

# 2019 ANNUAL HYDROLOGY REPORT

SENECA II-W MINE

PERMIT C-82-057

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## **1.0 INTRODUCTION**

This document constitutes the Annual Hydrology Report (AHR) for the Seneca Coal Company's (SCC) Seneca II-W Mine (SIIW). This AHR presents hydrologic monitoring data for the 2019 water year (October 2018 - September 2019). The AHR fulfills the reporting requirements under the Colorado Division of Reclamation, Mining and Safety (CDRMS) Permit C-82-057. Monitoring results for prior water years are presented in previous AHRs, although selected historical data from prior years are summarized in some of the Figures, Tables and Reports for comparison to the current water year.

## **1.1 BACKGROUND**

The SIIW is a surface coal mine located in Routt County, approximately 9 miles south of Hayden, Colorado (Figure 1).

SCC began coal production in 1968 at the Seneca II Mine. Mining began at SIIW in August 1990. Production ceased in 2005 and the last of the coal at SIIW was removed in January 2006.

## **2.0 MONITORING PROGRAM**

The monitoring program consists of 15 groundwater sites, 11 surface water sites and nine spring sites (Figure 1). Required monitoring frequencies and parameters are listed in CDRMS Permit C-82-057 and NPDES Permit No. CO-0000221.

All field tasks were conducted using appropriate personal protective equipment (PPE); which at a minimum, consisted of nitrile gloves, eye protection and safety toe footwear.

### **2.1 GROUNDWATER**

There are 15 groundwater sites monitored at the SIIW.

	Site	Type	Unit
1	GW-S2W-7A2 (WHAL7-2)	Groundwater	Hubberson Gulch Alluvium
2	DCAL-02	Groundwater	Dry Creek Alluvium
3	GW-S2W-14OV (WOV14)	Groundwater	Wadge Overburden
4	GW-S2W-17OV (WOV17)	Groundwater	Wadge Overburden
5	WOV25	Groundwater	Wadge Overburden
6	GW-S2W-14W (WW14)	Groundwater	Wadge Coal
7	GW-S2W-17W (WW17)	Groundwater	Wadge Coal
8	WW25	Groundwater	Wadge Coal
9	GW-S2W-23A (WSAL14)	Groundwater	Sage Creek Tributary Alluvium
10	WSOV25	Groundwater	Sage Creek Overburden
11	WSC25	Groundwater	Sage Creek Coal
12	WWCOV25	Groundwater	Wolf Creek Overburden
13	GW-S2W-17WC (WWC17)	Groundwater	Wolf Creek Coal
14	WWC25	Groundwater	Wolf Creek Coal
15	WWCU25	Groundwater	Wolf Creek Underburden

The following reports were prepared for each groundwater site: Period of Record Monitoring Summary, Water Year Monitoring Data, Period of Record Water Level Hydrograph and Period of Record TDS Trend Plot (Reports 1-15).

A Mann-Kendall test, at a 95% confidence level, was utilized to determine a statistical trend of TDS per site. Sen Slope is also represented on the TDS Trend Plots in red as a line passing through the median.

The following discussion of hydrologic data collected during the reporting period is arranged by strata monitored. For each site, the groundwater level and quality were compared to historical data. This year's groundwater quality was also compared against Colorado Department of Public Health & Environment (CDPHE) groundwater agricultural use standards (CDPHE, Reg. 41, 2008).

Groundwater Points of Compliance (GWPOC) have been established for the SIIW (SIIW PAP Appendix 15-3B). The groundwater standards are applied to Dry Creek Alluvial Well DCAL-02.

Predictions were made as to the expected TDS increases to be observed at various monitoring wells in the Probable Hydrological Consequences (PHC) for the SIIW (SIIW PAP, PHC Tab 17). Predictions were compared to annual average TDS concentrations for bedrock wells and average TDS values observed May through September for alluvial wells. Predictions were applied to Hubberson Gulch Alluvial Well GW-S2W-7A2 (WHAL7-2), Wadge Overburden Wells GW-S2W-14OV (WOV14) and GW-S2W-17OV (WOV17), and Wadge Coal Wells GW-S2W-14W (WW14) and GW-S2W-17W (WW17).

## **2.1.1 HUBBERSON GULCH ALLUVIUM**

Groundwater is monitored in the Hubberson Gulch Alluvium at one well: GW-S2W-7A2 (WHAL7-2).

The groundwater level at well GW-S2W-7A2 (WHAL7-2) remained within the historical range. The following wells display groundwater level trends:

	Site	Increasing	Decreasing
1	GW-S2W-7A2 (WHAL7-2)		X

Hubberson Gulch Alluvium groundwater quality concentrations remained within the CDPHE agricultural use standard range at each monitoring well.

Well GW-S2W-7A2 (WHAL7-2) TDS concentrations remained within the historical range. The following wells display a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	GW-S2W-7A2 (WHAL7-2)	X	

Hubberson Gulch Alluvium TDS concentrations remained within the SIIW PHC predictions.

## 2.1.2 DRY CREEK ALLUVIUM

One well is monitored in the Dry Creek Alluvium: DCAL-02.

The groundwater level remained within the historical range at monitoring well DCAL-02. The following wells display groundwater level trends:

	Site	Increasing	Decreasing
1	DCAL-02		X

Dry Creek Alluvium groundwater quality concentrations remained within the CDPHE agricultural use standard range at each monitoring well except for the following:

	Site	Date	Parameter	Units	Standard	Result
1	DCAL-02	05/17/19	Manganese	mg/L	0.2	1.32

Groundwater well DCAL-02 exceeded the manganese standard in May. High manganese values may, in part, be due to recharge from the spoil aquifer, although high values are often common due to naturally occurring geochemical conditions, especially in alluvial material. This standard is used to protect crops grown in soils with a pH value lower than 6.0. In January 2008, CDPHE revised their ground water agricultural standard to reflect this pH qualifier. In soils with a higher pH (as are found in the SIIW region), a more appropriate standard would be 10 mg/l.

Dry Creek Alluvium groundwater quality concentrations remained within the SIIW GWPOC standard range at monitoring well DCAL-02.

TDS concentrations at well DCAL-02 remained within the historical range and do not display a statistically significant TDS trend.

### **2.1.3 WADGE OVERBURDEN**

Three groundwater wells monitored at the SIIW that are completed in the Wadge Overburden: GW-S2W-14OV (WOW14), GW-S2W-17OV (WOW17) and WOW25.

Groundwater levels remained within the historical range at each monitoring well. The following wells display groundwater level trends:

	Site	Increasing	Decreasing
1	GW-S2W-14OV (WOW14)	X	
2	GW-S2W-17OV (WOW17)	X	
3	WOW25	X	

Wadge Overburden groundwater quality concentrations remained within the CDPHE agricultural use standard range at each monitoring well.

Wadge Overburden TDS concentrations remained within the historical range. The following wells display a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	GW-S2W-14OV (WOV14)	X	
2	GW-S2W-17OV (WOV17)		X

TDS concentrations remained within the SIIW PHC predictions except for the following:

	Site	Parameter	Units	PHC	Result
1	GW-S2W-17OV (WOV17)	TDS	mg/L	4295	6010

For Wadge Overburden well GW-S2W-17OV (WOV17), a value of 4295 mg/l was predicted, while a value of 6010 mg/l was observed this year. The predicted value for Well GW-S2W-17OV (WOV17) was calculated on a 5.5% increase of the pre-mining (prior to August 1990 for the central area) value of 4072 mg/l, which is an average of several overburden wells. However, GW-S2W-17OV (WOV17) exhibited a pre-mining TDS average value of 8043 mg/l, while the next highest TDS Wadge overburden well (WOV15) had a baseline TDS average of 3741 mg/l. Well GW-S2W-17OV (WOV17) also exhibited a high degree of baseline TDS variability (min. = 6860, max. = 8586 mg/l). The TDS value this year, 6010 mg/l, was below the PHC prediction using the average baseline value ( $8043 + 5.5\% = 8485$  mg/l) and is below a 5.5% increase of the maximum baseline TDS value ( $8586 + 5.5\% = 9058$  mg/l).

## 2.1.4 WADGE COAL

Three wells are monitored in the Wadge Coal: GW-S2W-14W (WW14), GW-S2W-17W (WW17) and WW25.

Wadge Coal groundwater levels remained within the historical range at each monitoring well. The following wells display groundwater level trends:

	Site	Increasing	Decreasing
1	GW-S2W-14W (WW14)	X	
2	GW-S2W-17W (WW17)	X	
3	WW25		X

Wadge Coal groundwater quality concentrations remained within the CDPHE agricultural use standard range at each monitoring well except for the following:

	Site	Date	Parameter	Units	Standard	Result
1	GW-S2W-14W (WW14)	05/07/19	Manganese	mg/L	0.2	1.1

Groundwater well GW-S2W-14W (WW14) exceeded the manganese standard in May. High manganese values may, in part, be due to recharge from the spoil aquifer, although high values are often common due to naturally occurring geochemical conditions, especially in alluvial material. This standard is used to protect crops grown in soils with a pH value lower than 6.0. In January 2008, CDPHE revised their ground water agricultural standard to reflect this pH qualifier. In soils with a higher pH (as are found in the SIIW region), a more appropriate standard would be 10 mg/l.

TDS concentrations remained within the historical range. Statistically significant TDS trends were observed at the following wells:

	Site	Increasing	Decreasing
1	GW-S2W-14W (WW14)	X	

TDS concentrations remained within the SIIW PHC predictions except for the following:

	Site	Parameter	Units	PHC	Result
1	GW-S2W-14W (WW14)	TDS	mg/L	2630	4560

The SIIW PHC predicts an annual average TDS value of 2630 mg/l for Wadge Coal Well GW-S2W-14W (WW14), while a value of 4560 mg/l was observed this year. This prediction was based on several assumptions including: baseline water quality values were an average of all Wadge coal wells at SIIW, aquifer characteristics were an average of all Wadge coal wells at SIIW and that the Wadge coal seam was saturated for its entire thickness (11.8 feet). These assumptions, however, do not hold true for Well GW-S2W-14W (WW14). Prior to mining in the north area (November 1992), this well was almost always dry. Since this portion of the Wadge seam was dry prior to mining, spoils water will now contribute much of the water present which may explain the elevated TDS value.

## **2.1.5 SAGE CREEK TRIBUTARY ALLUVIUM**

One well is monitored in the Sage Creek Tributary Alluvium: GW-S2W-23A (WSAL14). Well GW-S2W-23A (WSAL14) has not been monitored since 2015.

The following Sage Creek Tributary Alluvium wells display groundwater level trends:

	Site	Increasing	Decreasing
1	GW-S2W-23A (WSAL14)	X	

TDS concentrations remained within the historical range. The following wells display a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	GW-S2W-23A (WSAL14)		X

## **2.1.6 SAGE CREEK OVERBURDEN**

One well is monitored in the Sage Creek Overburden: WSOV25.

The groundwater level at well WSOV25 remained within the historical range. The following wells display groundwater level trends:

Site	Increasing	Decreasing
1   WSOV25	X	

Sage Creek Overburden groundwater quality concentrations remained within the CDPHE agricultural use standard range at each monitoring well.

TDS concentrations at well WSOV25 exceeded the historical range in 2019. Well WSOV25 does not display a statistically significant TDS trend.

## **2.1.7 SAGE CREEK COAL**

One well is monitored in the Sage Creek Coal: WSC25.

The groundwater level at well WSC25 remained within the historical range. The following wells display groundwater level trends:

Site	Increasing	Decreasing
1   WSC25		X

Sage Creek Coal groundwater quality concentrations remained within the CDPHE agricultural use standard range at each monitoring well.

TDS concentrations at well WSC25 exceeded the historical range in 2019. The following wells display a statistically significant TDS trend:

Site	Increasing	Decreasing
1   WSC25	X	

## 2.1.8 WOLF CREEK OVERBURDEN

One well is monitored in the Wolf Creek Overburden: WWCOV25.

The groundwater level at well WWCOV25 remained within the historical range. The following wells display groundwater level trends:

	Site	Increasing	Decreasing
1	WWCOV25		X

Wolf Creek Overburden groundwater quality concentrations remained within the CDPHE agricultural use standard range at each monitoring well except for the following:

	Site	Date	Parameter	Units	Standard	Result
1	WWCOV25	05/16/19	Manganese	mg/L	0.2	0.22

Groundwater well WWCOV25 exceeded the manganese standard in May. High manganese values may, in part, be due to recharge from the spoil aquifer, although high values are often common due to naturally occurring geochemical conditions, especially in alluvial material. This standard is used to protect crops grown in soils with a pH value lower than 6.0. In January 2008, CDPHE revised their ground water agricultural standard to reflect this pH qualifier. In soils with a higher pH (as are found in the SIIW region), a more appropriate standard would be 10 mg/l.

TDS concentrations at well WWCOV25 exceeded the historical range in 2019. The following wells display a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	WWCOV25	X	

## **2.1.9 WOLF CREEK COAL**

Two wells are monitored in the Wolf Creek Coal: GW-S2W-17WC (WWC17) and WWC25.

Wolf Creek Coal groundwater levels exceeded the historical range at monitoring well GW-S2W-17WC (WWC17). Groundwater levels at well WWC25 remained within the historical range in 2019. The following wells display groundwater level trends:

	Site	Increasing	Decreasing
1	GW-S2W-17WC (WWC17)	X	
2	WWC25		X

Well GW-S2W-17WC (WWC17) has not been sampled since 1988. Wolf Creek Coal groundwater quality concentrations remained within the CDPHE agricultural use standard range at each monitoring well.

TDS concentrations at well WWC25 exceeded the historical range. Statistically significant TDS trends were observed at the following wells:

	Site	Increasing	Decreasing
1	WWC25	X	

## **2.1.10 WOLF CREEK UNDERBURDEN**

One well is monitored in the Wolf Creek Underburden: WWCU25.

The groundwater level remained within the historical range at monitoring well WWCU25. The following wells display groundwater level trends:

	Site	Increasing	Decreasing
1	WWCU25		X

Wolf Creek Underburden groundwater quality concentrations remained within the CDPHE agricultural use standard range at each monitoring well except for the following:

	Site	Date	Parameter	Units	Standard	Result
1	WWCU25	05/19/19	pH	s.u.	6.5-8.5	8.65

Groundwater well WWCU25 exceeded the pH standard in May.

TDS concentrations remained within the historical range. Well WWCU25 does not display a statistically significant TDS trend.

## 2.2 SURFACE WATER

There are 11 surface water sites monitored at the SIIW. Six of the 11 surface water sites are NPDES sites.

	Site	Type	Unit
1	SW-S2W-SG9 (WSH9)	Surface Water	Hubberson Gulch
2	NPDES 017 (NPDES17)	NPDES	Hubberson Gulch
3	NPDES 016 (NPDES16)	NPDES	Hubberson Gulch
4	SW-S2W-SG7 (WSH7)	Surface Water	Hubberson Gulch
5	NPDES 006 (NPDES6)	NPDES	Hubberson Gulch
6	SW-S2W-FG1 (WSHF1)	Surface Water	Hubberson Gulch
7	NPDES 005 (NPDES5)	NPDES	Dry Creek
8	SW-S2W-SG5 (WSD5)	Surface Water	Dry Creek
9	NPDES 015 (NPDES15)	NPDES	Sage Creek
10	NPDES 009 (NPDES9)	NPDES	Sage Creek
11	SW-S2W-FG4 (WSSF3)	Surface Water	Sage Creek

The following reports were prepared for each surface water site: Period of Record Monitoring Summary, Water Year Monitoring Data, Period of Record Water Discharge Hydrograph and Period of Record TDS Trend Plot (Reports 16-26).

A Mann-Kendall test, at a 95% confidence level, was utilized to determine a statistical trend of TDS per site. Sen Slope is also represented on the TDS Trend Plots in red as a line passing through the median.

The following discussion of hydrologic data collected during the reporting period is arranged by drainage basin monitored. For each site, the surface water discharge and quality were compared to historical data. This year's surface water quality was also compared against Colorado Department of Public Health & Environment (CDPHE) surface water agricultural use standards (CDPHE, Reg. 31, 2009) and the appropriate CDPHE receiving stream standards: upper Dry Creek (Yampa Segment 13d, Regulation No. 33, 2015) and Sage Creek (Yampa Segment 13e, Regulation No. 33, 2015).

Predictions were made as to the expected TDS increases to be observed at various surface water sites in the Probable Hydrological Consequences (PHC) for the SIIW (SIIW PAP, PHC Tab 17). Predictions were compared to annual average TDS concentrations for surface water sites observed during the irrigation season of June through September. Predictions were applied to Hubberson Gulch site SW-S2W-FG1 (WSHF1), Dry Creek site SW-S2W-SG5 (WSD5) and Sage Creek site SW-S2W-FG4 (WSSF3).

The ammonia nitrogen MDL this year was 0.2 mg/L. All test values this year were less than the MDL. The ammonia nitrogen standard is 0.05 mg/L.

The mercury total MDL this year was 1.0 ug/L. All test values this year were less than the MDL. The mercury total standard is 0.01 ug/L.

The sulfide MDL this year was 0.1 mg/L. All test values this year were less than the MDL. The sulfide standard is 0.02 mg/L.

## **2.2.1 HUBBERSON GULCH**

Six surface water sites are monitored at the SIIW within the Hubberson Gulch drainage: SW-S2W-SG9 (WSH9), NPDES 017 (NPDES17), NPDES 016 (NPDES16), SW-S2W-SG7 (WSH7), NPDES 006 (NPDES6) and SW-S2W-FG1 (WSHF1).

Hubberson Gulch surface water quality concentrations remained within the CDPHE agricultural use standard range at each site except for the following:

	Site	Date	Parameter	Units	Standard	Result
1	NPDES 006 (NPDES6)	01/10/19	Manganese	mg/L	0.2	2.02
2	SW-S2W-FG1 (WSHF1)	09/03/19	Manganese	mg/L	0.2	0.286

Surface water site NPDES 006 (NPDES6) exceeded the manganese standard in January. Surface water site SW-S2W-FG1 (WSHF1) exceeded the manganese standard in September. This standard is only appropriate where irrigation water is applied to soils with pH values lower than 6.0. In alkaline soils, as are found in the SIIW region, a more appropriate standard would be 10 mg/l. Pre-mining manganese values often exceeded the 0.2 mg/l standard.

Hubberson Gulch surface water quality concentrations remained within the CDPHE receiving stream standards range at each monitoring site except for the following:

	Site	Date	Parameter	Units	Standard	Result
1	SW-S2W-SG7 (WSH7)	05/02/19	Iron TR	mg/L	1.11	2.33
2	SW-S2W-SG7 (WSH7)	06/11/19	Iron TR	mg/L	1.11	5.51
3	SW-S2W-SG7 (WSH7)	07/29/19	Iron TR	mg/L	1.11	4.47
4	SW-S2W-FG1 (WSHF1)	05/02/19	Iron TR	mg/L	1.11	1.88
5	SW-S2W-FG1 (WSHF1)	06/11/19	Iron TR	mg/L	1.11	1.57
6	SW-S2W-FG1 (WSHF1)	07/29/19	Iron TR	mg/L	1.11	2.55
7	SW-S2W-FG1 (WSHF1)	09/03/19	Iron TR	mg/L	1.11	1.88

Surface water sites SW-S2W-SG7 (WSH7) and SW-S2W-FG1 (WSHF1) exceeded the total recoverable iron standard in May, June and July. Site SW-S2W-FG1 (WSHF1) also

exceeded the total recoverable iron standard in September. Iron exceedances are likely the result of high-suspended solids and was exceeded in over half of the pre-mining stream samples.

Hubberson Gulch TDS concentrations remained within the historical range at each site. The following sites display a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	NPDES 017 (NPDES17)	X	
2	NPDES 016 (NPDES16)	X	
3	SW-S2W-SG7 (WSH7)	X	
4	NPDES 006 (NPDES6)	X	
5	SW-S2W-FG1 (WSHF1)	X	

Hubberson Gulch TDS concentrations remained within the SIIW PHC predictions.

## 2.2.2 DRY CREEK

Two surface water sites are monitored at the SIIW within the Dry Creek drainage: NPDES 005 (NPDES5) and SW-S2W-SG5 (WSD5).

Dry Creek surface water quality concentrations remained within the CDPHE agricultural use standard range and the CDPHE receiving stream standards at each site.

Dry Creek TDS concentrations remained within the historical range at each site. The following sites display a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	NPDES 005 (NPDES5)	X	
2	SW-S2W-SG5 (WSD5)	X	

Dry Creek TDS concentrations remained within the SIIW PHC predictions.

## **2.2.3 SAGE CREEK**

Three surface water sites are monitored at the SIIW within the Sage Creek drainage from upstream to downstream: NPDES 015 (NPDES15), NPDES 009 (NPDES9) and SW-S2W-FG4 (WSSF3).

Sage Creek surface water quality concentrations remained within the CDPHE agricultural use standard range and the CDPHE receiving stream standards at each site.

Sage Creek TDS concentrations remained within the historical range at each site. The following sites display a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	SW-S2W-FG4 (WSSF3)	X	

Sage Creek TDS concentrations remained within the SIIW PHC predictions except for the following:

	Site	Parameter	Units	PHC	Result
1	SW-S2W-FG4 (WSSF3)	TDS	mg/L	676	888

## 2.3 SPRINGS

There are nine spring sites monitored at the SIIW.

	Site	Type	Unit
1	S-46 (WSPG46)	Spring	Native
2	S-47 (WSPG47)	Spring	Native
3	S-50 (WSPG50)	Spring	Native
4	S-7 (WSPG7)	Spring	Native
5	Spoil Spring 1 (WSSPG1)	Spring	Spoils
6	Spoil Spring 2 (WSSPG2)	Spring	Spoils
7	Spoil Spring 3 (WSSPG3)	Spring	Spoils
8	Spoil Spring 4 (WSSPG4)	Spring	Spoils
9	Spoil Spring 5 (WSSPG5)	Spring	Spoils

The following reports were prepared for each spring site: Period of Record Monitoring Summary, Water Year Monitoring Data, Period of Record Water Discharge Hydrograph and Period of Record TDS Trend Plot (Reports 27-35).

A Mann-Kendall test, at a 95% confidence level, was utilized to determine a statistical trend of TDS per site. Sen Slope is also represented on the TDS Trend Plots in red as a line passing through the median.

The following discussion of hydrologic data collected during the reporting period is arranged by unit monitored. For each site, the spring water discharge and quality were compared to historical data. This year's surface water quality was also compared against Colorado Department of Public Health & Environment (CDPHE) surface water agricultural use standards (CDPHE, Reg. 31, 2009) and the appropriate CDPHE receiving stream standards: upper Dry Creek (Yampa Segment 13d, Regulation No. 33, 2015).

The ammonia nitrogen MDL this year was 0.2 mg/L. Numerous test values this year were less than the MDL. The aquatic life ammonia standard is dependent on pH and temperature. The detection limit for ammonia is 0.05 mg/l. All values above

detection limit are compared to the EPA Ambient Water Quality Criteria for Ammonia. Three sites required evaluation in 2019: S-46 (WSPG46), S-50 (WSPG50), and Spoil Spring 5 (WSSPG5). No ammonia excursions occurred this year.

The mercury total MDL this year was 1.0 ug/L. All test values this year were less than the MDL. The mercury total standard is 0.01 ug/L.

The sulfide MDL this year was 0.1 mg/L. All test values this year were less than the MDL. The sulfide standard is 0.02 mg/L.

### **2.3.1 NATIVE**

Four springs are monitored at the SIIW that are Native: S-46 (WSPG46), S-47 (WSPG47), S-50 (WSPG50) and S-7 (WSPG7).

Discharge flow at all Native springs water sites remained within the historical range this water year.

Native springs water quality concentrations remained within the CDPHE agricultural use standard range at each site except for the following:

	Site	Date	Parameter	Units	Standard	Result
1	S-46 (WSPG46)	06/12/19	Manganese	mg/L	0.2	0.232
2	S-50 (WSPG50)	06/12/19	Manganese	mg/L	0.2	1.18

Native springs water sites S-46 (WSPG46) and S-50 (WSPG50) exceeded the manganese standard in June. This standard is only appropriate where irrigation water is applied to soils with pH values lower than 6.0. In alkaline soils, as are found in the SIIW region, a more appropriate standard would be 10 mg/l. Pre-mining manganese values often exceeded the 0.2 mg/l standard.

Native springs water quality concentrations remained within the CDPHE receiving stream standards range at each monitoring site except for the following:

	Site	Date	Parameter	Units	Standard	Result
1	S-46 (WSPG46)	06/12/19	Iron TR	mg/L	1.11	25.8
2	S-47 (WSPG47)	06/12/19	Iron TR	mg/L	1.11	1.65

Native springs sites S-46 (WSPG46) and S-47 (WSPG47) exceeded the total recoverable iron standard in June. Iron exceedances are likely the result of high-suspended solids and was exceeded in over half of the pre-mining stream samples.

Native springs TDS concentrations for each site remained within the historical range this water year except for S-50 (WSPG50). Spring S-50 (WSPG50) exhibited the lowest TDS concentration on record in 2019. The following sites display a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	S-46 (WSPG46)	X	
2	S-47 (WSPG47)	X	
3	S-7 (WSPG7)	X	

### 2.3.2 SPOILS

Five springs are monitored at the SIIW from the Spoils: Spoil Spring 1 (WSSPG1), Spoil Spring 2 (WSSPG2), Spoil Spring 3 (WSSPG3), Spoil Spring 4 (WSSPG4) and Spoil Spring 5 (WSSPG5).

Discharge flow at all Spoils springs water sites remained within the historical range this water year.

Spoils springs water quality concentrations remained within the CDPHE agricultural use standard range at each site except for the following:

	Site	Date	Parameter	Units	Standard	Result
1	Spoil Spring 1 (WSSPG1)	06/12/19	Manganese	mg/L	0.2	2.1
2	Spoil Spring 3 (WSSPG3)	06/12/19	Manganese	mg/L	0.2	1.73
3	Spoil Spring 4 (WSSPG4)	06/12/19	Manganese	mg/L	0.2	0.482
4	Spoil Spring 5 (WSSPG5)	06/12/19	Manganese	mg/L	0.2	1.13

Spoils springs water sites Spoil Spring 1 (WSSPG1), Spoil Spring 3 (WSSPG3), Spoil Spring 4 (WSSPG4) and Spoil Spring 5 (WSSPG5) exceeded the manganese standard in June. This standard is only appropriate where irrigation water is applied to soils with pH values lower than 6.0. In alkaline soils, as are found in the SIIW region, a more appropriate standard would be 10 mg/l. Pre-mining manganese values often exceeded the 0.2 mg/l standard.

Spoils springs water quality concentrations remained within CDPHE receiving stream standards at each site.

Spoils springs TDS concentrations for each site remained within the historical range this water year except for Spoil Spring 3 (WSSPG3). Spoil Spring 3 (WSSPG3) exhibited the highest TDS concentration on record in 2019. The following sites display a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	Spoil Spring 2 (WSSPG2)	X	
2	Spoil Spring 3 (WSSPG3)	X	
3	Spoil Spring 4 (WSSPG4)	X	

## 2.4 METEOROLOGICAL

Meteorological data for 2019, including temperature and precipitation were obtained for Hayden, Colorado from the National Oceanic & Atmospheric Administration. This

data from the Hayden Station has been utilized to evaluate the precipitation trend and compare climatological observations for the period of record (Tables 1 & 2).

For this year, 21.83 inches of precipitation was measured, which is 3.56 inches (19.49%) greater than the 1981-2019 average, 18.27 inches. Four months exhibited below average precipitation: April, July, August, and September. Snowpack runoff, as estimated by totaling November through March precipitation values, was 10.23 inches, which was 2.74 inches (36.58%) above the 1981-2019 average, 7.49 inches.

## **3.0 SUMMARY**

No significant hydrology impacts, attributable to activities at the SIIW, were noted during 2019.

### **3.1 GROUNDWATER**

In the area surrounding the SIIW, groundwater is not being pumped for irrigation or livestock watering purposes, nor has the CDPHE classified any aquifer in this region for any use. Prior to mining, all aquifers at the SIIW exhibited several parameter concentrations in excess of both irrigation and livestock standards, rendering them questionable regarding their suitability for either irrigation or livestock. All bedrock aquifers affected by mining have been determined to have low transmissivities which would also preclude their use for yielding sufficient quantities of water for irrigation, or even livestock. The included discussion is provided only to serve as a comparative basis to judge ground water quality. Domestic wells that provide drinking water for mine employees or residents are not from aquifers impacted by mining.

Groundwater sites that exhibit a level trend:

	Site	Increasing	Decreasing
1	GW-S2W-7A2 (WHAL7-2)		X
2	DCAL-02		X
3	GW-S2W-14OV (WOV14)	X	
4	GW-S2W-17OV (WOV17)	X	
5	WOV25	X	
6	GW-S2W-14W (WW14)	X	
7	GW-S2W-17W (WW17)	X	
8	WW25		X
9	GW-S2W-23A (WSAL14)	X	
10	WSOV25	X	
11	WSC25		X
12	WWCOV25		X
13	GW-S2W-17WC (WWC17)	X	
14	WWC25		X
15	WWCU25		X

Groundwater sites and associated parameters that exceeded the CDPHE agricultural use standards:

	Site	Manganese	pH
1	DCAL-02	X	
2	GW-S2W-14W (WW14)	X	
3	WWCOV25	X	
4	WWCU25		X

Groundwater sites did not exceed the SIIW GWPOC standards.

Groundwater sites that exhibit a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	GW-S2W-7A2 (WHAL7-2)	X	
2	GW-S2W-14OV (WOV14)	X	
3	GW-S2W-17OV (WOV17)		X
4	GW-S2W-14W (WW14)	X	
5	GW-S2W-23A (WSAL14)		X
6	WSC25	X	
7	WWCOV25	X	
8	WWC25	X	

Groundwater sites that exceeded the PHC TDS predictions:

	Site	TDS
1	GW-S2W-17OV (WOV17)	X
2	GW-S2W-14W (WW14)	X

### 3.2 SURFACE WATER

Surface water discharged from the SIIW is not directly used for irrigation except from the following sites: SW-S2W-SG5 (WSD5), SW-S2W-FG4 (WSSF3), SW-S2W-SG7 (WSH7) and SW-S2W-FG1 (WSHF1). Surface water discharges are normally suitable for livestock and irrigation, but sometimes exceed water quality standards for aquatic life.

Surface water sites and associated parameters that exceeded the CDPHE agricultural use standards:

	Site	Manganese
1	NPDES 006 (NPDES6)	X
2	SW-S2W-FG1 (WSHF1)	X

Surface water sites and associated parameters that exceeded the CDPHE receiving stream standards:

	Site	Iron TR
1	SW-S2W-SG7 (WSH7)	X
2	SW-S2W-FG1 (WSHF1)	X

Surface water sites that exhibit a statistically significant TDS trend:

	Site	Increasing	Decreasing
1	NPDES 017 (NPDES17)	X	
2	NPDES 016 (NPDES16)	X	
3	SW-S2W-SG7 (WSH7)	X	
4	NPDES 006 (NPDES6)	X	
5	SW-S2W-FG1 (WSHF1)	X	
6	NPDES 005 (NPDES5)	X	
7	SW-S2W-SG5 (WSD5)	X	
8	SW-S2W-FG4 (WSSF3)	X	

Surface water sites that exceeded the PHC TDS predictions:

	Site	TDS
1	SW-S2W-FG4 (WSSF3)	X

### 3.3 SPRINGS

Springs water discharged from the SIIW is not directly used for irrigation. Springs water discharges are normally suitable for livestock and irrigation, but sometimes exceed water quality standards for aquatic life.

Springs water sites and associated parameters that exceeded the CDPHE agricultural use standards:

	Site	Manganese
1	S-46 (WSPG46)	X
2	S-50 (WSPG50)	X
3	Spoil Spring 1 (WSSPG1)	X
4	Spoil Spring 3 (WSSPG3)	X
5	Spoil Spring 4 (WSSPG4)	X
6	Spoil Spring 5 (WSSPG5)	X

Springs water sites and associated parameters that exceeded the CDPHE receiving stream standards:

	Site	Iron TR
1	S-46 (WSPG46)	X
2	S-47 (WSPG47)	X

Springs sites that exhibit a statistically significant TDS trend :

	Site	Increasing	Decreasing
1	S-46 (WSPG46)	X	
2	S-47 (WSPG47)	X	
3	S-7 (WSPG7)	X	
4	Spoil Spring 2 (WSSPG2)	X	
5	Spoil Spring 3 (WSSPG3)	X	
6	Spoil Spring 4 (WSSPG4)	X	

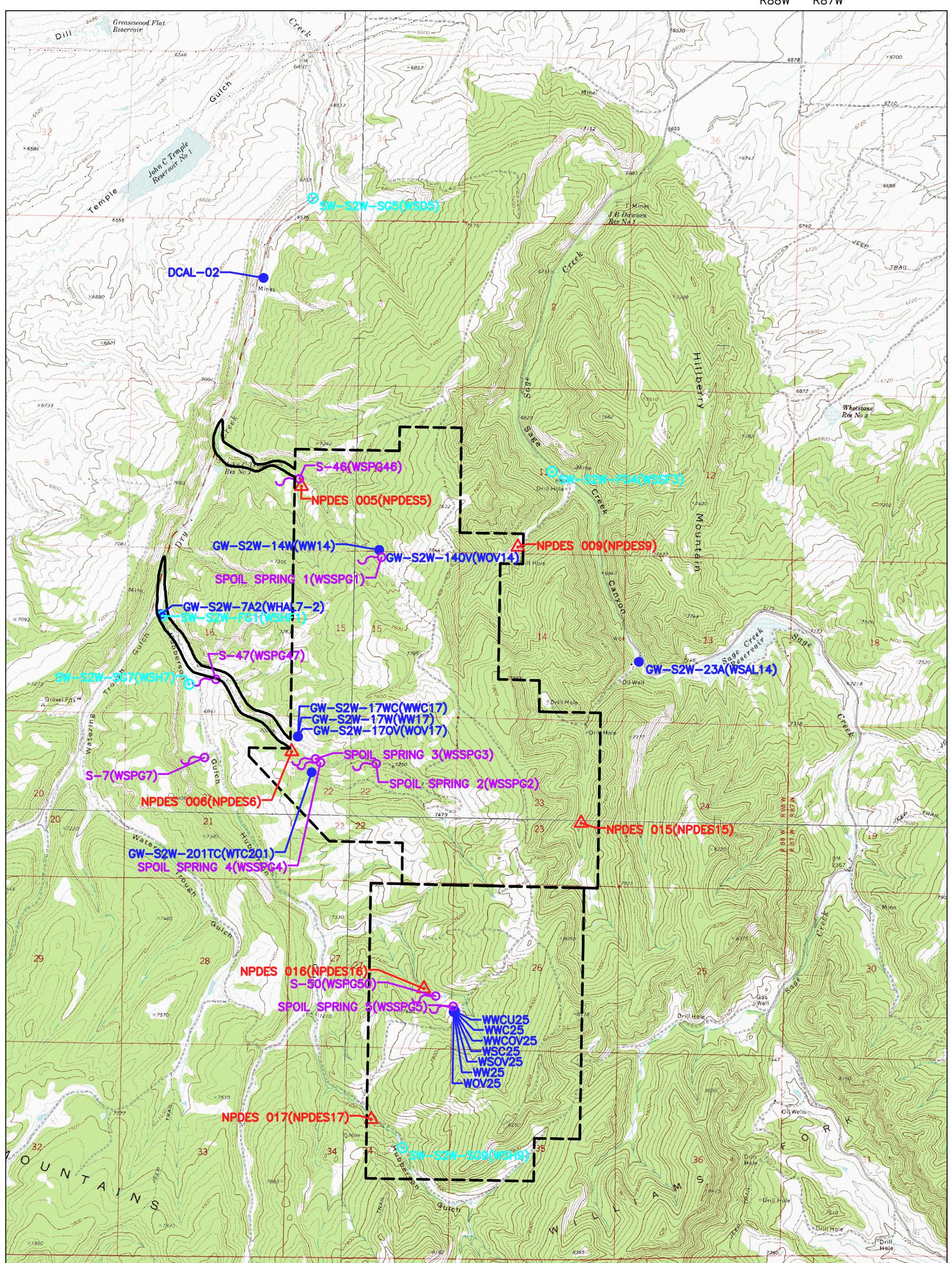


IMAGE SOURCE:  
DIGITAL RASTER GRAPHIC COUNTY MOSAIC BY NRCS  
OF ROUTT COUNTY, COLORADO FROM GEOSPATIAL  
DATA GATEWAY ([HTTPS://GDG.SC.EGOV.USDA.GOV](https://gdg.sc.egov.usda.gov))  
DOWNLOADED 10/16

GROUNDWATER  
SURFACE WATER  
NPDES  
SPRING  
PERMIT BOUNDARY

DESIGNED BY:	JAH
DRAWN BY:	SDG
CHECKED BY:	TNS
DATE:	2019

FIGURE 1  
MONITORING SITE LOCATIONS

SENECA II WEST MINE  
PEABODY SAGE CREEK MINING, LLC  
PEABODY ENERGY

WWC ENGINEERING

0 3000'  
SCALE

## PERIOD OF RECORD PRECIPITATION SUMMARY

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
2019	2.14	1.81	1.62	2.45	1.46	2.89	1.66	1.88	3.57	0.38	0.44	1.53	21.83
2018	2.45	1.31	1.36	1.65	1.92	1.90	2.95	0.85	0.15	0.15	1.33	0.17	16.19
2017	1.29	0.91	2.06	2.70	1.47	0.84	2.06	1.85	0.13	1.68	0.46	1.74	17.19
2016	1.39	1.9	2.55	2.65	1.16	1.40	3.02	1.94	0.40	0.81	0.19	1.02	18.43
2015	1.60	2.10	1.84	0.55	1.02	1.30	1.60	4.36	0.61	2.36	1.53	0.90	19.77
2014	2.69	1.75	1.42	2.02	0.78	1.96	1.19	2.58	0.72	1.50	3.77	0.87	21.25
2013	0.86	0.46	3.21	1.02	0.73	1.29	3.58	1.67	0.06	0.46	1.48	2.76	17.58
2012	1.41	1.65	0.36	0.87	1.97	0.50	1.13	0.22	0.15	2.43	0.55	1.56	12.80
2011	2.18	1.91	2.98	1.59	2.09	2.52	4.50	3.56	0.85	1.82	0.65	1.14	25.79
2010	1.22	0.77	1.24	0.75	0.90	0.73	1.98	2.80	1.34	1.19	1.56	0.62	15.10
2009	0.53	1.16	1.38	2.80	0.60	1.32	1.40	1.89	2.08	0.51	1.04	0.48	15.19
2008	1.41	0.13	3.36	2.51	1.70	1.64	0.94	1.68	0.37	0.57	0.75	0.91	15.97
2007	2.64	0.76	0.86	1.04	1.34	1.46	0.62	0.87	0.33	0.52	1.12	2.72	14.28
2006	2.27	2.04	2.01	1.78	0.58	1.06	0.95	0.93	0.24	1.48	2.71	2.75	18.80
2005	1.34	1.68	0.50	1.49	0.84	0.99	1.97	1.41	3.36	0.57	1.57	1.30	17.02
2004	0.44	2.90	1.58	0.74	1.64	0.40	1.57	1.26	0.86	1.00	1.44	2.76	16.59
2003	1.88	1.09	1.28	0.74	1.95	0.99	2.57	1.15	1.33	0.47	0.62	1.83	15.90
2002	1.14	1.17	0.54	0.88	0.92	1.06	1.39	0.40	0.37	0.78	1.26	1.94	11.86
2001	0.67	1.60	1.16	0.96	1.41	1.07	1.28	1.15	0.85	1.11	2.06	1.66	14.98
2000	0.43	0.61	1.66	1.66	1.68	1.46	1.84	1.94	0.54	0.75	2.38	2.00	16.95
1999	1.85	0.81	1.13	2.13	0.99	0.57	3.21	2.00	1.39	2.10	1.85	0.78	18.81
1998	2.37	1.08	0.95	1.34	1.93	1.77	1.77	0.62	2.51	1.50	0.48	1.50	17.82
1997	1.79	2.39	1.69	2.88	0.97	0.48	3.19	2.75	1.60	1.05	3.57	5.48	27.84
1996	1.32	2.20	1.26	3.60	2.19	0.99	1.34	2.10	1.00	1.33	0.35	1.37	19.05
1995	0.95	2.09	0.68	1.47	0.97	0.82	3.36	4.48	1.54	1.23	0.73	2.69	21.01
1994	3.02	1.61	1.16	0.69	1.13	0.56	1.85	1.07	0.43	0.24	0.98	0.72	13.46
1993	1.46	1.48	1.33	2.28	1.66	1.53	2.55	1.14	1.29	0.65	1.37	1.39	18.13
1992	1.18	2.79	0.85	0.88	1.16	1.20	1.66	3.08	1.15	4.38	0.95	0.98	20.26
1991	3.20	1.71	1.18	1.75	0.86	2.42	1.09	0.96	1.74	1.59	2.00	1.32	19.82
1990	0.77	1.38	2.08	0.65	1.64	1.54	1.36	1.12	1.38	1.14	0.51	1.22	14.79
1989	0.13	2.79	1.13	1.02	2.50	1.38	0.45	1.39	0.53	1.82	1.33	1.52	15.99
1988	1.27	1.22	2.32	2.80	0.70	1.31	0.83	1.85	1.93	0.60	1.03	2.31	18.17
1987	2.65	1.00	0.56	1.28	1.35	1.50	1.60	1.92	0.64	1.78	1.35	0.46	16.09
1986	3.51	4.19	1.34	0.79	3.01	1.59	2.70	0.99	1.00	1.65	1.96	2.12	24.85
1985	2.61	1.68	1.80	2.40	1.01	2.40	3.77	1.40	0.68	1.28	0.64	1.17	20.84
1984	2.16	2.82	5.03	0.59	0.43	2.31	2.68	1.33	2.36	1.84	2.61	1.31	25.47
1983	1.64	1.52	1.03	1.10	1.66	2.17	2.28	1.57	2.76	1.88	1.08	0.79	19.48
1982	3.76	0.78	2.51	1.71	0.62	2.64	1.92	0.97	0.46	1.60	1.19	2.64	20.80
1981	1.09	0.33	0.43	0.53	0.45	2.50	0.69	3.97	1.65	2.24	1.12	1.33	16.33
AVG	1.71	1.58	1.58	1.56	1.32	1.45	1.96	1.77	1.14	1.29	1.33	1.58	18.27

Data from October 1980 to February 1982, and 2011 Water Year and later, from U.S. Department of Commerce - NOAA - Hayden Station. All other data from Seneca II Mine Meteorological Station with Belfort Weighing Bucket Rain Gage. Site relocated to USGS site on August 31, 1991. Precipitation recorded in inches.

# Record of Climatological Observations

These data are quality controlled and may not  
be identical to the original observations.

Generated on 03/17/2020

Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2018	10	01	73	45	67	0.00		0.0		0.0										
2018	10	02	68	44	63	0.01		0.0		0.0										
2018	10	03	67	52	60	0.08		0.0		0.0										
2018	10	04	60	44	49	0.51		0.0		0.0										
2018	10	05	49	36	38	0.21		0.0		0.0										
2018	10	06	55	28	42	0.16		0.0		0.0										
2018	10	07	53	36	47	0.31		0.0		0.0										
2018	10	08	47	32	37	0.46		0.5		0.0										
2018	10	09	49	33	43	0.02		0.0		0.0										
2018	10	10	46	33	34	0.16		T		0.0										
2018	10	11	42	31	41	0.04		0.0		0.0										
2018	10	12	54	29	49	0.09		0.0		0.0										
2018	10	13	58	25	51	T		0.0		0.0										
2018	10	14	51	22	29	0.07		0.5		0.0										
2018	10	15	42	12	37	0.00		0.0		0.0										
2018	10	16	57	20	52	0.00		0.0		0.0										
2018	10	17	64	30	53	0.00		0.0		0.0										
2018	10	18	56	27	48	T		0.0		0.0										
2018	10	19	60	26	52	0.12		0.0		0.0										
2018	10	20	66	29	57	0.00		0.0		0.0										
2018	10	21	68	32	60	0.00		0.0		0.0										
2018	10	22	68	35	58	0.00		0.0		0.0										
2018	10	23	63	41	51	0.02		0.0		0.0										
2018	10	24	58	37	50	0.18		0.0		0.0										
2018	10	25	57	29	50	0.00		0.0		0.0										
2018	10	26	56	31	51	0.00		0.0		0.0										
2018	10	27	65	30	58	0.00		0.0		0.0										
2018	10	28	69	30	60	0.00		0.0		0.0										
2018	10	29	68	30	57	0.00		0.0		0.0										
2018	10	30	57	34	40	0.00		0.0		0.0										
2018	10	31	45	13	38	0.00		0.0		0.0										
Summary			58	31		2.44		1.0												

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

"s" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

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Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2018	11	01	41	27	37	0.14		2.0		0.0										
2018	11	02	54	36	50	0.06		0.0		0.0										
2018	11	03	50	34	42	0.01		0.0		0.0										
2018	11	04	42	26	31	0.37		3.0		3.0										
2018	11	05	39	29	33	0.09		1.0		2.0										
2018	11	06	40	26	37	0.00		0.0		1.0										
2018	11	07	41	21	29	T		T		0.0										
2018	11	08	33	19	27	T		T		0.0										
2018	11	09	40	10	27	0.00		0.0		0.0										
2018	11	10	40	14	29	0.00		0.0		0.0										
2018	11	11	31	9	25	T		T		0.0										
2018	11	12	31	4	19	0.00		0.0		0.0										
2018	11	13	40	10	30	0.00		0.0		0.0										
2018	11	14	49	15	38	0.00		0.0		0.0										
2018	11	15	50	17	34	0.00		0.0		0.0										
2018	11	16	52	17	39	0.00		0.0		0.0										
2018	11	17	39	21	24	0.06		1.0		1.0										
2018	11	18	39	13	23	0.00		0.0		1.0										
2018	11	19	43	9	28	0.00		0.0		1.0										
2018	11	20	51	14	35	0.00		0.0		0.0										
2018	11	21	52	16	38	0.00		0.0		0.0										
2018	11	22	40	18	29	0.17		1.5		1.0										
2018	11	23	38	23	32	0.04		1.0		2.0										
2018	11	24	42	22	23	0.30		4.0		4.0										
2018	11	25	31	14	18	0.00		0.0		4.0										
2018	11	26	31	2	21	0.00		0.0		4.0										
2018	11	27	34	6	28	0.00		0.0		3.0										
2018	11	28	37	24	33	0.00		0.0		3.0										
2018	11	29	39	29	32	0.41		4.0		4.0										
2018	11	30	34	28	28	0.16		1.0		4.0										
		Summary	41	18		1.81		18.5												

Empty, or blank, cells indicate that a data observation was not reported.

\*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

"s" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

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Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2018	12	01	34	16	17	0.17		2.5		7.0										
2018	12	02	25	3	15	0.00		0.0		7.0										
2018	12	03	24	6	15	0.12		2.0		9.0										
2018	12	04	22	2	7	0.09		1.0		10.0										
2018	12	05	18	-3	17	0.06		1.0		11.0										
2018	12	06	30	15	24	T		T		11.0										
2018	12	07	36	23	24	0.07		1.0		9.0										
2018	12	08	34	21	29	0.01		0.1		9.0										
2018	12	09	33	18	18	0.01		0.5		9.0										
2018	12	10	32	6	19	0.00		0.0		8.0										
2018	12	11	36	14	17	0.00		0.0		8.0										
2018	12	12	30	7	26	0.08		1.5		10.0										
2018	12	13	30	1	13	0.00		0.0		10.0										
2018	12	14	27	2	18	0.00		0.0		10.0										
2018	12	15	33	8	22	0.00		0.0		10.0										
2018	12	16	39	12	25	0.00		0.0		9.0										
2018	12	17	31	14	27	0.00		0.0		9.0										
2018	12	18	39	22	30	0.00		0.0		8.0										
2018	12	19	37	28	28	T		T		8.0										
2018	12	20	36	9	23	0.00		0.0		8.0										
2018	12	21	33	12	31	0.00		0.0		8.0										
2018	12	22	31	11	12	0.21		2.5		11.0										
2018	12	23	25	-1	16	0.00		0.0		11.0										
2018	12	24	29	16	26	0.33		4.5		15.0										
2018	12	25	36	13	14	0.00		0.0		14.0										
2018	12	26	30	14	22	0.12		1.5		15.0										
2018	12	27	30	6	7	T		0.1		15.0										
2018	12	28	10	-9	0	0.00		0.0		15.0										
2018	12	29	17	-9	14	0.00		0.0		15.0										
2018	12	30	26	11	21	T		0.1		15.0										
2018	12	31	22	3	3	0.35		3.5		17.0										
Summary			30	9		1.62		21.8												

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# Record of Climatological Observations

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Generated on 03/17/2020

Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2019	01	01	3	-14	-5	0.00		0.0		17.0										
2019	01	02	5	-21	-5	0.00		0.0		16.0										
2019	01	03	19	-10	10	0.00		0.0		16.0										
2019	01	04	31	6	22	0.00		0.0		16.0										
2019	01	05	28	2	25	0.00		0.0		15.0										
2019	01	06	39	18	28	0.13		3.0		16.0										
2019	01	07	37	16	25	0.12		1.5		16.0										
2019	01	08	29	12	19	T		T		16.0										
2019	01	09	33	13	21	0.00		0.0		16.0										
2019	01	10	30	9	21	0.00		0.0		16.0										
2019	01	11	30	16	26	0.10		1.5		17.0										
2019	01	12	26	18	20	T		T		17.0										
2019	01	13	20	2	6	0.00		0.0		17.0										
2019	01	14	9	-11	-1	0.00		0.0		17.0										
2019	01	15	34	-9	28	0.00		0.0		16.0										
2019	01	16	35	24	30	0.22		2.0		18.0										
2019	01	17	33	19	29	0.12		1.5		19.0										
2019	01	18	31	25	25	1.08		11.0		28.0										
2019	01	19	25	3	24	0.00		0.0		27.0										
2019	01	20	34	19	23	0.00		0.0		26.0										
2019	01	21	41	14	30	T		T		25.0										
2019	01	22	30	14	16	0.08		1.0		24.0										
2019	01	23	16	-3	15	0.16		5.0		29.0										
2019	01	24	30	15	21	0.29		6.0		33.0										
2019	01	25	32	15	21	0.10		2.0		31.0										
2019	01	26	33	17	17	0.05		1.0		31.0										
2019	01	27	31	12	24	0.00		0.0		30.0										
2019	01	28	26	12	12	0.00		0.0		28.0										
2019	01	29	18	-4	8	0.00		0.0		28.0										
2019	01	30	15	-9	11	0.00		0.0		27.0										
2019	01	31	24	-5	11	0.00		0.0		27.0										
Summary			27	7		2.45		35.5												

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Generated on 03/17/2020

Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2019	02	01	28	3	19	0.00		0.0		26.0										
2019	02	02	42	10	38	0.00		0.0		25.0										
2019	02	03	43	27	31	0.06		T		23.0										
2019	02	04	40	27	35	0.00		0.0		23.0										
2019	02	05	39	27	28	0.02		0.5		23.0										
2019	02	06	31	14	14	0.17		3.5		25.0										
2019	02	07	16	-1	7	0.09		1.0		25.0										
2019	02	08	17	-9	9	0.00		0.0		25.0										
2019	02	09	20	-2	16	0.00		0.0		25.0										
2019	02	10	32	3	27	0.00		0.0		25.0										
2019	02	11	31	7	7	0.04		0.5		25.0										
2019	02	12	22	-6	17	0.00		0.0		25.0										
2019	02	13	39	14	29	0.08		1.0		25.0										
2019	02	14	41	27	34	0.20		2.0		25.0										
2019	02	15	44	31	36	0.36		0.0		24.0										
2019	02	16	36	19	19	0.14		2.0		25.0										
2019	02	17	23	7	15	T		0.3		25.0										
2019	02	18	21	8	13	T		T		25.0										
2019	02	19	17	-4	4	0.12		1.2		26.0										
2019	02	20	30	-2	13	0.05		0.5		26.0										
2019	02	21	24	8	17	0.00		0.0		26.0										
2019	02	22	24	11	16	0.07		0.8		27.0										
2019	02	23	19	-5	15	T		T		27.0										
2019	02	24	29	8	24	0.00		0.0		26.0										
2019	02	25	32	3	27	0.00		0.0		26.0										
2019	02	26	42	9	32	0.00		0.0		26.0										
2019	02	27	38	12	33	0.00		0.0		26.0										
2019	02	28	44	25	36	0.06		0.3		25.0										
		Summary	31	10		1.46		13.6												

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Generated on 03/17/2020

Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2019	03	01	38	28	30	0.15		1.5		26.0										
2019	03	02	31	26	26	0.75		7.0		33.0										
2019	03	03	26	11	14	0.21		4.0		36.0										
2019	03	04	18	-2	8	0.01		0.2		34.0										
2019	03	05	34	-3	29	0.00		0.0		33.0										
2019	03	06	37	28	33	0.42		1.5		31.0										
2019	03	07	45	32	36	T		T		29.0										
2019	03	08	39	27	30	0.32		2.0		31.0										
2019	03	09	34	15	24	0.08		1.0		30.0										
2019	03	10	34	21	29	0.07		0.3		29.0										
2019	03	11	34	16	31	0.00		0.0		29.0										
2019	03	12	37	14	31	0.00		0.0		29.0										
2019	03	13	34	25	25	0.71		7.0		36.0										
2019	03	14	27	16	23	0.00		0.0		34.0										
2019	03	15	30	1	26	0.00		0.0		34.0										
2019	03	16	34	5	29	0.00		0.0		34.0										
2019	03	17	35	10	30	0.00		0.0		34.0										
2019	03	18	39	12	32	0.00		0.0		33.0										
2019	03	19	38	8	32	0.00		0.0		32.0										
2019	03	20	40	11	31	0.00		0.0		32.0										
2019	03	21	45	21	35	0.00		0.0		32.0										
2019	03	22	41	21	36	0.08		0.5		31.0										
2019	03	23	45	27	37	0.01		0.0		29.0										
2019	03	24	41	27	37	0.02		0.0		28.0										
2019	03	25	43	25	36	0.01		0.3		27.0										
2019	03	26	49	24	46	0.00		0.0		26.0										
2019	03	27	52	27	46	0.00		0.0		25.0										
2019	03	28	53	28	44	0.00		0.0		24.0										
2019	03	29	44	28	33	0.05		T		24.0										
2019	03	30	39	22	35	0.00		0.0		23.0										
2019	03	31	43	13	35	0.00		0.0		22.0										
Summary			38	18		2.89		25.3												

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# Record of Climatological Observations

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Generated on 03/17/2020

Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2019	04	01	46	19	40	0.00		0.0		20.0										
2019	04	02	47	30	44	0.04		0.7		19.0										
2019	04	03	62	32	37	0.12		0.0		17.0										
2019	04	04	54	31	49	0.00		0.0		14.0										
2019	04	05	60	33	54	0.00		0.0		10.0										
2019	04	06	56	35	47	0.01		0.0		9.0										
2019	04	07	56	27	54	0.07		0.0		4.0										
2019	04	08	65	30	60	0.00		0.0		0.0										
2019	04	09	65	35	59	0.00		0.0		0.0										
2019	04	10	59	32	33	T		T		0.0										
2019	04	11	39	22	34	0.02		T		0.0										
2019	04	12	36	26	33	0.05		T		0.0										
2019	04	13	44	27	40	0.02		T		0.0										
2019	04	14	53	24	50	T		0.0		0.0										
2019	04	15	60	38	58	T		0.0		0.0										
2019	04	16	63	34	56	0.00		0.0		0.0										
2019	04	17	57	36	53	T		0.0		0.0										
2019	04	18	61	38	60	0.00		0.0		0.0										
2019	04	19	70	30	68	0.00		0.0		0.0										
2019	04	20	74	36	59	0.00		0.0		0.0										
2019	04	21	59	36	56	0.05		0.0		0.0										
2019	04	22	63	30	52	0.00		0.0		0.0										
2019	04	23	67	28	63	0.00		0.0		0.0										
2019	04	24	68	37	60	0.00		0.0		0.0										
2019	04	25	68	36	65	0.00		0.0		0.0										
2019	04	26	71	34	52	0.08		0.0		0.0										
2019	04	27	64	34	63	0.37		0.0		0.0										
2019	04	28	66	35	55	0.02		0.0		0.0										
2019	04	29	55	25	36	0.21		1.0		0.0										
2019	04	30	48	34	43	0.60		0.0		0.0										
		Summary	59	31		1.66		1.7												

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Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2019	05	01	45	23	43	0.42		1.0		0.0										
2019	05	02	54	27	52	0.00		0.0		0.0										
2019	05	03	60	28	59	0.00		0.0		0.0										
2019	05	04	64	28	60	0.00		0.0		0.0										
2019	05	05	68	34	63	0.00		0.0		0.0										
2019	05	06	68	38	60	0.00		0.0		0.0										
2019	05	07	69	39	64	0.00		0.0		0.0										
2019	05	08	64	35	44	0.03		0.0		0.0										
2019	05	09	49	33	43	0.04		0.0		0.0										
2019	05	10	56	33	54	0.00		0.0		0.0										
2019	05	11	63	27	59	0.00		0.0		0.0										
2019	05	12	69	33	66	0.00		0.0		0.0										
2019	05	13	74	36	72	0.00		0.0		0.0										
2019	05	14	76	41	67	0.00		0.0		0.0										
2019	05	15	75	42	68	0.00		0.0		0.0										
2019	05	16	73	46	67	0.00		0.0		0.0										
2019	05	17	68	42	44	0.02		0.0		0.0										
2019	05	18	56	34	54	0.12		0.0		0.0										
2019	05	19	56	32	54	T		0.0		0.0										
2019	05	20	54	36	45	0.05		0.0		0.0										
2019	05	21	45	31	43	0.49		1.0		0.0										
2019	05	22	50	32	48	0.02		0.0		0.0										
2019	05	23	64	34	42	0.17		T		0.0										
2019	05	24	56	38	52	0.00		0.0		0.0										
2019	05	25	69	33	67	0.00		0.0		0.0										
2019	05	26	70	38	61	0.00		0.0		0.0										
2019	05	27	61	41	55	0.03		0.0		0.0										
2019	05	28	55	34	39	0.37		0.0		0.0										
2019	05	29	56	36	55	0.10		0.0		0.0										
2019	05	30	65	35	61	T		0.0		0.0										
2019	05	31	68	39	61	0.02		0.0		0.0										
Summary			62	35		1.88		2.0												

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Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2019	06	01	73	42	71	0.07		0.0		0.0										
2019	06	02	75	44	58	0.02		0.0		0.0										
2019	06	03	72	41	59	0.06		0.0		0.0										
2019	06	04	75	39	67	0.02		0.0		0.0										
2019	06	05	77	43	74	0.00		0.0		0.0										
2019	06	06	79	45	72	T		0.0		0.0										
2019	06	07	79	49	76	0.00		0.0		0.0										
2019	06	08	76	43	62	0.00		0.0		0.0										
2019	06	09	62	31	62	0.00		0.0		0.0										
2019	06	10	74		71	0.00		0.0		0.0										
2019	06	11	74	35	73	0.00		0.0		0.0										
2019	06	12	76	38	74	0.00		0.0		0.0										
2019	06	13	78	46	65	0.00		0.0		0.0										
2019	06	14	77	44	54	0.08		0.0		0.0										
2019	06	15	73	42	72	0.20		0.0		0.0										
2019	06	16	76	49	73	0.02		0.0		0.0										
2019	06	17	73	50	59	0.08		0.0		0.0										
2019	06	18	65	48	56	0.06		0.0		0.0										
2019	06	19	75	43	75	0.16		0.0		0.0										
2019	06	20	79	44	61	0.12		0.0		0.0										
2019	06	21	61	31	41	2.04		1.0		0.0										
2019	06	22	54	38	51	0.08		0.0		0.0										
2019	06	23	58	33	57	0.51		0.0		0.0										
2019	06	24	71	39	67	0.00		0.0		0.0										
2019	06	25	78	45	73	0.05		0.0		0.0										
2019	06	26	81	48	79	0.00		0.0		0.0										
2019	06	27	82	44	80	0.00		0.0		0.0										
2019	06	28	85	48	84	0.00		0.0		0.0										
2019	06	29	86	52	85	0.00		0.0		0.0										
2019	06	30	85	53	77	T		0.0		0.0										
		Summary	74	43		3.57		1.0												

Empty, or blank, cells indicate that a data observation was not reported.

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# Record of Climatological Observations

These data are quality controlled and may not  
be identical to the original observations.

Generated on 03/17/2020

Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2019	07	01	80	43	70	0.12		0.0		0.0										
2019	07	02	72	43	68	0.00		0.0		0.0										
2019	07	03	74	49	73	0.04		0.0		0.0										
2019	07	04	82	43	80	0.00		0.0		0.0										
2019	07	05	81	44	79	0.00		0.0		0.0										
2019	07	06	83	48	80	0.00		0.0		0.0										
2019	07	07	80	38	70	0.02		0.0		0.0										
2019	07	08	75	52	72	0.00		0.0		0.0										
2019	07	09	81	44	80	0.00		0.0		0.0										
2019	07	10	84	45	82	0.00		0.0		0.0										
2019	07	11	88	50	87	0.00		0.0		0.0										
2019	07	12	88	52	86	0.00		0.0		0.0										
2019	07	13	86	53	76	0.00		0.0		0.0										
2019	07	14	88	51	85	0.00		0.0		0.0										
2019	07	15	85	55	78	T		0.0		0.0										
2019	07	16	88	51	84	0.00		0.0		0.0										
2019	07	17	87	51	84	0.00		0.0		0.0										
2019	07	18	86	48	84	0.00		0.0		0.0										
2019	07	19	89	47	86	0.00		0.0		0.0										
2019	07	20	86	49	80	0.00		0.0		0.0										
2019	07	21	88	53	85	0.06		0.0		0.0										
2019	07	22	91	57	68	0.04		0.0		0.0										
2019	07	23	89	50	87	0.00		0.0		0.0										
2019	07	24	88	53	73	0.00		0.0		0.0										
2019	07	25	82	55	79	0.01		0.0		0.0										
2019	07	26	85	51	68	0.06		0.0		0.0										
2019	07	27	83	55	69	T		0.0		0.0										
2019	07	28	83	50	81	0.03		0.0		0.0										
2019	07	29	87	48	84	0.00		0.0		0.0										
2019	07	30	88	53	84	0.00		0.0		0.0										
2019	07	31	84	55	72	0.00		0.0		0.0										
Summary			84	50		0.38		0.0												

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# Record of Climatological Observations

These data are quality controlled and may not  
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Generated on 03/17/2020

Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time				At Obs. Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth			
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.	
2019	08	01	76	56	75	0.21		0.0		0.0									
2019	08	02	86	53	83	0.00		0.0		0.0									
2019	08	03	89	54	85	0.00		0.0		0.0									
2019	08	04	85	53	71	0.00		0.0		0.0									
2019	08	05	86	50	82	0.06		0.0		0.0									
2019	08	06	90	52	76	0.00		0.0		0.0									
2019	08	07	87	53	67	T		0.0		0.0									
2019	08	08	81	56	74	0.02		0.0		0.0									
2019	08	09	83	54	80	0.05		0.0		0.0									
2019	08	10	85	51	82	0.00		0.0		0.0									
2019	08	11	82	54	61	0.07		0.0		0.0									
2019	08	12	83	47	81	0.00		0.0		0.0									
2019	08	13	84	43	83	0.00		0.0		0.0									
2019	08	14	86	46	81	0.00		0.0		0.0									
2019	08	15	87	44	80	0.00		0.0		0.0									
2019	08	16	86	47	66	0.00		0.0		0.0									
2019	08	17	82	49	71	0.00		0.0		0.0									
2019	08	18	87	46	85	0.00		0.0		0.0									
2019	08	19	89	46	85	0.00		0.0		0.0									
2019	08	20	90	46	86	0.00		0.0		0.0									
2019	08	21	89	45	87	0.00		0.0		0.0									
2019	08	22	87	47	71	0.03		0.0		0.0									
2019	08	23	83	54	77	0.00		0.0		0.0									
2019	08	24	82	41	75	0.00		0.0		0.0									
2019	08	25	88	45	84	0.00		0.0		0.0									
2019	08	26	84	43	78	0.00		0.0		0.0									
2019	08	27	80	36	77	0.00		0.0		0.0									
2019	08	28	86	39	84	0.00		0.0		0.0									
2019	08	29	84	42	80	0.00		0.0		0.0									
2019	08	30	85	49	71	T		0.0		0.0									
2019	08	31	89	48	85	0.00		0.0		0.0									
Summary			85	48		0.44		0.0											

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# Record of Climatological Observations

These data are quality controlled and may not  
be identical to the original observations.

Generated on 03/17/2020

Observation Time Temperature: 1800 Observation Time Precipitation: 1800

Year	Month	Day	Temperature (F)		At Observation	Precipitation				At Obs. Time	Evaporation		Soil Temperature (F)							
			24 Hrs. Ending at Observation Time			24 Hour Amounts Ending at Observation Time					24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth				
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.		
2019	09	01	90	47	84	0.00		0.0		0.0										
2019	09	02	91	48	87	0.00		0.0		0.0										
2019	09	03	87	42	80	0.00		0.0		0.0										
2019	09	04	88	52	82	0.00		0.0		0.0										
2019	09	05	90	50	78	0.00		0.0		0.0										
2019	09	06	87	51	72	T		0.0		0.0										
2019	09	07	80	48	77	0.10		0.0		0.0										
2019	09	08	77	46	59	0.18		T		0.0										
2019	09	09	73	48	70	0.89		0.0		0.0										
2019	09	10	77	44	60	0.00		0.0		0.0										
2019	09	11	67	48	51	0.17		0.0		0.0										
2019	09	12	64	39	60	0.15		0.0		0.0										
2019	09	13	73	37	70	0.00		0.0		0.0										
2019	09	14	79	40	73	0.00		0.0		0.0										
2019	09	15	81	40	77	0.00		0.0		0.0										
2019	09	16	78	46	73	0.00		0.0		0.0										
2019	09	17	74	45	69	0.00		0.0		0.0										
2019	09	18	77	36	73	0.00		0.0		0.0										
2019	09	19	81	43	75	0.00		0.0		0.0										
2019	09	20	75	44	62	0.00		0.0		0.0										
2019	09	21	64	29	61	0.00		0.0		0.0										
2019	09	22	67	27	61	0.00		0.0		0.0										
2019	09	23	76	34	70	0.00		0.0		0.0										
2019	09	24	75	31	69	0.00		0.0		0.0										
2019	09	25	74	34	68	0.00		0.0		0.0										
2019	09	26	80	36	74	0.00		0.0		0.0										
2019	09	27	75	46	62	0.00		0.0		0.0										
2019	09	28	78	47	70	0.02		0.0		0.0										
2019	09	29	76	50	71	0.00		0.0		0.0										
2019	09	30	71	39	61	0.02		0.0		0.0										
		Summary	78	42		1.53		0.0												

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loc_report_order Location Code Location Name					2 WHAL7-2							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	5/5/1981	5/7/2019	95	1674	1700	3970	800	510.8
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	5/5/1981	5/7/2019	95	7.25	7.24	8.1	6.7	0.232
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	5/5/1981	5/7/2018	94	10	10.1	18.4	5.7	1.84
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/7/2019	5/7/2019	1	9.9	9.9	9.9	9.9	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	5/5/1981	5/3/2017	88	536	541	650	390	40.8
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	5/5/1981	5/3/2017	87	0.054	0.04	0.2	0.03	0.045
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	5/5/1981	5/3/2017	88	2.65	2.85	10	0.6	1.36
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/27/1983	5/3/2017	83	655	665	793	475	51
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	5/5/1981	5/3/2017	87	83.2	70	456	10	55.2
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	5/5/1981	5/3/2017	87	5	5	10	1	1
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	5/5/1981	5/3/2017	88	211	201	425	132	46.23
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/27/1983	5/3/2017	83	1.2	2	5.6	0	1.1
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	5/5/1981	5/3/2017	88	92.7	69.8	590	8	90
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	5/5/1981	5/3/2017	75	10	10	20	10	2
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	5/5/1981	5/3/2017	88	1767	1714	3810	1070	373.1
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	5/5/1981	5/3/2017	87	10	10	30	2	4
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	5/5/1981	5/7/2019	95	0.29	0.3	1.5	0.02	0.15
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	5/5/1981	5/3/2017	88	969	916	2060	590	217
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	5/5/1981	5/7/2019	95	4.02	4.38	11.3	0.02	2.82
19	3002 - SIIW AHR Wells Long	Iron	T	MG/L	5/5/1981	2/16/1983	5	38.7	36.5	73	22	20.4
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	5/5/1981	5/3/2017	88	30	30	80	20	10
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	5/5/1981	5/3/2017	88	107	102	243	63	25.4
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	5/5/1981	5/7/2019	95	2.1	2.2	3.72	0.07	0.721
22	3002 - SIIW AHR Wells Long	Manganese	T	MG/L	2/16/1983	2/16/1983	1	2.08	2.08	2.08	2.08	0
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	5/5/1981	5/3/2017	88	0.2	0.2	1	0.02	0.2
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	5/5/1981	5/3/2017	75	10	10	20	8	5
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	5/5/1981	5/7/2018	93	0.146	0.02	1.75	0.01	0.346
26	3002 - SIIW AHR Wells Long	Nitrate as NO <sub>3</sub>	N	MG/L	6/27/1983	5/7/2019	13	0.06	0.01	0.3	0	0.09
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	8/5/1987	5/7/2018	79	0.01	0.01	0.06	0.01	0.008
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	5/5/1981	5/3/2017	88	7.6	7.6	8.3	6.1	0.39
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	5/5/1981	5/3/2017	88	4.5	4.5	7.5	3	0.58
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	5/5/1981	5/7/2019	95	1.2	1	10	0.1	1.2

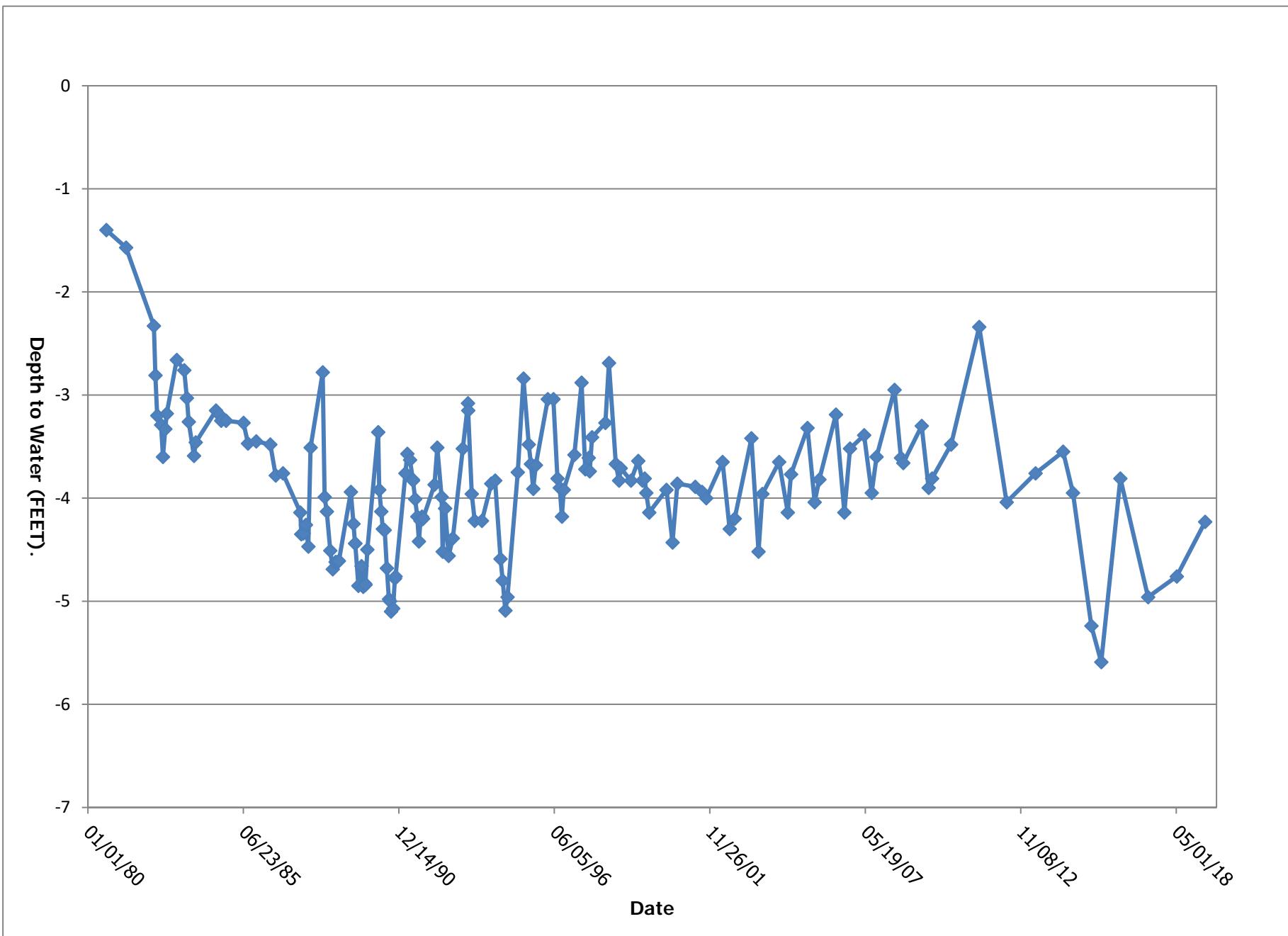
Period of Record Monitoring Summary

WHAL7-2

Report 1: Page 1 of 5

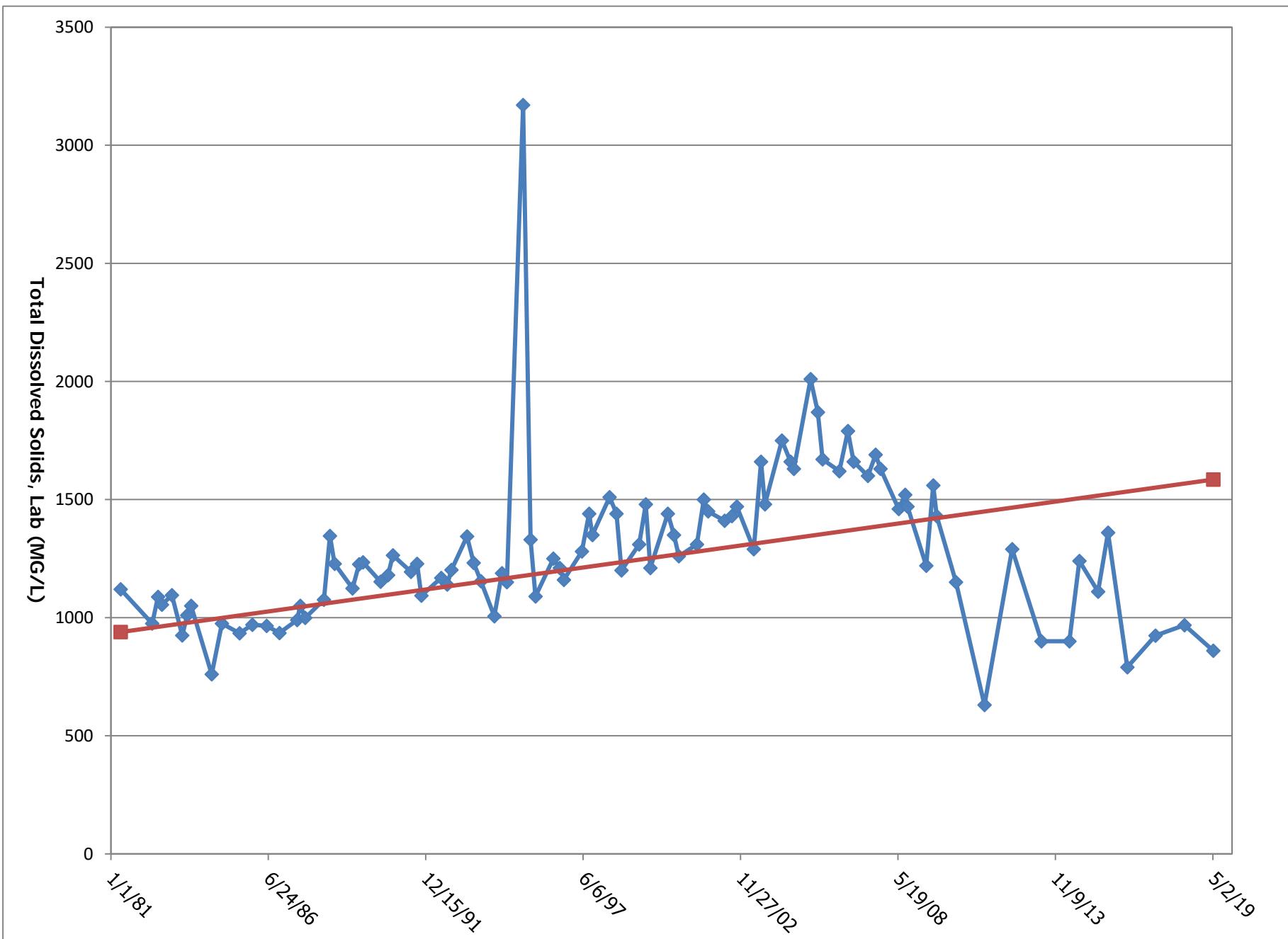
loc_report_order Location Code Location Name					2 WHAL7-2							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	5/5/1981	5/3/2017	88	67.3	66.5	129	49	9.44
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	6/27/1983	5/3/2017	83	0.96	0.95	1.4	0.8	0.0876
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	5/5/1981	5/7/2019	95	422	410	1100	140	126
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	6/25/1987	5/3/2017	74	0.0735	0.02	1.41	0.01	0.18
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	5/5/1981	5/3/2017	88	0.02	0.01	0.3	0.01	0.03
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	6/27/1983	5/3/2017	82	0.911	0.9	6.3	-4.37	2.15
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	5/5/1981	5/7/2019	95	1281	1228	3170	630	326.9
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	6/27/1983	5/3/2017	83	1256.87	1200	2840	750	278.676

loc_report_order	2				
sys_loc_code	WHAL7-2				
Date	5/7/2019				
Depth to Water (FT)	4.23				
report_order	Parameter	Fraction	Units	Detection	Result
1	Specific Conductivity	N	UMHOS/CM	Y	1100
2	pH, Field	N	S.U.	Y	7.43
3	Temperature, Field	N	DEG-C	Y	9.9
4	Fluoride	N	MG/L	Y	0.3
5	Iron	D	MG/L	N	0.08
6	Manganese	D	MG/L	Y	0.07
9	Selenium	D	UG/L	N	5
10	Sulfates	N	MG/L	Y	190
11	Total Dissolved Solid	N	MG/L	Y	860



Period of Record Depth to Water Hydrograph

WHAL7-2



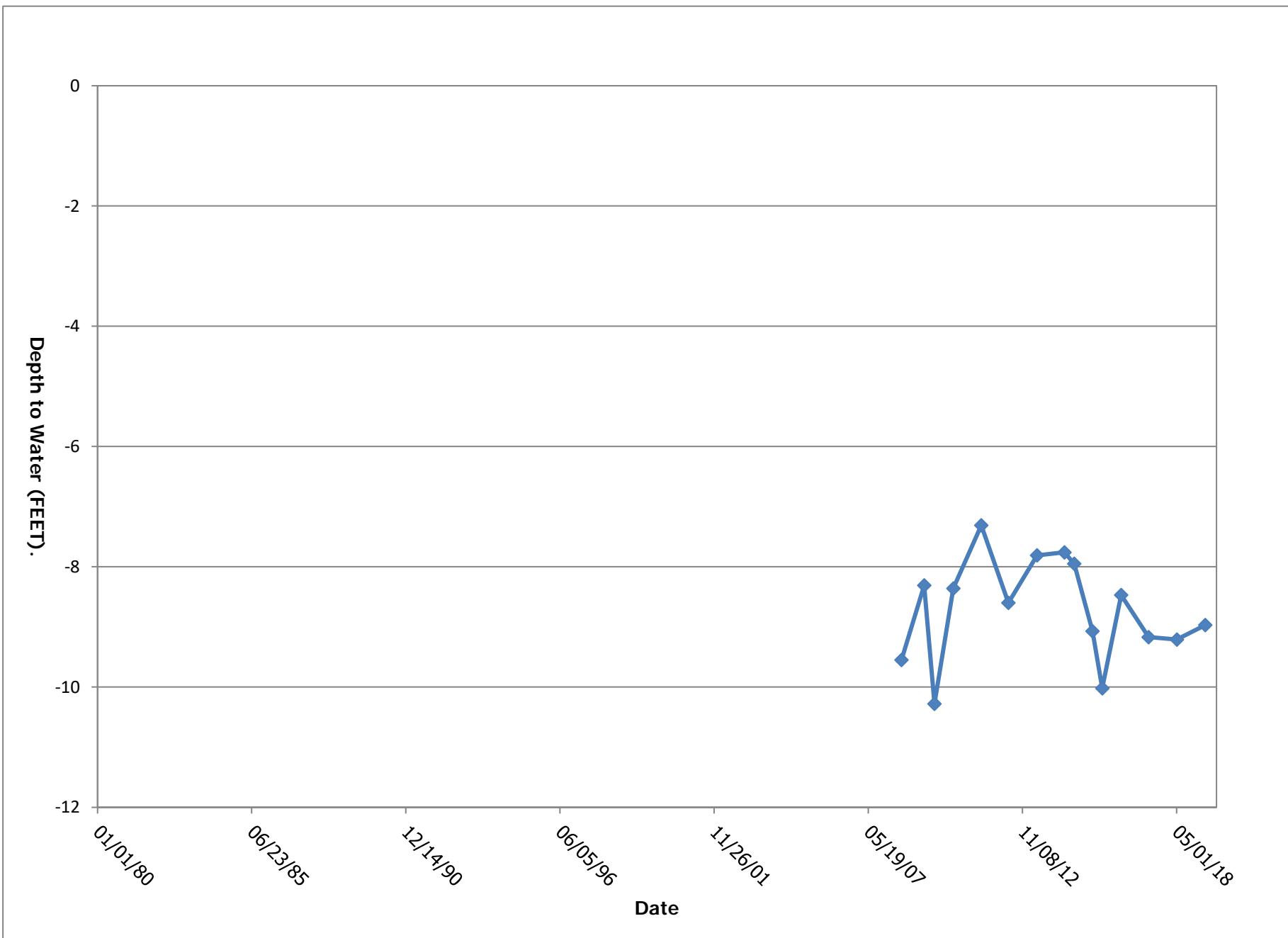
Period of Record TDS Trend Plot

WHAL7-2

loc_report_order Location Code Location Name					1 DCAL-02							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	7/22/2008	5/7/2019	15	2060	2080	2200	1850	115
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	7/22/2008	5/7/2019	15	7.5	7.51	7.97	7.08	0.204
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	7/22/2008	5/4/2018	14	10.7	10.6	12.3	10	0.635
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/7/2019	5/7/2019	1	11.4	11.4	11.4	11.4	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	7/22/2008	5/2/2017	13	500	501	540	438	29.3
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	7/22/2008	5/2/2017	13	0.03	0.03	0.03	0.03	1E-17
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	7/22/2008	5/2/2017	13	6.2	6.1	7	5.2	0.46
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	7/22/2008	5/2/2017	13	606	602	659	534	38.6
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	7/22/2008	5/2/2017	13	120	120	140	110	7.3
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	7/22/2008	5/2/2017	13	5	5	5	5	0
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	7/22/2008	5/2/2017	13	186	185	195	180	4.07
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	7/22/2008	5/2/2017	13	4	2	30	2	8
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	7/22/2008	5/2/2017	13	26.2	26	34.8	20	4.35
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	7/22/2008	5/2/2017	13	10	10	10	10	0
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	7/22/2008	5/2/2017	13	1960	1970	2080	1770	105
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	7/22/2008	5/2/2017	13	10	10	10	10	0
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	7/22/2008	5/7/2019	15	0.29	0.3	0.4	0.2	0.06
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	7/22/2008	5/2/2017	13	932	929	965	896	21.4
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	7/22/2008	5/7/2019	15	8.63	9.87	11	0.14	3.5
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	7/22/2008	5/2/2017	13	40	40	40	30	5
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	7/22/2008	5/2/2017	13	114	113	120	106	4.01
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	7/22/2008	5/7/2019	15	1.49	1.48	1.65	1.3	0.107
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	7/22/2008	5/2/2017	13	0.2	0.2	0.2	0.2	0
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	7/22/2008	5/2/2017	13	9	10	10	8	1
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	7/22/2008	5/7/2019	15	0.04	0.02	0.2	0.02	0.05
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	7/22/2008	5/7/2019	15	0.02	0.01	0.1	0.01	0.02
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	7/22/2008	5/2/2017	13	8.1	8.1	8.3	8	0.082
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	7/22/2008	5/2/2017	13	5.1	5.2	5.4	4.7	0.2
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	7/22/2008	5/7/2019	15	1	1	5	0.1	1
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	7/22/2008	5/2/2017	13	150	152	158	140	5.45
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	7/22/2008	5/2/2017	13	2.18	2.2	2.3	1.99	0.0905
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	7/22/2008	5/7/2019	15	710	690	840	570	70

loc_report_order Location Code Location Name					1 DCAL-02							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	7/22/2008	5/2/2017	13	0.042	0.02	0.13	0.02	0.04
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	7/22/2008	5/2/2017	13	0.02	0.01	0.2	0.01	0.05
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	7/22/2008	5/2/2017	13	0.38	1.9	7.1	-5.5	3.3
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	7/22/2008	5/7/2019	15	1580	1580	1660	1490	46.9
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	7/22/2008	5/2/2017	13	1520	1490	1660	1340	86.4

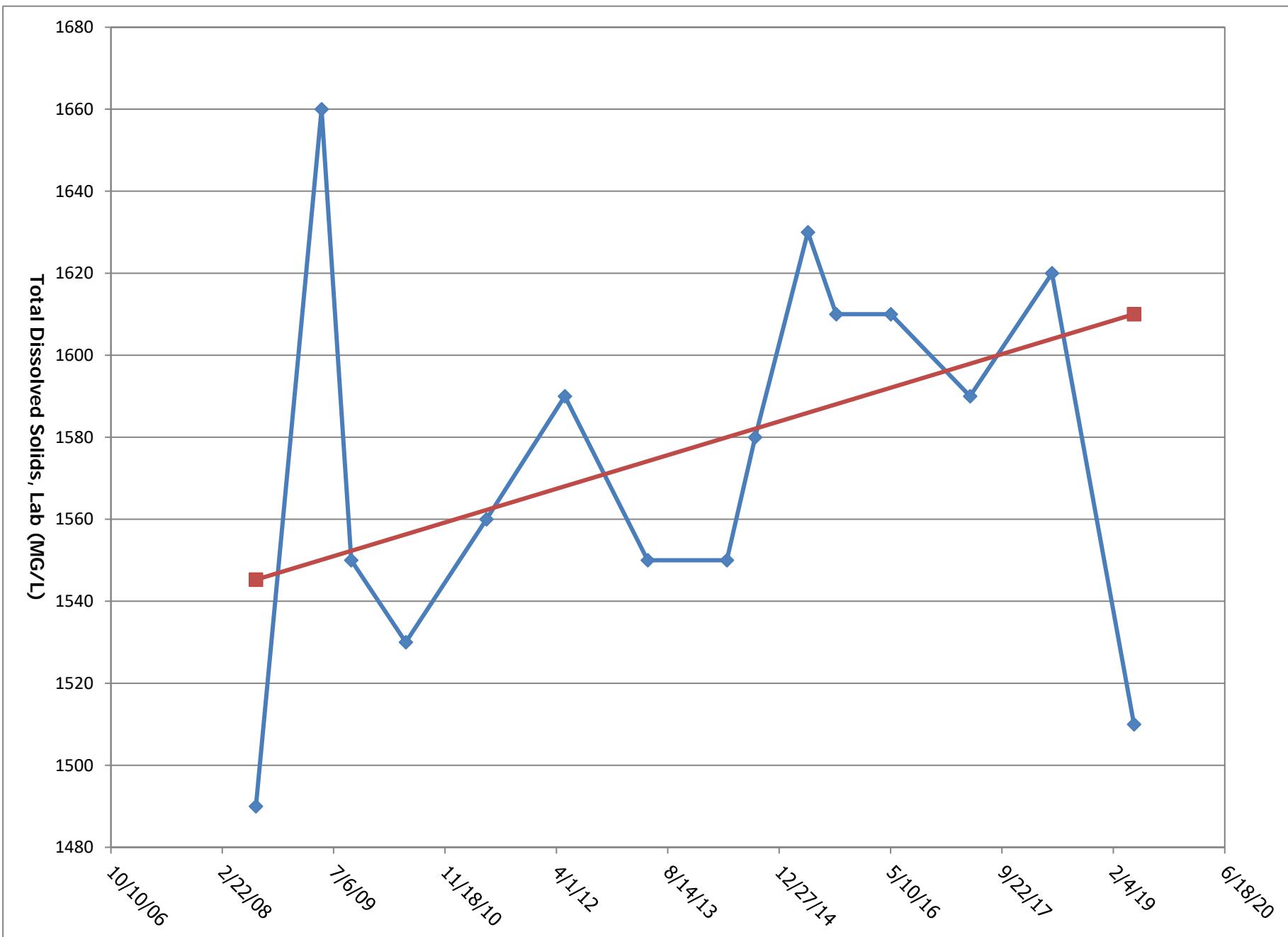
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			sys_loc_code	DCAL-02
			Date	5/7/2019
			Depth to Water (FT)	8.97
report_order	Parameter	Fraction	Units	Detection Result
1	Specific Conductivity	N	UMHOS/CM	Y 1850
2	pH, Field	N	S.U.	Y 7.36
3	Temperature, Field	N	DEG-C	Y 11.4
4	Fluoride	N	MG/L	Y 0.3
5	Iron	D	MG/L	Y 0.3
6	Manganese	D	MG/L	Y 1.32
7	Nitrate Nitrogen	N	MG/L	N 0.1
8	Nitrite Nitrogen	N	MG/L	N 0.05
9	Selenium	D	UG/L	N 5
10	Sulfates	N	MG/L	Y 680
11	Total Dissolved Solid	N	MG/L	Y 1510



Period of Record Depth to Water Hydrograph

DCAL-02

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Period of Record TDS Trend Plot

DCAL-02

loc_report_order Location Code Location Name					3 WOV14							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	6/21/1989	5/7/2019	53	3449	3440	4530	1480	689.4
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	6/21/1989	5/7/2019	52	6.74	6.7	7.37	6.1	0.262
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	6/21/1989	5/7/2018	52	10.8	10.5	14.4	8	1.58
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/7/2019	5/7/2019	1	10.1	10.1	10.1	10.1	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	6/21/1989	5/2/2017	46	460	502	692	204	137
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	6/21/1989	5/2/2017	46	0.12	0.06	2.4	0.03	0.35
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	6/21/1989	5/2/2017	46	1	1	5	0.4	1
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/21/1989	5/2/2017	46	586.6	616.5	1598	249	224.7
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	6/21/1989	5/2/2017	46	638	585	1100	290	245
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	6/21/1989	5/2/2017	46	10	6	30	3	8.4
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	6/21/1989	5/2/2017	46	456	464	566	156	86.3
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/21/1989	5/2/2017	46	1	2	2	0	0.9
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	6/21/1989	5/2/2017	46	26.1	15	510	8	73
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	6/21/1989	5/2/2017	46	23	20	120	10	23
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	6/21/1989	5/2/2017	46	3473	3655	4730	1496	672.7
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	6/21/1989	5/2/2017	46	20	20	100	10	20
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	6/21/1989	5/7/2019	53	0.61	0.5	1.4	0.09	0.26
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	6/21/1989	5/2/2017	46	2539	2580	3300	900	509.2
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	6/21/1989	5/7/2019	53	12.1	1.9	480	0.01	65.7
19	3002 - SIIW AHR Wells Long	Iron	T	MG/L	8/17/1989	8/17/1989	1	1180	1180	1180	1180	0
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	6/21/1989	5/2/2017	46	80	70	200	20	60
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	6/21/1989	5/2/2017	46	341	349	487	124	74.2
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	6/21/1989	5/7/2019	53	1.15	1.31	1.89	0.03	0.463
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	6/21/1989	5/2/2017	46	0.2	0.2	0.2	0.1	0.04
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	6/21/1989	5/2/2017	46	41	35	120	10	26
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	6/21/1989	5/7/2018	52	0.942	0.135	7.9	0.02	1.83
26	3002 - SIIW AHR Wells Long	Nitrate as NO <sub>3</sub>	N	MG/L	5/7/2019	5/7/2019	1	0.05	0.05	0.05	0.05	0
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	6/21/1989	5/7/2018	52	0.05	0.01	1.2	0.01	0.17
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	6/21/1989	5/2/2017	46	7.2	7.1	7.9	6.4	0.4
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	6/21/1989	5/2/2017	46	7.26	7	11.4	5	1.33
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	6/21/1989	5/7/2019	53	1.8	1	23	0.1	3.3
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	6/21/1989	5/2/2017	46	79.6	72	213	35.1	31.5

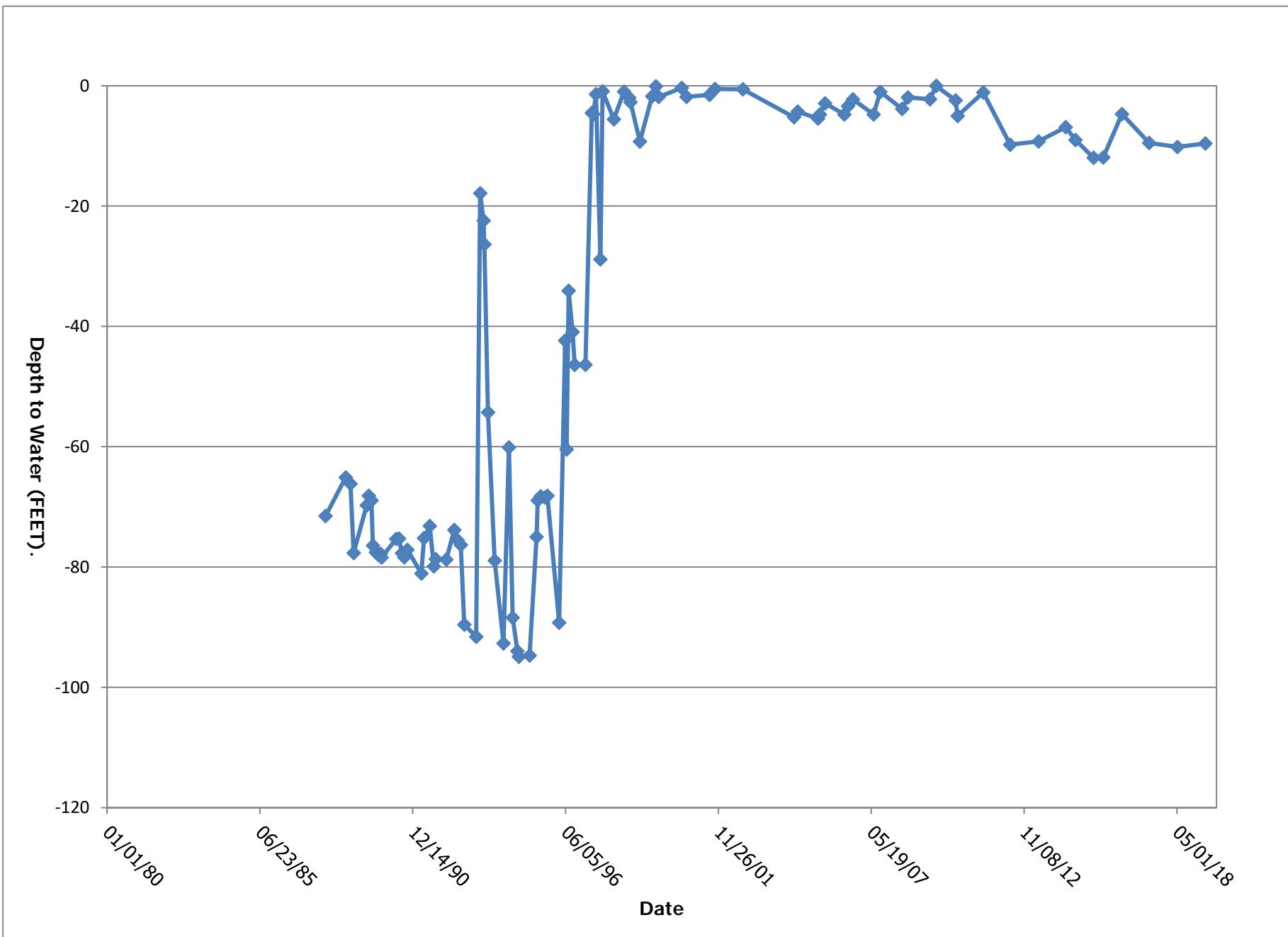
Period of Record Monitoring Summary

WOV14

Report 3: Page 1 of 5

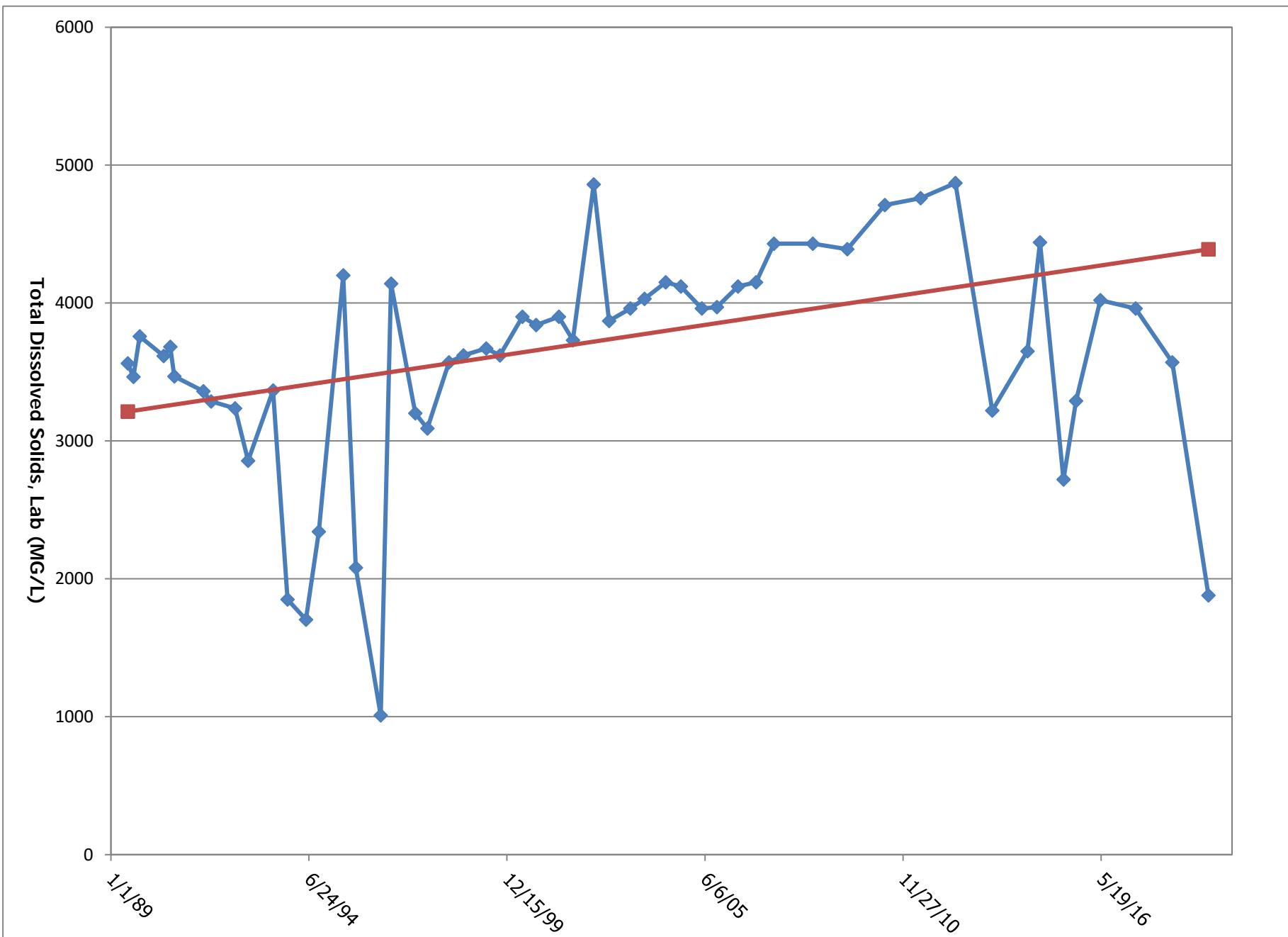
loc_report_order Location Code Location Name					3 WOV14							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	6/21/1989	5/2/2017	46	0.698	0.595	1.74	0.45	0.261
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	6/21/1989	5/7/2019	53	2208	2340	3200	260	561.7
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	6/21/1989	5/2/2017	46	0.725	0.055	13.8	0.01	2.21
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	6/21/1989	5/2/2017	46	0.05	0.04	0.3	0.01	0.052
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	6/21/1989	5/2/2017	44	-0.551	-0.785	18.5	-10.5	4.23
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	6/21/1989	5/7/2019	53	3597	3682	4870	1010	810.1
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	6/21/1989	5/2/2017	45	3372.31	3444	4650	1010	724.41

loc_report_order	3				
sys_loc_code	WOV14				
Date	5/7/2019				
Depth to Water (FT)	9.6				
report_order	Parameter	Fraction	Units	Detection	Result
1	Specific Conductivity	N	UMHOS/CM	Y	1910
2	pH, Field	N	S.U.	Y	6.9
3	Temperature, Field	N	DEG-C	Y	10.1
4	Fluoride	N	MG/L	Y	0.6
5	Iron	D	MG/L	N	0.08
6	Manganese	D	MG/L	Y	0.17
9	Selenium	D	UG/L	Y	1.3
10	Sulfates	N	MG/L	Y	1040
11	Total Dissolved Solid	N	MG/L	Y	1880



Period of Record Depth to Water Hydrograph

WOV14



Period of Record TDS Trend Plot

WOV14

loc_report_order Location Code Location Name					5 WOV17							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	6/29/1988	5/7/2019	55	7026	6910	13280	4500	1600
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	6/29/1988	5/7/2019	55	6.91	6.91	7.47	6.38	0.218
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	6/29/1988	5/7/2018	54	10.8	10.6	14.2	9.5	0.948
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/7/2019	5/7/2019	1	11.1	11.1	11.1	11.1	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	6/29/1988	9/9/2015	47	759.48	759	920.33	564	93.732
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	6/29/1988	9/9/2015	47	0.2	0.2	2	0.03	0.3
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	6/29/1988	9/9/2015	47	3	1	30	0.5	6
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/29/1988	9/9/2015	47	925.55	926	1122.8	688	115.29
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	6/29/1988	9/9/2015	47	340	350	440	230	41
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	6/29/1988	9/9/2015	47	20	20	300	5	40
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	6/29/1988	9/9/2015	47	414.5	437	573	197	83.91
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/29/1988	9/9/2015	47	1.7	2	19	0	2.8
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	6/29/1988	9/9/2015	47	55	55	140	28	16.5
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	6/29/1988	9/9/2015	47	50	50	500	10	70
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	6/29/1988	9/9/2015	47	7334	7310	13100	4140	1466
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	6/29/1988	9/9/2015	47	50	50	500	10	70
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	6/29/1988	9/9/2015	47	0.52	0.4	3.3	0.3	0.44
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	6/29/1988	9/9/2015	47	3370	3380	10300	1255	1436
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	6/29/1988	5/7/2019	55	1.18	1.16	2.55	0.02	0.846
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	6/29/1988	9/9/2015	47	200	200	2000	20	300
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	6/29/1988	9/9/2015	47	568.2	554	2270	186	328.8
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	6/29/1988	5/7/2019	55	0.17	0.17	0.31	0.05	0.061
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	6/29/1988	9/9/2015	47	0.2	0.2	0.2	0.1	0.05
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	6/29/1988	9/9/2015	47	50	50	500	8	70
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	6/29/1988	9/9/2015	47	2.08	0.04	48.6	0.02	8.13
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	6/29/1988	9/9/2015	47	0.01	0.01	0.09	0.01	0.01
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	6/29/1988	9/9/2015	47	7.3	7.2	8.3	6.7	0.44
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	6/29/1988	9/9/2015	47	19.7	20	39	11	5.75
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	6/29/1988	9/9/2015	47	9.05	1	208	0.5	35.3
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	6/29/1988	9/9/2015	47	1043.5	1100	1360	643	189.33
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	6/29/1988	9/9/2015	47	8.3	8.25	13.7	4.07	2.04
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	6/29/1988	9/9/2015	47	4759	4873	11000	2342	1427

Period of Record Monitoring Summary

WOV17

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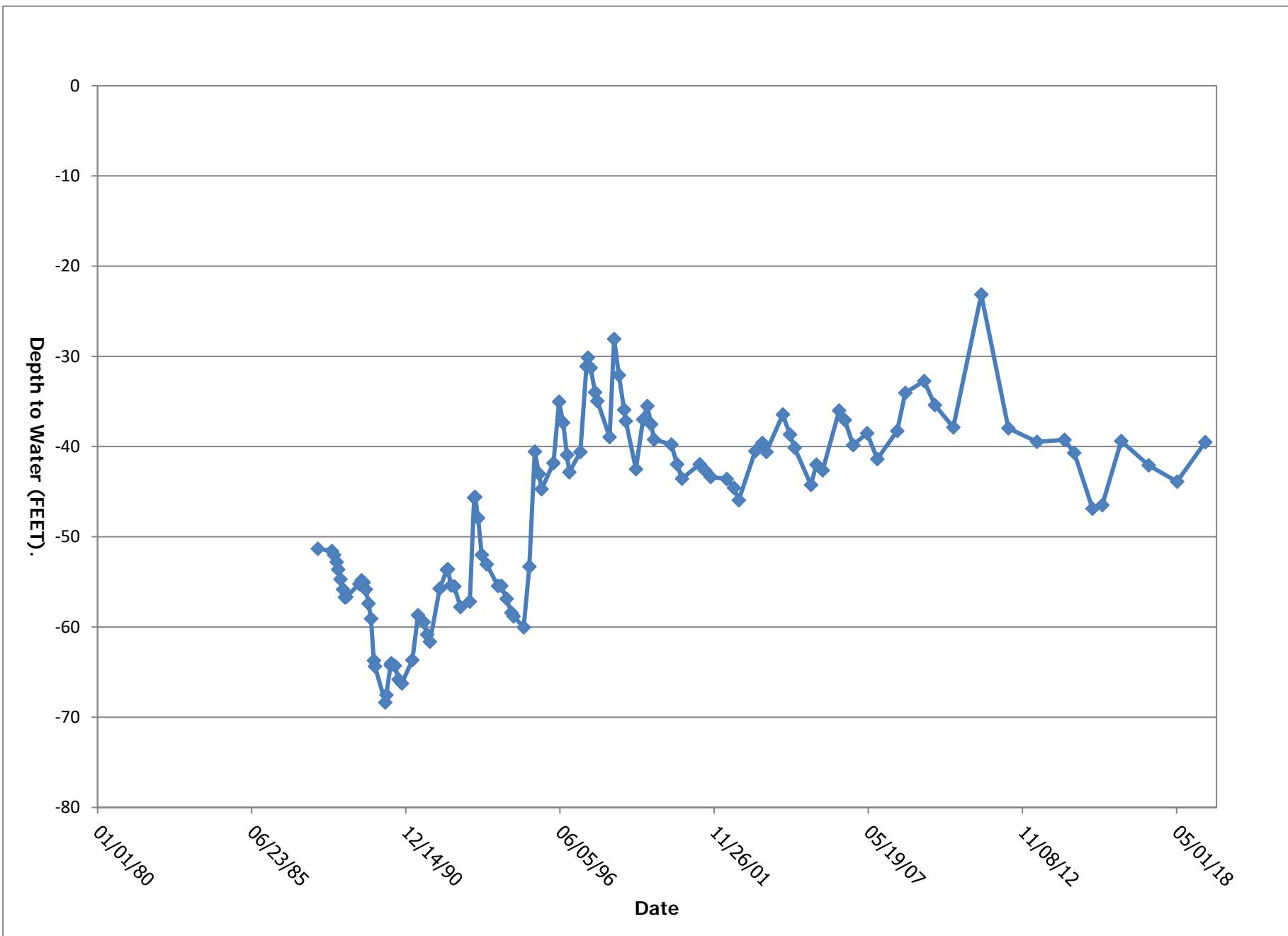
loc_report_order Location Code Location Name					5 WOV17							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	6/29/1988	9/9/2015	47	0.048	0.02	0.73	0.01	0.11
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	6/29/1988	9/9/2015	47	0.14	0.05	3.7	0.01	0.53
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	6/29/1988	9/9/2015	46	-0.875	-1.23	6.2	-4.4	2.65
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	6/29/1988	5/7/2019	55	7702	7880	16700	3766	2151
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	6/29/1988	9/9/2015	47	7318.12	7580	15800	3879	1930.28

Period of Record Monitoring Summary

WOV17

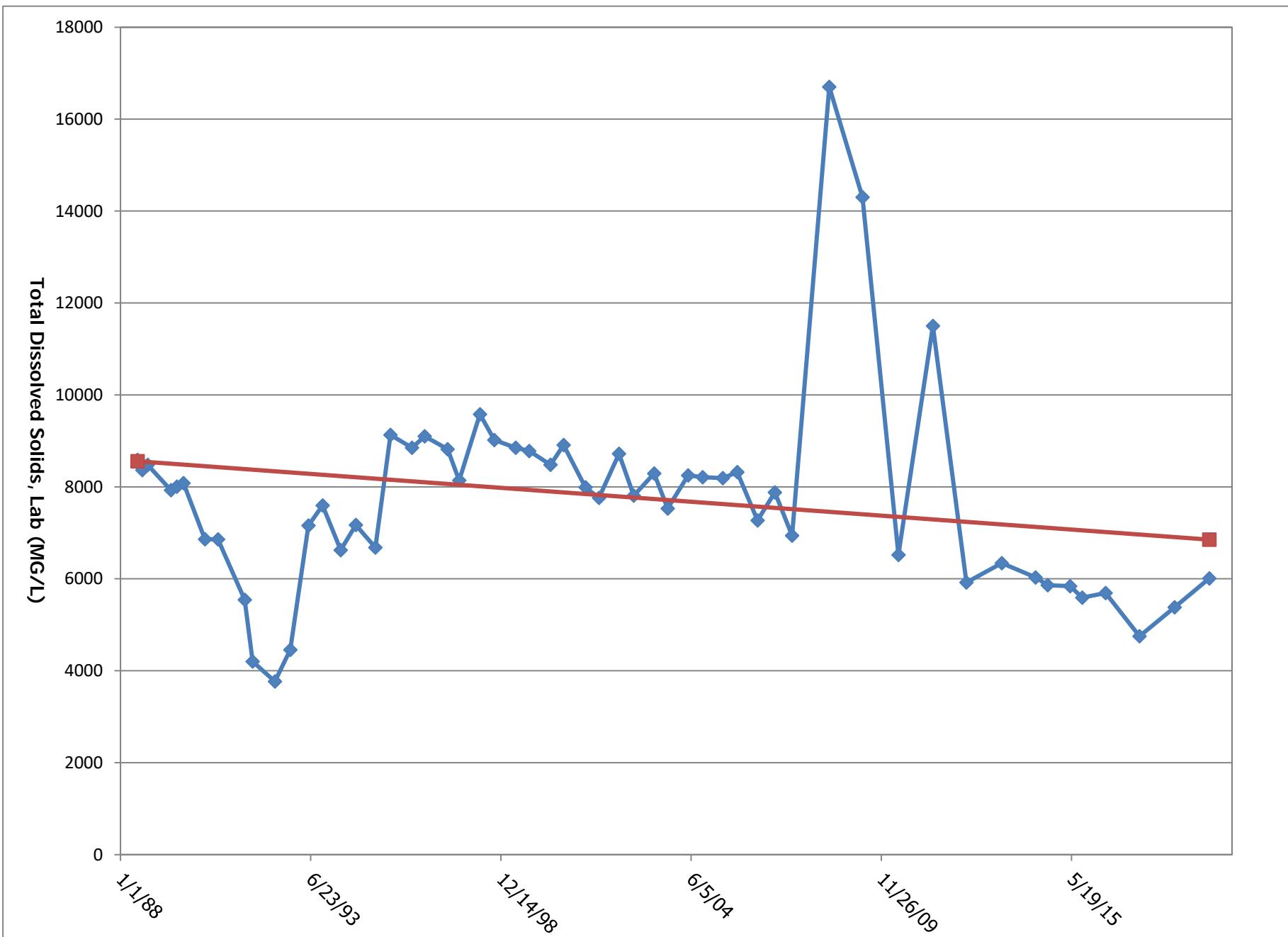
Report 4: Page 2 of 5

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Date	5/7/2019				
Depth to Water (FT)	39.51				
report_order	Parameter	Fraction	Units	Detection	Result
1	Specific Conductivity	N	UMHOS/CM	Y	5620
2	pH, Field	N	S.U.	Y	7.29
3	Temperature, Field	N	DEG-C	Y	11.1
5	Iron	D	MG/L	Y	0.24
6	Manganese	D	MG/L	Y	0.09
11	Total Dissolved Solid	N	MG/L	Y	6010



Period of Record Depth to Water Hydrograph

WOV17



Period of Record TDS Trend Plot

WOV17

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		loc_report_order			8 WOV25							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	10/8/2004	5/16/2019	20	2380	2440	3240	1670	457
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	10/8/2004	5/16/2019	20	7.06	7.03	7.57	6.7	0.233
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	10/8/2004	5/7/2018	19	9.17	9.2	10.2	8.5	0.42
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/16/2019	5/16/2019	1	9.6	9.6	9.6	9.6	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	10/8/2004	5/3/2017	13	438	452	472	377	30.8
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	10/8/2004	5/3/2017	13	0.04	0.03	0.1	0.03	0.02
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	10/8/2004	5/3/2017	13	0.5	0.5	1	0.2	0.3
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	534	552	575	460	37.4
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	10/8/2004	5/3/2017	13	250	260	350	70	81
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	10/8/2004	5/3/2017	13	6	5	10	5	2
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	10/8/2004	5/3/2017	13	300	293	418	195	57.5
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	2	2	2	2	0
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	10/8/2004	5/3/2017	13	5.3	5.2	7	4	0.84
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	10/8/2004	5/3/2017	13	10	10	20	10	4
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	10/8/2004	5/3/2017	13	2320	2210	2990	1580	399
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	10/8/2004	5/3/2017	13	10	10	20	10	4
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	10/8/2004	5/16/2019	20	0.18	0.2	0.43	0.1	0.075
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	10/8/2004	5/3/2017	13	1540	1530	2140	977	301
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	10/8/2004	5/16/2019	20	0.717	0.695	1.16	0.04	0.297
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	10/8/2004	5/3/2017	13	40	40	80	30	20
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	10/8/2004	5/3/2017	13	193	193	267	119	38.8
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	10/8/2004	5/16/2019	20	0.097	0.085	0.17	0.05	0.041
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	10/8/2004	5/3/2017	13	0.2	0.2	0.2	0.2	0
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	10/8/2004	5/3/2017	13	10	10	20	8	4
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.04	0.02	0.2	0.02	0.04
26	3002 - SIIW AHR Wells Long	Nitrate as NO <sub>3</sub>	N	MG/L	5/16/2019	5/16/2019	1	0.05	0.05	0.05	0.05	0
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.01	0.01	0.1	0.01	0.02
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	10/8/2004	5/3/2017	13	7.8	7.7	8.2	7.2	0.29
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	10/8/2004	5/3/2017	13	5.1	5.2	6.6	3.1	1
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	10/8/2004	5/16/2019	20	0.9	1	5	0.1	1
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	10/8/2004	5/3/2017	13	59.1	59.7	81.2	24.3	19.3
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	10/8/2004	5/3/2017	13	0.65	0.68	0.86	0.34	0.18

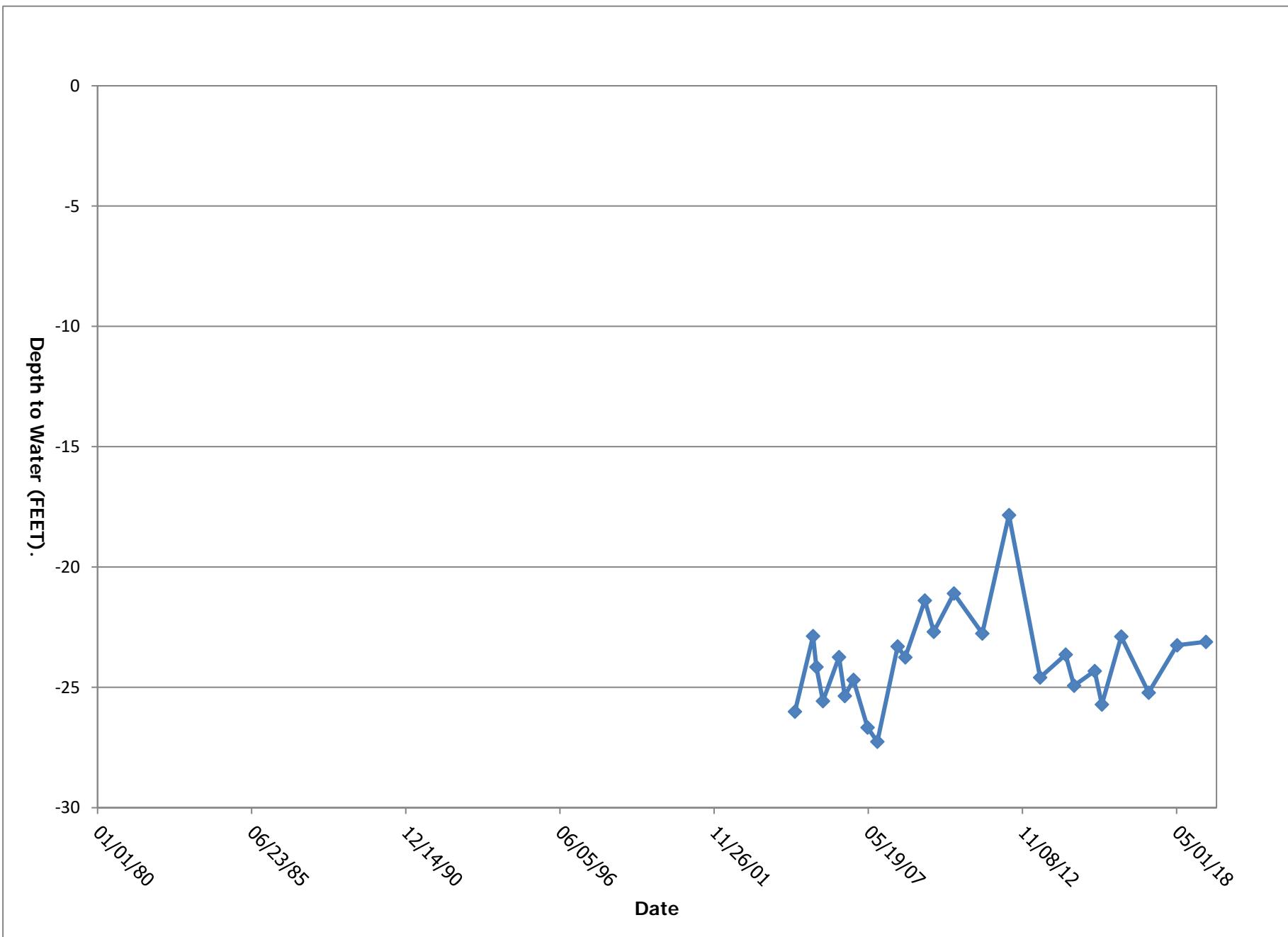
Period of Record Monitoring Summary

WOV25

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loc_report_order Location Code Location Name					8 WOV25							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	10/8/2004	5/16/2019	20	1140	1120	1730	600	334
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	10/8/2004	5/3/2017	13	0.2	0.05	2	0.02	0.54
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	10/8/2004	5/3/2017	13	0.03	0.02	0.06	0.01	0.02
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	10/8/2004	5/3/2017	13	-0.5	0	1.5	-6.9	2.2
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	10/8/2004	5/16/2019	20	2030	2010	2940	1250	476
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	10/8/2004	5/3/2017	13	2010	2030	2770	1210	408

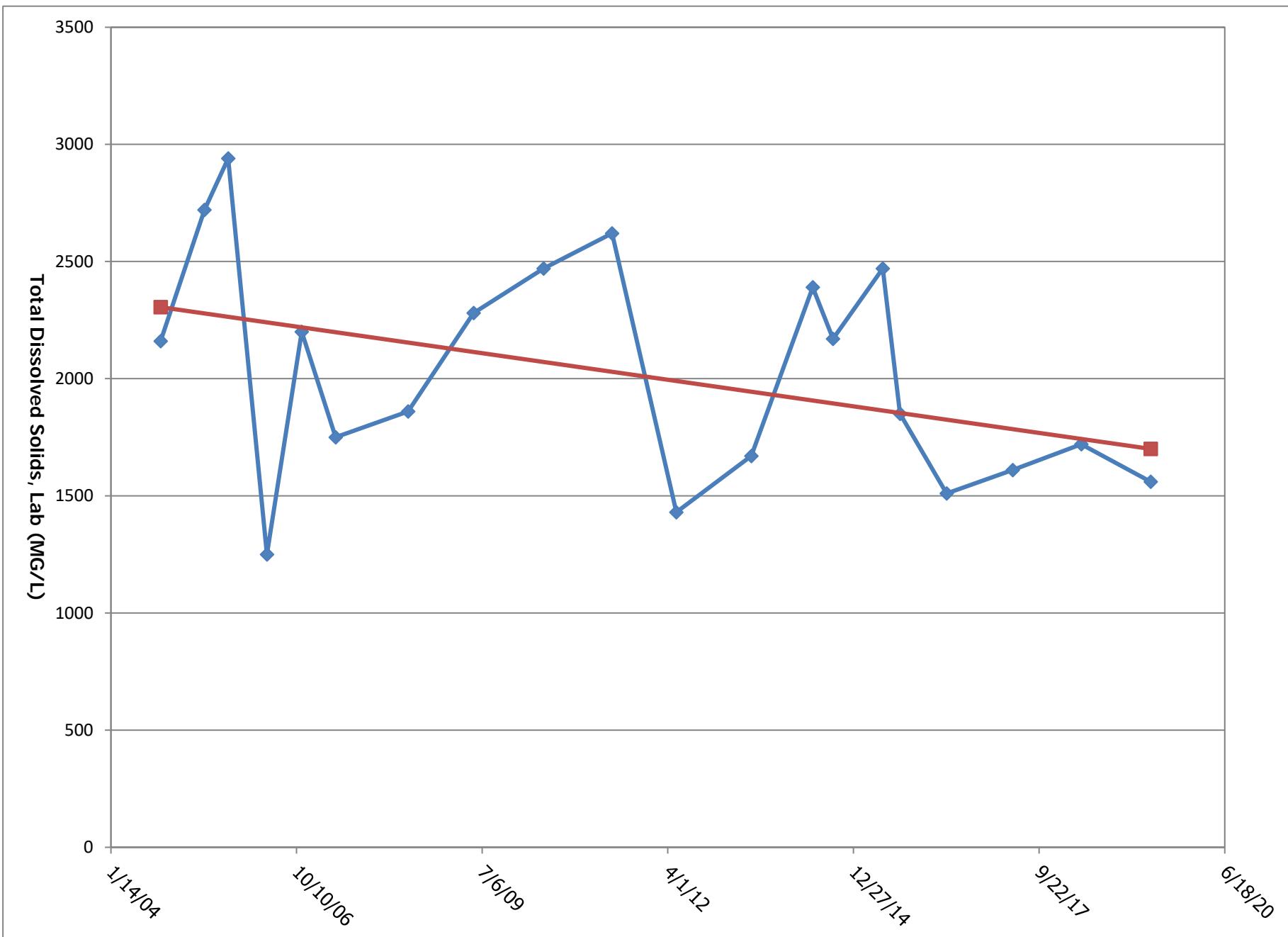
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sys_loc_code	WOV25				
Date	5/16/2019				
Depth to Water (FT)	23.11				
report_order	Parameter	Fraction	Units	Detection	Result
1	Specific Conductivity	N	UMHOS/CM	Y	1670
2	pH, Field	N	S.U.	Y	7.34
3	Temperature, Field	N	DEG-C	Y	9.6
4	Fluoride	N	MG/L	Y	0.1
5	Iron	D	MG/L	Y	0.04
6	Manganese	D	MG/L	Y	0.07
9	Selenium	D	UG/L	N	5
10	Sulfates	N	MG/L	Y	720
11	Total Dissolved Solid	N	MG/L	Y	1560



Period of Record Depth to Water Hydrograph

WOV25

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Period of Record TDS Trend Plot

WOV25

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loc_report_order Location Code Location Name					4 WW14							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	11/20/1993	5/7/2019	42	3660	4020	5070	1300	1190
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	11/20/1993	5/7/2019	42	6.74	6.65	7.4	6.35	0.322
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	6/27/1993	5/7/2018	42	10.1	10.2	12.2	7.6	0.93
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/7/2019	5/7/2019	1	10	10	10	10	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	6/27/1993	5/2/2017	36	512	485	704	335	110
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	6/27/1993	5/2/2017	36	0.1	0.06	0.2	0.03	0.08
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	6/27/1993	5/2/2017	36	1.7	1	5	1	1.2
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/27/1993	5/2/2017	36	624	592	859	408	133
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	6/27/1993	5/2/2017	36	865	945	1100	510	201
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	6/27/1993	5/2/2017	36	10	8	30	3	10
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	6/27/1993	5/2/2017	36	490	602	685	131	209
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/27/1993	5/2/2017	36	2.04	2	11.6	0	1.76
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	6/27/1993	5/2/2017	36	16.6	18	24	10	3.8
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	6/27/1993	5/2/2017	36	30	20	50	10	20
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	6/27/1993	5/2/2017	36	3343	3945	4730	1090	1302
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	6/27/1993	5/2/2017	36	30	20	50	10	20
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	6/27/1993	5/7/2019	43	0.945	1.1	1.4	0.3	0.332
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	6/27/1993	5/2/2017	36	2582	3165	3770	701	1088
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	6/27/1993	5/7/2019	43	14.6	19.4	28.3	0.01	9.65
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	6/27/1993	5/2/2017	36	100	80	200	20	80
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	6/27/1993	5/2/2017	36	330	398	518	91	139
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	6/27/1993	5/7/2019	43	1.02	1.2	1.82	0.04	0.554
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	6/27/1993	5/2/2017	36	0.2	0.2	0.2	0.1	0.02
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	6/27/1993	5/2/2017	36	30	20	50	8	20
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	6/27/1993	5/7/2018	42	0.119	0.02	1.22	0.02	0.228
26	3002 - SIIW AHR Wells Long	Nitrate as NO <sub>3</sub>	N	MG/L	5/7/2019	5/7/2019	1	0.05	0.05	0.05	0.05	0
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	6/27/1993	5/7/2018	42	0.01	0.01	0.03	0.01	0.005
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	6/27/1993	5/2/2017	36	7.2	7.3	8.4	6.4	0.42
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	6/27/1993	5/2/2017	36	8.1	8.9	12.6	4.7	1.95
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	6/27/1993	5/7/2019	43	1.9	1	20	0.1	3.7
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	6/27/1993	5/2/2017	36	76.9	83.9	173	25.9	29
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	6/27/1993	5/2/2017	36	0.68	0.65	1.73	0.39	0.24

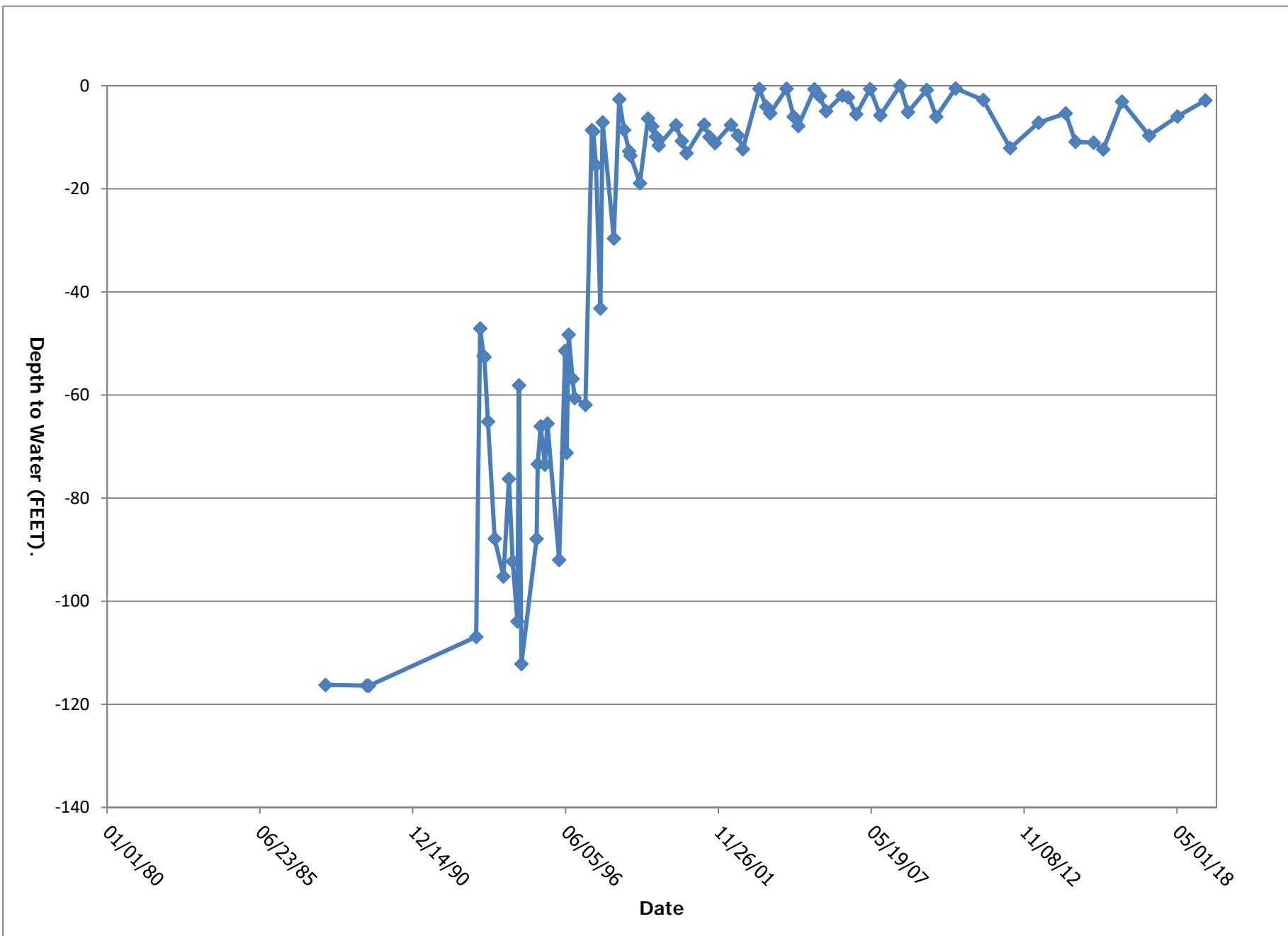
Period of Record Monitoring Summary

WW14

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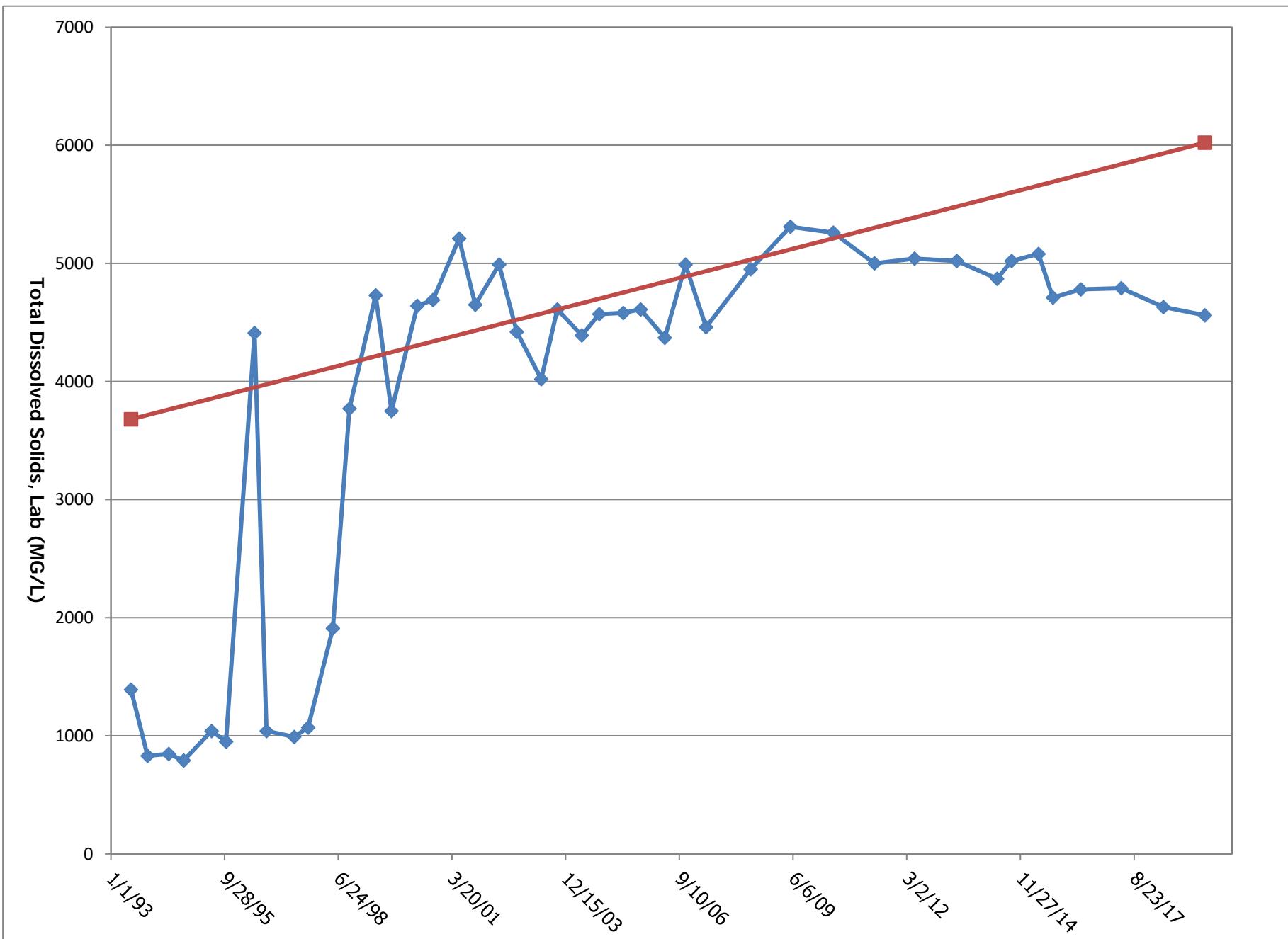
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report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	6/27/1993	5/7/2019	43	2340	2900	3560	76	1160
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	6/27/1993	5/2/2017	36	0.24	0.05	2.6	0.02	0.54
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	6/27/1993	5/2/2017	36	0.039	0.03	0.25	0.01	0.041
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	6/27/1993	5/2/2017	35	-0.213	0	5	-4.2	2.46
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	6/27/1993	5/7/2019	43	3850	4610	5310	790	1580
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	6/27/1993	5/2/2017	36	3441.6	4265	5080	750	1540.8

loc_report_order	4				
sys_loc_code	WW14				
Date	5/7/2019				
Depth to Water (FT)	2.85				
report_order	Parameter	Fraction	Units	Detection	Result
1	Specific Conductivity	N	UMHOS/CM	Y	3680
2	pH, Field	N	S.U.	Y	6.98
3	Temperature, Field	N	DEG-C	Y	10
4	Fluoride	N	MG/L	Y	1.2
5	Iron	D	MG/L	Y	2.6
6	Manganese	D	MG/L	Y	1.1
9	Selenium	D	UG/L	N	5
10	Sulfates	N	MG/L	Y	2900
11	Total Dissolved Solid	N	MG/L	Y	4560



Period of Record Depth to Water Hydrograph

WW14



Period of Record TDS Trend Plot

WW14

loc_report_order Location Code Location Name					6 WW17							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	6/29/1988	5/7/2019	55	1090	1100	1720	780	123
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	6/29/1988	5/7/2018	54	7.9	7.89	8.55	7.32	0.233
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	6/29/1988	5/7/2018	54	11.4	11.4	14.8	9.6	1.2
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/7/2019	5/7/2019	1	10.7	10.7	10.7	10.7	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	6/29/1988	9/9/2015	47	603	617	683	402	51.8
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	6/29/1988	9/9/2015	47	0.044	0.03	0.2	0.03	0.029
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	6/29/1988	9/9/2015	47	0.9	1	5	0.1	0.7
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/29/1988	9/9/2015	47	725	743	833	456	68.4
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	6/29/1988	9/9/2015	47	660	680	750	260	73
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	6/29/1988	9/9/2015	47	5	5	30	3	4
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	6/29/1988	9/9/2015	47	18.8	16.5	54	9	7.83
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/29/1988	9/9/2015	47	6.73	2	33	0	8.6
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	6/29/1988	9/9/2015	47	4.5	3	22	2	3.7
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	6/29/1988	9/9/2015	47	10	10	50	10	8
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	6/29/1988	9/9/2015	47	1230	1080	6880	888	864.2
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	6/29/1988	9/9/2015	47	10	10	50	10	8
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	6/29/1988	9/9/2015	47	1.07	1.04	2.1	0.8	0.182
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	6/29/1988	9/9/2015	47	115	102	406	55	55.1
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	6/29/1988	5/7/2019	55	0.12	0.03	4.1	0.01	0.55
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	6/29/1988	9/9/2015	47	40	40	200	20	40
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	6/29/1988	9/9/2015	47	16.6	15	66	8	8.9
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	6/29/1988	5/7/2019	55	0.027	0.02	0.22	0.01	0.035
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	6/29/1988	9/9/2015	47	0.2	0.2	0.2	0.1	0.04
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	6/29/1988	9/9/2015	47	20	10	200	8	30
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	6/29/1988	9/9/2015	47	0.054	0.02	0.4	0.02	0.079
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	6/29/1988	9/9/2015	47	0.01	0.01	0.05	0.01	0.006
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	6/29/1988	9/9/2015	47	8	8.1	8.7	5.3	0.5
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	6/29/1988	9/9/2015	47	2.8	2.6	7	2	0.77
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	6/29/1988	9/9/2015	47	1	1	5	0.1	0.7
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	6/29/1988	9/9/2015	47	250.8	247.3	414	211	30.7
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	6/29/1988	9/9/2015	47	10.72	10.9	13.85	7.6	1.541
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	6/29/1988	9/9/2015	47	78.4	33	729	2	138

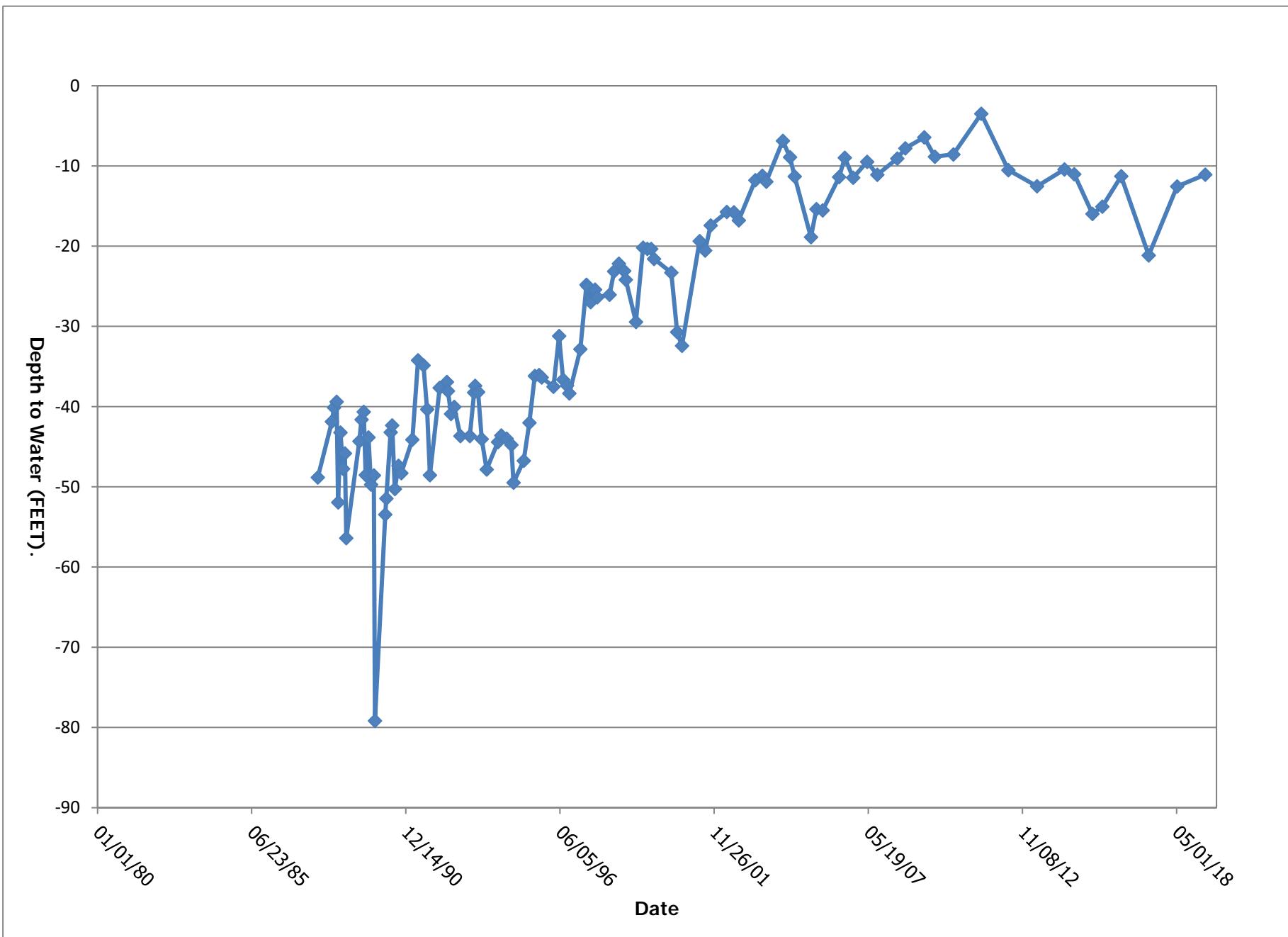
Period of Record Monitoring Summary

WW17

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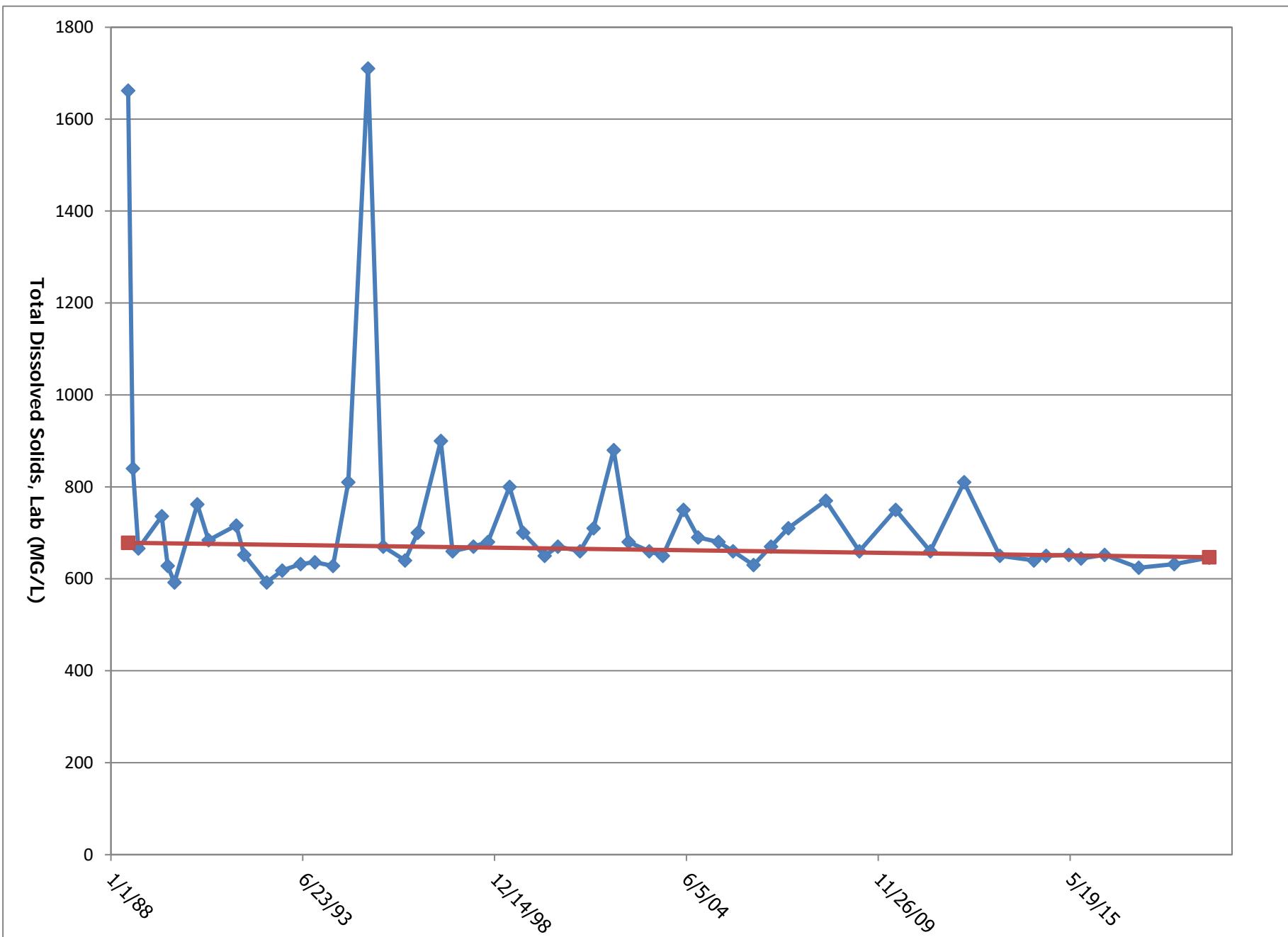
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report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	6/29/1988	9/9/2015	47	0.339	0.13	6.9	0.01	1
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	6/29/1988	9/9/2015	47	0.01	0.01	0.05	0.01	0.009
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	6/29/1988	9/9/2015	46	-1.09	-0.1	9.7	-28.9	5.96
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	6/29/1988	5/7/2019	55	723.2	666	1710	592	200.4
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	6/29/1988	9/9/2015	47	736.35	691	1638	594	175.51

loc_report_order	6				
sys_loc_code	WW17				
Date	5/7/2019				
Depth to Water (FT)	11.08				
report_order	Parameter	Fraction	Units	Detection	Result
1	Specific Conductivity	N	UMHOS/CM	Y	1050
3	Temperature, Field	N	DEG-C	Y	10.7
5	Iron	D	MG/L	Y	0.03
6	Manganese	D	MG/L	N	0.05
11	Total Dissolved Solid	N	MG/L	Y	646



Period of Record Depth to Water Hydrograph

WW17



Period of Record TDS Trend Plot

WW17

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loc_report_order Location Code Location Name					9 WW25							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	10/8/2004	5/16/2019	20	2280	2720	3060	840	835
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	10/8/2004	5/16/2019	20	7.27	7.14	8.28	6.79	0.405
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	10/8/2004	5/7/2018	19	9.19	9	10.2	8.5	0.551
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/16/2019	5/16/2019	1	10.1	10.1	10.1	10.1	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	10/8/2004	5/3/2017	13	442	466	520	184	84.3
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	10/8/2004	5/3/2017	13	0.04	0.03	0.07	0.03	0.02
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	10/8/2004	5/3/2017	13	0.5	0.5	1	0.2	0.2
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	538	568	634	214	105
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	10/8/2004	5/3/2017	13	350	390	420	40	100
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	10/8/2004	5/3/2017	13	7	5	10	5	3
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	10/8/2004	5/3/2017	13	311	373	416	91.7	115
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	2.3	2	5.5	2	0.97
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	10/8/2004	5/3/2017	13	5.2	5.8	6.5	3	1.1
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	10/8/2004	5/3/2017	13	10	10	20	10	4
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	10/8/2004	5/3/2017	13	2210	2560	2970	790	776
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	10/8/2004	5/3/2017	13	10	10	20	10	4
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	10/8/2004	5/16/2019	20	0.351	0.1	1.9	0.08	0.538
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	10/8/2004	5/3/2017	13	1520	1800	2030	450	560
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	10/8/2004	5/16/2019	20	1.65	1.8	3.68	0.02	1.21
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	10/8/2004	5/3/2017	13	40	40	80	30	20
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	10/8/2004	5/3/2017	13	180	211	240	53.6	66.5
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	10/8/2004	5/16/2019	20	0.094	0.11	0.16	0.01	0.044
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	10/8/2004	5/3/2017	13	0.2	0.2	0.3	0.2	0.03
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	10/8/2004	5/3/2017	13	10	10	20	8	5
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.1	0.02	0.49	0.02	0.15
26	3002 - SIIW AHR Wells Long	Nitrate as NO <sub>3</sub>	N	MG/L	5/16/2019	5/16/2019	1	0.05	0.05	0.05	0.05	0
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.01	0.01	0.1	0.01	0.02
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	10/8/2004	5/3/2017	13	7.8	7.8	8.4	7.2	0.34
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	10/8/2004	5/3/2017	13	4	4.4	4.9	1.6	0.99
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	10/8/2004	5/16/2019	20	1.5	1	6.5	0.1	1.7
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	10/8/2004	5/3/2017	13	41.3	40.3	55.3	15.9	11.6
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	10/8/2004	5/3/2017	13	0.47	0.49	0.54	0.32	0.066

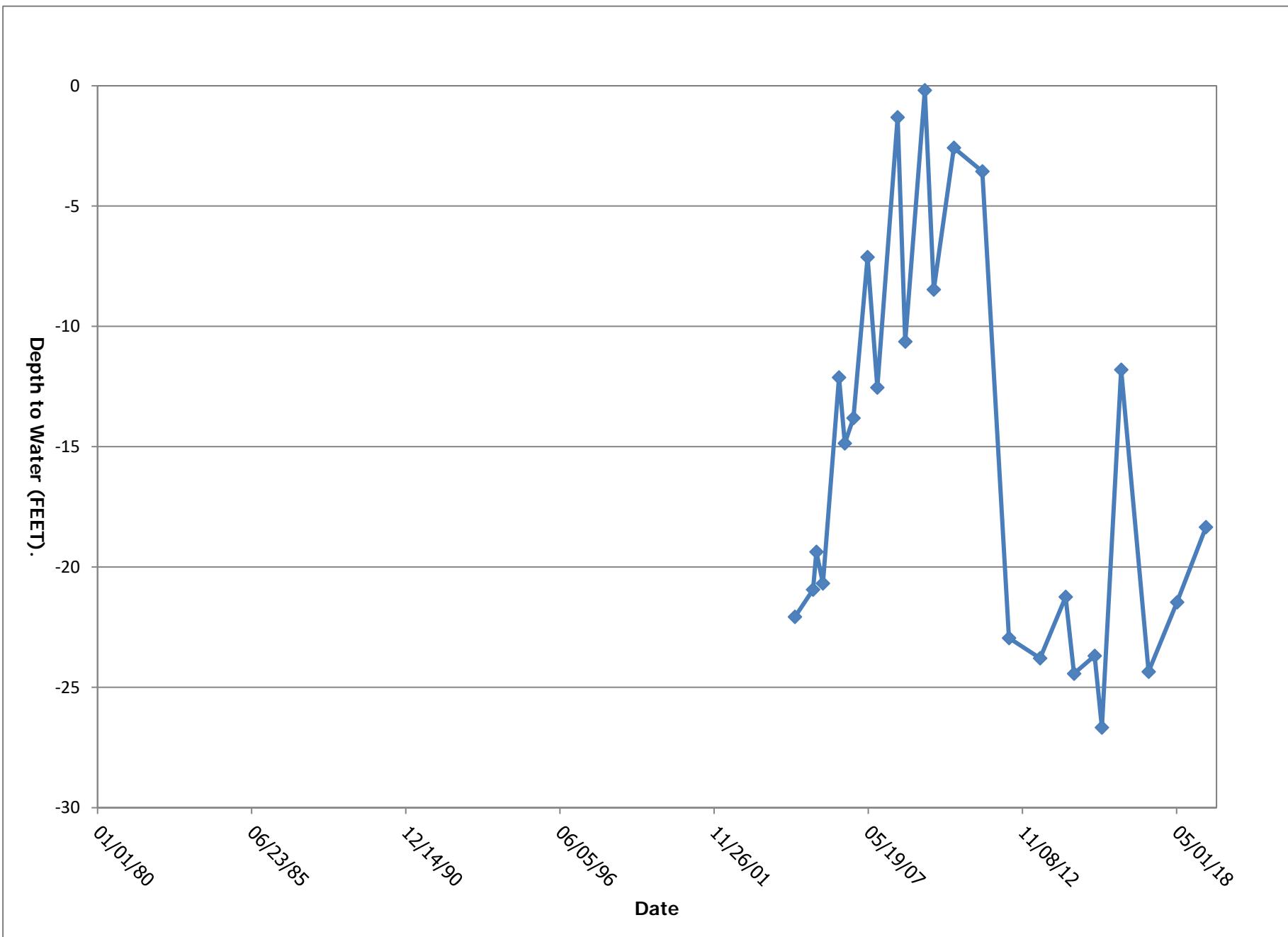
Period of Record Monitoring Summary

WW25

Report 8: Page 1 of 5

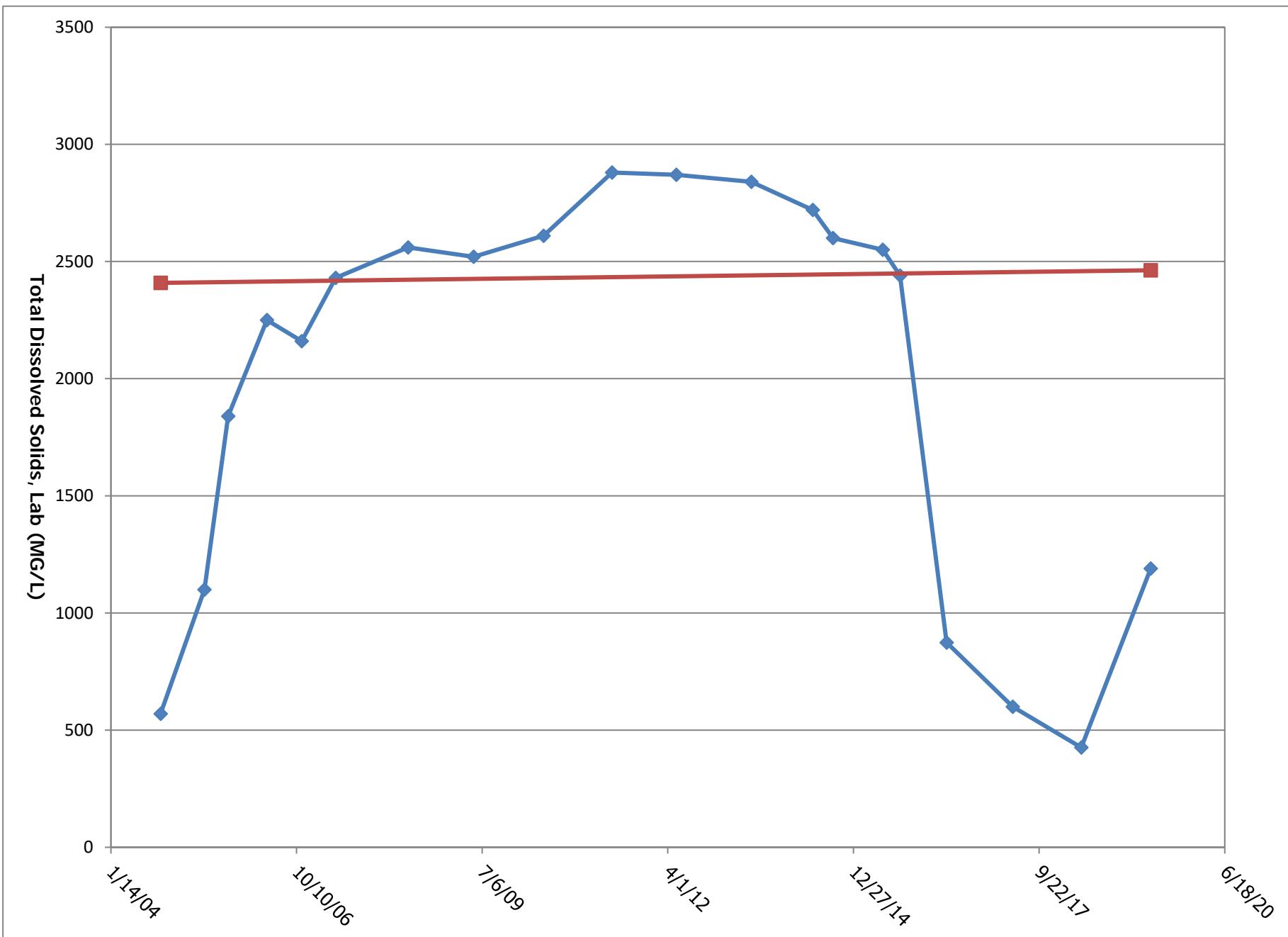
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34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	10/8/2004	5/16/2019	20	1030	1330	1690	120	568
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	10/8/2004	5/3/2017	13	0.22	0.08	2	0.02	0.54
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	10/8/2004	5/3/2017	13	0.01	0.01	0.03	0.01	0.007
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	10/8/2004	5/3/2017	13	-0.32	0	1.9	-3.8	1.7
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	10/8/2004	5/16/2019	20	2000	2440	2880	426	861
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	10/8/2004	5/3/2017	13	1920	2290	2600	550	725

loc_report_order	9				
sys_loc_code	WW25				
Date	5/16/2019				
Depth to Water (FT)	18.34				
report_order	Parameter	Fraction	Units	Detection	Result
1	Specific Conductivity	N	UMHOS/CM	Y	1310
2	pH, Field	N	S.U.	Y	7.61
3	Temperature, Field	N	DEG-C	Y	10.1
4	Fluoride	N	MG/L	Y	1.3
5	Iron	D	MG/L	N	0.08
6	Manganese	D	MG/L	N	0.05
9	Selenium	D	UG/L	Y	5.5
10	Sulfates	N	MG/L	Y	600
11	Total Dissolved Solid	N	MG/L	Y	1190



Period of Record Depth to Water Hydrograph

WW25



Period of Record TDS Trend Plot

WW25

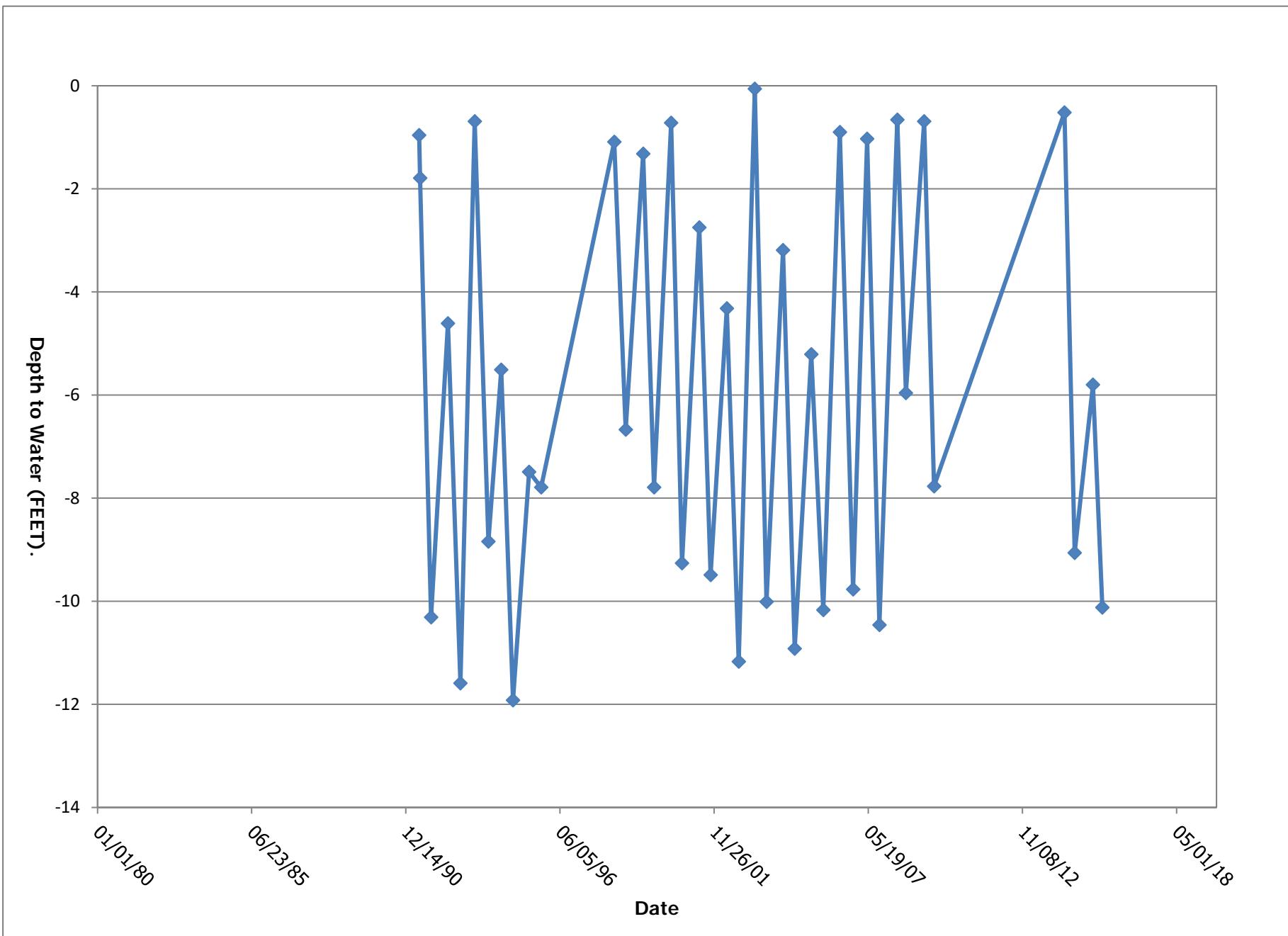
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report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	12/17/1990	9/9/2015	39	813	820	1040	690	69.5
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	12/17/1990	9/9/2015	39	7.22	7.15	8.4	6.71	0.287
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	12/17/1990	9/9/2015	39	8.32	8.3	12.5	6.6	1.23
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	12/17/1990	9/9/2015	39	293	292	416	234	35.3
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	12/17/1990	9/9/2015	40	0.04	0.03	0.06	0.03	0.01
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	12/17/1990	9/9/2015	40	2.2	2	4	1	0.73
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	12/17/1990	9/9/2015	39	358	356	508	286	43.1
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	12/17/1990	9/9/2015	39	50	50	60	30	8
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	12/17/1990	9/9/2015	39	4	5	5	3	0.9
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	12/17/1990	9/9/2015	39	98.3	98.8	113	81	9.16
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	12/17/1990	9/9/2015	39	2	2	2	0	0.9
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	12/17/1990	9/9/2015	39	6.9	7	12	3	1.8
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	12/17/1990	9/9/2015	39	10	10	10	10	0
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	12/17/1990	9/9/2015	39	794.3	775	1321	627	115.4
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	12/17/1990	9/9/2015	39	10	10	10	10	0
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	12/17/1990	9/9/2015	39	0.19	0.2	0.3	0.1	0.042
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	12/17/1990	9/9/2015	39	429	433	492	355	38
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	12/17/1990	9/9/2015	39	3.53	3.68	5.32	0.09	1.28
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	12/17/1990	9/9/2015	39	30	40	50	20	9
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	12/17/1990	9/9/2015	39	44.5	45.4	52	36.7	4.16
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	12/17/1990	9/9/2015	39	1.76	1.72	3.44	0.78	0.617
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	12/17/1990	9/9/2015	39	0.2	0.2	0.2	0.1	0.04
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	12/17/1990	9/9/2015	39	10	10	20	8	5
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	12/17/1990	9/9/2015	39	0.037	0.02	0.23	0.02	0.046
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	12/17/1990	9/9/2015	39	0.01	0.01	0.02	0.01	0.002
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	12/17/1990	9/9/2015	39	7.6	7.6	8.2	6.9	0.42
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	12/17/1990	9/9/2015	39	3.2	3.2	4	2.9	0.29
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	12/17/1990	9/9/2015	39	0.8	1	1	0.1	0.4
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	12/17/1990	9/9/2015	39	16	15.1	39	11.8	4.63
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	12/17/1990	9/9/2015	39	0.34	0.32	0.8	0.26	0.09
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	12/17/1990	9/9/2015	39	166	170	206	120	24.6
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	12/17/1990	9/9/2015	39	0.0718	0.02	1.46	0.01	0.233

Period of Record Monitoring Summary

WSAL14

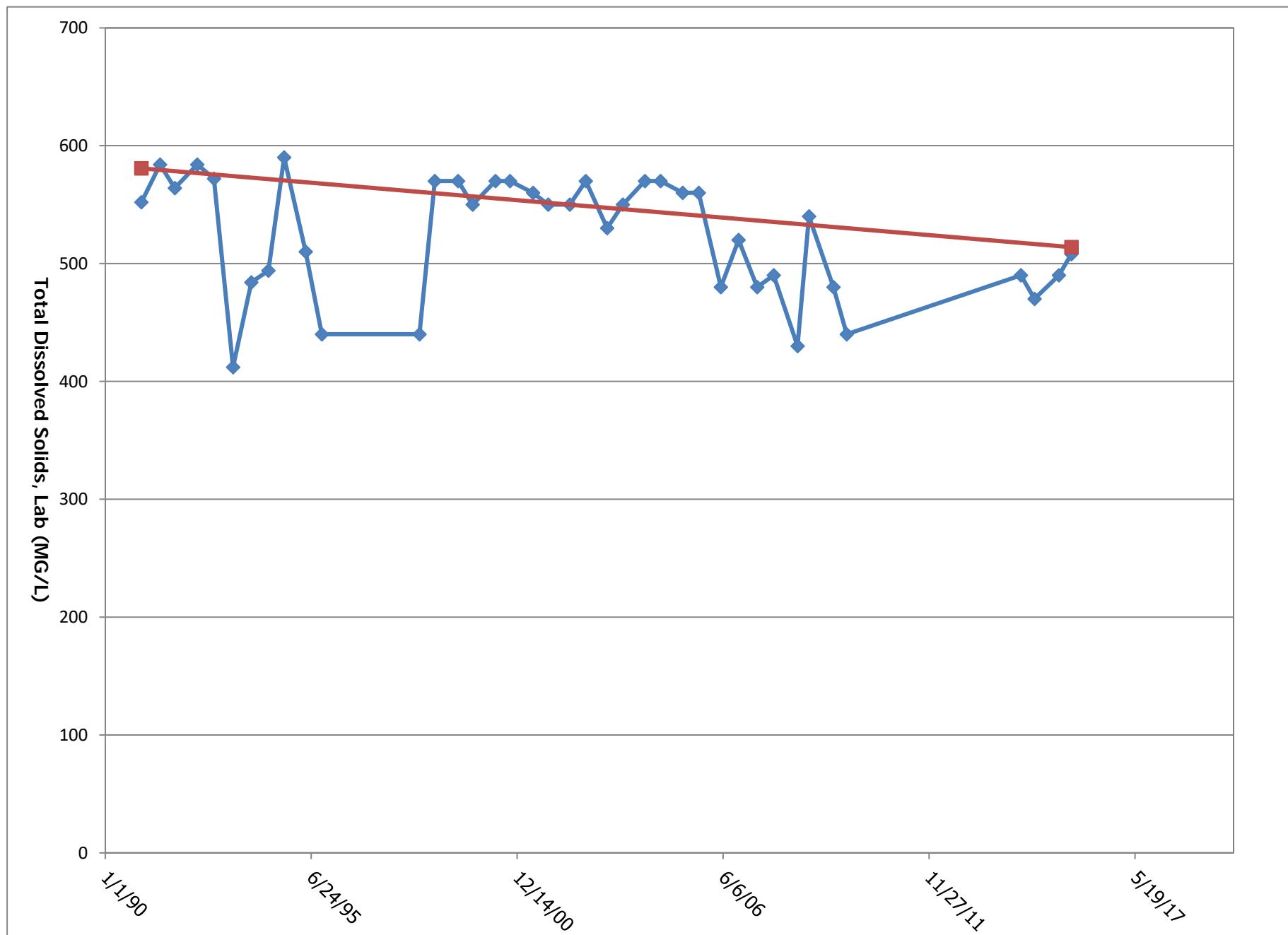
Report 9: Page 1 of 4

loc_report_order Location Code Location Name					19 WSAL14							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	12/17/1990	9/9/2015	39	0.01	0.01	0.03	0.01	0.005
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	12/17/1990	9/9/2015	38	0.387	0.685	5	-10.6	3
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	12/17/1990	9/9/2015	39	524	550	590	412	50.2
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	12/17/1990	9/9/2015	39	514.66	526	613	406	48.613



Period of Record Depth to Water Hydrograph

WSAL14



## Period of Record TDS Trend Plot

WSAL14

loc_report_order					10 WSOV25							
Location Code	Location Name	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation					
report_order	Type	Parameter	Fraction	Units	Start Date	End Date						
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	10/8/2004	5/16/2019	20	1230	1090	1800	1010	285
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	10/8/2004	5/16/2019	20	6.98	6.97	7.42	6.59	0.223
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	10/8/2004	5/7/2018	19	9.2	9.2	10	8.5	0.36
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/16/2019	5/16/2019	1	10.1	10.1	10.1	10.1	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	10/8/2004	5/3/2017	13	463	465	527	381	34.5
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	10/8/2004	5/3/2017	13	0.04	0.03	0.13	0.03	0.028
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	10/8/2004	5/3/2017	13	0.4	0.5	0.7	0.2	0.2
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	565	568	643	465	42
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	10/8/2004	5/3/2017	13	110	110	130	80	13
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	10/8/2004	5/3/2017	13	5	5	5	5	0
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	10/8/2004	5/3/2017	13	142	136	193	129	16.7
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	2	2	2	2	0
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	10/8/2004	5/3/2017	13	6.7	6.4	9.2	5.8	0.96
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	10/8/2004	5/3/2017	13	10	10	10	10	0
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	10/8/2004	5/3/2017	13	1070	1050	1460	892	142
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	10/8/2004	5/3/2017	13	10	10	10	10	0
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	10/8/2004	5/16/2019	20	0.16	0.18	0.22	0.09	0.048
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	10/8/2004	5/3/2017	13	632	606	890	561	85.1
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	10/8/2004	5/16/2019	20	0.867	0.895	1.48	0.12	0.297
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	10/8/2004	5/3/2017	13	40	40	40	30	5
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	10/8/2004	5/3/2017	13	67.3	64.8	99	57.9	10.6
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	10/8/2004	5/16/2019	20	0.098	0.08	0.17	0.07	0.032
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	10/8/2004	5/3/2017	13	0.2	0.2	0.2	0.2	0
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	10/8/2004	5/3/2017	13	9	10	10	8	1
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.03	0.02	0.2	0.02	0.04
26	3002 - SIIW AHR Wells Long	Nitrate as NO <sub>3</sub>	N	MG/L	5/16/2019	5/16/2019	1	0.05	0.05	0.05	0.05	0
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.01	0.01	0.1	0.01	0.02
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	10/8/2004	5/3/2017	13	7.7	7.7	8.1	7	0.36
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	10/8/2004	5/3/2017	13	2.3	2.3	2.5	2.2	0.11
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	10/8/2004	5/16/2019	20	0.9	1	5	0.1	1
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	10/8/2004	5/3/2017	13	15.1	15	18.8	12.7	1.59
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	10/8/2004	5/3/2017	13	0.26	0.27	0.28	0.23	0.016

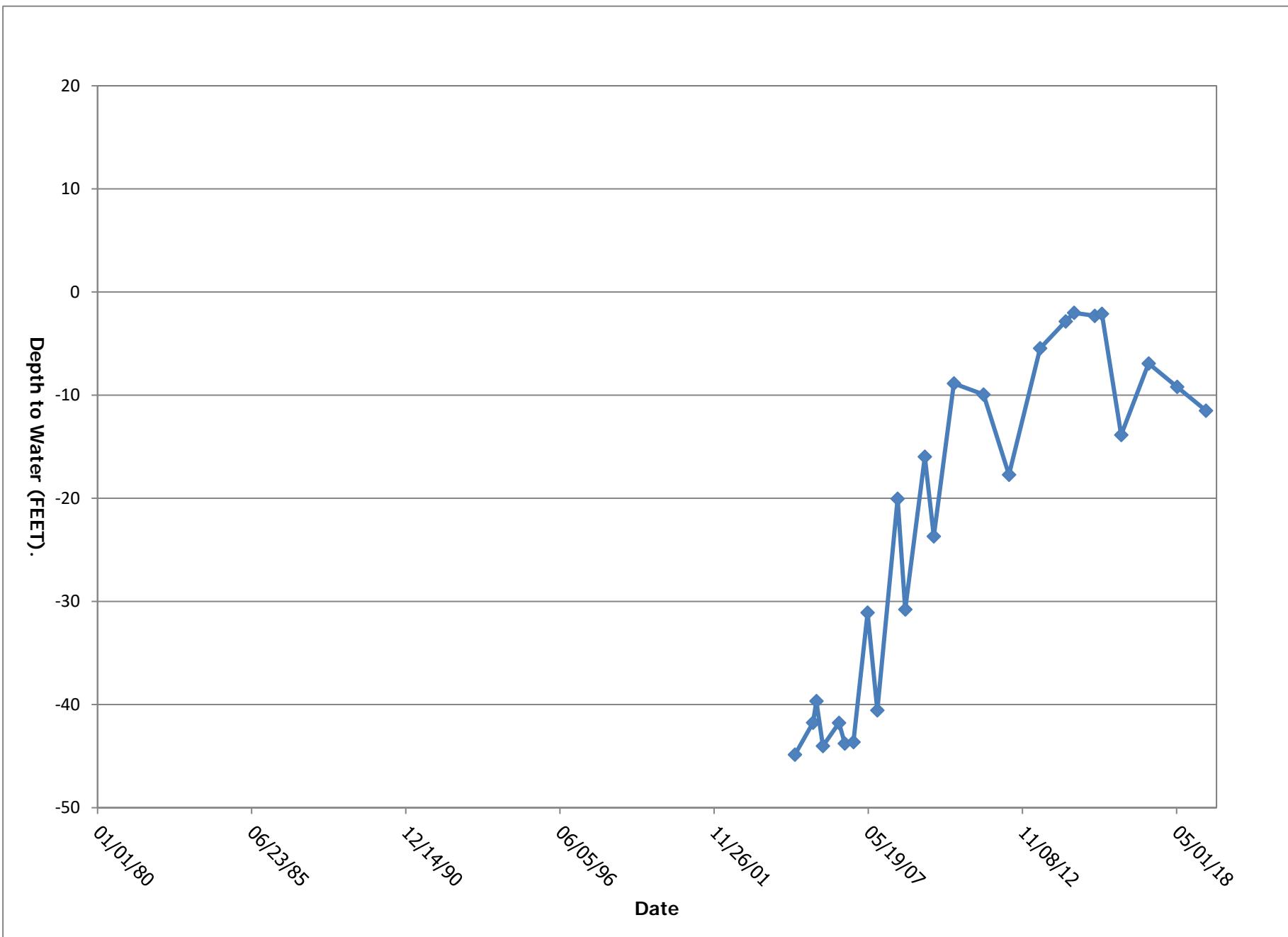
Period of Record Monitoring Summary

WSOV25

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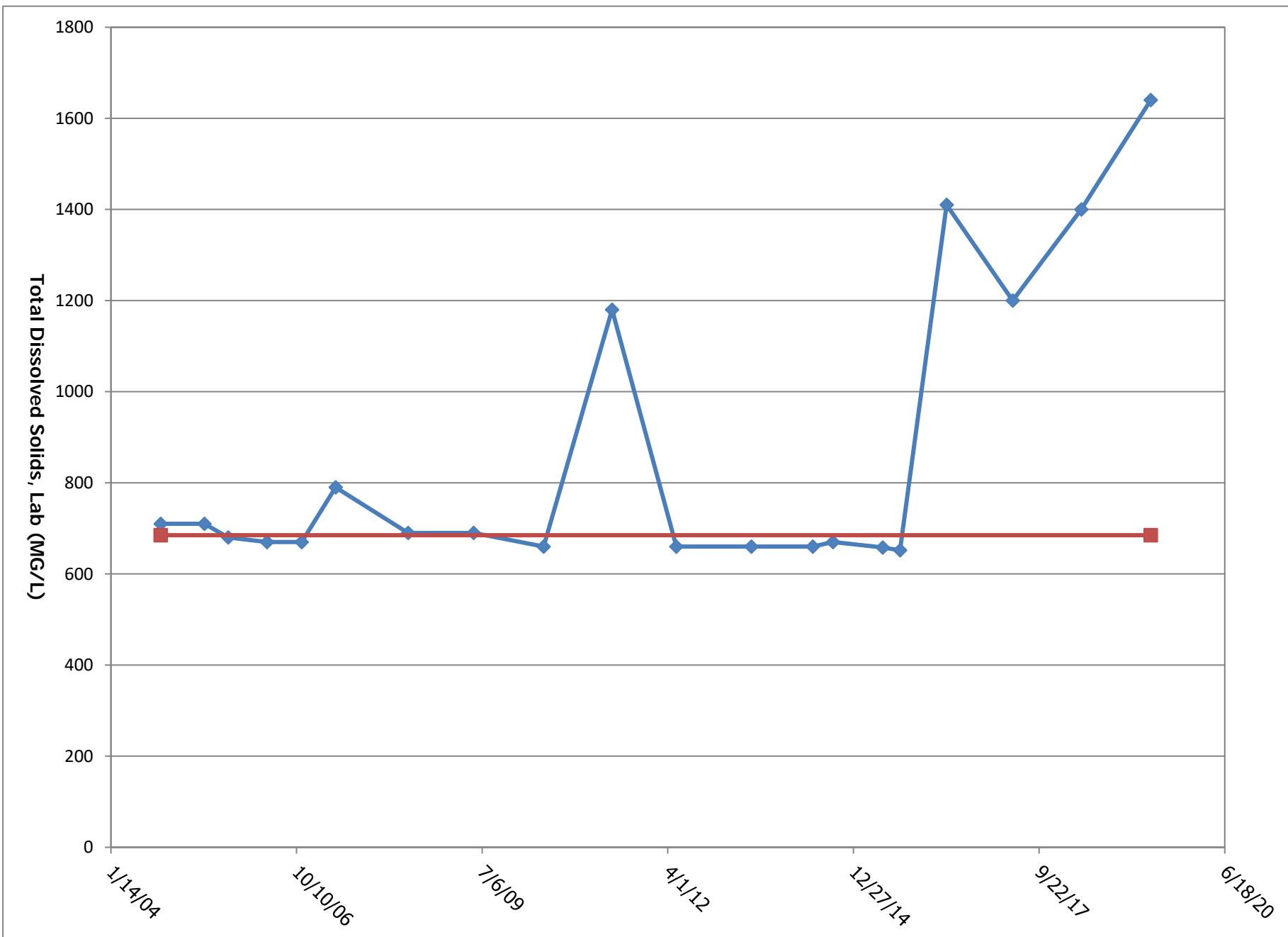
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report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	10/8/2004	5/16/2019	20	290	160	820	140	220
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	10/8/2004	5/3/2017	13	0.3	0.02	2	0.02	0.7
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	10/8/2004	5/3/2017	13	0.01	0.01	0.02	0.01	0.003
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	10/8/2004	5/3/2017	13	0.25	0.8	5.3	-7.3	3.7
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	10/8/2004	5/16/2019	20	853	685	1640	652	317
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	10/8/2004	5/3/2017	13	697	657	1150	602	140

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			Date	5/16/2019
		Depth to Water (FT)		-11.5
report_order	Parameter	Fraction	Units	Detection Result
1	Specific Conductivity	N	UMHOS/CM	Y 1750
2	pH, Field	N	S.U.	Y 7.42
3	Temperature, Field	N	DEG-C	Y 10.1
4	Fluoride	N	MG/L	Y 0.1
5	Iron	D	MG/L	Y 0.25
6	Manganese	D	MG/L	Y 0.16
9	Selenium	D	UG/L	N 5
10	Sulfates	N	MG/L	Y 690
11	Total Dissolved Solid	N	MG/L	Y 1640



Period of Record Depth to Water Hydrograph

WSOV25



Period of Record TDS Trend Plot

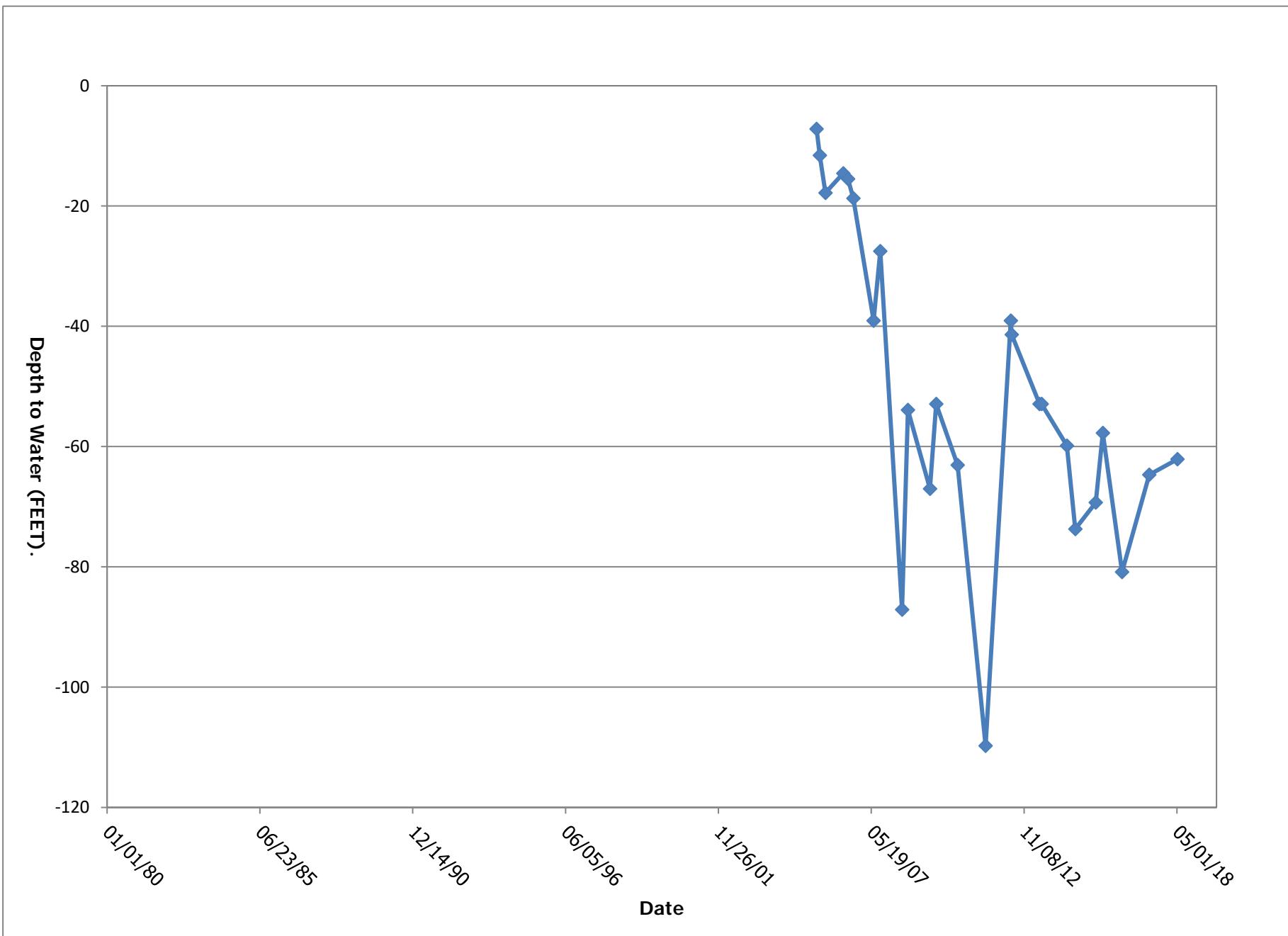
WSOV25

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loc_report_order Location Code Location Name					11 WSC25							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	10/8/2004	5/16/2019	20	791	795	1060	670	103
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	10/8/2004	5/16/2019	20	7.31	7.3	7.83	6.97	0.228
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	10/8/2004	5/7/2018	19	51.3	9.4	809	8.2	183
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/16/2019	5/16/2019	1	9.5	9.5	9.5	9.5	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	10/8/2004	5/3/2017	13	366	365	420	293	29.2
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	10/8/2004	5/3/2017	13	0.03	0.03	0.05	0.03	0.006
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	10/8/2004	5/3/2017	13	0.4	0.5	0.6	0.2	0.2
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	445	445	512	357	36.4
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	10/8/2004	5/3/2017	13	210	220	230	190	12
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	10/8/2004	5/3/2017	13	5	5	5	5	0
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	10/8/2004	5/3/2017	13	83.7	82	92.5	76	6.18
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	3	2	10	2	2
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	10/8/2004	5/3/2017	13	1.6	1.7	2	1	0.41
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	10/8/2004	5/3/2017	13	10	10	20	10	3
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	10/8/2004	5/3/2017	13	722	736	806	616	65.5
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	10/8/2004	5/3/2017	13	10	10	10	10	0
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	10/8/2004	5/16/2019	20	0.12	0.1	0.2	0.07	0.04
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	10/8/2004	5/3/2017	13	407	406	447	372	27.4
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	10/8/2004	5/16/2019	20	0.197	0.105	1.09	0.02	0.255
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	10/8/2004	5/3/2017	13	40	40	40	30	5
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	10/8/2004	5/3/2017	13	48.2	48.8	52.4	44.3	2.96
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	10/8/2004	5/16/2019	20	0.02	0.01	0.06	0.01	0.01
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	10/8/2004	5/3/2017	13	0.2	0.2	0.2	0.2	0
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	10/8/2004	5/3/2017	13	9	10	10	8	1
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.083	0.02	0.66	0.02	0.15
26	3002 - SIIW AHR Wells Long	Nitrate as NO <sub>3</sub>	N	MG/L	5/16/2019	5/16/2019	1	0.04	0.04	0.04	0.04	0
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.01	0.01	0.1	0.01	0.02
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	10/8/2004	5/3/2017	13	8	8.2	8.3	7.3	0.29
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	10/8/2004	5/3/2017	13	2	2	2.2	1.9	0.11
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	10/8/2004	5/16/2019	20	0.9	1	5	0.1	1
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	10/8/2004	5/3/2017	13	13.1	13.1	14.2	12.2	0.618
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	10/8/2004	5/3/2017	13	0.28	0.29	0.31	0.26	0.018

loc_report_order Location Code Location Name					11 WSC25							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	10/8/2004	5/16/2019	20	95	100	280	10	73
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	10/8/2004	5/3/2017	13	0.3	0.02	4	0.02	1
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	10/8/2004	5/3/2017	13	0.01	0.01	0.02	0.01	0.004
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	10/8/2004	5/3/2017	13	0.39	0.5	4.5	-4.7	3.1
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	10/8/2004	5/16/2019	20	486	485	818	350	113
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	10/8/2004	5/3/2017	13	436	422	520	371	53.5

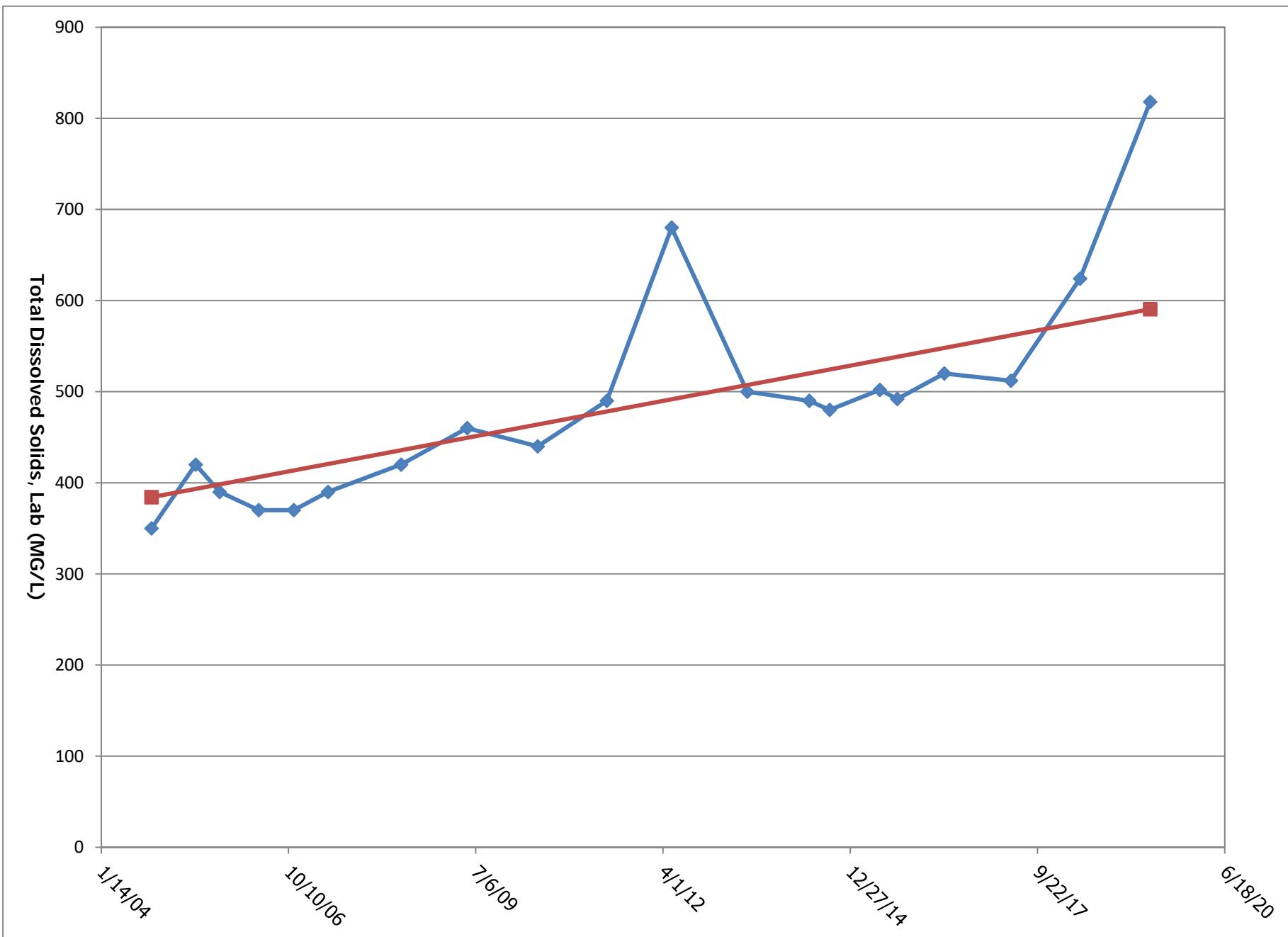
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1	Specific Conductivity	N	UMHOS/CM	Y 1060
2	pH, Field	N	S.U.	Y 7.15
3	Temperature, Field	N	DEG-C	Y 9.5
4	Fluoride	N	MG/L	Y 0.1
5	Iron	D	MG/L	Y 0.23
6	Manganese	D	MG/L	Y 0.01
9	Selenium	D	UG/L	N 5
10	Sulfates	N	MG/L	Y 280
11	Total Dissolved Solid	N	MG/L	Y 818



Period of Record Depth to Water Hydrograph

WSC25

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Period of Record TDS Trend Plot

WSC25

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loc_report_order Location Code Location Name					12 WWCOV25							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	10/8/2004	5/16/2019	20	1700	1710	2230	1220	347
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	10/8/2004	5/16/2019	20	7.04	7.01	7.32	6.78	0.148
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	10/8/2004	5/7/2018	19	9.58	9.5	10.8	8.9	0.494
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/16/2019	5/16/2019	1	9.6	9.6	9.6	9.6	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	10/8/2004	5/3/2017	13	538	531	604	472	44.2
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	10/8/2004	5/3/2017	13	0.03	0.03	0.05	0.03	0.006
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	10/8/2004	5/3/2017	13	0.4	0.5	0.5	0.2	0.2
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	656	647	737	576	54.1
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	10/8/2004	5/3/2017	13	80	80	90	30	20
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	10/8/2004	5/3/2017	13	5	5	5	5	0
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	10/8/2004	5/3/2017	13	197	180	279	144	50
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	2	2	2	2	0
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	10/8/2004	5/3/2017	13	8.6	9	11	6	1.4
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	10/8/2004	5/3/2017	13	10	10	10	10	0
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	10/8/2004	5/3/2017	13	1530	1510	1970	1030	348
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	10/8/2004	5/3/2017	13	10	10	10	10	0
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	10/8/2004	5/16/2019	20	0.21	0.2	0.3	0.1	0.059
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	10/8/2004	5/3/2017	13	966	894	1380	699	248
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	10/8/2004	5/16/2019	20	1.01	1.01	1.56	0.05	0.406
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	10/8/2004	5/3/2017	13	40	40	40	30	5
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	10/8/2004	5/3/2017	13	115	108	167	82.6	29.9
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	10/8/2004	5/16/2019	20	0.14	0.13	0.22	0.1	0.036
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	10/8/2004	5/3/2017	13	0.2	0.2	0.2	0.2	0
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	10/8/2004	5/3/2017	13	9	10	10	8	1
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.067	0.02	0.38	0.02	0.094
26	3002 - SIIW AHR Wells Long	Nitrate as NO <sub>3</sub>	N	MG/L	5/16/2019	5/16/2019	1	0.05	0.05	0.05	0.05	0
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.01	0.01	0.1	0.01	0.02
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	10/8/2004	5/3/2017	13	7.8	7.9	8.2	7	0.31
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	10/8/2004	5/3/2017	13	2.9	2.9	3.4	2.5	0.29
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	10/8/2004	5/16/2019	20	0.91	1	5	0.1	1.1
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	10/8/2004	5/3/2017	13	23.5	23.8	25.7	20.5	1.56
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	10/8/2004	5/3/2017	13	0.34	0.33	0.38	0.3	0.028

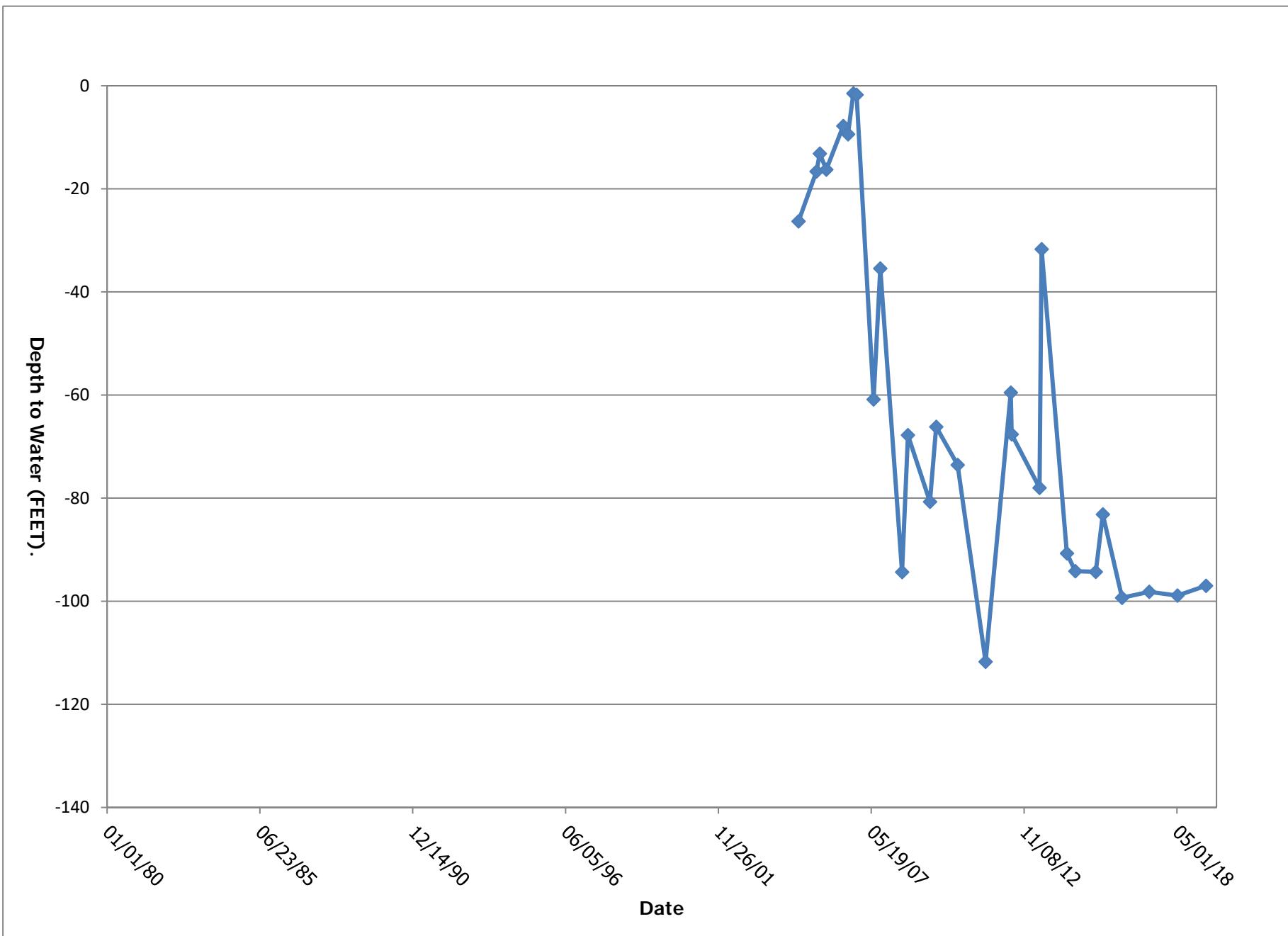
Period of Record Monitoring Summary

WWCOV25

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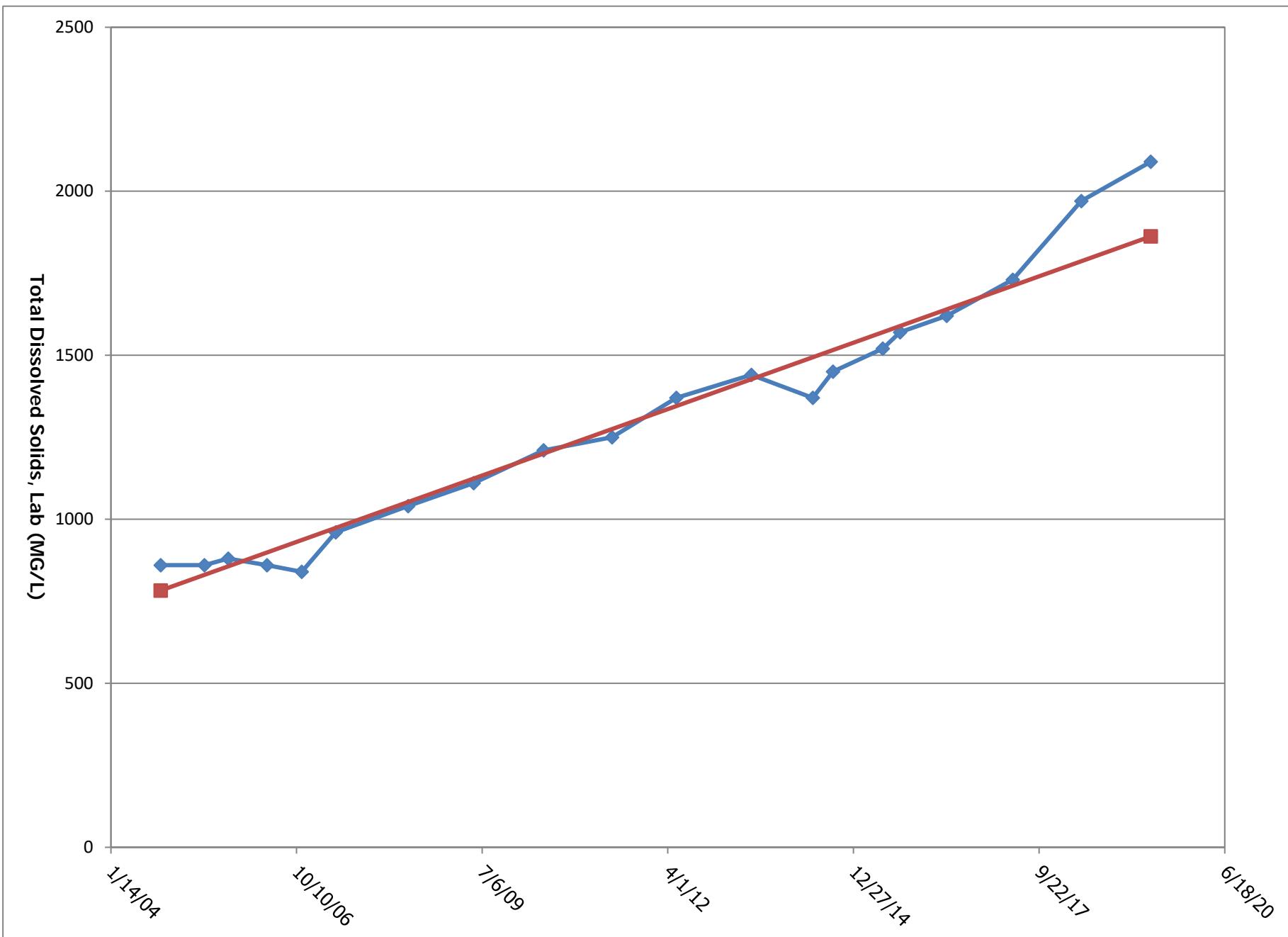
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report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	10/8/2004	5/16/2019	20	520	500	960	240	240
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	10/8/2004	5/3/2017	13	0.2	0.02	2	0.02	0.5
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	10/8/2004	5/3/2017	13	0.01	0.01	0.02	0.01	0.004
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	10/8/2004	5/3/2017	13	0.3	1.3	4.3	-4.2	2.7
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	10/8/2004	5/16/2019	20	1300	1310	2090	840	379
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	10/8/2004	5/3/2017	13	1120	977	1720	793	325

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			sys_loc_code	WWCOV25
			Date	5/16/2019
			Depth to Water (FT)	-97
report_order	Parameter	Fraction	Units	Detection Result
1	Specific Conductivity	N	UMHOS/CM	Y 2080
2	pH, Field	N	S.U.	Y 7.13
3	Temperature, Field	N	DEG-C	Y 9.6
4	Fluoride	N	MG/L	Y 0.2
5	Iron	D	MG/L	Y 0.1
6	Manganese	D	MG/L	Y 0.22
9	Selenium	D	UG/L	N 5
10	Sulfates	N	MG/L	Y 960
11	Total Dissolved Solid	N	MG/L	Y 2090



Period of Record Depth to Water Hydrograph

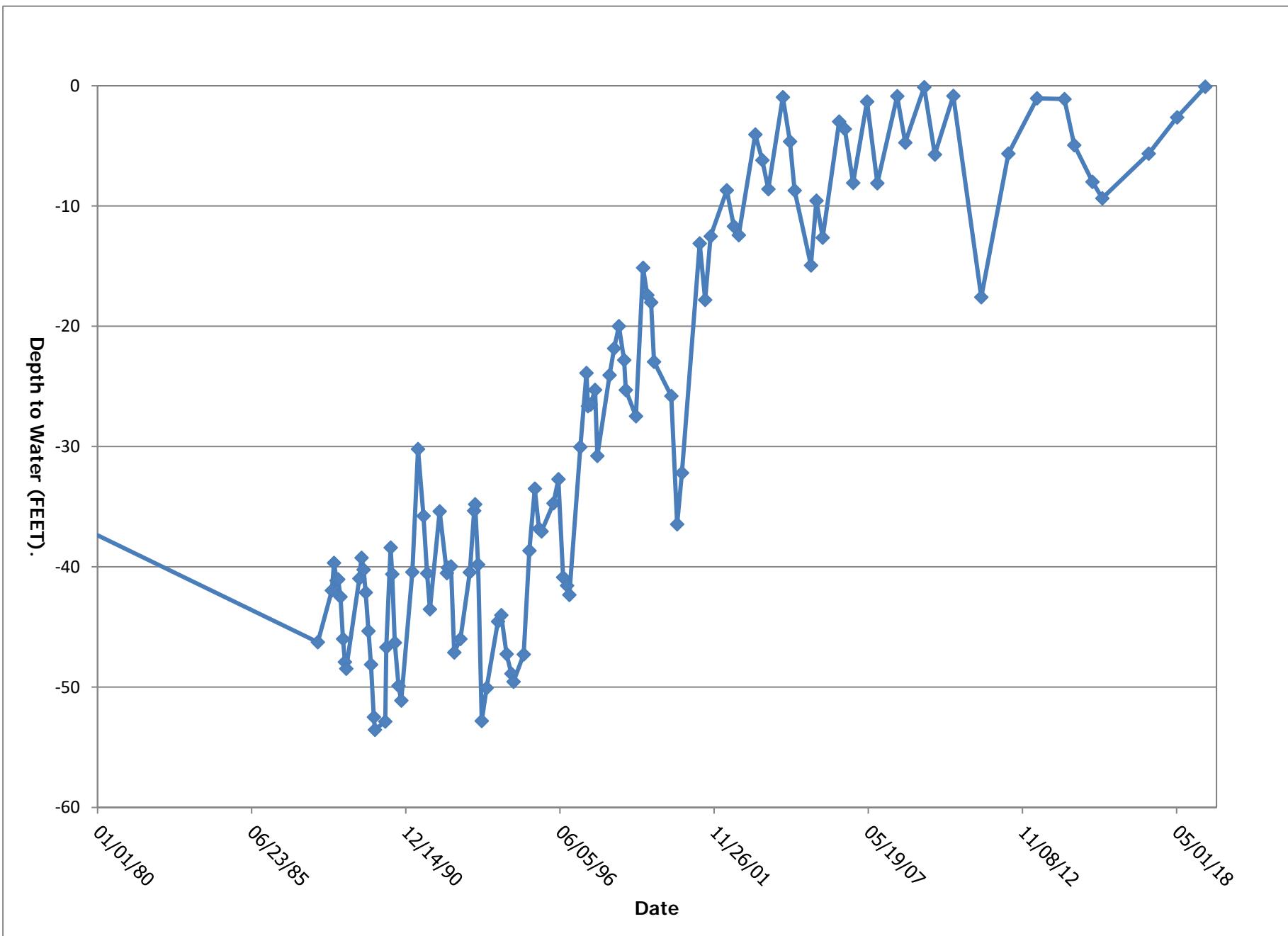
WWCOV25



Period of Record TDS Trend Plot

WWCOV25

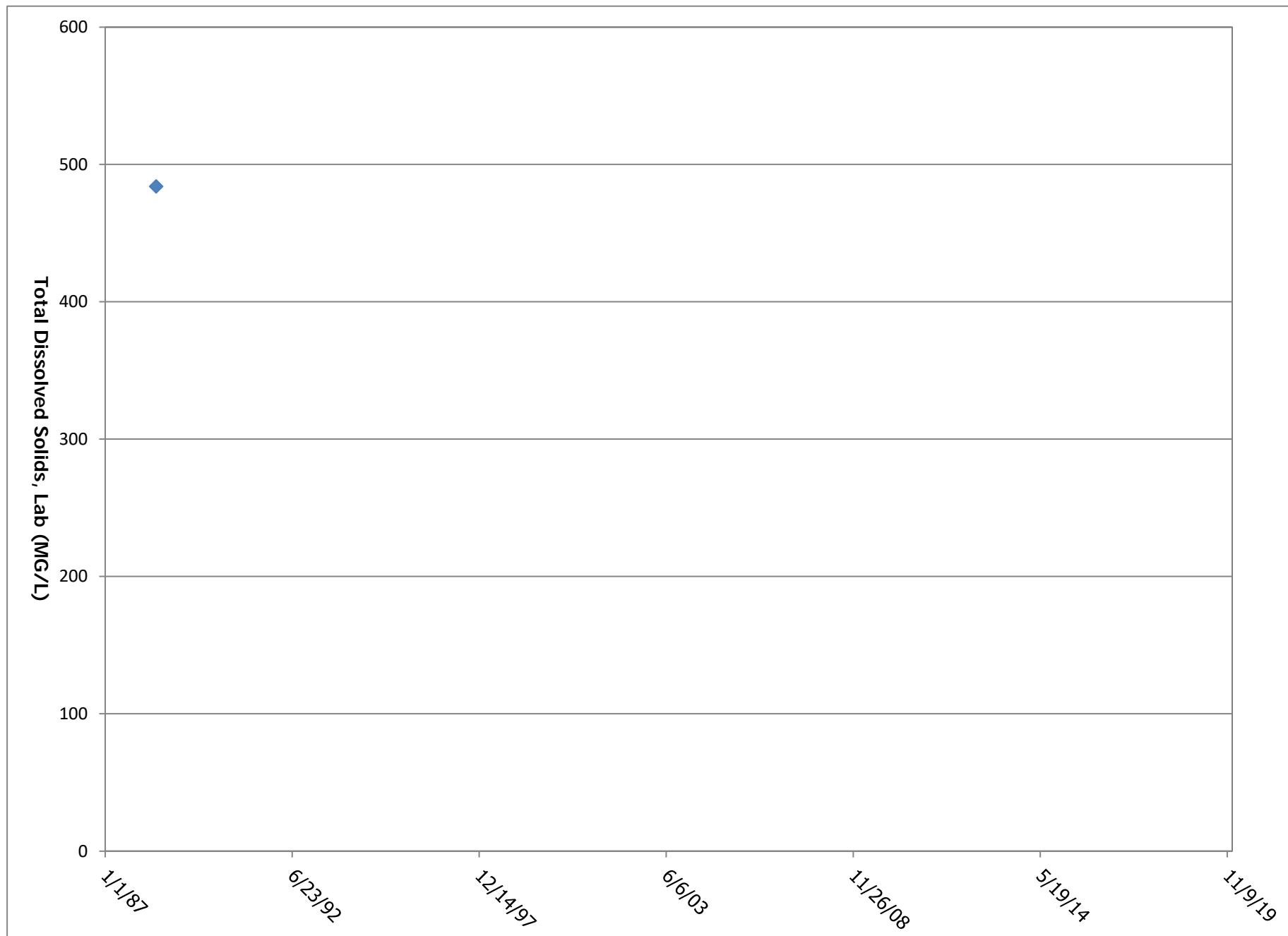
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Period of Record Depth to Water Hydrograph

WWC17

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Period of Record TDS Trend Plot

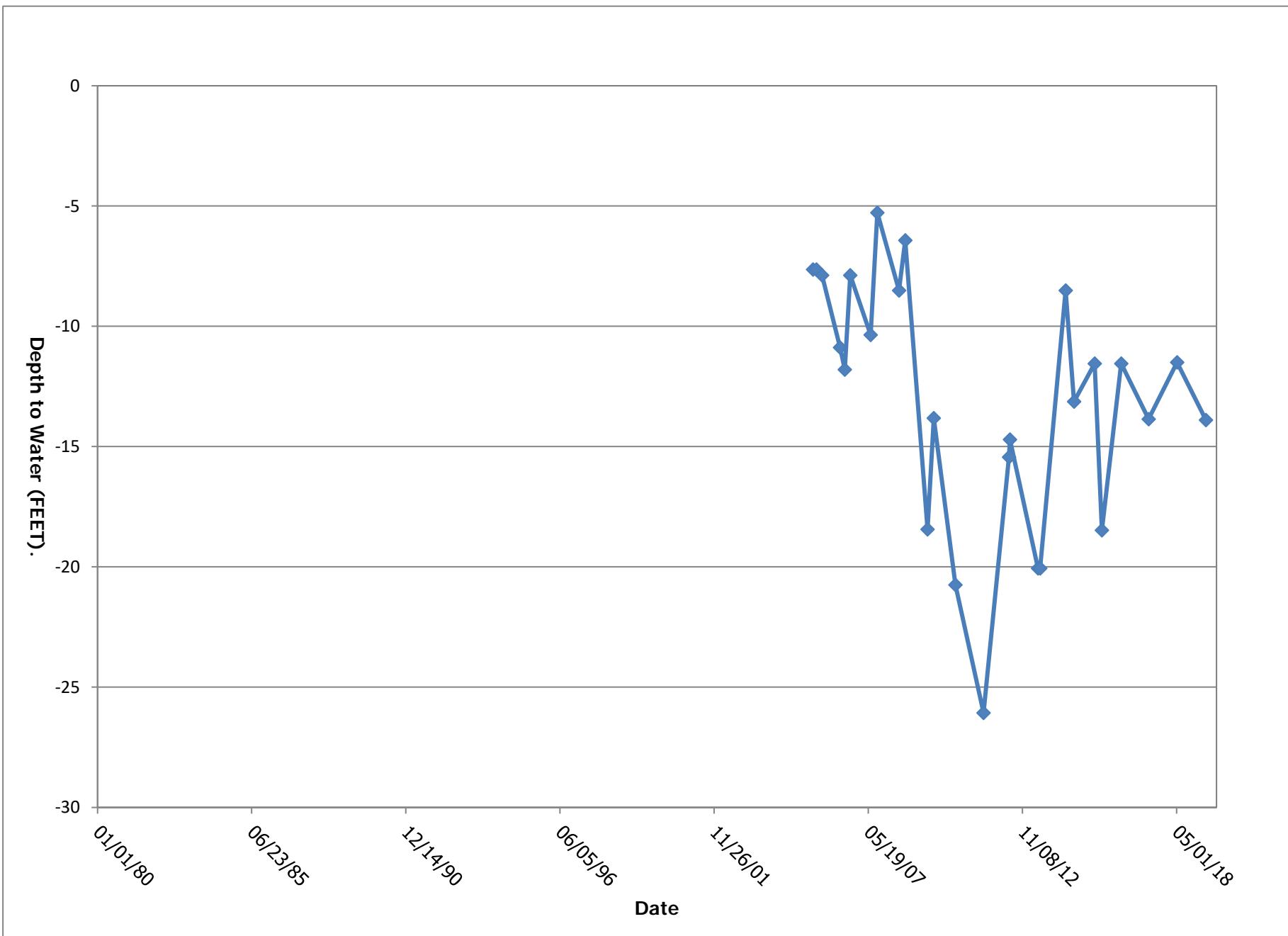
WWC17

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loc_report_order Location Code Location Name					13 WWC25							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	10/8/2004	5/16/2019	20	1260	1270	1360	1140	66.8
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	10/8/2004	5/16/2019	20	8.38	8.46	8.73	7.8	0.299
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	10/8/2004	5/7/2018	19	10.3	10.4	11.3	8.7	0.809
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/16/2019	5/16/2019	1	10.6	10.6	10.6	10.6	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	10/8/2004	5/3/2017	13	621	619	699	503	49.2
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	10/8/2004	5/3/2017	13	0.045	0.03	0.18	0.03	0.042
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	10/8/2004	5/3/2017	13	0.4	0.5	0.5	0.2	0.2
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	697	680	853	550	73.9
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	10/8/2004	5/3/2017	13	320	320	350	290	18
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	10/8/2004	5/3/2017	13	5	5	5	5	0
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	10/8/2004	5/3/2017	13	4.2	3.5	7.8	2.6	1.7
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	30	32	42	2	9.75
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	10/8/2004	5/3/2017	13	3.6	3.7	4.1	3	0.43
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	10/8/2004	5/3/2017	13	10	10	10	10	0
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	10/8/2004	5/3/2017	13	1200	1230	1290	1020	77
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	10/8/2004	5/3/2017	13	10	10	10	10	0
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	10/8/2004	5/16/2019	20	0.51	0.5	0.61	0.4	0.063
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	10/8/2004	5/3/2017	13	22	19	38	14	7.3
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	10/8/2004	5/16/2019	20	0.03	0.02	0.1	0.01	0.03
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	10/8/2004	5/3/2017	13	40	40	40	30	5
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	10/8/2004	5/3/2017	13	2.7	2.4	4.5	1.8	0.81
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	10/8/2004	5/16/2019	20	0.01	0.01	0.05	0.01	0.009
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	10/8/2004	5/3/2017	13	0.2	0.2	0.2	0.2	0
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	10/8/2004	5/3/2017	13	10	10	20	8	3
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.11	0.02	0.47	0.02	0.15
26	3002 - SIIW AHR Wells Long	Nitrate as NO <sub>3</sub>	N	MG/L	5/16/2019	5/16/2019	1	0.05	0.05	0.05	0.05	0
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.02	0.01	0.1	0.01	0.03
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	10/8/2004	5/3/2017	13	8.6	8.6	8.9	7.8	0.26
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	10/8/2004	5/3/2017	13	2.1	2.1	2.3	2	0.1
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	10/8/2004	5/16/2019	20	1.1	1	5	0.1	1.1
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	10/8/2004	5/3/2017	13	303	300	329	289	11.1
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	10/8/2004	5/3/2017	13	29.7	31	36.7	21.3	4.58

loc_report_order Location Code Location Name					13 WWC25							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	10/8/2004	5/16/2019	20	81	70	200	10	57
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	10/8/2004	5/3/2017	13	0.2	0.12	1	0.02	0.26
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	10/8/2004	5/3/2017	13	0.01	0.01	0.03	0.01	0.006
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	10/8/2004	5/3/2017	13	-0.062	0.4	4.9	-6.7	3.2
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	10/8/2004	5/16/2019	20	767	765	888	710	42.9
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	10/8/2004	5/3/2017	13	767	768	883	700	47.4

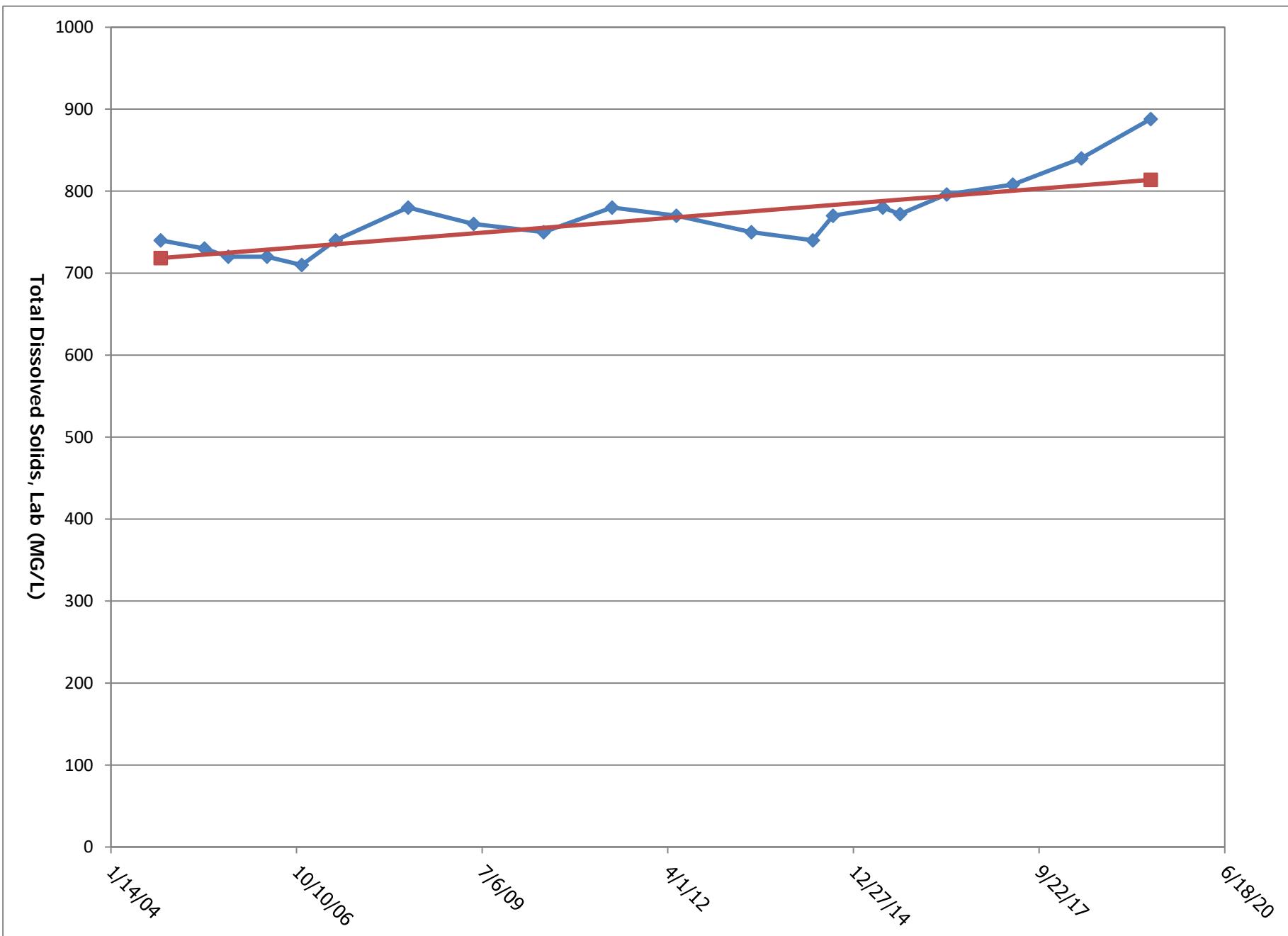
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			Date	5/16/2019
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report_order	Parameter	Fraction	Units	Detection Result
1	Specific Conductivity	N	UMHOS/CM	Y 1350
2	pH, Field	N	S.U.	Y 7.8
3	Temperature, Field	N	DEG-C	Y 10.6
4	Fluoride	N	MG/L	Y 0.5
5	Iron	D	MG/L	N 0.08
6	Manganese	D	MG/L	N 0.05
9	Selenium	D	UG/L	N 5
10	Sulfates	N	MG/L	Y 180
11	Total Dissolved Solid	N	MG/L	Y 888



Period of Record Depth to Water Hydrograph

WWC25

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Period of Record TDS Trend Plot

WWC25

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loc_report_order Location Code Location Name					14 WWCU25							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
1	3002 - SIIW AHR Wells Long	Specific Conductivity, Field	N	UMHOS/CM	10/8/2004	5/16/2019	20	1220	1150	1680	1060	193
2	3002 - SIIW AHR Wells Long	pH, Field	N	S.U.	10/8/2004	5/16/2019	20	8.655	8.69	10.36	7.24	0.7128
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	C	10/8/2004	5/7/2018	19	10.1	10	11.1	8.9	0.504
3	3002 - SIIW AHR Wells Long	Temperature, Field	N	DEG-C	5/16/2019	5/16/2019	1	11.3	11.3	11.3	11.3	0
4	3002 - SIIW AHR Wells Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	10/8/2004	5/3/2017	13	437	480	547	162	109
6	3002 - SIIW AHR Wells Long	Aluminum	D	MG/L	10/8/2004	5/3/2017	13	0.03	0.03	0.06	0.03	0.01
7	3002 - SIIW AHR Wells Long	Arsenic	D	UG/L	10/8/2004	5/3/2017	13	1.3	0.5	6.8	0.3	1.8
8	3002 - SIIW AHR Wells Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	453	505	573	2	151
9	3002 - SIIW AHR Wells Long	Boron	D	UG/L	10/8/2004	5/3/2017	13	190	210	240	100	49
10	3002 - SIIW AHR Wells Long	Cadmium	D	UG/L	10/8/2004	5/3/2017	13	5	5	5	5	0
11	3002 - SIIW AHR Wells Long	Calcium	D	MG/L	10/8/2004	5/3/2017	13	55.6	6.9	265	1	97.4
12	3002 - SIIW AHR Wells Long	Carbonate as CO <sub>3</sub>	N	MG/L	10/8/2004	5/3/2017	13	34.7	32.8	77	2	23.1
13	3002 - SIIW AHR Wells Long	Chloride	N	MG/L	10/8/2004	5/3/2017	13	2.1	2	4	1	0.72
14	3002 - SIIW AHR Wells Long	Chromium	D	UG/L	10/8/2004	5/3/2017	13	10	10	10	10	0
15	3002 - SIIW AHR Wells Long	Specific Conductivity, Lab	N	UMHOS/CM	10/8/2004	5/3/2017	13	1230	1130	1750	1050	214
16	3002 - SIIW AHR Wells Long	Copper	D	UG/L	10/8/2004	5/3/2017	13	10	10	10	10	0
17	3002 - SIIW AHR Wells Long	Fluoride	N	MG/L	10/8/2004	5/16/2019	20	1.02	1.2	1.42	0.2	0.412
18	3002 - SIIW AHR Wells Long	Hardness	N	MG/L	10/8/2004	5/3/2017	13	216	38	968	3	353
19	3002 - SIIW AHR Wells Long	Iron	D	MG/L	10/8/2004	5/16/2019	20	0.179	0.02	1.51	0.02	0.443
20	3002 - SIIW AHR Wells Long	Lead	D	UG/L	10/8/2004	5/3/2017	13	40	40	40	30	5
21	3002 - SIIW AHR Wells Long	Magnesium	D	MG/L	10/8/2004	5/3/2017	13	18.6	5.6	74.4	0.2	26.8
22	3002 - SIIW AHR Wells Long	Manganese	D	MG/L	10/8/2004	5/16/2019	20	0.02	0.01	0.1	0.01	0.02
23	3002 - SIIW AHR Wells Long	Mercury	D	UG/L	10/8/2004	5/3/2017	13	0.2	0.2	0.3	0.2	0.03
24	3002 - SIIW AHR Wells Long	Nickel	D	UG/L	10/8/2004	5/3/2017	13	10	10	30	8	6
25	3002 - SIIW AHR Wells Long	Nitrate Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.245	0.02	3.02	0.02	0.695
26	3002 - SIIW AHR Wells Long	Nitrate as NO <sub>3</sub>	N	MG/L	5/16/2019	5/16/2019	1	0.05	0.05	0.05	0.05	0
27	3002 - SIIW AHR Wells Long	Nitrite Nitrogen	N	MG/L	10/8/2004	5/7/2018	19	0.047	0.01	0.26	0.01	0.078
29	3002 - SIIW AHR Wells Long	pH, Lab	N	S.U.	10/8/2004	5/3/2017	13	8.85	8.8	11.5	7.3	0.985
30	3002 - SIIW AHR Wells Long	Potassium	D	MG/L	10/8/2004	5/3/2017	13	3.22	2.2	12.3	1.4	2.93
31	3002 - SIIW AHR Wells Long	Selenium	D	UG/L	10/8/2004	5/16/2019	20	1	1	5	0.1	1
32	3002 - SIIW AHR Wells Long	Sodium	D	MG/L	10/8/2004	5/3/2017	13	218	258	280	50.8	77.4
33	3002 - SIIW AHR Wells Long	Sodium Adsorption Ratio	N	RATIO	10/8/2004	5/3/2017	13	18.3	18	60.4	0.71	15.2

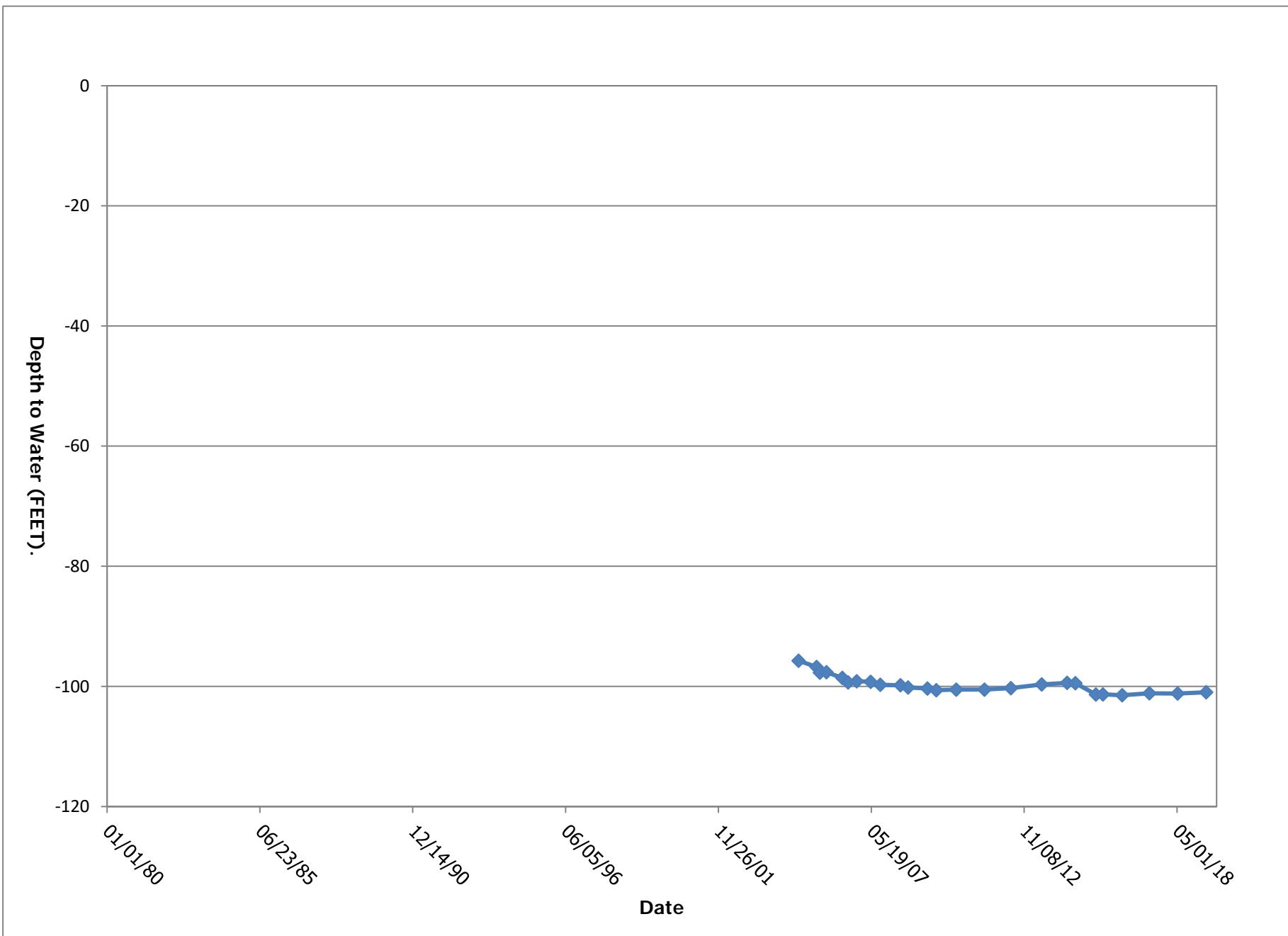
Period of Record Monitoring Summary

WWCU25

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loc_report_order Location Code Location Name					14 WWCU25							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
34	3002 - SIIW AHR Wells Long	Sulfates	N	MG/L	10/8/2004	5/16/2019	20	190	100	730	70	200
35	3002 - SIIW AHR Wells Long	Sulfide	N	MG/L	10/8/2004	5/3/2017	13	0.1	0.02	1	0.02	0.3
37	3002 - SIIW AHR Wells Long	Zinc	D	MG/L	10/8/2004	5/3/2017	13	0.01	0.01	0.01	0.01	2E-18
38	3002 - SIIW AHR Wells Long	Cation / Anion Balance	N	%	10/8/2004	5/3/2017	13	-0.19	0.4	5.3	-7.7	3.5
39	3002 - SIIW AHR Wells Long	Total Dissolved Solids, Lab	N	MG/L	10/8/2004	5/16/2019	20	761	680	1370	650	212
40	3002 - SIIW AHR Wells Long	Total Dissolved Solids (Calculated)	N	MG/L	10/8/2004	5/3/2017	13	822	731	1320	626	233

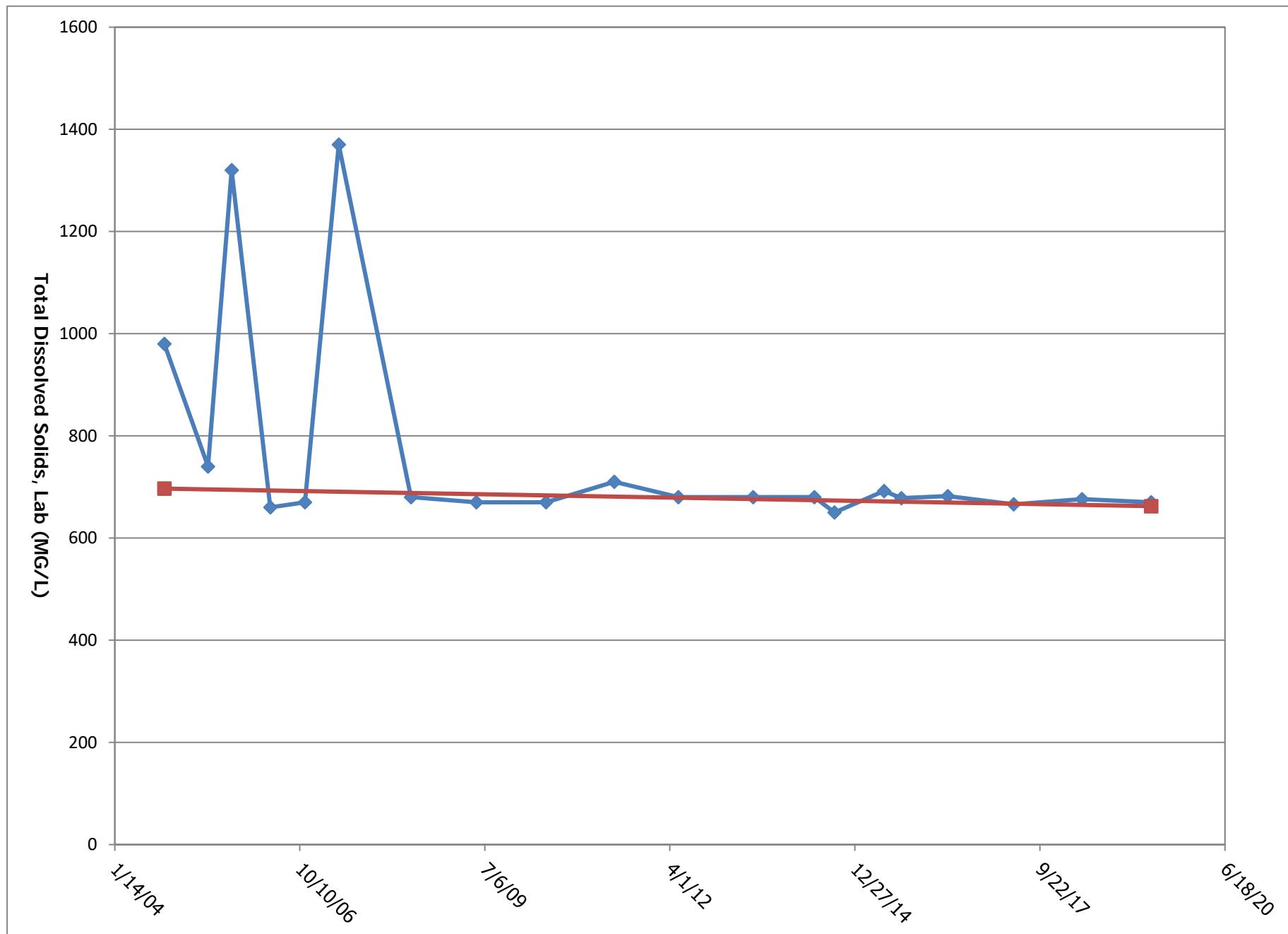
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Date	5/16/2019				
Depth to Water (FT)	100.98				
report_order	Parameter	Fraction	Units	Detection	Result
1	Specific Conductivity	N	UMHOS/CM	Y	1060
2	pH, Field	N	S.U.	Y	8.65
3	Temperature, Field	N	DEG-C	Y	11.3
4	Fluoride	N	MG/L	Y	1.2
5	Iron	D	MG/L	N	0.08
6	Manganese	D	MG/L	N	0.05
9	Selenium	D	UG/L	N	5
10	Sulfates	N	MG/L	Y	70
11	Total Dissolved Solid	N	MG/L	Y	670



Period of Record Depth to Water Hydrograph

WWCU25

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Period of Record TDS Trend Plot

WWCU25

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		loc_report_order				1 WSH9						
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	8/8/1997	9/3/2019	58	69.477	19.65	453	0	113.67
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	8/8/1997	7/29/2019	53	714.1	550	5760	0.43	776.3
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	8/8/1997	7/29/2019	53	8.13	8.23	8.72	7.27	0.299
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	8/8/1997	7/30/2018	50	12.77	12.8	22.9	1	4.532
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	5/2/2019	7/29/2019	3	15.1	15.5	18.8	10.9	3.97
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	8/8/1997	9/10/2015	28	204	205	343	104	47.6
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	8/8/1997	9/10/2015	27	0.79	0.7	1.7	0.3	0.32
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	8/8/1997	9/10/2015	28	243	242	381	126	53.7
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	8/8/1997	9/10/2015	27	55	50	150	40	21
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	6/15/2005	9/10/2015	5	0.1	0.1	0.1	0.1	0
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	6/15/2005	8/5/2013	8	0.1	0.1	0.1	0.1	1E-17
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	8/8/1997	6/15/2005	16	0.4	0.5	0.5	0.1	0.2
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	8/8/1997	9/10/2015	28	66	67.6	122	41.9	16.2
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	8/8/1997	9/10/2015	28	4.24	2	18	2	4.22
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	8/8/1997	9/10/2015	28	4.8	4.5	17	1.8	2.7
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	6/15/2005	9/10/2015	5	0.4	0.5	0.5	0.1	0.2
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	6/15/2005	8/5/2013	8	0.45	0.3	1.7	0.1	0.54
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	8/8/1997	6/15/2005	16	9	10	10	0.2	2
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	8/8/1997	9/10/2015	27	582	536	1570	400	229
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	6/15/2005	9/10/2015	5	0.6	0.5	0.8	0.5	0.1
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	6/15/2005	8/5/2013	8	0.8	0.7	2	0.5	0.5
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	8/8/1997	6/15/2005	16	9	10	10	0.5	2
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	8/8/1997	9/10/2015	27	284	283	646	186	87.9
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	8/8/1997	7/29/2019	24	0.059	0.03	0.27	0.01	0.056
18	3002 - AHR SW & SPR Long	Iron	PD	MG/L	3/12/2015	7/29/2019	8	0.28	0.23	0.6	0.11	0.17
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	8/8/1997	8/5/2013	26	0.642	0.6	1.74	0.08	0.441
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	6/5/2006	7/29/2019	35	0.713	0.52	4.29	0.1	0.74
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	6/15/2005	9/10/2015	5	0.1	0.1	0.1	0.1	0
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	6/15/2005	8/5/2013	8	0.2	0.2	0.3	0.1	0.09
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	8/8/1997	6/15/2005	16	0.7	1	1	0.1	0.4
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	8/8/1997	9/10/2015	28	28.5	28	82.9	18	11.6
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	8/8/1997	6/11/2019	26	0.0514	0.03	0.23	0.01	0.0579

Period of Record Monitoring Summary

WSH9

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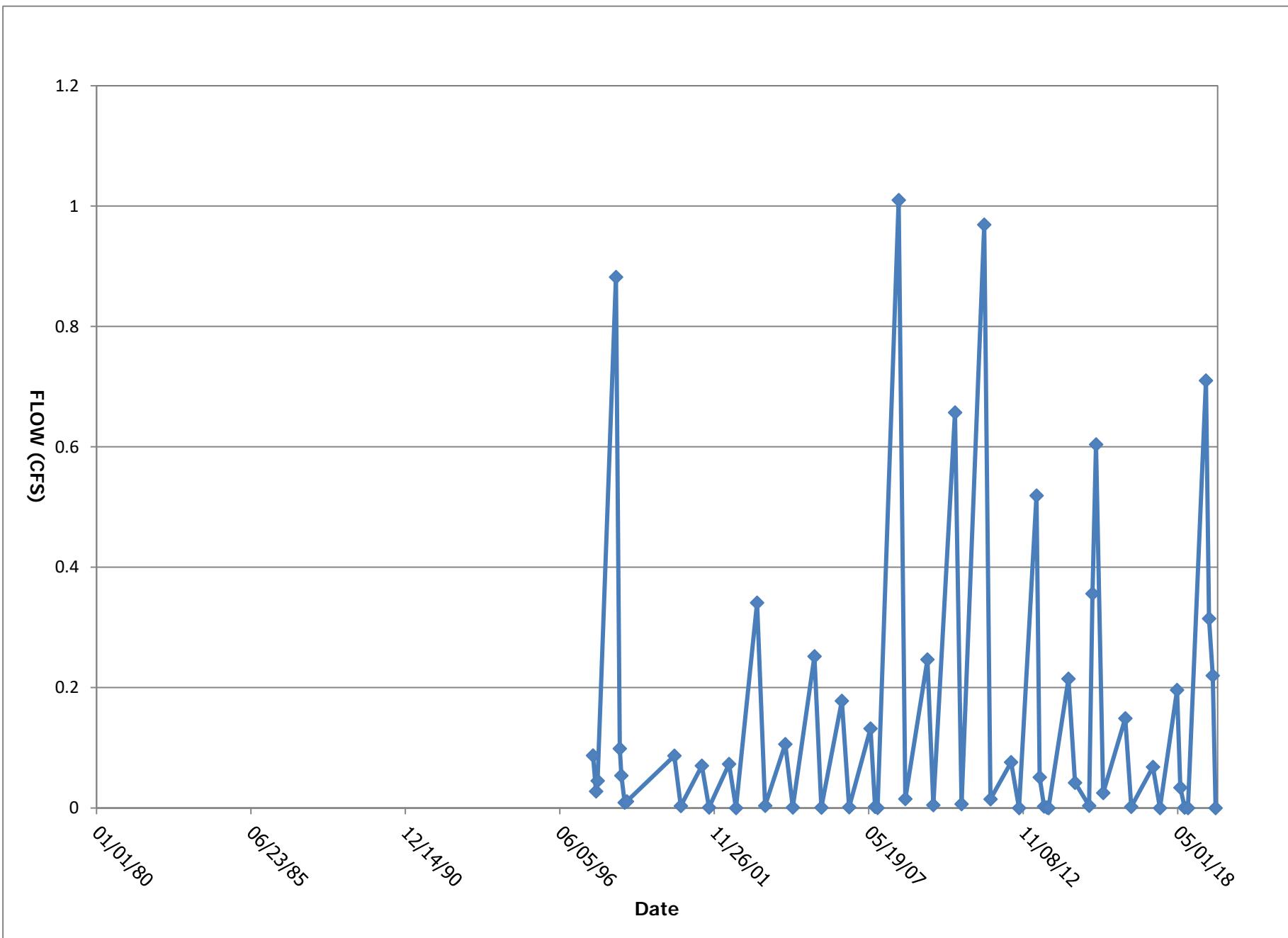
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report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Count	Average	Median	Maximum	Minimum	Standard Deviation
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	6/15/2005	6/5/2018	15	0.15	0.05	0.87	0.0038	0.24
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	8/8/1997	6/15/2005	16	0.11	0.065	0.42	0.04	0.11
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	6/2/2004	9/10/2015	13	0.2	0.2	0.2	0.2	0
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	8/8/1997	9/16/2003	14	0.2	0.2	0.2	0.2	0
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	6/15/2005	9/10/2015	5	8	8	10	8	0.9
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	6/15/2005	8/5/2013	8	10	10	10	10	0
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	8/8/1997	6/15/2005	16	10	10	10	10	0
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	8/8/1997	9/10/2015	27	0.072	0.05	0.15	0.05	0.033
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	8/8/1997	9/10/2015	27	0.03	0.02	0.2	0.02	0.04
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	8/8/1997	9/10/2015	27	0.01	0.01	0.01	0.01	2E-18
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	8/8/1997	9/10/2015	27	8.2	8.2	8.6	7.6	0.23
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	8/8/1997	9/10/2015	28	3.5	3.1	6.9	2	1.2
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	6/15/2005	6/11/2019	15	0.4	0.4	1	0.1	0.3
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	6/15/2005	6/11/2019	16	0.45	0.35	1.3	0.1	0.31
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	8/8/1997	6/11/2019	29	0.72	1	1.2	0.2	0.36
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	6/15/2005	9/10/2015	5	0.05	0.05	0.05	0.05	0
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	6/15/2005	8/5/2013	8	0.1	0.05	0.5	0.05	0.2
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	8/8/1997	6/15/2005	16	0.5	0.5	3	0.05	0.7
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	8/8/1997	9/10/2015	28	13.1	12.2	38.4	8.1	5.35
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	8/8/1997	9/10/2015	27	0.34	0.32	0.66	0.25	0.073
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	8/8/1997	9/10/2015	28	93.6	90	210	50	36.5
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	8/8/1997	9/10/2015	26	0.027	0.02	0.19	0.02	0.033
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	6/15/2005	9/10/2015	5	0.01	0.01	0.01	0.01	0
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	6/15/2005	8/5/2013	8	0.01	0.01	0.01	0.01	0
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	8/8/1997	6/15/2005	16	0.036	0.01	0.32	0.01	0.077
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	8/8/1997	9/10/2015	28	0.354	-0.35	11.7	-7	3.9
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	8/8/1997	7/29/2019	48	391	343	1570	240	233
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	8/8/1997	9/10/2015	27	335	336	695	226	92.3
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	8/8/1997	7/29/2019	48	14.5	8	111	5	16.8

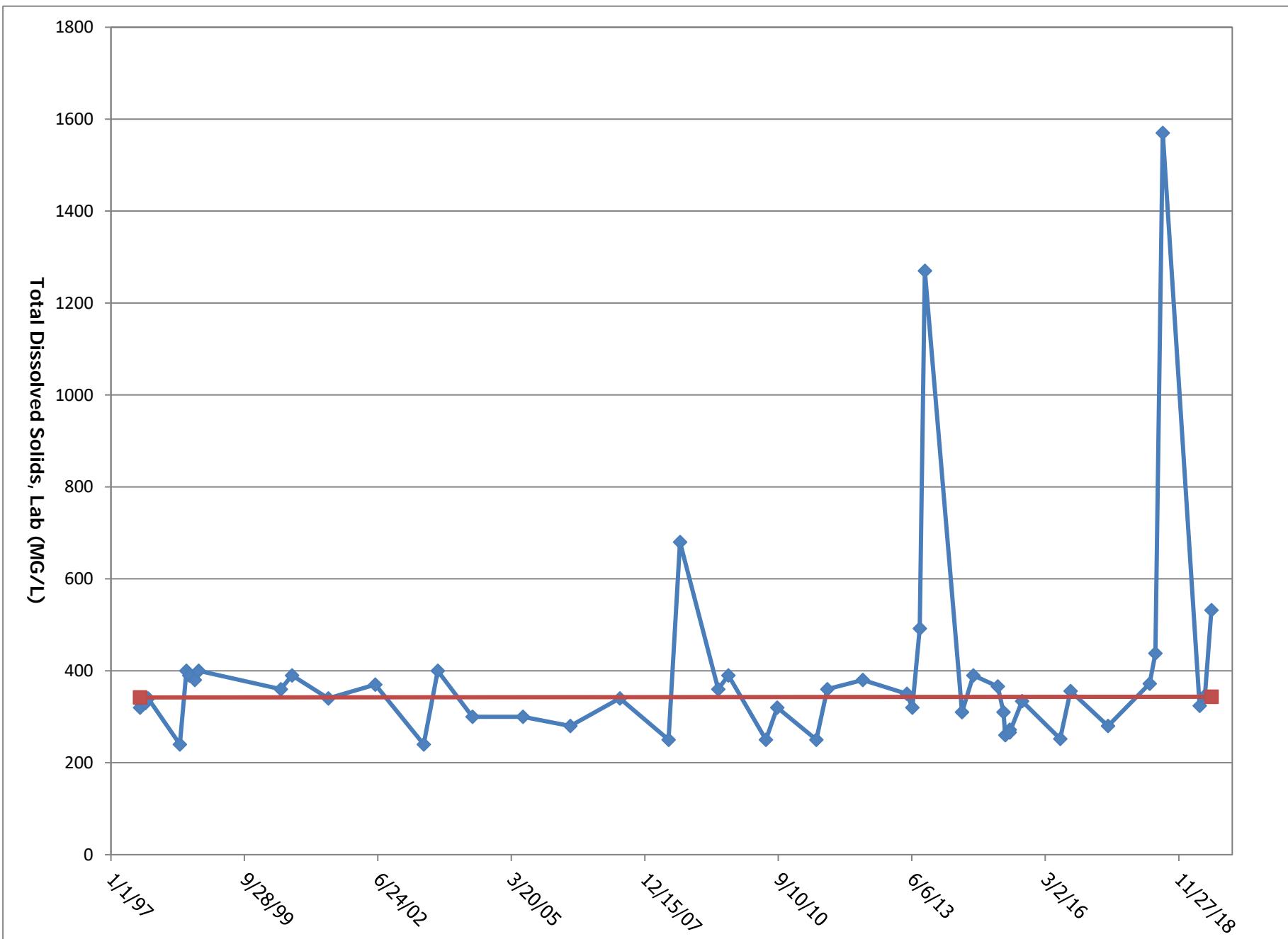
Period of Record Monitoring Summary

WSH9

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report_order	Parameter	Fraction	Units	5/2/2019		6/11/2019		7/29/2019		9/3/2019	
				Detection	Result	Detection	Result	Detection	Result	Detection	Result
42	Flow	N	GPM	Y	318.7	Y	141.2	Y	98.7	Y	0
1	Specific Conductivity, Field	N	UMHOS/CM	Y	501	Y	567	Y	851		
2	pH, Field	N	S.U.	Y	8.32	Y	8.29	Y	8.35		
3	Temperature, Field	N	DEG-C	Y	10.9	Y	15.5	Y	18.8		
18	Iron	D	MG/L	N	0.08			N	0.08		
18	Iron	PD	MG/L	Y	0.16			Y	0.2		
18	Iron	TR	MG/L	Y	0.52	Y	0.22	Y	0.25		
21	Manganese	D	MG/L			Y	0.0174				
30	Selenium	D	UG/L			Y	0.5				
30	Selenium	PD	UG/L			Y	0.5				
30	Selenium	TR	UG/L			Y	0.5				
39	Total Dissolved Solids, Lab	N	MG/L	Y	324	Y	346	Y	532		
41	Solids, Total Suspended	N	MG/L	Y	18	Y	6	Y	5		





Period of Record TDS Trend Plot

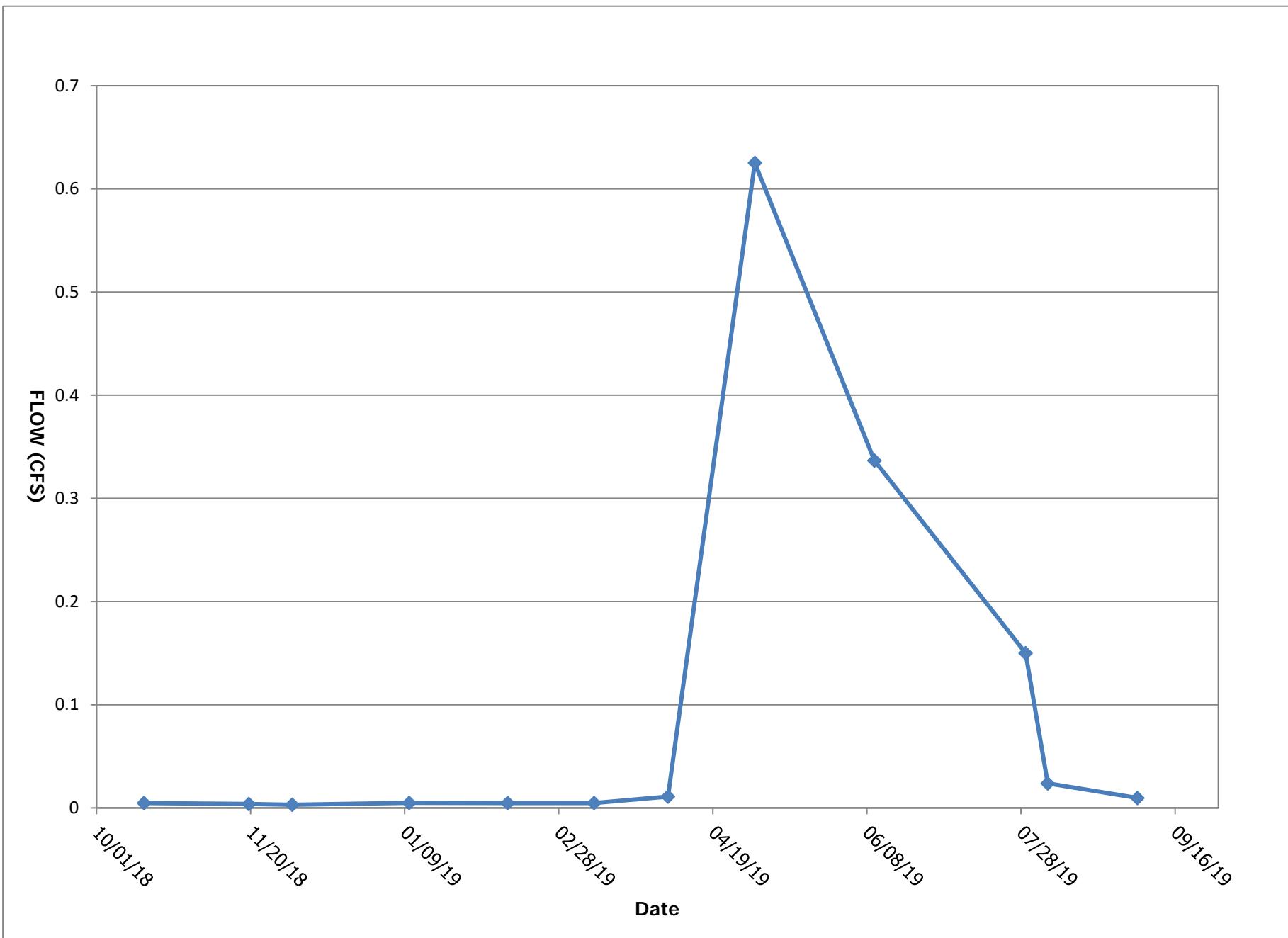
WSH9

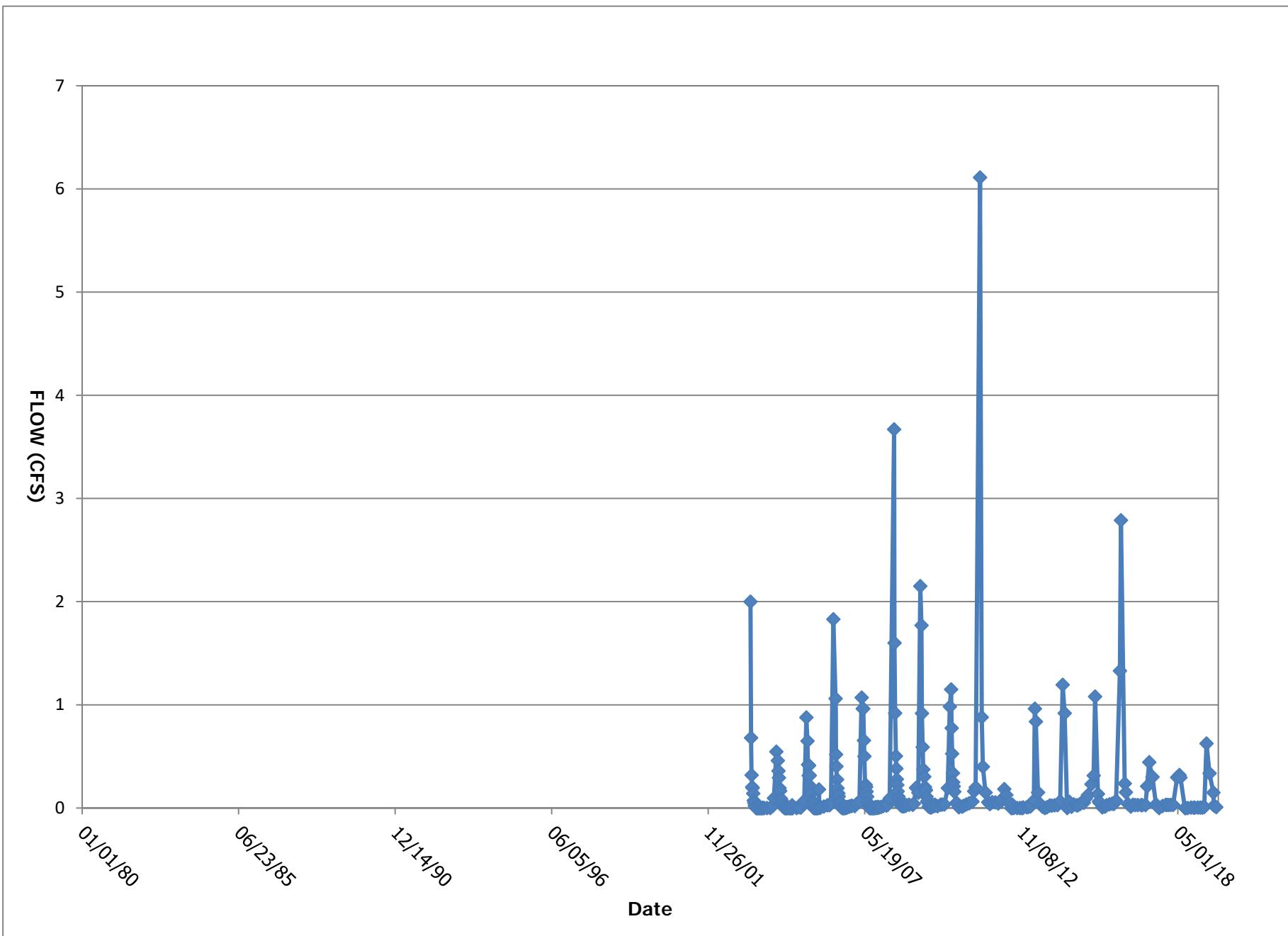
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	Site ID										
	Date	10/16/2018	11/19/2018	12/3/2018	1/10/2019						
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result	Detection	Result	Detection	Result
1	Flow	N	GPM	Y	2.1	Y	1.7	Y	1.4	Y	2.2
2	pH, Field	N	S.U.	Y	8.86	Y	8.74	Y	8.67	Y	8.17
3	Temperature, Field	N	C	Y	3.3	Y	2.2	Y	1.8	Y	1.2
4	Specific Conductivity, Field	N	UMHOS/CM	Y	2419	Y	2540	Y	2532	Y	1103
5	Iron	D	MG/L								
5	Iron	PD	MG/L								
5	Iron	TR	MG/L	Y	0.18	Y	0.06	Y	0.12	Y	0.12
7	Selenium	D	UG/L								
7	Selenium	PD	UG/L	Y	1.1	Y	1.3	Y	0.9	Y	0.7
7	Selenium	TR	UG/L	Y	1.4	Y	1.5	Y	1	Y	0.8
8	Solids, Total Suspended	N	MG/L								
9	Total Dissolved Solids, Lab	N	MG/L	Y	1940	Y	2080	Y	1880	Y	1610
19	Solids, Settleable	N	ML/L							N	0.5

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	Location Code	NPDES17	NPDES17	NPDES17	NPDES17						
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	Site ID										
	Date	2/11/2019	3/11/2019	4/4/2019	5/2/2019						
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result	Detection	Result	Detection	Result
1	Flow	N	GPM	Y	2.1	Y	2.1	Y	4.8	Y	280.6
2	pH, Field	N	S.U.	Y	7.87	Y	7.86	Y	7.83	Y	8.3
3	Temperature, Field	N	C	Y	1.3	Y	1.5	Y	1.7	Y	9.4
4	Specific Conductivity, Field	N	UMHOS/CM	Y	1089	Y	1094	Y	1084	Y	516
5	Iron	D	MG/L								
5	Iron	PD	MG/L								
5	Iron	TR	MG/L	Y	0.12	Y	0.15	Y	0.15	Y	0.41
7	Selenium	D	UG/L								
7	Selenium	PD	UG/L	Y	0.9	Y	1.1	Y	1.2	Y	0.8
7	Selenium	TR	UG/L	Y	0.9	Y	0.7	Y	1.3	Y	1
8	Solids, Total Suspended	N	MG/L								
9	Total Dissolved Solids, Lab	N	MG/L	Y	1680	Y	1630	Y	1020	Y	338
19	Solids, Settleable	N	ML/L	N	0.5	N	0.5	N	0.5	N	0.5

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	Site ID				
	Date	5/2/2019	6/10/2019	7/29/2019	7/29/2019
report_order	Parameter	Fraction	Units	Detection	Result
1	Flow	N	GPM	Y	280.6
2	pH, Field	N	S.U.	Y	8.3
3	Temperature, Field	N	C	Y	9.4
4	Specific Conductivity, Field	N	UMHOS/CM	Y	516
5	Iron	D	MG/L	N	0.08
5	Iron	PD	MG/L	Y	0.11
5	Iron	TR	MG/L	Y	0.41
7	Selenium	D	UG/L	Y	0.8
7	Selenium	PD	UG/L		
7	Selenium	TR	UG/L	Y	0.8
8	Solids, Total Suspended	N	MG/L	Y	6
9	Total Dissolved Solids, Lab	N	MG/L	Y	338
19	Solids, Settleable	N	ML/L		
				N	0.5
				N	0.5

	loc_report_order	1		1	
	Location Code	NPDES17		NPDES17	
	sys_sample_code	3002_NPDES17_08052019		3002_NPDES17_09032019	
	Site ID				
	Date	8/5/2019		9/3/2019	
report_order	Parameter	Fraction	Units	Detection	Result
1	Flow	N	GPM	Y	10.7
2	pH, Field	N	S.U.	Y	8.66
3	Temperature, Field	N	C	Y	24.8
4	Specific Conductivity, Field	N	UMHOS/CM	Y	1244
5	Iron	D	MG/L		
5	Iron	PD	MG/L		
5	Iron	TR	MG/L	Y	0.16
7	Selenium	D	UG/L		
7	Selenium	PD	UG/L	Y	1.2
7	Selenium	TR	UG/L	Y	1.3
8	Solids, Total Suspended	N	MG/L		
9	Total Dissolved Solids, Lab	N	MG/L	Y	890
9	Total Dissolved Solids, Lab	N	MG/L	Y	1600
19	Solids, Settleable	N	ML/L	N	0.5

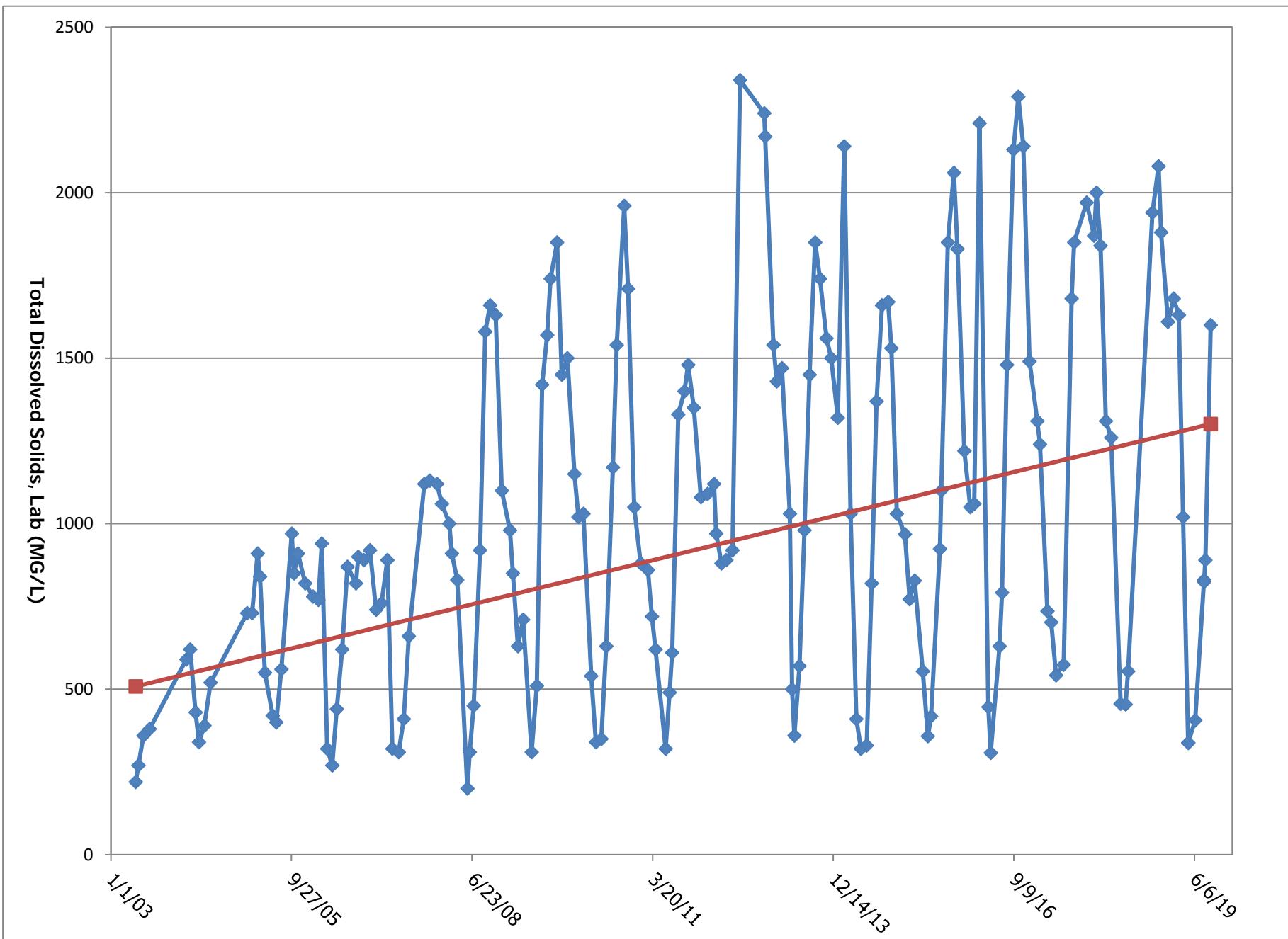




Period of Record Water Discharge Hydrograph

NPDES17

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Period of Record TDS Trend Plot

NPDES17

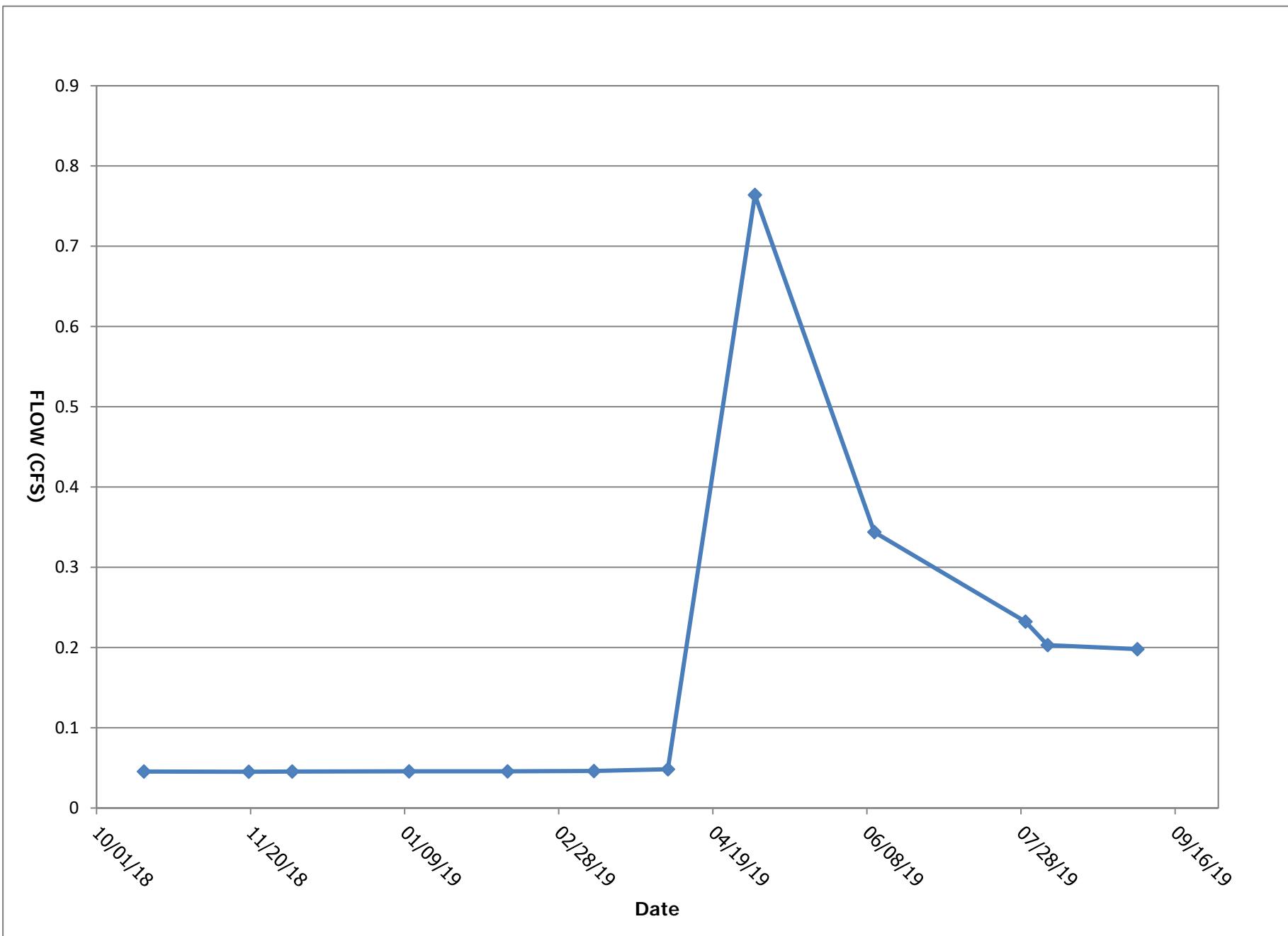
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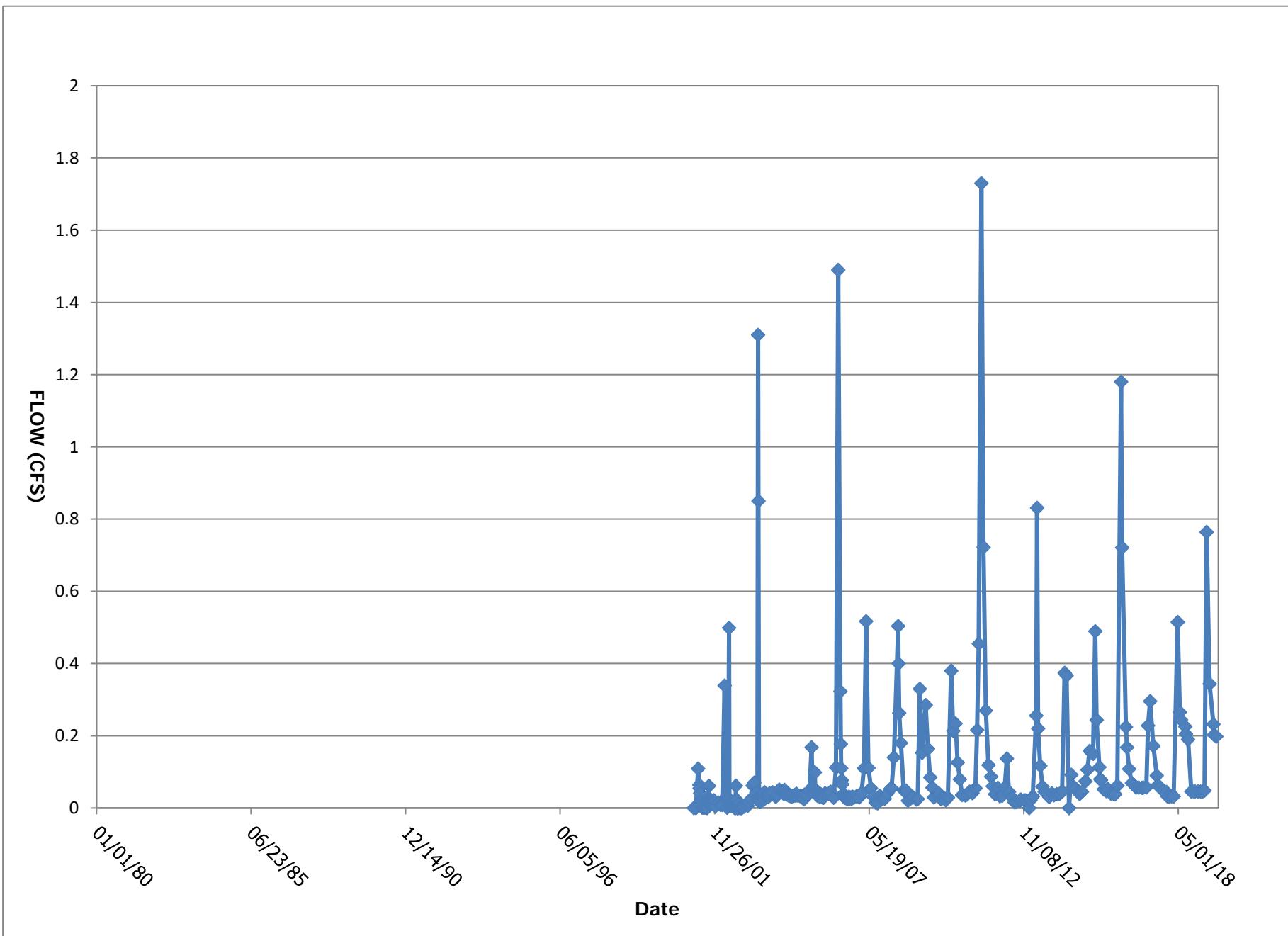
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	Site ID				
	Date	10/16/2018	11/19/2018	12/3/2018	1/10/2019
report_order	Parameter	Fraction	Units	Detection	Result
1	Flow	N	GPM	Y	20.4
2	pH, Field	N	S.U.	Y	8.61
3	Temperature, Field	N	C	Y	4.1
4	Specific Conductivity, Field	N	UMHOS/CM	Y	2723
5	Iron	D	MG/L		
5	Iron	PD	MG/L		
5	Iron	TR	MG/L	Y	0.05
7	Selenium	D	UG/L		
7	Selenium	PD	UG/L	Y	0.7
7	Selenium	TR	UG/L	Y	0.8
8	Solids, Total Suspended	N	MG/L		
9	Total Dissolved Solids, Lab	N	MG/L	Y	2340
19	Solids, Settleable	N	ML/L		

loc_report_order	2	2	2	2							
Location Code	NPDES16	NPDES16	NPDES16	NPDES16							
sys_sample_code	3002_NPDES16_02112019	3002_NPDES16_03112019	3002_NPDES16_04042019	3002_NPDES16_05022019							
Site ID											
Date	2/11/2019	3/11/2019	4/4/2019	5/2/2019							
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result	Detection	Result	Detection	Result
1	Flow	N	GPM	Y	20.5	Y	20.7	Y	21.7	Y	342.9
2	pH, Field	N	S.U.	Y	8.08	Y	8.03	Y	8.01	Y	8.29
3	Temperature, Field	N	C	Y	2	Y	2.2	Y	2.4	Y	9.6
4	Specific Conductivity, Field	N	UMHOS/CM	Y	1490	Y	1494	Y	1487	Y	1580
5	Iron	D	MG/L								
5	Iron	PD	MG/L								
5	Iron	TR	MG/L	Y	0.05	N	0.1	Y	0.04	Y	0.31
7	Selenium	D	UG/L								
7	Selenium	PD	UG/L	Y	2.8	Y	2.2	Y	2.4	Y	1
7	Selenium	TR	UG/L	Y	2.1	Y	1.5	Y	2.5	Y	1
8	Solids, Total Suspended	N	MG/L								
9	Total Dissolved Solids, Lab	N	MG/L	Y	2490	Y	2290	Y	1300	Y	1260
19	Solids, Settleable	N	ML/L	N	0.5	N	0.5	N	0.5	N	0.5

	loc_report_order	2	2	2	2
	Location Code	NPDES16	NPDES16	NPDES16	NPDES16
	sys_sample_code	3002_NPDES16_05022019A	3002_NPDES16_06102019	3002_NPDES16_07292019	3002_NPDES16_07292019A
	Site ID				
	Date	5/2/2019	6/10/2019	7/29/2019	7/29/2019
report_order	Parameter	Fraction	Units	Detection	Result
1	Flow	N	GPM	Y	342.9
2	pH, Field	N	S.U.	Y	8.29
3	Temperature, Field	N	C	Y	9.6
4	Specific Conductivity, Field	N	UMHOS/CM	Y	1580
5	Iron	D	MG/L	N	0.08
5	Iron	PD	MG/L	Y	0.07
5	Iron	TR	MG/L	Y	0.31
7	Selenium	D	UG/L	Y	1
7	Selenium	PD	UG/L		
7	Selenium	TR	UG/L	Y	0.9
8	Solids, Total Suspended	N	MG/L	Y	5
9	Total Dissolved Solids, Lab	N	MG/L	Y	1260
19	Solids, Settleable	N	ML/L		
				N	0.5
				N	0.5

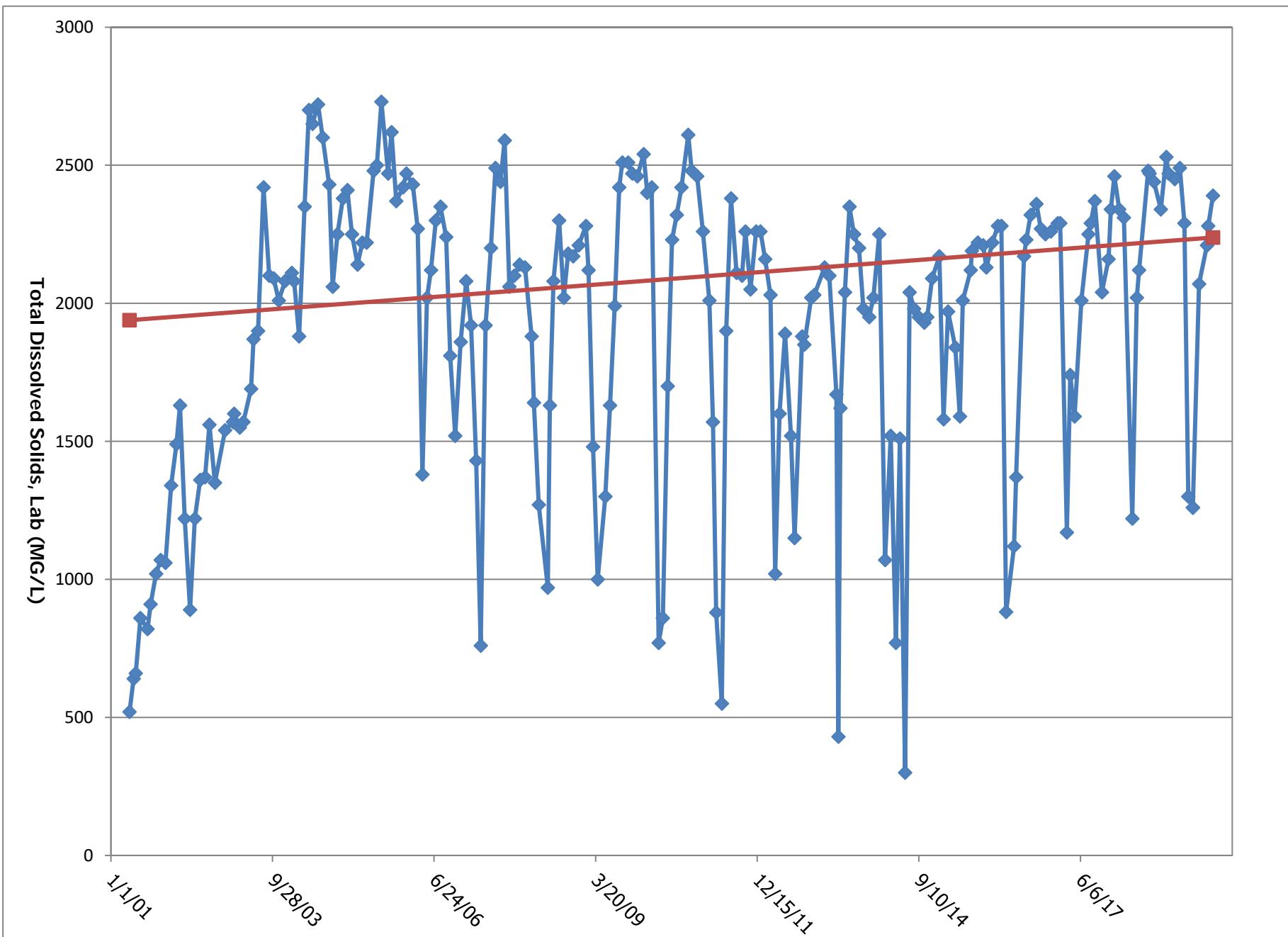
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		Site ID				
		Date	8/5/2019		9/3/2019	
report_order	Parameter	Fraction	Units	Detection	Result	Detection
1	Flow	N	GPM	Y	91.3	Y
2	pH, Field	N	S.U.	Y	8.31	Y
3	Temperature, Field	N	C	Y	24.4	Y
4	Specific Conductivity, Field	N	UMHOS/CM	Y	2642	Y
5	Iron	D	MG/L			
5	Iron	PD	MG/L			
5	Iron	TR	MG/L	Y	0.14	Y
7	Selenium	D	UG/L			
7	Selenium	PD	UG/L	Y	1.1	Y
7	Selenium	TR	UG/L	Y	1.3	Y
8	Solids, Total Suspended	N	MG/L			
9	Total Dissolved Solids, Lab	N	MG/L	Y	2280	Y
19	Solids, Settleable	N	ML/L	N	0.5	N
					0.5	





Period of Record Water Discharge Hydrograph

NPDES16



Period of Record TDS Trend Plot

NPDES16

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		loc_report_order				2 WSH7						
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	4/6/1987	9/3/2019	189	459.69	100.51	8600	0	989.561
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	4/6/1987	7/29/2019	180	1097	1070	1960	0.89	343.8
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	4/6/1987	7/29/2019	184	8.35	8.37	9.07	7.68	0.175
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	4/6/1987	7/30/2018	181	11.5	11.5	28.3	0.2	5.88
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	5/2/2019	7/29/2019	3	13.9	13.4	16	12.4	1.86
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	4/6/1987	9/10/2015	76	299	306	475	147	67.8
6	3002 - AHR SW & SPR Long	Arsenic	D	UG/L	6/11/1987	6/11/1987	1	1	1	1	1	0
6	3002 - AHR SW & SPR Long	Arsenic	T	UG/L	8/8/1990	8/8/1990	1	4	4	4	4	0
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	4/6/1987	9/10/2015	74	2	1.9	6.8	0.4	1.2
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	4/6/1987	9/10/2015	76	353	358	580	178	78.1
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	6/11/1987	9/10/2015	72	72	70	140	20	27
8	3002 - AHR SW & SPR Long	Boron	T	UG/L	4/6/1987	4/6/1987	1	30	30	30	30	0
8	3002 - AHR SW & SPR Long	Boron	TR	UG/L	9/6/1987	9/6/1987	1	80	80	80	80	0
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	6/11/1987	9/10/2015	9	0.6	0.1	5	0.1	2
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	4/13/2005	8/5/2013	16	0.1	0.1	0.1	0.1	1E-17
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	4/6/1987	6/13/2005	54	2	0.5	10	0.1	3
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	6/11/1987	9/10/2015	74	121	118	209	24	36.5
10	3002 - AHR SW & SPR Long	Calcium	T	MG/L	4/6/1987	4/6/1987	1	141	141	141	141	0
10	3002 - AHR SW & SPR Long	Calcium	TR	MG/L	6/11/1987	9/6/1987	2	99.5	99.5	113	86	19.1
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	4/6/1987	9/10/2015	76	6.49	2	33	0	7.47
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	4/6/1987	9/10/2015	76	11.4	10	50	4	7.79
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	6/11/1987	9/10/2015	9	1	0.5	10	0.1	3
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	4/13/2005	8/5/2013	16	0.3	0.1	1.1	0.1	0.28
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	6/11/1987	6/13/2005	53	10	10	40	0.3	5
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	4/6/1987	9/10/2015	74	1120	1040	1840	283	311.2
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	6/11/1987	9/10/2015	9	2	0.6	10	0.5	3
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	4/13/2005	8/5/2013	16	2.4	2.3	4.7	0.5	1.1
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	4/6/1987	6/13/2005	54	10	10	30	0.7	4.1
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	4/6/1987	9/10/2015	73	613.4	578	1160	130	205.5
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	4/6/1987	7/29/2019	60	0.047	0.02	1.1	0.01	0.14
18	3002 - AHR SW & SPR Long	Iron	PD	MG/L	4/30/2013	7/29/2019	7	0.7	0.68	1.75	0.05	0.536
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	6/11/1987	8/5/2013	70	3.14	2.6	10.6	0.1	2.53

Period of Record Monitoring Summary

WSH7

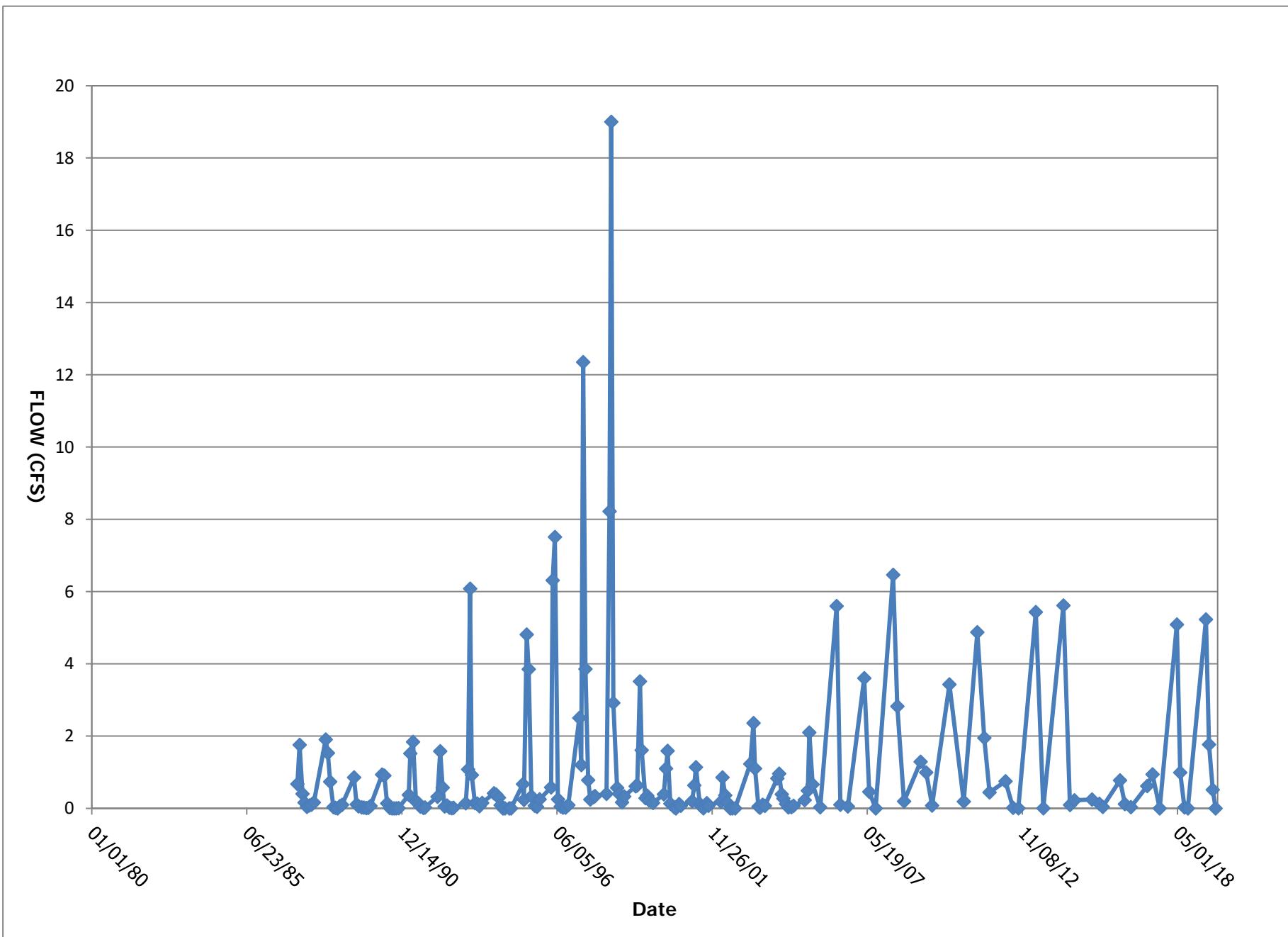
Report 19: Page 1 of 7

loc_report_order Location Code Location Name					2 WSH7							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Count	Average	Median	Maximum	Minimum	Standard Deviation
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	4/6/1987	7/29/2019	47	4.01	2.29	26.1	0.13	5.11
18	3002 - AHR SW & SPR Long	Iron	TR10UM	MG/L	4/30/2013	4/30/2013	1	5.18	5.18	5.18	5.18	0
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	6/11/1987	9/10/2015	9	2	0.1	20	0.1	7
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	4/13/2005	8/5/2013	16	1.5	1.5	3.9	0.1	1
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	4/6/1987	6/13/2005	54	6.37	2.6	20	0.2	7.74
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	6/11/1987	9/10/2015	74	76.2	66.4	155	17	30
20	3002 - AHR SW & SPR Long	Magnesium	T	MG/L	4/6/1987	9/6/1987	3	72	69	77	69	4.6
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	4/6/1987	6/11/2019	68	0.0853	0.07	0.38	0.0083	0.0653
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	4/13/2005	6/5/2018	25	0.14	0.12	0.7	0.01	0.14
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	4/5/1988	6/13/2005	51	0.17	0.16	0.46	0.04	0.075
21	3002 - AHR SW & SPR Long	Manganese	TR	MG/L	4/6/1987	8/8/1990	4	0.11	0.095	0.23	0.02	0.09
22	3002 - AHR SW & SPR Long	Mercury	D	UG/L	6/11/1987	6/11/1987	1	0.2	0.2	0.2	0.2	0
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	8/8/1990	9/10/2015	26	0.2	0.2	0.2	0.1	0.02
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	4/6/1987	4/7/2004	50	0.2	0.2	0.3	0.1	0.05
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	6/11/1987	9/10/2015	9	10	8	20	8	4
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	4/13/2005	8/5/2013	16	10	10	20	10	3
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	6/11/1987	6/13/2005	53	10	10	30	10	6
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	4/6/1987	9/10/2015	75	0.083	0.05	0.82	0.01	0.1
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	4/6/1987	9/10/2015	75	0.277	0.06	2.7	0.02	0.466
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	9/6/1987	9/10/2015	73	0.01	0.01	0.09	0.01	0.01
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	4/6/1987	9/10/2015	74	8.3	8.3	9	7.7	0.22
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	6/11/1987	9/10/2015	74	4.77	4.05	12.4	2	1.68
29	3002 - AHR SW & SPR Long	Potassium	T	MG/L	4/6/1987	4/6/1987	1	4	4	4	4	0
29	3002 - AHR SW & SPR Long	Potassium	TR	MG/L	6/11/1987	9/6/1987	2	4	4	4	4	0
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	6/11/1987	6/11/2019	30	0.86	0.95	2	0.2	0.41
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	4/13/2005	6/11/2019	27	0.92	1	2	0.1	0.43
30	3002 - AHR SW & SPR Long	Selenium	T	UG/L	8/8/1990	8/8/1990	1	2	2	2	2	0
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	4/6/1987	6/11/2019	73	1.1	1	10	0.1	1.1
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	6/11/1987	9/10/2015	9	1	0.05	10	0.05	3
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	4/13/2005	8/5/2013	16	0.08	0.05	0.5	0.05	0.1
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	6/11/1987	6/13/2005	53	2	0.5	10	0.05	4
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	6/11/1987	9/10/2015	74	41.4	32	240	11.6	35.7

loc_report_order Location Code Location Name					2 WSH7							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Count	Average	Median	Maximum	Minimum	Standard Deviation
32	3002 - AHR SW & SPR Long	Sodium	T	MG/L	4/6/1987	4/6/1987	1	25	25	25	25	0
32	3002 - AHR SW & SPR Long	Sodium	TR	MG/L	6/11/1987	9/6/1987	2	27	27	37	17	14
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	4/6/1987	9/10/2015	74	0.829	0.565	9.27	0.28	1.27
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	4/6/1987	9/10/2015	76	379	314	880	126	185
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	6/11/1987	9/10/2015	73	0.12	0.04	0.9	0.01	0.16
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	6/11/1987	9/10/2015	9	0.02	0.01	0.1	0.01	0.03
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	4/13/2005	8/5/2013	16	0.01	0.01	0.02	0.01	0.003
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	4/6/1987	6/13/2005	54	0.021	0.02	0.14	0.01	0.02
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	4/6/1987	9/10/2015	76	-0.146	-0.05	6.02	-6.6	2.25
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	4/6/1987	7/29/2019	94	897	790	1580	360	306
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	4/6/1987	9/10/2015	74	812.24	738.5	1550	351	270.54
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	4/6/1987	7/29/2019	95	117	76	892	2	144

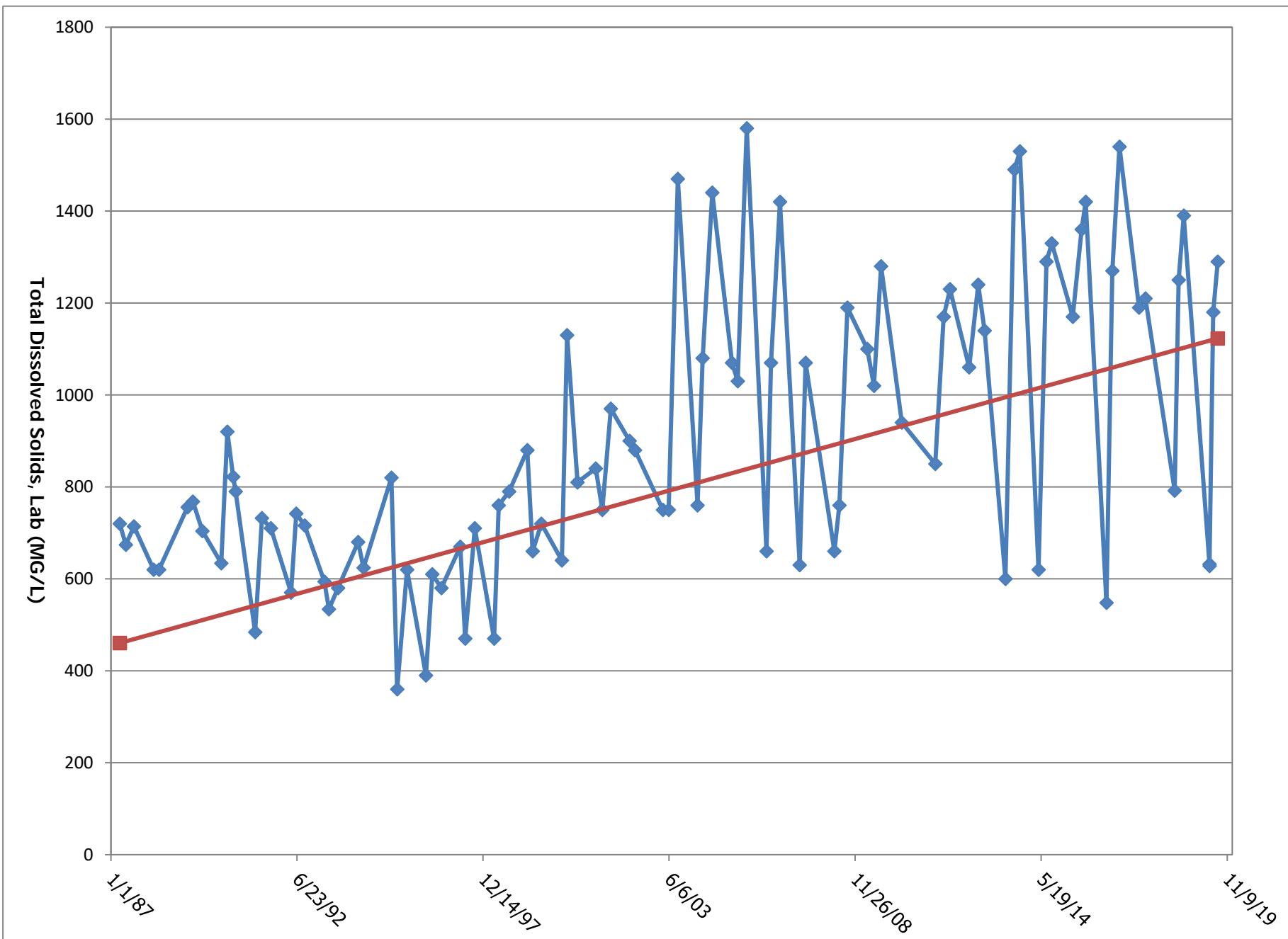


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		sys_sample_code	3002_WSH7_09032019		
		Site ID			
		Date	9/3/2019		
report_order	Parameter	Fraction	Units	Detection	Result
42	Flow	N	GPM	Y	0
1	Specific Conductivity, Field	N	UMHOS/CM		
2	pH, Field	N	S.U.		
3	Temperature, Field	N	DEG-C		
18	Iron	D	MG/L		
18	Iron	PD	MG/L		
18	Iron	TR	MG/L		
21	Manganese	D	MG/L		
30	Selenium	D	UG/L		
30	Selenium	PD	UG/L		
30	Selenium	TR	UG/L		
39	Total Dissolved Solids, Lab	N	MG/L		
41	Solids, Total Suspended	N	MG/L		



Period of Record Water Discharge Hydrograph

WSH7



Period of Record TDS Trend Plot

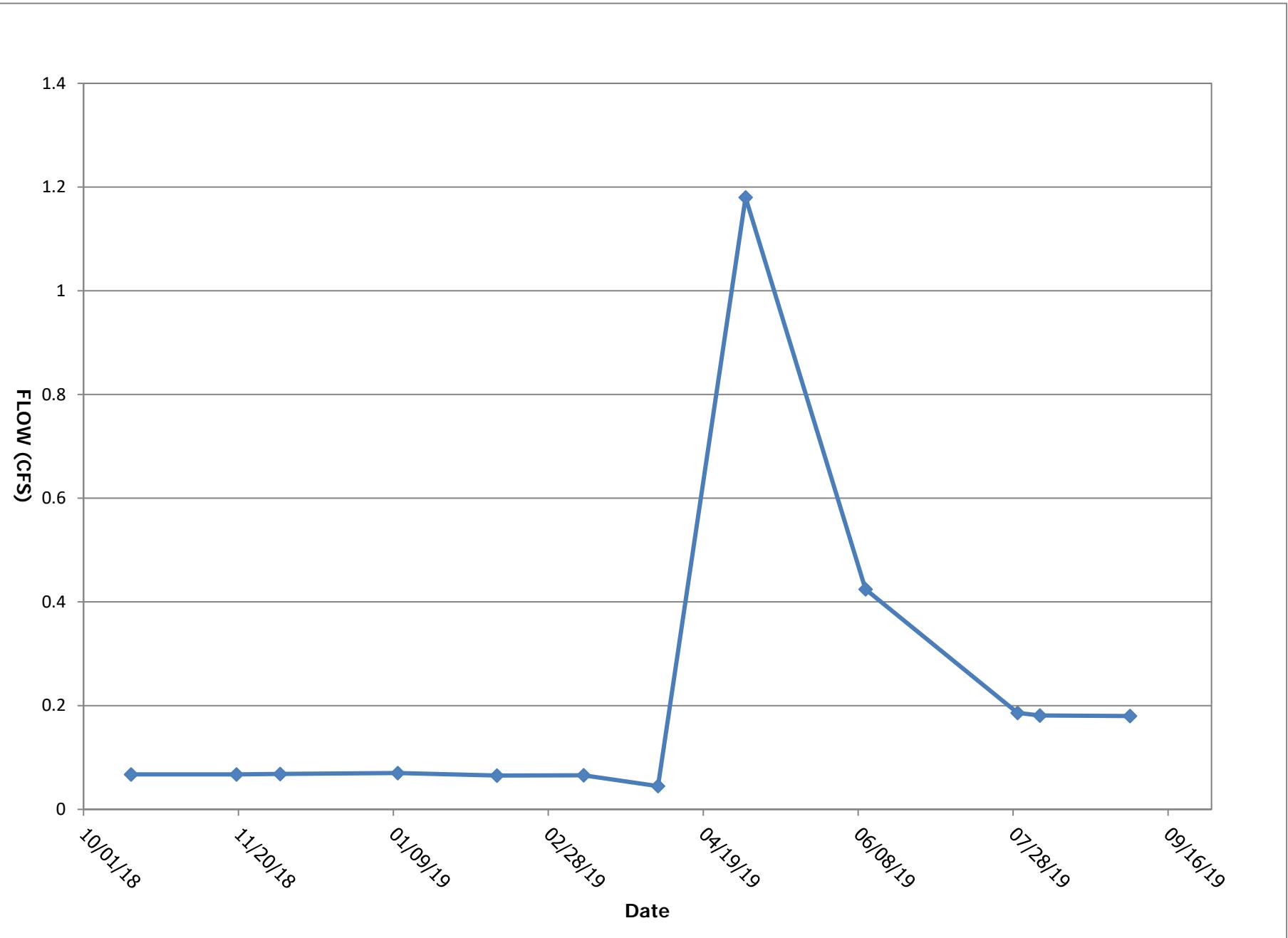
WSH7

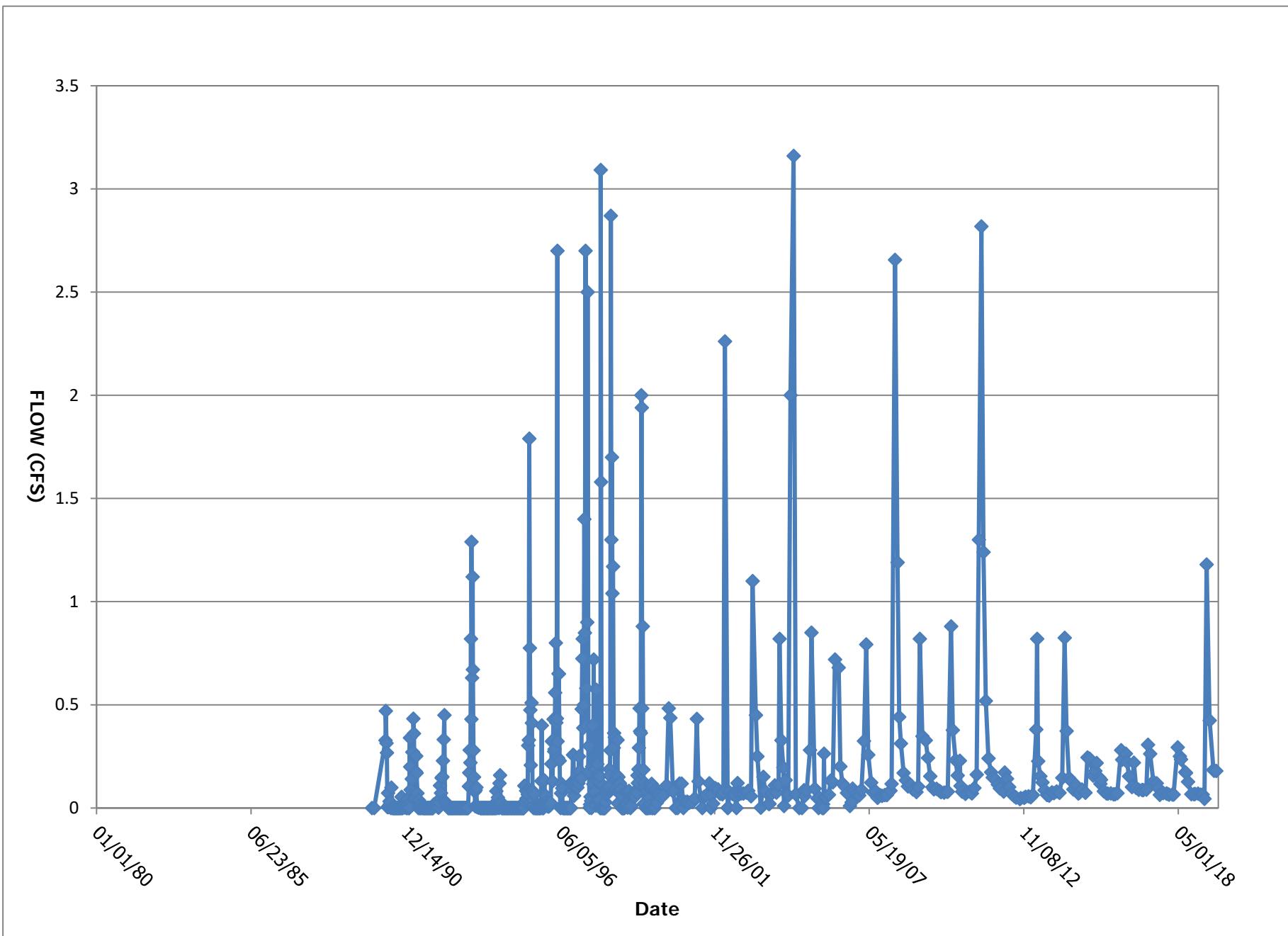
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				sys_sample_code	3002_NPDES6_10162018	3002_NPDES6_11192018	3002_NPDES6_12032018	3002_NPDES6_01102019
				Site ID	10/16/2018	11/19/2018	12/3/2018	1/10/2019
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result	Detection
1	Flow	N	GPM	Y	30.2	Y	30.2	Y
2	pH, Field	N	S.U.	Y	8.68	Y	8.53	Y
3	Temperature, Field	N	C	Y	4.8	Y	3.3	Y
4	Specific Conductivity, Field	N	UMHOS/CM	Y	4277	Y	4676	Y
5	Iron	D	MG/L					
5	Iron	PD	MG/L					
5	Iron	TR	MG/L	Y	0.1	N	0.1	Y
6	Manganese	PD	MG/L	Y	0.06			Y
7	Selenium	D	UG/L					
7	Selenium	PD	UG/L	N	0.2	N	0.5	N
7	Selenium	TR	UG/L	N	0.2	N	0.5	N
8	Solids, Total Suspended	N	MG/L					
9	Total Dissolved Solids, Lab	N	MG/L	Y	3940	Y	4270	Y
19	Solids, Settleable	N	ML/L					N
								0.5

				loc_report_order	3	3	3	3
				Location Code	NPDES6	NPDES6	NPDES6	NPDES6
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				Site ID	2/11/2019	3/11/2019	4/4/2019	5/2/2019
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result	Detection
1	Flow	N	GPM	Y	29.2	Y	29.5	Y
2	pH, Field	N	S.U.	Y	7.78	Y	7.81	Y
3	Temperature, Field	N	C	Y	1	Y	1.4	Y
4	Specific Conductivity, Field	N	UMHOS/CM	Y	2146	Y	2157	Y
5	Iron	D	MG/L					
5	Iron	PD	MG/L					
5	Iron	TR	MG/L	Y	0.21	Y	0.21	Y
6	Manganese	PD	MG/L				Y	0.15
7	Selenium	D	UG/L					
7	Selenium	PD	UG/L	Y	0.9	Y	0.3	Y
7	Selenium	TR	UG/L	Y	0.2	N	0.5	Y
8	Solids, Total Suspended	N	MG/L					
9	Total Dissolved Solids, Lab	N	MG/L	Y	3780	Y	3520	Y
19	Solids, Settleable	N	ML/L	N	0.5	N	0.5	N
							0.5	0.5

				loc_report_order	3 NPDES6		3 NPDES6		3 NPDES6		3 NPDES6	
				Location Code	3 NPDES6		3 NPDES6		3 NPDES6		3 NPDES6	
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				Site ID	5/2/2019		6/10/2019		7/29/2019		7/29/2019	
report_order	Parameter	Fraction	Units		Detection	Result	Detection	Result	Detection	Result	Detection	Result
1	Flow	N	GPM		Y	529.5	Y	190.5	Y	83.7	Y	83.7
2	pH, Field	N	S.U.		Y	8.19	Y	8.13	Y	8.2	Y	8.2
3	Temperature, Field	N	C		Y	10.1	Y	13.7	Y	20.6	Y	20.6
4	Specific Conductivity, Field	N	UMHOS/CM		Y	2287	Y	3896	Y	4119	Y	4119
5	Iron	D	MG/L		N	0.08			N	0.4		
5	Iron	PD	MG/L		Y	0.03			Y	0.11		
5	Iron	TR	MG/L		Y	0.09	Y	0.06	N	0.4	N	0.4
6	Manganese	PD	MG/L									
7	Selenium	D	UG/L		Y	1.6			N	1		
7	Selenium	PD	UG/L				Y	1.4			Y	0.3
7	Selenium	TR	UG/L		Y	1.7	Y	0.8	N	1	N	1
8	Solids, Total Suspended	N	MG/L		N	20			Y	6		
9	Total Dissolved Solids, Lab	N	MG/L		Y	1960	Y	3760	Y	4030	Y	4060
19	Solids, Settleable	N	ML/L				N	0.5			N	0.5

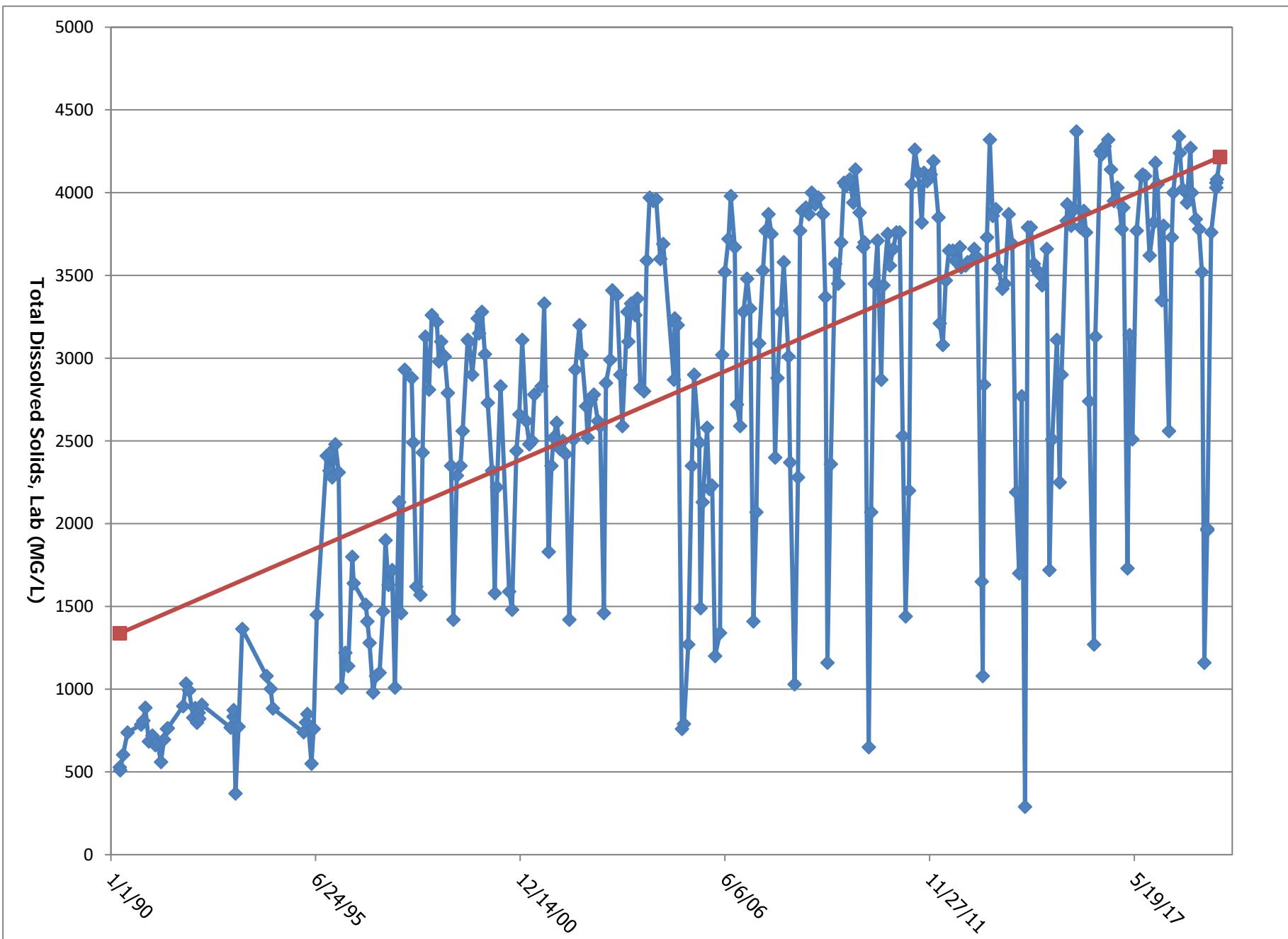
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	Site ID						
	Date	8/5/2019	9/3/2019				
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result
1	Flow	N	GPM	Y	81.2	Y	80.7
2	pH, Field	N	S.U.	Y	8.19	Y	8.28
3	Temperature, Field	N	C	Y	24.9	Y	22.2
4	Specific Conductivity, Field	N	UMHOS/CM	Y	4190	Y	4368
5	Iron	D	MG/L				
5	Iron	PD	MG/L				
5	Iron	TR	MG/L	N	0.4	N	0.4
6	Manganese	PD	MG/L				
7	Selenium	D	UG/L				
7	Selenium	PD	UG/L	N	1	Y	0.2
7	Selenium	TR	UG/L	N	1	N	1
8	Solids, Total Suspended	N	MG/L				
9	Total Dissolved Solids, Lab	N	MG/L	Y	4080	Y	4210
19	Solids, Settleable	N	ML/L	N	0.5	N	0.5





Period of Record Water Discharge Hydrograph

NPDES6



Period of Record TDS Trend Plot

NPDES6

loc_report_order Location Code Location Name					3 WSHF1							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	1/26/1979	9/3/2019	290	588.9944	104.17	13463.79	0.55	1360.38
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	1/26/1979	9/3/2019	286	1430	1296	4147	1.25	667
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	1/26/1979	9/3/2019	287	8.25	8.34	8.9	7.1	0.311
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	1/26/1979	9/11/2018	289	10.9	11	28	0	6.42
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	5/2/2019	9/3/2019	4	15.8	14.9	20.2	13	3.2
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	1/26/1979	9/10/2015	159	315.8	318	470	133	65.38
6	3002 - AHR SW & SPR Long	Arsenic	D	UG/L	1/21/1981	6/11/1987	3	1	1	2	1	0.6
6	3002 - AHR SW & SPR Long	Arsenic	T	UG/L	1/26/1979	9/11/1986	28	6.14	1	117	1	21.9
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	4/6/1987	9/10/2015	76	1.7	1.1	4.6	0.5	0.98
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	1/26/1979	9/10/2015	104	369	368	574	162	75.6
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	12/1/1980	9/10/2015	78	131	95	530	20	94.7
8	3002 - AHR SW & SPR Long	Boron	T	UG/L	1/26/1979	4/6/1987	35	138	120	330	0	87.4
8	3002 - AHR SW & SPR Long	Boron	TR	UG/L	9/6/1987	9/6/1987	1	70	70	70	70	0
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	1/21/1981	9/10/2015	11	0.9	0.2	5	0.1	2
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	4/13/2005	4/12/2010	16	0.1	0.1	0.2	0.1	0.03
9	3002 - AHR SW & SPR Long	Cadmium	T	UG/L	6/26/1980	9/11/1986	24	3.9	5	11	0.2	2.6
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	4/6/1987	6/13/2005	56	2	0.5	10	0.1	3
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	12/1/1980	9/10/2015	81	151	139	268	71.7	47.2
10	3002 - AHR SW & SPR Long	Calcium	T	MG/L	1/26/1979	4/6/1987	36	123	121	200	47	35.8
10	3002 - AHR SW & SPR Long	Calcium	TR	MG/L	6/11/1987	9/6/1987	2	112	112	115	109	4.24
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	7/11/1983	9/10/2015	93	4.63	2	32	0	6.78
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	1/26/1979	9/10/2015	118	23.6	15.5	590	4	54.1
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	1/21/1981	9/10/2015	11	7	1	40	0.1	10
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	4/13/2005	4/12/2010	16	0.2	0.1	1	0.1	0.2
13	3002 - AHR SW & SPR Long	Chromium	T	UG/L	8/28/1980	10/6/1981	5	30	20	40	20	10
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	6/11/1987	6/13/2005	55	10	10	20	0.5	3
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	1/26/1979	9/10/2015	154	1418	1340	3560	428	500.5
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	1/21/1981	9/10/2015	11	4.3	1	20	0.5	6.4
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	4/13/2005	4/12/2010	16	2.3	2.2	5.7	0.5	1.4
15	3002 - AHR SW & SPR Long	Copper	T	UG/L	1/26/1979	9/11/1986	30	23	20	250	2	43
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	4/6/1987	6/13/2005	56	11	10	30	1.6	4.2
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	1/26/1979	9/10/2015	112	811.904	713	1760	285	332.667

Period of Record Monitoring Summary

WSHF1

Report 21: Page 1 of 7

loc_report_order Location Code Location Name					3 WSHF1							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	1/26/1979	7/29/2019	143	0.052	0.02	0.86	0.01	0.1
18	3002 - AHR SW & SPR Long	Iron	PD	MG/L	4/30/2013	7/29/2019	11	0.925	0.69	3.31	0.09	0.962
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	1/26/1979	4/12/2010	153	6.74	1.46	240	0.15	27.6
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	4/6/1987	9/3/2019	55	3	1.54	21.4	0.39	3.98
18	3002 - AHR SW & SPR Long	Iron	TR10UM	MG/L	4/30/2013	4/30/2013	1	4.37	4.37	4.37	4.37	0
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	12/1/1980	9/10/2015	13	8	0.2	20	0.1	10
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	4/13/2005	4/12/2010	16	1.2	0.7	4.8	0.2	1.2
19	3002 - AHR SW & SPR Long	Lead	T	UG/L	1/26/1979	9/11/1986	29	26	20	130	2	29
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	4/6/1987	6/13/2005	56	6.3	2.2	20	0.2	7.7
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	12/1/1980	9/10/2015	81	126	96.6	359	44.5	68.5
20	3002 - AHR SW & SPR Long	Magnesium	T	MG/L	1/26/1979	9/6/1987	37	87.4	86	150	37	26.1
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	1/26/1979	9/3/2019	135	0.24	0.11	1.95	0.01	0.362
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	4/13/2005	6/5/2018	27	0.377	0.28	2.01	0.02	0.398
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	1/26/1979	6/13/2005	128	0.389	0.2	4.6	0.01	0.577
21	3002 - AHR SW & SPR Long	Manganese	TR	MG/L	4/6/1987	6/11/1987	2	0.19	0.19	0.25	0.13	0.085
22	3002 - AHR SW & SPR Long	Mercury	D	UG/L	12/1/1980	6/11/1987	4	0.07	0.02	0.2	0.02	0.09
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	1/26/1979	6/11/2019	69	0.24	0.2	1	0	0.24
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	4/6/1987	4/7/2004	52	0.2	0.2	0.5	0.1	0.06
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	12/1/1980	9/10/2015	13	10	20	20	8	6
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	4/13/2005	4/12/2010	16	10	10	20	10	4
23	3002 - AHR SW & SPR Long	Nickel	T	UG/L	8/28/1980	10/6/1981	5	20	20	30	20	4
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	6/11/1987	6/13/2005	55	10	10	30	10	5
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	5/29/1980	6/11/2019	121	0.083	0.05	0.52	0.01	0.08
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	5/29/1980	6/11/2019	122	0.598	0.255	3.33	0.02	0.727
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	9/6/1987	6/11/2019	90	0.014	0.01	0.11	0.01	0.013
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	1/26/1979	9/10/2015	155	8.2	8.2	8.7	7.1	0.24
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	12/1/1980	9/10/2015	81	5.3	5	8.9	2	1.5
29	3002 - AHR SW & SPR Long	Potassium	T	MG/L	1/26/1979	4/6/1987	35	4.6	4.3	8	2	1.4
29	3002 - AHR SW & SPR Long	Potassium	TR	MG/L	6/11/1987	9/6/1987	2	5	5	5	4	0.7
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	1/21/1981	9/3/2019	38	0.81	0.85	3	0.2	0.54
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	4/13/2005	9/3/2019	30	0.87	0.95	2.1	0.2	0.54
30	3002 - AHR SW & SPR Long	Selenium	T	UG/L	1/26/1979	9/11/1986	28	1	1	4	0	0.8

Period of Record Monitoring Summary

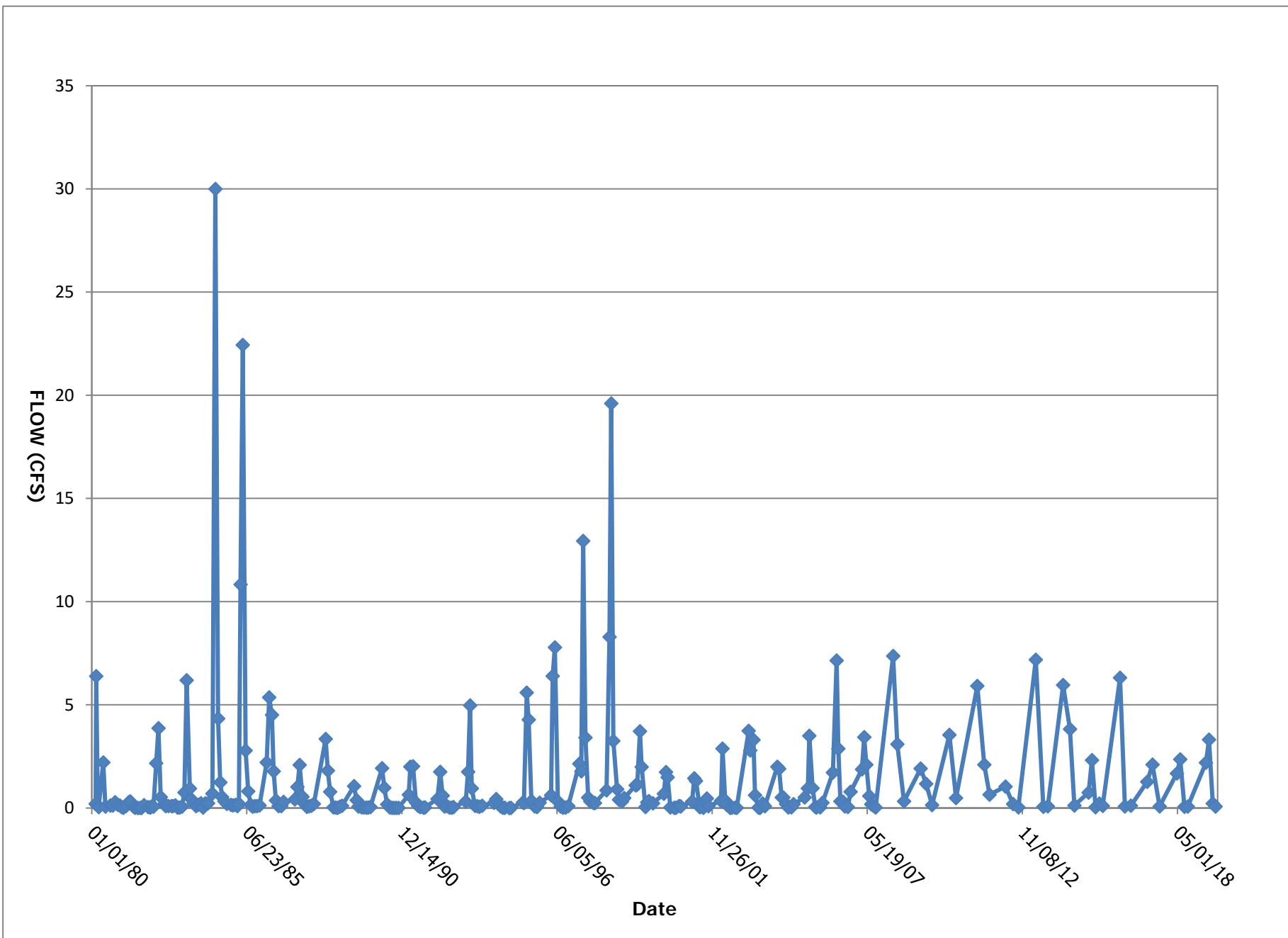
WSHF1

Report 21: Page 2 of 7

loc_report_order Location Code Location Name					3 WSHF1							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	4/6/1987	9/3/2019	80	1.2	1	10	0.2	1.2
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	1/21/1981	9/10/2015	11	1	0.1	10	0.05	3
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	4/13/2005	4/12/2010	16	0.08	0.05	0.5	0.05	0.1
31	3002 - AHR SW & SPR Long	Silver	T	UG/L	8/28/1980	10/29/1980	3	7	5	11	5	3.5
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	6/11/1987	6/13/2005	55	2	0.5	10	0.05	4
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	12/1/1980	9/10/2015	81	73.9	62.6	231	19.8	45.4
32	3002 - AHR SW & SPR Long	Sodium	T	MG/L	1/26/1979	4/6/1987	34	54	53	92	19	18
32	3002 - AHR SW & SPR Long	Sodium	TR	MG/L	6/11/1987	9/6/1987	2	71	71	82	59	16
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	1/26/1979	9/10/2015	98	1.04	0.86	3.96	0.44	0.631
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	1/26/1979	7/29/2019	132	652	540	2000	170	381
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	6/11/1987	6/11/2019	90	0.093	0.025	1	0.01	0.14
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	12/1/1980	9/10/2015	13	0.01	0.01	0.02	0.01	0.005
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	4/13/2005	4/12/2010	16	0.01	0.01	0.02	0.01	0.003
37	3002 - AHR SW & SPR Long	Zinc	T	MG/L	1/26/1979	9/11/1986	31	0.23	0.02	5	0	0.9
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	4/6/1987	6/13/2005	56	0.02	0.01	0.05	0.01	0.01
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	7/11/1983	9/10/2015	92	0.114	0	4.4	-4.7	2.03
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	1/26/1979	9/3/2019	183	1253	1090	3730	290	632.4
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	7/11/1983	9/10/2015	91	1227.58	1110	3000	388	537.333
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	4/27/1979	9/3/2019	181	194.9	40	14000	2	1109

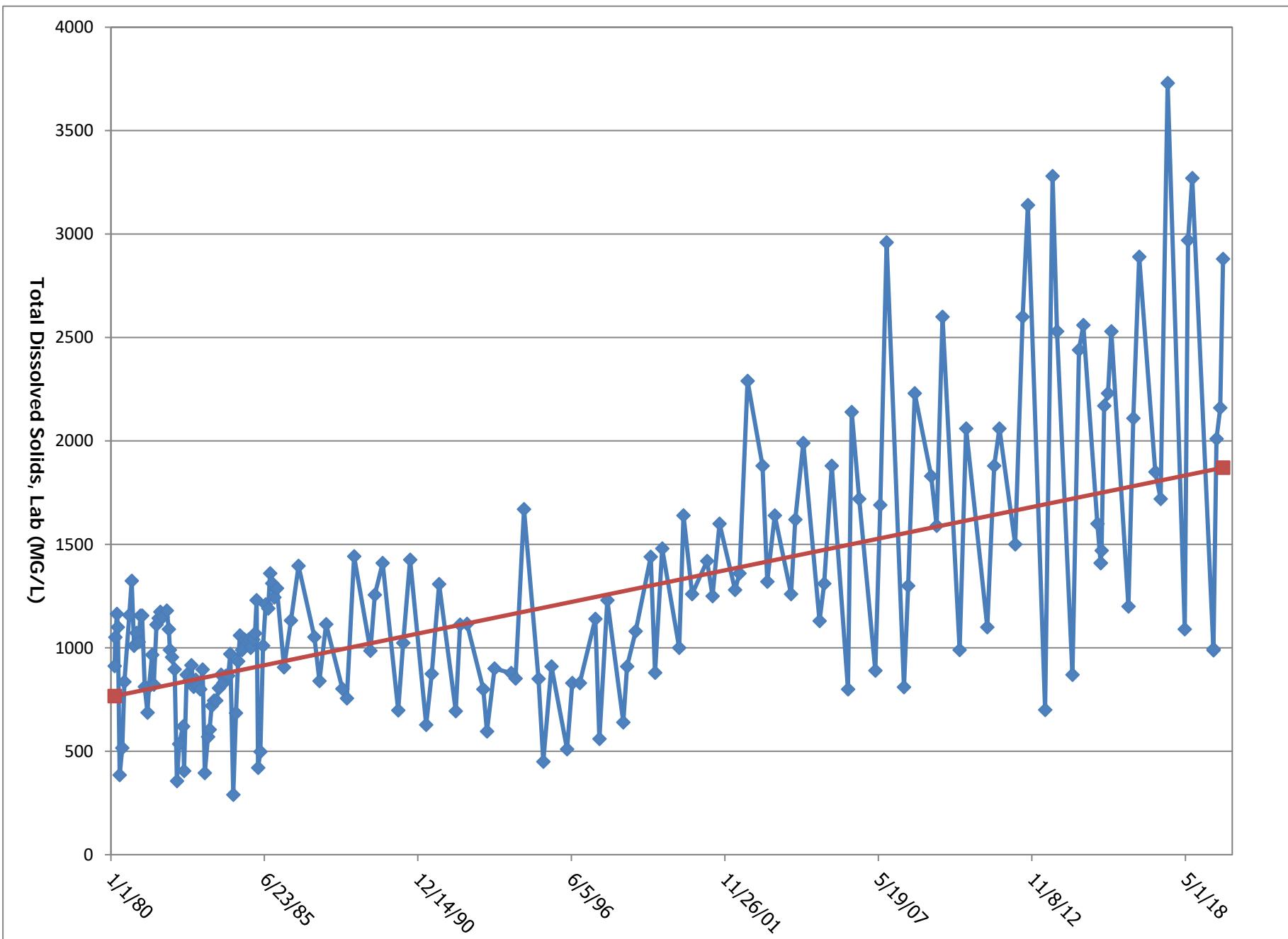
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42	Flow	N	GPM	Y	986.8	Y	986.8	Y	1486.9	Y	97.8
1	Specific Conductivity, Field	N	UMHOS/CM	Y	1291	Y	1291	Y	2335	Y	2550
2	pH, Field	N	S.U.	Y	8.65	Y	8.65	Y	8.32	Y	8.52
3	Temperature, Field	N	DEG-C	Y	13	Y	13	Y	13.9	Y	15.9
18	Iron	D	MG/L	N	0.08					N	0.2
18	Iron	PD	MG/L	Y	0.57					Y	0.77
18	Iron	TR	MG/L	Y	1.2	Y	1.88	Y	1.57	Y	2.55
21	Manganese	D	MG/L			Y	0.0125	Y	0.0295		
22	Mercury	T	UG/L			N	1	N	1		
24	Ammonia Nitrogen	N	MG/L			N	0.2	N	0.2		
26	Nitrate Nitrogen	N	MG/L			Y	0.27	Y	0.19		
27	Nitrite Nitrogen	N	MG/L			Y	0.01	Y	0.01		
30	Selenium	D	UG/L	Y	1	Y	1	Y	0.7	Y	0.8
30	Selenium	PD	UG/L			Y	1	Y	1		
30	Selenium	TR	UG/L	Y	1.1	Y	1.1	Y	0.6	Y	0.6
34	Sulfates	N	MG/L	Y	512	Y	454	Y	1170	Y	1190
35	Sulfide	N	MG/L			N	0.1	N	0.1		
39	Total Dissolved Solids, Lab	N	MG/L	Y	988	Y	994	Y	2010	Y	2160
41	Solids, Total Suspended	N	MG/L	Y	66	Y	67	Y	50	Y	81

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		sys_sample_code	3002_WSHF1_09032019		
		Site ID			
		Date	9/3/2019		
report_order	Parameter	Fraction	Units	Detection	Result
42	Flow	N	GPM	Y	30.7
1	Specific Conductivity, Field	N	UMHOS/CM	Y	3176
2	pH, Field	N	S.U.	Y	8.61
3	Temperature, Field	N	DEG-C	Y	20.2
18	Iron	D	MG/L		
18	Iron	PD	MG/L		
18	Iron	TR	MG/L	Y	1.88
21	Manganese	D	MG/L	Y	0.286
22	Mercury	T	UG/L		
24	Ammonia Nitrogen	N	MG/L		
26	Nitrate Nitrogen	N	MG/L		
27	Nitrite Nitrogen	N	MG/L		
30	Selenium	D	UG/L	Y	0.3
30	Selenium	PD	UG/L	Y	0.2
30	Selenium	TR	UG/L	Y	0.3
34	Sulfates	N	MG/L		
35	Sulfide	N	MG/L		
39	Total Dissolved Solids, Lab	N	MG/L	Y	2880
41	Solids, Total Suspended	N	MG/L	Y	75



Period of Record Water Discharge Hydrograph

WSHF1



Period of Record TDS Trend Plot

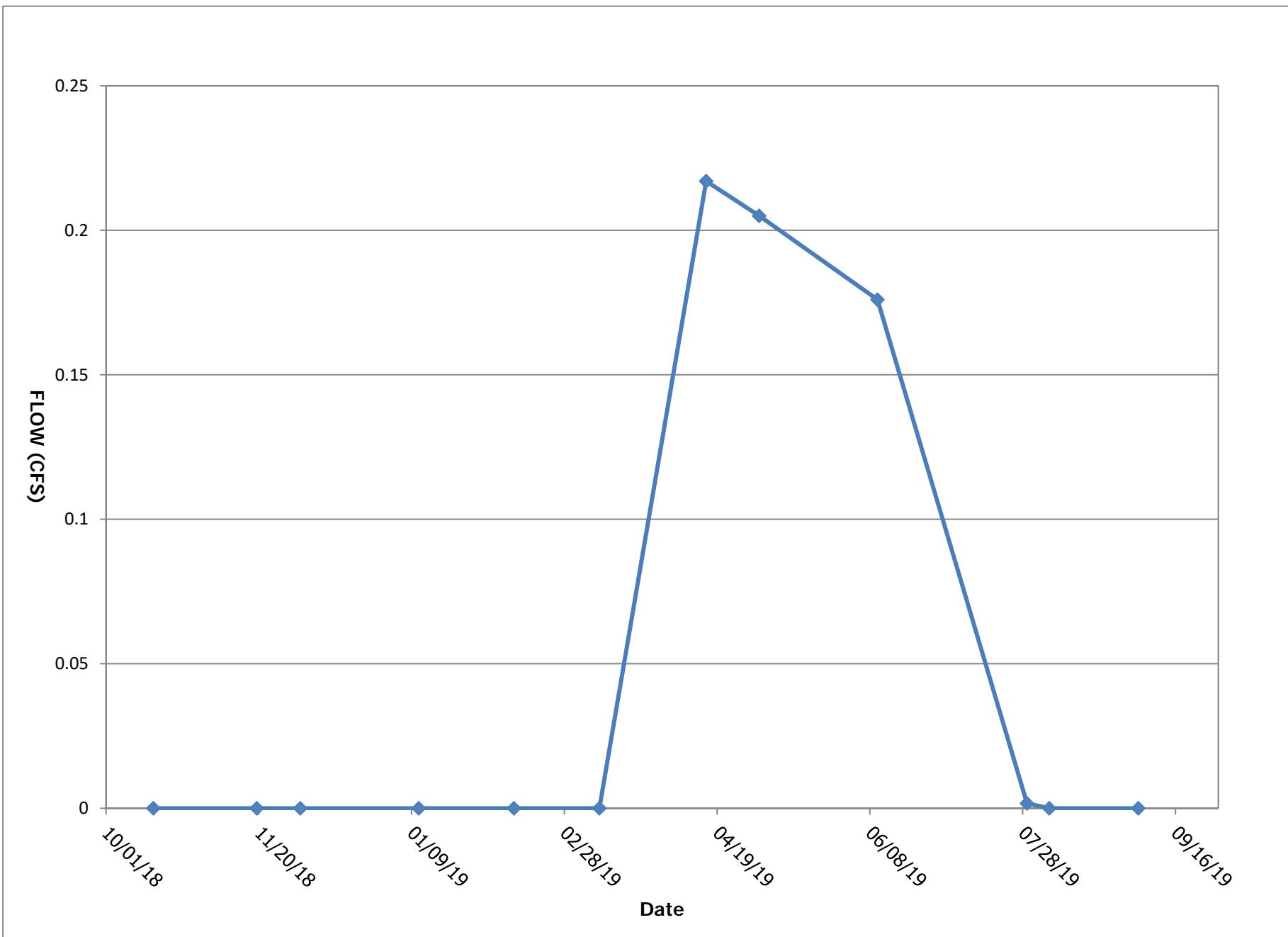
WSHF1

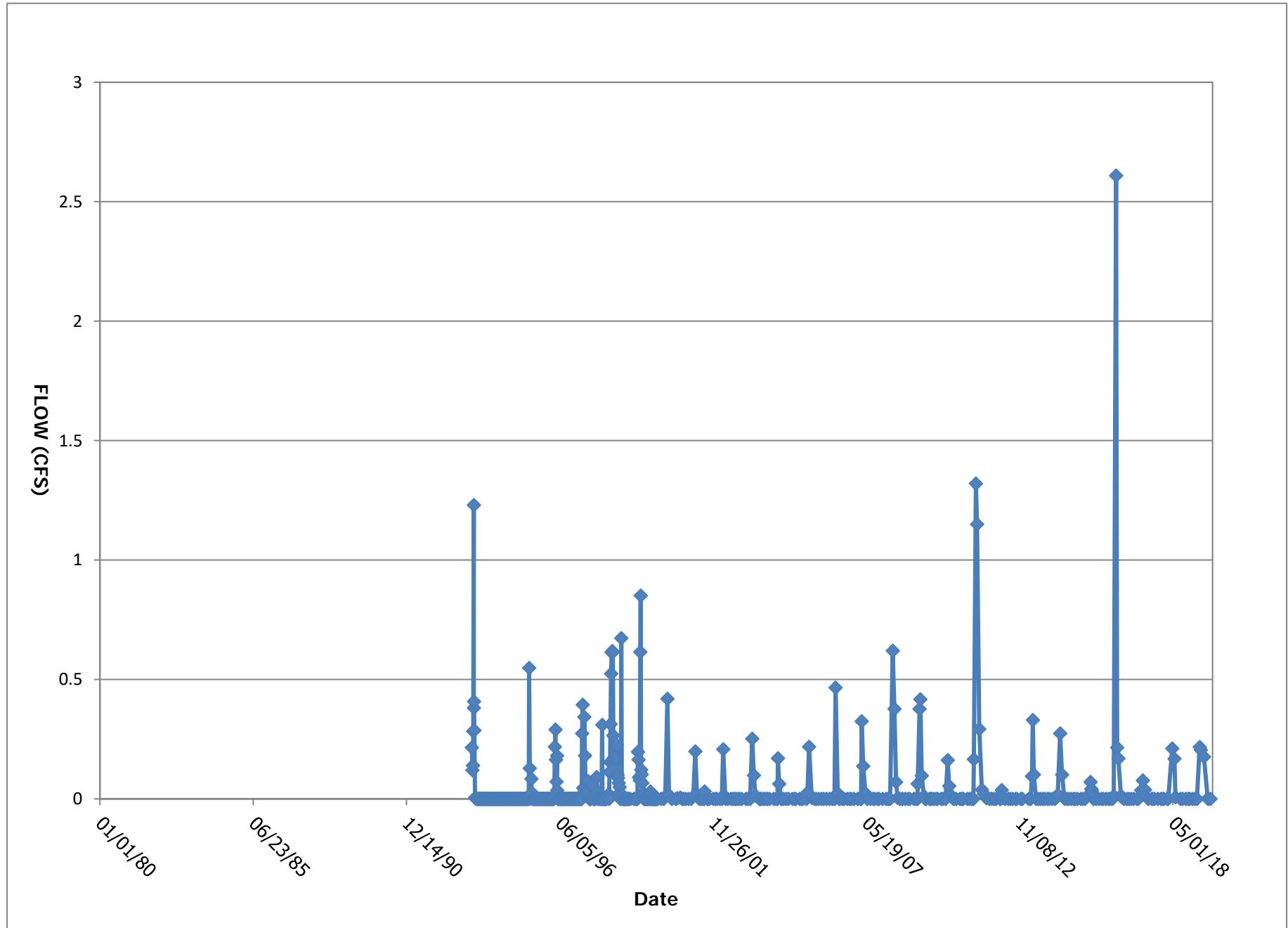
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Site ID							
Date	10/16/2018	11/19/2018	12/3/2018	1/11/2019			
report_order	Parameter	Fraction	Units	Detection Result	Detection Result	Detection Result	Detection Result
1	Flow	N	GPM	Y	0	Y	0
2	pH, Field	N	S.U.				
3	Temperature, Field	N	C				
4	Specific Conductivity, Field	N	UMHOS/CM				
5	Iron	D	MG/L				
5	Iron	PD	MG/L				
5	Iron	TR	MG/L				
7	Selenium	D	UG/L				
7	Selenium	PD	UG/L				
7	Selenium	TR	UG/L				
8	Solids, Total Suspended	N	MG/L				
9	Total Dissolved Solids, Lab	N	MG/L				
11	Cadmium	PD	UG/L				
12	Chromium	PD	UG/L				
13	Copper	PD	UG/L				
14	Lead	PD	UG/L				
15	Mercury	T	UG/L				
16	Nickel	PD	UG/L				
17	Silver	PD	UG/L				
18	Zinc	PD	MG/L				
19	Solids, Settleable	N	ML/L				

loc_report_order	4	4	4	4			
Location Code	NPDES5	NPDES5	NPDES5	NPDES5			
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Site ID							
Date	2/11/2019	3/11/2019	4/15/2019	5/2/2019			
report_order	Parameter	Fraction	Units	Detection Result	Detection Result	Detection Result	Detection Result
1	Flow	N	GPM	Y 0	Y 0	Y 97.6	Y 92.1
2	pH, Field	N	S.U.			Y 8.59	Y 8.52
3	Temperature, Field	N	C			Y 6.2	Y 10.3
4	Specific Conductivity, Field	N	UMHOS/CM			Y 2538	Y 2711
5	Iron	D	MG/L				
5	Iron	PD	MG/L				
5	Iron	TR	MG/L			Y 0.22	Y 0.29
7	Selenium	D	UG/L				
7	Selenium	PD	UG/L			Y 1.5	
7	Selenium	TR	UG/L			Y 1.7	
8	Solids, Total Suspended	N	MG/L				
9	Total Dissolved Solids, Lab	N	MG/L			Y 2200	Y 2520
11	Cadmium	PD	UG/L			N 0.3	
12	Chromium	PD	UG/L			N 2	
13	Copper	PD	UG/L			Y 0.9	
14	Lead	PD	UG/L			N 0.5	
15	Mercury	T	UG/L			Y 0.0017	
16	Nickel	PD	UG/L			Y 12	
17	Silver	PD	UG/L			N 0.5	
18	Zinc	PD	MG/L			N 0.05	
19	Solids, Settleable	N	ML/L			N 0.5	N 0.5

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	Location Code	NPDES5	NPDES5	NPDES5	NPDES5
	sys_sample_code	3002_NPDES5_05022019A	3002_NPDES5_06102019	3002_NPDES5_07292019	3002_NPDES5_07292019A
	Site ID				
	Date	5/2/2019	6/10/2019	7/29/2019	7/29/2019
report_order	Parameter	Fraction	Units	Detection	Result
1	Flow	N	GPM	Y	92.1
2	pH, Field	N	S.U.	Y	8.52
3	Temperature, Field	N	C	Y	10.3
4	Specific Conductivity, Field	N	UMHOS/CM	Y	2711
5	Iron	D	MG/L	N	0.2
5	Iron	PD	MG/L	Y	0.07
5	Iron	TR	MG/L	Y	0.54
7	Selenium	D	UG/L	Y	2.9
7	Selenium	PD	UG/L		
7	Selenium	TR	UG/L	Y	2.9
8	Solids, Total Suspended	N	MG/L	Y	14
9	Total Dissolved Solids, Lab	N	MG/L	Y	2510
11	Cadmium	PD	UG/L		
12	Chromium	PD	UG/L		
13	Copper	PD	UG/L		
14	Lead	PD	UG/L		
15	Mercury	T	UG/L		
16	Nickel	PD	UG/L		
17	Silver	PD	UG/L		
18	Zinc	PD	MG/L		
19	Solids, Settleable	N	ML/L		N 0.5

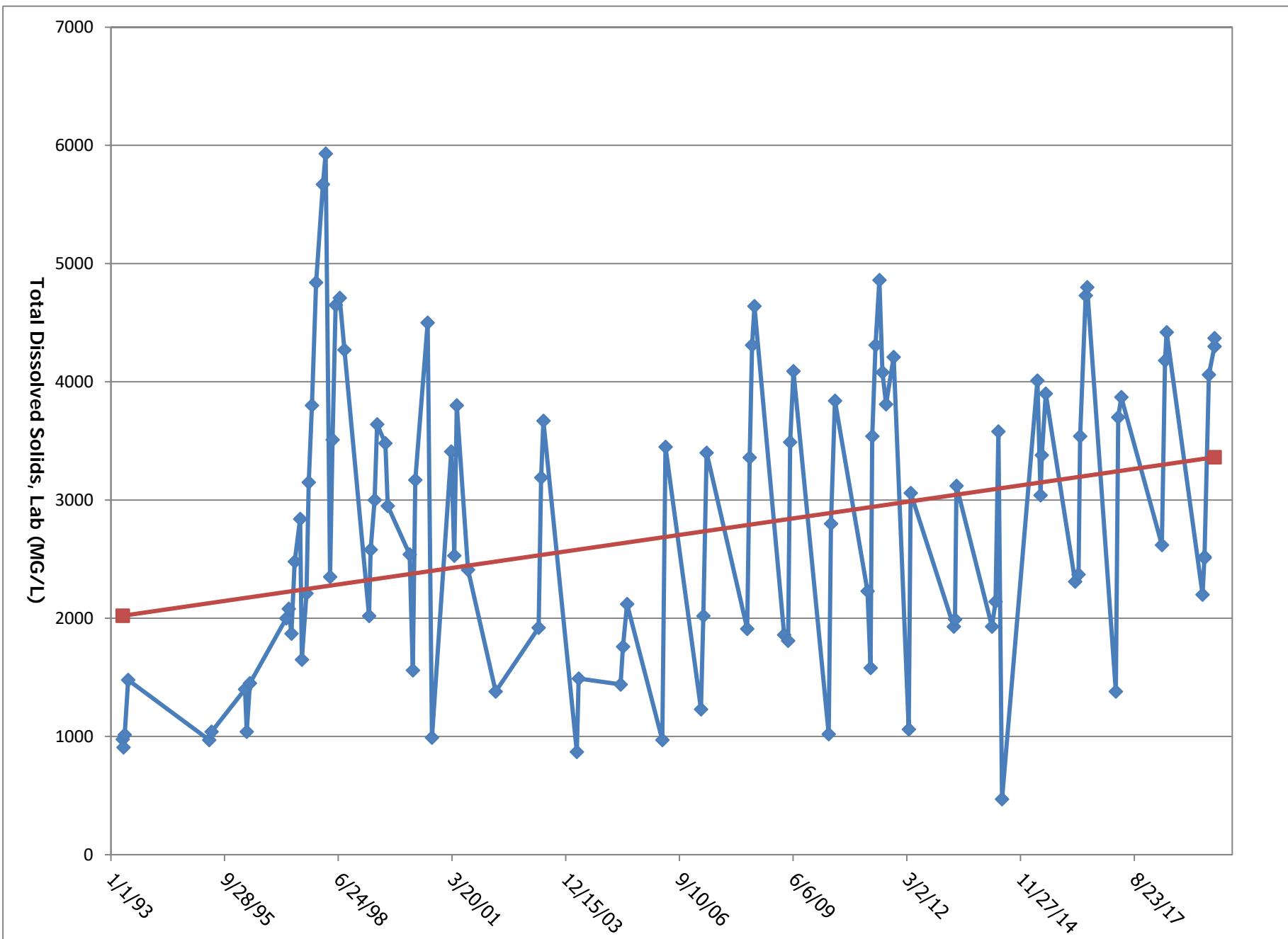
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	Site ID			
	Date	7/29/2019	8/5/2019	9/3/2019
report_order	Parameter	Fraction	Units	Detection Result
1	Flow	N	GPM	Y 0.75
2	pH, Field	N	S.U.	Y 8.5
3	Temperature, Field	N	C	Y 19
4	Specific Conductivity, Field	N	UMHOS/CM	Y 4339
5	Iron	D	MG/L	
5	Iron	PD	MG/L	
5	Iron	TR	MG/L	N 0.4
7	Selenium	D	UG/L	
7	Selenium	PD	UG/L	Y 0.6
7	Selenium	TR	UG/L	N 1
8	Solids, Total Suspended	N	MG/L	
9	Total Dissolved Solids, Lab	N	MG/L	Y 4370
11	Cadmium	PD	UG/L	N 1
12	Chromium	PD	UG/L	N 10
13	Copper	PD	UG/L	N 10
14	Lead	PD	UG/L	N 3
15	Mercury	T	UG/L	Y 0.0007
16	Nickel	PD	UG/L	N 40
17	Silver	PD	UG/L	N 3
18	Zinc	PD	MG/L	N 0.05
19	Solids, Settleable	N	ML/L	N 0.5





## Period of Record Water Discharge Hydrograph

NPDES5



Period of Record TDS Trend Plot

NPDES5

loc_report_order Location Code Location Name					4 WSD5							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	3/10/1983	9/3/2019	245	942.366	414	16900	0	1803.17
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	3/10/1983	7/29/2019	240	1480	1510	2860	1.33	547.7
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	3/10/1983	7/29/2019	241	8.36	8.39	8.8	6.86	0.229
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	3/10/1983	6/5/2018	240	12.4	12.7	28.9	0.2	6.83
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	5/2/2019	7/29/2019	3	14.8	15.6	19.4	9.3	5.1
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	3/10/1983	9/10/2015	112	335	341	453	156	59.3
6	3002 - AHR SW & SPR Long	Arsenic	D	UG/L	6/11/1987	6/11/1987	1	1	1	1	1	0
6	3002 - AHR SW & SPR Long	Arsenic	T	UG/L	3/10/1983	9/11/1986	15	2	2	4	1	0.81
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	4/6/1987	9/10/2015	72	1.5	1	5	0.5	0.92
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	7/11/1983	9/10/2015	88	396	410	530	96	76.2
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	6/11/1987	9/10/2015	70	130	120	250	40	48
8	3002 - AHR SW & SPR Long	Boron	T	UG/L	3/10/1983	4/6/1987	16	113	125	275	0	73.3
8	3002 - AHR SW & SPR Long	Boron	TR	UG/L	9/6/1987	9/6/1987	1	120	120	120	120	0
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	6/11/1987	9/10/2015	9	1	0.1	8	0.1	3
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	4/13/2005	4/12/2010	15	0.1	0.1	0.1	0.1	1E-17
9	3002 - AHR SW & SPR Long	Cadmium	T	UG/L	3/10/1983	9/11/1986	15	5	5	8	0.2	2
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	4/6/1987	6/13/2005	53	2	0.5	10	0.1	2
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	6/11/1987	4/5/2017	74	153	147	240	86.5	34.1
10	3002 - AHR SW & SPR Long	Calcium	T	MG/L	3/10/1983	4/6/1987	16	140	146	191	90	31
10	3002 - AHR SW & SPR Long	Calcium	TR	MG/L	6/11/1987	9/6/1987	2	135	135	147	123	17
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	7/11/1983	9/10/2015	88	6.85	2	112	0	13.5
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	3/10/1983	9/10/2015	90	27.5	22	190	8	23.5
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	6/11/1987	9/10/2015	9	1	0.5	10	0.1	3
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	4/13/2005	4/12/2010	15	0.2	0.1	0.5	0.1	0.2
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	6/11/1987	6/13/2005	52	10	10	20	0.2	3
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	3/10/1983	9/10/2015	109	1545	1530	2630	456	396.6
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	6/11/1987	9/10/2015	9	2	0.7	10	0.5	3
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	4/13/2005	4/12/2010	15	2.1	1.8	5.5	0.5	1.5
15	3002 - AHR SW & SPR Long	Copper	T	UG/L	3/10/1983	9/11/1986	15	20	20	30	10	6
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	4/6/1987	6/13/2005	53	12	10	80	0.8	10
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	3/10/1983	4/5/2017	87	886.854	837	1410	446	235.571
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	3/10/1983	7/29/2019	101	0.041	0.02	0.82	0.01	0.085

Period of Record Monitoring Summary

WSD5

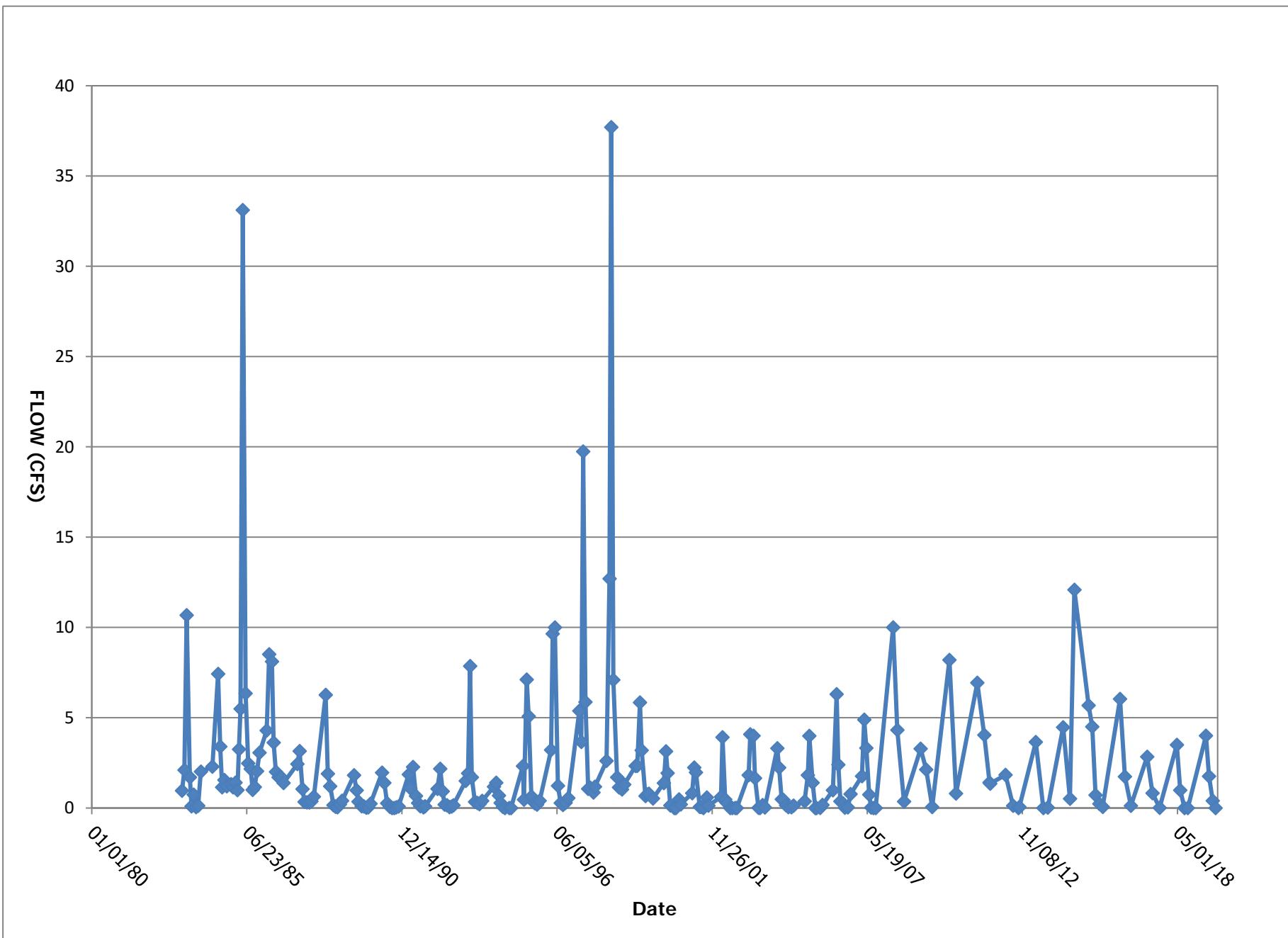
Report 23: Page 1 of 7

loc_report_order Location Code Location Name					4 WSD5							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Count	Average	Median	Maximum	Minimum	Standard Deviation
18	3002 - AHR SW & SPR Long	Iron	PD	MG/L	4/30/2013	7/29/2019	12	0.43	0.26	2.2	0.1	0.57
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	3/10/1983	4/12/2010	105	3.77	1.05	106	0.09	11.2
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	4/6/1987	7/29/2019	53	1.61	0.6	15	0.07	2.96
18	3002 - AHR SW & SPR Long	Iron	TR10UM	MG/L	4/30/2013	4/30/2013	1	4.71	4.71	4.71	4.71	0
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	6/11/1987	9/10/2015	9	2	0.1	20	0.1	7
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	4/13/2005	4/12/2010	15	1	0.5	4.4	0.1	1.2
19	3002 - AHR SW & SPR Long	Lead	T	UG/L	3/10/1983	9/11/1986	15	20	20	50	20	8
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	4/6/1987	6/13/2005	53	6.3	1	40	0.1	9.2
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	6/11/1987	4/5/2017	74	130	123	221	55.8	43
20	3002 - AHR SW & SPR Long	Magnesium	T	MG/L	3/10/1983	9/6/1987	18	106	103	150	70	22.7
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	3/10/1983	6/11/2019	106	0.176	0.15	0.78	0.0122	0.129
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	4/13/2005	6/5/2018	26	0.22	0.19	0.6	0.02	0.18
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	3/10/1983	6/13/2005	87	0.28	0.27	0.91	0.02	0.18
21	3002 - AHR SW & SPR Long	Manganese	TR	MG/L	4/6/1987	9/6/1987	3	0.27	0.22	0.49	0.11	0.2
22	3002 - AHR SW & SPR Long	Mercury	D	UG/L	6/11/1987	6/11/1987	1	0.2	0.2	0.2	0.2	0
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	3/10/1983	6/11/2019	55	0.3	0.2	1	0.02	0.3
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	4/6/1987	4/7/2004	49	0.2	0.2	0.5	0.1	0.06
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	6/11/1987	9/10/2015	9	10	8	20	8	4
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	4/13/2005	4/12/2010	15	10	10	20	10	4
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	6/11/1987	6/13/2005	52	10	10	20	10	5
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	3/10/1983	6/11/2019	104	0.075	0.05	0.36	0.02	0.056
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	3/10/1983	6/11/2019	104	0.364	0.065	3.12	0.02	0.592
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	9/6/1987	6/11/2019	87	0.01	0.01	0.05	0.01	0.008
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	3/10/1983	9/10/2015	109	8.2	8.2	8.7	7.8	0.19
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	6/11/1987	9/10/2015	73	6.48	5.9	14.2	4	2.03
29	3002 - AHR SW & SPR Long	Potassium	T	MG/L	3/10/1983	4/6/1987	16	5.6	5	8	3	1.5
29	3002 - AHR SW & SPR Long	Potassium	TR	MG/L	6/11/1987	9/6/1987	2	5	5	5	5	0
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	6/11/1987	7/29/2019	41	1.32	0.5	26.8	0.2	4.1
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	4/13/2005	6/11/2019	29	1.55	0.6	25.9	0.1	4.7
30	3002 - AHR SW & SPR Long	Selenium	T	UG/L	3/10/1983	9/11/1986	15	2	2	4	1	0.7
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	4/6/1987	7/29/2019	80	1.47	1	25.7	0.2	3.01
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	6/11/1987	9/10/2015	9	1	0.05	10	0.05	3

loc_report_order Location Code Location Name					4 WSD5							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Count	Average	Median	Maximum	Minimum	Standard Deviation
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	4/13/2005	4/12/2010	15	0.08	0.05	0.5	0.05	0.1
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	6/11/1987	6/13/2005	52	2	0.5	10	0.05	4
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	6/11/1987	9/10/2015	73	77.2	77	155	26.8	29.1
32	3002 - AHR SW & SPR Long	Sodium	T	MG/L	3/10/1983	4/6/1987	15	69	70	96	45	12
32	3002 - AHR SW & SPR Long	Sodium	TR	MG/L	6/11/1987	9/6/1987	2	87	87	92	81	7.8
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	7/11/1983	9/10/2015	84	1.1	1.09	1.92	0.57	0.287
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	3/10/1983	7/29/2019	109	679	650	1220	250	225
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	6/11/1987	6/11/2019	87	0.076	0.02	0.5	0.01	0.1
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	6/11/1987	9/10/2015	9	0.01	0.01	0.01	0.01	0
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	4/13/2005	4/12/2010	15	0.01	0.01	0.01	0.01	0
37	3002 - AHR SW & SPR Long	Zinc	T	MG/L	3/10/1983	9/11/1986	14	0.38	0.02	5	0.01	1.3
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	4/6/1987	6/13/2005	53	0.02	0.01	0.05	0.01	0.01
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	7/11/1983	9/10/2015	87	0.338	0.5	7	-6.3	2.43
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	3/10/1983	7/29/2019	136	1319	1250	2370	345	422.4
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	7/11/1983	9/10/2015	86	1253.06	1216.5	2090	580	344.32
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	3/10/1983	7/29/2019	136	125	34	5190	2	464

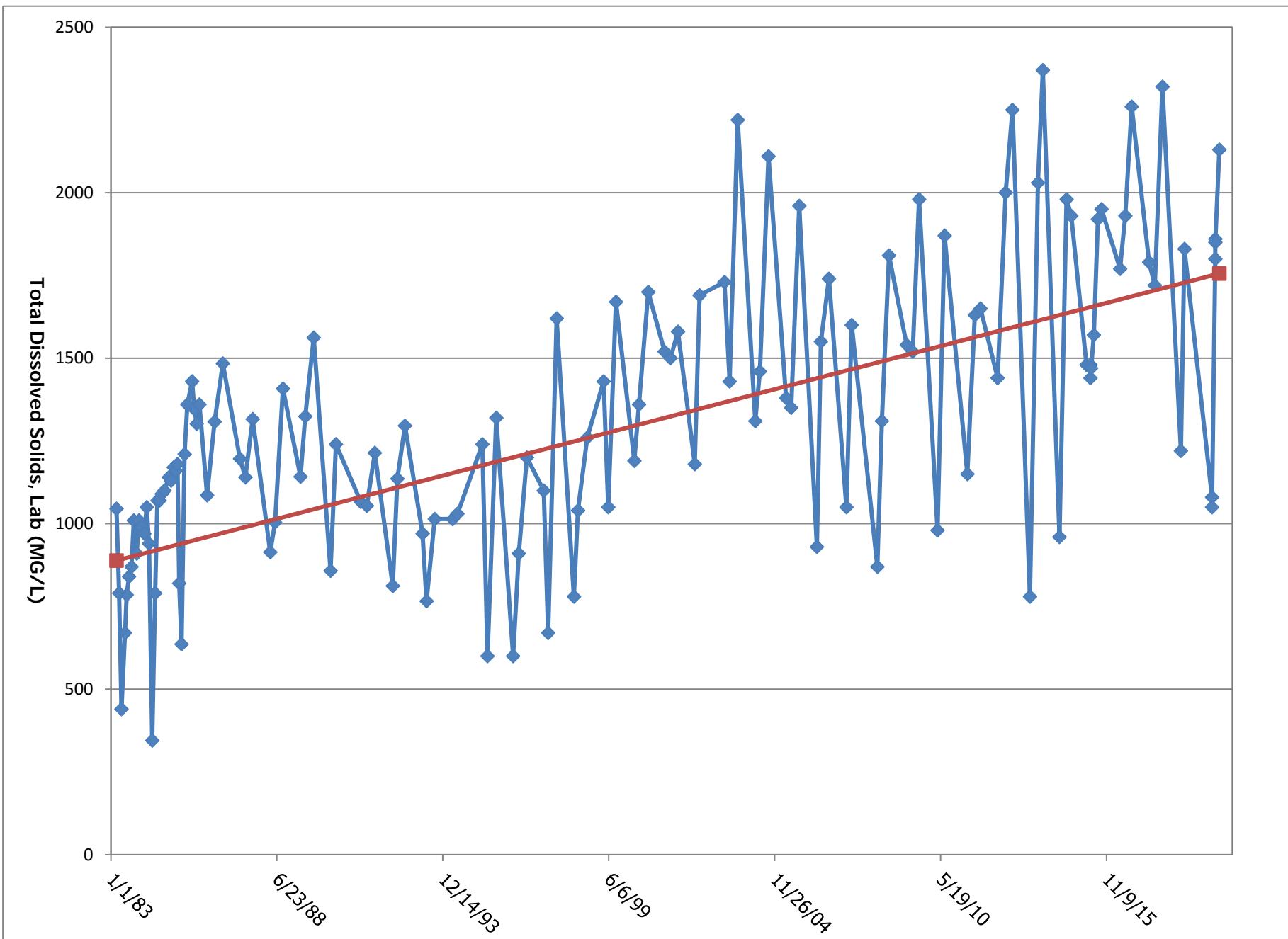
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	Date	5/2/2019	5/2/2019	6/11/2019	6/11/2019
report_order	Parameter	Fraction	Units	Detection	Result
42	Flow	N	GPM	Y	1797
1	Specific Conductivity, Field	N	UMHOS/CM	Y	1447
2	pH, Field	N	S.U.	Y	8.66
3	Temperature, Field	N	DEG-C	Y	9.3
18	Iron	D	MG/L	N	0.08
18	Iron	PD	MG/L	Y	0.13
18	Iron	TR	MG/L	Y	0.25
21	Manganese	D	MG/L		0.0122
22	Mercury	T	UG/L		1
24	Ammonia Nitrogen	N	MG/L		0.2
26	Nitrate Nitrogen	N	MG/L		0.05
27	Nitrite Nitrogen	N	MG/L		0.05
30	Selenium	D	UG/L	Y	0.8
30	Selenium	PD	UG/L		0.9
30	Selenium	TR	UG/L	Y	0.8
34	Sulfates	N	MG/L	Y	490
35	Sulfide	N	MG/L		0.1
39	Total Dissolved Solids, Lab	N	MG/L	Y	1080
41	Solids, Total Suspended	N	MG/L	Y	9

loc_report_order Location Code sys_sample_code Site ID Date				4 WSD5 3002_WSD5_06112019B 6/11/2019		4 WSD5 3002_WSD5_07292019 7/29/2019		4 WSD5 3002_WSD5_09032019 9/3/2019	
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result	Detection	Result
42	Flow	N	GPM	Y	241.5	Y	179	Y	0
1	Specific Conductivity, Field	N	UMHOS/CM	Y	2197	Y	2452		
2	pH, Field	N	S.U.	Y	8.4	Y	8.38		
3	Temperature, Field	N	DEG-C	Y	19.4	Y	15.6		
18	Iron	D	MG/L	Y	0.06	N	0.2		
18	Iron	PD	MG/L	Y	0.23	Y	0.1		
18	Iron	TR	MG/L	Y	0.38	Y	0.14		
21	Manganese	D	MG/L						
22	Mercury	T	UG/L						
24	Ammonia Nitrogen	N	MG/L						
26	Nitrate Nitrogen	N	MG/L						
27	Nitrite Nitrogen	N	MG/L						
30	Selenium	D	UG/L	Y	0.4	Y	0.4		
30	Selenium	PD	UG/L						
30	Selenium	TR	UG/L	Y	0.4	Y	0.4		
34	Sulfates	N	MG/L	Y	968	Y	1110		
35	Sulfide	N	MG/L						
39	Total Dissolved Solids, Lab	N	MG/L	Y	1850	Y	2130		
41	Solids, Total Suspended	N	MG/L	Y	13	Y	6		



Period of Record Water Discharge Hydrograph

WSD5



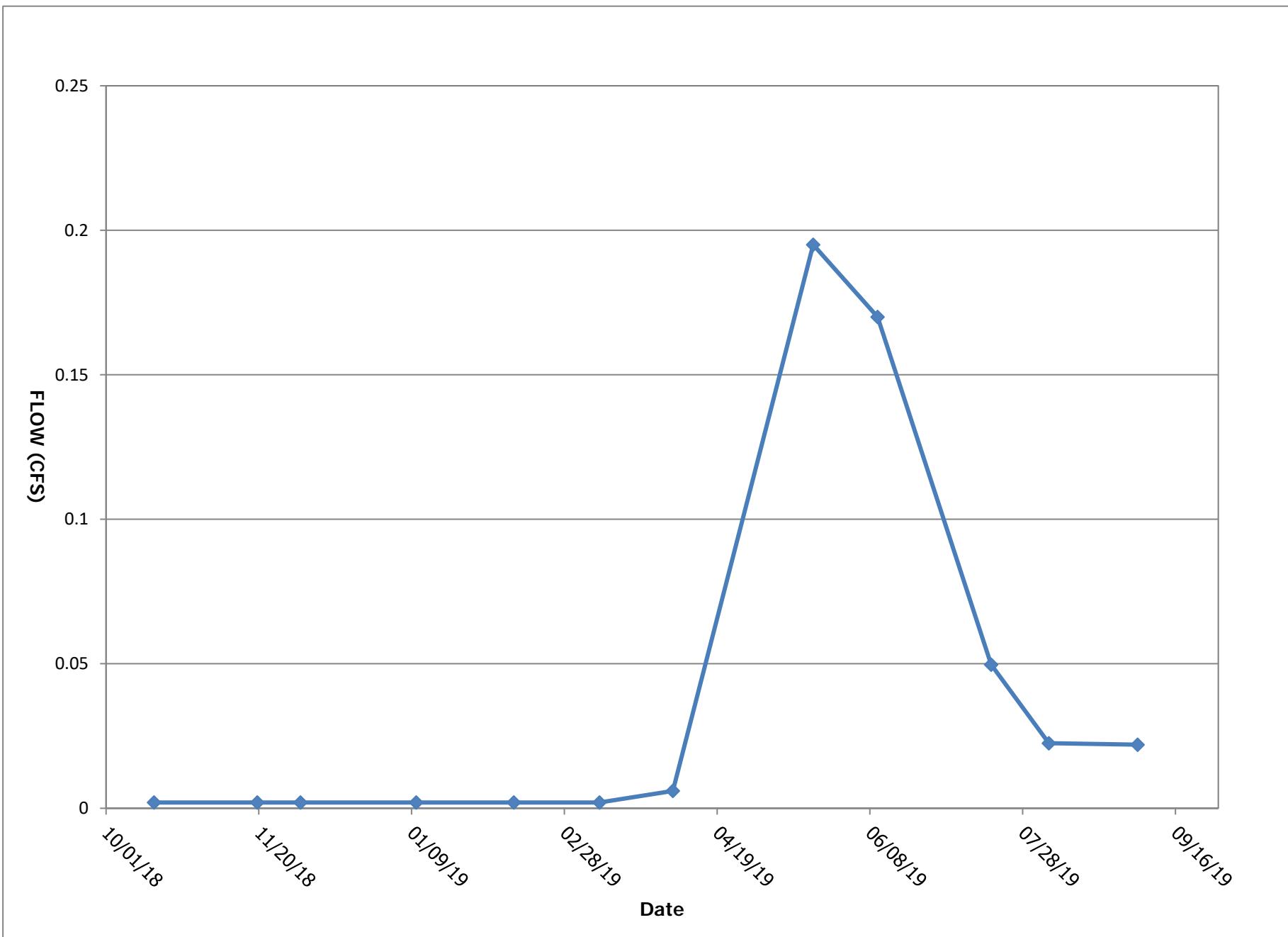
Period of Record TDS Trend Plot

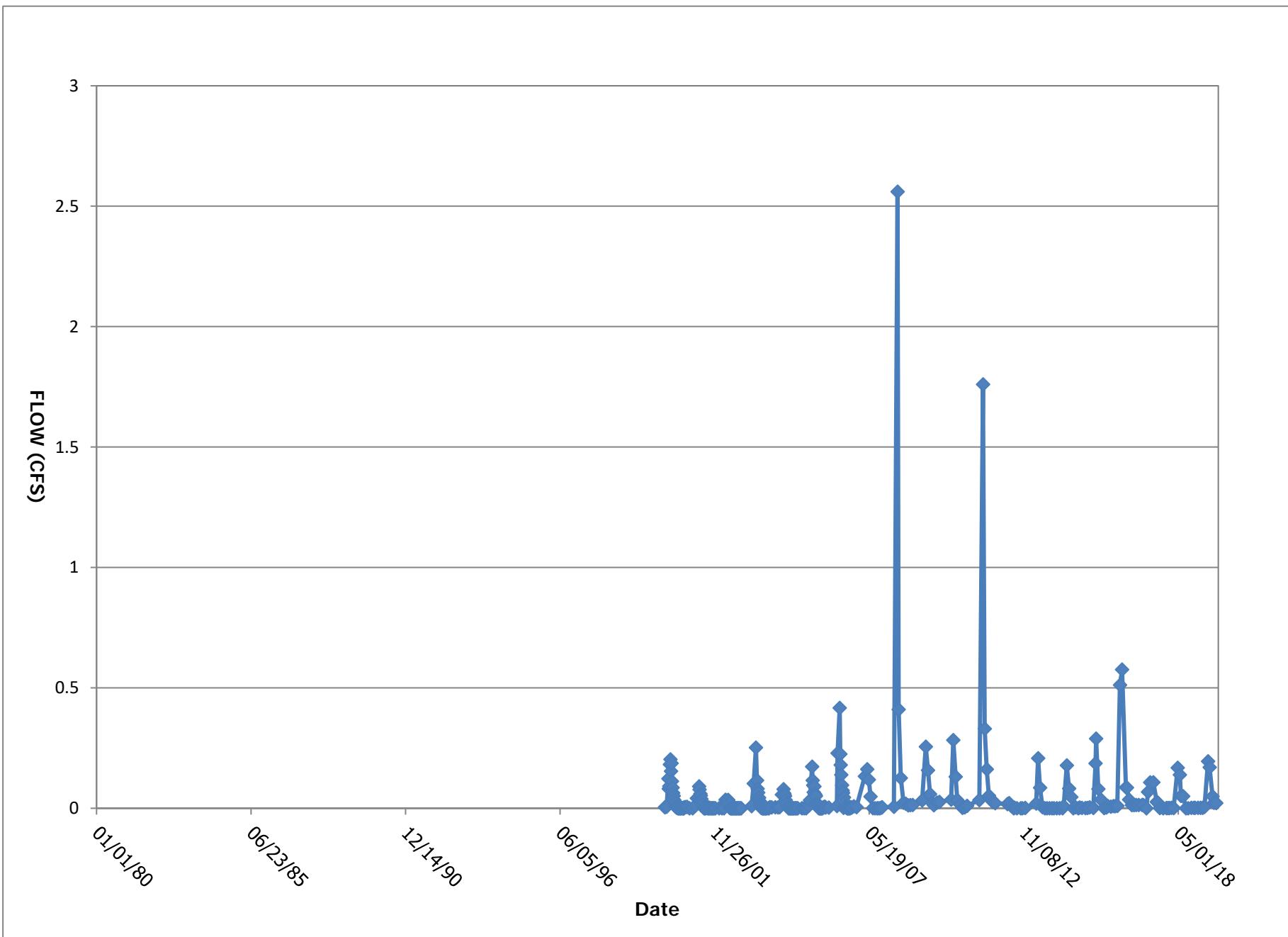
WSD5

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Site ID							
Date	10/16/2018	11/19/2018	12/3/2018	1/10/2019			
report_order	Parameter	Fraction	Units	Detection Result	Detection Result	Detection Result	Detection Result
1	Flow	N	GPM	Y 0.8	Y 0.8	Y 0.9	Y 1
2	pH, Field	N	S.U.	Y 8.53	Y 8.52	Y 8.5	Y 8.27
3	Temperature, Field	N	C	Y 8.7	Y 3.3	Y 3.1	Y 2.7
4	Specific Conductivity, Field	N	UMHOS/CM	Y 726	Y 793	Y 787	Y 434.7
9	Total Dissolved Solids, Lab	N	MG/L	Y 430	Y 482	Y 456	Y 486
19	Solids, Settleable	N	ML/L				N 0.5

loc_report_order	5	5	5	5							
Location Code	NPDES15	NPDES15	NPDES15	NPDES15							
sys_sample_code	3002_NPDES15_02112019	3002_NPDES15_03112019	3002_NPDES15_04042019	3002_NPDES15_05202019							
Site ID											
Date	2/11/2019	3/11/2019	4/4/2019	5/20/2019							
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result	Detection	Result	Detection	Result
1	Flow	N	GPM	Y	1	Y	1	Y	2.7	Y	87.6
2	pH, Field	N	S.U.	Y	8.25	Y	7.68	Y	7.71	Y	8.41
3	Temperature, Field	N	C	Y	2.6	Y	2.7	Y	3.4	Y	8.2
4	Specific Conductivity, Field	N	UMHOS/CM	Y	436.8	Y	448.9	Y	443.4	Y	561
9	Total Dissolved Solids, Lab	N	MG/L	Y	536	Y	536	Y	548	Y	332
19	Solids, Settleable	N	ML/L	N	0.5	N	0.5	N	0.5	N	0.5

loc_report_order	5	5	5	5							
Location Code	NPDES15	NPDES15	NPDES15	NPDES15							
sys_sample_code	3002_NPDES15_06102019	3002_NPDES15_07172019	3002_NPDES15_08052019	3002_NPDES15_09032019							
Site ID											
Date	6/10/2019	7/17/2019	8/5/2019	9/3/2019							
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result	Detection	Result	Detection	Result
1	Flow	N	GPM	Y	76.4	Y	22.3	Y	10.1	Y	9.7
2	pH, Field	N	S.U.	Y	8.25	Y	8.63	Y	8.66	Y	8.62
3	Temperature, Field	N	C	Y	14.5	Y	24.1	Y	24.2	Y	20.1
4	Specific Conductivity, Field	N	UMHOS/CM	Y	621	Y	618	Y	656	Y	726
9	Total Dissolved Solids, Lab	N	MG/L	Y	346	Y	374	Y	374	Y	418
19	Solids, Settleable	N	ML/L	N	0.5	N	0.5	N	0.5	N	0.5

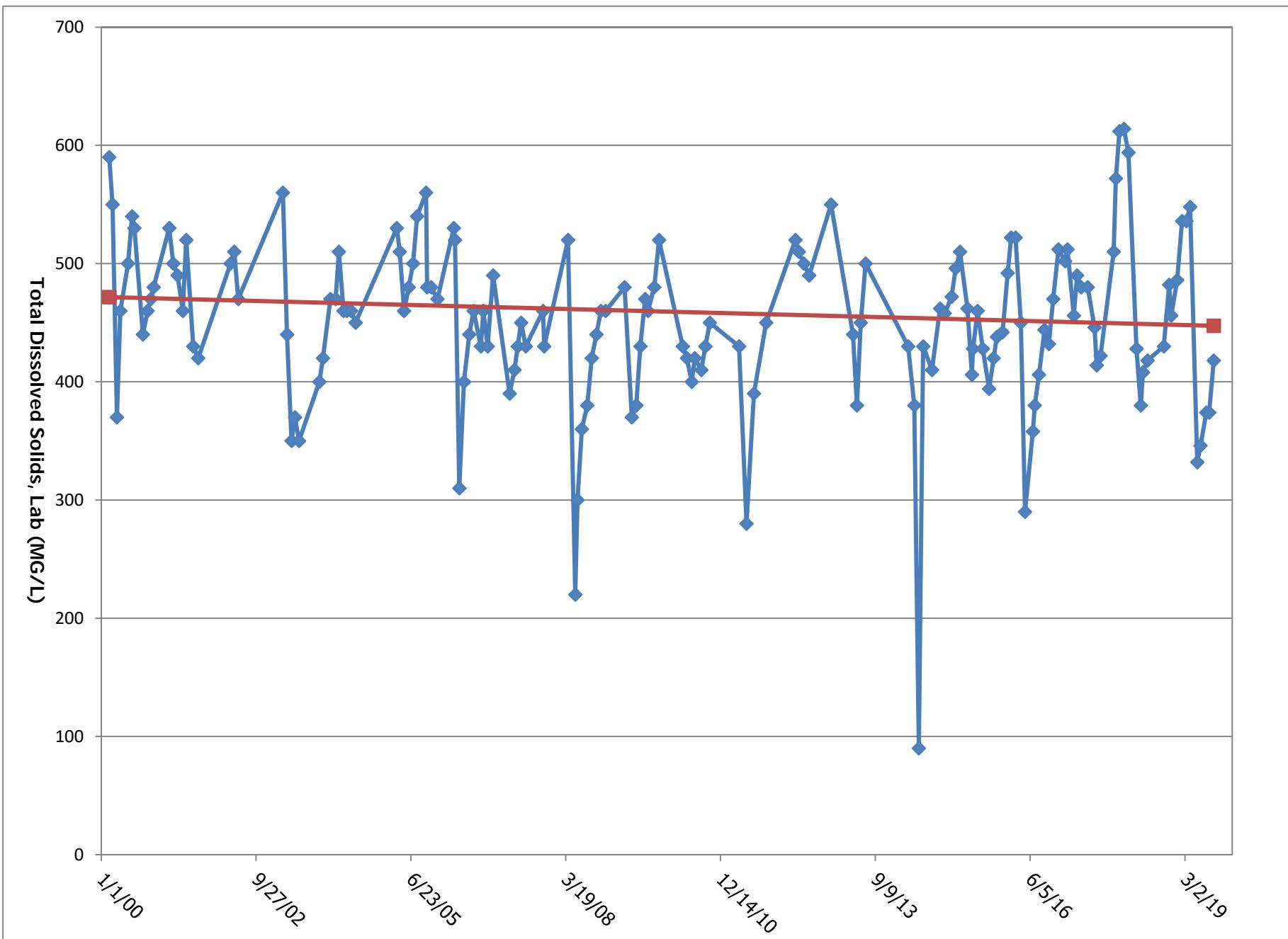




Period of Record Water Discharge Hydrograph

NPDES15

Report 24: Page 5 of 6



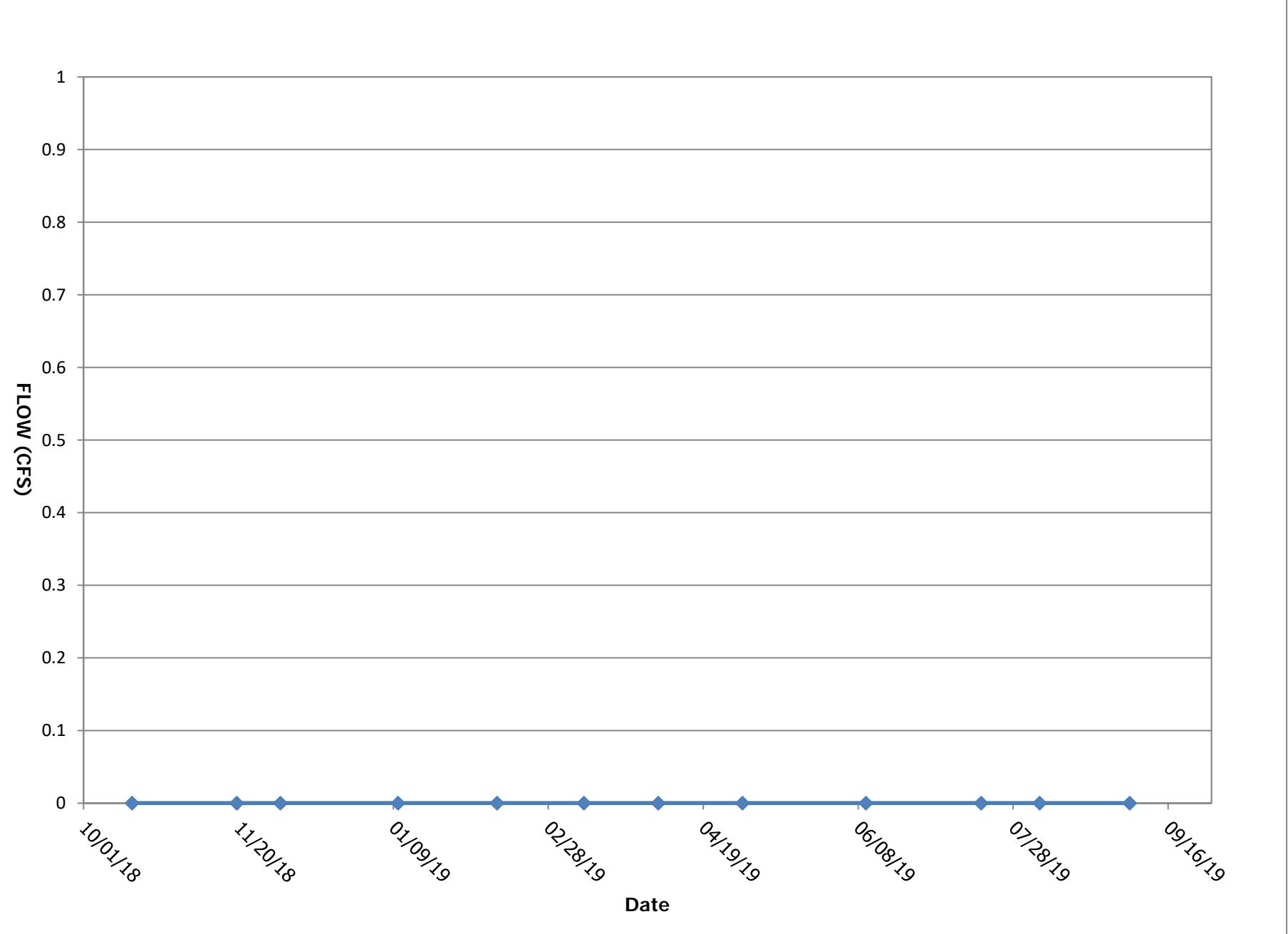
Period of Record TDS Trend Plot

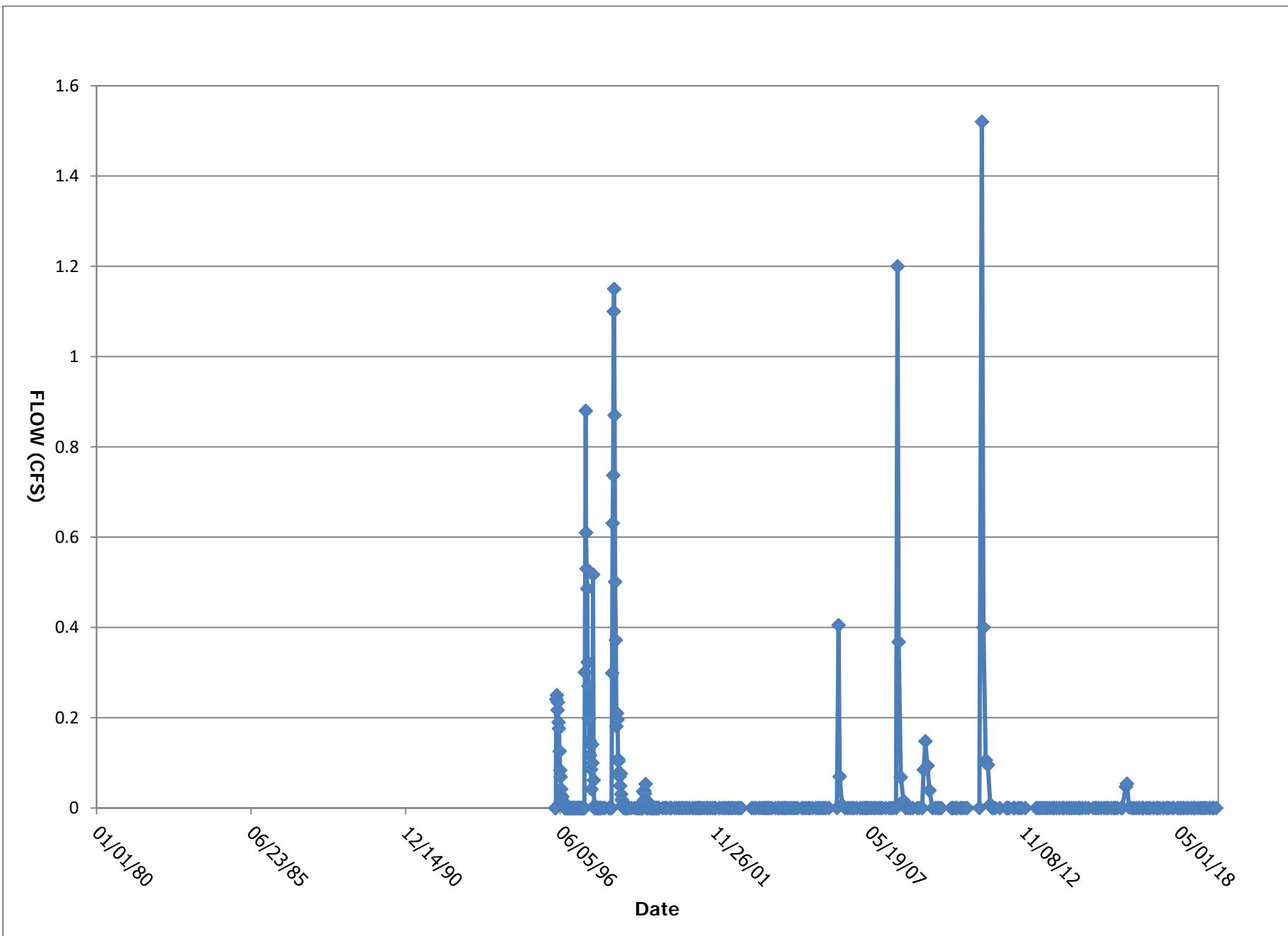
NPDES15

loc_report_order	6	6	6	6	6						
Location Code	NPDES9	NPDES9	NPDES9	NPDES9	NPDES9						
sys_sample_code	3002_NPDES9_10162018	3002_NPDES9_11192018	3002_NPDES9_12032018	3002_NPDES9_01102019	3002_NPDES9_02112019						
Site ID											
Date	10/16/2018	11/19/2018	12/3/2018	1/10/2019	2/11/2019						
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result	Detection	Result	Detection	Result
1	Flow	N	GPM	Y	0	Y	0	Y	0	Y	0

loc_report_order	6	6	6	6	6						
Location Code	NPDES9	NPDES9	NPDES9	NPDES9	NPDES9						
sys_sample_code	3002_NPDES9_03112019	3002_NPDES9_04042019	3002_NPDES9_05012019	3002_NPDES9_06102019	3002_NPDES9_07172019						
Site ID											
Date	3/11/2019	4/4/2019	5/1/2019	6/10/2019	7/17/2019						
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result	Detection	Result	Detection	Result
1	Flow	N	GPM	Y	0	Y	0	Y	0	Y	0

loc_report_order	6	6					
Location Code	NPDES9	NPDES9					
sys_sample_code	3002_NPDES9_08052019	3002_NPDES9_09032019					
Site ID							
Date	8/5/2019	9/3/2019					
report_order	Parameter	Fraction	Units	Detection	Result	Detection	Result
1	Flow	N	GPM	Y	0	Y	0

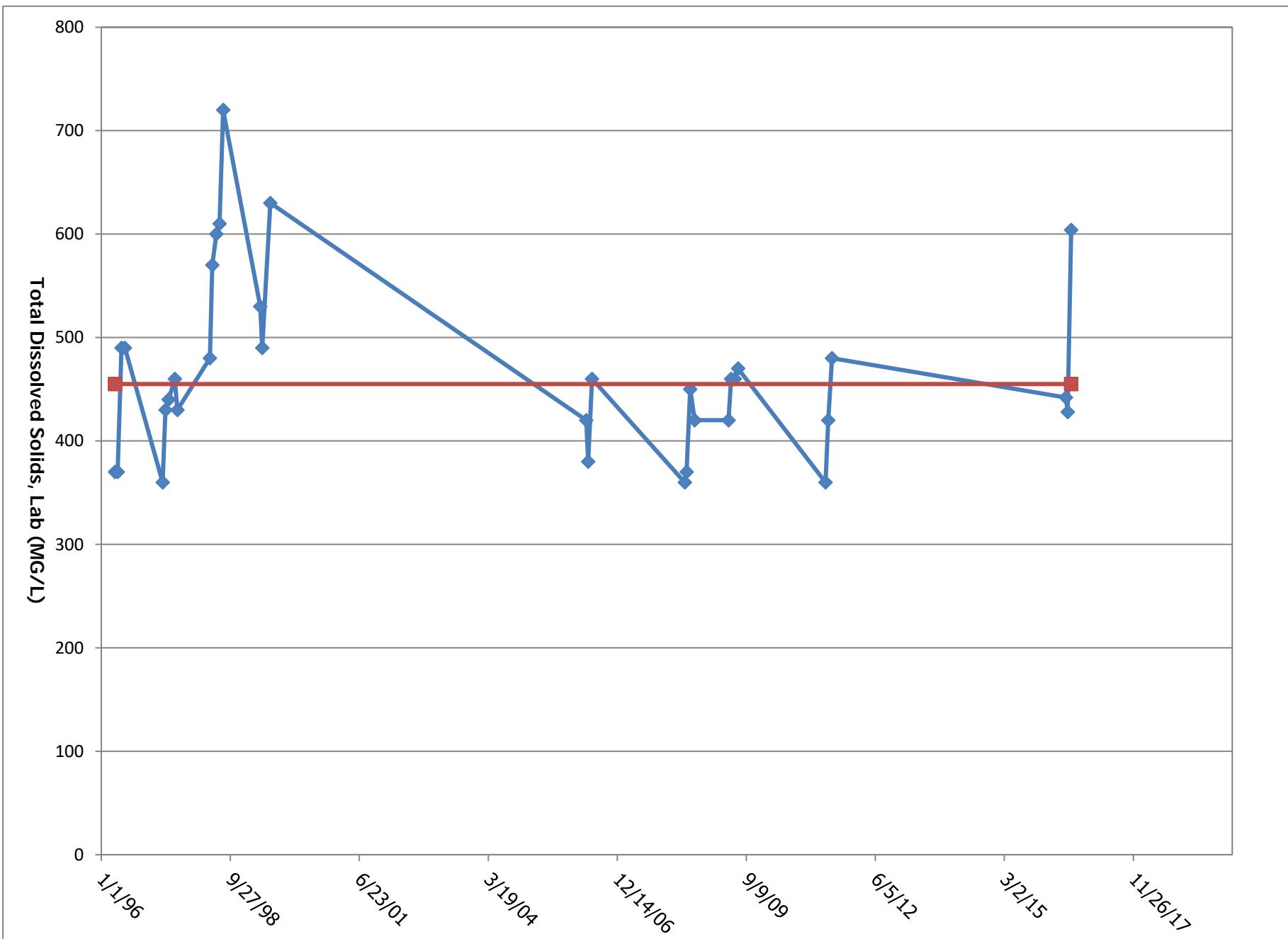




Period of Record Water Discharge Hydrograph

NPDES9

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Period of Record TDS Trend Plot

NPDES9

loc_report_order Location Code Location Name					5 WSSF3							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	9/4/1990	9/3/2019	175	5098.055	232	740972.22	0	55971.62
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	10/1/1990	7/17/2019	164	991.2	1010	1604	1.26	234.8
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	10/1/1990	7/17/2019	165	8.3	8.31	8.81	7.43	0.17
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	10/1/1990	7/3/2018	162	10.9	11	22	1	5.26
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	5/1/2019	7/17/2019	3	13.3	10	22.6	7.2	8.2
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	5/1/1991	9/14/2015	74	271	277	628	166	63.6
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	5/1/1991	9/14/2015	73	1.3	1	17	0.3	2.2
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	5/1/1991	9/14/2015	74	321	325	742	193	74.9
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	5/1/1991	9/14/2015	73	50	50	90	20	10
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	4/26/2005	9/14/2015	8	0.2	0.1	0.5	0.1	0.1
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	4/26/2005	4/21/2010	16	0.1	0.1	0.1	0.1	1E-17
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	5/1/1991	6/9/2005	53	0.3	0.1	1	0.1	0.2
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	5/1/1991	9/14/2015	74	112.7	116	170	60	23.05
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	5/1/1991	9/14/2015	74	5.59	2	26	0	6.46
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	5/1/1991	9/14/2015	74	8.61	8	21	3	3.2
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	4/26/2005	9/14/2015	8	0.4	0.5	0.5	0.1	0.2
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	4/26/2005	4/21/2010	16	0.2	0.1	0.6	0.1	0.2
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	5/1/1991	6/9/2005	53	10	10	20	0.1	3
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	5/1/1991	9/14/2015	73	957.8	960	1590	474	210.8
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	4/26/2005	9/14/2015	8	0.8	0.5	3	0.5	0.9
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	4/26/2005	4/21/2010	16	1.1	1.1	1.9	0.5	0.47
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	5/1/1991	6/9/2005	53	13	10	80	1.2	11
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	5/1/1991	9/14/2015	73	522	536	844	269	117
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	5/1/1991	4/9/2014	55	0.033	0.02	0.5	0.01	0.066
18	3002 - AHR SW & SPR Long	Iron	PD	MG/L	5/2/2013	4/27/2015	3	0.11	0.1	0.18	0.06	0.061
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	5/1/1991	4/21/2010	70	0.404	0.185	3.58	0.02	0.542
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	9/27/1999	6/11/2019	41	0.435	0.33	1.83	0.04	0.357
18	3002 - AHR SW & SPR Long	Iron	TR10UM	MG/L	5/2/2013	5/2/2013	1	0.05	0.05	0.05	0.05	0
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	4/26/2005	9/14/2015	8	0.2	0.1	0.5	0.1	0.1
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	4/26/2005	4/21/2010	16	0.3	0.3	1	0.1	0.3
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	5/1/1991	6/9/2005	53	1	1	10	0.1	2
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	5/1/1991	9/14/2015	74	58.7	58.2	105	29	14.9

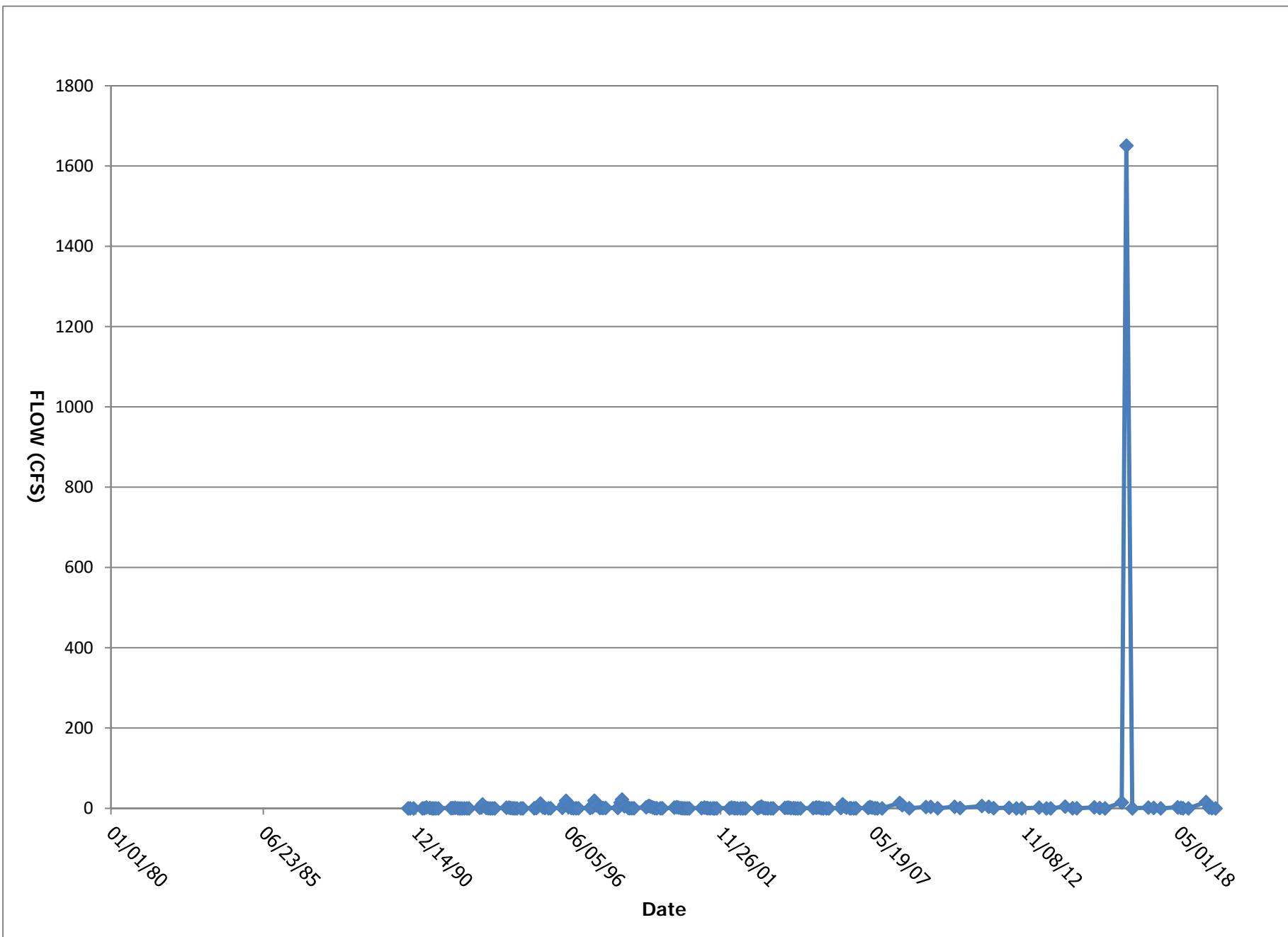
Period of Record Monitoring Summary

WSSF3

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loc_report_order Location Code Location Name					5 WSSF3							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Count	Average	Median	Maximum	Minimum	Standard Deviation
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	5/1/1991	6/11/2019	66	0.0449	0.03	0.25	0.0082	0.0487
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	4/26/2005	6/5/2018	22	0.075	0.06	0.22	0.01	0.059
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	5/1/1991	6/9/2005	53	0.047	0.04	0.19	0.01	0.037
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	6/2/2004	6/11/2019	36	0.29	0.2	1.6	0.2	0.29
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	5/1/1991	4/15/2004	47	0.2	0.2	0.4	0.1	0.06
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	4/26/2005	9/14/2015	8	9	8	10	8	0.9
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	4/26/2005	4/21/2010	16	10	10	10	10	0
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	5/1/1991	6/9/2005	53	10	10	40	10	7
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	5/1/1991	6/11/2019	85	0.064	0.05	0.2	0.03	0.034
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	5/1/1991	6/11/2019	85	0.112	0.04	1.52	0.02	0.212
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	5/1/1991	6/11/2019	85	0.01	0.01	0.05	0.01	0.006
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	5/1/1991	9/14/2015	73	8.2	8.3	8.6	3.1	0.63
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	5/1/1991	9/14/2015	74	3.7	4	5	1.6	0.67
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	4/26/2005	7/17/2019	25	0.76	0.5	5	0.2	0.95
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	4/26/2005	6/11/2019	25	0.82	0.9	1.8	0.1	0.41
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	5/1/1991	7/17/2019	70	1	1	5	0.1	0.8
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	4/26/2005	9/14/2015	8	0.08	0.05	0.3	0.05	0.09
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	4/26/2005	4/21/2010	16	0.05	0.05	0.05	0.05	7E-18
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	5/1/1991	6/9/2005	53	0.6	0.5	5	0.05	0.8
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	5/1/1991	9/14/2015	74	26.2	25.4	48.2	8.6	7.42
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	5/1/1991	9/14/2015	73	0.5	0.49	0.73	0.21	0.095
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	5/1/1991	7/17/2019	89	313	310	676	4	116
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	5/1/1991	6/11/2019	84	0.03	0.02	0.3	0.01	0.04
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	4/26/2005	9/14/2015	8	0.01	0.01	0.01	0.01	0
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	4/26/2005	4/21/2010	16	0.01	0.01	0.02	0.01	0.003
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	5/1/1991	6/9/2005	53	0.017	0.01	0.12	0.01	0.02
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	5/1/1991	9/14/2015	73	-0.435	-0.3	9.9	-8.6	2.68
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	5/1/1991	7/17/2019	90	733	740	1240	320	191
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	5/1/1991	9/14/2015	73	666.26	670	1150	330	167.75
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	5/1/1991	6/11/2019	88	11.9	6.5	138	2	16.5

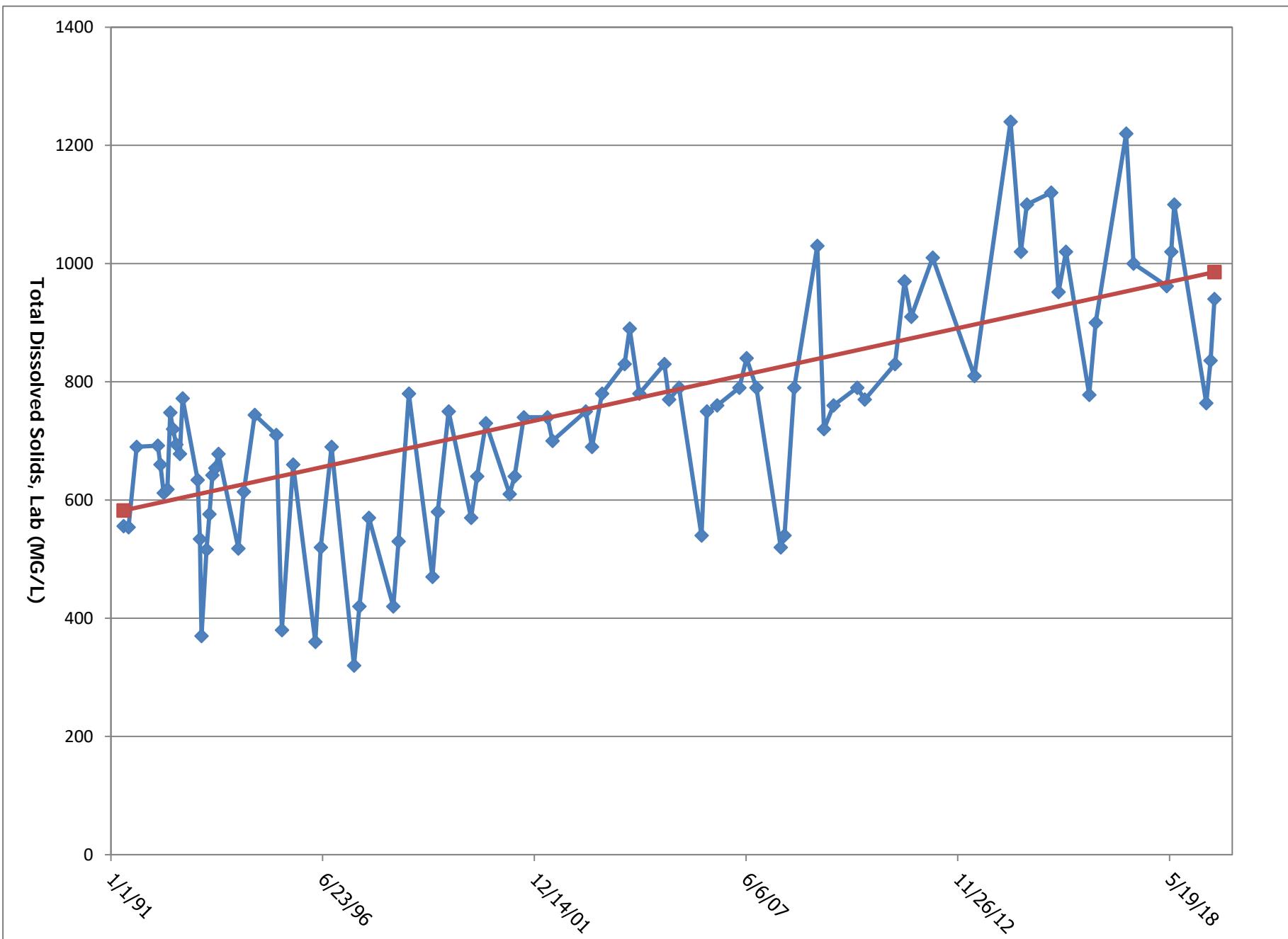
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				Location Code	WSSF3 3002_WSSF3_05012019	Date	5/1/2019	Result	Detection	Result	9/3/2019
42	Flow	N	GPM	Y	7054	Y	928.7	Y	286	Y	0
1	Specific Conductivity, Field	N	UMHOS/CM	Y	1114	Y	1167	Y	1330		
2	pH, Field	N	S.U.	Y	8.31	Y	8.45	Y	8.37		
3	Temperature, Field	N	DEG-C	Y	7.2	Y	10	Y	22.6		
18	Iron	TR	MG/L	Y	0.35	Y	0.77				
21	Manganese	D	MG/L	Y	0.0082	Y	0.0273				
22	Mercury	T	UG/L	N	1	N	1				
24	Ammonia Nitrogen	N	MG/L	N	0.2	N	0.2				
26	Nitrate Nitrogen	N	MG/L	N	0.1	N	0.1				
27	Nitrite Nitrogen	N	MG/L	N	0.05	N	0.05				
30	Selenium	D	UG/L	Y	0.9	Y	0.4	Y	0.2		
30	Selenium	PD	UG/L	Y	0.8	Y	0.5				
30	Selenium	TR	UG/L	Y	0.8	Y	0.3	Y	0.2		
34	Sulfates	N	MG/L	Y	361	Y	344	Y	405		
35	Sulfide	N	MG/L	N	0.1	N	0.1				
39	Total Dissolved Solids, Lab	N	MG/L	Y	764	Y	836	Y	940		
41	Solids, Total Suspended	N	MG/L	Y	11	Y	21				



Period of Record Water Discharge Hydrograph

WSSF3

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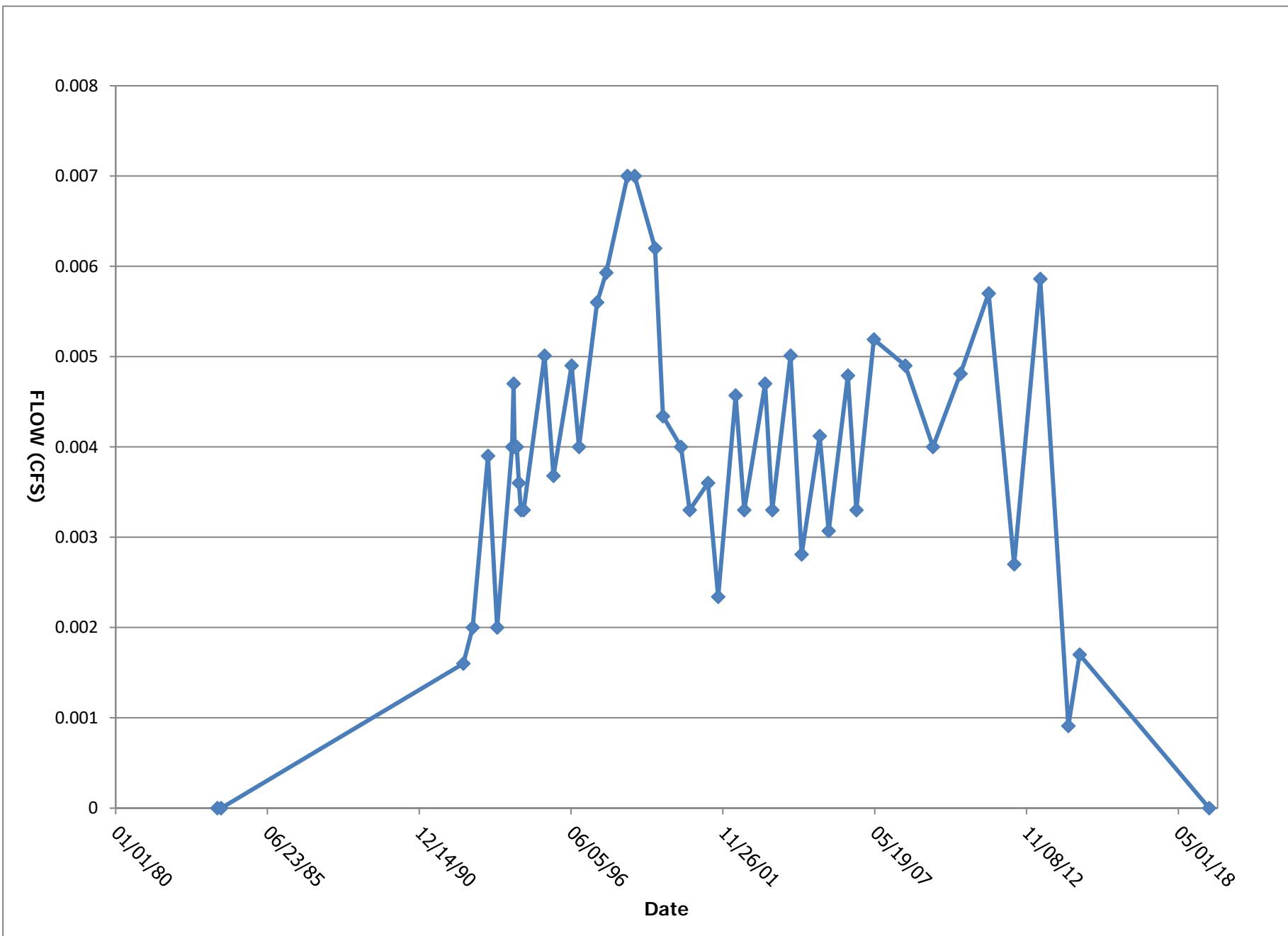
Period of Record TDS Trend Plot

WSSF3

loc_report_order Location Code Location Name					2 WSPG46							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	9/2/1983	6/12/2019	47	1.71	1.8	3	0	0.741
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	7/1/1983	6/12/2019	45	1941	1960	2740	2.28	521.7
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	7/1/1983	6/12/2019	45	7.04	7.01	7.8	6.76	0.153
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	7/1/1983	6/6/2018	44	10.6	10.3	15.1	8	1.62
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	6/12/2019	6/12/2019	1	9.5	9.5	9.5	9.5	0
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	7/1/1983	6/23/2015	18	451	456	546	337	46.9
6	3002 - AHR SW & SPR Long	Arsenic	D	UG/L	7/1/1983	11/17/1992	2	2	2	2	1	0.7
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	11/17/1992	6/23/2015	17	0.89	1	2	0.4	0.38
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	7/1/1983	6/23/2015	18	550	556	666	411	57.2
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	7/1/1983	6/23/2015	18	60	60	100	50	10
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	7/1/1983	6/23/2015	5	2	0.2	5	0.2	3
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	5/8/2007	6/25/2009	3	0.1	0.1	0.2	0.1	0.06
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	11/17/1992	5/24/2005	11	0.41	0.1	1.9	0.1	0.55
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	7/1/1983	6/23/2015	18	233	225	349	181	42.8
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	7/1/1983	6/23/2015	18	1	2	2	0	1
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	7/1/1983	6/23/2015	18	24.3	27.9	32.9	12	7.63
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	11/17/1992	6/23/2015	4	3	1	10	1	5
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	5/8/2007	6/25/2009	3	0.5	0.5	1	0.1	0.5
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	11/17/1992	5/24/2005	11	9	10	10	0.1	3
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	7/1/1983	6/23/2015	18	2073	2005	3250	1540	396.3
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	7/1/1983	6/23/2015	5	7	1	20	1	8
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	5/8/2007	6/25/2009	3	1.4	1.6	2	0.5	0.78
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	11/17/1992	5/24/2005	11	10	10	10	10	0
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	7/1/1983	6/23/2015	18	1201	1155	1980	893	255.9
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	7/1/1983	5/24/2005	12	0.579	0.37	1.63	0.02	0.547
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	11/17/1992	6/25/2009	14	1.88	1.79	3.84	1.19	0.629
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	5/8/2007	6/12/2019	14	7.06	2.37	39.3	0.29	11.3
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	7/1/1983	6/23/2015	5	8	0.2	20	0.2	10
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	5/8/2007	6/25/2009	3	0.1	0.1	0.2	0.1	0.06
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	11/17/1992	5/24/2005	11	0.89	1	2	0.1	0.57
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	7/1/1983	6/23/2015	18	151	145	268	107	36.3
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	7/1/1983	6/12/2019	19	0.233	0.19	0.74	0.04	0.154

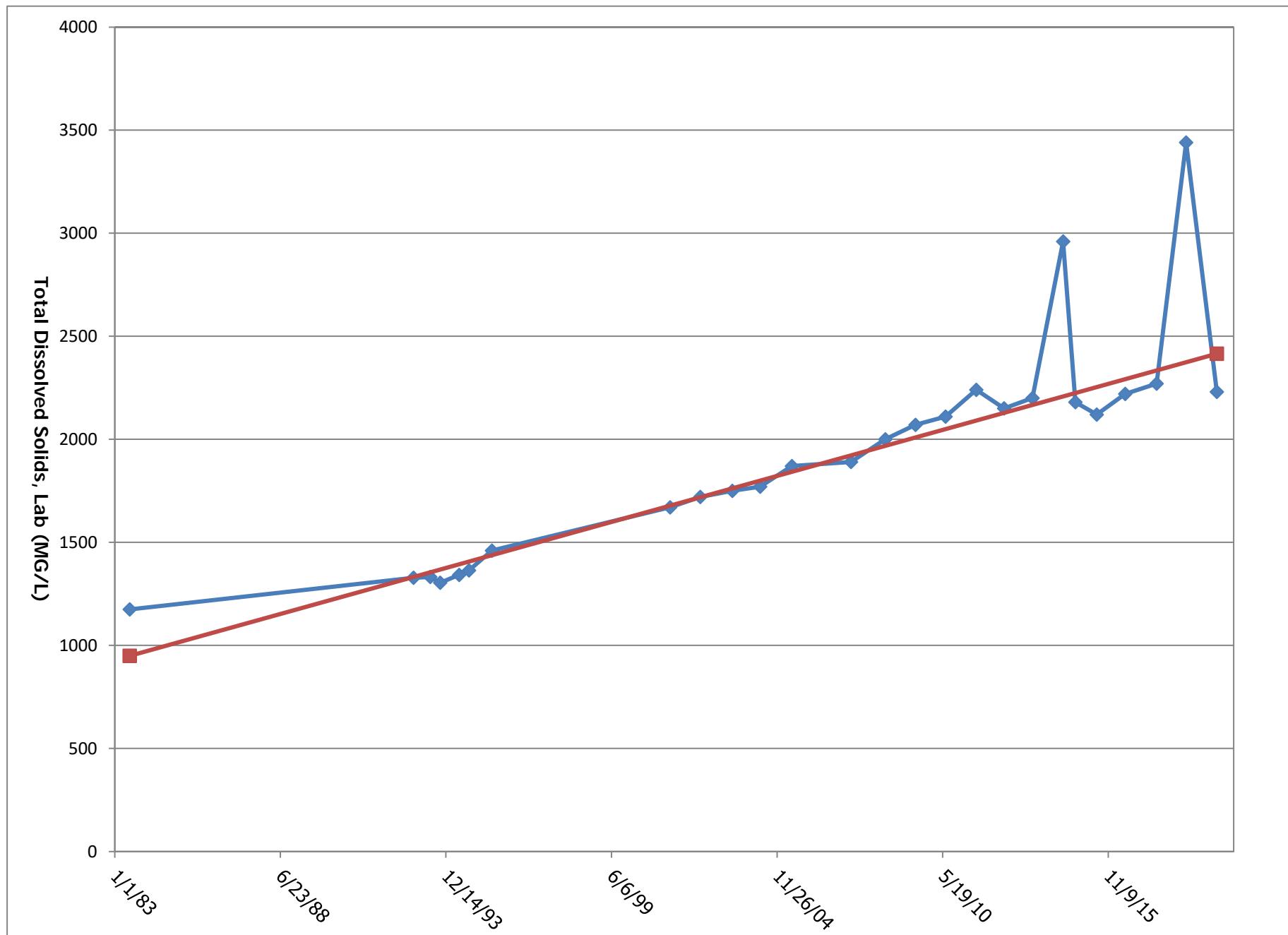
loc_report_order Location Code Location Name					2 WSPG46							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	5/8/2007	6/6/2018	7	0.53	0.24	2.25	0.19	0.759
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	11/17/1992	5/24/2005	11	0.17	0.17	0.22	0.13	0.031
22	3002 - AHR SW & SPR Long	Mercury	D	UG/L	7/1/1983	11/17/1992	2	0.6	0.6	1	0.2	0.6
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	5/24/2005	6/12/2019	15	0.3	0.2	1	0.2	0.2
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	11/17/1992	5/5/2004	10	0.41	0.2	2.4	0.1	0.7
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	11/17/1992	6/23/2015	4	10	10	20	8	7
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	5/8/2007	6/25/2009	3	20	20	20	10	6
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	11/17/1992	5/24/2005	11	10	10	20	10	5
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	7/1/1983	6/12/2019	26	0.5	0.51	0.82	0.05	0.17
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	7/1/1983	6/12/2019	26	0.038	0.02	0.21	0.02	0.042
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	11/17/1992	6/12/2019	25	0.01	0.01	0.02	0.01	0.002
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	7/1/1983	6/23/2015	18	7.6	7.5	8.3	6.9	0.39
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	7/1/1983	6/23/2015	18	5.3	5.1	7.3	3.9	0.84
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	7/1/1983	6/12/2019	13	1	0.2	10	0.1	3
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	5/8/2007	6/12/2019	8	1.1	0.15	6.7	0.1	2.3
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	11/17/1992	6/12/2019	19	2	1	20	0.1	4
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	11/17/1992	6/23/2015	4	3	0.1	10	0.1	5
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	5/8/2007	6/25/2009	3	0.07	0.05	0.1	0.05	0.03
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	11/17/1992	5/24/2005	11	0.3	0.5	0.5	0.05	0.2
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	7/1/1983	6/23/2015	18	76.7	73.5	136	59	16.8
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	7/1/1983	6/23/2015	18	0.968	0.95	1.35	0.83	0.108
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	7/1/1983	6/12/2019	26	1000	976	1930	475	343
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	11/17/1992	6/12/2019	25	0.0764	0.02	1.13	0.02	0.221
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	7/1/1983	6/23/2015	5	0.02	0.01	0.04	0.01	0.01
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	5/8/2007	6/25/2009	3	0.02	0.02	0.02	0.01	0.006
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	11/17/1992	5/24/2005	11	0.02	0.01	0.05	0.01	0.01
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	7/1/1983	6/23/2015	18	-1.42	-1.3	4.4	-8.5	2.92
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	7/1/1983	6/12/2019	26	1929	1945	3440	1175	519.5
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	7/1/1983	6/23/2015	18	1653	1655	2760	1140	390.8
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	7/1/1983	6/12/2019	26	97	8	970	2	254

loc_report_order	2				
Location Code	WSPG46				
sys_sample_code	3002_WSPG46_06122019				
Site ID					
Date	6/12/2019				
report_order	Parameter	Fraction	Units	Detection	Result
42	Flow	N	GPM	Y	0
1	Specific Conductivity, Field	N	UMHOS/CM	Y	2627
2	pH, Field	N	S.U.	Y	7.15
3	Temperature, Field	N	DEG-C	Y	9.5
18	Iron	TR	MG/L	Y	25.8
21	Manganese	D	MG/L	Y	0.232
22	Mercury	T	UG/L	N	1
24	Ammonia Nitrogen	N	MG/L	Y	0.47
26	Nitrate Nitrogen	N	MG/L	Y	0.21
27	Nitrite Nitrogen	N	MG/L	Y	0.02
30	Selenium	D	UG/L	N	0.5
30	Selenium	PD	UG/L	N	0.5
30	Selenium	TR	UG/L	N	0.5
34	Sulfates	N	MG/L	Y	1200
35	Sulfide	N	MG/L	N	0.1
39	Total Dissolved Solids, Lab	N	MG/L	Y	2230
41	Solids, Total Suspended	N	MG/L	Y	879



Period of Record Water Discharge Hydrograph

WSPG46



Period of Record TDS Trend Plot

WSPG46

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loc_report_order Location Code Location Name					3 WSPG47							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	6/13/1990	6/12/2019	46	5.3	5.55	7.68	2.1	1.11
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	6/13/1990	6/12/2019	46	1930	1965	3880	1.85	510.9
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	6/13/1990	6/12/2019	46	7.33	7.29	8	7.21	0.155
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	6/13/1990	6/6/2018	45	11	10.5	20.5	9	1.84
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	6/12/2019	6/12/2019	1	11.3	11.3	11.3	11.3	0
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	6/13/1990	6/23/2015	30	360	363	416	290	23.6
6	3002 - AHR SW & SPR Long	Arsenic	D	UG/L	11/17/1992	11/17/1992	1	1	1	1	1	0
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	6/13/1990	6/23/2015	30	0.9	0.5	5	0.1	1
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/13/1990	6/23/2015	30	439	443	508	354	29.7
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	6/13/1990	6/23/2015	30	60	60	70	10	10
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	11/17/1992	6/23/2015	4	1	0.1	5	0.1	2
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	9/13/2005	7/7/2009	6	0.1	0.1	0.1	0.1	2E-17
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	6/13/1990	6/21/2005	21	0.7	0.1	10	0.1	2
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	6/13/1990	6/23/2015	30	138	138	152	125	6.62
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/13/1990	6/23/2015	30	2.1	2	16	0	2.8
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	6/13/1990	6/23/2015	30	22.2	22	30	15	4.33
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	11/17/1992	6/23/2015	4	3	0.5	10	0.5	5
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	9/13/2005	7/7/2009	6	0.2	0.2	0.5	0.1	0.2
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	6/13/1990	6/21/2005	21	10	10	50	0.1	9
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	6/13/1990	6/23/2015	30	1974	1995	2350	1460	158.7
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	11/17/1992	6/23/2015	4	3	0.5	10	0.5	5
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	9/13/2005	7/7/2009	6	0.83	0.75	1.4	0.5	0.39
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	6/13/1990	6/21/2005	21	10	10	50	10	9
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	6/13/1990	6/23/2015	30	705	705	767	638	34.3
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	6/13/1990	6/21/2005	21	0.589	0.48	1.24	0.01	0.515
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	6/13/1990	7/7/2009	26	1.29	1.31	1.49	1.03	0.101
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	6/24/2003	6/12/2019	18	1.44	1.33	3.71	0.74	0.627
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	11/17/1992	6/23/2015	4	5	0.1	20	0.1	10
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	9/13/2005	7/7/2009	6	0.1	0.1	0.2	0.1	0.04
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	6/13/1990	6/21/2005	21	2	1	20	0.1	4
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	6/13/1990	6/23/2015	30	87.4	87.8	95.5	77.4	4.78
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	6/13/1990	6/12/2019	28	0.172	0.17	0.23	0.13	0.0195

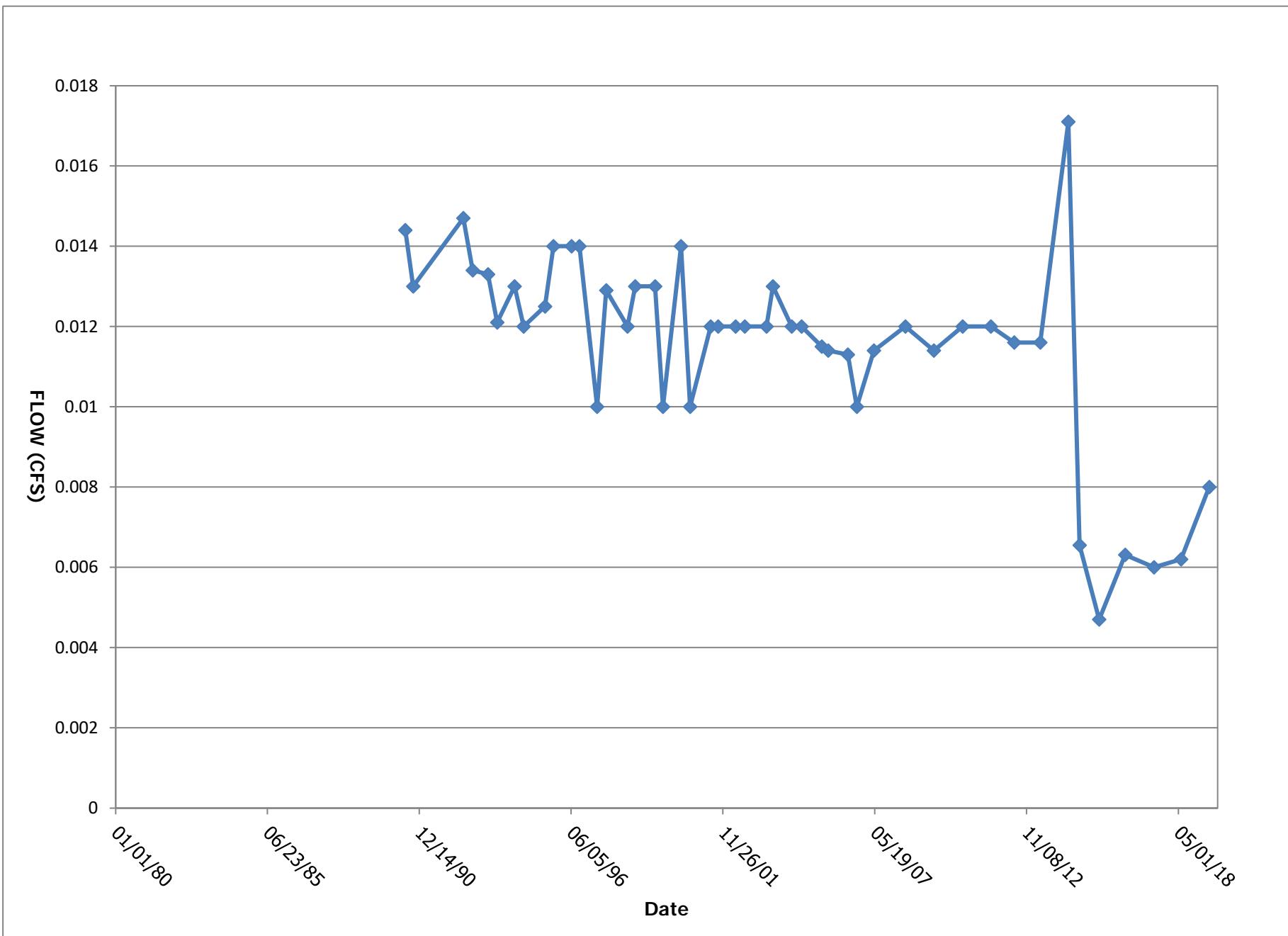
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report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	9/13/2005	6/6/2018	10	0.15	0.17	0.18	0.07	0.035
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	6/13/1990	6/21/2005	21	0.17	0.17	0.19	0.15	0.01
22	3002 - AHR SW & SPR Long	Mercury	D	UG/L	11/17/1992	11/17/1992	1	0.2	0.2	0.2	0.2	0
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	9/27/2004	6/23/2015	11	0.2	0.2	0.3	0.2	0.03
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	6/13/1990	5/20/2004	19	0.2	0.2	0.4	0.1	0.06
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	11/17/1992	6/23/2015	4	10	8	20	8	6
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	9/13/2005	7/7/2009	6	20	10	50	10	20
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	6/13/1990	6/21/2005	21	10	10	50	10	9
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	6/13/1990	6/23/2015	30	1	1	1.14	0.83	0.0719
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	6/13/1990	6/23/2015	30	0.03	0.02	0.09	0.02	0.02
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	6/13/1990	6/23/2015	30	0.01	0.01	0.03	0.01	0.004
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	6/13/1990	6/23/2015	30	7.7	7.7	8.5	6.8	0.37
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	6/13/1990	6/23/2015	30	3.7	3.8	4.5	2.9	0.44
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	11/17/1992	6/12/2019	9	0.37	0.1	1.4	0.1	0.49
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	9/13/2005	6/12/2019	11	0.35	0.1	1.7	0.1	0.52
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	6/13/1990	6/12/2019	29	0.84	1	2	0.1	0.46
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	11/17/1992	6/23/2015	4	3	0.05	10	0.05	5
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	9/13/2005	7/7/2009	6	0.05	0.05	0.05	0.05	8E-18
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	6/13/1990	6/21/2005	21	0.9	0.5	10	0.05	2
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	6/13/1990	6/23/2015	30	224	222	247	202	10.7
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	6/13/1990	6/23/2015	30	3.71	3.69	4.19	3.48	0.152
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	6/13/1990	6/23/2015	30	803	800	860	749	24
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	6/13/1990	6/23/2015	30	0.02	0.02	0.06	0.01	0.008
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	11/17/1992	6/23/2015	5	0.01	0.01	0.02	0.01	0.004
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	9/13/2005	7/7/2009	6	0.01	0.01	0.01	0.01	0
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	6/13/1990	6/21/2005	21	0.01	0.01	0.06	0.01	0.01
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	6/13/1990	6/23/2015	30	-1.29	-1.4	2.7	-6.6	2.22
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	6/13/1990	6/12/2019	38	1594	1530	3890	1420	384.9
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	6/13/1990	6/23/2015	30	1495	1490	1561	1430	37.33
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	6/13/1990	6/12/2019	38	6.2	5	18	2	2.9

Period of Record Monitoring Summary

WSPG47

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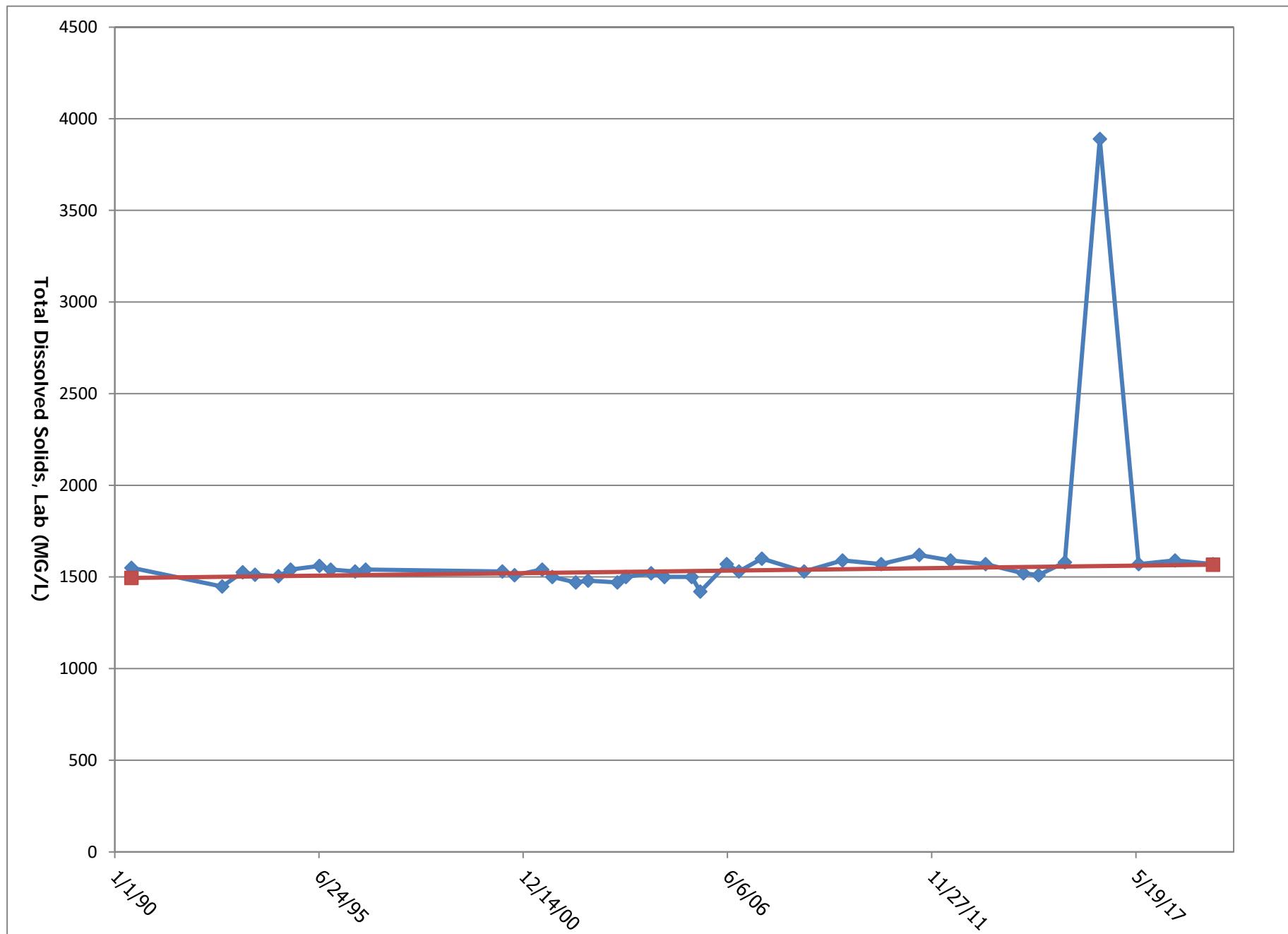
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Location Code	WSPG47				
sys_sample_code	3002_WSPG47_06122019				
Site ID					
Date	6/12/2019				
report_order	Parameter	Fraction	Units	Detection	Result
42	Flow	N	GPM	Y	3.6
1	Specific Conductivity, Field	N	UMHOS/CM	Y	2091
2	pH, Field	N	S.U.	Y	7.52
3	Temperature, Field	N	DEG-C	Y	11.3
18	Iron	TR	MG/L	Y	1.65
21	Manganese	D	MG/L	Y	0.168
30	Selenium	D	UG/L	N	0.3
30	Selenium	PD	UG/L	N	0.3
30	Selenium	TR	UG/L	N	0.3
39	Total Dissolved Solids, Lab	N	MG/L	Y	1570
41	Solids, Total Suspended	N	MG/L	Y	6



Period of Record Water Discharge Hydrograph

WSPG47

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Period of Record TDS Trend Plot

WSPG47

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		loc_report_order		4 WSPG50									
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation	
42	3002 - AHR SW & SPR Long	Flow	N	GPM	9/13/2005	6/12/2019	18	7.74	3.67	20	0.05	7.41	
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	9/13/2005	6/12/2019	19	3181	3190	6500	2.75	1525	
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	9/13/2005	6/12/2019	19	7.56	7.41	8.41	7.02	0.363	
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	9/13/2005	6/6/2018	18	11.9	10.8	19.6	8.4	3.48	
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	6/12/2019	6/12/2019	1	12.5	12.5	12.5	12.5	0	
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	9/13/2005	6/23/2015	12	563	562	631	487	43	
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	9/13/2005	6/23/2015	9	0.9	0.5	3	0.4	0.8	
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	9/13/2005	6/23/2015	12	686	685	770	594	52.4	
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	9/13/2005	6/23/2015	9	280	280	300	240	17	
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	5/13/2014	6/23/2015	3	0.2	0.2	0.2	0.2	3E-17	
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	9/13/2005	7/1/2009	6	0.2	0.1	0.5	0.1	0.2	
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	9/13/2005	6/23/2015	12	327	318	408	280	38.3	
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	9/13/2005	6/23/2015	12	2	2	2	2	0	
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	9/13/2005	6/23/2015	12	17.8	13.5	50	12	11	
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	5/13/2014	6/23/2015	3	1	1	1	1	0	
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	9/13/2005	7/1/2009	6	0.7	0.2	3	0.1	1	
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	9/13/2005	6/23/2015	9	3490	3300	4330	2660	680	
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	5/13/2014	6/23/2015	3	1	1	1	1	0	
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	9/13/2005	7/1/2009	6	3.2	2.2	8	0.5	2.9	
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	9/13/2005	6/23/2015	9	2160	2060	2940	1700	488	
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	9/13/2005	7/1/2009	6	1.14	1.01	2.21	0.48	0.597	
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	9/13/2005	6/12/2019	19	1.31	0.59	9.02	0.2	1.98	
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	5/13/2014	6/23/2015	3	0.2	0.2	0.2	0.2	3E-17	
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	9/13/2005	7/1/2009	6	0.4	0.4	0.7	0.1	0.2	
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	9/13/2005	6/23/2015	12	350	310	666	233	134	
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	6/22/2010	6/12/2019	7	0.476	0.44	1.18	0.09	0.343	
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	9/13/2005	6/6/2018	12	0.49	0.435	1.24	0.05	0.349	
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	9/13/2005	6/12/2019	19	0.2	0.2	1	0.2	0.2	
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	5/13/2014	6/23/2015	3	20	20	20	8	7	
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	9/13/2005	7/1/2009	6	20	20	50	10	10	
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	9/13/2005	6/12/2019	19	1.03	1.22	2.07	0.05	0.64	
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	9/13/2005	6/12/2019	19	4.03	3.38	11.6	0.08	2.96	

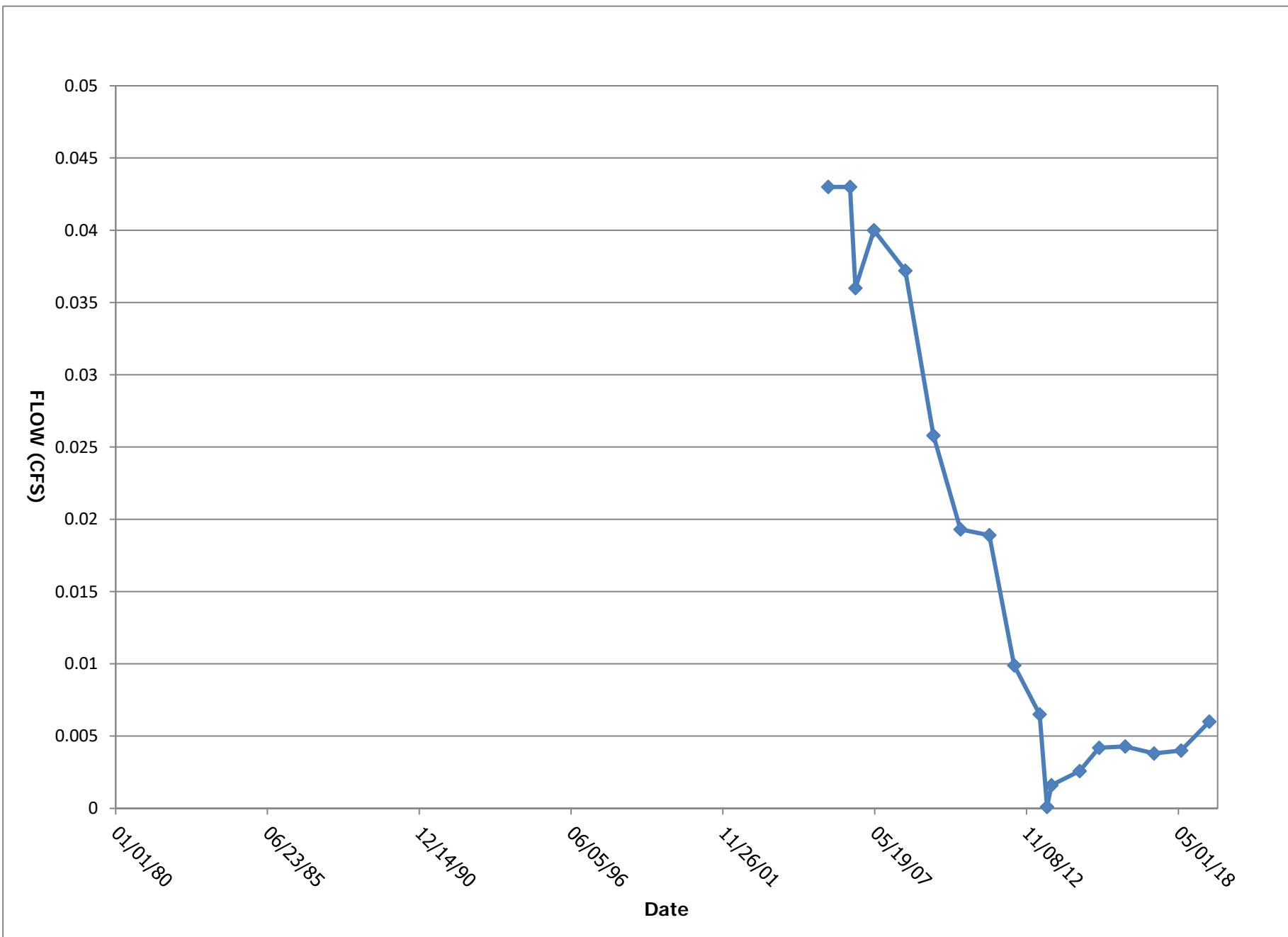
Period of Record Monitoring Summary

WSPG50

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loc_report_order Location Code Location Name					4 WSPG50							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	9/13/2005	6/12/2019	19	0.043	0.04	0.13	0.01	0.033
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	9/13/2005	6/23/2015	9	8	8	8.3	7.8	0.18
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	9/13/2005	6/23/2015	12	9.48	8.55	18.8	7.1	3.28
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	6/22/2010	6/12/2019	13	4.83	3.6	16.9	0.2	4.91
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	9/13/2005	6/12/2019	13	6.78	4.8	20.2	0.1	5.99
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	4/30/2013	6/12/2019	10	3.8	3	13	0.1	4.1
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	5/13/2014	6/23/2015	3	0.1	0.1	0.1	0.1	2E-17
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	9/13/2005	7/1/2009	6	0.1	0.05	0.3	0.05	0.1
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	9/13/2005	6/23/2015	12	160	143	328	96.7	69.3
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	9/13/2005	6/23/2015	9	1.41	1.3	2.46	1.03	0.444
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	9/13/2005	6/12/2019	19	1900	1710	3770	846	816
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	9/13/2005	6/12/2019	19	0.03	0.02	0.1	0.02	0.02
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	5/13/2014	6/23/2015	3	0.02	0.02	0.02	0.01	0.006
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	9/13/2005	7/1/2009	6	0.02	0.02	0.05	0.01	0.01
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	9/13/2005	6/23/2015	12	-1.7	-1.7	1.9	-6.3	2.4
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	9/13/2005	6/12/2019	19	3460	3010	7000	1920	1330
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	9/13/2005	6/23/2015	11	3270	3010	5520	2270	992
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	9/13/2005	6/12/2019	19	53.1	22	441	5	100

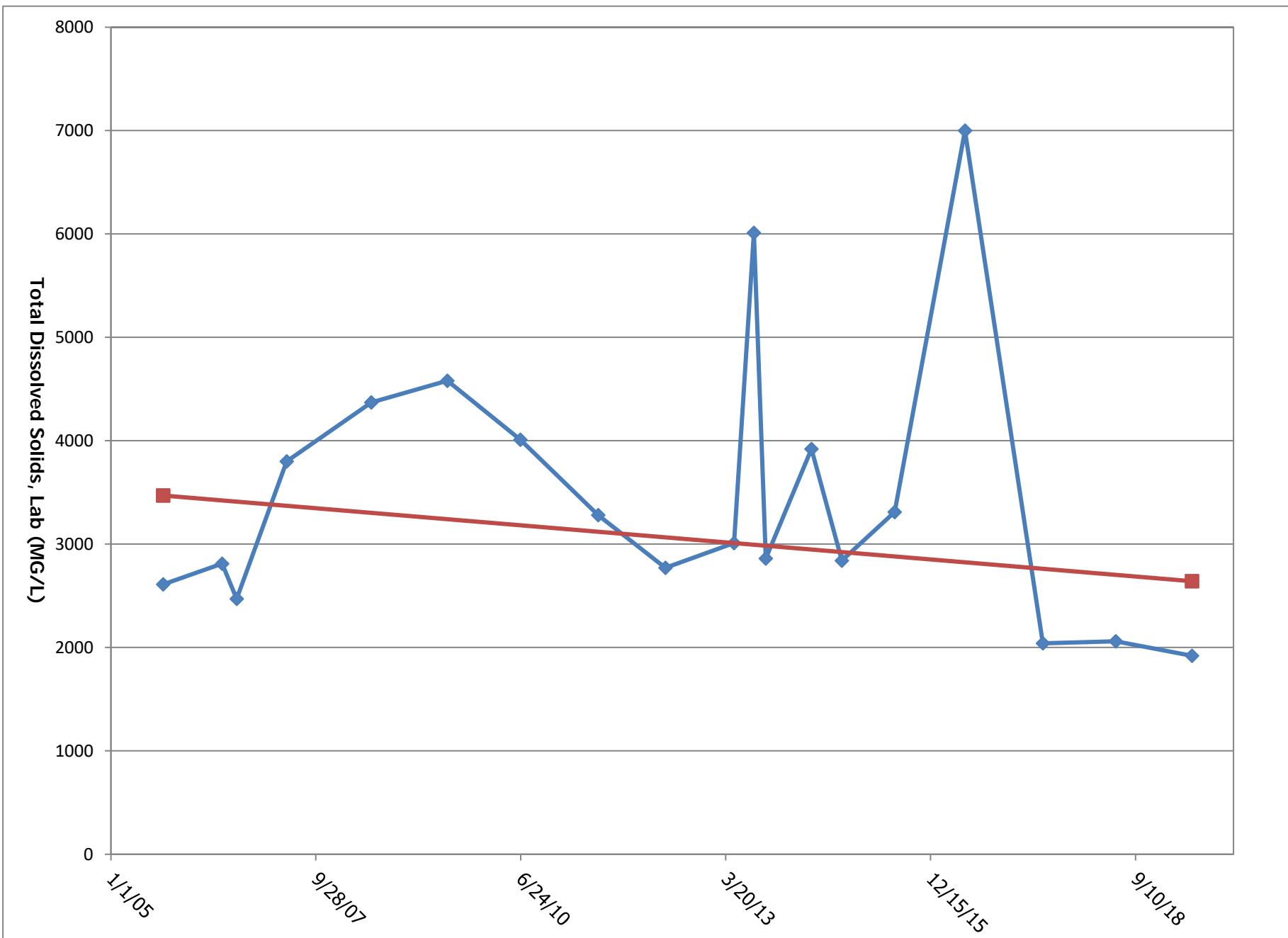
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		Site ID			
		Date	6/12/2019		
report_order	Parameter	Fraction	Units	Detection	Result
42	Flow	N	GPM	Y	2.7
1	Specific Conductivity, Field	N	UMHOS/CM	Y	2678
2	pH, Field	N	S.U.	Y	7.41
3	Temperature, Field	N	DEG-C	Y	12.5
18	Iron	TR	MG/L	Y	0.45
21	Manganese	D	MG/L	Y	1.18
22	Mercury	T	UG/L	N	1
24	Ammonia Nitrogen	N	MG/L	Y	0.32
26	Nitrate Nitrogen	N	MG/L	N	0.1
27	Nitrite Nitrogen	N	MG/L	N	0.05
30	Selenium	D	UG/L	N	0.3
30	Selenium	PD	UG/L	N	0.3
30	Selenium	TR	UG/L	N	0.3
34	Sulfates	N	MG/L	Y	846
35	Sulfide	N	MG/L	N	0.1
39	Total Dissolved Solids, Lab	N	MG/L	Y	1920
41	Solids, Total Suspended	N	MG/L	Y	8



Period of Record Water Discharge Hydrograph

WSPG50

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loc_report_order Location Code Location Name					1 WSPG7							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	6/29/1983	6/12/2019	12	3.428	2	13.19	0.03	4.53
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	6/29/1983	6/12/2019	38	1134	1180	1690	1.6	404.5
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	6/29/1983	6/12/2019	37	7.26	7.21	7.9	6.93	0.187
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	6/29/1983	6/6/2018	37	11.3	11.1	19	6.4	2.36
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	6/12/2019	6/12/2019	1	11.7	11.7	11.7	11.7	0
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	6/29/1983	6/23/2015	30	361	361	452	295	37.5
6	3002 - AHR SW & SPR Long	Arsenic	D	UG/L	6/29/1983	10/17/1983	3	2	2	2	2	0
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	7/6/1987	6/23/2015	27	1.1	1	4	0.4	0.86
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/29/1983	6/23/2015	30	440	440	552	352	47
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	6/29/1983	6/23/2015	30	60	70	90	10	20
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	6/29/1983	6/23/2015	6	3	3	5	0.1	3
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	9/19/2005	7/7/2009	6	0.1	0.1	0.1	0.1	2E-17
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	7/6/1987	6/21/2005	18	2	0.5	5	0.1	2
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	6/29/1983	6/23/2015	29	139.5	141	206	68	32.51
10	3002 - AHR SW & SPR Long	Calcium	TR	MG/L	7/6/1987	7/6/1987	1	122	122	122	122	0
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/29/1983	6/23/2015	30	2	2	9	0	2
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	6/29/1983	6/23/2015	30	11.2	11	21.7	1	4.57
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	5/13/2014	6/23/2015	3	0.5	0.5	0.5	0.5	0
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	9/19/2005	7/7/2009	6	0.2	0.1	0.5	0.1	0.2
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	7/6/1987	6/21/2005	18	10	10	50	0.1	10
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	6/29/1983	6/23/2015	30	1200	1180	1800	780	214
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	6/29/1983	6/23/2015	6	15.7	17	20	9.8	4.98
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	9/19/2005	7/7/2009	6	34.8	35.5	41.5	25.3	5.81
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	7/6/1987	6/21/2005	18	30	30	50	10	10
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	6/29/1983	6/23/2015	29	656	661	984	308	155
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	6/29/1983	6/21/2005	21	0.1	0.06	0.52	0.01	0.15
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	7/6/1987	7/7/2009	23	1.09	0.48	7.46	0.05	1.59
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	6/24/2003	6/12/2019	18	1.11	0.835	2.89	0.09	0.963
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	6/29/1983	6/23/2015	6	10	10	20	0.1	10
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	9/19/2005	7/7/2009	6	0.3	0.2	0.5	0.1	0.2
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	7/6/1987	6/21/2005	18	6	0.9	20	0.2	9
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	6/29/1983	6/23/2015	29	74.8	76.3	114	33	18.6

Period of Record Monitoring Summary

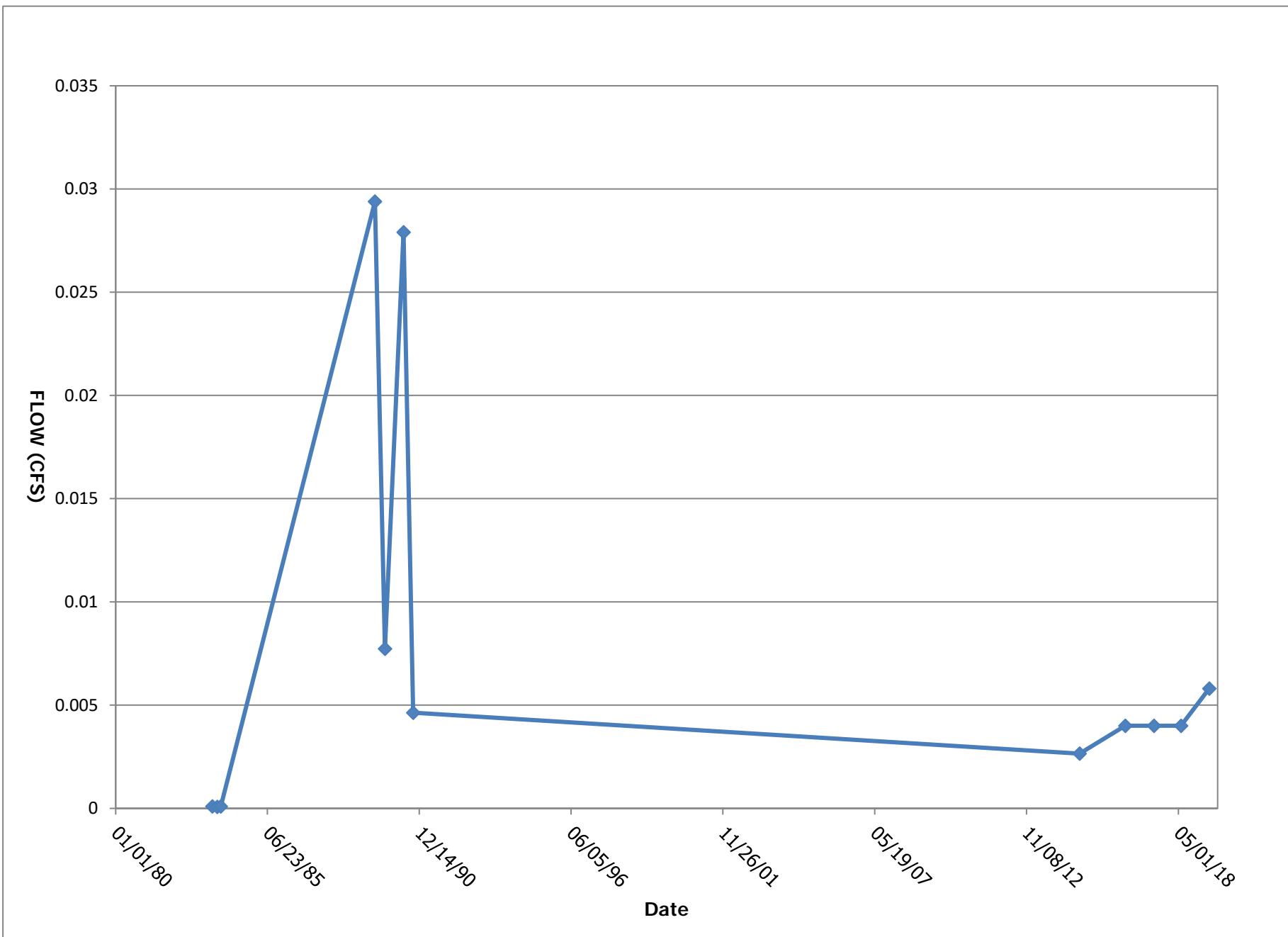
WSPG7

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loc_report_order Location Code Location Name					1 WSPG7							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
20	3002 - AHR SW & SPR Long	Magnesium	T	MG/L	7/6/1987	7/6/1987	1	70	70	70	70	0
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	6/29/1983	6/12/2019	28	0.0845	0.07	0.29	0.01	0.0744
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	9/19/2005	6/6/2018	10	0.046	0.03	0.17	0.01	0.049
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	5/9/1989	6/21/2005	17	0.078	0.08	0.19	0.01	0.047
21	3002 - AHR SW & SPR Long	Manganese	TR	MG/L	7/6/1987	7/6/1987	1	0.06	0.06	0.06	0.06	0
22	3002 - AHR SW & SPR Long	Mercury	D	UG/L	6/29/1983	10/17/1983	3	1	1	1	1	0
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	9/27/2004	6/12/2019	19	0.3	0.2	1	0.2	0.2
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	7/6/1987	5/20/2004	16	0.2	0.2	0.2	0.1	0.04
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	5/13/2014	6/23/2015	3	8	8	8	8	0
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	9/19/2005	7/7/2009	6	20	10	50	10	20
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	7/6/1987	6/21/2005	18	20	10	50	10	10
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	6/29/1983	6/12/2019	38	0.13	0.05	0.79	0.01	0.21
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	6/29/1983	6/12/2019	37	0.418	0.25	2.74	0.02	0.581
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	5/9/1989	6/12/2019	34	0.01	0.01	0.05	0.01	0.007
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	6/29/1983	6/23/2015	30	7.7	7.7	8.4	6.8	0.39
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	6/29/1983	6/23/2015	29	4	4.1	5.1	3	0.6
29	3002 - AHR SW & SPR Long	Potassium	TR	MG/L	7/6/1987	7/6/1987	1	3	3	3	3	0
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	6/29/1983	6/12/2019	14	0.91	0.75	2	0.2	0.7
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	9/19/2005	6/12/2019	11	0.71	0.6	1.4	0.1	0.44
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	7/6/1987	6/12/2019	26	0.83	1	1.2	0.2	0.31
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	5/13/2014	6/23/2015	3	0.05	0.05	0.05	0.05	8E-18
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	9/19/2005	7/7/2009	6	0.05	0.05	0.05	0.05	8E-18
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	7/6/1987	6/21/2005	18	3	0.4	10	0.05	5
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	6/29/1983	6/23/2015	29	37.3	35.8	49	28	6.05
32	3002 - AHR SW & SPR Long	Sodium	TR	MG/L	7/6/1987	7/6/1987	1	34	34	34	34	0
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	6/29/1983	6/23/2015	30	0.664	0.605	1.21	0.51	0.184
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	6/29/1983	6/12/2019	38	391	385	668	70	136
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	7/6/1987	6/12/2019	35	0.03	0.02	0.2	0.01	0.04
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	6/29/1983	6/23/2015	7	0.03	0.03	0.05	0.01	0.02
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	9/19/2005	7/7/2009	6	0.02	0.03	0.03	0.01	0.008
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	7/6/1987	6/21/2005	18	0.02	0.02	0.06	0.01	0.02
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	6/29/1983	6/23/2015	30	-0.719	-0.88	5.6	-5.2	2.47

loc_report_order Location Code Location Name					1 WSPG7							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	6/29/1983	6/12/2019	38	935	895	1360	440	220
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	6/29/1983	6/23/2015	30	844.78	846.5	1340	410	200.73
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	6/29/1983	6/12/2019	38	7	5	24	2	4.9

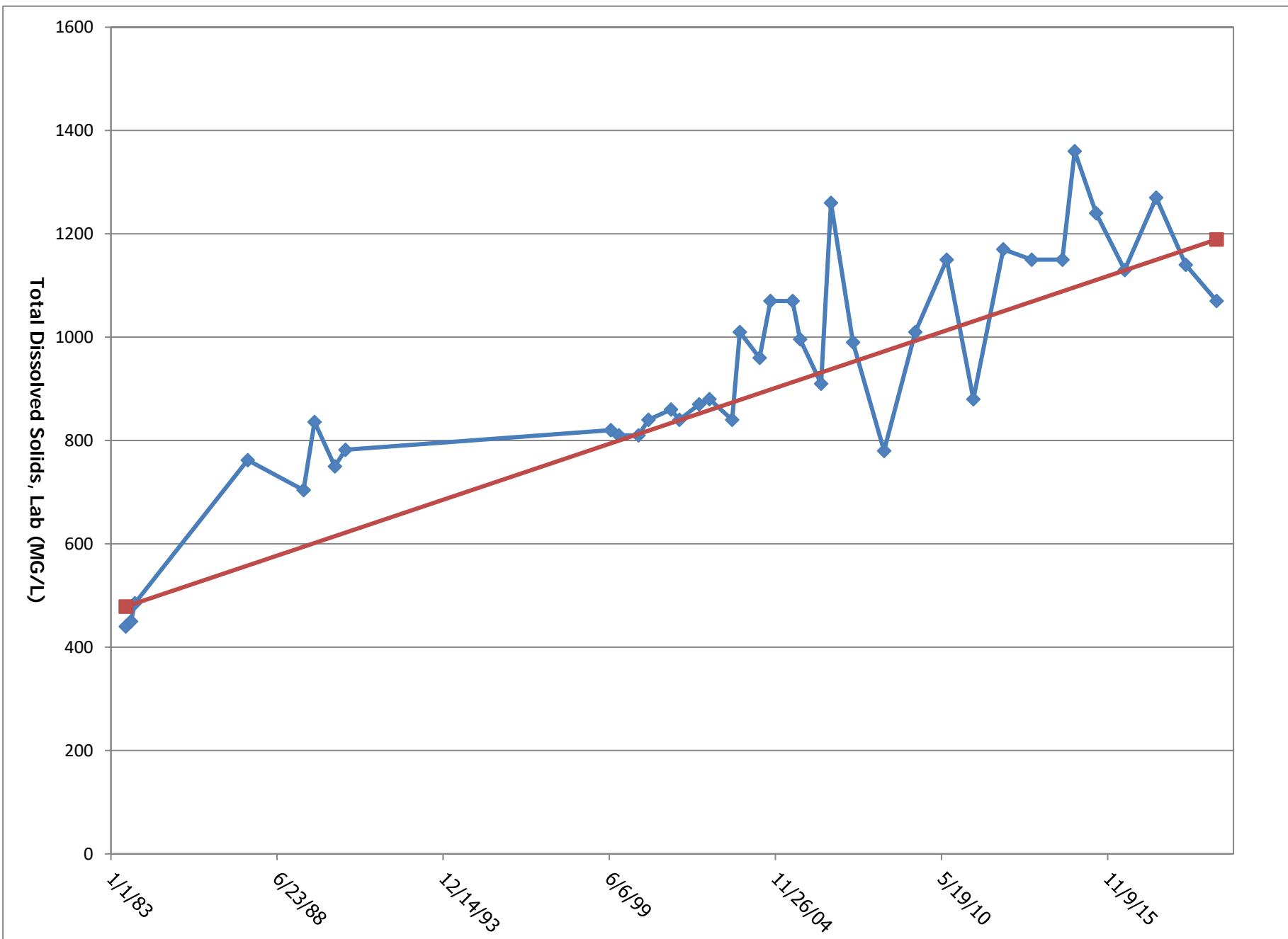
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Site ID					
Date	6/12/2019				
report_order	Parameter	Fraction	Units	Detection	Result
42	Flow	N	GPM	Y	2.6
1	Specific Conductivity, Field	N	UMHOS/CM	Y	1492
2	pH, Field	N	S.U.	Y	7.5
3	Temperature, Field	N	DEG-C	Y	11.7
18	Iron	TR	MG/L	Y	0.72
21	Manganese	D	MG/L	Y	0.0166
22	Mercury	T	UG/L	N	1
24	Ammonia Nitrogen	N	MG/L	N	0.2
26	Nitrate Nitrogen	N	MG/L	Y	1.39
27	Nitrite Nitrogen	N	MG/L	N	0.05
30	Selenium	D	UG/L	Y	0.7
30	Selenium	PD	UG/L	Y	0.6
30	Selenium	TR	UG/L	Y	0.5
34	Sulfates	N	MG/L	Y	458
35	Sulfide	N	MG/L	N	0.1
39	Total Dissolved Solids, Lab	N	MG/L	Y	1070
41	Solids, Total Suspended	N	MG/L	Y	6



Period of Record Water Discharge Hydrograph

WSPG7

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Period of Record TDS Trend Plot

WSPG7

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loc_report_order Location Code Location Name					5 WSSPG1							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	6/25/1998	6/12/2019	32	7.05	4.7	43.8	0	9.88
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	6/25/1998	6/12/2019	24	3521	3835	4890	3.48	1275
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	6/25/1998	6/12/2019	24	7.77	7.87	8.23	6.87	0.329
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	6/25/1998	6/6/2018	23	14.4	14	21.5	7	4.6
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	6/12/2019	6/12/2019	1	10.2	10.2	10.2	10.2	0
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	6/25/1998	6/23/2015	13	548	571	749	274	119
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	6/25/1998	6/23/2015	13	1.1	1	2.7	0.5	0.55
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/25/1998	6/23/2015	13	669	696	914	335	145
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	6/25/1998	6/23/2015	13	610	620	750	390	94
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	5/13/2014	6/23/2015	3	0.4	0.5	0.5	0.2	0.2
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	5/31/2006	6/25/2009	4	0.2	0.2	0.5	0.1	0.2
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	6/25/1998	5/24/2005	6	0.5	0.5	0.8	0.1	0.2
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	6/25/1998	6/23/2015	13	508	501	645	410	59.7
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/25/1998	6/23/2015	13	2	2	2	2	0
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	6/25/1998	6/23/2015	13	16.3	16	30	9.5	4.93
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	5/13/2014	6/23/2015	3	2	3	3	1	1
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	5/31/2006	6/25/2009	4	1	0.4	3	0.2	1
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	6/25/1998	5/24/2005	6	40	50	50	0.2	20
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	6/25/1998	6/23/2015	13	3810	3910	4510	2300	539
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	5/13/2014	6/23/2015	3	2	3	3	1	1
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	5/31/2006	6/25/2009	4	3	3.3	5	0.6	2
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	6/25/1998	5/24/2005	6	40	50	50	20	20
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	6/25/1998	6/23/2015	13	2880	2950	3300	1800	411
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	6/25/1998	5/24/2005	6	0.04	0.04	0.06	0.01	0.02
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	6/25/1998	6/25/2009	10	0.445	0.12	2.84	0.05	0.862
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	5/31/2006	6/12/2019	15	0.724	0.2	5.31	0.08	1.33
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	5/13/2014	6/23/2015	3	0.4	0.5	0.5	0.2	0.2
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	5/31/2006	6/25/2009	4	0.2	0.1	0.5	0.1	0.2
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	6/25/1998	5/24/2005	6	0.97	1	2.5	0.1	0.86
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	6/25/1998	6/23/2015	13	423	423	478	323	43.2
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	6/25/1998	6/12/2019	13	1.48	1.12	5.27	0.24	1.3
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	5/31/2006	6/6/2018	8	1.28	1.28	2.73	0.06	0.972

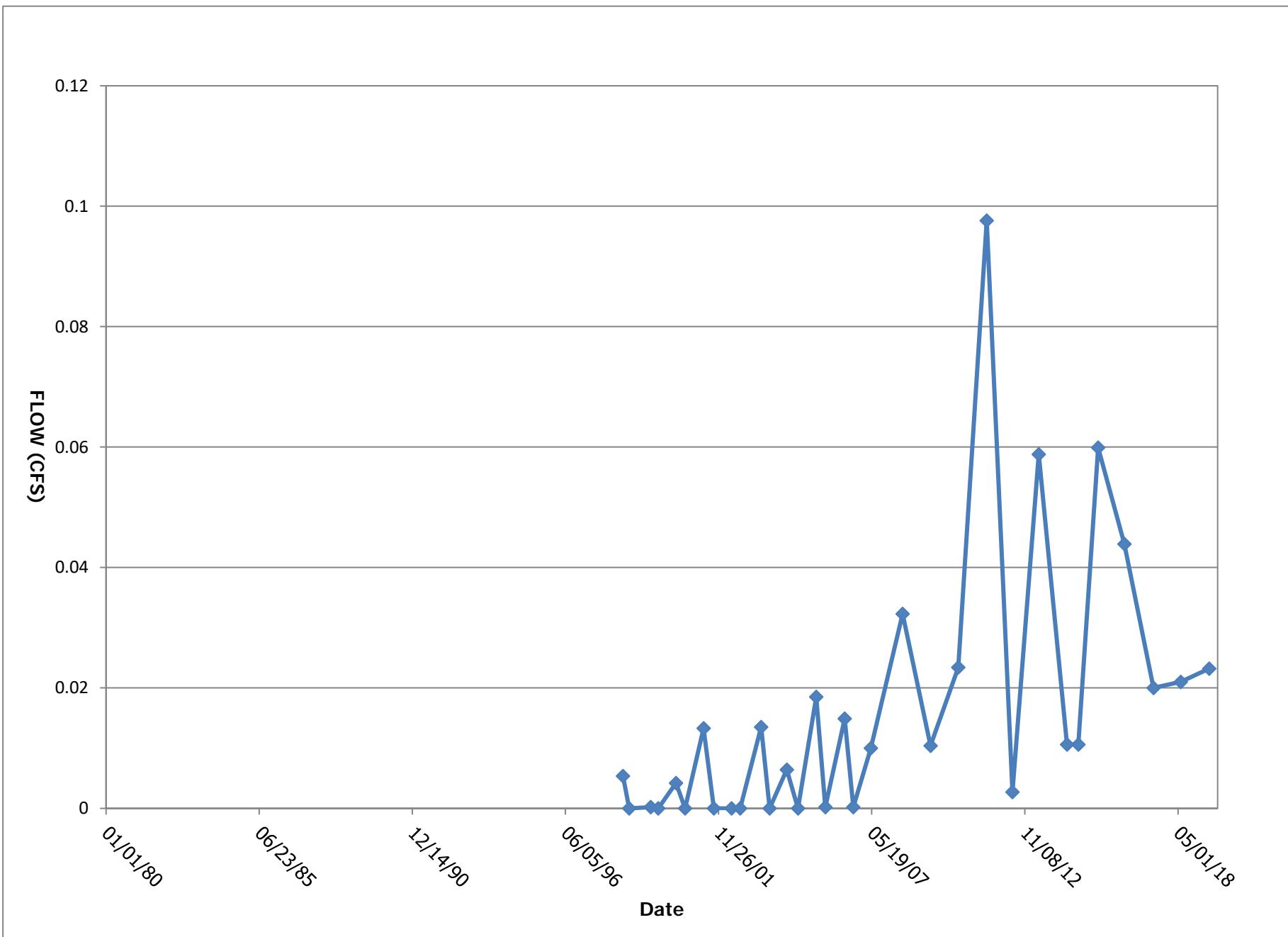
Period of Record Monitoring Summary

WSSPG1

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loc_report_order Location Code Location Name					5 WSSPG1							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	6/25/1998	5/24/2005	6	1.31	1.36	2.11	0.25	0.637
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	5/24/2005	6/6/2018	11	0.2	0.2	0.2	0.2	3E-17
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	6/25/1998	5/5/2004	5	0.78	0.2	3.1	0.2	1.3
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	5/13/2014	6/23/2015	3	71	70	80	62	9
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	5/31/2006	6/25/2009	4	60	60	80	50	20
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	6/25/1998	5/24/2005	6	78	70	150	50	37
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	6/25/1998	6/6/2018	16	0.473	0.27	1.45	0.05	0.474
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	6/25/1998	6/6/2018	16	0.877	0.465	3.2	0.02	1.03
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	6/25/1998	6/6/2018	16	0.02	0.02	0.07	0.01	0.02
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	6/25/1998	6/23/2015	13	7.9	8	8.3	7.2	0.33
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	6/25/1998	6/23/2015	13	12.8	11	35.7	8.3	6.97
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	6/29/2011	6/12/2019	10	1	0.5	5	0.2	1
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	5/31/2006	6/12/2019	9	0.47	0.3	1.5	0.2	0.42
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	6/25/1998	6/12/2019	14	0.7	1	1	0.2	0.3
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	5/13/2014	6/23/2015	3	0.2	0.3	0.3	0.1	0.1
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	5/31/2006	6/25/2009	4	0.1	0.05	0.3	0.05	0.1
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	6/25/1998	5/24/2005	6	0.4	0.4	0.6	0.1	0.2
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	6/25/1998	6/23/2015	13	56.7	57	71	45.9	6.62
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	6/25/1998	6/23/2015	12	0.45	0.45	0.54	0.39	0.042
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	6/25/1998	6/6/2018	16	2540	2580	3000	1940	259
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	6/25/1998	6/6/2018	16	0.04	0.02	0.2	0.02	0.06
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	5/13/2014	6/23/2015	3	0.03	0.02	0.05	0.01	0.02
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	5/31/2006	6/25/2009	4	0.05	0.05	0.05	0.05	0
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	6/25/1998	5/24/2005	6	0.05	0.05	0.09	0.02	0.02
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	6/25/1998	6/23/2015	12	-1.2	-2.8	5.3	-5	3.6
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	6/25/1998	6/12/2019	21	4370	4270	5180	3940	340
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	6/25/1998	6/23/2015	12	3830	3900	4390	2980	339
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	6/25/1998	6/12/2019	21	31.6	12	229	5	52.9

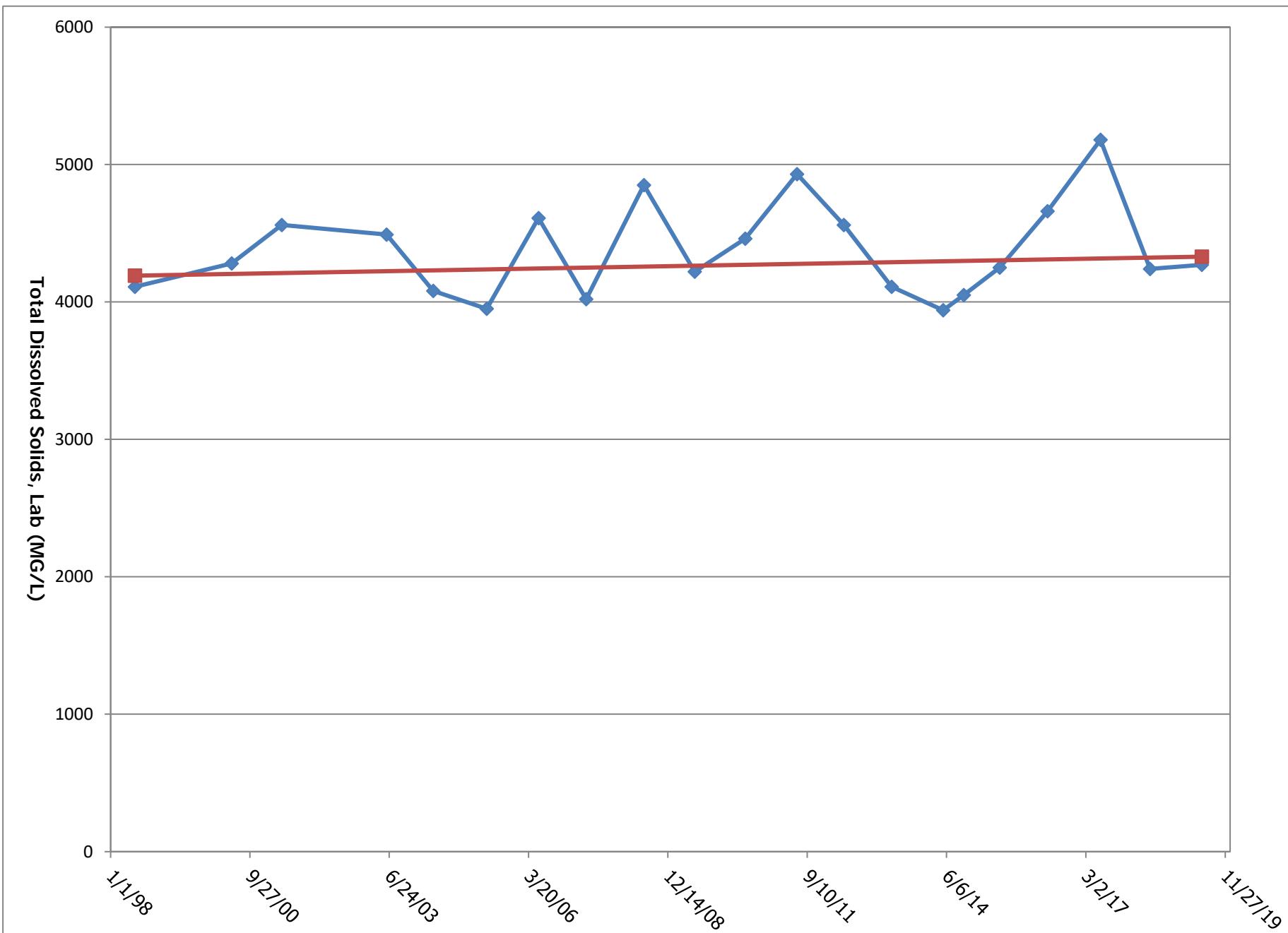
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Date	6/12/2019				
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42	Flow	N	GPM	Y	10.4
1	Specific Conductivity, Field	N	UMHOS/CM	Y	4378
2	pH, Field	N	S.U.	Y	7.95
3	Temperature, Field	N	DEG-C	Y	10.2
18	Iron	TR	MG/L	Y	0.3
21	Manganese	D	MG/L	Y	2.1
30	Selenium	D	UG/L	N	5
30	Selenium	PD	UG/L	Y	0.2
30	Selenium	TR	UG/L	N	1
39	Total Dissolved Solids, Lab	N	MG/L	Y	4270
41	Solids, Total Suspended	N	MG/L	Y	32



Period of Record Water Discharge Hydrograph

WSSPG1

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Period of Record TDS Trend Plot

WSSPG1

loc_report_order Location Code Location Name					6 WSSPG2							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	6/23/1999	6/12/2019	30	12.91	8.825	57.1	0	14.02
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	6/23/1999	6/12/2019	29	2822	2950	3620	2.7	619.3
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	6/23/1999	6/12/2019	29	7.85	7.86	8.23	7.28	0.221
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	6/23/1999	6/6/2018	28	14.9	14.6	24	6.6	3.67
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	6/12/2019	6/12/2019	1	11.3	11.3	11.3	11.3	0
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	6/23/1999	6/23/2015	16	735	741	897	389	121
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	6/23/1999	6/23/2015	16	1	1	3	0.4	0.8
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/23/1999	6/23/2015	16	891	902	1090	475	149
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	6/23/1999	6/23/2015	16	530	550	730	230	130
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	5/13/2014	6/23/2015	2	0.2	0.2	0.2	0.2	0
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	9/20/2005	6/30/2009	6	0.2	0.2	0.2	0.1	0.05
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	6/23/1999	5/25/2005	8	0.4	0.5	0.5	0.1	0.2
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	6/23/1999	6/23/2015	16	295	298	333	229	25.1
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/23/1999	6/23/2015	16	4	2	40	2	10
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	6/23/1999	6/23/2015	16	22.6	22.5	28	16.1	3.03
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	5/13/2014	6/23/2015	2	1	1	1	1	0
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	9/20/2005	6/30/2009	6	0.4	0.3	1	0.2	0.3
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	6/23/1999	5/25/2005	8	20	20	20	0.2	7
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	6/23/1999	6/23/2015	16	2910	2910	3410	2550	242
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	5/13/2014	6/23/2015	2	1	1	1	1	0
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	9/20/2005	6/30/2009	6	2.9	2.6	5	1	1.8
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	6/23/1999	5/25/2005	8	20	20	20	20	0
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	6/23/1999	6/23/2015	16	2020	2050	2180	1560	152
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	6/23/1999	5/25/2005	8	0.041	0.02	0.17	0.01	0.053
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	6/23/1999	6/30/2009	13	0.082	0.04	0.28	0.02	0.078
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	6/24/2003	6/12/2019	17	0.081	0.06	0.29	0.02	0.066
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	5/13/2014	6/23/2015	2	0.2	0.2	0.2	0.2	0
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	9/20/2005	6/30/2009	6	0.2	0.2	0.5	0.1	0.1
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	6/23/1999	5/25/2005	8	0.73	0.75	1.9	0.1	0.62
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	6/23/1999	6/23/2015	16	312	317	343	239	25.4
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	6/23/1999	6/12/2019	14	0.015	0.01	0.04	0.01	0.0094
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	9/20/2005	6/6/2018	10	0.01	0.01	0.02	0.01	0.003

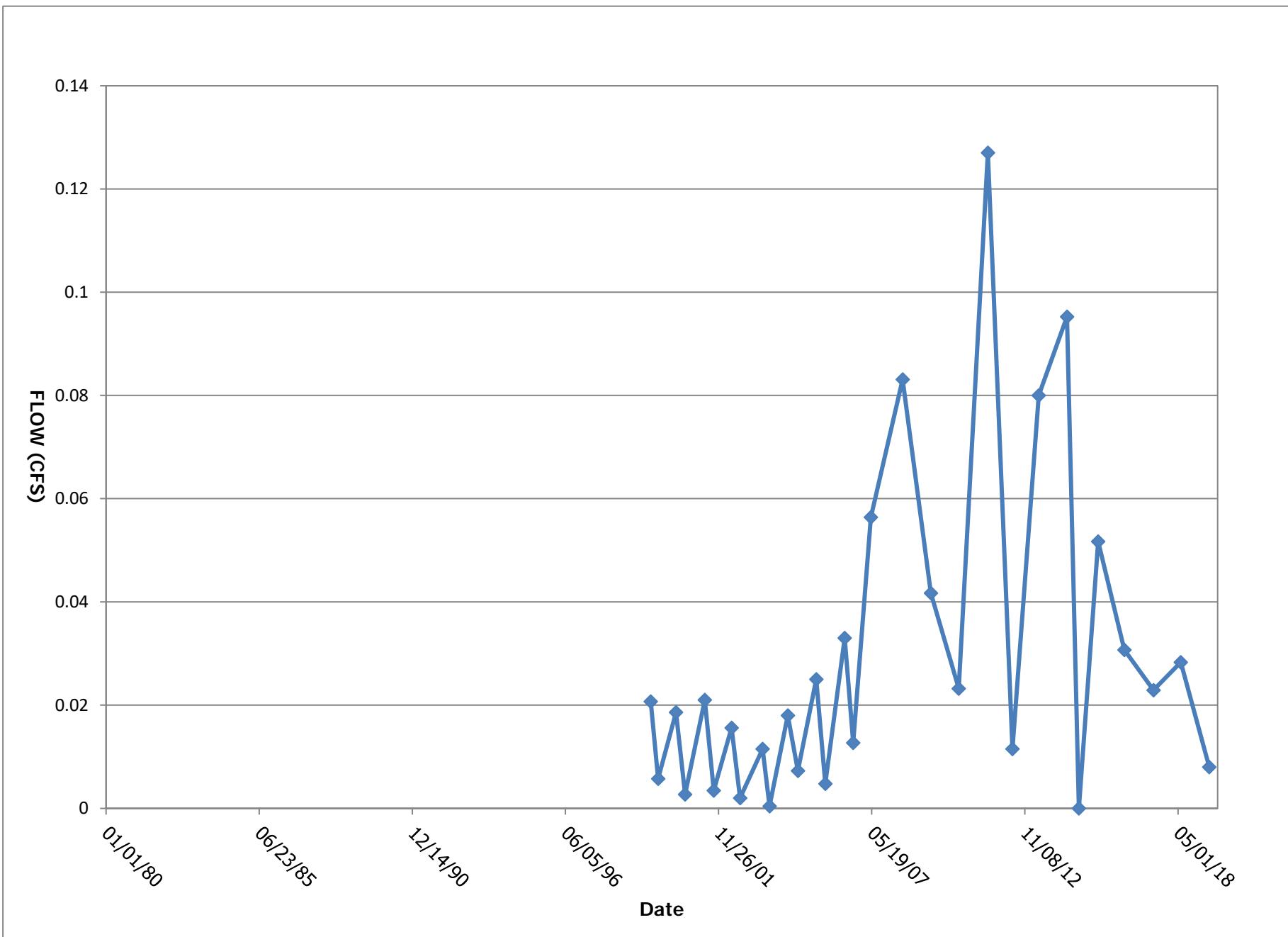
Period of Record Monitoring Summary

WSSPG2

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loc_report_order Location Code Location Name					6 WSSPG2							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	6/23/1999	5/25/2005	8	0.02	0.02	0.04	0.01	0.01
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	5/18/2004	6/12/2019	19	0.3	0.2	2	0.2	0.4
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	6/23/1999	6/24/2003	5	0.2	0.2	0.2	0.2	0
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	5/13/2014	6/23/2015	2	10	10	20	8	8
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	9/20/2005	6/30/2009	6	30	20	50	20	10
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	6/23/1999	5/25/2005	8	20	20	20	10	4
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	6/23/1999	6/12/2019	24	0.06	0.05	0.2	0.05	0.03
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	6/23/1999	6/12/2019	24	6.19	5.73	14.6	1.55	3.35
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	6/23/1999	6/12/2019	24	0.03	0.01	0.2	0.01	0.06
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	6/23/1999	6/23/2015	16	8	8.1	8.5	7.4	0.3
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	6/23/1999	6/23/2015	16	7.4	7.5	9.4	6	0.86
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	6/28/2010	6/12/2019	10	2.8	2.4	6.2	0.9	1.9
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	9/20/2005	6/12/2019	11	2.8	2.3	6.6	0.9	1.9
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	6/23/1999	6/12/2019	15	2.7	2	8	1	2.2
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	5/13/2014	6/23/2015	2	0.1	0.1	0.1	0.1	0
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	9/20/2005	6/30/2009	6	0.08	0.08	0.1	0.05	0.03
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	6/23/1999	5/25/2005	8	0.3	0.3	0.5	0.05	0.2
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	6/23/1999	6/23/2015	16	65.5	65	88.6	53.7	7.97
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	6/23/1999	6/23/2015	16	0.64	0.63	0.85	0.53	0.089
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	6/23/1999	6/12/2019	24	1420	1450	1740	1000	187
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	6/23/1999	6/12/2019	24	0.02	0.02	0.1	0.02	0.02
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	6/24/2003	6/23/2015	3	0.02	0.02	0.02	0.01	0.006
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	9/20/2005	6/30/2009	6	0.02	0.02	0.02	0.02	0
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	6/23/1999	5/25/2005	8	0.02	0.02	0.02	0.01	0.004
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	6/23/1999	6/23/2015	16	-1.5	-0.95	3.7	-8.4	3.6
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	6/23/1999	6/12/2019	24	2830	2830	3460	1800	341
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	6/23/1999	6/23/2015	16	2556.5	2620	2780	1990	207.457
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	6/23/1999	6/12/2019	24	6.5	5	14	5	2.6

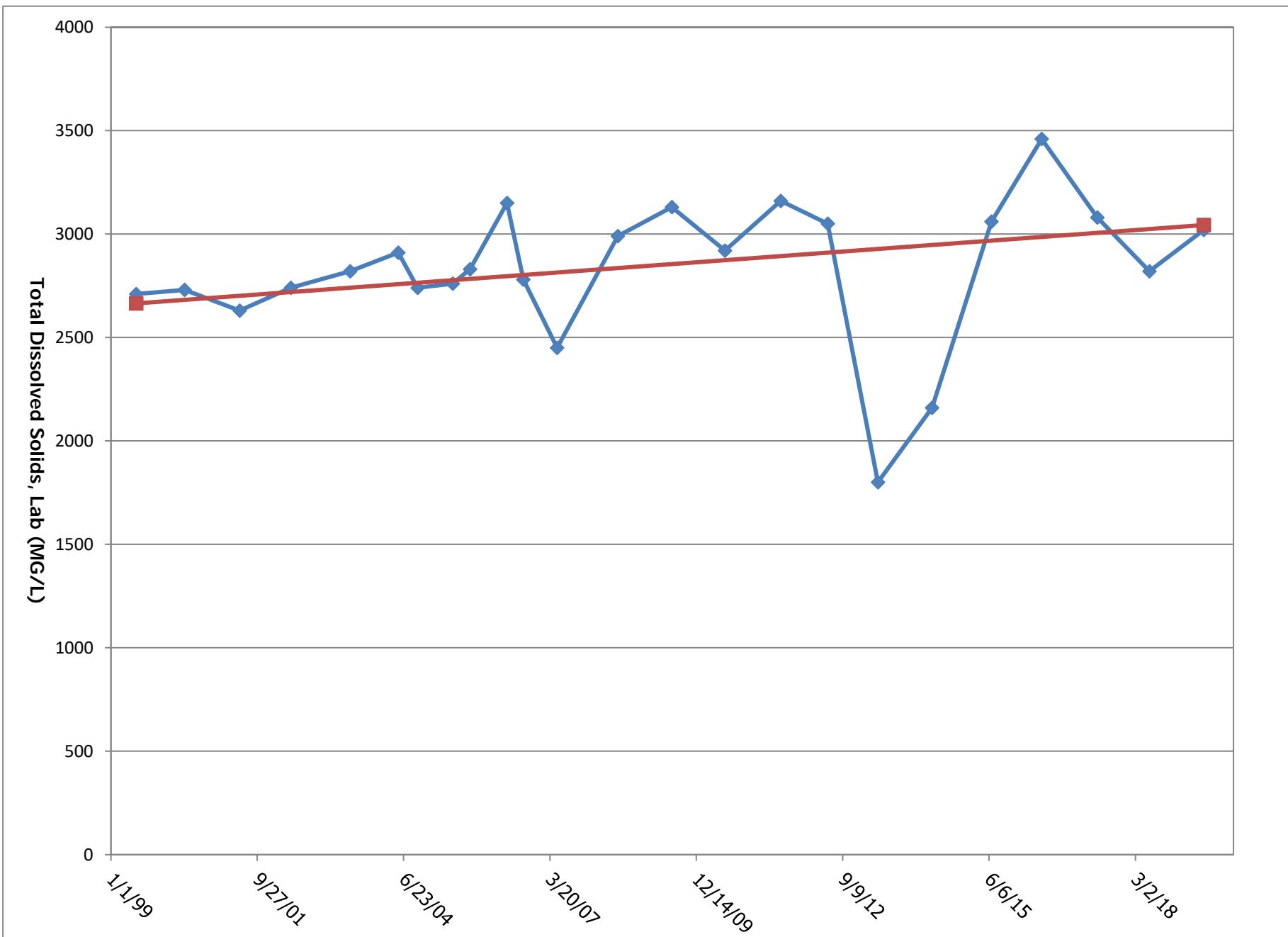
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42	Flow	N	GPM	Y	3.6
1	Specific Conductivity, Field	N	UMHOS/CM	Y	2091
2	pH, Field	N	S.U.	Y	7.52
3	Temperature, Field	N	DEG-C	Y	11.3
18	Iron	TR	MG/L	Y	0.14
21	Manganese	D	MG/L	Y	0.011
22	Mercury	T	UG/L	N	1
24	Ammonia Nitrogen	N	MG/L	N	0.2
26	Nitrate Nitrogen	N	MG/L	Y	4.66
27	Nitrite Nitrogen	N	MG/L	Y	0.01
30	Selenium	D	UG/L	Y	4.4
30	Selenium	PD	UG/L	Y	4.3
30	Selenium	TR	UG/L	Y	3.4
34	Sulfates	N	MG/L	Y	1610
35	Sulfide	N	MG/L	N	0.1
39	Total Dissolved Solids, Lab	N	MG/L	Y	3020
41	Solids, Total Suspended	N	MG/L	Y	14



Period of Record Water Discharge Hydrograph

WSSPG2

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Period of Record TDS Trend Plot

WSSPG2

loc_report_order Location Code Location Name					7 WSSPG3							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	9/30/1999	6/12/2019	29	25.85	25.3	46.9	10.4	9.938
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	9/30/1999	6/12/2019	29	3355	3420	4890	3.4	1089
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	9/30/1999	6/12/2019	29	7.01	6.95	7.66	6.51	0.244
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	9/30/1999	6/6/2018	28	11.1	10.7	18.5	9	1.8
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	6/12/2019	6/12/2019	1	12.4	12.4	12.4	12.4	0
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	9/30/1999	6/23/2015	21	664	715	889	383	126
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	9/30/1999	6/23/2015	21	1	1	3	0.4	0.8
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	9/30/1999	6/23/2015	21	810	873	1080	467	154
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	9/30/1999	6/23/2015	21	400	400	520	220	79
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	5/13/2014	6/23/2015	3	0.3	0.2	0.5	0.2	0.2
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	9/20/2005	6/30/2009	6	0.2	0.2	0.5	0.1	0.1
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	9/30/1999	5/25/2005	12	0.4	0.5	0.5	0.1	0.2
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	9/30/1999	6/23/2015	21	364.9	371	461	217	62.21
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	9/30/1999	6/23/2015	21	2	2	2	2	0
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	9/30/1999	6/23/2015	21	22.1	21	30	18	3.08
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	5/13/2014	6/23/2015	3	2	1	3	1	1
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	9/20/2005	6/30/2009	6	0.7	0.2	3	0.2	1
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	9/30/1999	5/25/2005	12	20	20	20	0.1	6
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	9/30/1999	6/23/2015	21	3540	3480	4630	2490	561
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	5/13/2014	6/23/2015	3	2	2	3	1	1
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	9/20/2005	6/30/2009	6	3.3	3.1	6	0.6	2.5
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	9/30/1999	5/25/2005	12	20	20	20	20	0
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	9/30/1999	6/23/2015	21	2420	2390	3310	1420	484
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	9/30/1999	5/25/2005	12	0.03	0.02	0.06	0.01	0.01
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	9/30/1999	6/30/2009	17	0.205	0.1	1.16	0.02	0.331
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	6/24/2003	6/12/2019	18	0.626	0.26	5	0.02	1.16
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	5/13/2014	6/23/2015	3	0.3	0.3	0.5	0.2	0.2
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	9/20/2005	6/30/2009	6	0.68	0.5	2.1	0.1	0.73
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	9/30/1999	5/25/2005	12	0.73	0.95	1.7	0.1	0.5
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	9/30/1999	6/23/2015	21	366.1	367	524	213	81.22
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	9/30/1999	6/12/2019	19	1.09	0.75	1.9	0.25	0.674
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	9/20/2005	6/6/2018	10	1.23	1.35	1.88	0.43	0.472

Period of Record Monitoring Summary

WSSPG3

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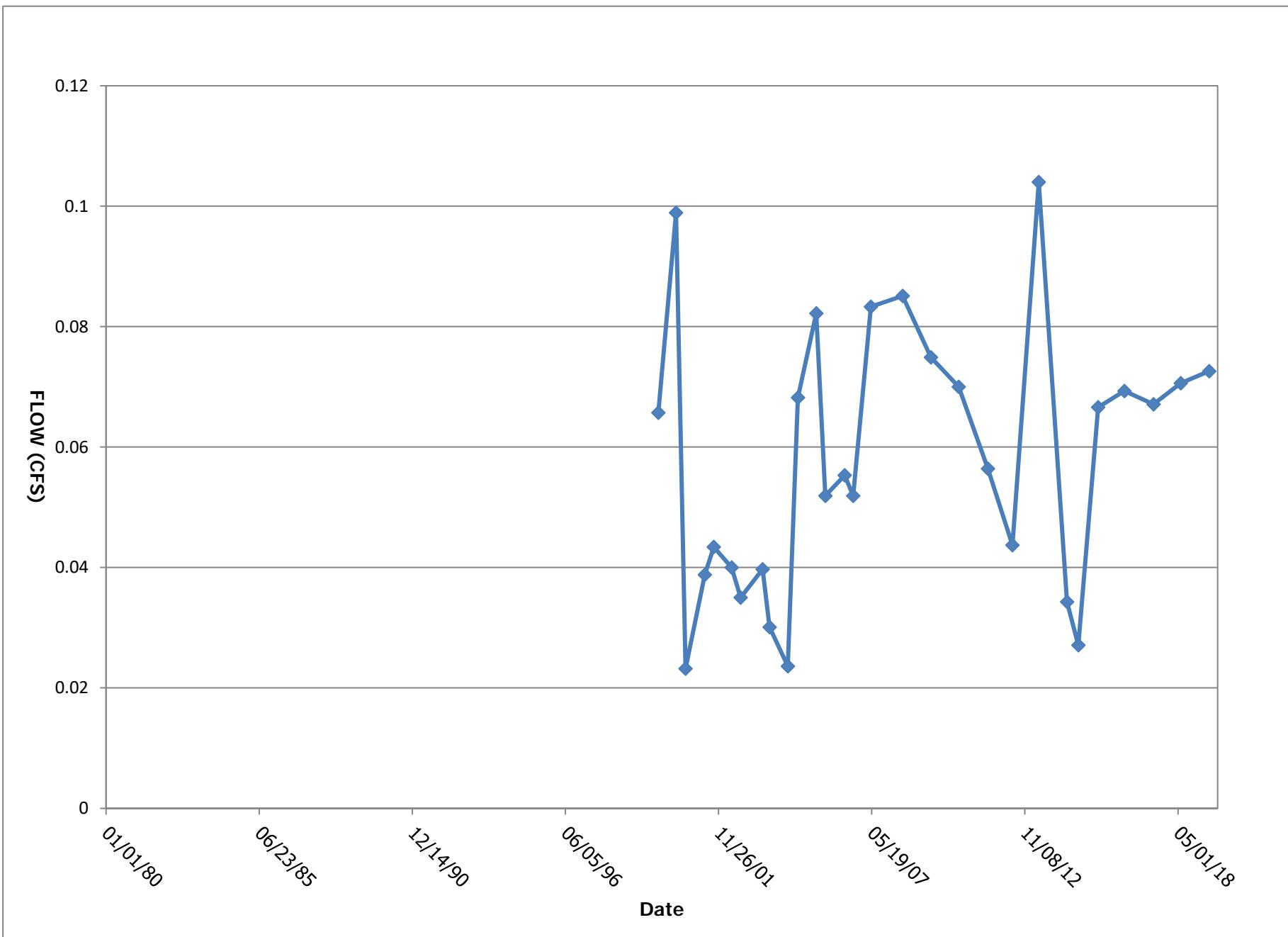
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report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	9/30/1999	5/25/2005	12	0.72	0.555	2.13	0.27	0.534
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	5/18/2004	6/12/2019	20	0.2	0.2	1	0.2	0.2
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	9/30/1999	9/23/2003	9	0.2	0.2	0.2	0.2	3E-17
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	5/13/2014	6/23/2015	3	19	20	20	16	2.3
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	9/20/2005	6/30/2009	6	70	50	200	20	70
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	9/30/1999	5/25/2005	12	20	20	20	10	3
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	9/30/1999	6/12/2019	29	0.17	0.12	0.54	0.05	0.12
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	9/30/1999	6/12/2019	29	0.915	0.19	4.79	0.02	1.37
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	9/30/1999	6/12/2019	29	0.01	0.01	0.05	0.01	0.01
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	9/30/1999	6/23/2015	21	7.6	7.6	8.1	7	0.35
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	9/30/1999	6/23/2015	21	8.35	8.7	10.1	5	1.42
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	6/28/2010	6/12/2019	11	0.6	0.5	1.8	0.2	0.49
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	9/20/2005	6/12/2019	11	0.56	0.3	2	0.1	0.64
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	9/30/1999	6/12/2019	20	0.83	1	1.7	0.2	0.39
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	5/13/2014	6/23/2015	3	0.2	0.1	0.3	0.1	0.1
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	9/20/2005	6/30/2009	6	0.2	0.1	0.3	0.05	0.1
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	9/30/1999	5/25/2005	12	0.3	0.3	0.5	0.05	0.2
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	9/30/1999	6/23/2015	21	113	117	144	69.5	20.4
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	9/30/1999	6/23/2015	21	1.01	1.02	1.31	0.8	0.132
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	9/30/1999	6/12/2019	29	2120	2180	2800	1460	361
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	9/30/1999	6/12/2019	29	0.03	0.02	0.1	0.02	0.02
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	6/24/2003	6/23/2015	4	0.058	0.02	0.18	0.01	0.082
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	9/20/2005	6/30/2009	6	0.04	0.05	0.05	0.02	0.02
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	9/30/1999	5/25/2005	12	0.02	0.02	0.05	0.01	0.01
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	9/30/1999	6/23/2015	21	-2.99	-3.4	2.1	-14.9	3.58
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	9/30/1999	6/12/2019	29	3730	3770	4850	2570	664
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	9/30/1999	6/23/2015	21	3304.02	3380	4330	2350	564.918
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	9/30/1999	6/12/2019	29	8.9	5	40	5	9

Period of Record Monitoring Summary

WSSPG3

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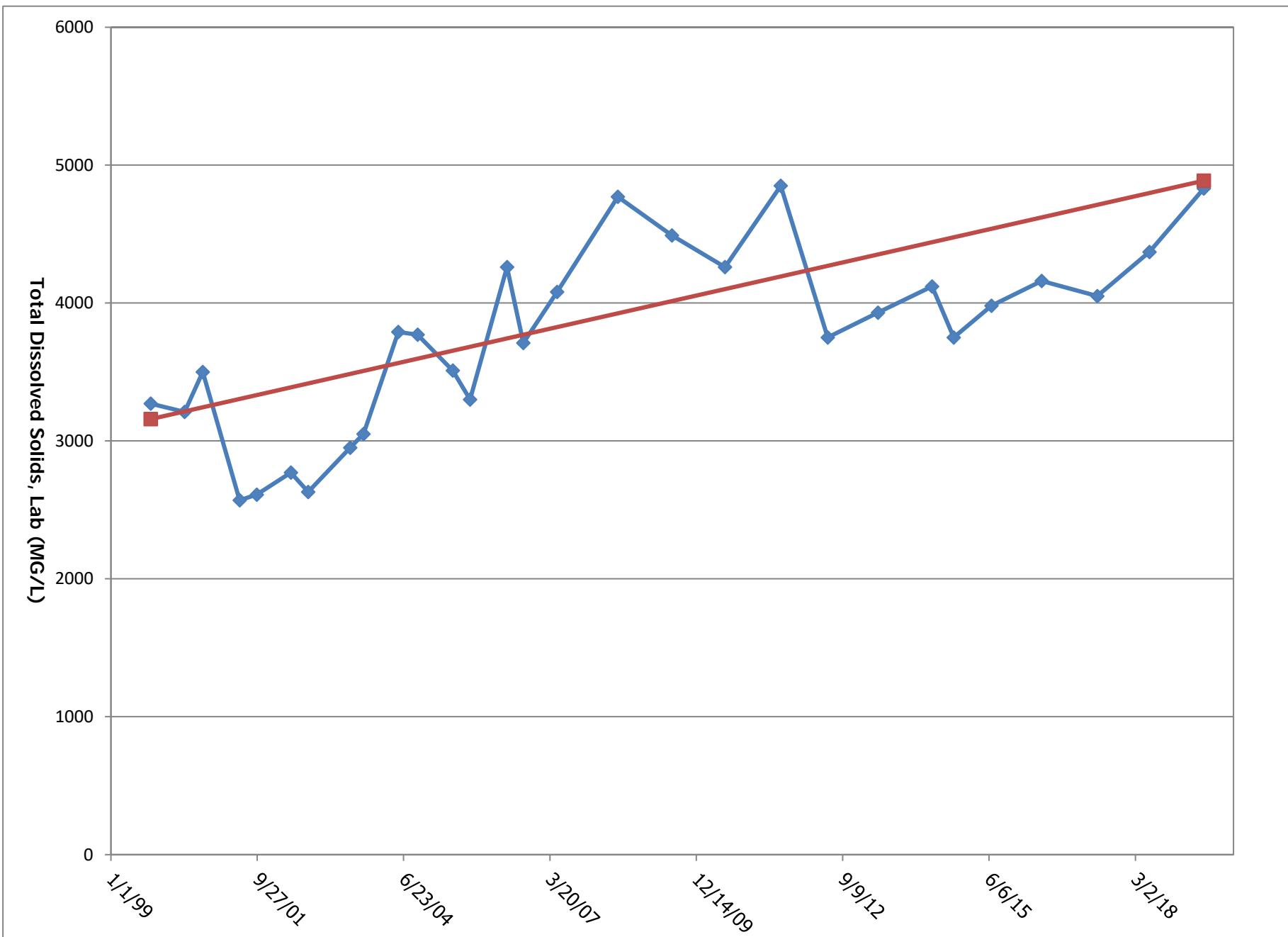
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Location Code	WSSPG3				
sys_sample_code	3002_WSSPG3_06122019				
Site ID					
Date	6/12/2019				
report_order	Parameter	Fraction	Units	Detection	Result
42	Flow	N	GPM	Y	32.6
1	Specific Conductivity, Field	N	UMHOS/CM	Y	4890
2	pH, Field	N	S.U.	Y	6.87
3	Temperature, Field	N	DEG-C	Y	12.4
18	Iron	TR	MG/L	N	0.4
21	Manganese	D	MG/L	Y	1.73
22	Mercury	T	UG/L	N	1
24	Ammonia Nitrogen	N	MG/L	Y	0.11
26	Nitrate Nitrogen	N	MG/L	Y	0.62
27	Nitrite Nitrogen	N	MG/L	Y	0.03
30	Selenium	D	UG/L	Y	0.2
30	Selenium	PD	UG/L	Y	0.2
30	Selenium	TR	UG/L	N	1
34	Sulfates	N	MG/L	Y	2620
35	Sulfide	N	MG/L	N	0.1
39	Total Dissolved Solids, Lab	N	MG/L	Y	4830
41	Solids, Total Suspended	N	MG/L	Y	7



Period of Record Water Discharge Hydrograph

WSSPG3

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Period of Record TDS Trend Plot

WSSPG3

loc_report_order Location Code Location Name					8 WSSPG4								
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation	
42	3002 - AHR SW & SPR Long	Flow	N	GPM	6/24/2003	6/12/2019	22	56.549	40.1	200	0	58.303	
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	6/24/2003	6/12/2019	21	3149	3460	4130	3.23	1136	
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	6/24/2003	6/12/2019	21	8.17	8.17	8.37	7.83	0.123	
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	6/24/2003	6/6/2018	20	13.5	13.4	21	6.4	3.83	
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	6/12/2019	6/12/2019	1	12.6	12.6	12.6	12.6	0	
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	6/24/2003	6/23/2015	12	536	548	610	420	58.6	
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	6/24/2003	6/23/2015	12	0.7	0.7	1	0.4	0.2	
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/24/2003	6/23/2015	12	647	667	724	512	66.1	
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	6/24/2003	6/23/2015	12	460	460	540	330	56	
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	5/13/2014	6/23/2015	3	0.2	0.2	0.2	0.2	3E-17	
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	5/31/2006	6/30/2009	5	0.1	0.1	0.2	0.1	0.05	
9	3002 - AHR SW & SPR Long	Cadmium	TR	UG/L	6/24/2003	5/25/2005	4	0.3	0.3	0.5	0.1	0.2	
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	6/24/2003	6/23/2015	12	332	330	394	236	55.7	
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/24/2003	6/23/2015	12	4.9	2	28	2	7.7	
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	6/24/2003	6/23/2015	12	29.4	24.5	87	16.6	18.8	
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	5/13/2014	6/23/2015	3	1	1	1	1	0	
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	5/31/2006	6/30/2009	5	0.4	0.2	1	0.2	0.4	
13	3002 - AHR SW & SPR Long	Chromium	TR	UG/L	6/24/2003	5/25/2005	4	20	20	20	0.2	10	
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	6/24/2003	6/23/2015	12	3370	3520	3980	2610	429	
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	5/13/2014	6/23/2015	3	1	1	1	1	0	
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	5/31/2006	6/30/2009	5	3.1	3.4	5	1.2	1.6	
15	3002 - AHR SW & SPR Long	Copper	TR	UG/L	6/24/2003	5/25/2005	4	20	20	20	20	0	
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	6/24/2003	6/23/2015	12	2270	2280	2570	1860	230	
18	3002 - AHR SW & SPR Long	Iron	D	MG/L	6/24/2003	5/25/2005	4	0.04	0.03	0.08	0.01	0.03	
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	5/18/2004	6/30/2009	8	0.15	0.05	0.72	0.03	0.24	
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	6/24/2003	6/12/2019	17	0.15	0.07	0.79	0.02	0.2	
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	5/13/2014	6/23/2015	3	0.2	0.2	0.2	0.2	3E-17	
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	5/31/2006	6/30/2009	5	0.2	0.2	0.5	0.1	0.2	
19	3002 - AHR SW & SPR Long	Lead	TR	UG/L	6/24/2003	5/25/2005	4	0.65	0.2	2.1	0.1	0.97	
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	6/24/2003	6/23/2015	12	350	354	391	302	29.6	
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	6/24/2003	6/12/2019	11	0.536	0.56	0.86	0.01	0.268	
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	5/31/2006	6/6/2018	9	0.599	0.53	1.31	0.2	0.356	

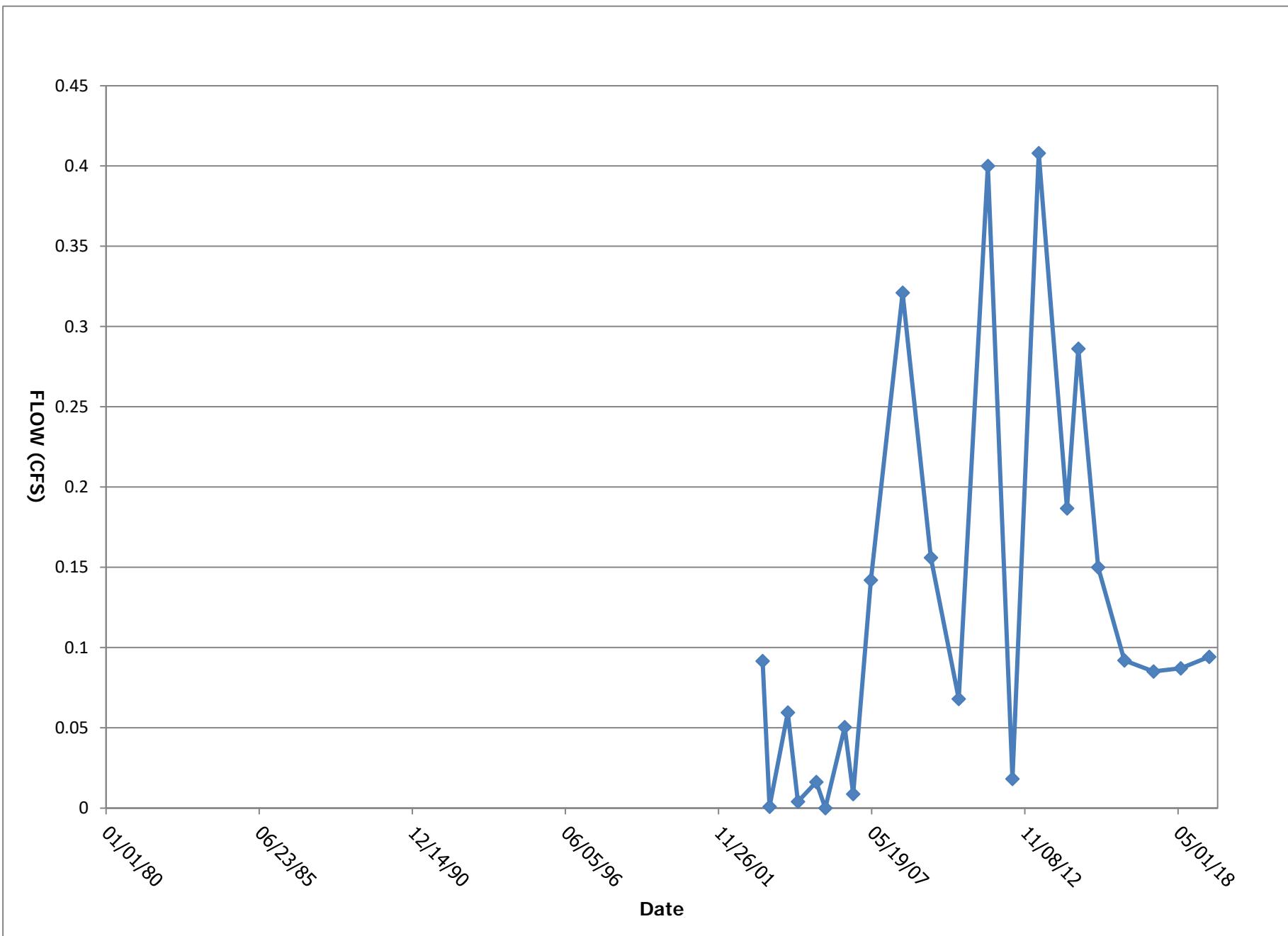
Period of Record Monitoring Summary

WSSPG4

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loc_report_order Location Code Location Name					8 WSSPG4								
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation	
21	3002 - AHR SW & SPR Long	Manganese	T	MG/L	6/24/2003	5/25/2005	4	0.57	0.49	1.28	0.02	0.561	
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	5/18/2004	6/12/2019	19	0.2	0.2	1	0.2	0.2	
22	3002 - AHR SW & SPR Long	Mercury	TR	UG/L	6/24/2003	6/24/2003	1	0.2	0.2	0.2	0.2	0	
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	5/13/2014	6/23/2015	3	26	20	40	19	12	
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	5/31/2006	6/30/2009	5	40	30	70	20	20	
23	3002 - AHR SW & SPR Long	Nickel	TR	UG/L	6/24/2003	5/25/2005	4	30	20	60	20	20	
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	6/24/2003	6/12/2019	20	0.13	0.07	0.54	0.05	0.15	
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	6/24/2003	6/12/2019	20	1.83	1.43	5.2	0.25	1.55	
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	6/24/2003	6/12/2019	20	0.02	0.02	0.1	0.01	0.02	
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	6/24/2003	6/23/2015	12	8.1	8.2	8.4	7.2	0.31	
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	6/24/2003	6/23/2015	12	10.1	9.55	15.3	7.9	1.97	
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	6/28/2010	6/12/2019	11	0.93	1	2.5	0.2	0.8	
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	5/31/2006	6/12/2019	10	1.2	1.1	2.5	0.1	0.89	
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	6/24/2003	6/12/2019	12	0.94	1	2.5	0.2	0.72	
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	5/13/2014	6/23/2015	3	0.1	0.1	0.1	0.1	2E-17	
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	5/31/2006	6/30/2009	5	0.07	0.05	0.1	0.05	0.03	
31	3002 - AHR SW & SPR Long	Silver	TR	UG/L	6/24/2003	5/25/2005	4	0.1	0.08	0.3	0.05	0.1	
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	6/24/2003	6/23/2015	12	110	109	152	68.1	25.2	
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	6/24/2003	6/23/2015	12	1	1.01	1.34	0.69	0.193	
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	6/24/2003	6/12/2019	20	1980	2000	2460	1390	338	
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	6/24/2003	6/12/2019	20	0.02	0.02	0.1	0.02	0.02	
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	6/24/2003	6/23/2015	4	0.02	0.02	0.02	0.01	0.005	
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	5/31/2006	6/30/2009	5	0.02	0.02	0.02	0.02	0	
37	3002 - AHR SW & SPR Long	Zinc	TR	MG/L	6/24/2003	5/25/2005	4	0.02	0.02	0.03	0.02	0.005	
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	6/24/2003	6/23/2015	12	-1	-0.4	4.5	-7.6	3.5	
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	6/24/2003	6/12/2019	20	3480	3670	4020	2420	502	
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	6/24/2003	6/23/2015	12	3070	3030	3740	2310	435	
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	6/24/2003	6/12/2019	20	8.2	7	21	5	4.5	

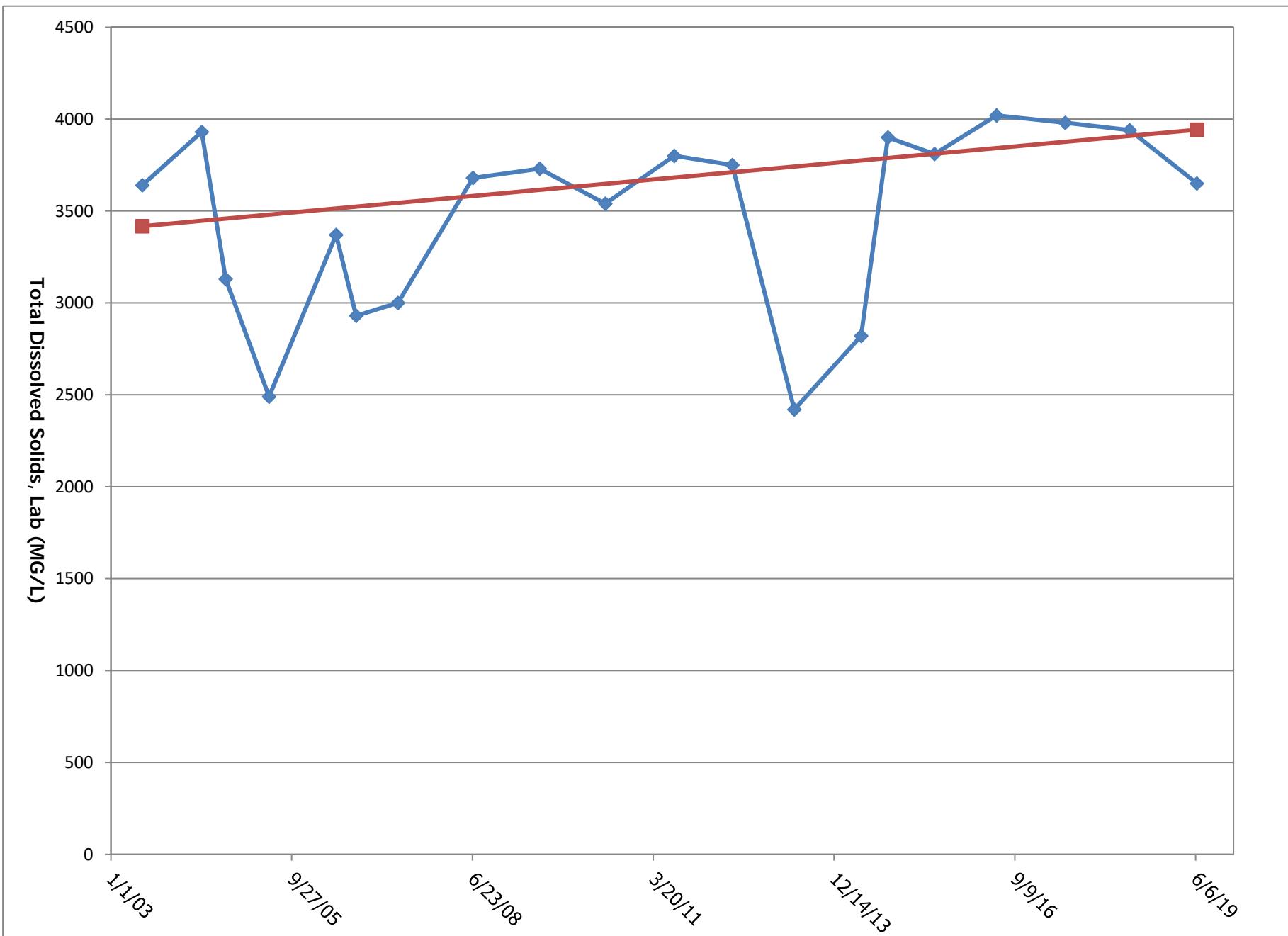
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Site ID					
Date	6/12/2019				
report_order	Parameter	Fraction	Units	Detection	Result
42	Flow	N	GPM	Y	42.3
1	Specific Conductivity, Field	N	UMHOS/CM	Y	3965
2	pH, Field	N	S.U.	Y	8.14
3	Temperature, Field	N	DEG-C	Y	12.6
18	Iron	TR	MG/L	Y	0.07
21	Manganese	D	MG/L	Y	0.482
22	Mercury	T	UG/L	N	1
24	Ammonia Nitrogen	N	MG/L	N	0.2
26	Nitrate Nitrogen	N	MG/L	Y	1.19
27	Nitrite Nitrogen	N	MG/L	Y	0.02
30	Selenium	D	UG/L	Y	1.1
30	Selenium	PD	UG/L	Y	0.8
30	Selenium	TR	UG/L	Y	0.9
34	Sulfates	N	MG/L	Y	2180
35	Sulfide	N	MG/L	N	0.1
39	Total Dissolved Solids, Lab	N	MG/L	Y	3650
41	Solids, Total Suspended	N	MG/L	Y	7



Period of Record Water Discharge Hydrograph

WSSPG4

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Period of Record TDS Trend Plot

WSSPG4

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loc_report_order Location Code Location Name					9 WSSPG5							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
42	3002 - AHR SW & SPR Long	Flow	N	GPM	6/28/2006	6/12/2019	18	102.53	69.8	376.9	0	104.3
1	3002 - AHR SW & SPR Long	Specific Conductivity, Field	N	UMHOS/CM	6/28/2006	6/12/2019	17	2082	2350	2662	2.11	803.6
2	3002 - AHR SW & SPR Long	pH, Field	N	S.U.	6/28/2006	6/12/2019	17	7.69	7.91	8.64	6.63	0.554
3	3002 - AHR SW & SPR Long	Temperature, Field	N	C	6/28/2006	6/6/2018	16	13.2	13.4	19.8	8	3.1
3	3002 - AHR SW & SPR Long	Temperature, Field	N	DEG-C	6/12/2019	6/12/2019	1	11.6	11.6	11.6	11.6	0
4	3002 - AHR SW & SPR Long	Alkalinity as CaCO <sub>3</sub> , @ pH 4.5	N	MG/L	6/28/2006	6/23/2015	10	533	524	589	473	45.4
6	3002 - AHR SW & SPR Long	Arsenic	TR	UG/L	6/28/2006	6/23/2015	7	0.7	0.5	1	0.4	0.3
7	3002 - AHR SW & SPR Long	Bicarbonate as HCO <sub>3</sub>	N	MG/L	6/28/2006	6/23/2015	10	647	639	719	578	51.5
8	3002 - AHR SW & SPR Long	Boron	D	UG/L	6/28/2006	6/23/2015	7	330	320	420	280	44
9	3002 - AHR SW & SPR Long	Cadmium	D	UG/L	5/13/2014	6/23/2015	3	0.2	0.2	0.2	0.1	0.06
9	3002 - AHR SW & SPR Long	Cadmium	PD	UG/L	6/28/2006	7/1/2009	4	0.2	0.2	0.2	0.1	0.06
10	3002 - AHR SW & SPR Long	Calcium	D	MG/L	6/28/2006	6/23/2015	10	286	294	307	238	20.6
11	3002 - AHR SW & SPR Long	Carbonate as CO <sub>3</sub>	N	MG/L	6/28/2006	6/23/2015	10	3.6	2	18	2	5.1
12	3002 - AHR SW & SPR Long	Chloride	N	MG/L	6/28/2006	6/23/2015	10	11	11.1	15	8	1.93
13	3002 - AHR SW & SPR Long	Chromium	D	UG/L	5/13/2014	6/23/2015	3	0.8	1	1	0.5	0.3
13	3002 - AHR SW & SPR Long	Chromium	PD	UG/L	6/28/2006	7/1/2009	4	0.4	0.2	1	0.1	0.4
14	3002 - AHR SW & SPR Long	Specific Conductivity, Lab	N	UMHOS/CM	6/28/2006	6/23/2015	7	2350	2250	2840	2210	223
15	3002 - AHR SW & SPR Long	Copper	D	UG/L	5/13/2014	6/23/2015	3	0.8	1	1	0.5	0.3
15	3002 - AHR SW & SPR Long	Copper	PD	UG/L	6/28/2006	7/1/2009	4	2.5	2.7	4	0.5	1.5
17	3002 - AHR SW & SPR Long	Hardness	N	MG/L	6/28/2006	6/23/2015	7	1480	1500	1590	1330	82.5
18	3002 - AHR SW & SPR Long	Iron	T	MG/L	6/28/2006	7/1/2009	4	0.62	0.155	2.15	0.02	1.02
18	3002 - AHR SW & SPR Long	Iron	TR	MG/L	6/28/2006	6/12/2019	16	2.35	0.275	26.6	0.02	6.6
19	3002 - AHR SW & SPR Long	Lead	D	UG/L	5/13/2014	6/23/2015	3	0.2	0.2	0.2	0.1	0.06
19	3002 - AHR SW & SPR Long	Lead	PD	UG/L	6/28/2006	7/1/2009	4	0.5	0.2	1.5	0.1	0.67
20	3002 - AHR SW & SPR Long	Magnesium	D	MG/L	6/28/2006	6/23/2015	10	181	180	201	167	11
21	3002 - AHR SW & SPR Long	Manganese	D	MG/L	6/22/2010	6/12/2019	7	0.979	1.01	1.26	0.67	0.229
21	3002 - AHR SW & SPR Long	Manganese	PD	MG/L	6/28/2006	6/6/2018	9	1.02	1.13	1.32	0.36	0.285
22	3002 - AHR SW & SPR Long	Mercury	T	UG/L	6/28/2006	6/12/2019	16	0.3	0.2	1	0.2	0.2
23	3002 - AHR SW & SPR Long	Nickel	D	UG/L	5/13/2014	6/23/2015	3	30	30	31	29	1
23	3002 - AHR SW & SPR Long	Nickel	PD	UG/L	6/28/2006	7/1/2009	4	30	30	40	20	8
24	3002 - AHR SW & SPR Long	Ammonia Nitrogen	N	MG/L	6/28/2006	6/12/2019	16	0.598	0.515	1.17	0.05	0.308
26	3002 - AHR SW & SPR Long	Nitrate Nitrogen	N	MG/L	6/28/2006	6/12/2019	16	0.16	0.06	1.3	0.02	0.31

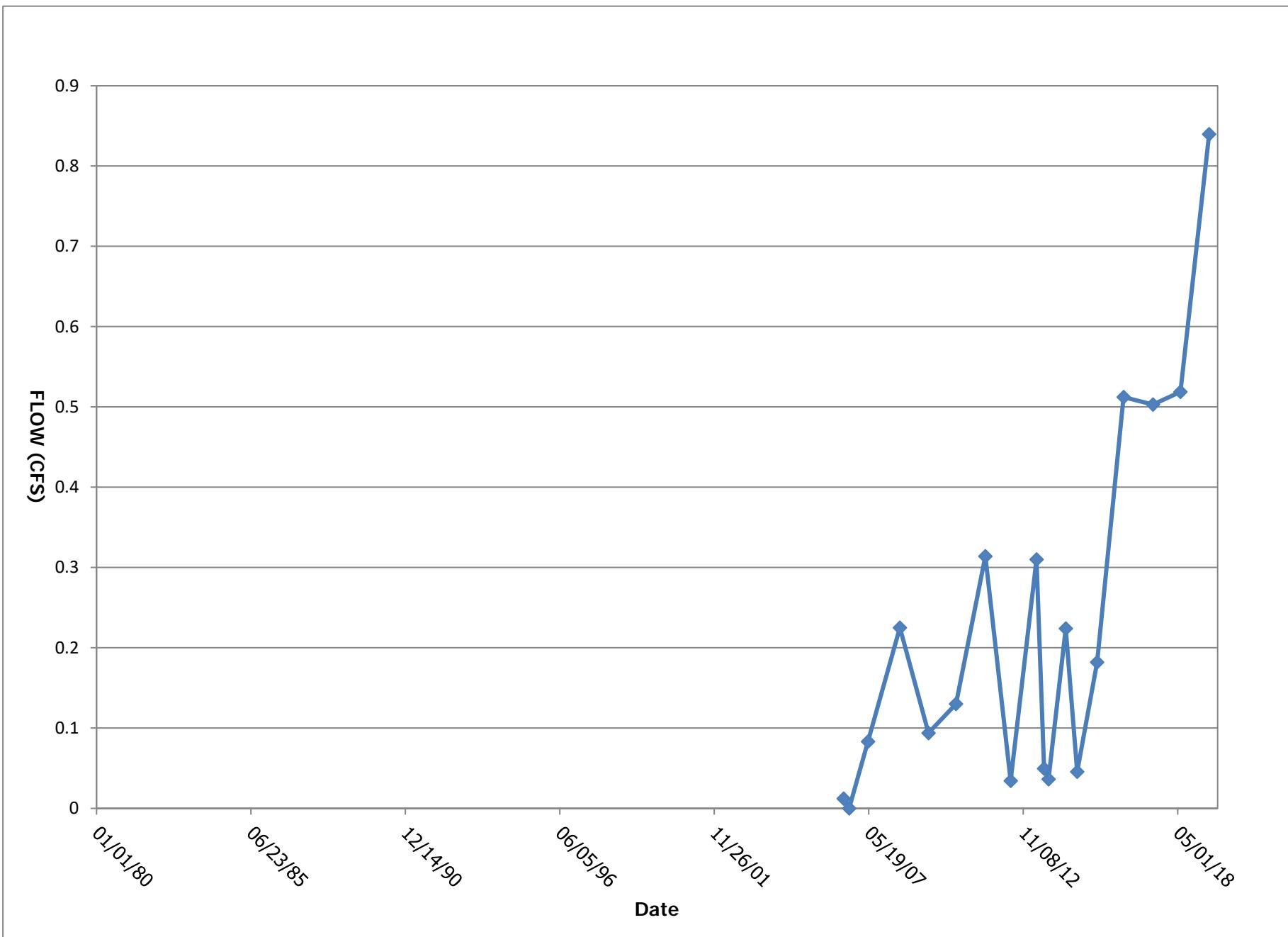
Period of Record Monitoring Summary

WSSPG5

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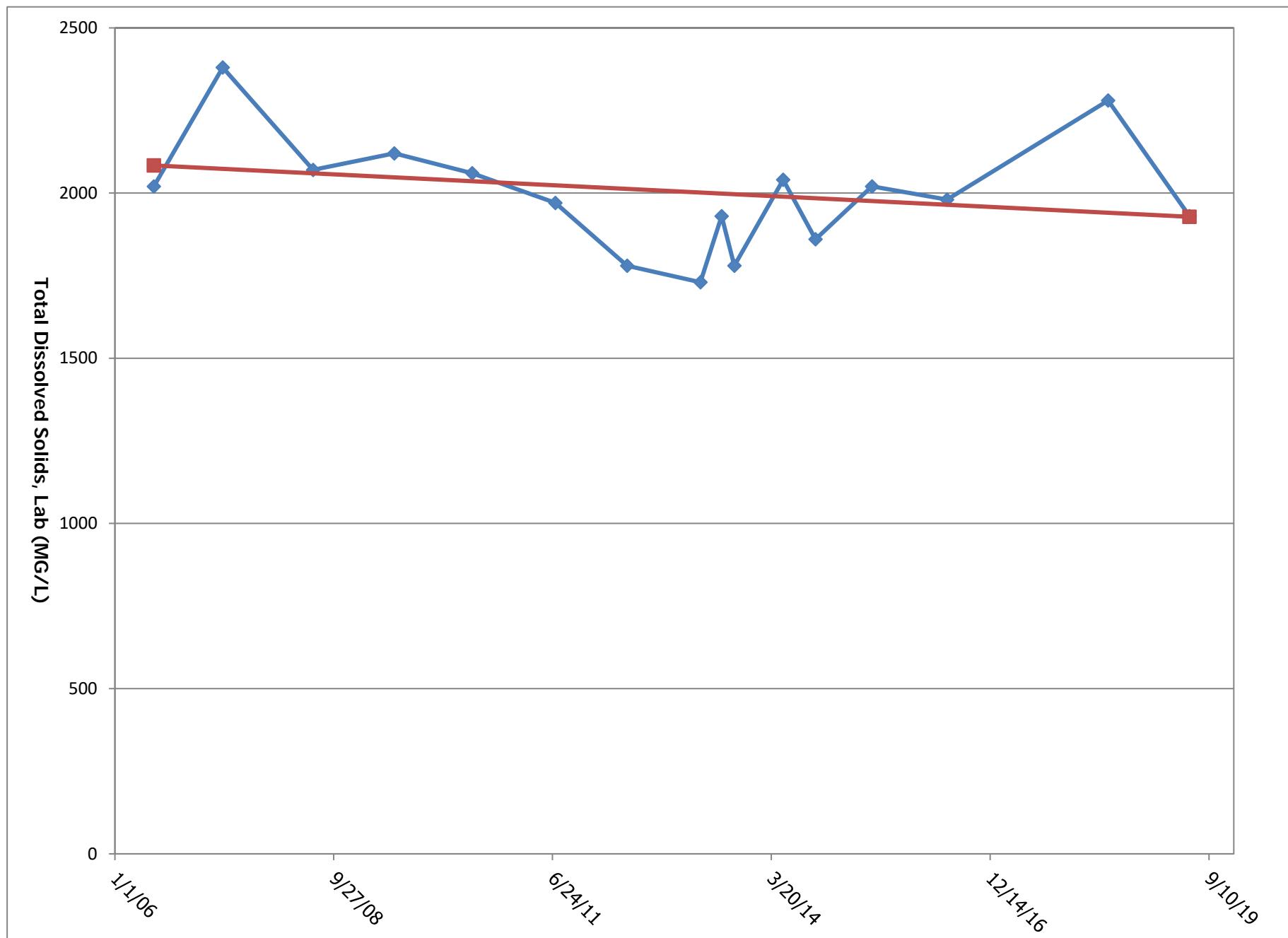
loc_report_order Location Code Location Name					9 WSSPG5							
report_order	Type	Parameter	Fraction	Units	Start Date	End Date	Sample Count	Average	Median	Maximum	Minimum	Standard Deviation
27	3002 - AHR SW & SPR Long	Nitrite Nitrogen	N	MG/L	6/28/2006	6/12/2019	16	0.02	0.01	0.05	0.01	0.01
28	3002 - AHR SW & SPR Long	pH, Lab	N	S.U.	6/28/2006	6/23/2015	7	8.1	8.1	8.3	7.6	0.25
29	3002 - AHR SW & SPR Long	Potassium	D	MG/L	6/28/2006	6/23/2015	10	6.3	6	9.3	5.4	1.2
30	3002 - AHR SW & SPR Long	Selenium	D	UG/L	6/22/2010	6/12/2019	12	0.46	0.2	2.8	0.1	0.78
30	3002 - AHR SW & SPR Long	Selenium	PD	UG/L	6/28/2006	6/12/2019	10	0.5	0.2	2.6	0.1	0.76
30	3002 - AHR SW & SPR Long	Selenium	TR	UG/L	4/30/2013	6/12/2019	9	0.56	0.2	2.5	0.1	0.78
31	3002 - AHR SW & SPR Long	Silver	D	UG/L	5/13/2014	6/23/2015	3	0.08	0.1	0.1	0.05	0.03
31	3002 - AHR SW & SPR Long	Silver	PD	UG/L	6/28/2006	7/1/2009	4	0.06	0.05	0.1	0.05	0.03
32	3002 - AHR SW & SPR Long	Sodium	D	MG/L	6/28/2006	6/23/2015	10	28.8	28.3	31.8	25.9	2.18
33	3002 - AHR SW & SPR Long	Sodium Adsorption Ratio	N	RATIO	6/28/2006	6/23/2015	7	0.33	0.34	0.36	0.31	0.024
34	3002 - AHR SW & SPR Long	Sulfates	N	MG/L	6/28/2006	6/12/2019	16	968	956	1310	789	124
35	3002 - AHR SW & SPR Long	Sulfide	N	MG/L	6/28/2006	6/12/2019	16	0.03	0.02	0.1	0.02	0.02
37	3002 - AHR SW & SPR Long	Zinc	D	MG/L	5/13/2014	6/23/2015	3	0.01	0.01	0.02	0.01	0.006
37	3002 - AHR SW & SPR Long	Zinc	PD	MG/L	6/28/2006	7/1/2009	4	0.02	0.02	0.03	0.01	0.01
38	3002 - AHR SW & SPR Long	Cation / Anion Balance	N	%	6/28/2006	6/23/2015	10	-2	-0.95	1.6	-6.7	2.8
39	3002 - AHR SW & SPR Long	Total Dissolved Solids, Lab	N	MG/L	6/28/2006	6/12/2019	16	2000	2000	2380	1730	173
40	3002 - AHR SW & SPR Long	Total Dissolved Solids (Calculated)	N	MG/L	6/28/2006	6/23/2015	9	1850	1820	2150	1660	130
41	3002 - AHR SW & SPR Long	Solids, Total Suspended	N	MG/L	6/28/2006	6/12/2019	16	121	10.5	1380	5	341

loc_report_order	9				
Location Code	WSSPG5				
sys_sample_code	3002_WSSPG5_06122019				
Site ID					
Date	6/12/2019				
report_order	Parameter	Fraction	Units	Detection	Result
42	Flow	N	GPM	Y	376.9
1	Specific Conductivity, Field	N	UMHOS/CM	Y	2401
2	pH, Field	N	S.U.	Y	7.14
3	Temperature, Field	N	DEG-C	Y	11.6
18	Iron	TR	MG/L	Y	0.53
21	Manganese	D	MG/L	Y	1.13
22	Mercury	T	UG/L	N	1
24	Ammonia Nitrogen	N	MG/L	Y	0.34
26	Nitrate Nitrogen	N	MG/L	Y	0.02
27	Nitrite Nitrogen	N	MG/L	N	0.05
30	Selenium	D	UG/L	N	0.3
30	Selenium	PD	UG/L	N	0.3
30	Selenium	TR	UG/L	N	0.3
34	Sulfates	N	MG/L	Y	864
35	Sulfide	N	MG/L	N	0.1
39	Total Dissolved Solids, Lab	N	MG/L	Y	1930
41	Solids, Total Suspended	N	MG/L	Y	8



Period of Record Water Discharge Hydrograph

WSSPG5



Period of Record TDS Trend Plot

WSSPG5

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