/cm  | 5.20 mg/L  | 77.6 cts/100 mL  | 96 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.94 pH units | 23.3 °C     | 0.612 mg/L | 0.61 mg/L                             | 0.026 mg/L       | 4 mg/L  |
| 8/13/2018                                | 1.10                | 0.2 mg/L   | 29 mg/L    | 156 µS/cm    | 2.37 mg/L  | 170 cts/100 mL   | 140 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.15 pH units | 22.8 °C     | 1.13 mg/L  | 1.18 mg/L                             | 0.034 mg/L       | 4 mg/L  |
| 9/5/2018                                 | 1.15                | 0.2 mg/L   | 244 mg/L   | 244 µS/cm    | 3.45 mg/L  | 142 cts/100 mL   | 119 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.90 pH units | 23.5 °C     | 1.02 mg/L  | 1.02 mg/L                             | 0.023 mg/L       | 4 mg/L  |
| 10/10/2018                               | 1.26                | 0.2 mg/L   | 36 mg/L    | 151.6 µS/cm  | 4.00 mg/L  | 86 cts/100 mL    | 86 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.68 pH units | 15.7 °C     | 0.726 mg/L | 0.73 mg/L                             | 0.017 mg/L       | 4 mg/L  |
| 10/31/2018                               | 2.70                | 0.2 mg/L   |            |              |            |                  |                |           |          |                 |               |             |            |                                       |                  |         |

## 01-XWB Tributary Sampling Data 2007-2019

|                     |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      | Laboratory Detection Limit            |          |             |    |       |       |                |      |                  |       |      |      |      |
|---------------------|---------|---------|------|----------|-------|--------------|-------|-------|------------|---------|------------|----------------|------------|---------|------|---------|------|-----------------|------|---------------------------------------|----------|-------------|----|-------|-------|----------------|------|------------------|-------|------|------|------|
|                     |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      | Expected Outlier or Equipment Failure |          |             |    |       |       |                |      |                  |       |      |      |      |
| Start Gauge Reading |         | Ammonia |      | Chloride |       | Conductivity |       | DO    |            | E. coli |            | Fecal Coliform |            | Nitrate |      | Nitrite |      | Nitrate/Nitrite |      | pH                                    |          | Temperature |    | TKN   |       | Total Nitrogen |      | Total Phosphorus |       | TSS  |      |      |
| Date                |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 2007                |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 5/30/2007           |         | 0.271   | mg/L |          |       | 7.45         | mg/L  | 33.6  | cts/100 mL |         |            |                |            |         |      |         |      |                 |      | 7.34                                  | pH units | 16.5        | °C | 0.614 | mg/L  |                |      | 0.023            | mg/L  | 4    | mg/L |      |
| 6/26/2007           |         | 0.1     | mg/L |          |       | 140          | µS/cm | 8.02  | mg/L       | 48      | cts/100 mL |                |            |         |      |         |      |                 |      | 6.7                                   | pH units | 27.3        | °C | 0.58  | mg/L  |                |      | 0.04             | mg/L  | 4    | mg/L |      |
| 8/2/2007            |         | 0.307   | mg/L |          |       | 151.6        | µS/cm | 8.36  | mg/L       | 93.3    | cts/100 mL |                |            |         |      |         |      |                 |      | 6.56                                  | pH units | 19.9        | °C | 0.859 | mg/L  |                |      | 0.022            | mg/L  | 10   | mg/L |      |
| 8/22/2007           |         | 0.1     | mg/L |          |       | 1590.4       | µS/cm | 9.5   | mg/L       | 84.2    | cts/100 mL |                |            |         |      |         |      |                 |      | 6.22                                  | pH units | 14.6        | °C | 2.98  | mg/L  |                |      | 0.152            | mg/L  | 4    | mg/L |      |
| 2008                |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 1/8/2008            |         | 0.1     | mg/L |          |       |              |       |       |            | 6.3     | cts/100 mL |                |            |         |      |         |      |                 |      |                                       |          |             |    |       | 0.523 | mg/L           |      |                  | 0.05  | mg/L | 4    | mg/L |
| 5/28/2008           |         | 0.24    | mg/L |          |       | 150.4        | µS/cm | 9.04  | mg/L       | 35.4    | cts/100 mL |                |            |         |      |         |      |                 |      | 6.34                                  | pH units | 14.5        | °C | 0.554 | mg/L  |                |      | 0.01             | mg/L  | 128  | mg/L |      |
| 6/5/2008            | No Data |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 6/11/2008           |         | 0.225   | mg/L |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    | 0.552 | mg/L  |                |      | 0.026            | mg/L  | 4    | mg/L |      |
| 7/9/2008            |         |         |      |          |       | 0.14         | µS/cm | 8.29  | mg/L       | 224.7   | cts/100 mL |                |            |         |      |         |      |                 |      | 7.04                                  | pH units | 22.8        | °C |       |       |                |      |                  |       |      |      |      |
| 8/20/2008           |         |         |      |          |       | 201          | µS/cm |       |            |         |            |                |            |         |      |         |      |                 |      | 6.97                                  | pH units | 20.7        | °C |       |       |                |      |                  |       |      |      |      |
| 2010                |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 5/25/2010           | No Data |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 7/13/2010           |         | 0.4     | mg/L |          |       | 121.8        | µS/cm | 1.25  | mg/L       | 101.9   | cts/100 mL |                |            |         |      |         |      |                 |      | 6.48                                  | pH units | 22.4        | °C | 0.5   | mg/L  |                |      | 0.043            | mg/L  | 4    | mg/L |      |
| 9/22/2010           | No Data |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 10/20/2010          |         | 0.2     | mg/L |          |       | 0.19         | µS/cm |       |            | 29.5    | cts/100 mL |                |            |         |      |         |      |                 |      | 7.22                                  | pH units | 8.5         | °C | 0.5   | mg/L  |                |      | 0.046            | mg/L  | 244  | mg/L |      |
| 11/30/2010          |         | 0.2     | mg/L |          |       | 0.4          | µS/cm |       |            | 8.4     | cts/100 mL |                |            |         |      |         |      |                 |      |                                       |          | 3.9         | °C | 0.5   | mg/L  |                |      | 0.025            | mg/L  | 4    | mg/L |      |
| 2011                |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 3/30/2011           |         | 0.2     | mg/L |          |       | 104.1        | µS/cm | 12.97 | mg/L       | 8.4     | cts/100 mL |                |            |         |      |         |      |                 |      | 6.83                                  | pH units | 5.9         | °C | 0.5   | mg/L  |                |      | 0.029            | mg/L  | 5    | mg/L |      |
| 5/2/2011            |         | 0.2     | mg/L |          |       | 112.7        | µS/cm | 11.3  | mg/L       | 18.5    | cts/100 mL |                |            |         |      |         |      |                 |      | 6.58                                  | pH units | 15.7        | °C | 0.5   | mg/L  |                |      | 0.019            | mg/L  | 4    | mg/L |      |
| 8/4/2011            |         | 0.2     | mg/L |          |       | 149.6        | µS/cm | 5.65  | mg/L       | 142.1   | cts/100 mL |                |            |         |      |         |      |                 |      | 6.25                                  | pH units | 21          | °C | 0.5   | mg/L  |                |      | 0.026            | mg/L  | 4    | mg/L |      |
| 8/16/2011           |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      | No Data                               |          |             |    |       |       |                |      |                  |       |      |      |      |
| 9/14/2011           |         | 0.2     | mg/L |          |       | 124.7        | µS/cm | 5.53  | mg/L       | 118.7   | cts/100 mL |                |            |         |      |         |      |                 |      | 6.08                                  | pH units | 19          | °C | 0.5   | mg/L  |                |      | 0.02             | mg/L  | 5    | mg/L |      |
| 10/14/2011          |         | 0.2     | mg/L |          |       | 93.7         | µS/cm | 7.98  | mg/L       |         |            |                |            |         |      |         |      |                 |      | 6                                     | pH units |             |    |       | 0.5   | mg/L           |      |                  | 0.244 | mg/L | 84   | mg/L |
| 11/7/2011           |         | 0.2     | mg/L |          |       | 181.3        | µS/cm | 10.57 | mg/L       | 3.1     | cts/100 mL |                |            |         |      |         |      |                 |      | 6.29                                  | pH units | 6           | °C | 0.5   | mg/L  |                |      | 0.01             | mg/L  | 4    | mg/L |      |
| 12/20/2011          |         | 0.2     | mg/L |          |       | 106.7        | µS/cm | 12.71 | mg/L       | 4.1     | cts/100 mL |                |            |         |      |         |      |                 |      | 6.69                                  | pH units | 1.9         | °C | 0.5   | mg/L  |                |      | 0.01             | mg/L  | 4    | mg/L |      |
| 2012                |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 3/28/2012           | 2.34    | 0.05    | mg/L |          |       | 114.6        | µS/cm | 10.45 | mg/L       | 6.3     | cts/100 mL |                |            |         |      |         |      |                 |      | 6.19                                  | pH units | 5.4         | °C | 0.5   | mg/L  |                |      | 0.01             | mg/L  | 5    | mg/L |      |
| 4/26/2012           | 2.36    | 0.05    | mg/L |          |       | 90.6         | µS/cm | 9.82  | mg/L       | 9.8     | cts/100 mL |                |            |         |      |         |      |                 |      | 6.6                                   | pH units | 12.5        | °C | 0.5   | mg/L  |                |      | 0.02             | mg/L  | 6    | mg/L |      |
| 8/2/2012            | 1.50    | 0.05    | mg/L |          |       | 140.3        | µS/cm | 0.59  | mg/L       | 121.1   | cts/100 mL |                |            |         |      |         |      |                 |      | 6.19                                  | pH units | 21.7        | °C | 0.5   | mg/L  |                |      | 0.022            | mg/L  | 5    | mg/L |      |
| 8/27/2012           |         | 0.05    | mg/L |          |       | 140.7        | µS/cm | 0.25  | mg/L       | 146.7   | cts/100 mL |                |            |         |      |         |      |                 |      | 6.49                                  | pH units | 22.8        | °C | 0.5   | mg/L  |                |      | 0.03             | mg/L  | 12   | mg/L |      |
| 9/18/2012           | 1.78    | 0.05    | mg/L |          |       | 151.3        | µS/cm | 6.05  | mg/L       | 155.3   | cts/100 mL |                |            |         |      |         |      |                 |      | 6.29                                  | pH units | 14.8        | °C | 0.6   | mg/L  |                |      | 0.04             | mg/L  | 16   | mg/L |      |
| 10/25/2012          | 1.78    | 0.05    | mg/L |          |       | 135.4        | µS/cm | 5.64  | mg/L       | 30.1    | cts/100 mL |                |            |         |      |         |      |                 |      | 5.99                                  | pH units | 9.9         | °C | 0.5   | mg/L  |                |      | 0.01             | mg/L  | 5    | mg/L |      |
| 2013                |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 4/4/2013            | 2.46    | 0.2     | mg/L | 18       | mg/L  | 87.1         | µS/cm | 12.10 | mg/L       | 1       | cts/100 mL | 2              | cts/100 mL |         |      |         |      | 0.5             | mg/L | 6.81                                  | pH units | 7.6         | °C | 0.5   | mg/L  | 0.5            | mg/L | 0.05             | mg/L  | 6    | mg/L |      |
| 5/6/2013            | 1.98    | 0.2     | mg/L |          |       | 123          | µS/cm | 8.77  | mg/L       | 34.1    | cts/100 mL | 30             | cts/100 mL |         |      |         |      |                 |      | 7.21                                  | pH units | 16.8        | °C | 0.5   | mg/L  |                |      | 0.06             | mg/L  | 6    | mg/L |      |
| 6/6/2013            | 2.32    | 0.374   | mg/L |          |       | 91.5         | µS/cm | 6.02  | mg/L       | 142     | cts/100 mL | 123            | cts/100 mL |         |      |         |      |                 |      | 6.10                                  | pH units | 17.3        | °C | 0.5   | mg/L  |                |      | 0.0297           | mg/L  | 6    | mg/L |      |
| 7/17/2013           | 2.42    | 0.2     | mg/L | 31       | mg/L  | 139.4        | µS/cm | 8.57  | mg/L       | 67.6    | cts/100 mL | 38             | cts/100 mL | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.03                                  | pH units | 25.5        | °C | 0.5   | mg/L  | 0.2            | mg/L | 0.055            | mg/L  | 6    | mg/L |      |
| 8/16/2013           | 2.44    | 0.2     | mg/L | 29       | mg/L  | 156.9        | µS/cm | 5.82  | mg/L       | 98.5    | cts/100 mL | 70             | cts/100 mL | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.08                                  | pH units | 18.2        | °C | 0.5   | mg/L  | 0.2            | mg/L | 0.062            | mg/L  | 6    | mg/L |      |
| 9/17/2013           | 2.25    | 0.2     | mg/L | 31       | mg/L  | 104.7        | µS/cm | 9.39  | mg/L       | 179     | cts/100 mL | 6              | cts/100 mL | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.10                                  | pH units | 13.1        | °C | 0.5   | mg/L  | 0.2            | mg/L | 0.039            | mg/L  | 6    | mg/L |      |
| 10/28/2013          | 2.67    | 0.1     | mg/L | 33       | mg/L  | 97.6         | µS/cm | 7.11  | mg/L       | 166     | cts/100 mL | 120            | cts/100 mL | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.30                                  | pH units | 7.4         | °C | 0.5   | mg/L  | 0.2            | mg/L | 0.031            | mg/L  | 6    | mg/L |      |
| 2014                |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 4/14/2014           | 2.76    | 0.2     | mg/L | 24       | mg/L  | 110          | µS/cm |       |            | 6.3     | cts/100 mL | 2              | cts/100 mL | 0.21    | mg/L | 0.2     | mg/L | 0.21            | mg/L |                                       |          | 11.8        | °C | 0.2   | mg/L  | 0.21           | mg/L | 0.032            | mg/L  | 4    | mg/L |      |
| 5/8/2014            | 2.77    | 0.2     | mg/L | 28       | mg/L  | 124.5        | µS/cm | 8.46  | mg/L       | 18.5    | cts/100 mL | 13             | cts/100 mL | 0.22    | mg/L | 0.2     | mg/L | 0.22            | mg/L | 6.77                                  | pH units | 15.2        | °C | 0.2   | mg/L  | 0.22           | mg/L | 0.052            | mg/L  | 4    | mg/L |      |
| 6/11/2014           | 2.62    | 0.2     | mg/L | 34       | mg/L  | 94.5         | µS/cm | 8.47  | mg/L       | 248     | cts/100 mL | 198            | cts/100 mL | 0.26    | mg/L | 0.2     | mg/L | 0.26            | mg/L | 6.42                                  | pH units | 18.3        | °C | 0.2   | mg/L  | 0.26           | mg/L | 0.014            | mg/L  | 4    | mg/L |      |
| 7/14/2014           | 2.60    | 0.2     | mg/L | 36       | mg/L  | 103.1        | µS/cm | 6.39  | mg/L       | 41.9    | cts/100 mL | 38             | cts/100 mL | 0.21    | mg/L | 0.2     | mg/L | 0.21            | mg/L | 6.58                                  | pH units | 24.4        | °C | 0.2   | mg/L  | 0.21           | mg/L | 0.044            | mg/L  | 4    | mg/L |      |
| 8/12/2014           | 2.26    | 0.2     | mg/L | 38       | mg/L  | 106.7        | µS/cm | 7.70  | mg/L       | 124     | cts/100 mL | 114            | cts/100 mL | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.58                                  | pH units | 21          | °C | 0.2   | mg/L  | 0.2            | mg/L | 0.016            | mg/L  | 4    | mg/L |      |
| 9/18/2014           | 2.30    | 0.2     | mg/L | 37       | mg/L  | 96.7         | µS/cm | 8.16  | mg/L       | 29.5    | cts/100 mL | 26             | cts/100 mL | 0.27    | mg/L | 0.2     | mg/L | 0.27            | mg/L | 6.64                                  | pH units | 13.8        | °C | 0.2   | mg/L  | 0.27           | mg/L | 0.037            | mg/L  | 7    | mg/L |      |
| 11/5/2014           | 2.58    | 0.2     | mg/L | 27       | mg/L  | 76           | µS/cm | 9.76  | mg/L       | 11      | cts/100 mL | 4              | cts/100 mL | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 9.40                                  | pH units | 6.48        | °C | 0.2   | mg/L  | 0.2            | mg/L | 0.011            | mg/L  | 4    | mg/L |      |
| 2015                |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 4/13/2015           | 1.90    | 0.2     | mg/L | 21       | mg/L  | 134.9        | µS/cm | 12.27 | mg/L       | 1       | cts/100 mL | 2              | cts/100 mL | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.54                                  | pH units | 11.4        | °C | 0.2   | mg/L  | 0.2            | mg/L | 0.014            | mg/L  | 4    | mg/L |      |
| 5/7/2015            | 2.57    | 0.2     | mg/L | 34       | mg/L  | 136.8        | µS/cm | 9.82  | mg/L       | 7.4     | cts/100 mL | 12             | cts/100 mL | 0.22    | mg/L | 0.2     | mg/L | 0.22            | mg/L | 6.55                                  | pH units | 19.2        | °C | 0.378 | mg/L  | 0.6            | mg/L | 0.014            | mg/L  | 4    | mg/L |      |
| 7/16/2015           | 2.51    | 0.2     | mg/L | 39       | mg/L  | 150.6        | µS/cm | 6.62  | mg/L       | 39.9    | cts/100 mL | 58             | cts/100 mL | 0.28    | mg/L | 0.2     | mg/L | 0.28            | mg/L | 6.55                                  | pH units | 19.8        | °C | 0.77  | mg/L  | 1.05           | mg/L | 0.013            | mg/L  | 4    | mg/L |      |
| 8/6/2015            | 2.73    | 0.2     | mg/L | 42       | mg/L  | 164          | µS/cm | 5.24  | mg/L       | 98.7    | cts/100 mL | 136            | cts/100 mL | 0.29    | mg/L | 0.2     | mg/L | 0.29            | mg/L | 6.51                                  | pH units | 19.8        | °C | 0.692 | mg/L  | 0.98           | mg/L | 0.012            | mg/L  | 4    | mg/L |      |
| 8/17/2015           | 2.04    | 0.2     | mg/L | 48       | mg/L  | 164.1        | µS/cm | 4.77  | mg/L       | 125     | cts/100 mL | 142            | cts/100 mL | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.34                                  | pH units | 19.9        | °C | 0.79  | mg/L  | 1.05           | mg/L | 0.017            | mg/L  | 4    | mg/L |      |
| 9/24/2015           | 2.87    | 0.2     | mg/L | 43       | mg/L  | 147.1        | µS/cm | 5.03  | mg/L       | 225     | cts/100 mL | 70             | cts/100 mL | 0.32    | mg/L | 0.2     | mg/L | 0.32            | mg/L | 6.34                                  | pH units | 14.6        | °C | 0.481 | mg/L  | 0.8            | mg/L | 0.012            | mg/L  | 4    | mg/L |      |
| 11/5/2015           | 2.96    | 0.2     | mg/L | 39       | mg/L  | 126.7        | µS/cm |       |            | 16.1    | cts/100 mL | 10             | cts/100 mL | 0.26    | mg/L | 0.2     | mg/L | 0.26            | mg/L | 6.35                                  | pH units | 8.9         | °C | 0.459 | mg/L  | 0.72           | mg/L | 0.01             | mg/L  | 4    | mg/L |      |
| 2016                |         |         |      |          |       |              |       |       |            |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |
| 4/21/2016           | 3.14    | 0.2     | mg/L | 30       | mg/L  | 142          | µS/cm |       |            | 7.4     | cts/100 mL | 12             | cts/100 mL | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.36                                  | pH units | 14.45       | °C | 0.2   | mg/L  | 0.2            | mg/L | 0.019            | mg/L  | 7    | mg/L |      |
| 6/2/2016            | 0.2     | mg/L    | 40   | mg/L     | 153.9 | µS/cm        | 2.69  | mg/L  | 178        |         |            |                |            |         |      |         |      |                 |      |                                       |          |             |    |       |       |                |      |                  |       |      |      |      |

## 02-WCH Tributary Sampling Data 2007-2019

|            |                     |            |          |              |            |                   |                |           |           |                 |               |             |            | Laboratory Detection Limit            |                  |           |
|------------|---------------------|------------|----------|--------------|------------|-------------------|----------------|-----------|-----------|-----------------|---------------|-------------|------------|---------------------------------------|------------------|-----------|
|            |                     |            |          |              |            |                   |                |           |           |                 |               |             |            | Expected Outlier or Equipment Failure |                  |           |
| Date       | Staff Gauge Reading | Ammonia    | Chloride | Conductivity | DO         | E. coli           | Fecal Coliform | Nitrate   | Nitrite   | Nitrate/Nitrite | pH            | Temperature | TKN        | Total Nitrogen                        | Total Phosphorus | TSS       |
| 2007       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 5/30/2007  |                     | 0.348 mg/L |          |              | 9.55 mg/L  | 9.8 cts/100 mL    |                | 0.1 mg/L  |           |                 | 8.24 pH units | 13.8 °C     | 0.694 mg/L |                                       | 0.023 mg/L       | 4 mg/L    |
| 6/26/2007  |                     | 0.21 mg/L  |          | 143 µS/cm    | 9.1 mg/L   | 6.3 cts/100 mL    |                | 0.1 mg/L  |           |                 | 7.03 pH units | 16.8 °C     | 0.747 mg/L |                                       | 0.034 mg/L       | 4 mg/L    |
| 8/2/2007   |                     | 0.349 mg/L |          | 149.6 µS/cm  | 8.94 mg/L  | 30.5 cts/100 mL   |                | 0.1 mg/L  |           |                 | 6.75 pH units | 17.9 °C     | 0.93 mg/L  |                                       | 0.044 mg/L       | 4 mg/L    |
| 8/22/2007  |                     | 0.355 mg/L |          | 154.5 µS/cm  | 10.64 mg/L | 18.5 cts/100 mL   |                | 0.1 mg/L  |           |                 | 6.18 pH units | 12.4 °C     | 0.595 mg/L |                                       | 0.023 mg/L       | 10 mg/L   |
| 2008       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 1/8/2008   |                     | 0.107 mg/L |          |              |            | 4.1 cts/100 mL    |                |           |           |                 |               |             | 0.43 mg/L  |                                       | 0.023 mg/L       | 4 mg/L    |
| 5/28/2008  |                     | 0.1 mg/L   |          | 152.5 µS/cm  | 10.27 mg/L | 24 cts/100 mL     |                |           |           |                 | 6.68 pH units | 12.6 °C     | 0.25 mg/L  |                                       | 0.01 mg/L        | 4 mg/L    |
| 6/5/2008   |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 6/11/2008  |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 7/9/2008   |                     |            |          | 0.146 µS/cm  | 8.87 mg/L  | 24.6 cts/100 mL   |                |           |           |                 | 7.04 pH units | 20.9 °C     |            |                                       |                  |           |
| 8/20/2008  |                     |            |          | 131 µS/cm    |            |                   |                |           |           |                 | 6.97 pH units | 20.8 °C     |            |                                       |                  |           |
| 2010       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 5/25/2010  |                     | 0.1 mg/L   |          | 141.8 µS/cm  | 10.85 mg/L | 16.1 cts/100 mL   |                |           |           |                 | 6.79 pH units | 16 °C       | 0.5 mg/L   |                                       | 0.026 mg/L       | 4 mg/L    |
| 7/13/2010  |                     | 0.4 mg/L   |          | 162.2 µS/cm  | 7.13 mg/L  | 36.8 cts/100 mL   |                |           |           |                 | 7.12 pH units | 18.7 °C     | 0.5 mg/L   |                                       | 0.033 mg/L       | 4 mg/L    |
| 9/22/2010  |                     | 0.2 mg/L   |          | 0.31 µS/cm   |            | 6.3 cts/100 mL    |                |           |           |                 | 7.59 pH units | 13.3 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L    |
| 10/20/2010 |                     | 0.2 mg/L   |          | 0.12 µS/cm   |            | 7.3 cts/100 mL    |                |           |           |                 | 7.58 pH units | 8.3 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L    |
| 11/30/2010 |                     | 0.2 mg/L   |          | 0.09 µS/cm   |            | 2 cts/100 mL      |                |           |           |                 |               | 3.6 °C      | 0.5 mg/L   |                                       | 0.028 mg/L       | 4 mg/L    |
| 2011       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 3/30/2011  |                     | 0.2 mg/L   |          | 92.2 µS/cm   | 13.84 mg/L | 1 cts/100 mL      |                |           |           |                 | 6.99 pH units | 5.2 °C      | 0.5 mg/L   |                                       | 0.014 mg/L       | 4 mg/L    |
| 5/2/2011   |                     | 0.346 mg/L |          | 95.2 µS/cm   | 11.6 mg/L  | 53.7 cts/100 mL   |                |           |           |                 | 6.94 pH units | 13.1 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L    |
| 8/4/2011   |                     | 0.2 mg/L   |          | 150.4 µS/cm  | 10.23 mg/L | 23.3 cts/100 mL   |                |           |           |                 | 6.89 pH units | 16.9 °C     | 0.5 mg/L   |                                       | 0.021 mg/L       | 4 mg/L    |
| 8/16/2011  |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 9/14/2011  |                     | 0.2 mg/L   |          | 120.3 µS/cm  | 9.52 mg/L  | 27.5 cts/100 mL   |                |           |           |                 | 6.84 pH units | 17.7 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L    |
| 10/14/2011 |                     | 0.2 mg/L   |          | 71.6 µS/cm   | 9.59 mg/L  |                   |                |           |           |                 | 7 pH units    |             | 0.5 mg/L   |                                       | 0.016 mg/L       | 4 mg/L    |
| 11/7/2011  |                     | 0.2 mg/L   |          | 121 µS/cm    | 11.99 mg/L | 4.1 cts/100 mL    |                |           |           |                 | 6.84 pH units | 5.4 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L    |
| 12/20/2011 |                     | 0.2 mg/L   |          | 89.1 µS/cm   | 13.66 mg/L | 2 cts/100 mL      |                |           |           |                 | 6.5 pH units  | 2.7 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L    |
| 2012       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 3/28/2012  | 0.88                | 0.05 mg/L  |          | 100.3 µS/cm  | 12.23 mg/L | 1 cts/100 mL      |                |           |           |                 | 6.66 pH units | 5.2 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L    |
| 4/26/2012  | 0.80                | 0.05 mg/L  |          | 82.5 µS/cm   | 10.93 mg/L | 18.3 cts/100 mL   |                |           |           |                 | 6.75 pH units | 10.8 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L    |
| 8/2/2012   | 0.57                | 0.05 mg/L  |          | 141.5 µS/cm  | 9.2 mg/L   | 17.1 cts/100 mL   |                |           |           |                 | 6.42 pH units | 17.8 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L    |
| 8/27/2012  |                     | 0.05 mg/L  |          | 144.7 µS/cm  | 9.39 mg/L  | 18.3 cts/100 mL   |                |           |           |                 | 6.71 pH units | 16.7 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L    |
| 9/18/2012  | 1.56                | 0.05 mg/L  |          | 147.5 µS/cm  | 10.3 mg/L  | 4.1 cts/100 mL    |                |           |           |                 | 6.69 pH units | 12.7 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 10 mg/L   |
| 10/25/2012 | 0.60                | 0.05 mg/L  |          | 120.4 µS/cm  | 9.92 mg/L  | 1 cts/100 mL      |                |           |           |                 | 6.47 pH units | 9.6 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L    |
| 2013       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 4/4/2013   | 1.28                | 0.2 mg/L   | 14 mg/L  | 74 µS/cm     | 12.15 mg/L | 2 cts/100 mL      | 1 cts/100 mL   |           |           | 0.5 mg/L        | 6.49 pH units | 5.8 °C      | 0.5 mg/L   | 0.5 mg/L                              | 0.05 mg/L        | 6 mg/L    |
| 5/6/2013   | 0.76                | 0.2 mg/L   |          | 109.4 µS/cm  | 10.10 mg/L | 12.2 cts/100 mL   |                |           |           |                 | 7.21 pH units | 14.2 °C     | 0.5 mg/L   |                                       | 0.05 mg/L        | 6 mg/L    |
| 6/6/2013   |                     | 0.2 mg/L   |          | 84.6 µS/cm   | 9.28 mg/L  | 6.3 cts/100 mL    | 7 cts/100 mL   |           |           |                 | 6.87 pH units | 15.2 °C     | 0.5 mg/L   |                                       | 0.019 mg/L       | 6 mg/L    |
| 7/17/2013  | 0.61                | 0.2 mg/L   | 30 mg/L  | 129.7 µS/cm  | 12.18 mg/L | 10.8 cts/100 mL   | 6 cts/100 mL   | 0.47 mg/L | 0.2 mg/L  | 0.47 mg/L       | 6.35 pH units | 21.2 °C     | 0.5 mg/L   | 0.47 mg/L                             | 0.05 mg/L        | 6 mg/L    |
| 8/16/2013  | 0.59                | 0.2 mg/L   | 30 mg/L  | 108.9 µS/cm  | 9.43 mg/L  | 9.8 cts/100 mL    |                | 0.49 mg/L | 0.2 mg/L  | 0.49 mg/L       | 6.03 pH units | 16.3 °C     | 0.5 mg/L   | 0.49 mg/L                             | 0.02 mg/L        | 6 mg/L    |
| 9/17/2013  | 0.55                | 0.2 mg/L   | 30 mg/L  | 103.5 µS/cm  | 14.40 mg/L | 16.1 cts/100 mL   |                | 0.48 mg/L | 0.2 mg/L  | 0.48 mg/L       | 6.19 pH units | 11.5 °C     | 0.5 mg/L   | 0.48 mg/L                             | 0.02 mg/L        | 6 mg/L    |
| 10/28/2013 | 0.58                | 0.2 mg/L   | 32 mg/L  | 94.6 µS/cm   | 10.89 mg/L | 1 cts/100 mL      | 1 cts/100 mL   | 0.49 mg/L | 0.2 mg/L  | 0.49 mg/L       | 6.26 pH units | 7.8 °C      | 0.5 mg/L   | 0.49 mg/L                             | 0.022 mg/L       | 6 mg/L    |
| 2014       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 4/14/2014  | 1.28                | 0.2 mg/L   | 21 mg/L  | 70 µS/cm     |            | 3.1 cts/100 mL    | 1 cts/100 mL   | 0.22 mg/L | 0.2 mg/L  | 0.22 mg/L       |               | 11.3 °C     | 0.2 mg/L   | 0.22 mg/L                             | 0.04 mg/L        | 5 mg/L    |
| 5/9/2014   | 0.98                | 0.2 mg/L   | 26 mg/L  | 110.2 µS/cm  | 11.18 mg/L | 1 cts/100 mL      | 2 cts/100 mL   | 0.25 mg/L | 0.2 mg/L  | 0.25 mg/L       | 6.54 pH units | 13.2 °C     | 0.2 mg/L   | 0.25 mg/L                             | 0.05 mg/L        | 4 mg/L    |
| 6/11/2014  | 0.66                | 0.2 mg/L   | 34 mg/L  | 90.7 µS/cm   | 11.00 mg/L | 8.6 cts/100 mL    | 2 cts/100 mL   | 0.48 mg/L | 0.2 mg/L  | 0.48 mg/L       | 6.80 pH units | 15.2 °C     | 0.2 mg/L   | 0.48 mg/L                             | 0.034 mg/L       | 4 mg/L    |
| 7/14/2014  | 0.54                | 0.2 mg/L   | 37 mg/L  | 104.8 µS/cm  | 10.17 mg/L | 236 cts/100 mL    | 175 cts/100 mL | 0.58 mg/L | 0.2 mg/L  | 0.58 mg/L       | 7.06 pH units | 19 °C       | 0.2 mg/L   | 0.58 mg/L                             | 0.044 mg/L       | 4 mg/L    |
| 8/12/2014  | 0.51                | 0.2 mg/L   | 40 mg/L  | 105.9 µS/cm  | 11.00 mg/L | 108 cts/100 mL    | 8 cts/100 mL   | 0.62 mg/L | 0.2 mg/L  | 0.62 mg/L       | 6.55 pH units | 17 °C       | 0.2 mg/L   | 0.62 mg/L                             | 0.018 mg/L       | 4 mg/L    |
| 9/18/2014  | 0.48                | 0.2 mg/L   | 38 mg/L  | 96.6 µS/cm   | 11.92 mg/L | 8.5 cts/100 mL    | 17 cts/100 mL  | 0.6 mg/L  | 0.2 mg/L  | 0.6 mg/L        | 6.46 pH units | 12.7 °C     | 0.2 mg/L   | 0.6 mg/L                              | 0.012 mg/L       | 4 mg/L    |
| 11/5/2014  | 0.90                | 0.2 mg/L   | 26 mg/L  | 68.8 µS/cm   | 12.44 mg/L | 4.1 cts/100 mL    | 2 cts/100 mL   | 0.26 mg/L | 0.2 mg/L  | 0.26 mg/L       | 6.32 pH units | 9.4 °C      | 0.2 mg/L   | 0.26 mg/L                             | 0.01 mg/L        | 4 mg/L    |
| 2015       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 4/13/2015  | 1.48                | 0.2 mg/L   | 18 mg/L  | 142.5 µS/cm  | 13.02 mg/L | 1 cts/100 mL      | 2 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.98 pH units | 9.1 °C      | 0.2 mg/L   | 0.2 mg/L                              | 0.01 mg/L        | 4 mg/L    |
| 5/7/2015   | 0.89                | 0.2 mg/L   | 33 mg/L  | 131.5 µS/cm  | 10.72 mg/L | 5.2 cts/100 mL    | 2 cts/100 mL   | 0.3 mg/L  | 0.2 mg/L  | 0.3 mg/L        | 6.54 pH units | 16.3 °C     | 0.318 mg/L | 0.62 mg/L                             | 0.01 mg/L        | 4 mg/L    |
| 7/16/2015  | 0.60                | 0.2 mg/L   | 42 mg/L  | 146.2 µS/cm  | 10.19 mg/L | 35.9 cts/100 mL   | 40 cts/100 mL  | 0.67 mg/L | 0.2 mg/L  | 0.67 mg/L       | 6.64 pH units | 16 °C       | 0.396 mg/L | 1.07 mg/L                             | 0.01 mg/L        | 4 mg/L    |
| 8/6/2015   | 0.57                | 0.2 mg/L   | 45 mg/L  | 157.1 µS/cm  | 6.89 mg/L  | 16 cts/100 mL     | 6 cts/100 mL   | 0.64 mg/L | 0.2 mg/L  | 0.64 mg/L       | 6.56 pH units | 16 °C       | 0.475 mg/L | 1.12 mg/L                             | 1.29 mg/L        | 4 mg/L    |
| 8/27/2015  | 0.52                | 0.2 mg/L   | 46 mg/L  | 96.6 µS/cm   | 9.31 mg/L  | 29.2 cts/100 mL   | 15 cts/100 mL  | 0.61 mg/L | 0.2 mg/L  | 0.61 mg/L       | 6.69 pH units | 16.9 °C     | 0.396 mg/L | 1.01 mg/L                             | 0.01 mg/L        | 4 mg/L    |
| 9/24/2015  | 0.50                | 0.2 mg/L   | 46 mg/L  | 150 µS/cm    | 8.70 mg/L  | 13.4 cts/100 mL   | 5 cts/100 mL   | 0.64 mg/L | 0.2 mg/L  | 0.64 mg/L       | 6.53 pH units | 13.4 °C     | 0.37 mg/L  | 1.01 mg/L                             | 0.01 mg/L        | 4 mg/L    |
| 11/5/2015  | 0.56                | 0.2 mg/L   | 41 mg/L  | 130.4 µS/cm  |            | 3 cts/100 mL      | 5 cts/100 mL   | 0.46 mg/L | 0.2 mg/L  | 0.46 mg/L       | 6.39 pH units | 9.9 °C      | 0.217 mg/L | 0.68 mg/L                             | 0.01 mg/L        | 4 mg/L    |
| 2016       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 4/21/2016  | 1.52                | 0.2 mg/L   | 27 mg/L  | 127 µS/cm    |            | 4 cts/100 mL      | 5 cts/100 mL   | 0.23 mg/L | 0.2 mg/L  | 0.23 mg/L       | 6.30 pH units | 12.7 °C     | 0.2 mg/L   | 0.23 mg/L                             | 0.01 mg/L        | 4 mg/L    |
| 6/2/2016   | 1.70                | 0.2 mg/L   | 40 mg/L  | 137.9 µS/cm  | 6.71 mg/L  | 19.9 cts/100 mL   |                | 0.53 mg/L | 0.2 mg/L  | 0.53 mg/L       | 6.49 pH units | 14.2 °C     | 1.03 mg/L  | 1.56 mg/L                             | 0.018 mg/L       | 4 mg/L    |
| 6/27/2016  | 2.60                | 0.2 mg/L   | 47 mg/L  | 179.9 µS/cm  | 6.03 mg/L  | 17.3 cts/100 mL   | 33 cts/100 mL  | 0.62 mg/L | 0.2 mg/L  | 0.62 mg/L       | 6.71 pH units | 19.8 °C     | 0.203 mg/L | 0.82 mg/L                             | 0.016 mg/L       | 4 mg/L    |
| 7/28/2016  | 1.45                | 0.2 mg/L   | 50 mg/L  | 199.6 µS/cm  | 6.44 mg/L  | 43.2 cts/100 mL   | 36 cts/100 mL  | 0.5 mg/L  | 0.2 mg/L  | 0.5 mg/L        | 6.65 pH units | 21.6 °C     | 2.6 mg/L   | 3.1 mg/L                              | 0.01 mg/L        | 4 mg/L    |
| 8/25/2016  | 1.60                | 0.2 mg/L   | 47 mg/L  | 185.7 µS/cm  | 6.48 mg/L  | 82 cts/100 mL     | 30 cts/100 mL  | 0.51 mg/L | 0.2 mg/L  | 0.51 mg/L       | 6.40 pH units | 20.1 °C     | 3.97 mg/L  | 4.48 mg/L                             | 0.011 mg/L       | 4 mg/L    |
| 9/22/2016  | 1.80                | 0.2 mg/L   | 48 mg/L  | 175.2 µS/cm  | 7.24 mg/L  | 365 cts/100 mL    | 299 cts/100 mL | 0.52 mg/L | 0.2 mg/L  | 0.52 mg/L       | 6.48 pH units | 17.1 °C     | 0.311 mg/L | 0.83 mg/L                             | 0.061 mg/L       | 21 mg/L   |
| 10/19/2016 | 2.00                | 0.2 mg/L   | 49 mg/L  | 167.7 µS/cm  | 6.54 mg/L  | 21.6 cts/100 mL   | 54 cts/100 mL  | 0.37 mg/L | 0.2 mg/L  | 0.37 mg/L       | 6.50 pH units | 14.9 °C     | 0.845 mg/L | 1.22 mg/L                             | 0.038 mg/L       | 12 mg/L   |
| 2017       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 5/4/2017   | 2.09                | 0.2 mg/L   | 24 mg/L  | 87.4 µS/cm   | 9.15 mg/L  | 52.9 cts/100 mL   | 32 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.98 pH units | 13.9 °C     | 0.506 mg/L | 0.51 mg/L                             | 0.013 mg/L       | 4 mg/L    |
| 6/14/2017  | 1.65                | 0.2 mg/L   | 39 mg/L  | 145.8 µS/cm  | 7.34 mg/L  | 6.3 cts/100 mL    | 13 cts/100 mL  | 0.37 mg/L | 0.2 mg/L  | 0.37 mg/L       | 6.54 pH units | 18.6 °C     | 0.576 mg/L | 0.95 mg/L                             | 0.010 mg/L       | 4 mg/L    |
| 7/6/2017   | 1.39                | 0.2 mg/L   | 51 mg/L  | 184.2 µS/cm  | 8.21 mg/L  | 32.7 cts/100 mL   | 24 cts/100 mL  | 0.62 mg/L | 0.2 mg/L  | 0.62 mg/L       | 6.34 pH units | 17.7 °C     | 0.576 mg/L | 0.58 mg/L                             | 0.017 mg/L       | 4 mg/L    |
| 8/22/2017  | 1.22                | 0.2 mg/L   | 50 mg/L  |              |            | 37.9 cts/100 mL   | 39 cts/100 mL  | 0.54 mg/L | 0.2 mg/L  | 0.54 mg/L       |               |             | 0.2 mg/L   | 0.54 mg/L                             |                  | 4 mg/L    |
| 9/20/2017  | 1.90                | 0.2 mg/L   | 51 mg/L  |              |            | 28.5 cts/100 mL   | 23 cts/100 mL  | 0.66 mg/L | 0.2 mg/L  | 0.66 mg/L       |               |             | 0.2 mg/L   | 0.66 mg/L                             |                  | 4 mg/L    |
| 10/19/2017 | 0.80                | 0.2 mg/L   | 48 mg/L  | 146 µS/cm    | 9.70 mg/L  | 16.9 cts/100 mL   | 194 cts/100 mL | 0.59 mg/L | 0.2 mg/L  | 0.59 mg/L       | 6.10 pH units | 11.6 °C     | 0.315 mg/L | 0.9 mg/L                              | 0.010 mg/L       | 4 mg/L    |
| 11/15/2017 | 1.02                | 0.2 mg/L   | 29 mg/L  | 80.5 µS/cm   | 13.52 mg/L | 25.1 cts/100 mL   | 4 cts/100 mL   | 0.28 mg/L | 0.2 mg/L  | 0.28 mg/L       | 6.13 pH units | 5.3 °C      | 0.315 mg/L | 0.6 mg/L                              | 0.010 mg/L       | 4 mg/L    |
| 2018       |                     |            |          |              |            |                   |                |           |           |                 |               |             |            |                                       |                  |           |
| 4/24/2018  | 1.30                | 0.2 mg/L   | 27 mg/L  | 111.9 µS/cm  | 10.90 mg/L | 8.5 cts/100 mL    | 11 cts/100 mL  | 0.22 mg/L | 0.2 mg/L  | 0.22 mg/L       | 6.66 pH units | 11.9 °C     | 1.85 mg/L  | 2.07 mg/L                             | 0.013 mg/L       | 4 mg/L    |
| 5/30/2018  | 0.83                | 0.92 mg/L  | 45 mg/L  | 178 µS/cm    | 7.91 mg/L  | 8 cts/100 mL      | 2 cts/100 mL   | 0.54 mg/L | 0.2 mg/L  | 0.54 mg/L       | 5.81 pH units | 16.4 °C     | 1.43 mg/L  | 2.89 mg/L                             | 0.026 mg/L       | 4 mg/L    |
| 7/12/2018  | 0.90                | 0.2 mg/L   | 57 mg/L  | 190.8 µS/cm  | 10.83 mg/L | 28.8 cts/100 mL   | 22 cts/100 mL  | 0.79 mg/L | 0.38 mg/L | 1.17 mg/L       | 7.15 pH units | 18.5 °C     | 0.717 mg/L | 1.89 mg/L                             | 0.018 mg/L       | 4 mg/L    |
| 8/16/2018  | 1.25                | 0.2 mg/L   | 27 mg/L  | 17.1 µS/cm   | 12.67 mg/L | 66.3 cts/100 mL   | 44 cts/100 mL  | 0.23 mg/L | 0.2 mg/L  | 0.23 mg/L       | 6.98 pH units | 20.9 °C     | 0.23 mg/L  | 0.97 mg/L                             | 0.027 mg/L       | 5 mg/L    |
| 9/5/2018   | 0.75                | 0.2 mg/L   | 47 mg/L  | 89.9 µS/cm   | 12.20 mg/L | 9.1 cts/100 mL    | 61 cts/100 mL  | 0.46 mg/L | 0.2 mg/L  | 0.66 mg/L       | 7.01 pH units | 19.9 °C     | 1.41 mg/L  | 2.06 mg/L                             | 0.012 mg/L       | 7.65 mg/L |
| 10/10/2018 | 1.60                | 0.2 mg/L   | 25 mg/L  | 109.6 µS/cm  | 10.20 mg/L | 20.1 cts/100 mL</ |                |           |           |                 |               |             |            |                                       |                  |           |

## 09-PEN Tributary Sampling Data 2007-2019

| 09-PEN Tributary Sampling Data 2007-2019 |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            | Laboratory Detection Limit            |                  |         |  |
|------------------------------------------|---------------------|------------|----------|--------------|------------|------------------|-----------------|----------|----------|-----------------|---------------|-------------|------------|---------------------------------------|------------------|---------|--|
|                                          |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            | Expected Outlier or Equipment Failure |                  |         |  |
| Date                                     | Staff Gauge Reading | Ammonia    | Chloride | Conductivity | DO         | E. coli          | Fecal Coliform  | Nitrate  | Nitrite  | Nitrate/Nitrite | pH            | Temperature | TKN        | Total Nitrogen                        | Total Phosphorus | TSS     |  |
| 2007                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 5/30/2007                                |                     | 0.1 mg/L   |          |              | 6.20 mg/L  | 45.7 cts/100 mL  |                 |          |          |                 | 6.78 pH units | 22.1 °C     | 0.496 mg/L |                                       | 0.033 mg/L       | 4 mg/L  |  |
| 6/26/2007                                |                     | 0.1 mg/L   |          | 192 µS/cm    | 7.69 mg/L  | 37.9 cts/100 mL  |                 |          |          |                 | 6.70 pH units | 24.8 °C     | 0.556 mg/L |                                       | 0.041 mg/L       | 6 mg/L  |  |
| 8/2/2007                                 |                     | 0.253 mg/L |          | 203.22 µS/cm | 6.26 mg/L  | 25.9 cts/100 mL  |                 |          |          |                 | 6.74 pH units | 25.6 °C     | 0.576 mg/L |                                       | 0.033 mg/L       | 4 mg/L  |  |
| 8/22/2007                                |                     | 0.1 mg/L   |          | 242 µS/cm    | 8.21 mg/L  | 105.8 cts/100 mL |                 |          |          |                 | 6.66 pH units | 17.9 °C     | 0.572 mg/L |                                       | 0.025 mg/L       | 4 mg/L  |  |
| 2008                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 1/8/2008                                 |                     | 0.152 mg/L |          |              |            | 10.8 cts/100 mL  |                 |          |          |                 |               |             | 0.781 mg/L |                                       | 0.05 mg/L        | 16 mg/L |  |
| 5/28/2008                                |                     | 0.127 mg/L |          | 204.2 µS/cm  | 7.33 mg/L  | 45.7 cts/100 mL  |                 |          |          |                 | 6.74 pH units | 18.9 °C     | 0.305 mg/L |                                       | 0.039 mg/L       | 4 mg/L  |  |
| 6/5/2008                                 |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 6/11/2008                                |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 7/9/2008                                 |                     |            |          | 160 µS/cm    | 6.84 mg/L  | 44.8 cts/100 mL  |                 |          |          |                 | 6.59 pH units | 26.3 °C     |            |                                       |                  |         |  |
| 8/20/2008                                |                     |            |          |              |            |                  |                 |          |          |                 | 6.36 pH units | 16.7 °C     |            |                                       |                  |         |  |
| 2010                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 5/25/2010                                |                     | 0.316 mg/L |          | 186.6 µS/cm  | 7.43 mg/L  | 52.9 cts/100 mL  |                 |          |          |                 | 6.72 pH units | 21.5 °C     | 0.641 mg/L |                                       | 0.037 mg/L       | 4 mg/L  |  |
| 7/13/2010                                |                     | 0.4 mg/L   |          | 361 µS/cm    | 7.61 mg/L  | 19.9 cts/100 mL  |                 |          |          |                 | 7.1 pH units  | 25 °C       | 0.5 mg/L   |                                       | 0.043 mg/L       | 4 mg/L  |  |
| 9/22/2010                                |                     | 0.2 mg/L   |          |              |            | 8.4 cts/100 mL   |                 |          |          |                 | 7.72 pH units | 17.6 °C     | 0.5 mg/L   |                                       | 0.023 mg/L       | 4 mg/L  |  |
| 10/20/2010                               |                     | 0.2 mg/L   |          | 0.2 µS/cm    |            | 25.9 cts/100 mL  |                 |          |          |                 | 7.06 pH units | 9.1 °C      | 0.5 mg/L   |                                       | 0.016 mg/L       | 4 mg/L  |  |
| 11/30/2010                               |                     | 0.2 mg/L   |          | 0.21 µS/cm   |            | 12.2 cts/100 mL  |                 |          |          |                 | 6.92 pH units | 2 °C        | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |  |
| 2011                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 3/30/2011                                |                     | 0.2 mg/L   |          | 153.5 µS/cm  | 10.85 mg/L | 16.1 cts/100 mL  |                 |          |          |                 | 6.7 pH units  | 5 °C        | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |  |
| 5/2/2011                                 |                     | 0.529 mg/L |          | 160.9 µS/cm  | 7.27 mg/L  | 23.3 cts/100 mL  |                 |          |          |                 | 6.67 pH units | 15 °C       | 0.5 mg/L   |                                       | 0.011 mg/L       | 4 mg/L  |  |
| 8/4/2011                                 |                     | 0.2 mg/L   |          | 258 µS/cm    | 5.3 mg/L   | 18.3 cts/100 mL  |                 |          |          |                 | 6.79 pH units | 23.3 °C     | 0.5 mg/L   |                                       | 0.026 mg/L       | 4 mg/L  |  |
| 8/16/2011                                |                     | 0.448 mg/L |          | 242 µS/cm    | 8.81 mg/L  |                  |                 |          |          |                 | 7 pH units    |             | 0.5 mg/L   |                                       | 0.012 mg/L       | 4 mg/L  |  |
| 9/14/2011                                |                     | 0.2 mg/L   |          | 142.9 µS/cm  | 3.51 mg/L  | 49.5 cts/100 mL  |                 |          |          |                 | 6.73 pH units | 21.6 °C     | 0.5 mg/L   |                                       | 0.02 mg/L        | 4 mg/L  |  |
| 10/14/2011                               |                     | 0.498 mg/L |          | 152 µS/cm    | 8.83 mg/L  |                  |                 |          |          |                 | 7 pH units    |             | 0.5 mg/L   |                                       | 0.016 mg/L       | 4 mg/L  |  |
| 11/7/2011                                |                     | 0.2 mg/L   |          | 88.7 µS/cm   | 9.82 mg/L  | 12.1 cts/100 mL  |                 |          |          |                 | 6.34 pH units | 5.9 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |  |
| 12/20/2011                               |                     | 0.2 mg/L   |          | 137.3 µS/cm  | 10.85 mg/L | 7.5 cts/100 mL   |                 |          |          |                 | 6.75 pH units | 1.2 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |  |
| 2012                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 3/28/2012                                | 0.31                | 0.05 mg/L  |          | 170.3 µS/cm  | 10.75 mg/L | 28.8 cts/100 mL  |                 |          |          |                 | 6.95 pH units | 6.5 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |  |
| 4/28/2012                                | 0.45                | 0.05 mg/L  |          | 117.6 µS/cm  | 7.07 mg/L  | 27.2 cts/100 mL  |                 |          |          |                 | 6.41 pH units | 11.8 °C     | 0.5 mg/L   |                                       | 0.04 mg/L        | 5 mg/L  |  |
| 8/2/2012                                 | 0.09                | 0.05 mg/L  |          | 370 µS/cm    | 3.18 mg/L  | 9.8 cts/100 mL   |                 |          |          |                 | 6.58 pH units | 23.9 °C     | 0.5 mg/L   |                                       | 0.054 mg/L       | 5 mg/L  |  |
| 8/27/2012                                |                     | 0.09 mg/L  |          | 273 µS/cm    | 4.35 mg/L  | 6.3 cts/100 mL   |                 |          |          |                 | 6.65 pH units | 22.3 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |  |
| 9/18/2012                                | 0.05                | 0.05 mg/L  |          | 390 µS/cm    | 6.1 mg/L   | 8.6 cts/100 mL   |                 |          |          |                 | 6.31 pH units | 17.1 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 21 mg/L |  |
| 10/25/2012                               | 0.15                | 0.05 mg/L  |          | 217.1 µS/cm  | 7.31 mg/L  | 21.1 cts/100 mL  |                 |          |          |                 | 6.52 pH units | 11.4 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |  |
| 2013                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 4/4/2013                                 | 0.46                | 0.2 mg/L   | 27 mg/L  | 127.3 µS/cm  | 10.09 mg/L | 18.7 cts/100 mL  | 6 cts/100 mL    |          |          | 0.5 mg/L        | 6.56 pH units | 4.7 °C      | 0.5 mg/L   | 0.5 mg/L                              | 0.05 mg/L        | 6 mg/L  |  |
| 5/6/2013                                 | 0.30                | 0.365 mg/L |          | 195.9 µS/cm  | 7.26 mg/L  | 52 cts/100 mL    | 22 cts/100 mL   |          |          |                 | 7.11 pH units | 20.1 °C     | 0.5 mg/L   |                                       | 0.06 mg/L        | 6 mg/L  |  |
| 6/6/2013                                 | 0.25                | 0.2 mg/L   |          | 138.5 µS/cm  | 5.36 mg/L  | 49.6 cts/100 mL  | 48 cts/100 mL   |          |          |                 | 6.42 pH units | 21.2 °C     | 0.5 mg/L   |                                       | 0.0304 mg/L      | 6 mg/L  |  |
| 7/17/2013                                | 0.30                | 0.2 mg/L   | 41 mg/L  | 188.2 µS/cm  | 2.40 mg/L  | 34.5 cts/100 mL  | 70 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.64 pH units | 26.4 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.056 mg/L       | 6 mg/L  |  |
| 8/16/2013                                | 0.35                | 0.2 mg/L   | 38 mg/L  | 141.7 µS/cm  | 3.49 mg/L  | 52.8 cts/100 mL  | 260 cts/100 mL  | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.59 pH units | 19.6 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.02 mg/L        | 6 mg/L  |  |
| 9/10/2013                                | 0.18                | 0.2 mg/L   | 71 mg/L  | 226 µS/cm    | 8.75 mg/L  | 21.3 cts/100 mL  | 48 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.84 pH units | 17.8 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.022 mg/L       | 6 mg/L  |  |
| 10/28/2013                               | 0.20                | 0.1 mg/L   | 68 mg/L  | 179.5 µS/cm  | 9.16 mg/L  | 18.7 cts/100 mL  | 15 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.58 pH units | 7.7 °C      | 0.5 mg/L   | 0.2 mg/L                              | 0.052 mg/L       | 6 mg/L  |  |
| 2014                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 4/4/2014                                 | 0.54                | 0.2 mg/L   | 33 mg/L  | 150 µS/cm    |            | 27.8 cts/100 mL  | 26 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.66 pH units | 12 °C       | 0.2 mg/L   | 0.2 mg/L                              | 0.038 mg/L       | 4 mg/L  |  |
| 5/8/2014                                 | 0.42                | 0.2 mg/L   | 38 mg/L  | 169.1 µS/cm  | 7.63 mg/L  | 24.9 cts/100 mL  | 38 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.06 pH units | 13.9 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.02 mg/L        | 4 mg/L  |  |
| 6/11/2014                                | 0.15                | 0.2 mg/L   | 55 mg/L  | 144.6 µS/cm  | 5.98 mg/L  | 38.8 cts/100 mL  | 52 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.20 pH units | 21 °C       | 0.2 mg/L   | 0.2 mg/L                              | 0.027 mg/L       | 4 mg/L  |  |
| 7/14/2014                                | 0.24                | 0.2 mg/L   | 53 mg/L  | 157.5 µS/cm  | 4.49 mg/L  | 16.1 cts/100 mL  | 9 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.98 pH units | 25 °C       | 0.992 mg/L | 0.99 mg/L                             | 0.061 mg/L       | 4 mg/L  |  |
| 8/12/2014                                | 0.15                | 0.2 mg/L   | 70 mg/L  | 185.2 µS/cm  | 5.55 mg/L  | 10.7 cts/100 mL  | 16 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.00 pH units | 22.9 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.013 mg/L       | 4 mg/L  |  |
| 9/18/2014                                | 0.18                | 0.2 mg/L   | 81 mg/L  | 198.8 µS/cm  | 6.87 mg/L  | 21.1 cts/100 mL  | 67 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.95 pH units | 14.8 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.021 mg/L       | 4 mg/L  |  |
| 11/5/2014                                | 0.32                | 0.2 mg/L   | 46 mg/L  | 109.6 µS/cm  | 9.91 mg/L  | 35.9 cts/100 mL  | 18 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.54 pH units | 7.3 °C      | 0.2 mg/L   | 0.2 mg/L                              | 0.017 mg/L       | 4 mg/L  |  |
| 2015                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 4/13/2015                                | 0.80                | 0.2 mg/L   | 31 mg/L  | 139.7 µS/cm  | 9.61 mg/L  | 15.6 cts/100 mL  | 10 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.25 pH units | 9.3 °C      | 0.976 mg/L | 0.98 mg/L                             | 0.01 mg/L        | 4 mg/L  |  |
| 5/7/2015                                 | 0.44                | 0.2 mg/L   | 47 mg/L  | 196.1 µS/cm  | 6.63 mg/L  | 152 cts/100 mL   | 116 cts/100 mL  | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.52 pH units | 18.4 °C     | 0.597 mg/L | 0.6 mg/L                              | 0.028 mg/L       | 4 mg/L  |  |
| 7/16/2015                                | 0.22                | 0.2 mg/L   | 54 mg/L  | 231.8 µS/cm  | 2.44 mg/L  | 21.6 cts/100 mL  | 46 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.74 pH units | 23.5 °C     | 0.617 mg/L | 0.617 mg/L                            | 0.027 mg/L       | 4 mg/L  |  |
| 8/6/2015                                 | 0.15                | 0.2 mg/L   | 76 mg/L  | 316.3 µS/cm  | 2.20 mg/L  | 4 mg/L           | 190 cts/100 mL  | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.60 pH units | 23.6 °C     | 0.967 mg/L | 0.97 mg/L                             | 0.314 mg/L       | 4 mg/L  |  |
| 8/27/2015                                | 0.08                | 0.2 mg/L   | 85 mg/L  | 349.1 µS/cm  | 3.16 mg/L  | 5.2 cts/100 mL   | 5 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.80 pH units | 22.9 °C     | 0.495 mg/L | 0.5 mg/L                              | 0.016 mg/L       | 4 mg/L  |  |
| 9/24/2015                                | 0.05                | 0.2 mg/L   | 96 mg/L  | 330.5 µS/cm  | 4.05 mg/L  | 7.4 cts/100 mL   | 30 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.56 pH units | 17 °C       | 0.503 mg/L | 0.5 mg/L                              | 0.018 mg/L       | 4 mg/L  |  |
| 11/5/2015                                | 0.18                | 0.2 mg/L   | 64 mg/L  | 194.1 µS/cm  |            | 7.5 cts/100 mL   | 15 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.94 pH units | 9.2 °C      | 0.039 mg/L | 0.039 mg/L                            | 0.01 mg/L        | 4 mg/L  |  |
| 2016                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 4/21/2016                                |                     | 0.2 mg/L   | 48 mg/L  |              |            | 13.5 cts/100 mL  | 32 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        |               |             | 0.562 mg/L | 0.56 mg/L                             | 0.014 mg/L       | 4 mg/L  |  |
| 6/2/2016                                 | 0.14                | 0.2 mg/L   | 65 mg/L  | 272.1 µS/cm  | 3.54 mg/L  | 4.3 cts/100 mL   | 0.2 mg/L        | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.88 pH units | 21.3 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.018 mg/L       | 4 mg/L  |  |
| 6/27/2016                                | 0.04                | 0.2 mg/L   | 84 mg/L  | 370.7 µS/cm  | 5.11 mg/L  | 6.3 cts/100 mL   | 6 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.20 pH units | 25.4 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.025 mg/L       | 4 mg/L  |  |
| 7/28/2016                                | 0.06                | 0.2 mg/L   | 145 mg/L | 616 µS/cm    | 3.79 mg/L  | 6.3 cts/100 mL   | 5 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.92 pH units | 25.9 °C     | 0.589 mg/L | 0.59 mg/L                             | 0.015 mg/L       | 4 mg/L  |  |
| 8/25/2016                                | 0.04                | 0.2 mg/L   | 131 mg/L | 536 µS/cm    | 4.73 mg/L  | 11 cts/100 mL    | 15 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.68 pH units | 23.2 °C     | 0.635 mg/L | 0.64 mg/L                             | 0.018 mg/L       | 5 mg/L  |  |
| 9/22/2016                                | 0.05                | 0.2 mg/L   | 144 mg/L | 546 µS/cm    | 3.75 mg/L  | 9.7 cts/100 mL   | 4 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.79 pH units | 20.6 °C     | 0.45 mg/L  | 0.45 mg/L                             | 0.014 mg/L       | 4 mg/L  |  |
| 10/19/2016                               | 0.10                | 0.2 mg/L   | 142 mg/L | 450.2 µS/cm  | 6.84 mg/L  | 15.6 cts/100 mL  | 23 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.21 pH units | 13.6 °C     | 0.548 mg/L | 0.55 mg/L                             | 0.011 mg/L       | 4 mg/L  |  |
| 2017                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 5/4/2017                                 | 0.45                | 0.2 mg/L   | 41 mg/L  | 142.3 µS/cm  | 5.97 mg/L  | 50.4 cts/100 mL  | 57 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.96 pH units | 13.5 °C     | 0.623 mg/L | 0.62 mg/L                             | 0.013 mg/L       | 4 mg/L  |  |
| 6/14/2017                                | 0.44                | 0.2 mg/L   | 42 mg/L  | 260.7 µS/cm  | 1.53 mg/L  | 44.8 cts/100 mL  | 57 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.95 pH units | 24.8 °C     | 0.731 mg/L | 0.73 mg/L                             | 0.023 mg/L       | 4 mg/L  |  |
| 7/7/2017                                 | 0.28                | 0.2 mg/L   | 55 mg/L  | 241.4 µS/cm  | 2.98 mg/L  | 30.9 cts/100 mL  | 38 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.75 pH units | 24.5 °C     | 0.576 mg/L | 0.58 mg/L                             | 0.019 mg/L       | 4 mg/L  |  |
| 8/22/2017                                | 0.23                | 0.2 mg/L   | 65 mg/L  |              |            | 49.6 cts/100 mL  | 53 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        |               |             | 1.16 mg/L  | 1.16 mg/L                             | 0.017 mg/L       | 4 mg/L  |  |
| 9/27/2017                                | 0.10                | 0.2 mg/L   | 84 mg/L  |              |            |                  | 24 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        |               |             | 0.315 mg/L | 0.32 mg/L                             | 0.014 mg/L       | 4 mg/L  |  |
| 10/18/2017                               | 0.19                | 0.2 mg/L   | 77 mg/L  | 238 µS/cm    | 6.37 mg/L  | 85.2 cts/100 mL  | 75 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.41 pH units | 12.7 °C     | 0.428 mg/L | 0.43 mg/L                             | 0.018 mg/L       | 4 mg/L  |  |
| 11/15/2017                               | 0.31                | 0.2 mg/L   | 51 mg/L  | 130.8 µS/cm  | 10.55 mg/L | 62 cts/100 mL    | 35 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.39 pH units | 3.7 °C      | 0.541 mg/L | 0.54 mg/L                             | 0.013 mg/L       | 4 mg/L  |  |
| 2018                                     |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                                       |                  |         |  |
| 4/24/2018                                | 0.55                | 0.2 mg/L   | 42 mg/L  | 175.3 µS/cm  | 8.13 mg/L  | 21.6 cts/100 mL  | 46 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.75 pH units | 12 °C       | 0.57 mg/L  | 0.57 mg/L                             | 0.035 mg/L       | 4 mg/L  |  |
| 5/30/2018                                | 0.28                | 0.2 mg/L   | 58 mg/L  | 250.7 µS/cm  | 4.70 mg/L  | 62 cts/100 mL    | 79.4 cts/100 mL | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.12 pH units | 22.7 °C     | 0.864 mg/L | 0.86 mg/L                             | 0.041 mg/L       | 4 mg/L  |  |
| 7/12/2018                                | 0.10                | 0.2 mg/L   | 76 mg/L  | 315.5 µS/cm  | 5.66 mg/L  | 15.8 cts/100 mL  | 26 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 9.01 pH units | 23.9 °C     | 0.927 mg/L | 0.93 mg/L                             | 0.037 mg/L       | 9 mg/L  |  |
| 8/16/2018                                | 0.46                | 0.2 mg/L   | 40 mg/L  | 179.3 µS/cm  | 3.60 mg/L  | 45.9 cts/100 mL  | 49 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.28 pH units | 23.5 °C     | 1.33 mg/L  | 1.33 mg/L                             | 0.027 mg/L       | 4 mg/L  |  |
| 9/6/2018                                 | 0.04                | 0.2 mg/L   | 62 mg/L  | 516 µS/cm    | 5.16 mg/L  | 32.7 cts/100 mL  | 32 c            |          |          |                 |               |             |            |                                       |                  |         |  |

09T-PEN Tributary Sampling Data 2007-2019

| 09T-99T Tributary Sampling Data 2007-2019 |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            | Laboratory Detection Limit |                  |          |  |
|-------------------------------------------|---------------------|------------|----------|--------------|------------|------------------|-----------------|----------|----------|-----------------|---------------|-------------|------------|----------------------------|------------------|----------|--|
| Date                                      | Staff Gauge Reading | Ammonia    | Chloride | Conductivity | DO         | E. coli          | Fecal Coliform  | Nitrate  | Nitrite  | Nitrate/Nitrite | pH            | Temperature | TKN        | Total Nitrogen             | Total Phosphorus | TSS      |  |
| 2007                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 5/30/2007                                 |                     | 0.1 mg/L   |          |              | 3.42 mg/L  | 33.1 cts/100 mL  |                 |          |          |                 | 6.47 pH units | 19.7 °C     | 0.637 mg/L |                            | 0.031 mg/L       | 4 mg/L   |  |
| 6/05/2007                                 |                     | 0.1 mg/L   |          | 159 µS/cm    | 4.33 mg/L  | 103.6 cts/100 mL |                 |          |          |                 | 6.43 pH units | 22.9 °C     | 0.819 mg/L |                            | 0.025 mg/L       | 6 mg/L   |  |
| 8/2/2007                                  |                     | 0.243 mg/L |          | 174 µS/cm    | 1.23 mg/L  | 45 cts/100 mL    |                 |          |          |                 | 6.36 pH units | 23.4 °C     | 0.883 mg/L |                            | 0.033 mg/L       | 4 mg/L   |  |
| 8/22/2007                                 |                     | 0.333 mg/L |          | 209.36 µS/cm | 3.31 mg/L  | 64 cts/100 mL    |                 |          |          |                 | 6.26 pH units | 16.8 °C     | 1.08 mg/L  |                            | 0.03 mg/L        | 4 mg/L   |  |
| 2008                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 1/8/2008                                  |                     | 0.198 mg/L |          |              |            | 83.6 cts/100 mL  |                 |          |          |                 |               |             | 3.66 mg/L  |                            | 0.318 mg/L       | 546 mg/L |  |
| 5/28/2008                                 |                     | 0.184 mg/L |          | 185.3 µS/cm  | 5.22 mg/L  | 70.6 cts/100 mL  |                 |          |          |                 | 6.4 pH units  | 17.6 °C     | 0.28 mg/L  |                            | 0.024 mg/L       | 4 mg/L   |  |
| 6/5/2008                                  |                     | 0.291 mg/L |          |              |            |                  |                 |          |          |                 |               |             | 0.815 mg/L |                            | 0.021 mg/L       | 4 mg/L   |  |
| 6/11/2008                                 |                     | 0.313 mg/L |          |              |            |                  |                 |          |          |                 |               |             | 0.815 mg/L |                            | 0.018 mg/L       | 4 mg/L   |  |
| 7/9/2008                                  |                     |            |          | 8.4 µS/cm    | 3.49 mg/L  | 95.9 cts/100 mL  |                 |          |          |                 | 6.25 pH units | 25.5 °C     |            |                            |                  |          |  |
| 8/20/2008                                 |                     |            |          | 103 µS/cm    |            |                  |                 |          |          |                 | 6.58 pH units | 15.8 °C     |            |                            |                  |          |  |
| 2010                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 5/29/2010                                 |                     | 0.1 mg/L   |          | 171.2 µS/cm  | 5.71 mg/L  | 28.8 cts/100 mL  |                 |          |          |                 | 6.54 pH units |             | 0.5 mg/L   |                            | 0.034 mg/L       | 4 mg/L   |  |
| 7/13/2010                                 |                     | 0.4 mg/L   |          | 251 µS/cm    | 1.39 mg/L  | 75.9 cts/100 mL  |                 |          |          |                 | 6.67 pH units | 23.8 °C     | 0.5 mg/L   |                            | 0.062 mg/L       | 4 mg/L   |  |
| 9/22/2010                                 |                     | 0.2 mg/L   |          | 0.78 µS/cm   |            | 146.7 cts/100 mL |                 |          |          |                 | 7.14 pH units | 17.1 °C     | 0.5 mg/L   |                            | 0.031 mg/L       | 4 mg/L   |  |
| 10/20/2010                                |                     | 0.2 mg/L   |          | 0.15 µS/cm   |            | 25.3 cts/100 mL  |                 |          |          |                 | 7.51 pH units | 8.5 °C      | 0.5 mg/L   |                            | 0.024 mg/L       | 4 mg/L   |  |
| 11/30/2010                                |                     | 0.2 mg/L   |          | 0.17 µS/cm   |            | 28.1 cts/100 mL  |                 |          |          |                 | 5.8 pH units  | 2.4 °C      | 0.5 mg/L   |                            | 0.022 mg/L       | 4 mg/L   |  |
| 2011                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 3/30/2011                                 |                     | 0.2 mg/L   |          | 137.6 µS/cm  | 10.72 mg/L | 1 cts/100 mL     |                 |          |          |                 | 6.34 pH units | 5.1 °C      | 0.5 mg/L   |                            | 0.01 mg/L        | 4 mg/L   |  |
| 5/2/2011                                  |                     | 0.297 mg/L |          | 142 µS/cm    | 8.61 mg/L  | 17.3 cts/100 mL  |                 |          |          |                 | 6.68 pH units | 16.1 °C     | 0.5 mg/L   |                            | 0.016 mg/L       | 4 mg/L   |  |
| 8/4/2011                                  |                     | 0.2 mg/L   |          | 193.9 µS/cm  | 2.88 mg/L  | 39.3 cts/100 mL  |                 |          |          |                 | 6.47 pH units | 23 °C       | 0.5 mg/L   |                            | 0.041 mg/L       | 4 mg/L   |  |
| 8/16/2011                                 |                     | 0.2 mg/L   |          | 164.9 µS/cm  | 4.77 mg/L  |                  |                 |          |          |                 | 6 pH units    |             | 0.5 mg/L   |                            | 0.01 mg/L        | 4 mg/L   |  |
| 9/14/2011                                 |                     | 0.2 mg/L   |          | 130.2 µS/cm  | 2.02 mg/L  | 25.6 cts/100 mL  |                 |          |          |                 | 6.4 pH units  | 21.5 °C     | 0.5 mg/L   |                            | 0.03 mg/L        | 4 mg/L   |  |
| 10/14/2011                                |                     |            |          |              |            |                  |                 | No Data  |          |                 |               |             |            |                            |                  |          |  |
| 11/7/2011                                 |                     | 0.2 mg/L   |          | 75.9 µS/cm   | 8.4 mg/L   | 3.1 cts/100 mL   |                 |          |          |                 | 6.09 pH units | 5 °C        | 0.5 mg/L   |                            | 0.01 mg/L        | 4 mg/L   |  |
| 12/20/2011                                |                     | 0.2 mg/L   |          | 127 µS/cm    | 10.76 mg/L | 1 cts/100 mL     |                 |          |          |                 | 6.46 pH units | 1.3 °C      | 0.5 mg/L   |                            | 0.01 mg/L        | 4 mg/L   |  |
| 2012                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 3/28/2012                                 | 4.00                | 0.05 mg/L  |          | 144 µS/cm    | 8.48 mg/L  | 24.9 cts/100 mL  |                 |          |          |                 | 6.05 pH units | 6.2 °C      | 0.5 mg/L   |                            | 0.01 mg/L        | 5 mg/L   |  |
| 4/28/2012                                 | 2.90                | 0.05 mg/L  |          | 109 µS/cm    | 7.04 mg/L  | 7.4 cts/100 mL   |                 |          |          |                 | 6.29 pH units | 12.7 °C     | 0.5 mg/L   |                            | 0.02 mg/L        | 5 mg/L   |  |
| 8/2/2012                                  | 1.68                | 0.05 mg/L  |          | 310 µS/cm    | 1.45 mg/L  | 228.2 cts/100 mL |                 |          |          |                 | 6.19 pH units | 22.2 °C     | 0.5 mg/L   |                            | 0.016 mg/L       | 5 mg/L   |  |
| 8/27/2012                                 |                     | 0.05 mg/L  |          | 264 µS/cm    | 2.36 mg/L  | 90.8 cts/100 mL  |                 |          |          |                 | 6.43 pH units | 20.3 °C     | 0.7 mg/L   |                            | 0.02 mg/L        | 5 mg/L   |  |
| 9/18/2012                                 | 1.59                | 0.05 mg/L  |          | 366 µS/cm    | 2.93 mg/L  | 88.2 cts/100 mL  |                 |          |          |                 | 6.35 pH units | 15 °C       | 0.5 mg/L   |                            | 0.01 mg/L        | 5 mg/L   |  |
| 10/25/2012                                | 1.92                | 0.05 mg/L  |          | 179.2 µS/cm  | 5.91 mg/L  | 8.6 cts/100 mL   |                 |          |          |                 | 6.1 pH units  | 10.1 °C     | 0.5 mg/L   |                            | 0.02 mg/L        | 5 mg/L   |  |
| 2013                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 4/4/2013                                  | 3.00                | 0.2 mg/L   | 24 mg/L  | 115.3 µS/cm  | 9.73 mg/L  | 4.1 cts/100 mL   | 3 cts/100 mL    |          |          | 0.5 mg/L        | 6.22 pH units | 5.1 °C      | 0.5 mg/L   | 0.5 mg/L                   | 0.05 mg/L        | 6 mg/L   |  |
| 5/6/2013                                  | 2.24                | 0.2 mg/L   |          | 163.1 µS/cm  | 8.53 mg/L  | 21.3 cts/100 mL  | 12 cts/100 mL   |          |          |                 | 6.95 pH units | 20 °C       | 0.5 mg/L   |                            | 0.01 mg/L        | 6 mg/L   |  |
| 6/6/2013                                  | 2.22                | 0.2 mg/L   |          | 116.3 µS/cm  | 4.05 mg/L  | 47.1 cts/100 mL  | 100 cts/100 mL  |          |          |                 | 5.95 pH units | 20.1 °C     | 0.5 mg/L   |                            | 0.0254 mg/L      | 6 mg/L   |  |
| 7/17/2013                                 | 2.59                | 0.2 mg/L   | 35 mg/L  | 166.9 µS/cm  | 0.91 mg/L  | 46.5 cts/100 mL  | 100 cts/100 mL  | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.15 pH units | 25.6 °C     | 0.5 mg/L   | 0.2 mg/L                   | 0.079 mg/L       | 7 mg/L   |  |
| 8/16/2013                                 | 2.54                | 0.2 mg/L   | 33 mg/L  | 128 µS/cm    | 2.72 mg/L  | 75.9 cts/100 mL  | 240 cts/100 mL  | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.23 pH units | 19.3 °C     | 0.5 mg/L   | 0.2 mg/L                   | 0.02 mg/L        | 6 mg/L   |  |
| 9/10/2013                                 | 1.63                | 0.2 mg/L   | 59 mg/L  | 187.8 µS/cm  | 3.85 mg/L  | 179 cts/100 mL   | 220 cts/100 mL  | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.06 pH units | 16.6 °C     | 0.5 mg/L   | 0.2 mg/L                   | 0.02 mg/L        | 6 mg/L   |  |
| 10/28/2013                                | 1.84                | 0.1 mg/L   | 55 mg/L  | 147.1 µS/cm  | 7.57 mg/L  | 7.4 cts/100 mL   | 19 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.41 pH units | 5.5 °C      | 0.5 mg/L   | 0.2 mg/L                   | 0.061 mg/L       | 6 mg/L   |  |
| 2014                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 4/4/2014                                  | 3.06                | 0.2 mg/L   | 29 mg/L  | 120 µS/cm    |            | 34.5 cts/100 mL  | 8 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.23 pH units | 11.8 °C     | 0.2 mg/L   | 0.2 mg/L                   | 0.021 mg/L       | 4 mg/L   |  |
| 5/8/2014                                  | 2.64                | 0.2 mg/L   | 34 mg/L  | 149.2 µS/cm  | 7.86 mg/L  | 20.1 cts/100 mL  | 26 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.06 pH units | 14.7 °C     | 0.2 mg/L   | 0.2 mg/L                   | 0.047 mg/L       | 4 mg/L   |  |
| 6/11/2014                                 | 2.14                | 0.2 mg/L   | 42 mg/L  | 117 µS/cm    | 5.12 mg/L  | 33.1 cts/100 mL  | 20 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.14 pH units | 20.5 °C     | 0.2 mg/L   | 0.2 mg/L                   | 0.019 mg/L       | 4 mg/L   |  |
| 7/14/2014                                 | 2.24                | 0.2 mg/L   | 41 mg/L  | 130.9 µS/cm  | 1.66 mg/L  | 184 cts/100 mL   | 87 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.58 pH units | 24.4 °C     | 1.21 mg/L  | 1.21 mg/L                  | 0.075 mg/L       | 6 mg/L   |  |
| 8/12/2014                                 | 1.86                | 0.2 mg/L   | 54 mg/L  | 145.2 µS/cm  | 2.18 mg/L  | 41.9 cts/100 mL  | 68 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.63 pH units | 20.9 °C     | 0.2 mg/L   | 0.2 mg/L                   | 0.021 mg/L       | 4 mg/L   |  |
| 9/18/2014                                 | 1.72                | 0.2 mg/L   | 57 mg/L  | 138.9 µS/cm  | 4.16 mg/L  | 98.5 cts/100 mL  | 27 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.69 pH units | 13.6 °C     | 0.798 mg/L | 0.8 mg/L                   | 0.01 mg/L        | 4 mg/L   |  |
| 11/5/2014                                 | 3.00                | 0.2 mg/L   | 39 mg/L  | 94.5 µS/cm   | 7.53 mg/L  | 12.2 cts/100 mL  | 16 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.08 pH units | 7.4 °C      | 0.2 mg/L   | 0.2 mg/L                   | 0.014 mg/L       | 4 mg/L   |  |
| 2015                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 4/13/2015                                 | 3.30                | 0.2 mg/L   | 26 mg/L  | 121.5 µS/cm  | 9.96 mg/L  | 4.1 cts/100 mL   | 6 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.34 pH units | 10 °C       | 0.876 mg/L | 0.88 mg/L                  | 0.01 mg/L        | 4 mg/L   |  |
| 5/7/2015                                  | 2.53                | 0.2 mg/L   | 40 mg/L  | 171.1 µS/cm  | 6.72 mg/L  | 34.1 cts/100 mL  | 26 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.34 pH units | 19.4 °C     | 0.478 mg/L | 0.48 mg/L                  | 0.01 mg/L        | 4 mg/L   |  |
| 7/16/2015                                 | 2.30                | 0.2 mg/L   | 42 mg/L  | 185.5 µS/cm  | 1.01 mg/L  | 61.3 cts/100 mL  | 74 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.49 pH units | 21.8 °C     | 0.573 mg/L | 0.573 mg/L                 | 0.043 mg/L       | 7 mg/L   |  |
| 8/6/2015                                  | 1.95                | 0.2 mg/L   | 52 mg/L  | 223.4 µS/cm  | 0.81 mg/L  | 73.8 cts/100 mL  | 343 cts/100 mL  | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.40 pH units | 21.4 °C     | 0.889 mg/L | 0.89 mg/L                  | 0.06 mg/L        | 22 mg/L  |  |
| 8/27/2015                                 |                     | 0.2 mg/L   | 58 mg/L  | 244 µS/cm    | 1.02 mg/L  | 88.2 cts/100 mL  | 45 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.38 pH units | 21.6 °C     | 0.987 mg/L | 0.99 mg/L                  | 0.075 mg/L       | 8 mg/L   |  |
| 9/24/2015                                 | 1.10                | 0.2 mg/L   | 75 mg/L  | 260 µS/cm    | 2.75 mg/L  | 32.2 cts/100 mL  | 15 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.77 pH units | 15.6 °C     | 0.701 mg/L | 0.7 mg/L                   | 0.032 mg/L       | 4 mg/L   |  |
| 11/5/2015                                 | 1.97                | 0.2 mg/L   | 51 mg/L  | 157.2 µS/cm  |            | 4.1 cts/100 mL   | 5 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.68 pH units | 9 °C        | 0.393 mg/L | 0.39 mg/L                  | 0.01 mg/L        | 4 mg/L   |  |
| 2016                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 4/21/2016                                 | 0.34                | 0.2 mg/L   | 41 mg/L  | 191 µS/cm    |            | 16.1 cts/100 mL  | 5 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.48 pH units | 13.52 °C    | 0.538 mg/L | 0.54 mg/L                  | 0.011 mg/L       | 4 mg/L   |  |
| 6/2/2016                                  | 1.82                | 0.2 mg/L   | 51 mg/L  | 216.7 µS/cm  | 1.32 mg/L  | 85.6 cts/100 mL  | 0.2 mg/L        | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.33 pH units | 20.2 °C     | 1.84 mg/L  | 1.84 mg/L                  | 0.06 mg/L        | 15 mg/L  |  |
| 6/27/2016                                 | 1.20                | 0.2 mg/L   | 57 mg/L  | 256.5 µS/cm  | 1.98 mg/L  | 63.8 cts/100 mL  | 82 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.28 pH units | 23.3 °C     | 1.19 mg/L  | 1.19 mg/L                  | 0.078 mg/L       | 13 mg/L  |  |
| 7/28/2016                                 | 0.90                | 0.2 mg/L   | 78 mg/L  | 328 µS/cm    | 1.12 mg/L  | 32.3 cts/100 mL  | 61 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.40 pH units | 22.7 °C     | 1.17 mg/L  | 1.17 mg/L                  | 0.049 mg/L       | 4 mg/L   |  |
| 8/25/2016                                 | 1.50                | 0.2 mg/L   | 68 mg/L  | 306.5 µS/cm  | 1.50 mg/L  | 87.8 cts/100 mL  | 47 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.25 pH units | 21 °C       | 0.728 mg/L | 0.73 mg/L                  | 0.055 mg/L       | 7 mg/L   |  |
| 9/22/2016                                 | 2.50                | 0.2 mg/L   | 63 mg/L  | 255.3 µS/cm  | 2.43 mg/L  | 104 cts/100 mL   | 36 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.74 pH units | 20.2 °C     | 0.38 mg/L  | 0.38 mg/L                  | 0.051 mg/L       | 24 mg/L  |  |
| 10/19/2016                                | 1.55                | 0.2 mg/L   | 72 mg/L  | 239.1 µS/cm  | 4.66 mg/L  | 228 cts/100 mL   | 261 cts/100 mL  | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.25 pH units | 13.7 °C     | 0.64 mg/L  | 0.64 mg/L                  | 0.028 mg/L       | 4 mg/L   |  |
| 2017                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 5/4/2017                                  | 3.05                | 0.2 mg/L   | 35 mg/L  | 126 µS/cm    | 6.04 mg/L  | 16.1 cts/100 mL  | 8 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.35 pH units | 14 °C       | 0.53 mg/L  | 0.53 mg/L                  | 0.012 mg/L       | 4 mg/L   |  |
| 6/14/2017                                 | 2.21                | 0.2 mg/L   | 36 mg/L  | 177.3 µS/cm  | 1.51 mg/L  | 94.7 cts/100 mL  | 33.9 cts/100 mL | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.21 pH units | 24.5 °C     | 0.34 mg/L  | 0.34 mg/L                  | 0.031 mg/L       | 4 mg/L   |  |
| 7/6/2017                                  | 2.59                | 0.2 mg/L   | 43 mg/L  | 197.2 µS/cm  | 6.76 mg/L  | 79.8 cts/100 mL  | 84 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.30 pH units | 22.8 °C     | 0.5 mg/L   | 0.5 mg/L                   | 0.035 mg/L       | 4 mg/L   |  |
| 8/22/2017                                 | 2.26                | 0.2 mg/L   | 52 mg/L  |              |            | 58.3 cts/100 mL  | 56 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        |               |             | 0.692 mg/L | 0.69 mg/L                  | 0.021 mg/L       | 4 mg/L   |  |
| 9/27/2017                                 | 1.77                | 0.2 mg/L   | 58 mg/L  |              |            | 50.4 cts/100 mL  | 84 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        |               |             | 0.665 mg/L | 0.66 mg/L                  | 0.026 mg/L       | 58 mg/L  |  |
| 10/18/2017                                | 2.14                | 0.2 mg/L   | 47 mg/L  | 166 µS/cm    | 4.49 mg/L  | 28.2 cts/100 mL  | 26 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 6.48 pH units | 13.3 °C     | 0.428 mg/L | 0.43 mg/L                  | 0.015 mg/L       | 4 mg/L   |  |
| 11/15/2017                                | 2.42                | 0.2 mg/L   | 129 mg/L | 111.5 µS/cm  | 7.20 mg/L  | 24.9 cts/100 mL  | 9 cts/100 mL    | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.18 pH units | 3.6 °C      | 0.655 mg/L | 0.66 mg/L                  | 0.012 mg/L       | 4 mg/L   |  |
| 2018                                      |                     |            |          |              |            |                  |                 |          |          |                 |               |             |            |                            |                  |          |  |
| 4/24/2018                                 | 2.78                | 0.2 mg/L   | 36 mg/L  | 155 µS/cm    | 8.98 mg/L  | 11 cts/100 mL    | 11 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.01 pH units | 12.9 °C     | 0.78 mg/L  | 0.78 mg/L                  | 0.025 mg/L       | 4 mg/L   |  |
| 5/30/2018                                 | 2.21                | 0.2 mg/L   | 47 mg/L  | 205.7 µS/cm  | 4.05 mg/L  | 22 cts/100 mL    | 33.9 cts/100 mL | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.91 pH units | 20.9 °C     | 1.77 mg/L  | 1.77 mg/L                  | 0.021 mg/L       | 4 mg/L   |  |
| 7/12/2018                                 | 1.50                | 0.2 mg/L   | 60 mg/L  | 250.1 µS/cm  | 4.46 mg/L  | 66.4 cts/100 mL  | 46 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.81 pH units | 23.1 °C     | 2.02 mg/L  | 2.02 mg/L                  | 0.079 mg/L       | 9 mg/L   |  |
| 8/10/2018                                 | 2.60                | 0.2 mg/L   | 36 mg/L  | 172 µS/cm    | 2.78 mg/L  | 72.8 cts/100 mL  | 66 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 7.87 pH units | 23.8 °C     | 1.02 mg/L  | 1.02 mg/L                  | 0.036 mg/L       | 4 mg/L   |  |
| 9/5/2018                                  | 1.70                | 0.2 mg/L   | 57 mg/L  | 321 µS/cm    | 3.21 mg/L  | 105 cts/100 mL   | 28 cts/100 mL   | 0.2 mg/L | 0.2 mg/L | 0.2 mg/L        | 8.19 pH units | 23.8 °C     |            |                            |                  |          |  |

## 09-XPB Tributary Sampling Data 2007-2019

|            |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            | Laboratory Detection Limit            |                  |         |
|------------|---------------------|------------|-----------|--------------|------------|------------------|------------------|-----------|----------|-----------------|---------------|-------------|------------|---------------------------------------|------------------|---------|
|            |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            | Expected Outlier or Equipment Failure |                  |         |
| Date       | Staff Gauge Reading | Ammonia    | Chloride  | Conductivity | DO         | E. coli          | Fecal Coliform   | Nitrate   | Nitrite  | Nitrate/Nitrite | pH            | Temperature | TKN        | Total Nitrogen                        | Total Phosphorus | TSS     |
| 2007       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 5/30/2007  |                     | 0.182 mg/L |           |              |            | 6.73 mg/L        | 36.4 cts/100 mL  |           |          |                 | 6.79 pH units | 21.6 °C     | 0.661 mg/L |                                       | 0.036 mg/L       | 4 mg/L  |
| 6/26/2007  |                     | 0.1 mg/L   |           | 214 µS/cm    |            | 6.19 mg/L        | 125.9 cts/100 mL |           |          |                 | 6.56 pH units | 22.8 °C     | 1.15 mg/L  |                                       | 0.052 mg/L       | 5 mg/L  |
| 8/2/2007   |                     | 0.232 mg/L |           | 205.6 µS/cm  |            | 2.88 mg/L        | 79.4 cts/100 mL  |           |          |                 | 6.41 pH units | 24.6 °C     | 1.1 mg/L   |                                       | 0.036 mg/L       | 4 mg/L  |
| 8/22/2007  |                     | 0.1 mg/L   |           | 221 µS/cm    |            | 6.26 mg/L        | 201.4 cts/100 mL |           |          |                 | 6.26 pH units | 17.6 °C     | 0.757 mg/L |                                       | 0.023 mg/L       | 4 mg/L  |
| 2008       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 1/8/2008   |                     | 0.345 mg/L |           |              |            | 26.5 cts/100 mL  |                  |           |          |                 |               |             | 10.7 mg/L  |                                       | 0.057 mg/L       | 36 mg/L |
| 5/28/2008  |                     | 0.184 mg/L |           | 248 µS/cm    | 7.19 mg/L  | 73.3 cts/100 mL  |                  |           |          |                 | 6.55 pH units | 19.8 °C     | 0.678 mg/L |                                       | 0.037 mg/L       | 4 mg/L  |
| 6/5/2008   |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 6/11/2008  |                     |            |           | No Data      |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 7/9/2008   |                     |            |           | 0.06 µS/cm   | 1.31 mg/L  | 613.1 cts/100 mL |                  |           |          |                 | 7.04 pH units | 20.2 °C     |            |                                       |                  |         |
| 8/20/2008  |                     |            |           | 112 µS/cm    |            |                  |                  |           |          |                 | 6.06 pH units | 18.2 °C     |            |                                       |                  |         |
| 2010       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 5/25/2010  |                     | 0.1 mg/L   |           | 197.3 µS/cm  | 6.56 mg/L  | 235.9 cts/100 mL |                  |           |          |                 | 6.63 pH units | 25.1 °C     | 1.66 mg/L  |                                       | 0.045 mg/L       | 4 mg/L  |
| 7/13/2010  |                     | 0.4 mg/L   |           | 914 µS/cm    | 1 mg/L     | 325.5 cts/100 mL |                  |           |          |                 | 6.38 pH units | 19.4 °C     | 0.5 mg/L   |                                       | 0.054 mg/L       | 4 mg/L  |
| 9/22/2010  |                     | 0.2 mg/L   |           | 0.05 µS/cm   |            | 4.1 cts/100 mL   |                  |           |          |                 | 6.94 pH units | 15.4 °C     | 0.5 mg/L   |                                       | 0.036 mg/L       | 4 mg/L  |
| 10/20/2010 |                     | 0.2 mg/L   |           | 0.23 µS/cm   |            | 12.1 cts/100 mL  |                  |           |          |                 | 6.79 pH units | 9.3 °C      | 0.5 mg/L   |                                       | 0.032 mg/L       | 8 mg/L  |
| 11/30/2010 |                     | 0.2 mg/L   |           | 0.21 µS/cm   |            | 3.1 cts/100 mL   |                  |           |          |                 | 5.4 °C        | 0.5 mg/L    |            |                                       | 0.06 mg/L        | 6 mg/L  |
| 2011       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 3/30/2011  |                     | 0.2 mg/L   |           | 210.3 µS/cm  | 12.26 mg/L | 1 cts/100 mL     |                  |           |          |                 | 6.92 pH units | 5.6 °C      | 0.5 mg/L   |                                       | 0.016 mg/L       | 4 mg/L  |
| 5/2/2011   |                     | 0.2 mg/L   |           | 208.2 µS/cm  | 10.37 mg/L | 12 cts/100 mL    |                  |           |          |                 | 6.98 pH units | 17.3 °C     | 0.5 mg/L   |                                       | 0.016 mg/L       | 4 mg/L  |
| 8/4/2011   |                     | 0.2 mg/L   |           | 237 µS/cm    | 3.7 mg/L   | 108.1 cts/100 mL |                  |           |          |                 | 6.56 pH units | 23.5 °C     | 0.5 mg/L   |                                       | 0.031 mg/L       | 4 mg/L  |
| 8/16/2011  |                     | 0.448 mg/L |           | 851 µS/cm    | 4.42 mg/L  |                  |                  |           |          |                 | 6 pH units    |             | 0.5 mg/L   |                                       | 0.03 mg/L        | 12 mg/L |
| 9/14/2011  |                     | 0.2 mg/L   |           | 183.8 µS/cm  | 5.45 mg/L  | 45.5 cts/100 mL  |                  |           |          |                 | 6.61 pH units | 21.6 °C     | 0.5 mg/L   |                                       | 0.02 mg/L        | 4 mg/L  |
| 10/14/2011 |                     | 0.2 mg/L   |           | 233 µS/cm    | 6.65 mg/L  |                  |                  |           |          |                 | 7 pH units    |             | 0.5 mg/L   |                                       | 0.01 mg/L        | 20 mg/L |
| 11/7/2011  |                     | 0.2 mg/L   |           | 130.6 µS/cm  | 10.26 mg/L | 12.2 cts/100 mL  |                  |           |          |                 | 6.47 pH units | 5.3 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |
| 12/20/2011 |                     | 0.2 mg/L   |           | 188.5 µS/cm  | 11.7 mg/L  | 2 cts/100 mL     |                  |           |          |                 | 6.46 pH units | 3 °C        | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |
| 2012       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 3/28/2012  | 1.28                | 0.05 mg/L  |           | 197.2 µS/cm  | 9.94 mg/L  | 16.1 cts/100 mL  |                  |           |          |                 | 6.43 pH units | 7.6 °C      | 0.7 mg/L   |                                       | 0.02 mg/L        | 7 mg/L  |
| 4/26/2012  | 1.31                | 0.05 mg/L  |           | 144.6 µS/cm  | 8.86 mg/L  | 52.8 cts/100 mL  |                  |           |          |                 | 6.7 pH units  | 14 °C       | 0.5 mg/L   |                                       | 0.02 mg/L        | 5 mg/L  |
| 8/2/2012   | 0.28                | 0.28 mg/L  |           | 109.8 µS/cm  | 0.82 mg/L  | 547.5 cts/100 mL |                  |           |          |                 | 7.23 pH units | 16.5 °C     | 0.6 mg/L   |                                       | 0.034 mg/L       | 5 mg/L  |
| 8/27/2012  | 0.39                | 0.39 mg/L  |           | 233 µS/cm    | 1.76 mg/L  | 37.3 cts/100 mL  |                  |           |          |                 | 6.45 pH units | 17.7 °C     | 0.9 mg/L   |                                       | 0.04 mg/L        | 6 mg/L  |
| 9/18/2012  | 0.35                | 0.28 mg/L  |           | 229 µS/cm    | 2.3 mg/L   | 32.3 cts/100 mL  |                  |           |          |                 | 6.41 pH units | 13.8 °C     | 0.7 mg/L   |                                       | 0.02 mg/L        | 10 mg/L |
| 10/25/2012 | 0.72                | 0.08 mg/L  |           | 210.2 µS/cm  | 5.91 mg/L  | 8.6 cts/100 mL   |                  |           |          |                 | 6.61 pH units | 13.1 °C     | 0.5 mg/L   |                                       | 0.02 mg/L        | 5 mg/L  |
| 2013       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 4/4/2013   | 1.26                | 0.2 mg/L   | 45 mg/L   | 182.6 µS/cm  | 11.37 mg/L | 1 cts/100 mL     |                  |           |          | 0.5 mg/L        | 6.27 pH units | 5.5 °C      | 0.5 mg/L   | 0.5 mg/L                              | 0.06 mg/L        | 6 mg/L  |
| 5/6/2013   | 1.10                | 0.402 mg/L |           | 230 µS/cm    | 9.90 mg/L  | 15.8 cts/100 mL  | 30 cts/100 mL    |           |          |                 | 7.23 pH units | 21.4 °C     | 0.5 mg/L   |                                       | 0.15 mg/L        | 6 mg/L  |
| 6/6/2013   | 0.92                | 0.2 mg/L   |           | 145.5 µS/cm  | 5.62 mg/L  | 11 cts/100 mL    | 120 cts/100 mL   |           |          |                 | 6.30 pH units | 21.2 °C     | 0.5 mg/L   |                                       | 0.0323 mg/L      | 6 mg/L  |
| 7/17/2013  | 0.90                | 0.2 mg/L   | 46 mg/L   | 208.2 µS/cm  | 4.53 mg/L  | 98.7 cts/100 mL  | 120 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.17 pH units | 27.3 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.047 mg/L       | 6 mg/L  |
| 8/16/2013  | 0.80                | 0.2 mg/L   | 38 mg/L   | 144.7 µS/cm  | 4.76 mg/L  | 38.9 cts/100 mL  | 60 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.15 pH units | 21.3 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.02 mg/L        | 6 mg/L  |
| 9/10/2013  | 0.2                 | 0.2 mg/L   | 56 mg/L   | 190.9 µS/cm  | 5.97 mg/L  | 12.2 cts/100 mL  | 24 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.35 pH units | 17.8 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.03 mg/L        | 25 mg/L |
| 10/28/2013 | 0.56                | 0.1 mg/L   | 28.9 mg/L | 150.9 µS/cm  | 7.44 mg/L  | 2 cts/100 mL     | 3 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.08 pH units | 9.8 °C      | 0.5 mg/L   | 0.2 mg/L                              | 0.05 mg/L        | 6 mg/L  |
| 2014       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 4/14/2014  | 1.46                | 0.2 mg/L   | 46 mg/L   | 170 µS/cm    |            | 2 cts/100 mL     |                  | 0.52 mg/L | 0.2 mg/L | 0.52 mg/L       |               | 13.8 °C     | 0.2 mg/L   | 0.52 mg/L                             | 0.033 mg/L       | 4 mg/L  |
| 5/8/2014   | 1.28                | 0.2 mg/L   | 51 mg/L   | 215.1 µS/cm  | 10.58 mg/L | 1 cts/100 mL     |                  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.55 pH units | 15.4 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.026 mg/L       | 4 mg/L  |
| 6/11/2014  | 0.74                | 0.2 mg/L   | 653 mg/L  | 158.3 µS/cm  | 7.95 mg/L  | 5.2 cts/100 mL   | 5 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.71 pH units | 21.1 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.076 mg/L       | 4 mg/L  |
| 7/14/2014  | 0.2                 | 0.2 mg/L   | 54 mg/L   | 161.2 µS/cm  | 3.43 mg/L  | 4.1 cts/100 mL   | 5 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.75 pH units | 24.5 °C     | 1.21 mg/L  | 1.21 mg/L                             | 0.047 mg/L       | 4 mg/L  |
| 8/12/2014  | 0.78                | 0.2 mg/L   | 57 mg/L   | 177.4 µS/cm  | 3.85 mg/L  | 7.3 cts/100 mL   | 1 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.64 pH units | 20.2 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.018 mg/L       | 4 mg/L  |
| 9/18/2014  | 0.76                | 0.2 mg/L   | 56 mg/L   | 155 µS/cm    | 5.46 mg/L  | 6.3 cts/100 mL   | 5 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.49 pH units | 15.6 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.014 mg/L       | 4 mg/L  |
| 11/5/2014  | 1.67                | 0.2 mg/L   | 53 mg/L   | 132.1 µS/cm  | 9.83 mg/L  | 1 cts/100 mL     | 2 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.46 pH units | 8.7 °C      | 0.2 mg/L   | 0.2 mg/L                              | 0.015 mg/L       | 4 mg/L  |
| 2015       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 4/13/2015  | 1.60                | 0.2 mg/L   | 42 mg/L   | 180.8 µS/cm  | 11.78 mg/L | 1 cts/100 mL     | 2 cts/100 mL     | 0.51 mg/L | 0.2 mg/L | 0.51 mg/L       | 6.68 pH units | 6.9 °C      | 0.2 mg/L   | 0.51 mg/L                             | 0.014 mg/L       | 4 mg/L  |
| 5/7/2015   | 1.24                | 0.2 mg/L   | 55 mg/L   | 226 µS/cm    | 9.31 mg/L  | 1 cts/100 mL     | 4 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.55 pH units | 20.8 °C     | 0.537 mg/L | 0.54 mg/L                             | 0.014 mg/L       | 4 mg/L  |
| 7/16/2015  | 1.50                | 0.2 mg/L   | 54 mg/L   | 223 µS/cm    | 4.97 mg/L  | 34.1 cts/100 mL  | 22 cts/100 mL    | 1.08 mg/L | 0.2 mg/L | 1.08 mg/L       | 6.65 pH units | 22 °C       | 0.83 mg/L  | 1.91 mg/L                             | 0.024 mg/L       | 4 mg/L  |
| 8/6/2015   | 2.04                | 0.2 mg/L   | 63 mg/L   | 263.5 µS/cm  | 2.41 mg/L  | 37.9 cts/100 mL  | 56 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.47 pH units | 23.6 °C     | 1.3 mg/L   | 1.3 mg/L                              | 0.036 mg/L       | 4 mg/L  |
| 8/27/2015  | 1.46                | 0.75 mg/L  | 67 mg/L   | 238.8 µS/cm  | 0.56 mg/L  | 4.1 cts/100 mL   | 5 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.16 pH units | 15.1 °C     | 0.987 mg/L | 1.74 mg/L                             | 0.022 mg/L       | 4 mg/L  |
| 9/24/2015  | 1.30                | 1.35 mg/L  | 67 mg/L   | 246.3 µS/cm  | 0.65 mg/L  | 7.3 cts/100 mL   | 5 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.45 pH units | 13.2 °C     | 1.36 mg/L  | 2.71 mg/L                             | 0.064 mg/L       | 1 mg/L  |
| 11/5/2015  | 1.65                | 0.2 mg/L   | 65 mg/L   | 208.9 µS/cm  |            | 1 cts/100 mL     | 5 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.62 pH units | 10.8 °C     | 0.39 mg/L  | 0.39 mg/L                             | 0.015 mg/L       | 5 mg/L  |
| 2016       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 4/21/2016  | 1.16                | 0.2 mg/L   | 58 mg/L   | 267 µS/cm    |            | 3.1 cts/100 mL   | 9 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.52 pH units | 15.49 °C    | 0.701 mg/L | 0.7 mg/L                              | 0.018 mg/L       | 4 mg/L  |
| 6/2/2016   | 1.36                | 0.2 mg/L   | 62 mg/L   | 256.7 µS/cm  | 3.57 mg/L  | 18.7 cts/100 mL  |                  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.05 pH units | 20.5 °C     | 0.654 mg/L | 0.65 mg/L                             | 0.024 mg/L       | 4 mg/L  |
| 6/27/2016  | 0.50                | 0.2 mg/L   | 64 mg/L   | 260.9 µS/cm  | 2.95 mg/L  | 24.6 cts/100 mL  | 19 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.62 pH units | 20.1 °C     | 0.631 mg/L | 0.63 mg/L                             | 0.026 mg/L       | 4 mg/L  |
| 7/28/2016  | 0.60                | 0.82 mg/L  | 66 mg/L   | 282.2 µS/cm  | 2.87 mg/L  | 8.5 cts/100 mL   | 23 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.64 pH units | 20.1 °C     | 0.913 mg/L | 1.73 mg/L                             | 0.029 mg/L       | 7 mg/L  |
| 8/25/2016  | 0.50                | 0.87 mg/L  | 68 mg/L   | 287.8 µS/cm  | 1.77 mg/L  | 10.9 cts/100 mL  | 3 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.97 pH units | 18 °C       | 0.866 mg/L | 1.74 mg/L                             | 0.018 mg/L       | 4 mg/L  |
| 9/22/2016  | 0.26                | 0.61 mg/L  | 73 mg/L   | 291.5 µS/cm  | 5.90 mg/L  | 80.1 cts/100 mL  | 101 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.61 pH units | 19.5 °C     | 0.496 mg/L | 0.76 mg/L                             | 0.020 mg/L       | 5 mg/L  |
| 10/19/2016 | 0.55                | 0.38 mg/L  | 70 mg/L   | 254.8 µS/cm  | 3.48 mg/L  | 3.1 cts/100 mL   | 7 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.86 pH units | 15.4 °C     | 0.731 mg/L | 1.11 mg/L                             | 0.028 mg/L       | 4 mg/L  |
| 2017       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 5/4/2017   | 1.54                | 0.2 mg/L   | 54 mg/L   | 191.5 µS/cm  | 7.56 mg/L  | 124 cts/100 mL   | 131 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.20 pH units | 15.6 °C     | 1.16 mg/L  | 1.16 mg/L                             | 0.020 mg/L       | 4 mg/L  |
| 6/14/2017  | 1.52                | 0.2 mg/L   | 60 mg/L   | 277.2 µS/cm  | 4.82 mg/L  | 20.1 cts/100 mL  | 16 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.41 pH units | 24.9 °C     | 0.745 mg/L | 0.75 mg/L                             | 0.019 mg/L       | 4 mg/L  |
| 7/16/2017  | 1.00                | 0.2 mg/L   | 60 mg/L   | 258.9 µS/cm  | 3.30 mg/L  | 11 cts/100 mL    | 28 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.90 pH units | 23.4 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.018 mg/L       | 4 mg/L  |
| 8/22/2017  | 1.26                | 0.2 mg/L   | 68 mg/L   |              |            | 17.5 cts/100 mL  | 31 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        |               |             | 1.74 mg/L  | 1.74 mg/L                             | 0.015 mg/L       | 4 mg/L  |
| 9/27/2017  | 0.68                | 0.38 mg/L  | 62 mg/L   |              |            | 9.5 cts/100 mL   | 19 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.55 pH units |             | 1.04 mg/L  | 1.04 mg/L                             | 0.028 mg/L       | 30 mg/L |
| 10/19/2017 | 1.15                | 0.2 mg/L   | 73 mg/L   | 241 µS/cm    | 6.09 mg/L  | 1 cts/100 mL     | 30 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.69 pH units | 14.8 °C     | 0.655 mg/L | 0.66 mg/L                             | 0.018 mg/L       | 4 mg/L  |
| 11/15/2017 | 1.35                | 0.2 mg/L   | 63 mg/L   | 278.6 µS/cm  | 9.40 mg/L  | 3.1 cts/100 mL   | 1 cts/100 mL     | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.87 pH units | 4.1 °C      | 1.79 mg/L  | 1.79 mg/L                             | 0.019 mg/L       | 4 mg/L  |
| 2018       |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |
| 4/24/2018  | 1.80                | 0.2 mg/L   | 61 mg/L   | 245.4 µS/cm  | 9.30 mg/L  | 1 cts/100 mL     | 1 cts/100 mL     | 0.33 mg/L | 0.2 mg/L | 0.33 mg/L       | 7.08 pH units | 14.8 °C     | 0.822 mg/L | 1.15 mg/L                             | 0.018 mg/L       | 4 mg/L  |
| 5/30/2018  | 1.30                | 0.24 mg/L  | 66 mg/L   | 277.2 µS/cm  | 6.02 mg/L  | 13 cts/100 mL    | 6.3 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.71 pH units | 21.7 °C     | 1.45 mg/L  | 1.69 mg/L                             | 0.020 mg/L       | 4 mg/L  |
| 7/12/2018  | 2.20                | 0.26 mg/L  | 67 mg/L   | 268.6 µS/cm  | 5.71 mg/L  | 13.4 cts/100 mL  | 26 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 8.35 pH units | 22.7 °C     | 1.18 mg/L  | 1.18 mg/L                             | 0.027 mg/L       | 4 mg/L  |
| 8/16/2018  | 2.50                | 0.2 mg/L   | 54 mg/L   | 227.4 µS/cm  | 6.07 mg/L  | 30.9 cts/100 mL  | 33 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.67 pH units | 23.8 °C     | 0.705 mg/L | 0.7 mg/L                              | 0.026 mg/L       | 4 mg/L  |
|            |                     |            |           |              |            |                  |                  |           |          |                 |               |             |            |                                       |                  |         |

## 12-PEN Tributary Sampling Data 2007-2019

| 12-PEN Tributary Sampling Data 2007-2019 |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            | Laboratory Detection Limit            |                  |         |  |
|------------------------------------------|---------------------|------------|----------|--------------|------------|------------------|-----------------|-----------|----------|-----------------|---------------|-------------|------------|---------------------------------------|------------------|---------|--|
|                                          |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            | Expected Outlier or Equipment Failure |                  |         |  |
| Date                                     | Staff Gauge Reading | Ammonia    | Chloride | Conductivity | DO         | E. coli          | Fecal Coliform  | Nitrate   | Nitrite  | Nitrate/Nitrite | pH            | Temperature | TKN        | Total Nitrogen                        | Total Phosphorus | TSS     |  |
| 2007                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 5/30/2007                                |                     | 0.1 mg/L   |          |              | 8.54 mg/L  | 2 cts/100 mL     |                 |           |          |                 | 7.28 pH units | 17.8 °C     | 0.637 mg/L |                                       | 0.017 mg/L       | 4 mg/L  |  |
| 6/26/2007                                |                     | 0.1 mg/L   |          | 133 µS/cm    | 8.24 mg/L  | 18.5 cts/100 mL  |                 |           |          |                 | 7.08 pH units | 24.5 °C     | 0.723 mg/L |                                       | 0.025 mg/L       | 4 mg/L  |  |
| 8/2/2007                                 |                     | 0.307 mg/L |          | 139.4 µS/cm  | 8.14 mg/L  | 50.4 cts/100 mL  |                 |           |          |                 | 7.01 pH units | 21.5 °C     | 0.765 mg/L |                                       | 0.019 mg/L       | 4 mg/L  |  |
| 8/22/2007                                |                     | 0.1 mg/L   |          | 137.5 µS/cm  | 9.85 mg/L  | 35 cts/100 mL    |                 |           |          |                 | 6.54 pH units | 13.6 °C     | 1.13 mg/L  |                                       | 0.025 mg/L       | 4 mg/L  |  |
| 2008                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 1/8/2008                                 |                     | 0.175 mg/L |          |              |            | 72.2 cts/100 mL  |                 |           |          |                 |               |             | 0.523 mg/L |                                       | 0.035 mg/L       | 4 mg/L  |  |
| 5/28/2008                                |                     | 0.115 mg/L |          | 144.2 µS/cm  | 9.18 mg/L  | 49.2 cts/100 mL  |                 |           |          |                 | 6.91 pH units | 16.1 °C     | 0.305 mg/L |                                       | 0.016 mg/L       | 4 mg/L  |  |
| 6/5/2008                                 | No Data             |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 6/11/2008                                | No Data             |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 7/9/2008                                 |                     |            |          | 0.019 µS/cm  | 7.04 mg/L  | 69.7 cts/100 mL  |                 |           |          |                 | 7.04 pH units | 24.5 °C     |            |                                       |                  |         |  |
| 8/20/2008                                |                     |            |          | 142 µS/cm    |            |                  |                 |           |          |                 | 6.56 pH units | 20.9 °C     |            |                                       |                  |         |  |
| 2010                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 5/25/2010                                |                     | 0.1 mg/L   |          | 127.5 µS/cm  | 9.32 mg/L  | 16.1 cts/100 mL  |                 |           |          |                 | 6.89 pH units | 21.5 °C     | 0.5 mg/L   |                                       | 0.026 mg/L       | 4 mg/L  |  |
| 7/13/2010                                |                     | 0.4 mg/L   |          | 131.6 µS/cm  | 8.14 mg/L  | 145 cts/100 mL   |                 |           |          |                 | 7.02 pH units | 21.3 °C     | 0.5 mg/L   |                                       | 0.041 mg/L       | 4 mg/L  |  |
| 9/22/2010                                |                     | 0.2 mg/L   |          | 0.31 µS/cm   |            | 2 cts/100 mL     |                 |           |          |                 | 7.56 pH units | 14.7 °C     | 0.5 mg/L   |                                       | 0.015 mg/L       | 4 mg/L  |  |
| 10/20/2010                               |                     | 0.2 mg/L   |          |              |            | 154.1 cts/100 mL |                 |           |          |                 |               |             | 0.5 mg/L   |                                       | 0.043 mg/L       | 4 mg/L  |  |
| 11/30/2010                               |                     | 0.2 mg/L   |          | 0.13 µS/cm   |            | 3.1 cts/100 mL   |                 |           |          |                 |               | 3.8 °C      | 0.5 mg/L   |                                       | 0.03 mg/L        | 4 mg/L  |  |
| 2011                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 3/30/2011                                |                     | 0.2 mg/L   |          | 125.9 µS/cm  | 12.79 mg/L | 1 cts/100 mL     |                 |           |          |                 | 7.04 pH units | 6.4 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |  |
| 5/2/2011                                 |                     | 0.49 mg/L  |          | 140.7 µS/cm  | 10.63 mg/L | 24.1 cts/100 mL  |                 |           |          |                 | 7.19 pH units | 15.2 °C     | 0.5 mg/L   |                                       | 0.013 mg/L       | 4 mg/L  |  |
| 8/4/2011                                 |                     | 0.2 mg/L   |          | 142.3 µS/cm  | 9.28 mg/L  | 107.6 cts/100 mL |                 |           |          |                 | 7.15 pH units | 21.1 °C     | 0.5 mg/L   |                                       | 0.07 mg/L        | 4 mg/L  |  |
| 8/16/2011                                |                     | 0.2 mg/L   |          | 136.3 µS/cm  | 9.24 mg/L  |                  |                 |           |          |                 | 7 pH units    |             | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |  |
| 9/14/2011                                |                     | 0.2 mg/L   |          | 134.1 µS/cm  | 8.78 mg/L  | 44.1 cts/100 mL  |                 |           |          |                 | 7.09 pH units | 20.7 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |  |
| 10/14/2011                               |                     | 0.2 mg/L   |          | 138 µS/cm    | 9.34 mg/L  |                  |                 |           |          |                 | 7 pH units    |             | 0.5 mg/L   |                                       | 0.013 mg/L       | 4 mg/L  |  |
| 11/7/2011                                |                     | 0.2 mg/L   |          | 123.9 µS/cm  | 11.36 mg/L | 5.2 cts/100 mL   |                 |           |          |                 | 7.13 pH units | 8 °C        | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |  |
| 12/20/2011                               |                     | 0.2 mg/L   |          | 128.8 µS/cm  | 12.56 mg/L | 12.2 cts/100 mL  |                 |           |          |                 | 7.32 pH units | 4 °C        | 0.5 mg/L   |                                       | 0.01 mg/L        | 4 mg/L  |  |
| 2012                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 3/28/2012                                | 0.59                | 0.05 mg/L  |          | 123.8 µS/cm  | 11.13 mg/L | 36.9 cts/100 mL  |                 |           |          |                 | 6.8 pH units  | 7.5 °C      | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |  |
| 4/26/2012                                | 0.60                | 0.05 mg/L  |          | 116.1 µS/cm  | 10.04 mg/L | 29.5 cts/100 mL  |                 |           |          |                 | 6.84 pH units | 13.5 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |  |
| 8/2/2012                                 | 0.35                | 0.05 mg/L  |          | 143.9 µS/cm  | 8.67 mg/L  | 365.4 cts/100 mL |                 |           |          |                 | 6.73 pH units | 21.6 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |  |
| 8/27/2012                                |                     | 0.05 mg/L  |          | 131.7 µS/cm  | 8.45 mg/L  | 172.3 cts/100 mL |                 |           |          |                 | 6.88 pH units | 19.1 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |  |
| 9/18/2012                                | 1.00                | 0.05 mg/L  |          | 130.4 µS/cm  | 9.32 mg/L  | 52 cts/100 mL    |                 |           |          |                 | 6.89 pH units | 14.3 °C     | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |  |
| 10/25/2012                               | 0.25                | 0.05 mg/L  |          | 115.3 µS/cm  | 10.22 mg/L | 10.8 cts/100 mL  |                 |           |          |                 | 6.17 pH units | 10 °C       | 0.5 mg/L   |                                       | 0.01 mg/L        | 5 mg/L  |  |
| 2013                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 4/4/2013                                 | 0.82                | 0.2 mg/L   | 24 mg/L  | 118.2 µS/cm  | 12.05 mg/L | 2 cts/100 mL     | 1 cts/100 mL    |           |          | 0.5 mg/L        | 6.63 pH units | 5.3 °C      | 0.5 mg/L   | 0.5 mg/L                              | 0.05 mg/L        | 6 mg/L  |  |
| 5/6/2013                                 | 0.52                | 0.2 mg/L   |          | 138.1 µS/cm  | 9.73 mg/L  | 4.1 cts/100 mL   |                 |           |          |                 | 7.12 pH units | 13.7 °C     | 0.5 mg/L   |                                       | 0.06 mg/L        | 6 mg/L  |  |
| 6/6/2013                                 | 0.68                | 0.2 mg/L   |          | 96.6 µS/cm   | 8.67 mg/L  | 16 cts/100 mL    | 17 cts/100 mL   |           |          |                 | 6.54 pH units | 16.8 °C     | 0.5 mg/L   |                                       | 0.018 mg/L       | 6 mg/L  |  |
| 7/17/2013                                | 0.59                | 0.2 mg/L   | 30 mg/L  | 147 µS/cm    | 11.24 mg/L | 119 cts/100 mL   | 56 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.63 pH units | 24.3 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.051 mg/L       | 6 mg/L  |  |
| 8/16/2013                                | 0.46                | 0.2 mg/L   | 28 mg/L  | 113.2 µS/cm  | 8.88 mg/L  | 16.1 cts/100 mL  | 100 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.28 pH units | 18 °C       | 0.5 mg/L   | 0.5 mg/L                              | 0.02 mg/L        | 6 mg/L  |  |
| 9/17/2013                                | 0.35                | 0.2 mg/L   | 27 mg/L  | 104.7 µS/cm  | 14.05 mg/L | 24.6 cts/100 mL  |                 | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.63 pH units | 11.9 °C     | 0.5 mg/L   | 0.2 mg/L                              | 0.029 mg/L       | 56 mg/L |  |
| 10/28/2013                               | 0.26                | 0.1 mg/L   | 28 mg/L  | 89.1 µS/cm   | 11.15 mg/L | 13.1 cts/100 mL  | 19 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.57 pH units | 8 °C        | 0.5 mg/L   | 0.2 mg/L                              | 0.029 mg/L       | 6 mg/L  |  |
| 2014                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 4/4/2014                                 | 0.96                | 0.2 mg/L   | 28 mg/L  | 80 µS/cm     |            | 2 cts/100 mL     | 2 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        |               | 14.6 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.042 mg/L       | 4 mg/L  |  |
| 5/8/2014                                 | 0.74                | 0.2 mg/L   | 33 mg/L  | 147.4 µS/cm  | 10.36 mg/L | 2.1 cts/100 mL   | 9 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.65 pH units | 13.8 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.026 mg/L       | 4 mg/L  |  |
| 6/11/2014                                | 0.54                | 0.2 mg/L   | 34 mg/L  | 97 µS/cm     | 10.09 mg/L | 66.3 cts/100 mL  | 32 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.69 pH units | 18.1 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.03 mg/L        | 4 mg/L  |  |
| 7/14/2014                                | 0.58                | 0.2 mg/L   | 32 mg/L  | 97.3 µS/cm   | 9.21 mg/L  | 22.8 cts/100 mL  | 11 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.76 pH units | 22.6 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.117 mg/L       | 27 mg/L |  |
| 8/12/2014                                | 0.40                | 0.2 mg/L   | 32 mg/L  | 97 µS/cm     | 10.36 mg/L | 27.5 cts/100 mL  | 12 cts/100 mL   | 0.22 mg/L | 0.2 mg/L | 0.22 mg/L       | 7.36 pH units | 18.5 °C     | 0.2 mg/L   | 0.22 mg/L                             | 0.012 mg/L       | 4 mg/L  |  |
| 9/18/2014                                | 0.58                | 0.2 mg/L   | 33 mg/L  | 90.5 µS/cm   | 11.26 mg/L | 37.3 cts/100 mL  | 21 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.94 pH units | 11.9 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.01 mg/L        | 4 mg/L  |  |
| 11/5/2014                                | 1.56                | 0.2 mg/L   | 31 mg/L  | 84.3 µS/cm   | 11.62 mg/L | 25.6 cts/100 mL  | 10 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.92 pH units | 9.6 °C      | 0.2 mg/L   | 0.2 mg/L                              | 0.01 mg/L        | 4 mg/L  |  |
| 2015                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 4/13/2015                                | 2.16                | 0.2 mg/L   | 35 mg/L  | 96.7 µS/cm   | 12.61 mg/L | 3.1 cts/100 mL   | 2 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.24 pH units | 9.2 °C      | 0.2 mg/L   | 0.2 mg/L                              | 0.01 mg/L        | 4 mg/L  |  |
| 5/7/2015                                 | 1.18                | 0.2 mg/L   | 36 mg/L  | 153.9 µS/cm  | 9.39 mg/L  | 42.6 cts/100 mL  | 18 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.60 pH units | 18.6 °C     | 0.817 mg/L | 0.82 mg/L                             | 0.013 mg/L       | 4 mg/L  |  |
| 7/16/2015                                | 0.41                | 0.2 mg/L   | 39 mg/L  | 154.5 µS/cm  | 6.01 mg/L  | 43.2 cts/100 mL  | 62 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.60 pH units | 20 °C       | 1.26 mg/L  | 1.26 mg/L                             | 0.022 mg/L       | 4 mg/L  |  |
| 8/6/2015                                 | 0.27                | 0.2 mg/L   | 38 mg/L  | 156.9 µS/cm  | 5.08 mg/L  | 48 cts/100 mL    | 78 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.61 pH units | 19.7 °C     | 0.77 mg/L  | 0.77 mg/L                             | 0.046 mg/L       | 4 mg/L  |  |
| 8/27/2015                                | 0.26                | 0.2 mg/L   | 38 mg/L  | 164 µS/cm    | 4.37 mg/L  | 133 cts/100 mL   | 85 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.65 pH units | 21.5 °C     | 0.692 mg/L | 0.69 mg/L                             | 0.023 mg/L       | 7 mg/L  |  |
| 9/24/2015                                | 0.17                | 0.36 mg/L  | 38 mg/L  | 140.3 µS/cm  | 5.01 mg/L  | 63.1 cts/100 mL  | 35 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.56 pH units | 14.4 °C     | 0.679 mg/L | 1.04 mg/L                             | 0.029 mg/L       | 4 mg/L  |  |
| 11/5/2015                                | 0.27                | 0.2 mg/L   | 37 mg/L  | 123.7 µS/cm  |            | 37.9 cts/100 mL  | 40 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.41 pH units | 11.1 °C     | 0.327 mg/L | 0.33 mg/L                             | 0.014 mg/L       | 4 mg/L  |  |
| 2016                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 4/21/2016                                | 0.58                | 0.2 mg/L   | 43 mg/L  | 199 µS/cm    |            | 3.1 cts/100 mL   | 4 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.48 pH units | 13.62 °C    | 0.2 mg/L   | 0.2 mg/L                              | 0.012 mg/L       | 4 mg/L  |  |
| 6/2/2016                                 | 0.69                | 0.2 mg/L   | 46 mg/L  | 171.3 µS/cm  | 4.17 mg/L  | 236 cts/100 mL   |                 | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.79 pH units | 18.2 °C     | 0.654 mg/L | 0.65 mg/L                             | 0.043 mg/L       | 11 mg/L |  |
| 6/27/2016                                | 2.45                | 0.2 mg/L   | 42 mg/L  | 182.1 µS/cm  | 1.80 mg/L  | 276 cts/100 mL   | 220 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.54 pH units | 20.6 °C     | 1.42 mg/L  | 1.42 mg/L                             | 0.117 mg/L       | 4 mg/L  |  |
| 7/28/2016                                | 2.80                | 0.2 mg/L   | 45 mg/L  | 202.3 µS/cm  | 1.61 mg/L  | 7.4 cts/100 mL   | 6 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.29 pH units | 21.6 °C     | 0.977 mg/L | 0.977 mg/L                            | 0.117 mg/L       | 4 mg/L  |  |
| 8/25/2016                                | 2.30                | 0.2 mg/L   | 39 mg/L  | 166 µS/cm    | 1.64 mg/L  | 248 cts/100 mL   | 65 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.66 pH units | 19.7 °C     | 0.542 mg/L | 0.54 mg/L                             | 0.051 mg/L       | 5 mg/L  |  |
| 9/22/2016                                | 2.40                | 0.28 mg/L  | 31 mg/L  | 146 µS/cm    | 1.29 mg/L  | 79.4 cts/100 mL  | 32 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.68 pH units | 17.7 °C     | 0.519 mg/L | 0.8 mg/L                              | 0.073 mg/L       | 4 mg/L  |  |
| 10/19/2016                               | 0.50                | 0.2 mg/L   | 39 mg/L  | 141.6 µS/cm  | 3.49 mg/L  | 326 cts/100 mL   | 43 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.70 pH units | 13.5 °C     | 1.03 mg/L  | 1.03 mg/L                             | 0.031 mg/L       | 4 mg/L  |  |
| 2017                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 5/4/2017                                 | 1.18                | 0.2 mg/L   | 46 mg/L  | 167.7 µS/cm  | 7.98 mg/L  | 5.2 cts/100 mL   | 8 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.90 pH units | 15.7 °C     | 0.576 mg/L | 0.58 mg/L                             | 0.020 mg/L       | 10 mg/L |  |
| 6/14/2017                                | 0.98                | 0.2 mg/L   | 45 mg/L  | 191.8 µS/cm  | 5.75 mg/L  | 130 cts/100 mL   | 173 cts/100 mL  | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.90 pH units | 22.5 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.011 mg/L       | 4 mg/L  |  |
| 7/6/2017                                 | 1.30                | 0.2 mg/L   | 44 mg/L  | 192 µS/cm    | 4.68 mg/L  | 41.9 cts/100 mL  | 36 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.79 pH units | 21.8 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.014 mg/L       | 4 mg/L  |  |
| 8/22/2017                                | 1.47                | 0.2 mg/L   | 43 mg/L  |              |            | 61.3 cts/100 mL  | 55 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        |               |             | 0.2 mg/L   | 0.2 mg/L                              | 0.011 mg/L       | 4 mg/L  |  |
| 9/27/2017                                | via                 | 0.2 mg/L   | 42 mg/L  |              |            | 62.1 cts/100 mL  | 88 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        |               |             | 0.2 mg/L   | 0.2 mg/L                              | 0.014 mg/L       | 4 mg/L  |  |
| 10/18/2017                               | 2.54                | 0.2 mg/L   | 42 mg/L  | 134 µS/cm    | 7.21 mg/L  | 31.4 cts/100 mL  | 22 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.20 pH units | 11.4 °C     | 0.428 mg/L | 0.43 mg/L                             | 0.022 mg/L       | 4 mg/L  |  |
| 11/5/2017                                | 1.28                | 0.2 mg/L   | 47 mg/L  | 127.5 µS/cm  | 17.13 mg/L | 8.6 cts/100 mL   | 6 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.53 pH units | 5.4 °C      | 0.428 mg/L | 0.43 mg/L                             | 0.010 mg/L       | 4 mg/L  |  |
| 2018                                     |                     |            |          |              |            |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |
| 4/24/2018                                | 0.95                | 0.2 mg/L   | 44 mg/L  | 181.9 µS/cm  | 10.51 mg/L | 1 cts/100 mL     | 4 cts/100 mL    | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.85 pH units | 12.3 °C     | 0.696 mg/L | 0.7 mg/L                              | 0.011 mg/L       | 4 mg/L  |  |
| 5/30/2018                                | 0.80                | 0.2 mg/L   | 42 mg/L  | 184.2 µS/cm  | 8.06 mg/L  | 50 cts/100 mL    | 50.4 cts/100 mL | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.40 pH units | 19.2 °C     | 0.759 mg/L | 0.76 mg/L                             | 0.014 mg/L       | 4 mg/L  |  |
| 7/12/2018                                | 0.30                | 0.2 mg/L   | 43 mg/L  | 169.3 µS/cm  | 12.16 mg/L | 61.3 cts/100 mL  | 84 cts/100 mL   | 0.4 mg/L  | 0.2 mg/L | 0.4 mg/L        | 7.44 pH units | 20.7 °C     | 0.822 mg/L | 1.22 mg/L                             | 0.018 mg/L       | 4 mg/L  |  |
| 8/16/2018                                | 0.50                | 0.2 mg/L   | 39 mg/L  | 171.7 µS/cm  | 11.39 mg/L | 104 cts/100 mL   | 93 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 6.62 pH units | 22.4 °C     | 0.2 mg/L   | 0.2 mg/L                              | 0.016 mg/L       | 4 mg/L  |  |
| 9/5/2018                                 | 0.35                | 0.2 mg/L   | 41 mg/L  | 188.1 µS/cm  | 11.10 mg/L | 55 cts/100 mL    | 28 cts/100 mL   | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L        | 7.70 pH units | 22.2 °C     | 0.717 mg/L | 0.75 mg/L                             | 0.038 mg/L       | 4 mg/L  |  |
| 10/10/2018                               | 0.70                | 0.2 mg/L   | 48 mg/L  | 192.4 µS/cm  | 8.39 mg/L  |                  |                 |           |          |                 |               |             |            |                                       |                  |         |  |

**Attachment C:**

Groundwater Sampling Data, 2013 through 2019

|                                       |  |
|---------------------------------------|--|
| Laboratory Detection Limit            |  |
| Expected Outlier or Equipment Failure |  |

| Date       | Water Level Depth | Ammonia | Chloride | Conductivity | DO   | Nitrate | Nitrite | Nitrate/Nitrite | pH   | Temperature | Total Alkalinity | Total Dissolved Solids | TKN  | Total Nitrogen | Total Phosphorus, Unfiltered |
|------------|-------------------|---------|----------|--------------|------|---------|---------|-----------------|------|-------------|------------------|------------------------|------|----------------|------------------------------|
| 2013       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                |                              |
| 4/4/2013   |                   |         | 86       | mg/L         |      |         |         | 0.5             | mg/L |             |                  |                        | 0.7  | mg/L           | 0.7                          |
| 7/17/2013  | 2.32              | 0.4     | mg/L     | 90           | mg/L | 426     | µS/cm   | 4.23            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.08           | pH units                     |
| 8/16/2013  | 2.50              | 0.2     | mg/L     | 200          | mg/L | 646     | µS/cm   | 2.61            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.51           | pH units                     |
| 9/10/2013  | 2.75              | 0.2     | mg/L     | 133          | mg/L | 436     | µS/cm   | 2.83            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.63           | pH units                     |
| 10/28/2013 | 2.89              | 0.1     | mg/L     | 135          | mg/L | 406     | µS/cm   | 2.71            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.61           | pH units                     |
| 2014       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                |                              |
| 4/14/2014  | 1.83              | 0.2     | mg/L     | 209          | mg/L | 720     | µS/cm   |                 | 0.2  | mg/L        | 0.2              | mg/L                   | 7.45 | pH units       | 7.4                          |
| 5/8/2014   | 2.13              | 0.2     | mg/L     | 76           | mg/L | 280     | µS/cm   | 8.80            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.35           | pH units                     |
| 6/11/2014  | 2.46              | 0.2     | mg/L     | 304          | mg/L | 519     | µS/cm   | 8.13            | mg/L | 0.5         | mg/L             | 0.2                    | mg/L | 7.60           | pH units                     |
| 7/14/2014  | 2.66              | 0.2     | mg/L     | 196          | mg/L | 472     | µS/cm   | 2.98            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.92           | pH units                     |
| 8/12/2014  | 2.78              | 0.2     | mg/L     | 254          | mg/L | 571     | µS/cm   | 2.87            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.69           | pH units                     |
| 9/18/2014  | 2.91              | 0.2     | mg/L     | 119          | mg/L | 315     | µS/cm   | 2.98            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.79           | pH units                     |
| 11/5/2014  | 2.51              | 0.2     | mg/L     | 143          | mg/L | 385     | µS/cm   | 2.45            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.91           | pH units                     |
| 2015       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                |                              |
| 4/13/2015  | 1.89              | 0.2     | mg/L     | 113          | mg/L | 423     | µS/cm   | 8.75            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.75           | pH units                     |
| 5/7/2015   | 2.22              | 0.2     | mg/L     | 211          | mg/L | 680     | µS/cm   | 7.60            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.73           | pH units                     |
| 7/16/2015  | 2.60              | 0.2     | mg/L     | 279          | mg/L | 956     | µS/cm   | 2.57            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.73           | pH units                     |
| 8/6/2015   | 2.77              | 0.2     | mg/L     | 181          | mg/L | 579     | µS/cm   | 1.73            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.70           | pH units                     |
| 8/27/2015  | 2.86              | 0.2     | mg/L     | 212          | mg/L | 695     | µS/cm   | 2.04            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.72           | pH units                     |
| 9/24/2015  | 2.89              | 0.2     | mg/L     | 202          | mg/L | 681     | µS/cm   | 2.09            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.49           | pH units                     |
| 11/5/2015  | 2.80              | 0.2     | mg/L     | 140          | mg/L | 523     | µS/cm   |                 | 0.2  | mg/L        | 0.2              | mg/L                   | 7.02 | pH units       |                              |
| 2016       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                |                              |
| 4/21/2016  | 2.45              | 0.2     | mg/L     | 282          | mg/L | 1090    | µS/cm   |                 | 0.2  | mg/L        | 0.2              | mg/L                   | 6.80 | pH units       | 7.36                         |
| 6/2/2016   | 2.80              | 0.2     | mg/L     | 239          | mg/L | 690     | µS/cm   | 3.46            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.70           | pH units                     |
| 6/27/2016  | 2.96              | 0.2     | mg/L     | 227          | mg/L | 752     | µS/cm   | 2.61            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 8.63           | pH units                     |
| 7/28/2016  | 3.80              | 0.2     | mg/L     | 212          | mg/L | 736     | µS/cm   | 2.37            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 8.27           | pH units                     |
| 8/25/2016  | 3.20              | 0.2     | mg/L     | 152          | mg/L | 631     | µS/cm   | 3.10            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.99           | pH units                     |
| 9/22/2016  | 2.90              | 0.2     | mg/L     | 127          | mg/L | 552     | µS/cm   | 3.38            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.93           | pH units                     |
| 10/19/2016 | 2.80              | 0.2     | mg/L     | 121          | mg/L | 487.4   | µS/cm   | 1.91            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 8.50           | pH units                     |
| 2017       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                |                              |
| 5/4/2017   | 2.00              | 0.2     | mg/L     | 81           | mg/L | 348.1   | µS/cm   | 6.23            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 8.88           | pH units                     |
| 6/15/2017  | 2.15              | 0.2     | mg/L     | 178          | mg/L | 540     | µS/cm   | 6.35            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 8.15           | pH units                     |
| 7/6/2017   | 2.37              | 0.2     | mg/L     | 155          | mg/L | 524     | µS/cm   | 3.40            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 9.18           | pH units                     |
| 8/22/2017  | 2.55              | 0.2     | mg/L     | 214          | mg/L |         |         |                 | 0.2  | mg/L        | 0.2              | mg/L                   | 0.2  | mg/L           |                              |
| 9/27/2017  | 3.67              | 0.2     | mg/L     | 108          | mg/L |         |         |                 | 0.2  | mg/L        | 0.2              | mg/L                   | 0.2  | mg/L           |                              |
| 10/19/2017 | 2.79              | 0.2     | mg/L     | 216          | mg/L | 641     | µS/cm   | 3.30            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.70           | pH units                     |
| 11/15/2017 | 2.38              | 0.2     | mg/L     | 146          | mg/L | 551     | µS/cm   | 1.65            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 8.35           | pH units                     |
| 2018       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                |                              |
| 4/24/2018  | 2.05              | 0.2     | mg/L     | 83           | mg/L | 353.6   | µS/cm   | 9.62            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 9.75           | pH units                     |
| 5/30/2018  | 2.60              | 0.2     | mg/L     | 275          | mg/L | 1030    | µS/cm   | 5.20            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 8.55           | pH units                     |
| 7/12/2018  | 2.91              | 0.2     | mg/L     | 232          | mg/L | 727     | µS/cm   | 8.90            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 9.50           | pH units                     |
| 8/16/2018  | 1.18              | 0.2     | mg/L     | 156          | mg/L | 645     | µS/cm   | 5.28            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.88           | pH units                     |
| 9/5/2018   | 1.80              | 0.2     | mg/L     | 91           | mg/L | 426.8   | µS/cm   | 4.15            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 8.75           | pH units                     |
| 10/10/2018 | 2.50              | 0.2     | mg/L     | 216          | mg/L | 841     | µS/cm   | 6.00            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.69           | pH units                     |
| 10/31/2018 | 2.43              | 0.2     | mg/L     | 101          | mg/L | 536     | µS/cm   | 4.80            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.42           | pH units                     |
| 2019       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                |                              |
| 4/25/2019  | 2.00              | 0.2     | mg/L     | 88           | mg/L | 366.7   | µS/cm   | 6.52            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.55           | pH units                     |
| 6/10/2019  | 2.60              | 0.2     | mg/L     | 95           | mg/L | 397.6   | µS/cm   | 5.75            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.75           | pH units                     |
| 7/1/2019   | 2.70              | 0.2     | mg/L     | 467          | mg/L | 1575    | µS/cm   | 3.55            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.72           | pH units                     |
| 7/31/2019  | 2.65              | 0.2     | mg/L     | 295          | mg/L | 1067    | µS/cm   | 2.96            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.37           | pH units                     |
| 9/19/2019  | 2.90              | 0.2     | mg/L     | 192          | mg/L | 735     | µS/cm   | 1.08            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.52           | pH units                     |
| 9/18/2019  | 2.90              |         |          |              | mg/L | 732     | µS/cm   | 1.12            | mg/L |             |                  |                        | 7.00 | pH units       |                              |

|                                       |  |
|---------------------------------------|--|
| Laboratory Detection Limit            |  |
| Expected Outlier or Equipment Failure |  |

|                                         | Water Level |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
|-----------------------------------------|-------------|---------|------|----------|------|--------------|-------|-------|------|---------|------|---------|------|-----------------|------|------|----------|-------------|----|------------------|------------|------------------------|------|------|-------|----------------|------|------------------------------|-------|------|
| Date                                    | Depth       | Ammonia |      | Chloride |      | Conductivity |       | DO    |      | Nitrate |      | Nitrite |      | Nitrate/Nitrite |      | pH   |          | Temperature |    | Total Alkalinity |            | Total Dissolved Solids |      | TKN  |       | Total Nitrogen |      | Total Phosphorus, Unfiltered |       |      |
| 2016                                    |             |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 4/21/2016                               | 1.92        | 0.2     | mg/L | 84       | mg/L | 321          | µS/cm |       |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.52 | pH units | 8.92        | °C |                  |            |                        |      |      | 0.771 | mg/L           | 0.77 | mg/L                         | 0.314 | mg/L |
| 6/2/2016                                | 2.18        | 0.2     | mg/L | 47       | mg/L | 145.8        | µS/cm | 5.79  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.72 | pH units | 13.20       | °C |                  |            |                        |      | 0.2  | mg/L  | 0.2            | mg/L | 0.244                        | mg/L  |      |
| 6/27/2016                               | 3.29        | 0.2     | mg/L | 37       | mg/L | 155.7        | µS/cm | 6.70  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.39 | pH units | 18.30       | °C |                  |            |                        |      | 8.91 | mg/L  | 8.91           | mg/L | 3.79                         | mg/L  |      |
| 7/28/2016                               |             |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 8/25/2016                               |             |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 9/22/2016                               |             |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 10/19/2016                              |             |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| Well Recharge Insufficient for Sampling |             |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 2017                                    |             |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 5/4/2017                                | 2.03        | 0.2     | mg/L | 118      | mg/L | 320.2        | µS/cm | 10.06 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.40 | pH units | 9.8         | °C | 12               | mg CaCO3/L | 295                    | mg/L | 9.46 | mg/L  | 9.46           | mg/L | 2.67                         | mg/L  |      |
| 6/15/2017                               | 2.46        |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 7/6/2017                                | 2.30        |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 8/22/2017                               | n/a         |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 9/27/2017                               | 3.21        |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 10/19/2017                              | 2.8         |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 11/15/2017                              | 2.85        | 0.2     | mg/L | 101      | mg/L | 331          | µS/cm | 8.83  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.24 | pH units | 8.7         | °C | 58               | mg CaCO3/L | 324                    | mg/L | 3.14 | mg/L  | 3.14           | mg/L | 9.51                         | mg/L  |      |
| 2018                                    |             |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 4/24/2018                               |             |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 5/30/2018                               | 2.52        | 0.2     | mg/L | 145      | mg/L | 854          | µS/cm | 10.50 | mg/L | 0.29    | mg/L | 0.2     | mg/L | 0.29            | mg/L | 5.51 | pH units | 17.5        | °C | 35               | mg CaCO3/L | 486                    | mg/L | 0.2  | mg/L  | 0.49           | mg/L | 0.93                         | mg/L  |      |
| 7/12/2018                               | 3.10        | 0.36    | mg/L | 82       | mg/L |              |       |       |      | 0.2     | mg/L | 0.55    | mg/L | 0.55            | mg/L |      |          |             |    | 45               | mg CaCO3/L | 308                    | mg/L | 3.13 | mg/L  | 4.04           | mg/L | 0.486                        | mg/L  |      |
| 8/16/2018                               | 2           | 1.09    | mg/L | 91       | mg/L | 454.8        | µS/cm | 1.38  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.50 | pH units | 21.6        | °C | 55               | mg CaCO3/L | 260                    | mg/L | 3.28 | mg/L  | 4.37           | mg/L | 0.865                        | mg/L  |      |
| 9/5/2018                                | 2.4         |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |      |       |                |      |                              |       |      |
| 10/10/2018                              |             | 0.2     | mg/L | 35       | mg/L |              |       |       |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L |      |          |             |    | 50               | mg CaCO3/L | 206                    | mg/L | 2.45 | mg/L  | 2.45           | mg/L | 0.963                        | mg/L  |      |
| 10/31/2018                              | 1.92        | 0.2     | mg/L | 31       | mg/L | 195.4        | µS/cm | 8.00  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.38 | pH units | 10.3        | °C | 59               | mg CaCO3/L | 124                    | mg/L | 2.22 | mg/L  | 3.22           | mg/L | 0.597                        | mg/L  |      |

## 01-MUD Groundwater Sampling Data 2013-2019

| 01-MUD Groundwater Sampling Data 2013-2019 |                   |         |      |          |          |              |            |           |           |          |           |           |           |                 |               |               |             |            |                  | Laboratory Detection Limit            |                        |           |     |  |                |            |                              |            |  |            |
|--------------------------------------------|-------------------|---------|------|----------|----------|--------------|------------|-----------|-----------|----------|-----------|-----------|-----------|-----------------|---------------|---------------|-------------|------------|------------------|---------------------------------------|------------------------|-----------|-----|--|----------------|------------|------------------------------|------------|--|------------|
|                                            |                   |         |      |          |          |              |            |           |           |          |           |           |           |                 |               |               |             |            |                  | Expected Outlier or Equipment Failure |                        |           |     |  |                |            |                              |            |  |            |
| Date                                       | Water Level Depth | Ammonia |      | Chloride |          | Conductivity |            | DO        |           | Nitrate  |           | Nitrite   |           | Nitrate/Nitrite |               | pH            | Temperature |            | Total Alkalinity |                                       | Total Dissolved Solids |           | TKN |  | Total Nitrogen |            | Total Phosphorus, Unfiltered |            |  |            |
| 2013                                       |                   |         |      |          |          |              |            |           |           |          |           |           |           |                 |               |               |             |            |                  |                                       |                        |           |     |  |                |            |                              |            |  |            |
| 4/4/2013                                   |                   |         |      |          | 350 mg/L |              |            |           |           |          |           |           |           |                 | 0.5 mg/L      |               |             |            |                  |                                       |                        |           |     |  | 0.5 mg/L       |            | 0.5 mg/L                     |            |  |            |
| 7/17/2013                                  | 1.45              | 0.4     | mg/L |          | 314 mg/L |              | 1004 μS/cm | 3.34 mg/L |           |          | 0.2       | mg/L      | 0.2       | mg/L            | 0.4 mg/L      | 5.78 pH units | 16.9 °C     |            |                  |                                       |                        |           |     |  | 0.5 mg/L       |            | 0.2 mg/L                     |            |  |            |
| 8/16/2013                                  | 1.36              | 0.2     | mg/L |          | 334 mg/L |              | 916 μS/cm  | 2.38 mg/L |           |          | 5.05 mg/L |           | 1 mg/L    | 5.05 mg/L       | 5.68 pH units | 15.4 °C       |             |            |                  |                                       |                        |           |     |  | 0.5 mg/L       |            | 5.05 mg/L                    |            |  |            |
| 9/17/2013                                  | 1.40              | 0.2     | mg/L |          | 373 mg/L |              | 960 μS/cm  | 5.01 mg/L |           |          | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.49 pH units | 14 °C         |             |            |                  |                                       |                        |           |     |  | 0.5 mg/L       |            | 0.2 mg/L                     |            |  |            |
| 10/28/2013                                 | 1.46              | 0.1     | mg/L |          | 378 mg/L |              | 850 μS/cm  | 3.00 mg/L |           |          | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.74 pH units | 13.2 °C       |             |            |                  |                                       |                        |           |     |  | 0.5 mg/L       |            | 0.2 mg/L                     |            |  |            |
| 2014                                       |                   |         |      |          |          |              |            |           |           |          |           |           |           |                 |               |               |             |            |                  |                                       |                        |           |     |  |                |            |                              |            |  |            |
| 4/14/2014                                  | 0.80              | 0.2     | mg/L |          | 282 mg/L |              | 960 μS/cm  |           |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        |               | 8.2 °C        |             |            |                  |                                       |                        |           |     |  | 0.2 mg/L       |            | 0.2 mg/L                     |            |  |            |
| 5/8/2014                                   | 1.00              | 0.2     | mg/L |          | 287 mg/L |              | 947 μS/cm  | 4.98 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.94 pH units | 10.4 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.2 mg/L   |                              | 0.2 mg/L   |  |            |
| 6/11/2014                                  | 1.10              | 0.2     | mg/L |          | 296 mg/L |              | 609 μS/cm  | 5.36 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.92 pH units | 13.9 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.2 mg/L   |                              | 0.2 mg/L   |  |            |
| 7/14/2014                                  | 1.21              | 0.2     | mg/L |          | 275 mg/L |              | 589 μS/cm  | 4.29 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.96 pH units | 14.5 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.2 mg/L   |                              | 0.2 mg/L   |  |            |
| 8/12/2014                                  | 1.39              | 0.2     | mg/L |          | 270 mg/L |              | 577 μS/cm  | 3.43 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.79 pH units | 15.8 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.2 mg/L   |                              | 0.2 mg/L   |  |            |
| 9/18/2014                                  | 1.17              | 0.2     | mg/L |          | 269 mg/L |              | 565 μS/cm  | 3.83 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.00 pH units | 14.6 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.2 mg/L   |                              | 0.2 mg/L   |  |            |
| 11/5/2014                                  | 0.85              | 0.2     | mg/L |          | 315 mg/L |              | 647 μS/cm  | 6.70 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.07 pH units | 12.3 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.2 mg/L   |                              | 0.2 mg/L   |  |            |
| 2015                                       |                   |         |      |          |          |              |            |           |           |          |           |           |           |                 |               |               |             |            |                  |                                       |                        |           |     |  |                |            |                              |            |  |            |
| 4/13/2015                                  | 0.50              | 0.2     | mg/L |          | 104 mg/L |              | 490 μS/cm  | 7.17 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.54 pH units | 8.3 °C        |             |            |                  |                                       |                        |           |     |  |                | 0.2 mg/L   |                              | 0.2 mg/L   |  |            |
| 5/7/2015                                   | 0.95              | 0.2     | mg/L |          | 107 mg/L |              | 443 μS/cm  | 5.89 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        |               | 13 °C         |             |            |                  |                                       |                        |           |     |  |                | 0.697 mg/L |                              | 0.7 mg/L   |  |            |
| 7/16/2015                                  | 0.40              | 0.2     | mg/L |          | 138 mg/L |              | 443 μS/cm  | 3.38 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.03 pH units | 12.4 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.81 mg/L  |                              | 0.81 mg/L  |  |            |
| 8/6/2015                                   | 1.17              | 0.2     | mg/L |          | 210 mg/L |              | 603 μS/cm  | 4.41 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.89 pH units | 14.2 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.869 mg/L |                              | 0.87 mg/L  |  |            |
| 8/27/2015                                  | 1.61              | 0.2     | mg/L |          | 222 mg/L |              | 660 μS/cm  | 4.53 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.93 pH units | 15 °C         |             |            |                  |                                       |                        |           |     |  |                | 0.495 mg/L |                              | 0.5 mg/L   |  |            |
| 9/24/2015                                  | 1.85              | 0.2     | mg/L |          | 241 mg/L |              | 683 μS/cm  | 1.77 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.98 pH units | 15.2 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.635 mg/L |                              | 0.64 mg/L  |  |            |
| 11/5/2015                                  | 1.30              | 0.2     | mg/L |          | 277 mg/L |              | 797 μS/cm  |           |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.83 pH units | 13.9 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.481 mg/L |                              | 0.48 mg/L  |  |            |
| 2016                                       |                   |         |      |          |          |              |            |           |           |          |           |           |           |                 |               |               |             |            |                  |                                       |                        |           |     |  |                |            |                              |            |  |            |
| 4/21/2016                                  | 1.14              | 0.2     | mg/L |          | 357 mg/L |              | 1351 μS/cm |           |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.60 pH units | 10.79 °C      |             |            |                  |                                       |                        |           |     |  |                | 0.2 mg/L   |                              | 0.2 mg/L   |  | 0.915 mg/L |
| 6/2/2016                                   | 0.73              | 0.2     | mg/L |          | 458 mg/L |              | 1303 μS/cm | 4.27 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.81 pH units | 11.1 °C       |             |            |                  |                                       |                        |           |     |  |                | 1.05 mg/L  |                              | 1.05 mg/L  |  | 2.67 mg/L  |
| 6/27/2016                                  | 1.45              | 0.22    | mg/L |          | 586 mg/L |              | 1637 μS/cm | 2.52 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.77 pH units | 15.6 °C       |             |            |                  |                                       |                        |           |     |  |                | 1.07 mg/L  |                              | 1.29 mg/L  |  | 2.81 mg/L  |
| 7/28/2016                                  | 1.89              | 0.51    | mg/L |          | 571 mg/L |              | 1710 μS/cm | 3.85 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.81 pH units | 16.8 °C       |             |            |                  |                                       |                        |           |     |  |                | 4.41 mg/L  |                              | 4.92 mg/L  |  | 12.3 mg/L  |
| 8/25/2016                                  | 1.86              | 0.2     | mg/L |          | 506 mg/L |              | 1543 μS/cm | 4.03 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 4.64 pH units | 17 °C         |             |            |                  |                                       |                        |           |     |  |                | 2.00 mg/L  |                              | 2.00 mg/L  |  | 4.77 mg/L  |
| 9/22/2016                                  | 2.54              | 0.2     | mg/L |          | 487 mg/L |              | 1432 μS/cm | 4.42 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.91 pH units | 16.1 °C       |             |            |                  |                                       |                        |           |     |  |                | 0.241 mg/L |                              | 0.24 mg/L  |  | 0.441 mg/L |
| 10/19/2016                                 | 1.80              | 0.2     | mg/L |          | 483 mg/L |              | 1385 μS/cm | 6.12 mg/L |           | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.97 pH units | 15.2 °C       |             |            |                  |                                       |                        |           |     |  |                | 1.19 mg/L  |                              | 1.19 mg/L  |  | 0.747 mg/L |
| 2017                                       |                   |         |      |          |          |              |            |           |           |          |           |           |           |                 |               |               |             |            |                  |                                       |                        |           |     |  |                |            |                              |            |  |            |
| 5/4/2017                                   | 1.00              | 0.2     | mg/L |          | 653 mg/L |              | 1615 μS/cm | 3.72 mg/L | 0.25 mg/L | 0.2 mg/L | 0.2 mg/L  | 0.25 mg/L | 0.25 mg/L | 5.80 pH units   | 9.5 °C        | 10            | mg CaCO3/L  | 1200 mg/L  |                  | 0.785 mg/L                            | 1.03 mg/L              |           |     |  |                | 0.63 mg/L  |                              | 3.57 mg/L  |  |            |
| 6/15/2017                                  | 1.10              | 0.2     | mg/L |          | 781 mg/L |              | 2025 μS/cm | 3.85 mg/L | 0.29 mg/L | 0.2 mg/L | 0.2 mg/L  | 0.29 mg/L | 0.29 mg/L | 5.74 pH units   | 12 °C         | 8             | mg CaCO3/L  | 1420 mg/L  |                  | 0.34 mg/L                             | 0.63 mg/L              |           |     |  |                | 1.06 mg/L  |                              | 6.08 mg/L  |  |            |
| 7/6/2017                                   | 1.05              | 0.2     | mg/L |          | 0.2 mg/L |              | 2045 μS/cm | 3.10 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 5.70 pH units   | 13.9 °C       | 11            | mg CaCO3/L  | 1380 mg/L  |                  | 0.2 mg/L                              | 0.2 mg/L               |           |     |  |                | 0.92 mg/L  |                              | 4.96 mg/L  |  |            |
| 8/22/2017                                  | 1.14              | 0.26    | mg/L |          | 664 mg/L |              |            |           | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        |               |               | 10          | mg CaCO3/L | 161 mg/L         |                                       | 1.74 mg/L              | 2 mg/L    |     |  |                | 1.74 mg/L  |                              | 4.19 mg/L  |  |            |
| 9/27/2017                                  | 1.11              | 0.2     | mg/L |          | 725 mg/L |              |            |           | 0.26 mg/L | 0.2 mg/L | 0.2 mg/L  | 0.26 mg/L | 0.26 mg/L |                 |               |               | 10          | mg CaCO3/L | 1260 mg/L        |                                       | 0.994 mg/L             | 1.25 mg/L |     |  |                | 0.994 mg/L |                              | 2.01 mg/L  |  |            |
| 10/19/2017                                 | 1.15              | 0.22    | mg/L |          | 761 mg/L |              | 1015 μS/cm | 3.56 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 5.53 pH units   | 15.6 °C       | 11            | mg CaCO3/L  | 1300 mg/L  |                  | 0.655 mg/L                            | 0.88 mg/L              |           |     |  |                | 0.655 mg/L |                              | 1.54 mg/L  |  |            |
| 11/15/2017                                 | 1.04              | 0.2     | mg/L |          | 754 mg/L |              | 1960 μS/cm | 6.27 mg/L | 0.23 mg/L | 0.2 mg/L | 0.2 mg/L  | 0.23 mg/L | 0.23 mg/L | 5.87 pH units   | 12.7 °C       | 9             | mg CaCO3/L  | 1340 mg/L  |                  | 0.655 mg/L                            | 0.88 mg/L              |           |     |  |                | 0.655 mg/L |                              | 2.17 mg/L  |  |            |
| 2018                                       |                   |         |      |          |          |              |            |           |           |          |           |           |           |                 |               |               |             |            |                  |                                       |                        |           |     |  |                |            |                              |            |  |            |
| 4/24/2018                                  | 0.92              | 0.2     | mg/L |          | 643 mg/L |              | 2116 μS/cm | 4.49 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 6.28 pH units   | 9.8 °C        | 7             | mg CaCO3/L  | 1240 mg/L  |                  | 1.14 mg/L                             | 1.14 mg/L              |           |     |  |                | 1.14 mg/L  |                              | 6.86 mg/L  |  |            |
| 5/30/2018                                  | 1.10              | 0.24    | mg/L |          | 636 mg/L |              | 2105 μS/cm | 4.47 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 4.57 pH units   | 12.3 °C       | 9             | mg CaCO3/L  | 1170 mg/L  |                  | 1.35 mg/L                             | 1.59 mg/L              |           |     |  |                | 1.59 mg/L  |                              | 0.593 mg/L |  |            |
| 7/12/2018                                  | 1.15              | 0.2     | mg/L |          | 652 mg/L |              | 1732 μS/cm | 8.00 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 6.77 pH units   | 14.1 °C       | 10            | mg CaCO3/L  | 1190 mg/L  |                  | 1.89 mg/L                             | 1.89 mg/L              |           |     |  |                | 1.89 mg/L  |                              | 4.07 mg/L  |  |            |
| 8/16/2018                                  | 1.20              | 0.2     | mg/L |          | 677 mg/L |              | 2167 μS/cm | 5.70 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 6.06 pH units   | 16.7 °C       | 5             | mg CaCO3/L  | 1230 mg/L  |                  | 1.25 mg/L                             | 1.25 mg/L              |           |     |  |                | 1.25 mg/L  |                              | 1.06 mg/L  |  |            |
| 9/5/2018                                   | 1.10              | 0.2     | mg/L |          | 717 mg/L |              | 1968 μS/cm | 5.50 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 6.90 pH units   | 17.5 °C       | 9             | mg CaCO3/L  | 1300 mg/L  |                  | 1.08 mg/L                             | 1.08 mg/L              |           |     |  |                | 1.08 mg/L  |                              | 0.443 mg/L |  |            |
| 10/10/2018                                 | 1.00              | 0.2     | mg/L |          | 691 mg/L |              | 2120 μS/cm | 3.90 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 5.95 pH units   | 16.5 °C       | 7             | mg CaCO3/L  | 1180 mg/L  |                  | 0.83 mg/L                             | 0.83 mg/L              |           |     |  |                | 0.83 mg/L  |                              | 4.37 mg/L  |  |            |
| 10/31/2018                                 | 0.76              | 0.2     | mg/L |          | 663 mg/L |              | 2218 μS/cm | 6.32 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 5.45 pH units   | 12.5 °C       | 10            | mg CaCO3/L  | 1230 mg/L  |                  | 1.02 mg/L                             | 1.02 mg/L              |           |     |  |                | 1.02 mg/L  |                              | 1.59 mg/L  |  |            |
| 2019                                       |                   |         |      |          |          |              |            |           |           |          |           |           |           |                 |               |               |             |            |                  |                                       |                        |           |     |  |                |            |                              |            |  |            |
| 4/25/2019                                  | 0.79              | 0.2     | mg/L |          | 452 mg/L |              | 1509 μS/cm | 5.83 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 5.36 pH units   | 9.1 °C        | 11            | mg CaCO3/L  | 8400 mg/L  |                  | 1.02 mg/L                             | 1.02 mg/L              |           |     |  |                | 1.02 mg/L  |                              | 3.12 mg/L  |  |            |
| 6/10/2019                                  | 2.15              | 0.2     | mg/L |          | 455 mg/L |              | 1580 μS/cm | 8.05 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 6.00 pH units   | 10.8 °C       | 14            | mg CaCO3/L  | 889 mg/L   |                  | 0.706 mg/L                            | 0.71 mg/L              |           |     |  |                | 0.71 mg/L  |                              | 4.54 mg/L  |  |            |
| 7/11/2019                                  | 1.00              | 0.24    | mg/L |          | 461 mg/L |              | 1552 μS/cm | 2.84 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 5.60 pH units   | 15 °C         | 13            | mg CaCO3/L  | 858 mg/L   |                  | 1.13 mg/L                             | 1.37 mg/L              |           |     |  |                | 1.37 mg/L  |                              | 5.7 mg/L   |  |            |
| 7/31/2019                                  | 1.20              | 0.2     | mg/L |          | 438 mg/L |              | 1407 μS/cm | 1.59 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 5.33 pH units   | 17.7 °C       | 13            | mg CaCO3/L  | 830 mg/L   |                  | 1.37 mg/L                             | 1.37 mg/L              |           |     |  |                | 1.37 mg/L  |                              | 2.64 mg/L  |  |            |
| 8/27/2019                                  | 1.30              | 0.29    | mg/L |          | 468 mg/L |              | 1543 μS/cm | 1.05 mg/L | 0.2 mg/L  | 0.2 mg/L | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 5.25 pH units   | 15.5 °C       | 14            | mg CaCO3/L  | 884 mg/L   |                  | 0.883 mg/L                            | 1.17 mg/L              |           |     |  |                | 1.17 mg/L  |                              | 3.85 mg/L  |  |            |
| 9/19/2019                                  |                   |         |      |          |          |              | 1503 μS/cm | 1.49 mg/L |           |          |           |           |           | 5.40 pH units   | 14.3 °C       |               |             |            |                  |                                       |                        |           |     |  |                |            |                              |            |  |            |

## 01-WCH Groundwater Sampling Data 2013-2019

| 01-WCH Groundwater Sampling Data 2013-2019 |                   |           |  |          |              |            |           |           |                 |               |             |                  |                        |            | Laboratory Detection Limit            |                              |
|--------------------------------------------|-------------------|-----------|--|----------|--------------|------------|-----------|-----------|-----------------|---------------|-------------|------------------|------------------------|------------|---------------------------------------|------------------------------|
|                                            |                   |           |  |          |              |            |           |           |                 |               |             |                  |                        |            | Expected Outlier or Equipment Failure |                              |
| Date                                       | Water Level Depth | Ammonia   |  | Chloride | Conductivity | DO         | Nitrate   | Nitrite   | Nitrate/Nitrite | pH            | Temperature | Total Alkalinity | Total Dissolved Solids | TKN        | Total Nitrogen                        | Total Phosphorus, Unfiltered |
| 2013                                       |                   |           |  |          |              |            |           |           |                 |               |             |                  |                        |            |                                       |                              |
| 4/4/2013                                   |                   |           |  | 55 mg/L  |              |            |           |           | 2.1 mg/L        |               |             |                  |                        | 0.5 mg/L   | 2.1 mg/L                              |                              |
| 7/17/2013                                  | 1.95              | 0.4 mg/L  |  | 68 mg/L  | 259 µS/cm    | 10.72 mg/L | 0.2 mg/L  |           | 0.4 mg/L        | 5.67 pH units | 14.5 °C     |                  |                        | 0.5 mg/L   | 0.2 mg/L                              |                              |
| 8/16/2013                                  | 1.76              | 0.2 mg/L  |  | 76 mg/L  | 247 µS/cm    | 6.82 mg/L  | 2.41 mg/L | 0.2 mg/L  | 2.41 mg/L       | 5.58 pH units | 13.6 °C     |                  |                        | 0.5 mg/L   | 2.41 mg/L                             |                              |
| 9/17/2013                                  | 1.80              | 0.2 mg/L  |  | 80 mg/L  | 243 µS/cm    | 10.63 mg/L | 0.2 mg/L  | 2.33 mg/L | 2.33 mg/L       | 5.58 pH units | 12.6 °C     |                  |                        | 0.5 mg/L   | 2.33 mg/L                             |                              |
| 10/28/2013                                 | 1.56              | 0.1 mg/L  |  | 61 mg/L  | 158.3 µS/cm  | 2.71 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.88 pH units | 11.4 °C     |                  |                        | 0.5 mg/L   | 0.2 mg/L                              |                              |
| 2014                                       |                   |           |  |          |              |            |           |           |                 |               |             |                  |                        |            |                                       |                              |
| 4/14/2014                                  | 1.12              | 0.2 mg/L  |  | 67 mg/L  | 250 µS/cm    |            | 1.77 mg/L | 0.2 mg/L  | 1.77 mg/L       |               | 11.1 °C     |                  |                        | 0.2 mg/L   | 1.77 mg/L                             |                              |
| 5/8/2014                                   | 1.43              | 0.2 mg/L  |  | 49 mg/L  | 208.2 µS/cm  | 7.17 mg/L  | 1.92 mg/L | 0.2 mg/L  | 1.92 mg/L       | 5.83 pH units | 10.9 °C     |                  |                        | 0.2 mg/L   | 1.92 mg/L                             |                              |
| 6/11/2014                                  | 1.51              | 0.2 mg/L  |  | 40 mg/L  | 118.7 µS/cm  | 8.21 mg/L  | 1.85 mg/L | 0.2 mg/L  | 1.85 mg/L       | 5.95 pH units | 13 °C       |                  |                        | 0.2 mg/L   | 1.85 mg/L                             |                              |
| 7/14/2014                                  | 1.72              | 0.2 mg/L  |  | 41 mg/L  | 119.2 µS/cm  | 7.47 mg/L  | 1.74 mg/L | 0.2 mg/L  | 1.74 mg/L       | 6.00 pH units | 13.9 °C     |                  |                        | 0.2 mg/L   | 1.72 mg/L                             |                              |
| 8/12/2014                                  | 1.86              | 0.2 mg/L  |  | 41 mg/L  | 116.4 µS/cm  | 7.58 mg/L  | 1.85 mg/L | 0.2 mg/L  | 1.85 mg/L       | 6.03 pH units | 13.5 °C     |                  |                        | 0.2 mg/L   | 1.85 mg/L                             |                              |
| 9/18/2014                                  | 1.82              | 0.2 mg/L  |  | 42 mg/L  | 114.9 µS/cm  | 6.02 mg/L  | 0.2 mg/L  | 1.8 mg/L  | 1.8 mg/L        | 5.91 pH units | 12.8 °C     |                  |                        | 0.2 mg/L   | 1.8 mg/L                              |                              |
| 11/5/2014                                  | 1.31              | 0.2 mg/L  |  | 93 mg/L  | 116.4 µS/cm  | 4.63 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.96 pH units | 11.1 °C     |                  |                        | 0.2 mg/L   | 0.2 mg/L                              |                              |
| 2015                                       |                   |           |  |          |              |            |           |           |                 |               |             |                  |                        |            |                                       |                              |
| 4/13/2015                                  | 0.92              | 0.2 mg/L  |  | 104 mg/L | 419 µS/cm    | 5.75 mg/L  | 1.8 mg/L  | 0.2 mg/L  | 1.8 mg/L        | 5.34 pH units | 9.7 °C      |                  |                        | 0.2 mg/L   | 1.8 mg/L                              |                              |
| 5/7/2015                                   | 1.04              | 0.2 mg/L  |  | 72 mg/L  | 277 µS/cm    | 5.39 mg/L  | 1.75 mg/L | 0.2 mg/L  | 1.75 mg/L       |               | 11.5 °C     |                  |                        | 0.478 mg/L | 2.23 mg/L                             |                              |
| 7/16/2015                                  | 1.75              | 0.2 mg/L  |  | 58 mg/L  | 185.4 µS/cm  | 5.58 mg/L  | 1.54 mg/L | 0.2 mg/L  | 1.54 mg/L       | 5.79 pH units | 11.6 °C     |                  |                        | 0.613 mg/L | 2.15 mg/L                             |                              |
| 8/6/2015                                   | 2.94              | 0.2 mg/L  |  | 61 mg/L  | 200.1 µS/cm  | 4.45 mg/L  | 1.57 mg/L | 0.2 mg/L  | 1.57 mg/L       | 5.73 pH units | 12.5 °C     |                  |                        | 0.514 mg/L | 2.08 mg/L                             |                              |
| 8/27/2015                                  | 2.00              | 0.2 mg/L  |  | 51 mg/L  | 173 µS/cm    | 3.22 mg/L  | 1.4 mg/L  | 0.2 mg/L  | 1.4 mg/L        | 5.65 pH units | 12.8 °C     |                  |                        | 0.495 mg/L | 1.9 mg/L                              |                              |
| 9/24/2015                                  | 1.99              | 0.2 mg/L  |  | 37 mg/L  | 141.8 µS/cm  | 3.11 mg/L  | 1.3 mg/L  | 0.2 mg/L  | 1.3 mg/L        | 6.02 pH units | 13.2 °C     |                  |                        | 0.635 mg/L | 1.94 mg/L                             |                              |
| 11/5/2015                                  | 1.57              | 0.2 mg/L  |  | 39 mg/L  | 145.6 µS/cm  |            | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 5.95 pH units | 12.1 °C     |                  |                        | 0.2 mg/L   | 1.56 mg/L                             |                              |
| 2016                                       |                   |           |  |          |              |            |           |           |                 |               |             |                  |                        |            |                                       |                              |
| 4/21/2016                                  | 2.24              | 0.2 mg/L  |  | 79 mg/L  | 370 µS/cm    |            | 2.35 mg/L | 0.2 mg/L  | 2.35 mg/L       | 5.79 pH units | 10.55 °C    |                  |                        | 6.28 mg/L  | 8.63 mg/L                             | 0.625 mg/L                   |
| 6/2/2016                                   | 2.30              | 0.2 mg/L  |  | 26 mg/L  | 109.2 µS/cm  | 4.96 mg/L  | 1.6 mg/L  | 0.2 mg/L  | 1.6 mg/L        | 6.54 pH units | 11.3 °C     |                  |                        | 3.14 mg/L  | 4.74 mg/L                             | 1.15 mg/L                    |
| 6/27/2016                                  | 2.35              | 0.2 mg/L  |  | 61 mg/L  | 208.5 µS/cm  | 1.67 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.01 pH units | 18 °C       |                  |                        | 43.5 mg/L  | 43.5 mg/L                             | 2.11 mg/L                    |
| 7/28/2016                                  | 2.98              | 0.36 mg/L |  | 74 mg/L  | 287.9 µS/cm  | 1.99 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.15 pH units | 25 °C       |                  |                        | 21.2 mg/L  | 21.6 mg/L                             | 2.84 mg/L                    |
| 8/25/2016                                  | 3.30              | 0.26 mg/L |  | 86 mg/L  | 345.6 µS/cm  | 2.68 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.55 pH units | 24 °C       |                  |                        | 18.0 mg/L  | 18.3 mg/L                             | 2.27 mg/L                    |
| 9/22/2016                                  | 2.82              | 0.2 mg/L  |  | 114 mg/L | 418.8 µS/cm  | 2.79 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.67 pH units | 20.5 °C     |                  |                        | 3.3 mg/L   | 3.3 mg/L                              | 0.299 mg/L                   |
| 10/19/2016                                 | 3.13              | 0.2 mg/L  |  | 73 mg/L  | 233 µS/cm    | 3.57 mg/L  | 0.2 mg/L  | 0.2 mg/L  | 0.2 mg/L        | 6.45 pH units | 12.6 °C     |                  |                        | 2.4 mg/L   | 2.4 mg/L                              | 0.283 mg/L                   |
| 2017                                       |                   |           |  |          |              |            |           |           |                 |               |             |                  |                        |            |                                       |                              |
| 5/4/2017                                   | 1.79              | 0.2 mg/L  |  | 57 mg/L  | 186 µS/cm    | 5.98 mg/L  | 0.93 mg/L | 0.2 mg/L  | 0.93 mg/L       | 7.04 pH units | 13.1 °C     | 7 mg CaCO3/L     | 159 mg/L               | 1.55 mg/L  | 2.48 mg/L                             | 0.15 mg/L                    |
| 6/15/2017                                  | 2.80              | 0.2 mg/L  |  | 34 mg/L  | 139.1 µS/cm  | 4.38 mg/L  | 1.21 mg/L | 0.2 mg/L  | 1.21 mg/L       | 6.63 pH units | 14.7 °C     | 15 mg CaCO3/L    | 103 mg/L               | 5.34 mg/L  | 6.55 mg/L                             | 2.02 mg/L                    |
| 7/6/2017                                   | 2.09              | 0.2 mg/L  |  | 37 mg/L  | 148.2 µS/cm  | 4.36 mg/L  | 0.99 mg/L | 0.2 mg/L  | 0.99 mg/L       | 6.32 pH units | 17 °C       | 24 mg CaCO3/L    | 144 mg/L               | 15.1 mg/L  | 16.1 mg/L                             | 2.23 mg/L                    |
| 8/22/2017                                  | 2.30              | 0.2 mg/L  |  | 31 mg/L  |              |            | 1.13 mg/L | 0.2 mg/L  | 1.13 mg/L       |               |             | 14 mg CaCO3/L    | 131 mg/L               | 0.692 mg/L | 1.82 mg/L                             | 0.174 mg/L                   |
| 9/27/2017                                  | n/a               | 0.2 mg/L  |  | 34 mg/L  |              |            | 0.55 mg/L | 0.2 mg/L  | 0.55 mg/L       |               |             | 30 mg CaCO3/L    | 134 mg/L               | 11.2 mg/L  | 11.8 mg/L                             | 1.22 mg/L                    |
| 10/19/2017                                 | 2.30              | 0.2 mg/L  |  | 33 mg/L  | 148 µS/cm    | 8.05 mg/L  | 1.39 mg/L | 0.2 mg/L  | 1.39 mg/L       | 6.45 pH units | 14.8 °C     | 14 mg CaCO3/L    | 130 mg/L               | 0.768 mg/L | 2.16 mg/L                             | 0.524 mg/L                   |
| 11/15/2017                                 | 1.77              | 0.2 mg/L  |  | 60 mg/L  | 710 µS/cm    | 2.51 mg/L  | 0.44 mg/L | 0.2 mg/L  | 0.44 mg/L       | 6.46 pH units | 11.7 °C     | 11 mg CaCO3/L    | 170 mg/L               | 6.99 mg/L  | 7.43 mg/L                             | 0.971 mg/L                   |
| 2018                                       |                   |           |  |          |              |            |           |           |                 |               |             |                  |                        |            |                                       |                              |
| 4/24/2018                                  | 1.90              | 0.2 mg/L  |  | 34 mg/L  | 165.2 µS/cm  | 4.55 mg/L  | 0.59 mg/L | 0.2 mg/L  | 0.59 mg/L       | 7.34 pH units | 9 °C        | 16 mg CaCO3/L    | 115 mg/L               | 4.6 mg/L   | 5.19 mg/L                             | 0.494 mg/L                   |
| 5/30/2018                                  | 2.20              | 0.2 mg/L  |  | 22 mg/L  | 123 µS/cm    | 4.84 mg/L  | 1.28 mg/L | 0.2 mg/L  | 1.28 mg/L       | 6.11 pH units | 11.3 °C     | 10 mg CaCO3/L    | 107 mg/L               | 2.21 mg/L  | 3.49 mg/L                             | 0.262 mg/L                   |
| 7/12/2018                                  | 4.18              | 0.21 mg/L |  | 21 mg/L  | 100.9 µS/cm  | 10.95 mg/L | 1.09 mg/L | 0.2 mg/L  | 1.09 mg/L       | 7.82 pH units | 17 °C       | 14 mg CaCO3/L    | 150 mg/L               | 37.1 mg/L  | 39.4 mg/L                             | 1.89 mg/L                    |
| 8/16/2018                                  | 1.90              | 0.2 mg/L  |  | 22 mg/L  | 132.6 µS/cm  | 7.61 mg/L  | 1.22 mg/L | 0.2 mg/L  | 1.22 mg/L       | 6.32 pH units | 17.2 °C     | 10 mg CaCO3/L    | 126 mg/L               | 1.85 mg/L  | 3.07 mg/L                             | 0.273 mg/L                   |
| 9/5/2018                                   | 4.00              | 0.2 mg/L  |  | 29 mg/L  | 162.5 µS/cm  | 10.39 mg/L | 0.69 mg/L | 0.2 mg/L  | 0.69 mg/L       | 6.27 pH units | 20.3 °C     | 10 mg CaCO3/L    | 155 mg/L               | 31.7 mg/L  | 32.4 mg/L                             | 3.39 mg/L                    |
| 10/10/2018                                 | 1.70              | 0.2 mg/L  |  | 26 mg/L  | 143 µS/cm    | 4.80 mg/L  | 1.02 mg/L | 0.2 mg/L  | 1.02 mg/L       | 6.50 pH units | 15.4 °C     | 9 mg CaCO3/L     | 96 mg/L                | 2.86 mg/L  | 3.88 mg/L                             | 0.283 mg/L                   |
| 10/31/2018                                 | 1.83              | 0.2 mg/L  |  | 25 mg/L  | 135.8 µS/cm  | 5.25 mg/L  | 1.01 mg/L | 0.2 mg/L  | 1.01 mg/L       | 5.90 pH units | 11.9 °C     | 10 mg CaCO3/L    | 106 mg/L               | 1.68 mg/L  | 2.69 mg/L                             | 0.2 5                        |
| 2019                                       |                   |           |  |          |              |            |           |           |                 |               |             |                  |                        |            |                                       |                              |
| 4/25/2019                                  | 1.66              | 0.2 mg/L  |  | 62 mg/L  | 250.9 µS/cm  | 4.53 mg/L  | 0.94 mg/L | 0.2 mg/L  | 0.94 mg/L       | 5.77 pH units | 8.60 °C     | 9 mg CaCO3/L     | 178 mg/L               | 1.37 mg/L  | 2.31 mg/L                             | 0.223 mg/L                   |
| 6/10/2019                                  | 2.15              | 0.2 mg/L  |  | 50 mg/L  | 219.2 µS/cm  | 4.08 mg/L  | 0.8 mg/L  | 0.2 mg/L  | 0.8 mg/L        | 6.20 pH units | 10.9 °C     | 11 mg CaCO3/L    | 140 mg/L               | 1.11 mg/L  | 1.91 mg/L                             | 0.087 mg/L                   |
| 7/11/2019                                  | 2.50              | 0.2 mg/L  |  | 40 mg/L  | 77.2 µS/cm   | 4.33 mg/L  | 0.77 mg/L | 0.2 mg/L  | 0.77 mg/L       | 5.88 pH units | 14.5 °C     | 12 mg CaCO3/L    | 118 mg/L               | 0.595 mg/L | 1.36 mg/L                             | 0.073 mg/L                   |
| 7/31/2019                                  | 2.40              | 0.2 mg/L  |  | 45 mg/L  | 189.5 µS/cm  | 2.84 mg/L  | 0.72 mg/L | 0.2 mg/L  | 0.72 mg/L       | 5.50 pH units | 17.2 °C     | 11 mg CaCO3/L    | 128 mg/L               | 2.17 mg/L  | 2.89 mg/L                             | 0.429 mg/L                   |
| 8/27/2019                                  | 2.80              | 0.2 mg/L  |  | 34 mg/L  | 161.9 µS/cm  | 4.75 mg/L  | 0.91 mg/L | 0.2 mg/L  | 0.91 mg/L       | 5.47 pH units | 15 °C       | 10 mg CaCO3/L    | 108 mg/L               | 1.95 mg/L  | 2.86 mg/L                             | 0.458 mg/L                   |
| 9/19/2019                                  | 2.50              |           |  |          | 239 µS/cm    | 1.94 mg/L  |           |           |                 | 5.65 pH units | 13.4 °C     |                  |                        |            |                                       |                              |

## 01-XWB Groundwater Sampling Data 2013-2019

|            |                   |         |          |              |      |         |         |                 |      |             |                  |                        |          | Laboratory Detection Limit            |                              |
|------------|-------------------|---------|----------|--------------|------|---------|---------|-----------------|------|-------------|------------------|------------------------|----------|---------------------------------------|------------------------------|
|            |                   |         |          |              |      |         |         |                 |      |             |                  |                        |          | Expected Outlier or Equipment Failure |                              |
| Date       | Water Level Depth | Ammonia | Chloride | Conductivity | DO   | Nitrate | Nitrite | Nitrate/Nitrite | pH   | Temperature | Total Alkalinity | Total Dissolved Solids | TKN      | Total Nitrogen                        | Total Phosphorus, Unfiltered |
| 2013       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |          |                                       |                              |
| 4/4/2013   |                   |         | 17       | mg/L         |      |         |         | 0.9             | mg/L |             |                  |                        | 0.5      | mg/L                                  | 0.9                          |
| 7/17/2013  | 2.75              | 0.4     | mg/L     | 17           | mg/L | 96.7    | µS/cm   | 3.60            | mg/L | 1.27        | mg/L             | 5.55                   | pH units | 19.1                                  | °C                           |
| 8/16/2013  | 2.78              | 0.2     | mg/L     | 17           | mg/L | 83.9    | µS/cm   | 1.84            | mg/L | 0.79        | mg/L             | 5.48                   | pH units | 18.1                                  | °C                           |
| 9/17/2013  | 3.05              | 0.2     | mg/L     | 20           | mg/L | 99.8    | µS/cm   | 6.69            | mg/L | 1.1         | mg/L             | 5.57                   | pH units | 16.3                                  | °C                           |
| 10/28/2013 | 2.94              | 0.1     | mg/L     | 26           | mg/L | 91.8    | µS/cm   | 4.87            | mg/L | 1.56        | mg/L             | 5.68                   | pH units | 13.9                                  | °C                           |
| 2014       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |          |                                       |                              |
| 4/14/2014  | 2.08              | 0.2     | mg/L     | 6            | mg/L | 60      | µS/cm   | 4.50            | mg/L | 0.46        | mg/L             | 5.88                   | pH units | 10.2                                  | °C                           |
| 5/8/2014   | 2.33              | 0.2     | mg/L     | 23           | mg/L | 112.5   | µS/cm   | 4.50            | mg/L | 1.41        | mg/L             | 5.88                   | pH units | 10.2                                  | °C                           |
| 6/11/2014  | 2.72              | 0.2     | mg/L     | 14           | mg/L | 60.1    | µS/cm   | 2.74            | mg/L | 1.14        | mg/L             | 5.80                   | pH units | 12.9                                  | °C                           |
| 7/14/2014  | 3.03              | 0.2     | mg/L     | 13           | mg/L | 61.1    | µS/cm   | 4.12            | mg/L | 0.96        | mg/L             | 5.90                   | pH units | 17.5                                  | °C                           |
| 8/12/2014  | 3.28              | 0.2     | mg/L     | 20           | mg/L | 72.1    | µS/cm   | 3.78            | mg/L | 1.34        | mg/L             | 5.85                   | pH units | 17.9                                  | °C                           |
| 9/18/2014  | 3.28              | 0.2     | mg/L     | 21           | mg/L | 71.2    | µS/cm   | 4.29            | mg/L | 1.3         | mg/L             | 5.81                   | pH units | 16.6                                  | °C                           |
| 11/5/2014  | 2.65              | 0.2     | mg/L     | 28           | mg/L | 82.6    | µS/cm   | 2.92            | mg/L | 0.2         | mg/L             | 5.89                   | pH units | 13.1                                  | °C                           |
| 2015       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |          |                                       |                              |
| 4/13/2015  | 2.10              | 0.2     | mg/L     | 17           | mg/L | 102.2   | µS/cm   | 4.75            | mg/L | 1.2         | mg/L             | 6.08                   | pH units | 6.1                                   | °C                           |
| 5/7/2015   | 2.52              | 0.2     | mg/L     | 16           | mg/L | 81.8    | µS/cm   | 3.55            | mg/L | 1.12        | mg/L             | 1.12                   | mg/L     | 10.8                                  | °C                           |
| 7/16/2015  | 2.91              | 0.2     | mg/L     | 14           | mg/L | 78.9    | µS/cm   | 2.63            | mg/L | 0.75        | mg/L             | 5.59                   | pH units | 16.1                                  | °C                           |
| 8/6/2015   | 3.03              | 0.2     | mg/L     | 18           | mg/L | 92.9    | µS/cm   | 2.91            | mg/L | 1.65        | mg/L             | 5.64                   | pH units | 17.2                                  | °C                           |
| 8/27/2015  | 3.01              | 0.2     | mg/L     | 21           | mg/L | 103.6   | µS/cm   | 2.78            | mg/L | 1.36        | mg/L             | 5.61                   | pH units | 17.2                                  | °C                           |
| 9/24/2015  | 3.08              | 0.2     | mg/L     | 22           | mg/L | 105     | µS/cm   | 2.85            | mg/L | 1.42        | mg/L             | 5.75                   | pH units | 16.8                                  | °C                           |
| 11/5/2015  | 2.80              | 0.2     | mg/L     | 19           | mg/L | 90.5    | µS/cm   | 1               | mg/L | 0.2         | mg/L             | 5.79                   | pH units | 13.6                                  | °C                           |
| 2016       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |          |                                       |                              |
| 4/21/2016  | 2.31              | 0.2     | mg/L     | 16           | mg/L | 109     | µS/cm   | 1.85            | mg/L | 0.2         | mg/L             | 1.85                   | mg/L     | 5.54                                  | pH units                     |
| 6/2/2016   | 2.51              | 0.2     | mg/L     | 22           | mg/L | 100.5   | µS/cm   | 3.51            | mg/L | 1.38        | mg/L             | 1.38                   | mg/L     | 6.02                                  | pH units                     |
| 6/27/2016  | 2.64              | 0.2     | mg/L     | 23           | mg/L | 111.3   | µS/cm   | 3.42            | mg/L | 1.4         | mg/L             | 1.4                    | mg/L     | 5.97                                  | pH units                     |
| 7/28/2016  | 2.92              | 0.2     | mg/L     | 24           | mg/L | 111.2   | µS/cm   | 4.20            | mg/L | 1.43        | mg/L             | 1.43                   | mg/L     | 6.22                                  | pH units                     |
| 8/25/2016  | 3.00              | 0.2     | mg/L     | 24           | mg/L | 122.3   | µS/cm   | 3.50            | mg/L | 1.41        | mg/L             | 1.41                   | mg/L     | 5.88                                  | pH units                     |
| 9/22/2016  | 3.00              | 0.2     | mg/L     | 25           | mg/L | 119.7   | µS/cm   | 2.63            | mg/L | 1.51        | mg/L             | 1.51                   | mg/L     | 6.07                                  | pH units                     |
| 10/19/2016 | 3.00              | 0.2     | mg/L     | 27           | mg/L | 121     | µS/cm   | 3.71            | mg/L | 1.56        | mg/L             | 1.56                   | mg/L     | 5.98                                  | pH units                     |
| 2017       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |          |                                       |                              |
| 5/4/2017   | 2.03              | 0.2     | mg/L     | 15           | mg/L | 71.6    | µS/cm   | 3.16            | mg/L | 1.03        | mg/L             | 1.03                   | mg/L     | 5.78                                  | pH units                     |
| 6/15/2017  | 2.30              | 0.2     | mg/L     | 12           | mg/L | 68.5    | µS/cm   | 2.65            | mg/L | 0.67        | mg/L             | 0.67                   | mg/L     | 6.30                                  | pH units                     |
| 7/6/2017   | 2.75              | 0.2     | mg/L     | 9            | mg/L | 66.5    | µS/cm   | 2.06            | mg/L | 0.35        | mg/L             | 0.35                   | mg/L     | 5.89                                  | pH units                     |
| 8/22/2017  | 3.12              | 0.2     | mg/L     | 10           | mg/L |         |         | 0.24            | mg/L | 0.2         | mg/L             | 0.24                   | mg/L     |                                       |                              |
| 9/27/2017  | 3.12              | 0.2     | mg/L     | 26           | mg/L |         |         | 1.35            | mg/L | 0.2         | mg/L             | 1.35                   | mg/L     |                                       |                              |
| 10/19/2017 | 2.40              | 0.2     | mg/L     | 24           | mg/L | 96      | µS/cm   | 3.33            | mg/L | 1.51        | mg/L             | 1.51                   | mg/L     | 5.67                                  | pH units                     |
| 11/15/2017 | 2.46              | 0.2     | mg/L     | 23           | mg/L | 100.3   | µS/cm   | 2.34            | mg/L | 0.98        | mg/L             | 0.98                   | mg/L     | 6.14                                  | pH units                     |
| 2018       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |          |                                       |                              |
| 4/24/2018  | 2.18              | 0.2     | mg/L     |              | mg/L | 85.8    | µS/cm   | 5.90            | mg/L | 0.86        | mg/L             | 0.86                   | mg/L     | 8.60                                  | pH units                     |
| 5/30/2018  | 2.49              | 0.2     | mg/L     | 17           | mg/L | 95.55   | µS/cm   | 3.68            | mg/L | 1.05        | mg/L             | 1.05                   | mg/L     | 5.44                                  | pH units                     |
| 7/12/2018  | 2.70              | 0.2     | mg/L     | 25           | mg/L | 101.6   | µS/cm   | 9.68            | mg/L | 1.31        | mg/L             | 1.31                   | mg/L     | 7.26                                  | pH units                     |
| 8/16/2018  | 2.20              | 0.2     | mg/L     | 27           | mg/L | 134.2   | µS/cm   | 13.05           | mg/L | 1.46        | mg/L             | 1.46                   | mg/L     | 7.04                                  | pH units                     |
| 9/5/2018   | 2.70              | 0.2     | mg/L     | 22           | mg/L | 123.4   | µS/cm   | 5.50            | mg/L | 1.32        | mg/L             | 1.32                   | mg/L     | 7.46                                  | pH units                     |
| 10/10/2018 | 2.30              | 0.2     | mg/L     | 4            | mg/L | 45.4    | µS/cm   | 4.86            | mg/L | 0.28        | mg/L             | 0.28                   | mg/L     | 6.75                                  | pH units                     |
| 10/31/2018 | 2.56              | 0.2     | mg/L     | 3            | mg/L | 42.1    | µS/cm   | 5.54            | mg/L | 0.46        | mg/L             | 0.46                   | mg/L     | 5.95                                  | pH units                     |
| 2019       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |          |                                       |                              |
| 4/25/2019  | 2.42              | 0.2     | mg/L     | 9            | mg/L | 121.6   | µS/cm   | 5.30            | mg/L | 0.63        | mg/L             | 0.63                   | mg/L     | 3.81                                  | pH units                     |
| 6/10/2019  | 2.50              | 0.2     | mg/L     | 3            | mg/L | 53.1    | µS/cm   | 3.02            | mg/L | 0.37        | mg/L             | 0.37                   | mg/L     | 5.57                                  | pH units                     |
| 7/11/2019  | 3.60              | 0.2     | mg/L     | 13           | mg/L | 73.1    | µS/cm   | 4.12            | mg/L | 0.58        | mg/L             | 0.58                   | mg/L     | 5.41                                  | pH units                     |
| 7/31/2019  | 3.80              | 0.2     | mg/L     | 19           | mg/L | 95.1    | µS/cm   | 3.01            | mg/L | 0.7         | mg/L             | 0.7                    | mg/L     | 5.35                                  | pH units                     |
| 8/27/2019  | 3.50              | 0.2     | mg/L     | 24           | mg/L | 117     | µS/cm   | 1.22            | mg/L | 1.13        | mg/L             | 1.13                   | mg/L     | 5.29                                  | pH units                     |
| 9/18/2019  | 3.10              |         |          |              | mg/L | 126     | µS/cm   | 1.20            | mg/L |             |                  | 5.26                   | pH units | 16                                    | °C                           |

## 02-WCH Groundwater Sampling Data 2013-2019

| 02-WCH Groundwater Sampling Data 2013-2019 |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             | Laboratory Detection Limit            |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
|--------------------------------------------|-------------------|---------|------|------|----------|------|--------------|-------|-------|------|---------|------|---------|------|-----------------|------|-----------------------------------------|-------------|---------------------------------------|----|------------------------|------------|------------|-------|----------------|-------|------------------------------|------|-------|-------|------|--|--|--|--|--|--|
|                                            |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             | Expected Outlier or Equipment Failure |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| Date                                       | Water Level Depth | Ammonia |      |      | Chloride |      | Conductivity |       | DO    |      | Nitrate |      | Nitrite |      | Nitrate/Nitrite |      | pH                                      | Temperature | Total Alkalinity                      |    | Total Dissolved Solids |            | TKN        |       | Total Nitrogen |       | Total Phosphorus, Unfiltered |      |       |       |      |  |  |  |  |  |  |
| 2013                                       |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 4/4/2013                                   |                   |         |      |      | 59       | mg/L |              |       |       |      |         |      |         |      |                 | 0.5  | mg/L                                    |             |                                       |    |                        |            |            | 0.5   | mg/L           | 0.5   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 7/17/2013                                  | 1.80              | 0.4     |      | mg/L | 25       | mg/L | 97.3         | µS/cm | 4.96  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.4             | mg/L | 5.57                                    | pH units    | 19.2                                  | °C |                        |            |            | 2.38  | mg/L           | 2.38  | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 8/16/2013                                  | 1.88              | 0.2     |      | mg/L | 24       | mg/L | 85.9         | µS/cm | 5.25  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.68                                    | pH units    | 17.1                                  | °C |                        |            |            | 0.5   | mg/L           | 0.2   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 9/17/2013                                  | 1.90              | 0.2     |      | mg/L | 26       | mg/L | 44.2         | µS/cm | 4.98  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.31                                    | pH units    | 15.2                                  | °C |                        |            |            | 0.5   | mg/L           | 0.2   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 10/28/2013                                 | 1.93              | 0.1     |      | mg/L | 10       | mg/L | 40.9         | µS/cm | 4.13  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.81                                    | pH units    | 11.3                                  | °C |                        |            |            | 0.5   | mg/L           | 0.2   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 2014                                       |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 4/14/2014                                  | 1.44              | 0.2     |      | mg/L | 41       | mg/L | 150          | µS/cm |       |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L |                                         |             | 10.2                                  | °C |                        |            |            | 0.2   | mg/L           | 0.2   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 5/8/2014                                   | 1.83              | 0.2     |      | mg/L | 35       | mg/L | 140.6        | µS/cm | 7.96  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.89                                    | pH units    | 10.3                                  | °C |                        |            |            | 0.2   | mg/L           | 0.2   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 6/11/2014                                  | 2.13              | 0.2     |      | mg/L | 71       | mg/L | 161.8        | µS/cm | 7.60  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.85                                    | pH units    | 13.2                                  | °C |                        |            |            | 0.2   | mg/L           | 0.2   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 7/14/2014                                  | 2.46              | 0.2     |      | mg/L | 33       | mg/L | 88.5         | µS/cm | 8.15  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.26                                    | pH units    | 17.3                                  | °C |                        |            |            | 0.2   | mg/L           | 0.2   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 8/12/2014                                  | 3.10              | 0.2     |      | mg/L | 22       | mg/L | 70.7         | µS/cm | 9.53  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.37                                    | pH units    | 17.7                                  | °C |                        |            |            | 0.2   | mg/L           | 0.2   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 9/18/2014                                  | 2.86              | 0.2     |      | mg/L | 21       | mg/L | 63.2         | µS/cm | 9.80  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.22                                    | pH units    | 15.8                                  | °C |                        |            |            | 0.2   | mg/L           | 0.2   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 11/5/2014                                  | 1.90              | 0.2     |      | mg/L | 43       | mg/L | 222          | µS/cm | 6.80  | mg/L | 1.49    | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.79                                    | pH units    | 11.2                                  | °C |                        |            |            | 0.2   | mg/L           | 1.49  | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 2015                                       |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 4/13/2015                                  | 1.40              | 0.2     |      | mg/L | 99       | mg/L | 356          | µS/cm | 5.84  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.84                                    | pH units    | 6                                     | °C |                        |            |            | 0.2   | mg/L           | 0.2   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 5/7/2015                                   | 1.01              | 0.2     |      | mg/L | 44       | mg/L | 161.8        | µS/cm | 7.06  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L |                                         |             | 11.7                                  | °C |                        |            |            | 0.478 | mg/L           | 0.48  | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 7/16/2015                                  | 2.03              | 0.2     |      | mg/L | 128      | mg/L | 384.2        | µS/cm | 4.01  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.30                                    | pH units    | 15.4                                  | °C |                        |            |            | 0.455 | mg/L           | 0.455 | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 8/6/2015                                   | 2.74              | 0.2     |      | mg/L | 42       | mg/L | 142.2        | µS/cm | 6.26  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.95                                    | pH units    | 16.3                                  | °C |                        |            |            | 0.633 | mg/L           | 0.63  | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 8/27/2015                                  | 4.02              | 0.2     |      | mg/L | 37       | mg/L |              |       |       |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L |                                         |             |                                       |    |                        |            |            | 0.396 | mg/L           | 0.4   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 9/24/2015                                  |                   | 0.2     |      | mg/L | 46       | mg/L |              |       |       |      | 0.64    | mg/L | 0.2     | mg/L | 0.2             | mg/L |                                         |             |                                       |    |                        |            |            | 0.37  | mg/L           | 1.01  | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 11/5/2015                                  | 2.00              | 0.2     |      | mg/L | 31       | mg/L | 128.7        | µS/cm |       |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.50                                    | pH units    | 12.6                                  | °C |                        |            |            | 0.503 | mg/L           | 0.5   | mg/L                         |      |       |       |      |  |  |  |  |  |  |
| 2016                                       |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 4/21/2016                                  |                   |         |      |      |          |      | 619          | µS/cm |       |      |         |      |         |      |                 |      | 5.89                                    | pH units    | 11.72                                 | °C |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 6/2/2016                                   |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      | Well Recharge Insufficient for Sampling |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 6/27/2016                                  | 3.73              |         |      |      |          |      | 278.5        | µS/cm | 5.25  | mg/L |         |      |         |      |                 |      | 6.55                                    | pH units    | 21.2                                  | °C |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 7/28/2016                                  | 3.45              | 2.61    | mg/L | 23   | mg/L     |      | 290          | µS/cm | 4.45  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.14                                    | pH units    | 22.3                                  | °C |                        |            |            |       | 12.7           | mg/L  | 15.3                         | mg/L | 0.403 | mg/L  |      |  |  |  |  |  |  |
| 8/25/2016                                  | 3.28              | 2.12    | mg/L | 23   | mg/L     |      | 195.3        | µS/cm | 4.90  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.07                                    | pH units    | 20                                    | °C |                        |            |            |       | 15             | mg/L  | 17.1                         | mg/L | 0.438 | mg/L  |      |  |  |  |  |  |  |
| 9/22/2016                                  | 2.56              | 2.16    | mg/L | 21   | mg/L     |      | 210.9        | µS/cm | 5.19  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.42                                    | pH units    | 21.9                                  | °C |                        |            |            |       | 4.1            | mg/L  | 6.26                         | mg/L | 0.272 | mg/L  |      |  |  |  |  |  |  |
| 10/19/2016                                 | 2.21              | 1.73    | mg/L | 22   | mg/L     |      | 130.2        | µS/cm | 4.84  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.24                                    | pH units    | 16                                    | °C |                        |            |            |       | 5.46           | mg/L  | 7.19                         | mg/L | 0.218 | mg/L  |      |  |  |  |  |  |  |
| 2017                                       |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 5/4/2017                                   | 2.75              |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 6/15/2017                                  | 2.23              |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 7/6/2017                                   | 3.41              |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 8/22/2017                                  | n/a               |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 9/27/2017                                  | 4.43              |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 10/19/2017                                 | 4.75              |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 11/15/2017                                 | 4.48              | 0.62    | mg/L | 11   | mg/L     |      | 114.7        | µS/cm | 6.55  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.29                                    | pH units    | 9.5                                   | °C | 63                     | mg CaCO3/L | 117        | mg/L  | 4.28           | mg/L  | 4.9                          | mg/L | 1.82  | mg/L  |      |  |  |  |  |  |  |
| 2018                                       |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 4/24/2018                                  |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 5/30/2018                                  | 3.30              | 0.2     | mg/L | 28   | mg/L     |      |              |       |       |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L |                                         |             |                                       |    |                        | 24         | mg CaCO3/L | 269   | mg/L           | 5.72  | mg/L                         | 6.97 | mg/L  | 0.859 | mg/L |  |  |  |  |  |  |
| 7/12/2018                                  | 3.41              | 0.2     | mg/L | 50   | mg/L     |      |              |       |       |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L |                                         |             |                                       |    |                        | 14         | mg CaCO3/L | 146   | mg/L           | 2.71  | mg/L                         | 2.71 | mg/L  | 0.545 | mg/L |  |  |  |  |  |  |
| 8/16/2018                                  | 4.70              | 0.38    | mg/L | 35   | mg/L     |      | 191.8        | µS/cm | 12.75 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.90                                    | pH units    | 19.4                                  | °C | 5                      | mg CaCO3/L | 180        | mg/L  | 3.82           | mg/L  | 4.2                          | mg/L | 0.438 | mg/L  |      |  |  |  |  |  |  |
| 9/5/2018                                   | 5.70              | 0.26    | mg/L | 36   | mg/L     |      | 161.1        | µS/cm | 11.50 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 7.08                                    | pH units    | 19.9                                  | °C | 16                     | mg CaCO3/L | 157        | mg/L  | 2.12           | mg/L  | 2.38                         | mg/L | 0.197 | mg/L  |      |  |  |  |  |  |  |
| 10/10/2018                                 | 2.70              | 0.2     | mg/L | 23   | mg/L     |      | 116          | µS/cm | 11.00 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.54                                    | pH units    | 16.9                                  | °C | 10                     | mg CaCO3/L | 92.6       | mg/L  | 6.58           | mg/L  | 6.58                         | mg/L | 0.813 | mg/L  |      |  |  |  |  |  |  |
| 10/31/2018                                 | 2.42              | 0.2     | mg/L | 24   | mg/L     |      | 115.6        | µS/cm | 10.10 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.53                                    | pH units    | 9.4                                   | °C | 10                     | mg CaCO3/L | 84         | mg/L  | 0.913          | mg/L  | 0.91                         | mg/L | 0.177 | mg/L  |      |  |  |  |  |  |  |
| 2019                                       |                   |         |      |      |          |      |              |       |       |      |         |      |         |      |                 |      |                                         |             |                                       |    |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |
| 4/25/2019                                  | 2.42              | 0.2     | mg/L | 18   | mg/L     |      | 475.4        | µS/cm | 7.79  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 2.98                                    | pH units    | 9.9                                   | °C | 8                      | mg CaCO3/L | 84         | mg/L  | 1.77           | mg/L  | 1.77                         | mg/L | 0.175 | mg/L  |      |  |  |  |  |  |  |
| 6/10/2019                                  | 2.90              | 0.2     | mg/L | 28   | mg/L     |      | 113.3        | µS/cm | 8.64  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.03                                    | pH units    | 14.7                                  | °C | 5                      | mg CaCO3/L | 92         | mg/L  | 1.73           | mg/L  | 1.73                         | mg/L | 0.498 | mg/L  |      |  |  |  |  |  |  |
| 7/11/2019                                  | 3.30              | 0.2     | mg/L | 37   | mg/L     |      | 144.8        | µS/cm | 5.23  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.13                                    | pH units    | 17.9                                  | °C | 5                      | mg CaCO3/L | 98         | mg/L  | 0.661          | mg/L  | 0.66                         | mg/L | 0.109 | mg/L  |      |  |  |  |  |  |  |
| 7/31/2019                                  | 2.55              | 0.2     | mg/L | 35   | mg/L     |      | 134          | µS/cm | 2.09  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.63                                    | pH units    | 18.8                                  | °C | 6                      | mg CaCO3/L | 104        | mg/L  | 0.861          | mg/L  | 0.86                         | mg/L | 0.029 | mg/L  |      |  |  |  |  |  |  |
| 8/27/2019                                  | 3.40              | 0.23    | mg/L | 45   | mg/L     |      | 167.6        | µS/cm | 6.58  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.01                                    | pH units    | 17                                    | °C | 8                      | mg CaCO3/L | 102        | mg/L  | 0.972          | mg/L  | 1.2                          | mg/L | 0.114 | mg/L  |      |  |  |  |  |  |  |
| 9/18/2019                                  | 3.50              |         |      |      |          |      | 189          | µS/cm | 8.25  | mg/L |         |      |         |      |                 |      | 5.81                                    | pH units    | 14.3                                  | °C |                        |            |            |       |                |       |                              |      |       |       |      |  |  |  |  |  |  |

09-PEN Groundwater Sampling Data 2013-2015

| 09-PEN Groundwater Sampling Data 2013-2015 |                   |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             | Laboratory Detection Limit            |       |      |                |      |      |
|--------------------------------------------|-------------------|---------|------|----------|------|--------------|-------|-------|------|---------|------|---------|------|-----------------|------|------|----------|-------------|---------------------------------------|-------|------|----------------|------|------|
|                                            |                   |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             | Expected Outlier or Equipment Failure |       |      |                |      |      |
| Date                                       | Water Level Depth | Ammonia |      | Chloride |      | Conductivity |       | DO    |      | Nitrate |      | Nitrite |      | Nitrate/Nitrite |      | pH   |          | Temperature |                                       | TKN   |      | Total Nitrogen |      |      |
| 2013                                       |                   |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |                                       |       |      |                |      |      |
| 4/4/2013                                   |                   |         |      | 410      | mg/L |              |       |       |      |         |      |         |      | 0.9             | mg/L |      |          |             |                                       |       | 0.5  | mg/L           | 0.9  | mg/L |
| 7/17/2013                                  | 2.92              | 0.4     | mg/L | 227      | mg/L | 780          | µS/cm | 12.25 | mg/L | 0.67    | mg/L | 0.2     | mg/L | 0.67            | mg/L | 6.53 | pH units | 23.1        | °C                                    | 0.5   | mg/L | 0.67           | mg/L |      |
| 8/16/2013                                  | 2.97              | 0.2     | mg/L | 235      | mg/L | 741          | µS/cm | 7.56  | mg/L | 1.14    | mg/L | 0.2     | mg/L | 1.14            | mg/L | 6.42 | pH units | 18.3        | °C                                    | 2.8   | mg/L | 3.9            | mg/L |      |
| 9/10/2013                                  | 3.27              | 0.2     | mg/L | 266      | mg/L | 716          | µS/cm | 12.81 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.51 | pH units | 17.4        | °C                                    | 0.5   | mg/L | 0.2            | mg/L |      |
| 10/28/2013                                 | 3.22              | 0.1     | mg/L | 150      | mg/L | 439          | µS/cm | 10.42 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.65 | pH units | 13          | °C                                    | 0.5   | mg/L | 0.2            | mg/L |      |
| 2014                                       |                   |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |                                       |       |      |                |      |      |
| 4/14/2014                                  | 2.53              | 0.2     | mg/L | 333      | mg/L | 860          | µS/cm |       |      | 2.03    | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.37 | pH units | 15          | °C                                    | 0.2   | mg/L | 2.03           | mg/L |      |
| 5/8/2014                                   | 2.65              | 0.2     | mg/L | 401      | mg/L | 1369         | µS/cm | 10.46 | mg/L | 2.75    | mg/L | 0.2     | mg/L | 2.75            | mg/L | 6.73 | pH units | 12          | °C                                    | 0.2   | mg/L | 2.75           | mg/L |      |
| 6/11/2014                                  | 3.13              | 0.2     | mg/L | 443      | mg/L | 902          | µS/cm | 9.86  | mg/L | 1.56    | mg/L | 0.2     | mg/L | 1.56            | mg/L | 6.78 | pH units | 16.2        | °C                                    | 0.2   | mg/L | 1.56           | mg/L |      |
| 7/14/2014                                  | 3.20              | 0.2     | mg/L | 425      | mg/L | 922          | µS/cm | 9.68  | mg/L | 0.56    | mg/L | 0.2     | mg/L | 0.56            | mg/L | 6.79 | pH units | 20.2        | °C                                    | 0.2   | mg/L | 0.56           | mg/L |      |
| 8/12/2014                                  | 3.31              | 0.2     | mg/L | 248      | mg/L | 595          | µS/cm | 10.36 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 7.09 | pH units | 19          | °C                                    | 0.2   | mg/L | 0.2            | mg/L |      |
| 9/18/2014                                  | 3.28              | 0.2     | mg/L | 124      | mg/L | 356          | µS/cm | 10.83 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.90 | pH units | 15.8        | °C                                    | 0.876 | mg/L | 0.88           | mg/L |      |
| 11/5/2014                                  | 3.01              | 0.2     | mg/L | 220      | mg/L | 474          | µS/cm | 10.98 | mg/L | 3.36    | mg/L | 0.2     | mg/L | 3.36            | mg/L | 6.92 | pH units | 12.9        | °C                                    | 0.2   | mg/L | 3.36           | mg/L |      |
| 2015                                       |                   |         |      |          |      |              |       |       |      |         |      |         |      |                 |      |      |          |             |                                       |       |      |                |      |      |
| 4/13/2015                                  | 2.38              | 0.2     | mg/L | 211      | mg/L | 728          | µS/cm | 11.27 | mg/L | 1.32    | mg/L | 0.2     | mg/L | 1.32            | mg/L | 6.96 | pH units | 10.2        | °C                                    | 0.975 | mg/L | 0.98           | mg/L |      |
| 5/7/2015                                   | 2.90              | 0.2     | mg/L | 163      | mg/L | 598          | µS/cm | 10.44 | mg/L | 1.83    | mg/L | 0.2     | mg/L | 1.83            | mg/L |      |          | 14.1        | °C                                    | 0.458 | mg/L | 2.29           | mg/L |      |
| 7/16/2015                                  | 3.08              | 0.2     | mg/L | 260      | mg/L | 801          | µS/cm | 6.03  | mg/L | 2.58    | mg/L | 0.2     | mg/L | 2.58            | mg/L | 6.94 | pH units | 16.8        | °C                                    | 0.2   | mg/L | 2.58           | mg/L |      |
| 8/6/2015                                   | 3.24              | 0.2     | mg/L | 249      | mg/L | 770          | µS/cm | 6.72  | mg/L | 0.45    | mg/L | 0.2     | mg/L | 0.45            | mg/L | 6.95 | pH units | 17.5        | °C                                    | 0.633 | mg/L | 1.08           | mg/L |      |
| 8/27/2015                                  | 3.28              | 0.2     | mg/L | 130      | mg/L | 484.5        | µS/cm | 6.24  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.84 | pH units | 18.8        | °C                                    | 0.593 | mg/L | 0.59           | mg/L |      |
| 9/24/2015                                  | 3.38              | 0.2     | mg/L | 94       | mg/L | 366.6        | µS/cm | 6.54  | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.97 | pH units | 18.8        | °C                                    | 0.635 | mg/L | 0.64           | mg/L |      |
| 11/5/2015                                  | 3.10              | 0.2     | mg/L | 96       | mg/L | 378.4        | µS/cm |       |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.89 | pH units | 16.8        | °C                                    | 0.283 | mg/L | 0.28           | mg/L |      |

09T-PEN Groundwater Sampling Data 2013-2019

| 09T-PEN Groundwater Sampling Data 2013-2019 |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       | Laboratory Detection Limit            |      |  |
|---------------------------------------------|-------------------|---------|------|----------|--------------|-------|---------|---------|-----------------|------|-------------|------------------|------------------------|------|----------------|------------------------------|------|----|------------|-----|------|-------|-------|-------|------|-------|---------------------------------------|------|--|
|                                             |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       | Expected Outlier or Equipment Failure |      |  |
| Date                                        | Water Level Depth | Ammonia |      | Chloride | Conductivity | DO    | Nitrate | Nitrite | Nitrate/Nitrite | pH   | Temperature | Total Alkalinity | Total Dissolved Solids | TKN  | Total Nitrogen | Total Phosphorus, Unfiltered |      |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 2013                                        |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 4/4/2013                                    |                   |         |      | 26       | mg/L         |       |         |         | 0.5             | mg/L |             |                  |                        | 0.5  | mg/L           | 0.5                          | mg/L |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 7/17/2013                                   | 3.20              | 0.4     | mg/L | 23       | mg/L         | 184   | µS/cm   | 9.54    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.04 | pH units       | 24.2                         | °C   |    |            |     |      | 7.27  | mg/L  | 7.27  | mg/L |       |                                       |      |  |
| 8/16/2013                                   | 3.28              | 0.2     | mg/L | 21       | mg/L         | 131.4 | µS/cm   | 6.38    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.64 | pH units       | 18.1                         | °C   |    |            |     |      | 4.07  | mg/L  | 4.07  | mg/L |       |                                       |      |  |
| 9/10/2013                                   | 3.97              | 0.2     | mg/L | 21       | mg/L         | 97    | µS/cm   | 7.94    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.93 | pH units       | 17.1                         | °C   |    |            |     |      | 0.5   | mg/L  | 0.2   | mg/L |       |                                       |      |  |
| 10/28/2013                                  | 3.87              | 0.1     | mg/L | 21       | mg/L         | 101.8 | µS/cm   | 9.39    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.19 | pH units       | 12.7                         | °C   |    |            |     |      | 0.5   | mg/L  | 0.2   | mg/L |       |                                       |      |  |
| 2014                                        |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 4/14/2014                                   | 2.60              | 0.2     | mg/L | 70       | mg/L         | 170   | µS/cm   |         | 0.41            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.79           | pH units                     | 12.2 | °C |            |     |      |       | 4.2   | mg/L  | 4.61 | mg/L  |                                       |      |  |
| 5/8/2014                                    | 3.01              | 0.2     | mg/L | 28       | mg/L         | 161.1 | µS/cm   | 8.27    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.62 | pH units       | 10.7                         | °C   |    |            |     |      | 3.17  | mg/L  | 3.17  | mg/L |       |                                       |      |  |
| 6/11/2014                                   | 3.48              | 0.2     | mg/L | 23       | mg/L         | 84.1  | µS/cm   | 6.90    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.49 | pH units       | 13.9                         | °C   |    |            |     |      | 0.2   | mg/L  | 0.2   | mg/L |       |                                       |      |  |
| 7/14/2014                                   | 3.53              | 0.2     | mg/L | 28       | mg/L         | 89.2  | µS/cm   | 8.63    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.53 | pH units       | 18.2                         | °C   |    |            |     |      | 1.46  | mg/L  | 1.46  | mg/L |       |                                       |      |  |
| 8/12/2014                                   | 3.85              | 0.2     | mg/L | 27       | mg/L         | 80.2  | µS/cm   | 10.14   | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.71 | pH units       | 17.4                         | °C   |    |            |     |      | 0.2   | mg/L  | 0.2   | mg/L |       |                                       |      |  |
| 9/18/2014                                   | 3.96              | 0.2     | mg/L | 28       | mg/L         | 85.4  | µS/cm   | 9.64    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.58 | pH units       | 16.6                         | °C   |    |            |     |      | 1.48  | mg/L  | 1.48  | mg/L |       |                                       |      |  |
| 11/5/2014                                   | 3.24              | 0.2     | mg/L | 39       | mg/L         | 121.9 | µS/cm   | 10.11   | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.73 | pH units       | 13.6                         | °C   |    |            |     |      | 0.2   | mg/L  | 0.2   | mg/L |       |                                       |      |  |
| 2015                                        |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 4/13/2015                                   | 2.57              | 0.2     | mg/L | 23       | mg/L         | 136.7 | µS/cm   | 9.89    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.60 | pH units       | 8.1                          | °C   |    |            |     |      | 0.2   | mg/L  | 0.2   | mg/L |       |                                       |      |  |
| 5/7/2015                                    | 3.17              | 0.2     | mg/L | 20       | mg/L         | 117.2 | µS/cm   | 9.39    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   |      |                | 14                           | °C   |    |            |     |      | 1.14  | mg/L  | 1.14  | mg/L |       |                                       |      |  |
| 7/16/2015                                   | 3.34              | 0.2     | mg/L | 27       | mg/L         | 99.4  | µS/cm   | 7.73    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.26 | pH units       | 16.5                         | °C   |    |            |     |      | 0.731 | mg/L  | 0.731 | mg/L |       |                                       |      |  |
| 8/6/2015                                    | 3.78              | 0.2     | mg/L | 44       | mg/L         | 126.9 | µS/cm   | 6.70    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.55 | pH units       | 18                           | °C   |    |            |     |      | 2.09  | mg/L  | 2.09  | mg/L |       |                                       |      |  |
| 8/27/2015                                   | 4.04              | 0.2     | mg/L | 35       | mg/L         | 137.8 | µS/cm   | 5.95    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.12 | pH units       | 18.7                         | °C   |    |            |     |      | 0.987 | mg/L  | 0.99  | mg/L |       |                                       |      |  |
| 9/24/2015                                   | 4.26              |         |      | 29       | mg/L         | 107.3 | µS/cm   | 6.04    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.40 | pH units       | 17.5                         | °C   |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 11/5/2015                                   | 3.76              | 0.2     | mg/L | 86       | mg/L         | 270.8 | µS/cm   |         |                 | 0.2  | mg/L        | 0.2              | mg/L                   | 6.23 | pH units       | 13.6                         | °C   |    |            |     |      | 0.2   | mg/L  | 0.2   | mg/L |       |                                       |      |  |
| 2016                                        |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 4/21/2016                                   | 3.49              | 0.2     | mg/L | 41       | mg/L         | 204   | µS/cm   |         | 0.2             | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 5.90           | pH units                     | 9.51 | °C |            |     |      |       | 0.794 | mg/L  | 0.79 | mg/L  | 0.348                                 | mg/L |  |
| 6/2/2016                                    | 3.90              | 0.2     | mg/L | 44       | mg/L         | 128.9 | µS/cm   | 6.17    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 7.17 | pH units       | 11.6                         | °C   |    |            |     |      | 1.03  | mg/L  | 1.03  | mg/L | 0.267 | mg/L                                  |      |  |
| 6/27/2016                                   | 1.03              | 0.2     | mg/L | 43       | mg/L         | 163.7 | µS/cm   | 5.85    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 7.32 | pH units       | 15.6                         | °C   |    |            |     |      | 3.12  | mg/L  | 3.12  | mg/L | 1.77  | mg/L                                  |      |  |
| 7/28/2016                                   | 4.84              | 0.2     | mg/L | 55       | mg/L         | 237.2 | µS/cm   | 5.54    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.96 | pH units       | 18.4                         | °C   |    |            |     |      | 1.61  | mg/L  | 1.61  | mg/L | 0.893 | mg/L                                  |      |  |
| 8/25/2016                                   | 4.35              | 0.2     | mg/L | 47       | mg/L         | 255.3 | µS/cm   | 6.08    | mg/L            | 0.57 | mg/L        | 0.2              | mg/L                   | 7.07 | pH units       | 18.1                         | °C   |    |            |     |      | 3.14  | mg/L  | 3.71  | mg/L | 4.28  | mg/L                                  |      |  |
| 9/22/2016                                   | 4.09              | 0.2     | mg/L | 22       | mg/L         | 198.7 | µS/cm   | 6.66    | mg/L            | 0.56 | mg/L        | 0.2              | mg/L                   | 7.62 | pH units       | 17.4                         | °C   |    |            |     |      | 4.27  | mg/L  | 4.38  | mg/L | 0.02  | mg/L                                  |      |  |
| 10/19/2016                                  | 4.13              | 0.2     | mg/L | 43       | mg/L         | 213.8 | µS/cm   | 5.63    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 7.53 | pH units       | 16.4                         | °C   |    |            |     |      | 0.754 | mg/L  | 0.75  | mg/L | 0.343 | mg/L                                  |      |  |
| 2017                                        |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 5/4/2017                                    | 2.78              | 0.2     | mg/L | 51       | mg/L         | 229.2 | µS/cm   | 7.72    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 7.42 | pH units       | 10.1                         | °C   | 11 | mg CaCO3/L | 452 | mg/L | 1.79  | mg/L  | 1.79  | mg/L | 0.86  | mg/L                                  |      |  |
| 6/15/2017                                   | 3.08              | 0.2     | mg/L | 41       | mg/L         | 247.8 | µS/cm   | 6.50    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 7.20 | pH units       | 14                           | °C   | 9  | mg CaCO3/L | 208 | mg/L | 0.496 | mg/L  | 0.5   | mg/L | 0.441 | mg/L                                  |      |  |
| 7/6/2017                                    | 3.38              | 0.2     | mg/L | 48       | mg/L         | 169   | µS/cm   | 4.61    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.73 | pH units       | 15                           | °C   | 9  | mg CaCO3/L | 136 | mg/L | 0.2   | mg/L  | 0.2   | mg/L | 1.8   | mg/L                                  |      |  |
| 8/22/2017                                   | 2.98              | 0.2     | mg/L | 47       | mg/L         |       |         |         |                 | 0.2  | mg/L        | 0.2              | mg/L                   |      |                |                              |      | 10 | mg CaCO3/L | 287 | mg/L | 1.27  | mg/L  | 1.27  | mg/L | 0.487 | mg/L                                  |      |  |
| 9/27/2017                                   | 3.91              | 0.2     | mg/L | 93       | mg/L         |       |         |         |                 | 0.2  | mg/L        | 0.2              | mg/L                   | 0.2  | mg/L           |                              |      | 13 | mg CaCO3/L | 643 | mg/L | 0.655 | mg/L  | 0.66  | mg/L | 0.952 | mg/L                                  |      |  |
| 10/19/2017                                  | 3.85              | 0.2     | mg/L | 58       | mg/L         | 128   | µS/cm   | 8.80    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.79 | pH units       | 15                           | °C   | 10 | mg CaCO3/L | 119 | mg/L | 1.11  | mg/L  | 1.11  | mg/L | 0.669 | mg/L                                  |      |  |
| 11/15/2017                                  | 3.34              | 0.2     | mg/L | 41       | mg/L         | 514   | µS/cm   | 5.65    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 7.75 | pH units       | 11.7                         | °C   | 16 | mg CaCO3/L | 348 | mg/L | 1.56  | mg/L  | 1.56  | mg/L | 0.218 | mg/L                                  |      |  |
| 2018                                        |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 4/24/2018                                   | 4.35              | 0.2     | mg/L | 23       | mg/L         | 169.4 | µS/cm   | 10.05   | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 7.93 | pH units       | 8.9                          | °C   | 13 | mg CaCO3/L | 226 | mg/L | 1.94  | mg/L  | 1.94  | mg/L | 0.359 | mg/L                                  |      |  |
| 5/30/2018                                   | 3.70              | 0.2     | mg/L | 32       | mg/L         | 163.8 | µS/cm   | 9.54    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 8.06 | pH units       | 16.3                         | °C   | 8  | mg CaCO3/L | 184 | mg/L | 1.14  | mg/L  | 1.14  | mg/L | 0.227 | mg/L                                  |      |  |
| 7/12/2018                                   |                   | 0.2     | mg/L | 38       | mg/L         |       |         |         |                 | 0.26 | mg/L        | 0.2              | mg/L                   | 0.26 | mg/L           |                              |      | 5  | mg CaCO3/L | 385 | mg/L | 1.87  | mg/L  | 2.13  | mg/L | 0.677 | mg/L                                  |      |  |
| 8/16/2018                                   | 3.00              | 0.2     | mg/L | 252      | mg/L         | 892   | µS/cm   | 14.63   | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 7.46 | pH units       | 18.6                         | °C   | 8  | mg CaCO3/L | 556 | mg/L | 3.45  | mg/L  | 3.45  | mg/L | 0.692 | mg/L                                  |      |  |
| 9/5/2018                                    |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 10/10/2018                                  |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 10/31/2018                                  | 2.97              | 0.2     | mg/L | 98       | mg/L         | 424.9 | µS/cm   | 6.70    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.09 | pH units       | 11.1                         | °C   | 14 | mg CaCO3/L | 258 | mg/L | 1.72  | mg/L  | 1.72  | mg/L | 0.27  | mg/L                                  |      |  |
| 2019                                        |                   |         |      |          |              |       |         |         |                 |      |             |                  |                        |      |                |                              |      |    |            |     |      |       |       |       |      |       |                                       |      |  |
| 4/25/2019                                   | 3.25              | 0.2     | mg/L | 33       | mg/L         | 215   | µS/cm   | 11.25   | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 3.98 | pH units       | 9.4                          | °C   | 10 | mg CaCO3/L | 274 | mg/L | 2.37  | mg/L  | 2.37  | mg/L | 0.787 | mg/L                                  |      |  |
| 6/10/2019                                   | 2.60              | 0.2     | mg/L | 42       | mg/L         | 191.1 | µS/cm   | 10.00   | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.40 | pH units       | 13.3                         | °C   | 13 | mg CaCO3/L | 212 | mg/L | 3.39  | mg/L  | 3.39  | mg/L | 0.42  | mg/L                                  |      |  |
| 7/11/2019                                   | 2.90              | 0.2     | mg/L | 68       | mg/L         | 262.9 | µS/cm   | 8.10    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.30 | pH units       | 17.2                         | °C   | 5  | mg CaCO3/L | 222 | mg/L | 2.77  | mg/L  | 2.77  | mg/L | 0.773 | mg/L                                  |      |  |
| 7/31/2019                                   | 3.35              | 0.2     | mg/L | 152      | mg/L         | 482.6 | µS/cm   | 7.79    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 5.98 | pH units       | 20.3                         | °C   | 5  | mg CaCO3/L | 338 | mg/L | 2.35  | mg/L  | 2.35  | mg/L | 0.502 | mg/L                                  |      |  |
| 8/27/2019                                   | 1.80              | 0.2     | mg/L | 81       | mg/L         | 299.8 | µS/cm   | 6.45    | mg/L            | 0.2  | mg/L        | 0.2              | mg/L                   | 6.01 | pH units       | 17.4                         | °C   | 5  | mg CaCO3/L | 214 | mg/L | 1.53  | mg/L  | 1.53  | mg/L | 0.338 | mg/L                                  |      |  |
| 9/18/2019                                   | 3.80              |         |      |          |              | 247   | µS/cm   | 7.52    | mg/L            |      |             |                  |                        | 5.85 | pH units       | 15.1                         | °C   |    |            |     |      |       |       |       |      |       |                                       |      |  |

09-XPB Groundwater Sampling Data 2013-2019

|            |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      | Laboratory Detection Limit            |                              |
|------------|-------------------|---------|----------|--------------|------|---------|---------|-----------------|------|-------------|------------------|------------------------|------|---------------------------------------|------------------------------|
|            |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      | Expected Outlier or Equipment Failure |                              |
| Date       | Water Level Depth | Ammonia | Chloride | Conductivity | DO   | Nitrate | Nitrite | Nitrate/Nitrite | pH   | Temperature | Total Alkalinity | Total Dissolved Solids | TKN  | Total Nitrogen                        | Total Phosphorus, Unfiltered |
| 2013       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                                       |                              |
| 4/4/2013   |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                                       |                              |
| 7/17/2013  | 3.20              | 0.4     | mg/L     | 67           | mg/L | 1229    | µS/cm   | 4.57            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.5                                   | mg/L                         |
| 8/16/2013  | 3.26              | 0.2     | mg/L     | 158          | mg/L | 486     | µS/cm   | 7.00            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.5                                   | mg/L                         |
| 9/10/2013  | 3.47              | 0.2     | mg/L     | 88           | mg/L | 264     | µS/cm   | 7.50            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.5                                   | mg/L                         |
| 10/28/2013 | 3.46              | 0.1     | mg/L     | 63           | mg/L | 185     | µS/cm   | 6.82            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.5                                   | mg/L                         |
| 2014       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                                       |                              |
| 4/14/2014  | 2.95              | 0.2     | mg/L     | 57           | mg/L | 230     | µS/cm   |                 |      | 0.2         | mg/L             | 0.2                    | mg/L | 0.2                                   | mg/L                         |
| 5/8/2014   | 3.09              | 0.2     | mg/L     | 39           | mg/L | 165.4   | µS/cm   | 7.42            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.2                                   | mg/L                         |
| 6/11/2014  | 3.24              | 0.2     | mg/L     | 61           | mg/L | 796     | µS/cm   | 7.07            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.2                                   | mg/L                         |
| 7/14/2014  | 3.37              | 0.2     | mg/L     | 360          | mg/L | 720     | µS/cm   | 7.86            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.2                                   | mg/L                         |
| 8/12/2014  | 3.44              | 0.2     | mg/L     | 253          | mg/L | 508     | µS/cm   | 9.13            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.2                                   | mg/L                         |
| 9/18/2014  | 3.47              | 0.2     | mg/L     | 122          | mg/L | 264     | µS/cm   | 9.26            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.2                                   | mg/L                         |
| 11/5/2014  | 3.10              | 0.2     | mg/L     | 150          | mg/L | 332     | µS/cm   | 9.00            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.2                                   | mg/L                         |
| 2015       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                                       |                              |
| 4/13/2015  | 2.91              | 0.2     | mg/L     | 89           | mg/L | 373     | µS/cm   | 9.91            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.2                                   | mg/L                         |
| 5/7/2015   | 3.09              | 0.2     | mg/L     | 83           | mg/L | 273     | µS/cm   | 9.02            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.398                                 | mg/L                         |
| 7/16/2015  | 2.91              | 0.2     | mg/L     | 252          | mg/L | 660     | µS/cm   | 7.31            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.2                                   | mg/L                         |
| 8/6/2015   | 2.71              | 0.2     | mg/L     | 247          | mg/L | 724     | µS/cm   | 6.04            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.77                                  | mg/L                         |
| 8/27/2015  | 3.10              | 0.2     | mg/L     | 125          | mg/L | 385.6   | µS/cm   | 5.66            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.593                                 | mg/L                         |
| 9/24/2015  | 3.29              | 0.2     | mg/L     | 90           | mg/L | 275.6   | µS/cm   | 2.19            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 0.503                                 | mg/L                         |
| 11/5/2015  | 2.95              | 0.2     | mg/L     | 62           | mg/L | 226.7   | µS/cm   |                 |      | 0.2         | mg/L             | 0.2                    | mg/L | 0.305                                 | mg/L                         |
| 2016       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                                       |                              |
| 4/21/2016  | 3.25              | 0.28    | mg/L     | 73           | mg/L | 325     | µS/cm   |                 |      | 0.2         | mg/L             | 0.2                    | mg/L | 6.05                                  | pH units                     |
| 6/2/2016   | 3.05              | 0.2     | mg/L     | 137          | mg/L | 384     | µS/cm   | 5.12            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.60                                  | pH units                     |
| 6/27/2016  | 1.08              | 0.2     | mg/L     | 92           | mg/L | 321.3   | µS/cm   | 3.45            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.62                                  | pH units                     |
| 7/28/2016  | 3.75              | 0.2     | mg/L     | 59           | mg/L | 203.1   | µS/cm   | 6.16            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.04                                  | pH units                     |
| 8/25/2016  | 4.60              | 0.2     | mg/L     | 66           | mg/L | 224.6   | µS/cm   | 6.17            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.90                                  | pH units                     |
| 9/22/2016  | 2.72              | 0.2     | mg/L     | 71           | mg/L | 250.8   | µS/cm   | 7.15            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.28                                  | pH units                     |
| 10/19/2016 | 3.55              | 0.2     | mg/L     | 74           | mg/L | 257.2   | µS/cm   | 6.77            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.82                                  | pH units                     |
| 2017       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                                       |                              |
| 5/4/2017   | 1.67              | 0.2     | mg/L     | 98           | mg/L | 319.4   | µS/cm   | 9.10            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.97                                  | pH units                     |
| 6/15/2017  | 2.75              | 0.2     | mg/L     | 478          | mg/L | 1385    | µS/cm   | 5.90            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.43                                  | pH units                     |
| 7/6/2017   | 2.93              | 0.2     | mg/L     | 438          | mg/L | 1181    | µS/cm   | 5.04            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.27                                  | pH units                     |
| 8/22/2017  | 2.94              | 0.21    | mg/L     | 176          | mg/L |         |         |                 |      | 0.2         | mg/L             | 0.2                    | mg/L |                                       |                              |
| 9/27/2017  | 3.23              | 0.2     | mg/L     | 166          | mg/L |         |         |                 |      | 0.2         | mg/L             | 0.2                    | mg/L |                                       |                              |
| 10/19/2017 | 3.35              | 0.2     | mg/L     | 103          | mg/L | 322     | µS/cm   | 8.27            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.71                                  | pH units                     |
| 11/15/2017 | 3.08              | 0.2     | mg/L     | 73           | mg/L | 251     | µS/cm   | 5.05            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.91                                  | pH units                     |
| 2018       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                                       |                              |
| 4/24/2018  | 2.71              | 0.2     | mg/L     | 255          | mg/L | 764     | µS/cm   | 7.68            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.02                                  | pH units                     |
| 5/30/2018  | 2.92              | 0.21    | mg/L     | 417          | mg/L | 1463    | µS/cm   | 9.82            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 4.70                                  | pH units                     |
| 7/12/2018  | 2.55              | 0.2     | mg/L     | 277          | mg/L | 744     | µS/cm   | 15.63           | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.98                                  | pH units                     |
| 8/16/2018  | 1.10              | 0.2     | mg/L     | 264          | mg/L | 886     | µS/cm   | 12.60           | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 7.37                                  | pH units                     |
| 9/5/2018   | 2.40              | 0.2     | mg/L     | 123          | mg/L | 700     | µS/cm   | 10.00           | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 9.00                                  | pH units                     |
| 10/10/2018 | 2.50              | 0.2     | mg/L     | 70           | mg/L | 335     | µS/cm   | 8.92            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.77                                  | pH units                     |
| 10/31/2018 | 2.59              | 0.2     | mg/L     | 71           | mg/L | 320.5   | µS/cm   | 6.00            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.36                                  | pH units                     |
| 2019       |                   |         |          |              |      |         |         |                 |      |             |                  |                        |      |                                       |                              |
| 4/25/2019  | 3.50              | 0.2     | mg/L     | 148          | mg/L | 511.5   | µS/cm   | 6.22            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.12                                  | pH units                     |
| 6/10/2019  | 2.80              | 0.2     | mg/L     | 265          | mg/L | 860     | µS/cm   | 9.00            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 6.27                                  | pH units                     |
| 7/11/2019  | 2.90              | 0.22    | mg/L     | 331          | mg/L | 1045    | µS/cm   | 7.35            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 5.96                                  | pH units                     |
| 7/31/2019  | 2.75              | 0.2     | mg/L     | 335          | mg/L | 1070    | µS/cm   | 4.42            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 5.41                                  | pH units                     |
| 8/27/2019  | 3.20              | 0.22    | mg/L     | 239          | mg/L | 853     | µS/cm   | 5.76            | mg/L | 0.2         | mg/L             | 0.2                    | mg/L | 5.52                                  | pH units                     |
| 9/18/2019  | 3.00              |         |          |              |      | 609     | µS/cm   | 7.51            | mg/L |             |                  |                        |      | 5.95                                  | pH units                     |

## 12-PEN Groundwater Sampling Data 2013-2019

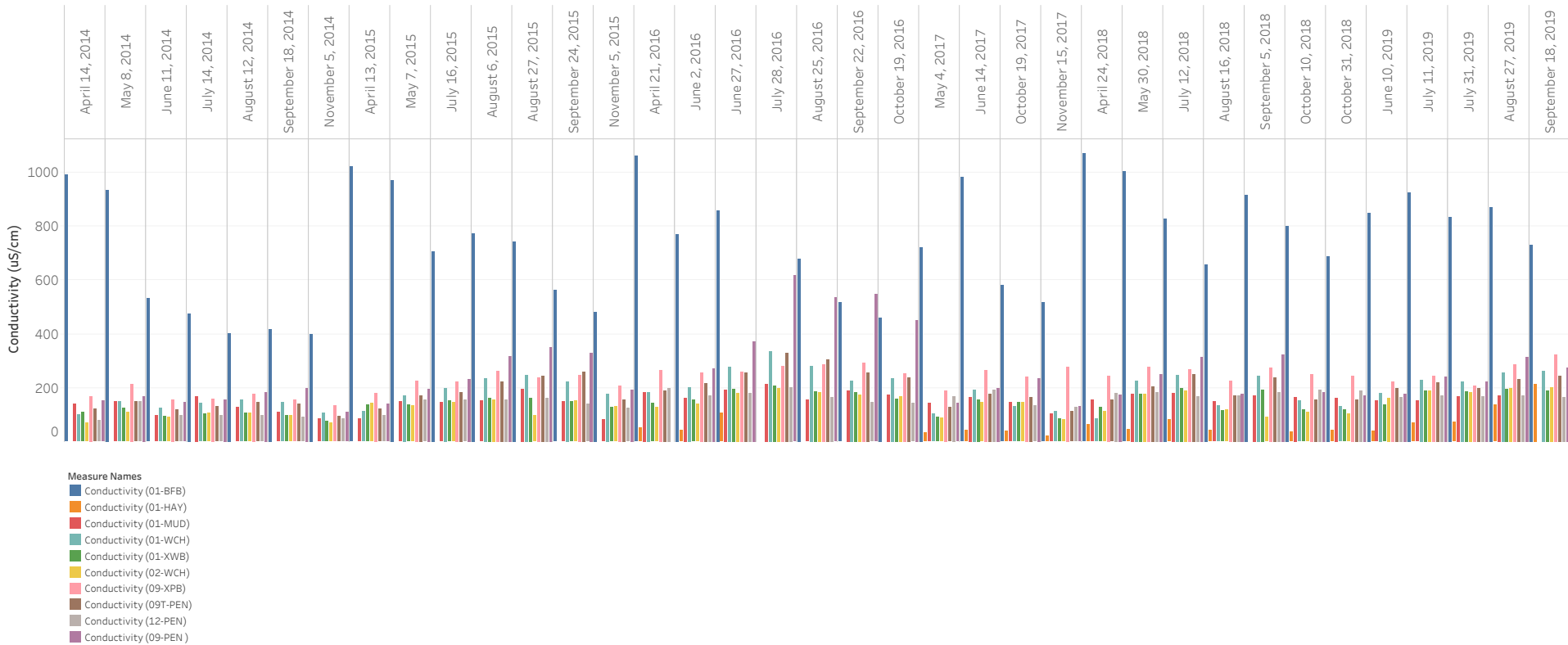
| 12-PEN Groundwater Sampling Data 2013-2019 |                   |         |      |          |      |              |       |      |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |       |      |                | Laboratory Detection Limit            |                              |      |       |      |
|--------------------------------------------|-------------------|---------|------|----------|------|--------------|-------|------|------|---------|------|---------|------|-----------------|------|------|----------|-------------|----|------------------|------------|------------------------|------|-------|------|----------------|---------------------------------------|------------------------------|------|-------|------|
|                                            |                   |         |      |          |      |              |       |      |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |       |      |                | Expected Outlier or Equipment Failure |                              |      |       |      |
| Date                                       | Water Level Depth | Ammonia |      | Chloride |      | Conductivity |       | DO   |      | Nitrate |      | Nitrite |      | Nitrate/Nitrite |      | pH   |          | Temperature |    | Total Alkalinity |            | Total Dissolved Solids |      | TKN   |      | Total Nitrogen |                                       | Total Phosphorus, Unfiltered |      |       |      |
| 2013                                       |                   |         |      |          |      |              |       |      |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |       |      |                |                                       |                              |      |       |      |
| 4/4/2013                                   |                   |         |      | 42       | mg/L |              |       |      |      |         |      |         |      |                 | 0.5  | mg/L |          |             |    |                  |            |                        |      |       |      | 0.5            | mg/L                                  | 0.5                          | mg/L |       |      |
| 7/17/2013                                  | 2.00              | 0.4     | mg/L | 42       | mg/L | 171.9        | µS/cm | 3.61 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.4             | mg/L | 6.43 | pH units | 14.2        | °C |                  |            |                        |      |       |      | 0.5            | mg/L                                  | 0.2                          | mg/L |       |      |
| 8/16/2013                                  | 2.43              | 0.2     | mg/L | 41       | mg/L | 144.2        | µS/cm | 2.29 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.04 | pH units | 13.1        | °C |                  |            |                        |      |       |      | 0.5            | mg/L                                  | 0.2                          | mg/L |       |      |
| 9/17/2013                                  | 3.02              | 0.2     | mg/L | 39       | mg/L | 134.5        | µS/cm | 3.03 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.98 | pH units | 11.7        | °C |                  |            |                        |      |       |      | 0.5            | mg/L                                  | 0.2                          | mg/L |       |      |
| 10/28/2013                                 | 3.32              | 0.1     | mg/L | 37       | mg/L | 111.7        | µS/cm | 2.43 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.06 | pH units | 12.6        | °C |                  |            |                        |      |       |      | 0.5            | mg/L                                  | 0.2                          | mg/L |       |      |
| 2014                                       |                   |         |      |          |      |              |       |      |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |       |      |                |                                       |                              |      |       |      |
| 4/14/2014                                  | 1.36              | 0.2     | mg/L | 39       | mg/L | 160          | µS/cm |      |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L |      |          | 8.2         | °C |                  |            |                        |      |       |      | 0.2            | mg/L                                  | 0.2                          | mg/L |       |      |
| 5/8/2014                                   | 1.82              | 0.2     | mg/L | 33       | mg/L | 143.9        | µS/cm | 2.45 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.18 | pH units | 9.6         | °C |                  |            |                        |      |       |      | 0.2            | mg/L                                  | 0.2                          | mg/L |       |      |
| 6/11/2014                                  | 2.27              | 0.2     | mg/L | 31       | mg/L | 87           | µS/cm | 2.50 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.44 | pH units | 9.6         | °C |                  |            |                        |      |       |      | 0.2            | mg/L                                  | 0.2                          | mg/L |       |      |
| 7/14/2014                                  | 2.70              | 0.2     | mg/L | 30       | mg/L | 88           | µS/cm | 2.85 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.37 | pH units | 12          | °C |                  |            |                        |      |       |      | 0.2            | mg/L                                  | 0.2                          | mg/L |       |      |
| 8/12/2014                                  | 3.10              | 0.2     | mg/L | 35       | mg/L | 94.4         | µS/cm | 2.48 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.34 | pH units | 12.3        | °C |                  |            |                        |      |       |      | 0.2            | mg/L                                  | 0.2                          | mg/L |       |      |
| 9/18/2014                                  | 3.28              | 0.2     | mg/L | 35       | mg/L | 94.8         | µS/cm | 2.72 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.24 | pH units | 12.4        | °C |                  |            |                        |      |       |      | 0.2            | mg/L                                  | 0.2                          | mg/L |       |      |
| 11/5/2014                                  | 2.20              | 0.2     | mg/L | 33       | mg/L | 109.4        | µS/cm | 2.26 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.35 | pH units | 11.9        | °C |                  |            |                        |      |       |      | 0.2            | mg/L                                  | 0.2                          | mg/L |       |      |
| 2015                                       |                   |         |      |          |      |              |       |      |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |       |      |                |                                       |                              |      |       |      |
| 4/13/2015                                  | 1.10              | 0.2     | mg/L | 34       | mg/L | 148.5        | µS/cm | 2.91 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.37 | pH units | 4           | °C |                  |            |                        |      |       |      | 14.6           | mg/L                                  | 14.6                         | mg/L |       |      |
| 5/7/2015                                   | 1.62              | 0.2     | mg/L | 35       | mg/L | 143.3        | µS/cm | 3.69 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L |      |          | 9           | °C |                  |            |                        |      |       |      | 0.517          | mg/L                                  | 0.52                         | mg/L |       |      |
| 7/16/2015                                  | 2.21              | 0.2     | mg/L | 34       | mg/L | 120.1        | µS/cm | 3.50 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.12 | pH units | 12.7        | °C |                  |            |                        |      |       |      | 0.869          | mg/L                                  | 0.869                        | mg/L |       |      |
| 8/6/2015                                   | 2.70              | 0.2     | mg/L | 33       | mg/L | 118.1        | µS/cm |      |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.04 | pH units | 12.8        | °C |                  |            |                        |      |       |      | 0.652          | mg/L                                  | 0.65                         | mg/L |       |      |
| 8/27/2015                                  | 3.04              | 0.2     | mg/L | 34       | mg/L | 118          | µS/cm | 1.16 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.89 | pH units | 12.7        | °C |                  |            |                        |      |       |      | 0.298          | mg/L                                  | 0.3                          | mg/L |       |      |
| 9/24/2015                                  | 3.42              | 0.2     | mg/L | 35       | mg/L | 123.7        | µS/cm | 2.70 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.07 | pH units | 14.1        | °C |                  |            |                        |      |       |      | 0.327          | mg/L                                  | 0.33                         | mg/L |       |      |
| 11/5/2015                                  | 3.03              | 0.2     | mg/L | 36       | mg/L | 127.6        | µS/cm |      |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.08 | pH units | 13.3        | °C |                  |            |                        |      |       |      | 0.2            | mg/L                                  | 0.2                          | mg/L |       |      |
| 2016                                       |                   |         |      |          |      |              |       |      |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |       |      |                |                                       |                              |      |       |      |
| 4/21/2016                                  | 2.06              | 0.2     | mg/L | 43       | mg/L | 200          | µS/cm |      |      | 0.54    | mg/L | 0.2     | mg/L | 0.54            | mg/L | 5.75 | pH units | 7.89        | °C |                  |            |                        |      |       |      | 1.31           | mg/L                                  | 1.85                         | mg/L | 0.425 | mg/L |
| 6/2/2016                                   | 2.02              | 0.2     | mg/L | 45       | mg/L | 143          | µS/cm | 3.47 | mg/L | 0.48    | mg/L | 0.2     | mg/L | 0.48            | mg/L | 6.46 | pH units | 9.5         | °C |                  |            |                        |      |       |      | 7.65           | mg/L                                  | 8.13                         | mg/L | 0.712 | mg/L |
| 6/27/2016                                  | 1.91              | 0.2     | mg/L | 46       | mg/L | 163.5        | µS/cm | 2.15 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.22 | pH units | 14.3        | °C |                  |            |                        |      |       |      | 3.61           | mg/L                                  | 3.61                         | mg/L | 1.88  | mg/L |
| 7/28/2016                                  | 1.35              | 0.21    | mg/L | 47       | mg/L | 189.5        | µS/cm | 2.41 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.05 | pH units | 20.5        | °C |                  |            |                        |      |       |      | 1.1            | mg/L                                  | 1.31                         | mg/L | 0.559 | mg/L |
| 8/25/2016                                  | 2.40              | 0.23    | mg/L | 40       | mg/L | 162.5        | µS/cm | 2.20 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.07 | pH units | 20.2        | °C |                  |            |                        |      |       |      | 2.86           | mg/L                                  | 3.09                         | mg/L | 1.01  | mg/L |
| 9/22/2016                                  | 2.43              | 0.26    | mg/L | 36       | mg/L | 135.4        | µS/cm | 2.27 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.47 | pH units | 18.7        | °C |                  |            |                        |      |       |      | 0.519          | mg/L                                  | 0.78                         | mg/L | 0.829 | mg/L |
| 10/19/2016                                 | 3.17              | 0.2     | mg/L | 44       | mg/L | 164.9        | µS/cm | 1.88 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.28 | pH units | 16          | °C |                  |            |                        |      |       |      | 1.01           | mg/L                                  | 1.01                         | mg/L | 0.309 | mg/L |
| 2017                                       |                   |         |      |          |      |              |       |      |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |       |      |                |                                       |                              |      |       |      |
| 5/4/2017                                   | 1.45              | 0.2     | mg/L | 47       | mg/L | 139.2        | µS/cm | 2.85 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.57 | pH units | 9.9         | °C | 11               | mg CaCO3/L | 117                    | mg/L | 2.11  | mg/L | 2.11           | mg/L                                  | 1.41                         | mg/L |       |      |
| 6/15/2017                                  | 1.56              | 0.2     | mg/L | 47       | mg/L | 143.5        | µS/cm | 2.31 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.47 | pH units | 10.6        | °C | 11               | mg CaCO3/L | 129                    | mg/L | 1.12  | mg/L | 1.12           | mg/L                                  | 1.12                         | mg/L | 1.26  | mg/L |
| 7/6/2017                                   | 1.89              | 0.2     | mg/L | 46       | mg/L | 148.3        | µS/cm | 2.42 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.27 | pH units | 12.6        | °C | 12               | mg CaCO3/L | 129                    | mg/L | 0.2   | mg/L | 0.2            | mg/L                                  | 1.09                         | mg/L |       |      |
| 8/22/2017                                  | 2.16              | 0.2     | mg/L | 45       | mg/L |              |       |      |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L |      |          |             |    | 12               | mg CaCO3/L | 120                    | mg/L | 1.97  | mg/L | 1.97           | mg/L                                  | 0.954                        | mg/L |       |      |
| 9/27/2017                                  | 2.16              | 0.2     | mg/L | 42       | mg/L |              |       |      |      | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L |      |          |             |    | 14               | mg CaCO3/L | 133                    | mg/L | 0.994 | mg/L | 0.99           | mg/L                                  | 0.983                        | mg/L |       |      |
| 10/19/2017                                 | 2.25              | 0.2     | mg/L | 43       | mg/L | 144          | µS/cm | 3.35 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.09 | pH units | 15.6        | °C | 13               | mg CaCO3/L | 100                    | mg/L | 1.79  | mg/L | 1.79           | mg/L                                  | 1.79                         | mg/L | 1.28  | mg/L |
| 11/15/2017                                 | 1.73              | 0.2     | mg/L | 48       | mg/L | 146.7        | µS/cm | 1.91 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.50 | pH units | 13          | °C | 12               | mg CaCO3/L | 130                    | mg/L | 0.315 | mg/L | 0.32           | mg/L                                  | 0.228                        | mg/L |       |      |
| 2018                                       |                   |         |      |          |      |              |       |      |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |       |      |                |                                       |                              |      |       |      |
| 4/24/2018                                  | 1.47              | 0.2     | mg/L | 57       | mg/L | 211.7        | µS/cm | 3.24 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.73 | pH units | 8.2         | °C | 7                | mg CaCO3/L | 113                    | mg/L | 2.97  | mg/L | 2.97           | mg/L                                  | 0.884                        | mg/L |       |      |
| 5/30/2018                                  | 1.92              | 0.2     | mg/L | 56       | mg/L | 298          | µS/cm | 4.06 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 3.88 | pH units | 9.7         | °C | 10               | mg CaCO3/L | 151                    | mg/L | 1.5   | mg/L | 1.5            | mg/L                                  | 0.217                        | mg/L |       |      |
| 7/12/2018                                  | 2.71              | 0.2     | mg/L | 58       | mg/L | 164.8        | µS/cm | 6.67 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 7.39 | pH units | 11.4        | °C | 8                | mg CaCO3/L | 138                    | mg/L | 1.83  | mg/L | 1.83           | mg/L                                  | 0.761                        | mg/L |       |      |
| 8/16/2018                                  | 2.50              | 0.2     | mg/L | 58       | mg/L | 227.2        | µS/cm | 8.12 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.75 | pH units | 13.5        | °C | 9                | mg CaCO3/L | 146                    | mg/L | 1.58  | mg/L | 1.58           | mg/L                                  | 0.416                        | mg/L |       |      |
| 9/5/2018                                   | 2.80              | 0.2     | mg/L | 63       | mg/L | 238.8        | µS/cm | 4.60 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.89 | pH units | 14.9        | °C | 6                | mg CaCO3/L | 204                    | mg/L | 1.79  | mg/L | 1.79           | mg/L                                  | 0.524                        | mg/L |       |      |
| 10/10/2018                                 | 2.00              | 0.2     | mg/L | 66       | mg/L | 248.4        | µS/cm | 3.07 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 6.48 | pH units | 14.4        | °C | 7                | mg CaCO3/L | 154                    | mg/L | 0.975 | mg/L | 0.98           | mg/L                                  | 0.602                        | mg/L |       |      |
| 10/31/2018                                 | 1.95              | 0.2     | mg/L | 70       | mg/L | 271.4        | µS/cm | 3.45 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.80 | pH units | 12.8        | °C | 13               | mg CaCO3/L | 164                    | mg/L | 0.643 | mg/L | 0.64           | mg/L                                  | 0.135                        | mg/L |       |      |
| 2019                                       |                   |         |      |          |      |              |       |      |      |         |      |         |      |                 |      |      |          |             |    |                  |            |                        |      |       |      |                |                                       |                              |      |       |      |
| 4/25/2019                                  | 1.58              | 0.2     | mg/L | 83       | mg/L | 313.6        | µS/cm | 3.83 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.54 | pH units | 7.2         | °C | 6                | mg CaCO3/L | 215                    | mg/L | 1.59  | mg/L | 1.59           | mg/L                                  | 0.925                        | mg/L |       |      |
| 6/10/2019                                  | 1.90              | 0.2     | mg/L | 76       | mg/L | 289          | µS/cm | 2.20 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.99 | pH units | 9.1         | °C | 6                | mg CaCO3/L | 202                    | mg/L | 0.683 | mg/L | 0.88           | mg/L                                  | 1.33                         | mg/L |       |      |
| 7/11/2019                                  | 2.30              | 0.2     | mg/L | 75       | mg/L | 282.3        | µS/cm | 4.70 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.99 | pH units | 12          | °C | 7                | mg CaCO3/L | 184                    | mg/L | 1.42  | mg/L | 1.42           | mg/L                                  | 0.514                        | mg/L |       |      |
| 7/31/2019                                  | 2.75              | 0.2     | mg/L | 74       | mg/L | 278          | µS/cm | 4.78 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.79 | pH units | 13.3        | °C | 7                | mg CaCO3/L | 186                    | mg/L | 1.08  | mg/L | 1.08           | mg/L                                  | 0.191                        | mg/L |       |      |
| 8/27/2019                                  | 3.20              | 0.2     | mg/L | 73       | mg/L | 271          | µS/cm | 2.51 | mg/L | 0.2     | mg/L | 0.2     | mg/L | 0.2             | mg/L | 5.60 | pH units | 13.5        | °C | 7                | mg CaCO3/L | 176                    | mg/L | 4.86  | mg/L | 4.86           | mg/L                                  | 3.12                         | mg/L |       |      |
| 9/18/2019                                  | 3.60              |         |      |          |      | 262          | µS/cm | 1.85 | mg/L |         |      |         |      |                 |      | 5.73 | pH units | 12.9        | °C |                  |            |                        |      |       |      |                |                                       |                              |      |       |      |

**Attachment D:**

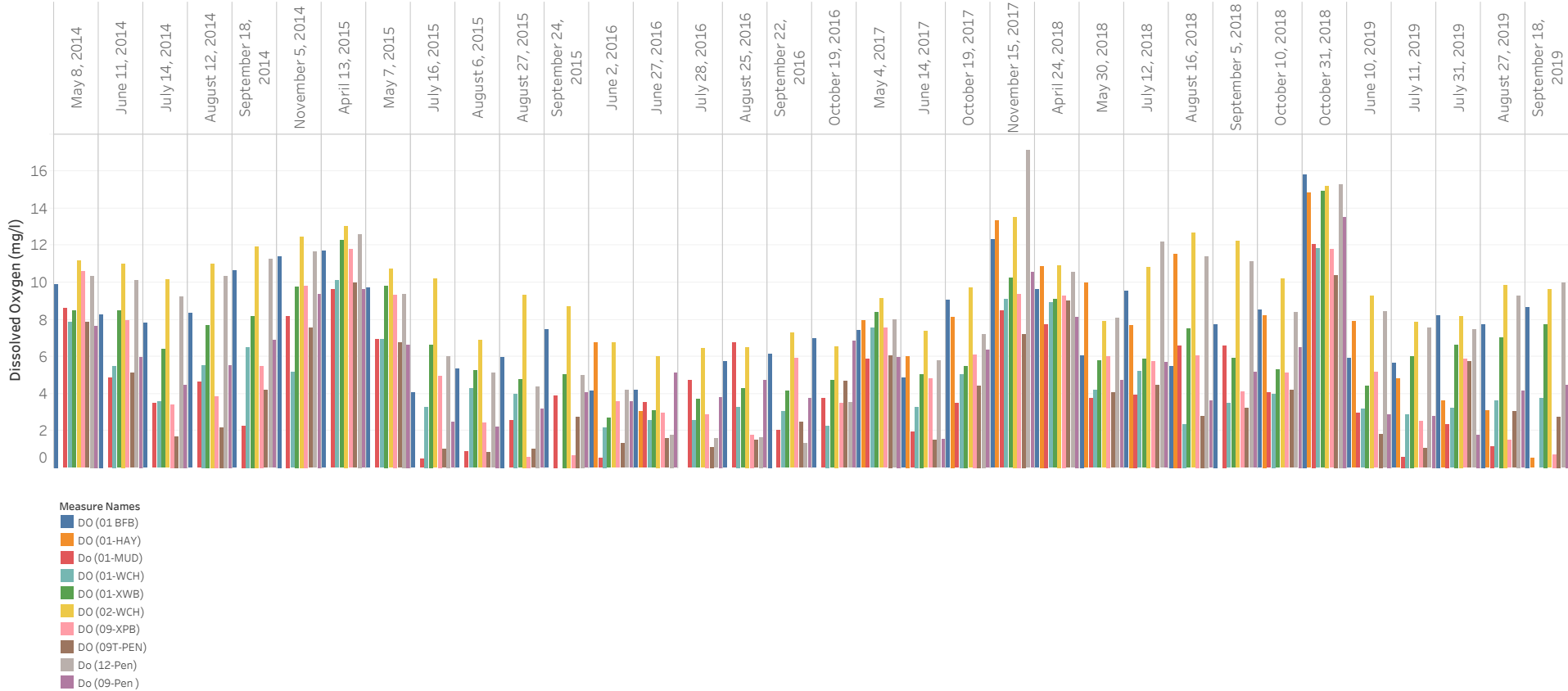
Select Tributary Graphs, 2014 through 2019

*(Note: Graphs abbreviated to show recent data from  
2014 through 2019 for enhanced readability and identification of trends)*

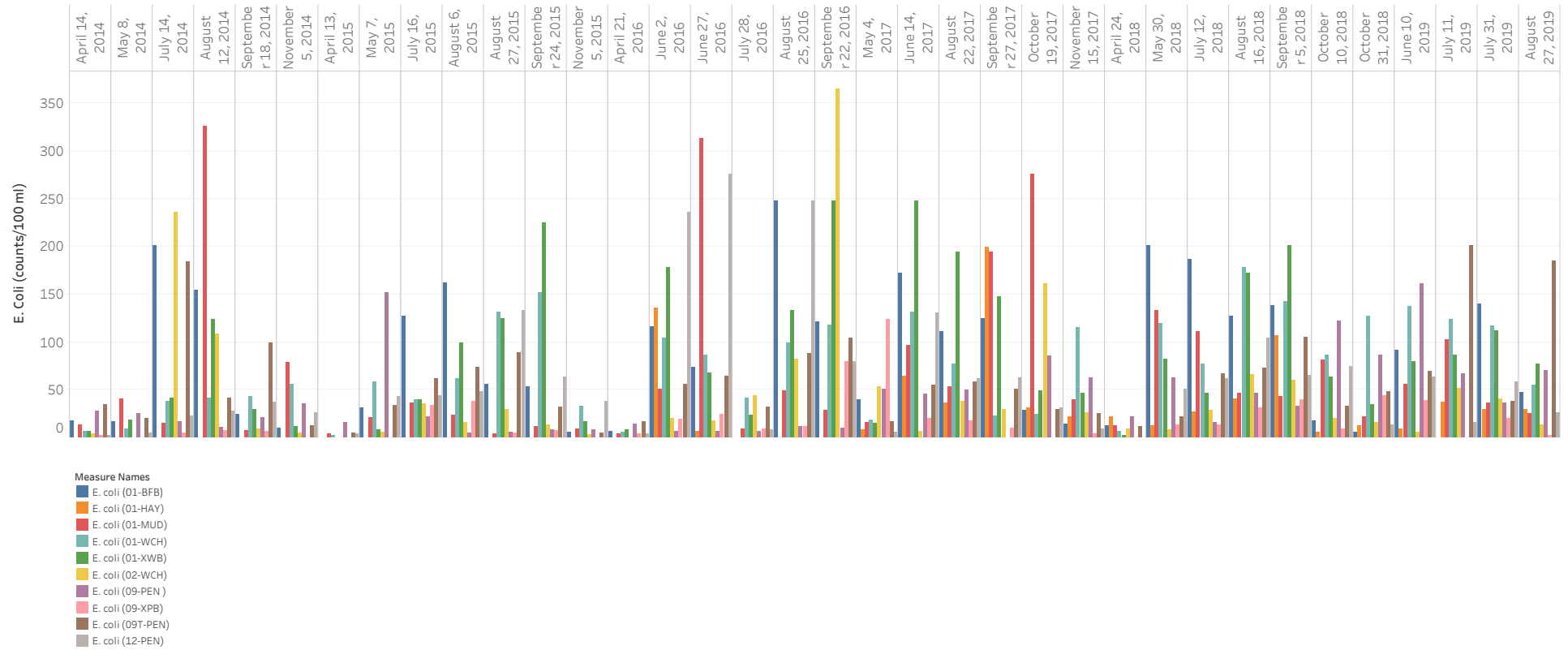
Tributary Conductivity, 2014-2019



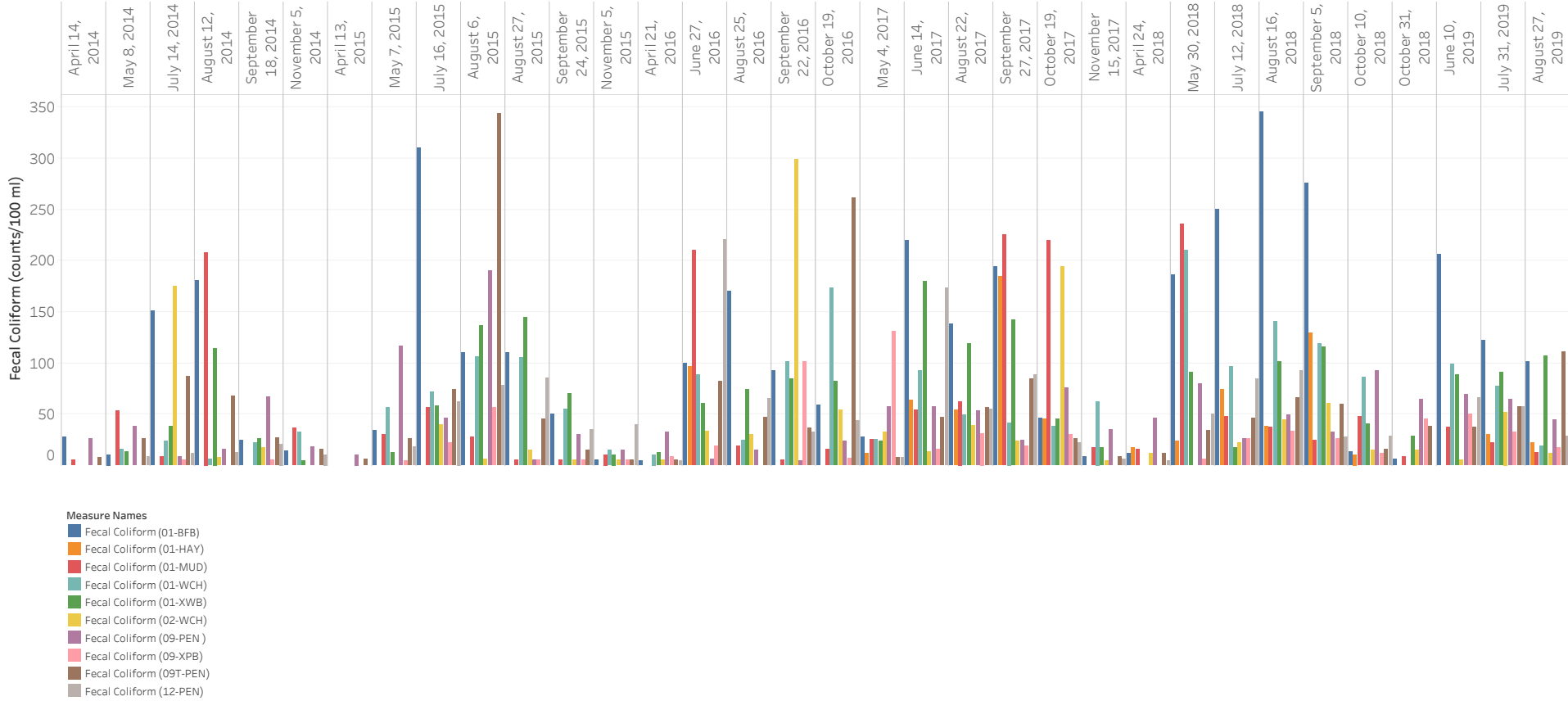
Tributary Dissolved Oxygen, 2014-2019



## Tributary E. Coli, 2014-2019



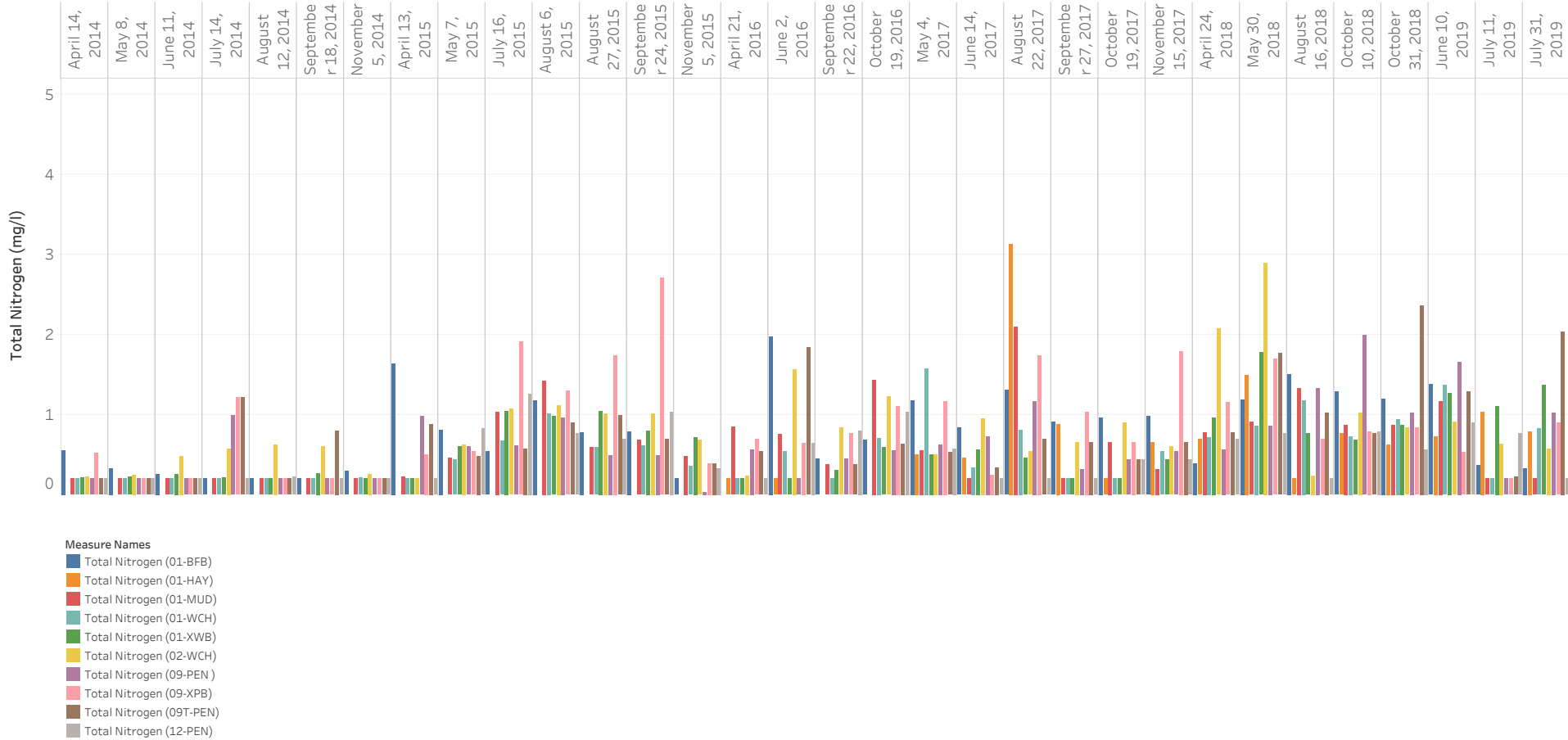
Tributary Fecal Coliform, 2014-2019



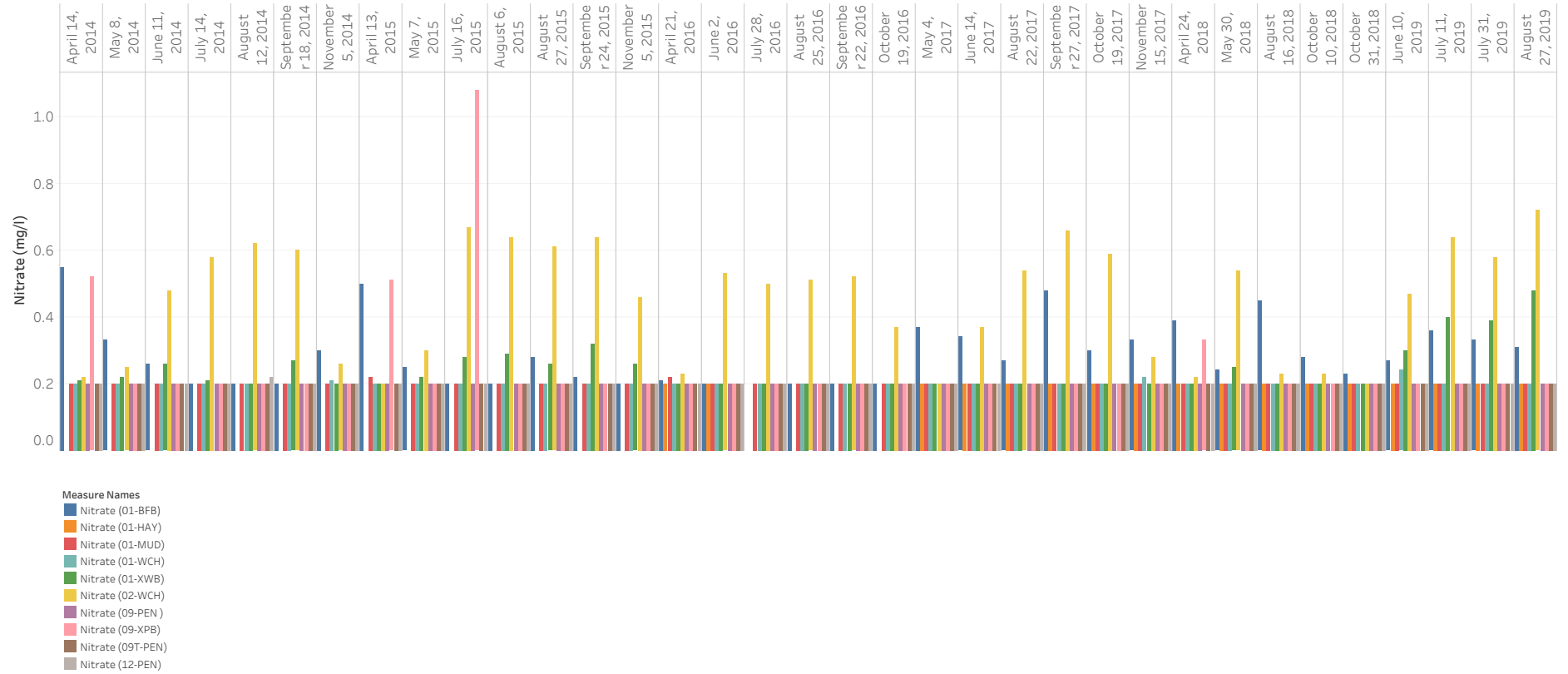
Tributary pH, 2014-2019



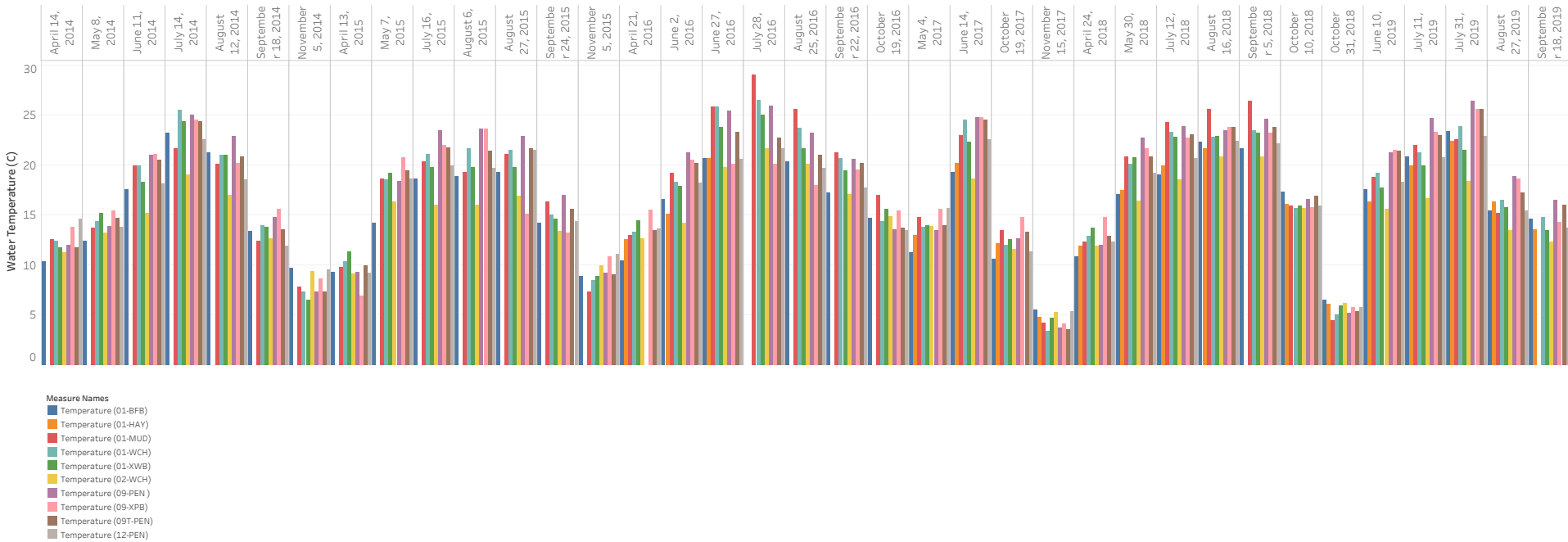
Tributary Total Nitrogen, 2014-2019



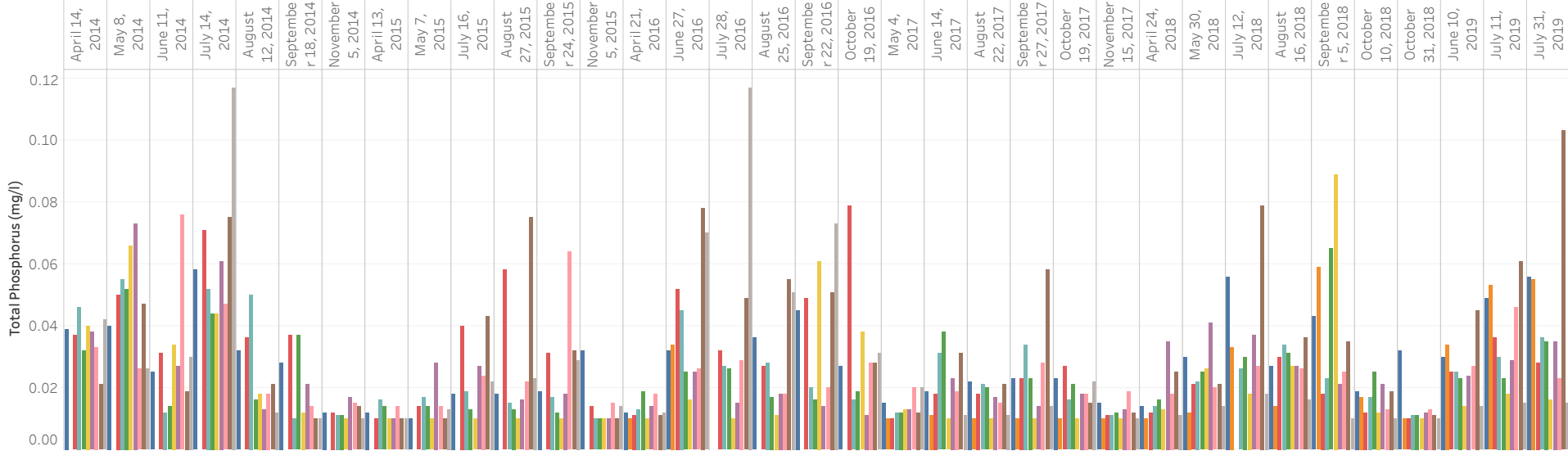
## Tributary Nitrate, 2014-2019



Tributary Temperature, 2014-2019



Tributary Total Phosphorus, 2014-2019

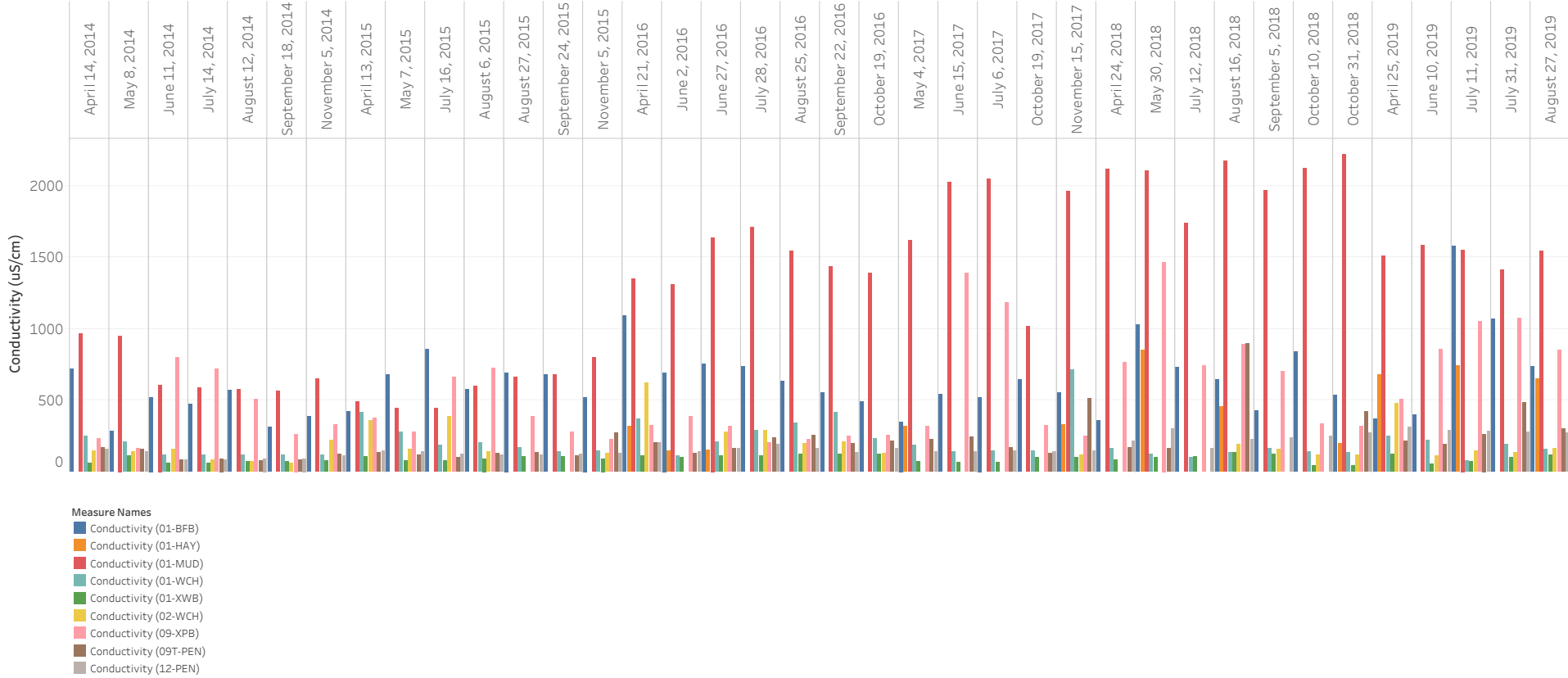


- Measure Names
- Total Phosphorus (01-BFB)
  - Total Phosphorus (01-HAY)
  - Total Phosphorus (01-MUD)
  - Total Phosphorus (01-WCH)
  - Total Phosphorus (01-XWB)
  - Total Phosphorus (02-WCH)
  - Total Phosphorus (09-PEN )
  - Total Phosphorus (09-XPB)
  - Total Phosphorus (09T-PEN)
  - Total Phosphorus (12-PEN)

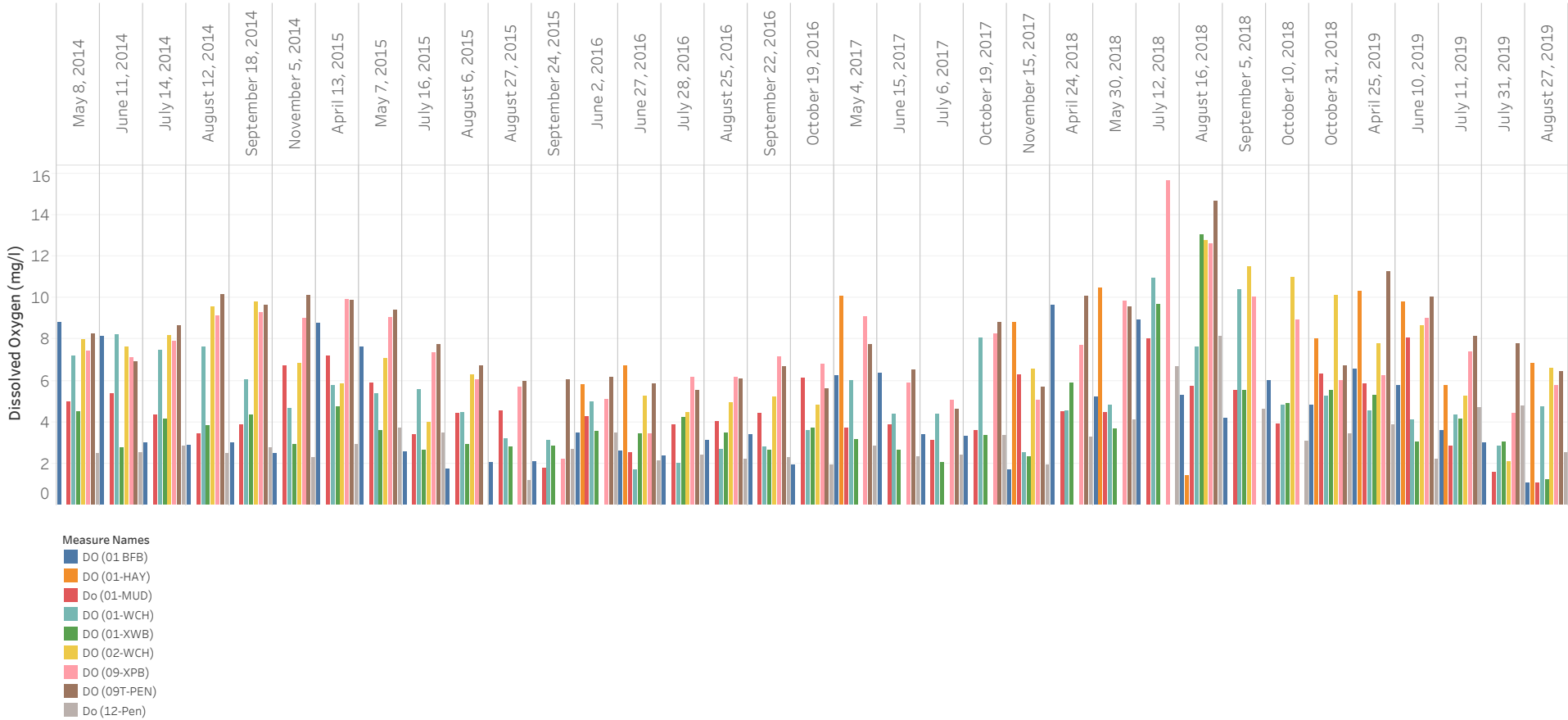
**Attachment E:**

Select Groundwater Graphs, 2013 through 2019

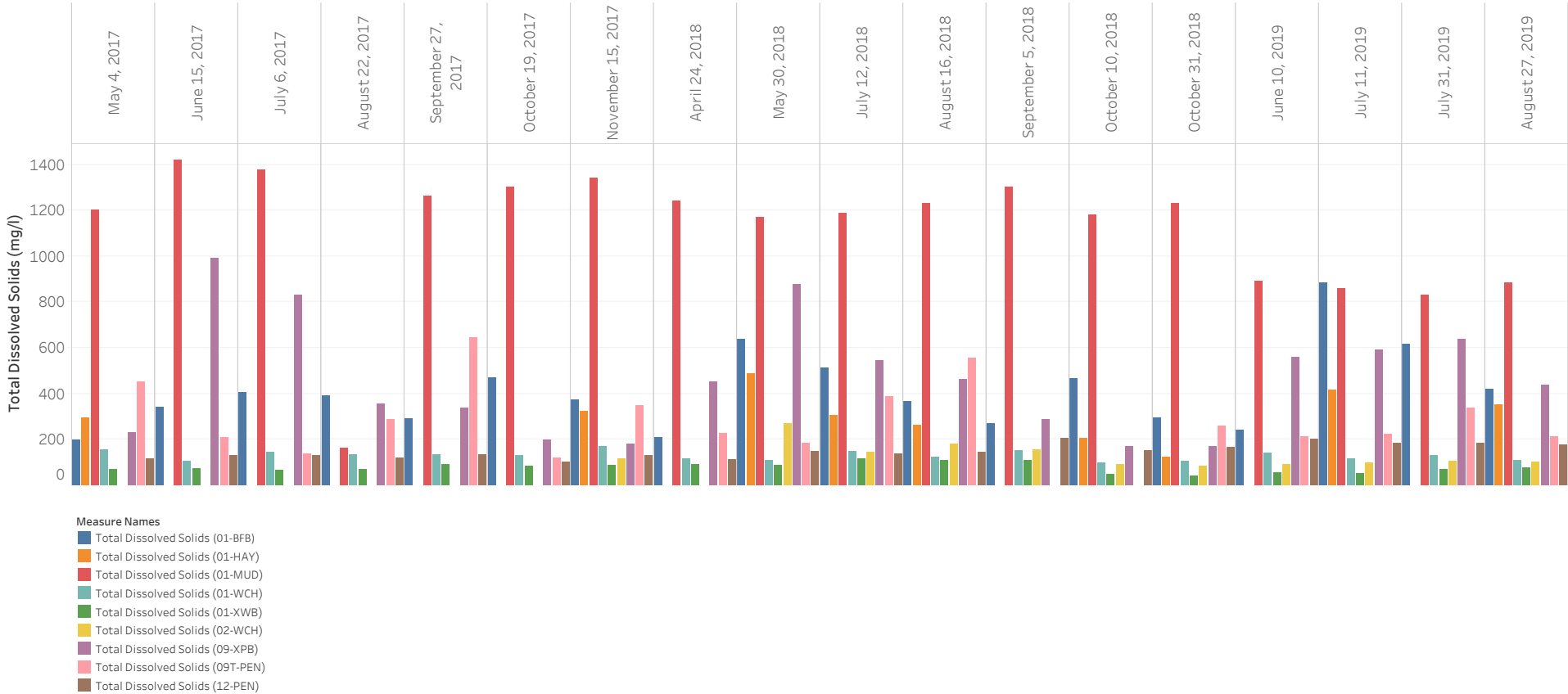
Groundwater Conductivity, 2014-2019



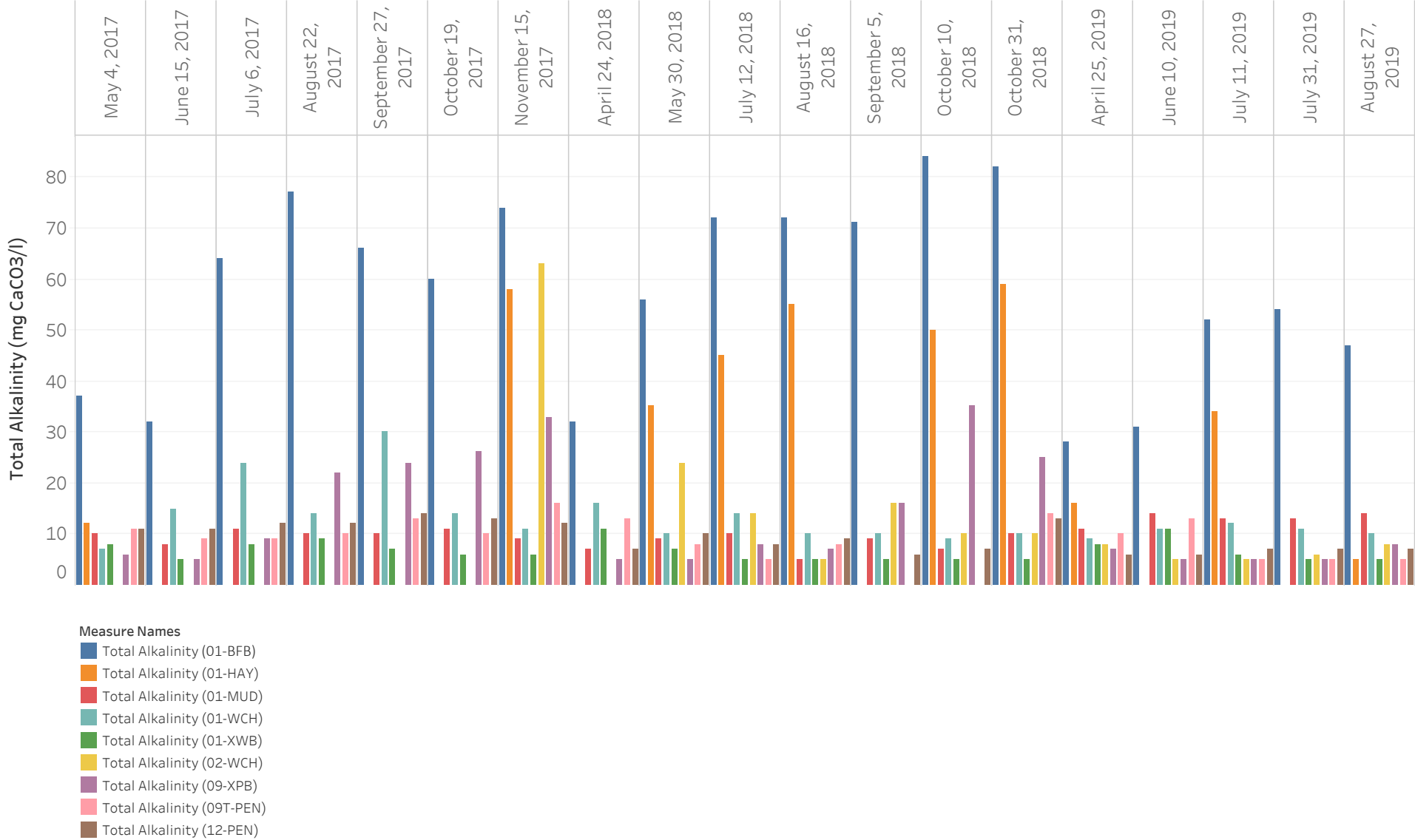
Groundwater Dissolved Oxygen, 2014-2019



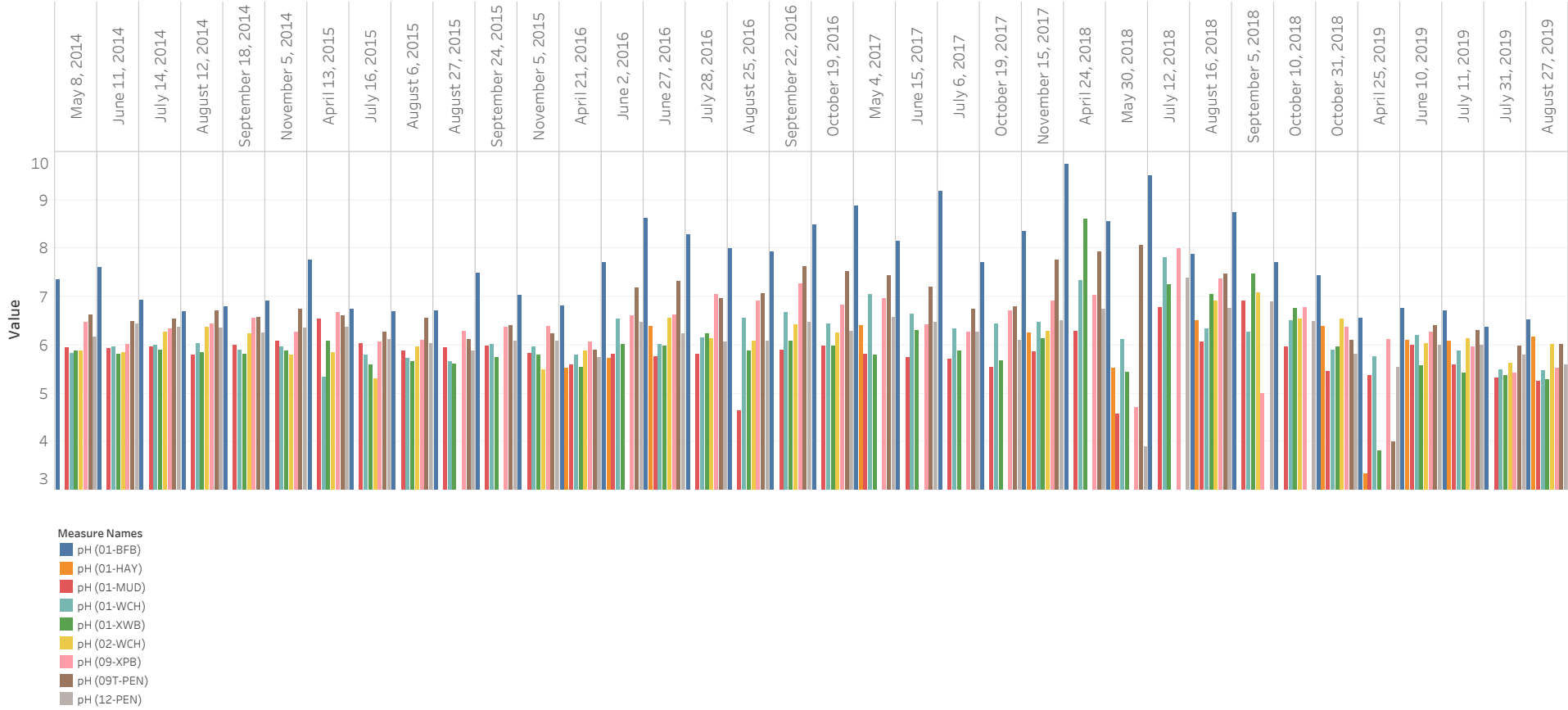
Groundwater Total Dissolved Solids, 2017-2019



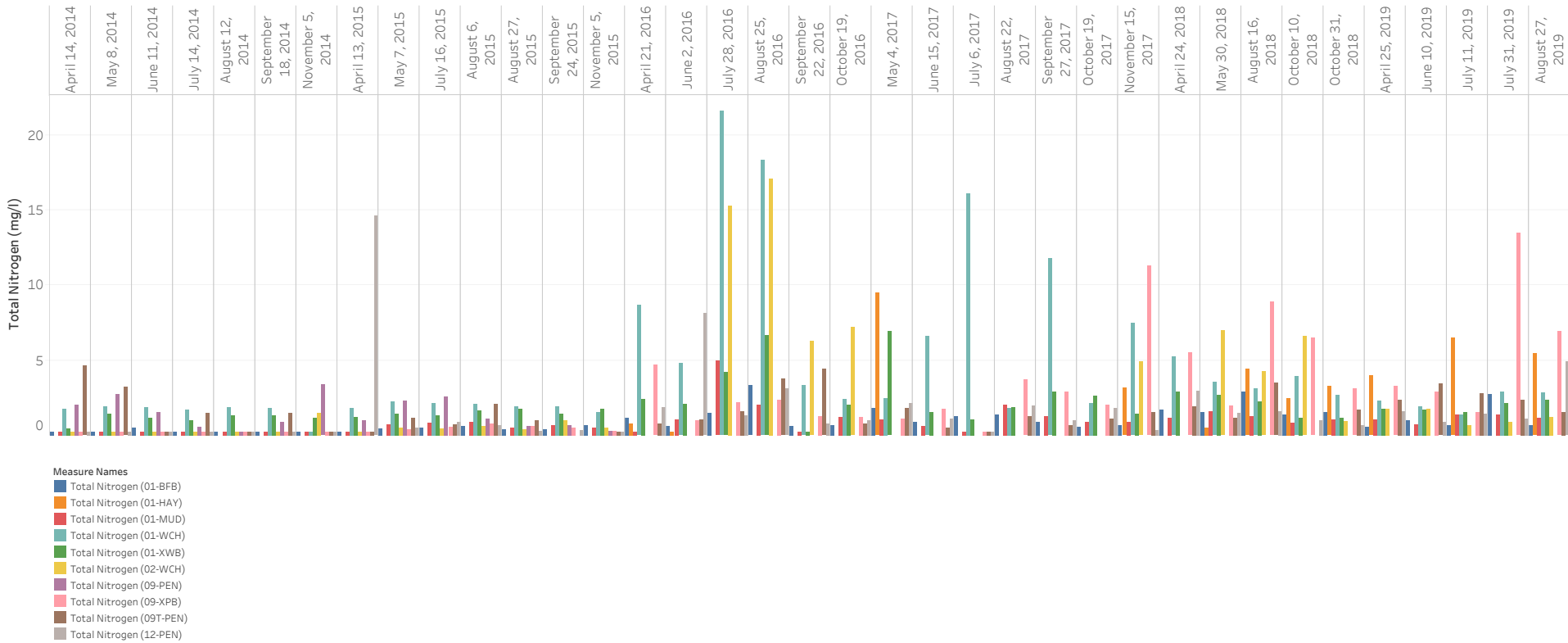
# Groundwater Alkalinity, 2017-2019



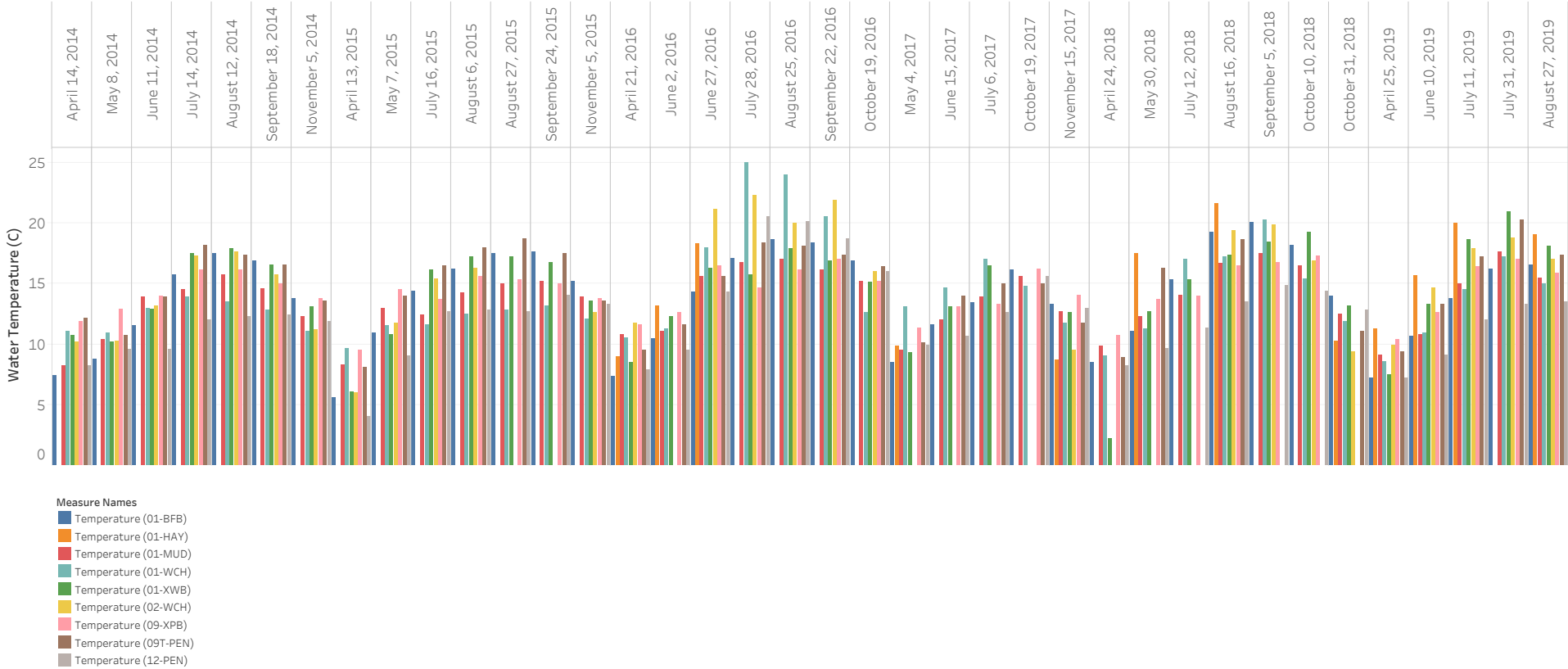
Groundwater pH, 2014-2019



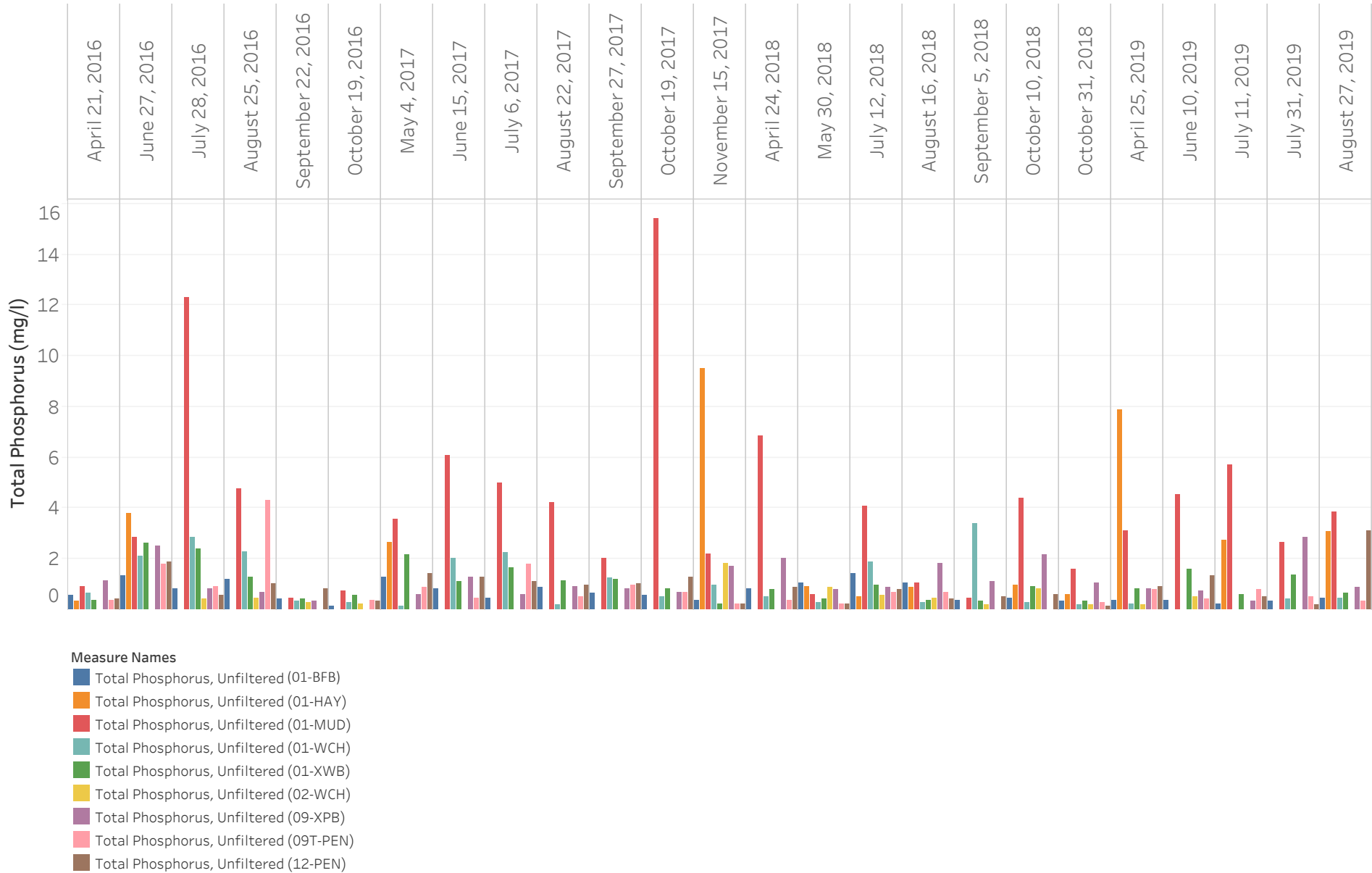
Groundwater Total Nitrogen, 2014-2019



Groundwater Temperature, 2014-2019



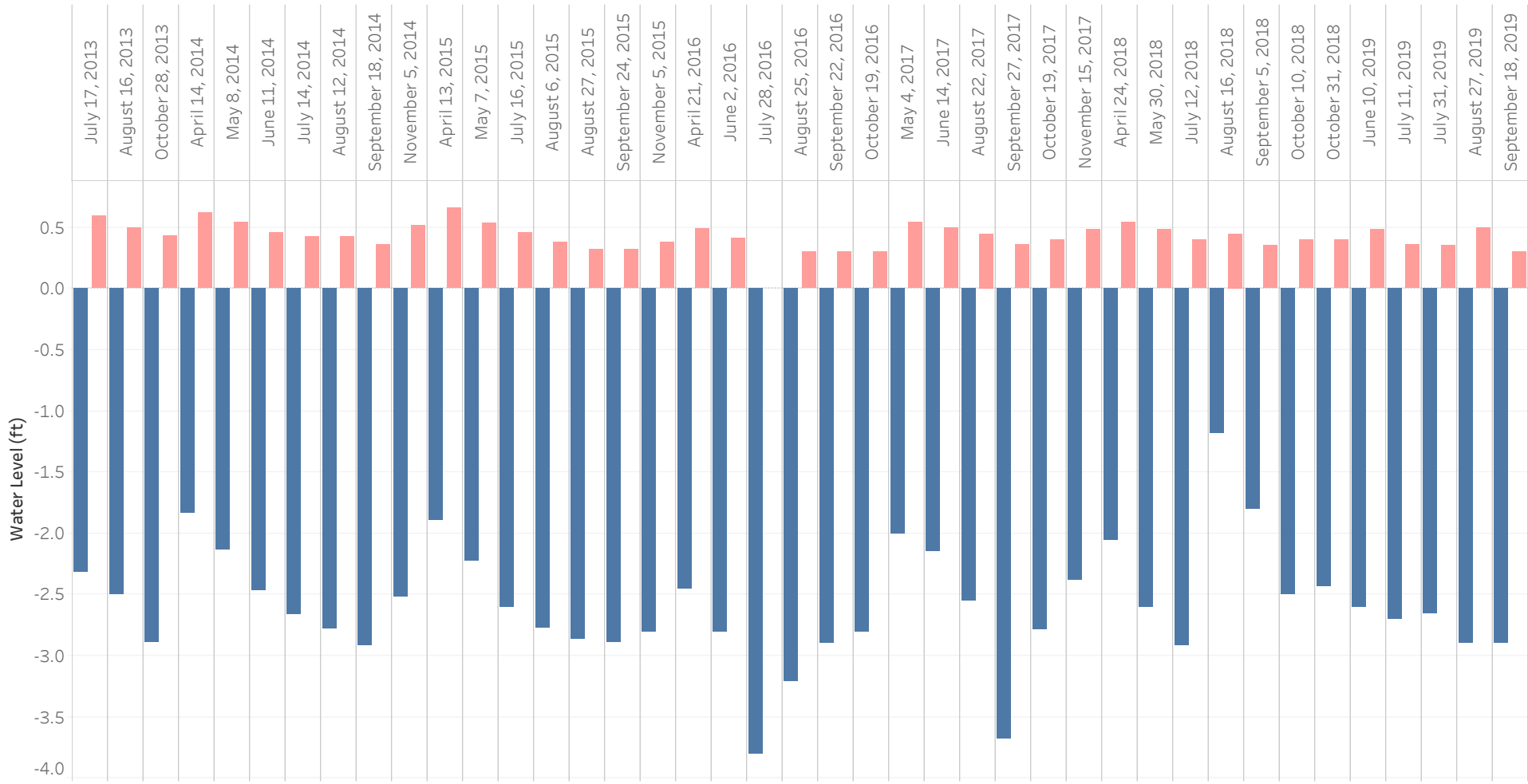
# Groundwater Total Phosphorus, 2016-2019



**Attachment F:**

Comparison of Stream Gage Data and Groundwater Levels, 2013-2019

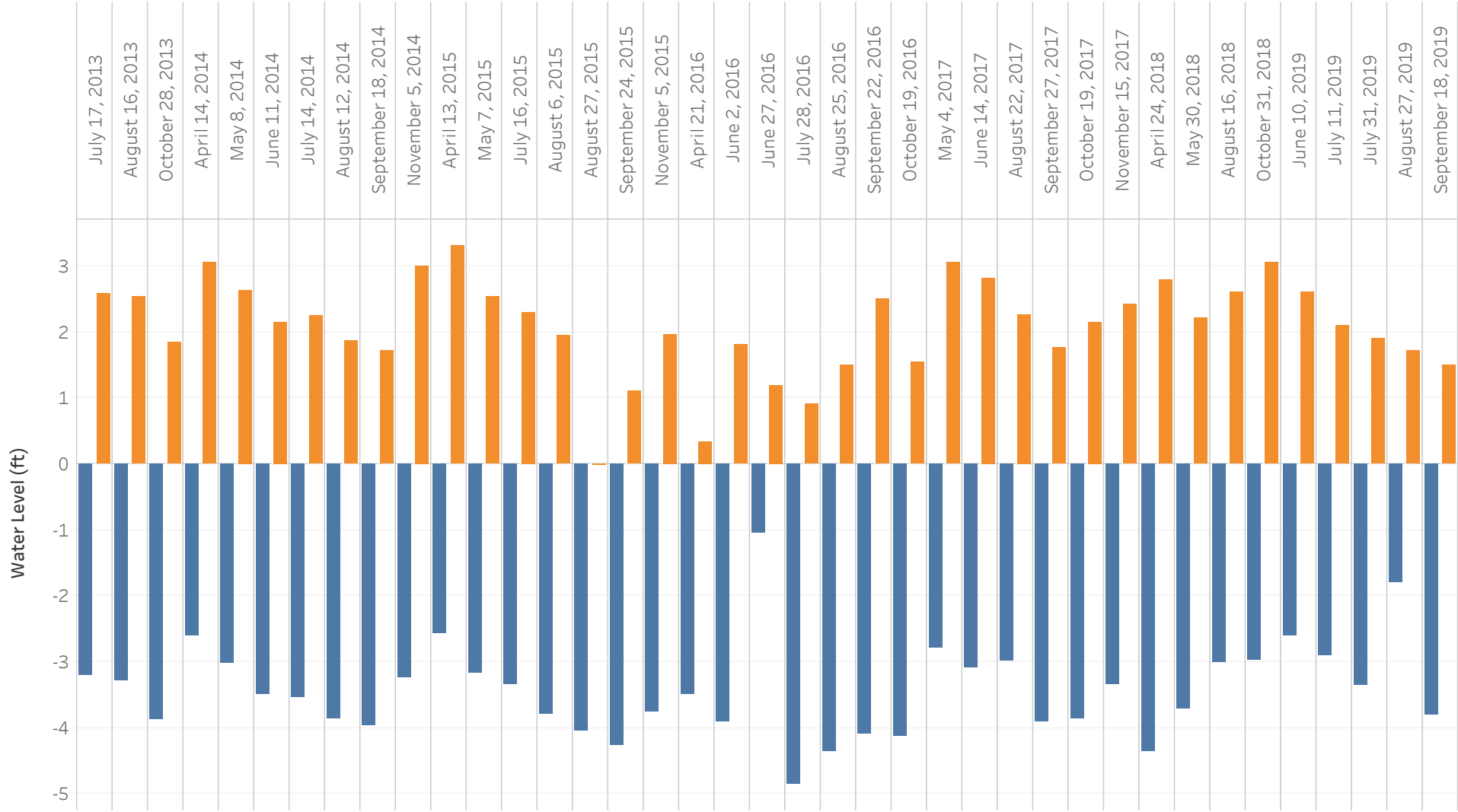
Water Levels, 01-BFB 2013-2019



\*Note:  
- Data from 6/6/2016 and 6/28/2016 omitted due to collection error

Measure Names  
■ Piezometer (Depth from Ground Surface)  
■ Staff Gauge Reading (Surface Water Depth)

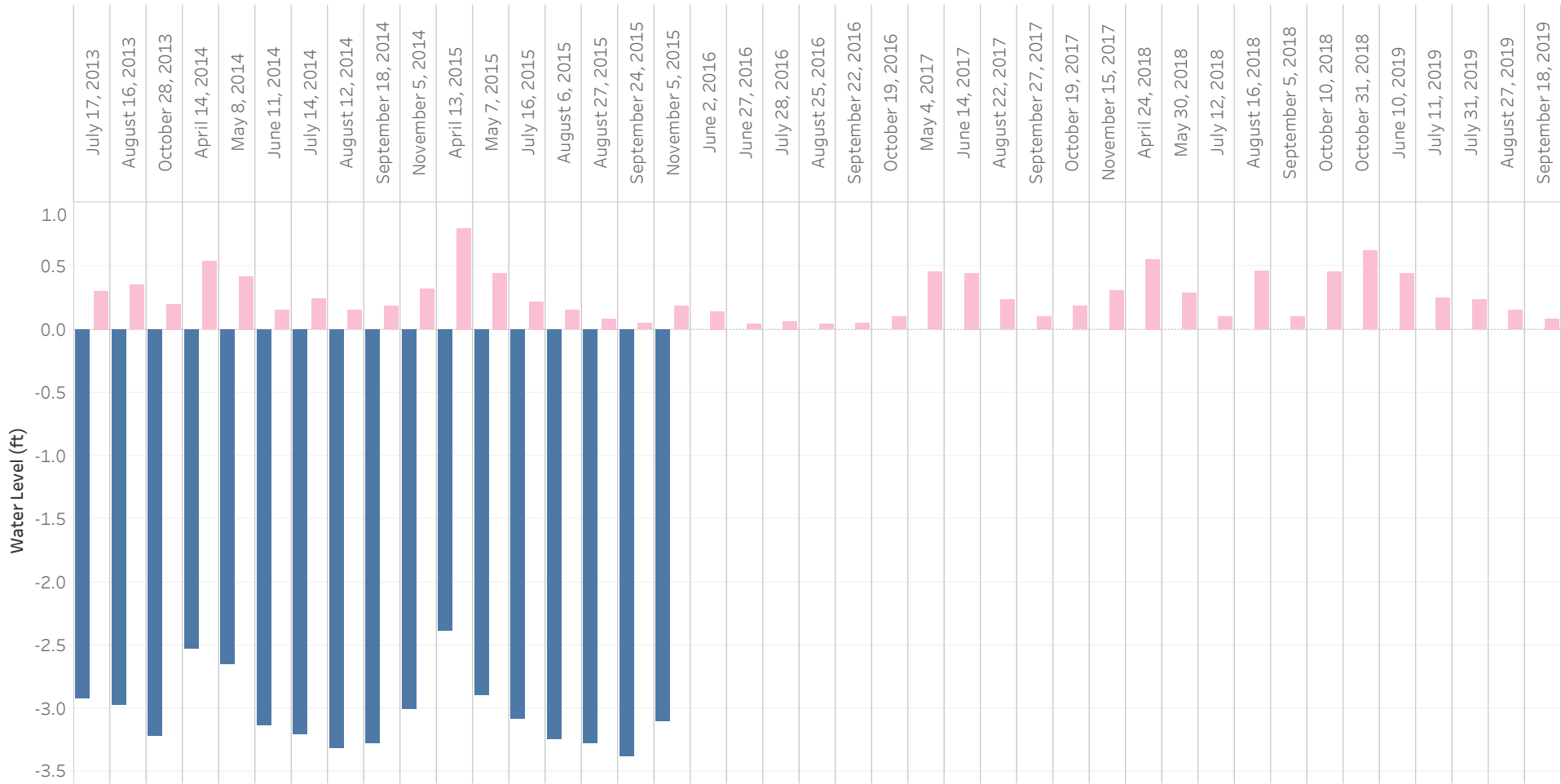
Water Levels, 09T-PEN 2013-2019



\*Note:  
- Data from 6/6/2016 and 8/27/2015 omitted due to collection error

Measure Names  
■ Piezometer (09T-PEN) (Depth from Ground Surface)  
■ Staff Gauge Reading (09T-PEN) (Surface Water Depth)

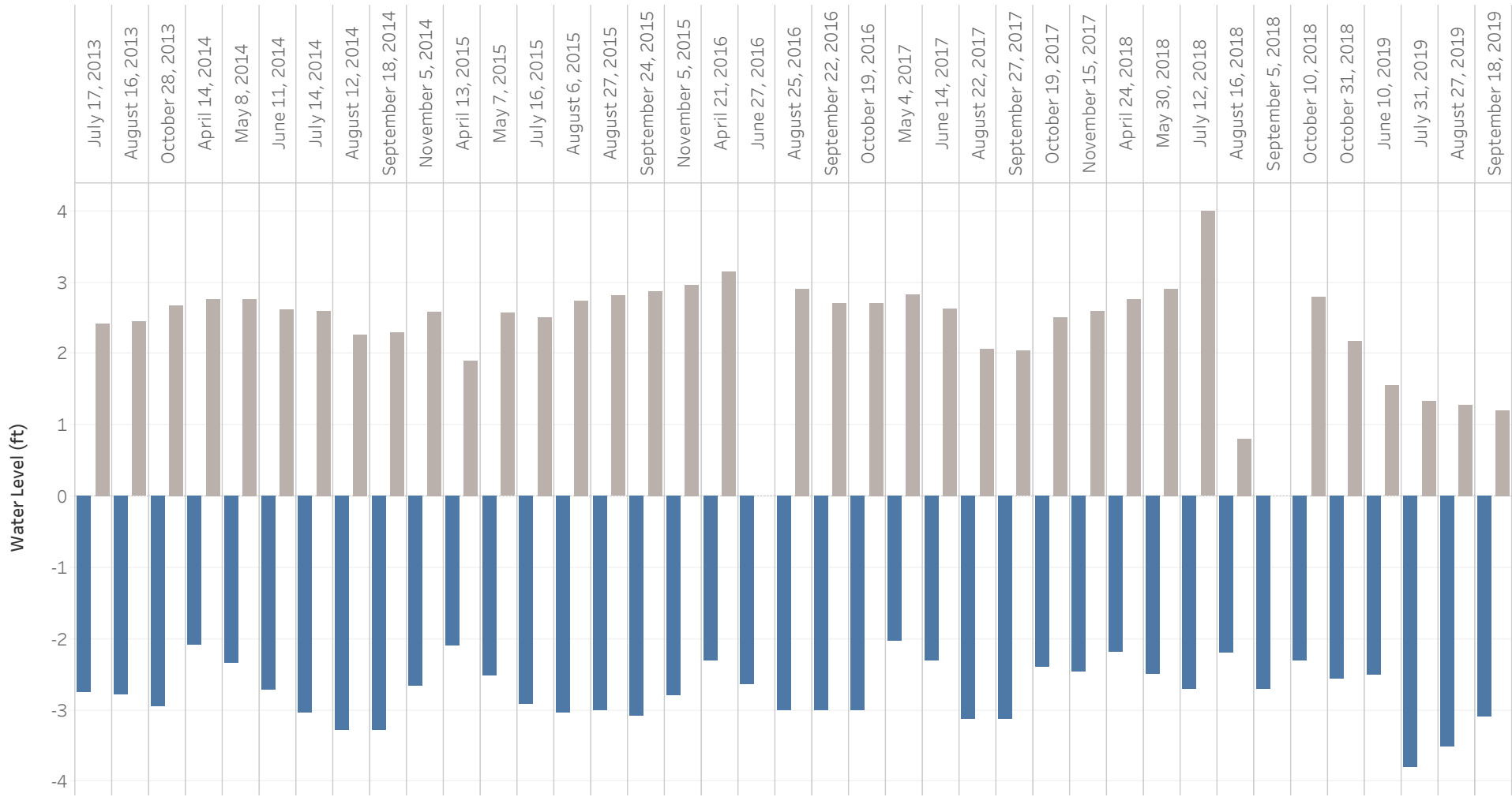
Water Levels, 09-PEN 2013-2019



\*Note:  
- Monitoring well at this location was abandoned beginning in 2016 due to poor recharge  
- Data from 4/21/2016 omitted due to collection error

Measure Names  
■ Piezometer (09-PEN) (Depth from Ground Surface)  
■ Staff Gauge Reading (09-PEN) (Surface Water Depth)

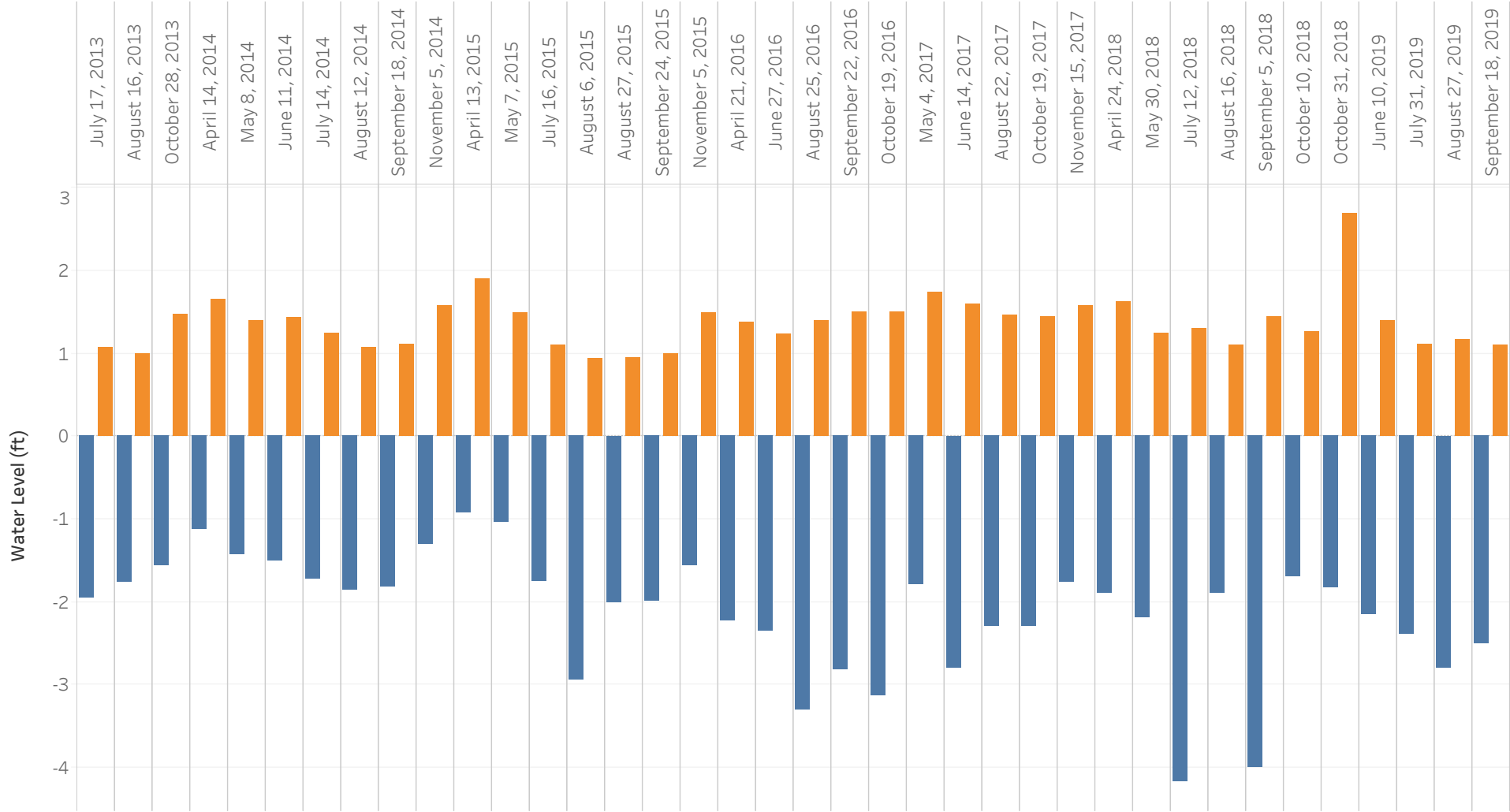
# Water Levels, 01-XWB 2013-2019



\*Note:  
- Data from 6/27/2016 and 9/5/2018 omitted due to collection error

Measure Names  
■ Piezometer (01-XWB) (Depth from Ground Surface)  
■ Staff Gauge Reading (01-XWB) (Surface Water Depth)

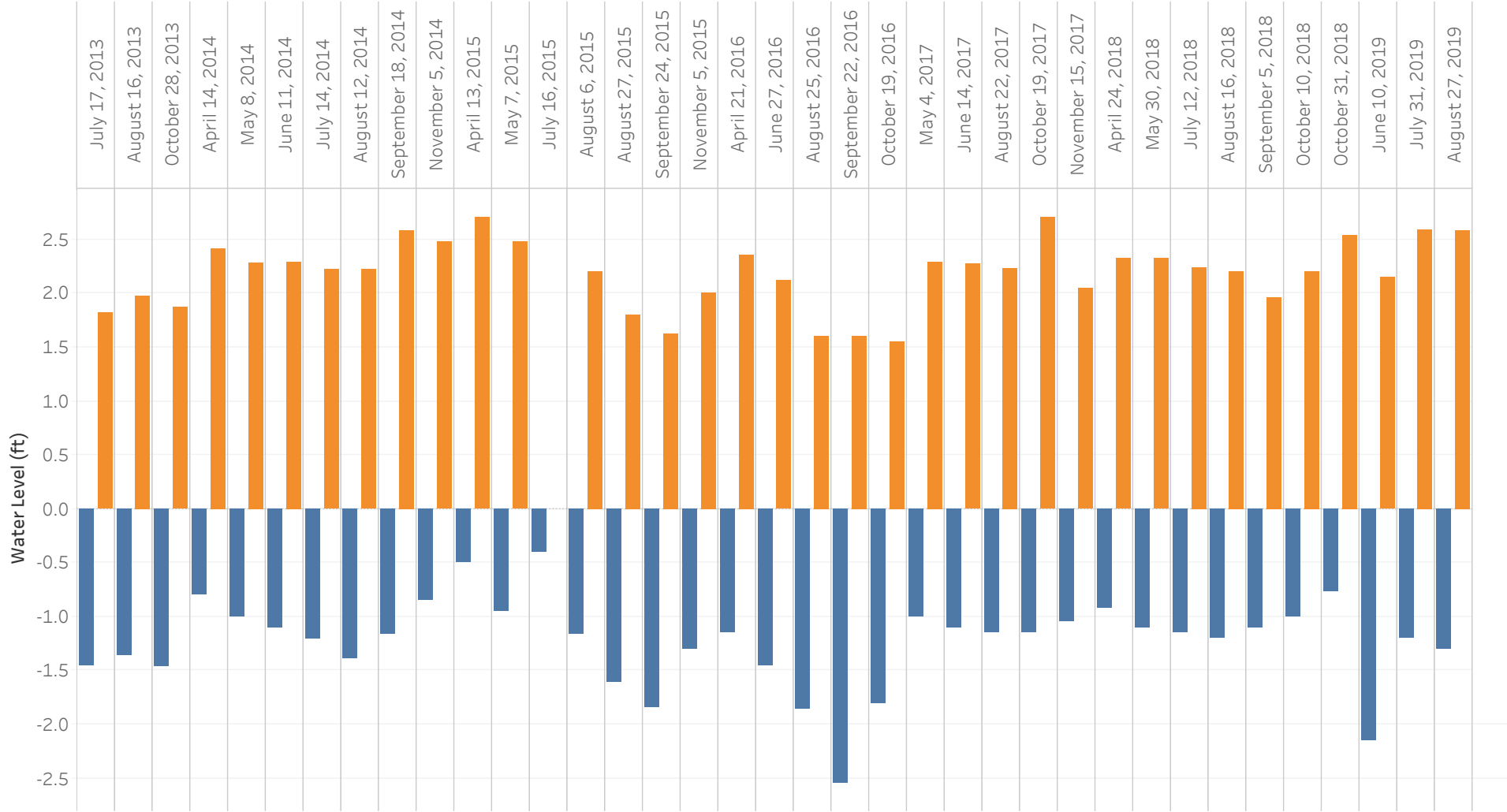
Water Levels, 01-WCH 2013-2019



\*Note:  
- Data from 9/27/2017 and 9/5/2018 omitted due to collection error

Measure Names  
■ Piezometer (01-WCH) (Depth from Ground Surface)  
■ Staff Gauge Reading (01-WCH) (Surface Water Depth)

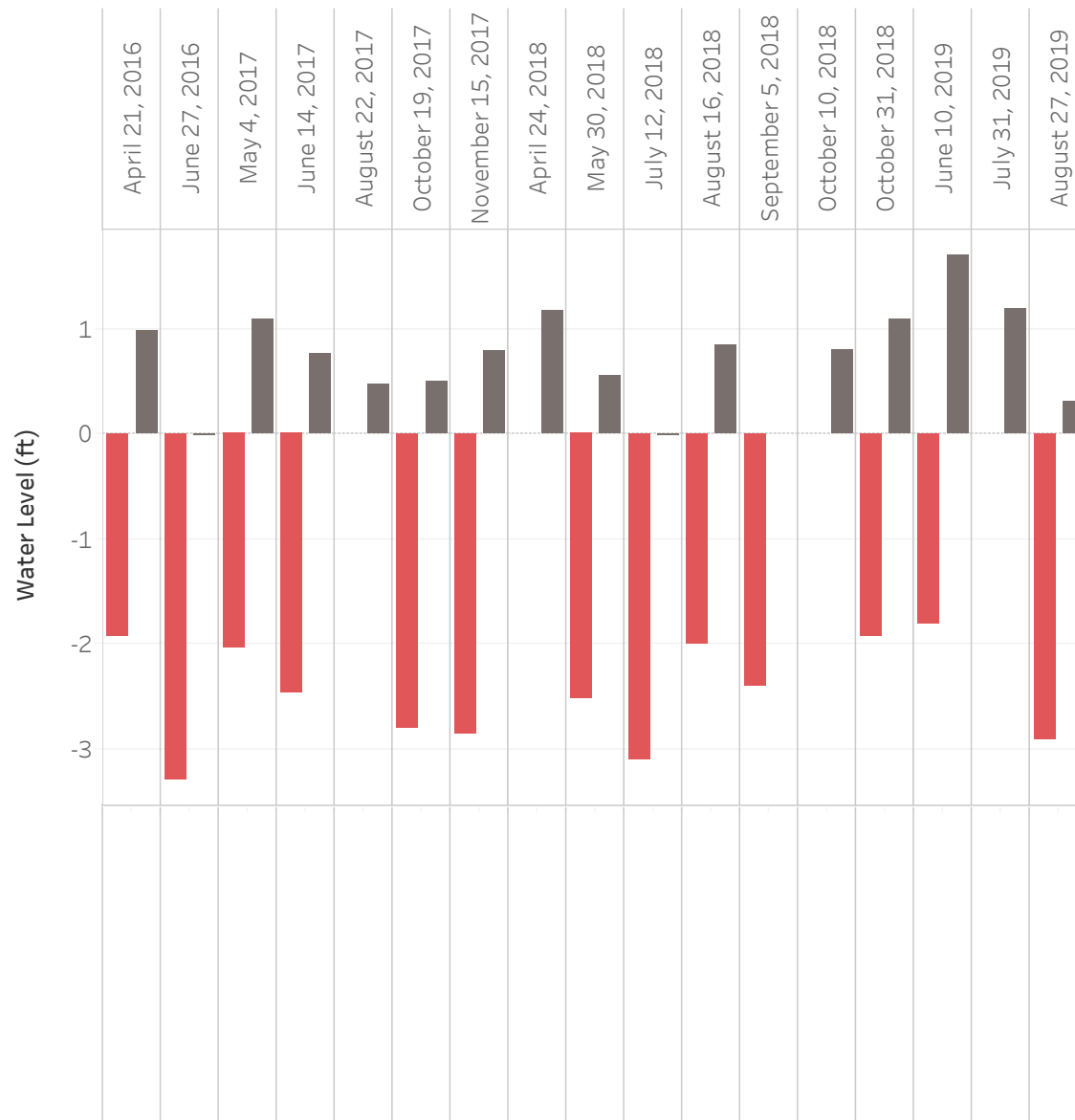
# Water Levels, 01-MUD 2013-2019



\*Note:  
- Data from 7/16/2015 and 9/18/2019 omitted due to collection error

Measure Names  
■ Piezometer (01-MUD) (Depth from Ground Surface)  
■ Staff Gauge Reading (01-MUD) (Surface Water Depth)

## Water Levels, 01-HAY 2016-2019



\*Note:

- This station was established in 2016

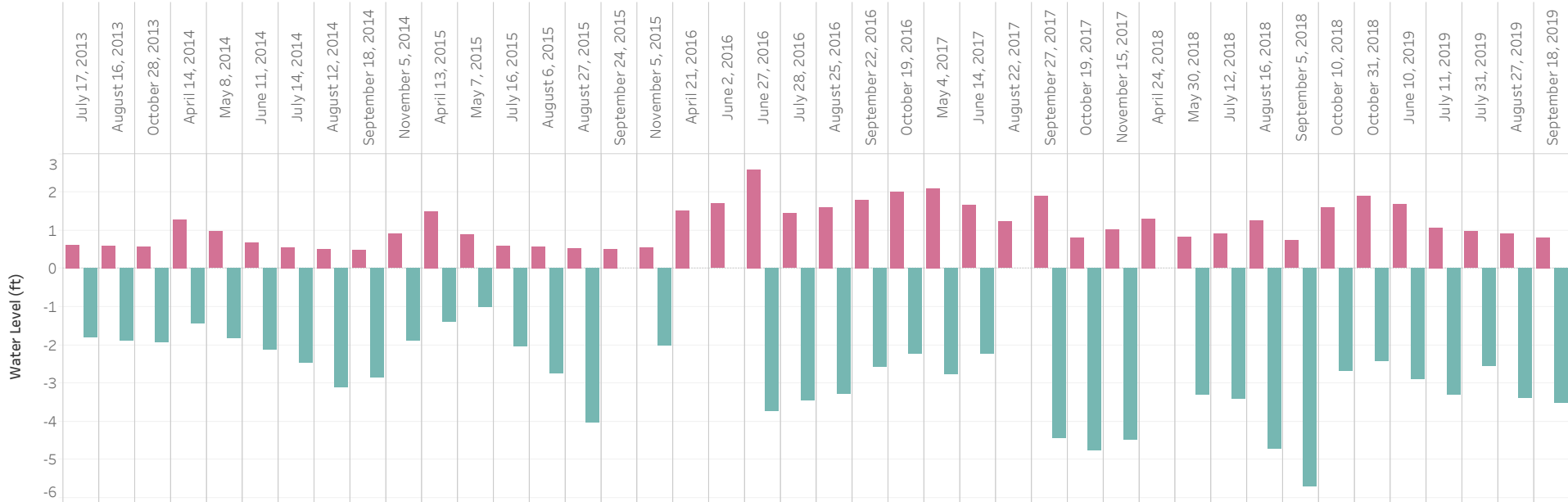
- Data from 6/27/2016, 8/22/2017, 4/24/2018, 7/12/2018, 9/5/2018, 10/10/2018, and 7/31/2019 omitted due to poor well recharge and/or lack of tributary flow

### Measure Names

■ Piezometer (01-HAY) (Depth from Ground Surface)

■ Staff Gauge Reading (01-HAY) (Surface Water Depth)

Water Levels, 02-WCH 2013-2019



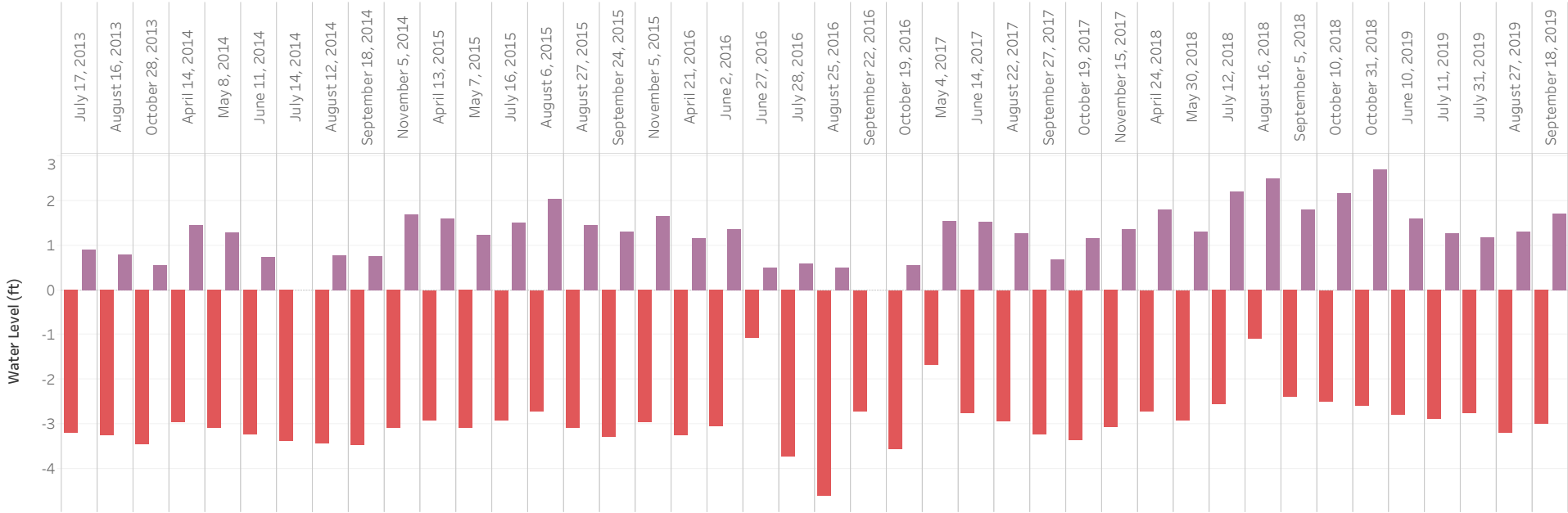
\*Note:  
- Data from 9/24/2015, 4/21/2016, 6/2/2016, 8/22/2017, and 4/24/2018 omitted due to poor well recharge.

Measure Names  
■ Staff Gauge Reading (02-WCH)(Surface Water Depth)  
■ Piezometer (02-WCH) (Depth from Ground Surface)

Water Levels, 12-PEN 2013-2019



Water Levels, 09-XPB 2013-2019



\*Note:  
- Data from 7/14/2014 and 9/22/2016 omitted due to collection error

Measure Names  
■ Piezometer (09-XPB) (Depth from Ground Surface)  
■ Staff Gauge Reading (09-XPB) (Surface Water Depth)