

*Upper Fox and Wolf River Basins Volunteer Monitoring Program
Upper Fox and Wolf Basins TMDL
2025 Annual Report*



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Project Summary

Project Location

The project area is located within the Upper Fox River and the Wolf River Basins in northeast and central Wisconsin. The Upper Fox Basin is 2,200 square miles and extends from the headwaters of the Fox River in Columbia and Adams Counties to the outlet of Lake Winnebago. The Upper Fox Basin also includes the direct drainage areas to Lake Winnebago. The Wolf River Basin is 3,700 square miles and extends from the headwaters of the Wolf River in Forest County to the Wolf River confluence with Lake Butte des Morts in Winnebago County.

The Upper Fox and Wolf River Basins (UFWB) volunteer monitoring program utilizes citizen volunteers to collect surface water samples from 26 monitoring sites on 24 different streams and rivers throughout the UFWB. The program started in 2020 with 12 sites and there have been sites added throughout the years. Most recently there were two sites added in 2025 for a total of 26 monitoring sites. Sampling locations are evenly distributed among the Upper Fox Basin, Wolf Basin, and Lake Winnebago region. These streams and rivers contribute nutrients and sediment to the Wolf River, Upper Fox River, and Lake Winnebago. Monitoring locations are displayed in Figure 1 and more detailed location information can be found in Appendix A.

Project Background

The U.S. Environmental Protection Agency (EPA) approved the UFWB Total Maximum Daily Load (TMDL) in 2020. Implementation of the TMDL aims to improve water quality by reducing total phosphorus (TP) and total suspended solids (TSS) in waterbodies throughout the Basins. The TMDL identifies and quantifies the sources and necessary phosphorus and sediment reductions to reach water quality goals. To evaluate

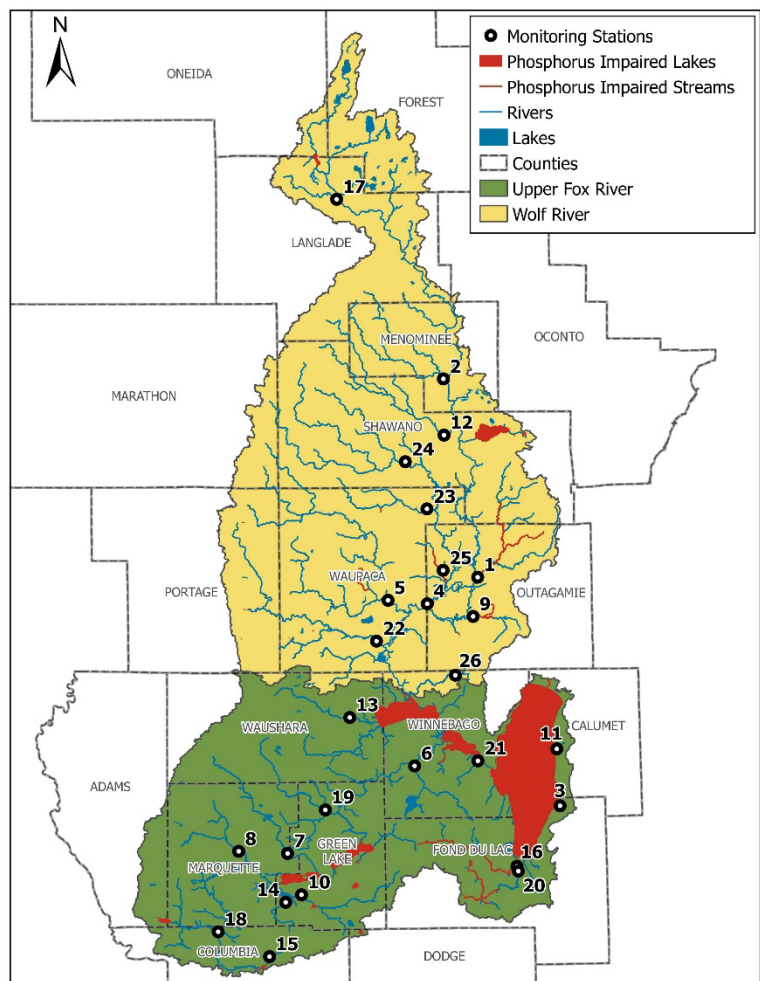


Figure 1: UFWB volunteer monitoring sites.

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effectiveness of TMDL implementation activities, one objective of the TMDL is to evaluate long-term water quality trends within the entirety of the UFWB.

The UFWB volunteer monitoring program started in 2020 to achieve some of the monitoring objectives resulting from the TMDL. 26 sampling sites were chosen for monthly (May – October) surface water sampling. Each monitoring location was selected for the program to assess long-term water quality trends throughout the Basins.

Given the time commitment and the spatial extent of the monitoring sites in the UFWB, the assistance of volunteers is vital to the success of the program. Volunteers serve the essential role of data collectors, as they collect monthly surface water samples across the 26 monitoring sites in the UFWB. Volunteers are trained before each sampling season by Wisconsin DNR staff to ensure reliable and accurate results are achieved each month.

Problem Statement

The waters within the UFWB are impaired due to excessive phosphorus and sediment loading. TMDL implementation focuses on restoring waters impaired by excessive sediment and/or high phosphorus concentrations. Phosphorus and sediment cause numerous impairments to waterways, including low dissolved oxygen concentrations, degraded habitat, and excessive turbidity. These impairments adversely impact fish and aquatic life, water quality, recreation, and potentially navigation.

Every two years, Sections 303(d) and 305(b) of the Clean Water Act (CWA) requires states to publish a list of all waters not meeting water quality standards and an overall report on surface water quality status of all waters in the state. Most of the streams and rivers sampled through the UFWB volunteer monitoring program have a target median summer (May – October) TP concentration of 0.075 mg/L, Embarrass River (STH 54) and Little Wolf River have a criteria of 0.1 mg/L. There is a TSS target of 12 mg/L defined by the UFWB TMDL. No water quality criteria currently exist for TN for the streams and rivers sampled through the UFWB volunteer monitoring program.

According to the WDNR 2024 303(d) Impaired Waters list, 13 of the 24 monitoring streams sampled through the UFWB volunteer monitoring program (Bear Creek, East and West Branches of Fond du Lac River, Fox River, Grand River, Mud Creek, Pigeon River, Pipe Creek, Rat River, Shioc River, Waukau Creek, Waupaca River, and Wolf River) are impaired due to high levels of TP and/or TSS levels in the water. Appendix C provides more information about the impaired monitoring streams.

Project Goals

There are two main goals for this project: (1) Increase public awareness and involvement in water quality issues by engaging residents in citizen science and (2) the collection of reliable surface water quality data to assess long-term water quality trends/success. The volunteer monitoring program aims to increase community awareness on local water quality issues and the impact of land use decisions around them. The focus is to raise awareness through building a volunteer base and increasing community involvement and engagement.

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Through citizen science the volunteer monitoring program goal is to collect reliable data to characterize TP, dissolved reactive phosphorus (DRP), diatom phosphorus index, TSS, total nitrogen (TN), and associated chemical and physical characteristics in streams during the primary algae and aquatic plant “growing season” of May through October. The monitoring data brings focus to which streams are affected by elevated phosphorus and sediment concentrations.

It is important to note, however, that research is currently underway into the relationship between the reduction of TP, DRP, TN, and biological responses. The collection of TP, DRP, and TN will help strengthen the understanding of these relationships and effects they may have on biological responses in streams.

Additional goals of this project include:

1. Evaluate nutrient and sediment concentrations in the tributaries discharging to the Upper Fox River, Wolf River, and Lake Winnebago.
2. Monitor the health of the basins overtime.
3. Provide a basis for evaluation of the long-term effectiveness of implementation of the Upper Fox and Wolf Basins TMDL; are there water quality improvements in sub-basins with the implementation of best management practices?
4. Share water quality data broadly among stakeholders to collectively assess water quality.

Proposed Work and Sampling Procedure

The UFWB volunteer monitoring program started in 2020 and is proposed to continue as the TMDL progresses and as funds are available. Coordination and implementation of volunteer monitoring efforts are administered by WDNR staff. Specifically, the WDNR:

- Continues to develop a well-trained volunteer base through various means of recruitment and community engagement:
 - o Volunteers are trained to follow Water Action Volunteer (WAV) (<https://wateractionvolunteers.org/>) monitoring protocol to ensure consistency is being met in each sample.
 - o Volunteers collect and ship surface water samples in iced coolers to the Wisconsin State Lab of Hygiene (WSLH) for analysis of TP, DRP, TSS, and TN.
 - o Volunteers collect streamflow and transparency data at the time of surface water sample collection (if able).
 - o Duplicate samples are collected at randomly selected sites throughout the sampling season (Appendix M). Duplicates are collected on the same day and at the same time as the regular sample.
- Continues to provide support to volunteers as needed:
 - o Ensures safe access and suitability at each monitoring site.
 - o Orders, prepares, and maintains supplies for volunteers to successfully carry out monitoring activities and shipment of samples.

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- Fosters an open line of communication with volunteers to ensure that all stations are being monitored at the frequency outlined in the project QAPP.
- Confirms that all 24 monitoring sites are monitored monthly from May to October for a total of six sampling events per year.
- Compiles monthly sampling data results to share with volunteers and stakeholders:
 - Records data into tables and graphs for analysis.
 - Develops an annual report complete with data and figures to share with stakeholders to assess annual water quality.

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2025 Sampling Season

Sample Collection Summary

2025 was the sixth year for the UFWB volunteer monitoring program. The program started in 2020 with 12 monitoring sites and sites have been added over the years. Most recently two sites were added this season for a total of 26 monitoring sites. The sites are spread throughout the UFWB and represent the main rivers and tributaries that flow to Lake Winnebago. The volunteer monitoring program started with nine volunteers, five individuals and two groups. The volunteer base has grown and in 2025 there were 22 returning and two new volunteers.

The DNR coordinator trained the new volunteers one-on-one at their sampling site in May, this ensured volunteers were comfortable with their sampling site. This type of training will be used for future seasons because it works with volunteers' schedules, ensures they are sampling at the correct location, and allows for easy equipment drop-off.

Returning volunteers had supplies shipped to their house or the supplies were dropped off by the DNR coordinator. Some sampling supplies such as sample bottles, coolers, Ziploc bags, preservative acid, and DRP supplies were shipped directly to volunteers from the WSLH. In the past, lab slips and shipping labels were created by DNR central office staff, in 2024 the volunteer coordinator took over the role. This ensured consistency with the supplies and made the coordinator the main point of contact for volunteers.

In 2025 there was one missed sample, the Red River July sample. The volunteer coordinator is there to sample if a volunteer is unable, but July tends to be a busy month and sampling needs to be planned, the volunteer is aware they need to let the coordinator know earlier in the month if they are unable to sample. Appendix D displays the sample collection completeness percentage for each sampling site since 2020.

2025 was the second year UPS was used as the courier. US Postal Service (USPS) Priority Mail was the courier from 2021-2023, but shipment reliability decreased in 2023, many samples arrived at the lab late and some shipments were lost for multiple weeks. While UPS was the main courier in 2025, one volunteer will continue to use USPS due to the convenient drop off location and lack of a UPS location in their area. There were no issues with UPS, and it will continue to be the courier for the foreseeable future. All shipping labels were printed and provided to volunteers throughout the season.

Volunteers are instructed to ship water samples immediately after collection or as early as possible the next day due to the 48-hour hold time for the DRP sample. A total of 24 DRP samples, or 16%, were flagged in 2025 due to the samples exceeding the 48-hour hold time for DRP. This amount is much lower than previous seasons, in 2024 43 samples (30%) were flagged, and in 2023 there were 58 flagged samples (40%). The shipping courier changed from USPS to UPS in 2024, leading to the decrease of samples flagged. There were not any lost packages, and most of the samples arrived at the lab the day after collection. The UFWB is a large region and some of the monitoring sites are hours away from the WSLH, variable shipping times is another factor affecting DRP samples being analyzed on time. Although these samples were flagged by

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the lab for exceeding the hold time, they were still able to be processed, and the results can be used. Getting samples to the lab and analyzed within 48 hours continues to be an area for improvement as shipping times can vary by carrier and shipping origin.

Given the spatial extent of the UFWB monitoring sites, finding volunteers in some areas of the basin is more challenging. Volunteer recruitment is one area of the program that will continually be prioritized. The coordinator should actively recruit volunteers throughout the year to help facilitate conversations amongst stakeholders and community members. Outreach and citizen science are one of the main goals of the volunteer monitoring program.

Outreach

- The UFWB Volunteer Monitoring Fact Sheet (Appendix B) was shared broadly to DNR staff and county land and water programs to help recruit volunteers.
- County Land and Conservation departments were contacted to assist with sample collection, multiple counties sample for this volunteer monitoring program.
- Local farmers groups were reached out to in 2025, this resulted in a volunteer for one of the new sampling sites.

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Wisconsin Listing Methodology

To evaluate stream water quality and TP reductions, the WDNR follows a standard assessment procedure which accounts for sample methods, timing, variability, sample size and statistical confidence to more confidently determine whether a stream meets water quality standards. The volunteer monitoring programs TP sampling data is compared to Wisconsin's TP water quality criteria (WQC) for streams (0.075 mg/L) and rivers (0.1 mg/L) by calculating the Growing Season Median (GSM) and the upper and lower 90% confidence limits of the GSM for each monitoring location. A stream is listed as impaired for TP if the lower 90% confidence limit of the GSM (May – October) TP concentration exceeds the stream WQC. The lower 90% confidence limit is used to ensure a stream exceeds the criteria with a predetermined level of confidence, before it is listed. A stream that is impaired for TP will be de-listed if the upper 90% confidence limit of the GSM TP subsequently drops below, or clearly attains, the criteria.¹ See Figure 2.

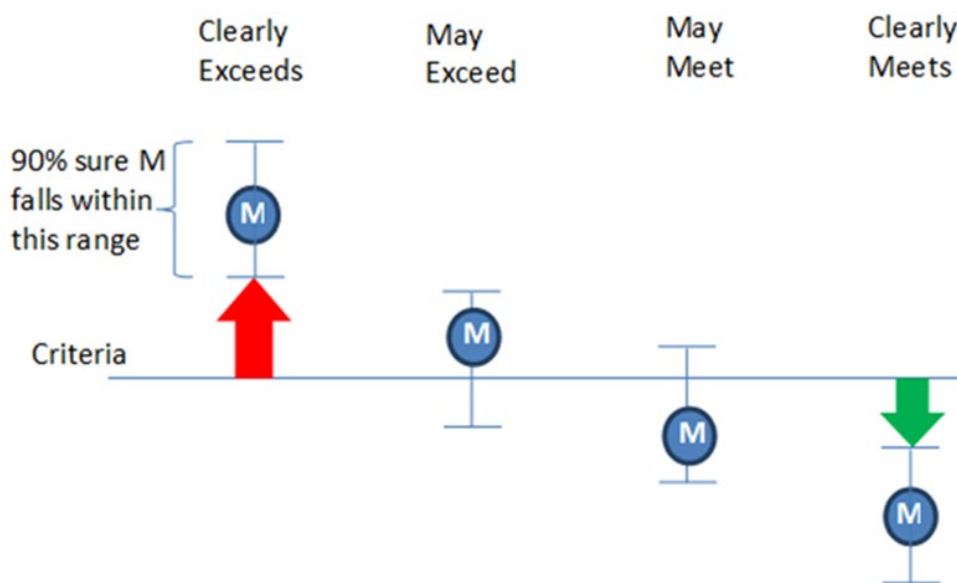


Figure 2: Wisconsin TP criteria confidence limit table. Criteria line represents the 0.075 mg/L or 0.1 mg/L WQC limit and M represents the GSM value.

A GSM and 90% Confidence limits were calculated for each monitoring site each year of data collection. A minimum of six samples, one per month from May – October, are needed to calculate the confidence limits. In years with less than six data points at a location, a data point from the same month from the most recent year of a full dataset should be used instead. There was one missed TP sample in 2025, Red River (July). Data from the corresponding month in 2024 will be used in place of the missing data. The confidence limits calculated in this data

¹ WDNR 2020. Guidelines for Monitoring for Watershed Restoration Effectiveness. Wisconsin Department of Natural Resources, Bureau of Water Quality. Madison, Wisconsin. EGAD#3200-2020-26

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summary will not be used for stream listing purposes, however the data can be used for future listing assessments. A confidence interval table is provided in Appendix E.

Based on the confidence limits calculated in 2025, the relation to criteria for nine of the monitoring streams is “Clearly Meets” (Embarrass River (CTH M), Mekan River, Pigeon River, Pine River, Red River, Waupaca River, West Branch Wolf River, White River, and Wolf River (CTH T)). There are six streams that “May Meet”, one stream that “May Exceed”, and the remaining ten streams “Clearly Exceeds” (Bear Creek (STH 76 and Stilen Rd), East and West Branches of FDL River, Grand River, Mud Creek, Neenah Creek, Pipe Creek, Rat River, and Shioc River).

Twenty of the sites have five years of data to calculate confidence limits. Confidence interval graphs for these sites can be found in Appendix F, the two sites added in 2025 are not included because there is only one year of data (Bear Creek (Stilen Rd) and Rat River). The confidence limits and GSM TP values of 12 of the 24 monitoring sites show an overall decline since 2021. These sites include Belle Fountain Creek, East Branch FDL River, Fox River, Grand River, Mekan River, Montello River, Mud Creek, Pine River, Shioc River, Waukau Creek, West Branch FDL River, and West Branch Wolf River. It is important to continue monitoring confidence limits in future seasons, these will help assess water quality trends over time and track progress as implementation occurs.

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Water Quality Data

Total Phosphorus Analysis

Total phosphorus is a key indicator of water quality. It is an essential nutrient for plant growth however, when excess amounts are introduced to a waterbody, water quality can decrease and lead to excess algae growth and harmful algal blooms. TP median values are calculated every year of sampling, even if there is less than 100% sample collection. The median is calculated instead of the mean in accordance with Wisconsin Consolidated Assessment and Listing Methodology (WisCALM) protocol for streams and rivers. Median is used for datasets with high variability to ensure results are not skewed by one extremely high or low value; streams and rivers tend to have higher variability in concentrations. Appendix G displays the median TP values for each sampling location monitored from 2020-2025. Red values indicate there was less than 100% sample collection at the monitoring site for that year. These median values were calculated from only the samples collected at the monitoring site for that year, compared to the GSM which uses previous years values if there is missing data.

In 2025, 15 of the 26 monitoring sites had median TP values below Wisconsin's TP WQC, this is higher than 2024 where 12 of the monitoring sites were below the WQC. A graph of the median values for each monitoring site can be found in Appendix H. Sampling data for all parameters is found in Appendix L.

The established State TP WQC for the UFWB streams is 0.075 mg/L, Embarrass River (STH 54) and Little Wolf River have a criteria of 0.1 mg/L. To evaluate stream TP concentrations, each TP sample was compared to the 0.075 mg/L TP criteria, samples from Embarrass River (STH 54) and Little Wolf River were compared to 0.1 mg/L. Table 3 compares the UFWB TP samples to the State TP WQC (excluding Embarrass River (STH 54) and Little Wolf River). In 2024, 70 of 129 (50%) TP samples met the TP criteria of 0.075 mg/L, this is a 4% decrease from 2024. The percentage of TP samples meeting the TP WQC has stayed consistent since the start of the program in 2020, in 2020 48% of samples met the WQC and in 2025 it is 2% more. The number of TP samples from the Embarrass River (STH 54) and Little Wolf River meeting the TP WQC of 0.1 mg/L has been high throughout the program. In 2025 75% of the samples were below 0.1 mg/L, which is 25% more than last season (Table 4).

TP Samples Below 0.075 mg/L	2020	2021	2022	2023	2024	2025
# Sites	10	18	18	22	22	24
# Samples Collected	27	100	95	126	129	143
# Above 0.075 mg/L	14	60	48	60	59	72
# Below 0.075 mg/L	13	40	47	66	70	71
% Below 0.075 mg/L	48%	40%	49%	52%	54%	50%

Table 1: TP samples compared to the TP WQC for 22 of the monitoring sites, Embarrass River (STH 54) and Little Wolf River not included.

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TP Samples Below 0.1 mg/L	2020	2021	2022	2023	2024	2025
# Samples Collected	4	12	12	12	12	12
# Above 0.1 mg/L	0	2	1	0	6	3
# Below 0.1 mg/L	4	10	11	12	6	9
% Below 0.1 mg/L	100%	83%	92%	100%	50%	75%

Table 2: TP samples compared to TP WQC of 0.1 mg/L for Embarrass River (STH 54) and Little Wolf River.

Dissolved Reactive Phosphorus Analysis

DRP is the soluble form of phosphorus and is readily available for plant uptake and algae growth. DRP concentrations can vary over short time periods due to plants taking it up and releasing it. Excessive amounts of DRP can lead to harmful algal blooms and poor water quality.

A TP sample and a DRP sample are collected during each sampling event. These samples are compared to determine the percentage of dissolved phosphorus present in the TP sample. Appendix I categorizes the TP/DRP percentages for each sample event. The red values in the table indicate the DRP concentration exceeded the TP concentration, this is due to sample variance. The bold and italicized values indicate that the DRP sample exceeded the TP WQC of 0.075 mg/L. In 2025, 12 of the 26 monitoring sites had at least one DRP sample that exceeded the TP WQC, this is similar to 2024 which had 11 monitoring sites. In addition to high DRP values at these monitoring sites, the percentage of DRP also consistently remains high at these sites.

Table 5 further breaks down the DRP percentages into percentage ranges. 44 of 154, or 29%, of TP samples collected in 2025 had 40-60% of their TP concentrations from DRP which is the most among all percentage ranges in 2025. Samples were distributed between the 20-40%, 40-60%, and 60-80% ranges in 2025. The percentage range with the biggest difference from 2024 to 2025 was <20%, in 2024 only 5 samples were in this range and in 2025 there were 23 samples in this range. There was more rain in 2024, which could be the reason for the increased DRP concentrations due to an increase in runoff, this is why it's important to sample consistently for many years to account for variability. It will be important to monitor these percentages over time as implementation in the UFWB continues as it may teach us which types of implementation help reduce DRP concentrations in rivers and streams.

Year	# Sites	# Samples Collected	< 20% DRP	20 - 40% DRP	40 - 60% DRP	60 - 80% DRP	80 - 100% DRP	> 100% DRP
2020	12	31	0	0	7	8	11	5
2021	20	112	15	31	17	29	20	0
2022	20	106	14	37	20	21	15	0
2023	24	144	31	41	29	30	13	0
2024	24	140	5	40	52	34	9	0
2025	26	154	23	41	44	37	8	1
Total	N/A	687	88	190	169	159	76	6
Percent of Total	N/A	N/A	13%	28%	25%	23%	11%	1%

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Table 3: DRP Percentage of TP Ranges (DRP >100% due to sample variance).

Total Suspended Solids Analysis

TSS results vary by site with no clear trend of concentrations increasing or decreasing from 2020-2025. The TSS median concentrations were higher in 2025 than 2024 for 16 of the monitoring sites, this shows an increase in more than half of the sites. Precipitation across the basin varied, some areas did receive higher than average rainfall which resulted in more runoff and higher TSS concentrations. TSS medians for all sites from 2020-2025 are shown in Appendix J.

The UFWB TMDL defines a numeric TSS target of 12 mg/L for streams and rivers in the basin. In 2025 eight of the monitoring sites had a median over this target, East Branch FDL River, Embarrass River (STH 54), Little Wolf River, Mud Creek, Neenah Creek, Pipe Creek, Rat River, and Waukau Creek. This is an increase from 2024, which only had four sites with a median above the TSS target. Since the start of the program 10 of the sites have had medians under this target every year. The Rat River site had the highest median TSS result since the start of the program (62.4 mg/L). The high TSS results for this site could be due to the watershed size, surrounding land use, and location of the site. Low water levels were noted at this site, which could affect TSS results.

Median TSS and TP results by month are compared in Figure 3, all TSS and TP data from 2020-2025 were used. TSS and TP have a similar trend for parts of the sampling season; concentrations are high in July and then decrease August-October. TSS concentrations are higher than TP in May and June, this could be due to the lack of crop cover in these months which allows more TSS to run off into nearby waterways.

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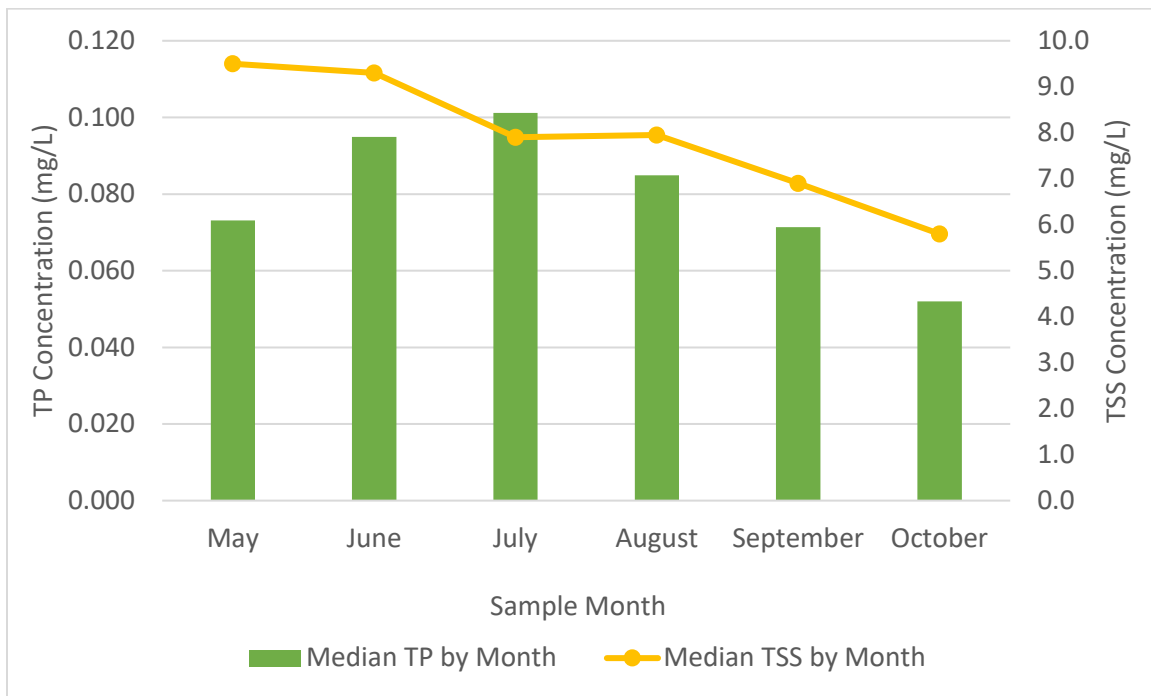


Figure 3: Median TSS and TP concentration by month.

Total Nitrogen Analysis

There is no WQC for nitrogen in Wisconsin and TMDLs are not developed for nitrogen, but it is still important to monitor TN trends over time. TN analysis may provide valuable insight to water quality as nitrogen may have similar impacts to water quality as phosphorus. TN concentrations vary by site; there is not a clear trend across the sampling seasons. Most of the sites have median results that stay consistent or are decreasing, while a few of the sites show an increase in TN concentrations. TN median results were lower in 2025 compared to 2024, only eight of the sites had higher median results in 2025 (Fox River, Little Wolf River, Mud Creek, Neenah Creek, Pigeon River, Pipe Creek, Sawyer Creek, and White River). TN medians from 2020-2025 are shown in Appendix K.

Stream Flow and Transparency

In addition to collecting surface water samples each month, volunteers collect stream flow and water transparency data. Stream flow is affected by the amount of water within a watershed and increases with rainstorms or snowmelt and decreases during dry periods. Flow defines the shape, size, and course of the stream. Streamflow and transparency data can be found in Appendix N.

Volunteers measure streamflow using a velocity-area approach. A 20 ft. length of stream is assessed; the volunteer measures the width of the stream and the water depth at numerous locations across the width. Water velocity is determined by measuring the time it takes for a tennis ball to float along the stream length. To measure streamflow, the stream needs to be

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wadable and two people are required. Most of the monitoring sites do not meet these requirements and it would be unsafe to measure streamflow.

Water transparency is collected each month with a transparency tube. Water clarity is closely related to suspended sediment in the water and is also affected by dissolved material and algae. Transparency readings range from 0-120 cm, clear water with minimal dissolved material has a reading of 120 cm. In 2024, 39 of the 134 (29%) transparency readings were 120 cm, which is only 1% more than in 2024. Transparency readings will continue to be analyzed in future seasons to determine if water clarity is increasing across the UFWB.

Field Quality Assurance/Quality Control Duplicate Samples

To document the accuracy and precision of the field data collected by volunteers, duplicate samples were taken as quality assurance/quality control (QA/QC) samples. Two duplicate samples were taken; the duplicate sample locations were randomly selected from the list of sites that are monitored. These QA/QC tests document the accuracy and precision of the data collected and look at natural variability and sampling errors.

Duplicate samples are collected on the same day and time as the regular samples and are analyzed for the same parameters as the regular samples. Duplicate sample results were compared to the regular sample results, and an absolute difference was calculated. The absolute difference between the two sets of samples is compared to each test's Level of Quantification (LOQ). The absolute difference for most of the parameters for the 2025 duplicate sample was below the LOQ. One of the TSS results, Waukau Creek was above the LOQ of 2 mg/L. Relative percent difference between the regular and duplicate samples was also calculated, the results are flagged if the percentage is greater than 30% as this indicates a variance between the two sample results. The relative percent difference for each parameter was below 30%, indicating limited variance. Duplicate sample results are in Appendix M.

Upper Fox Versus Wolf Basin

Volunteer data for the UFWB were analyzed as a single basin. Analyzing the two basins separately reveals different trends. In general, the Wolf basin has lower nutrient levels than the Upper Fox basin. There are many factors that go into this, including surrounding land use and basin size.

TP concentration between the two basins are distinctly different. In the Upper Fox basin, there are only 2 of the 13 monitoring sites that have consistently had median TP values below the 0.075 mg/L criteria. In the Wolf basin, 8 of the 13 sites are below the criteria, this includes the Embarrass River (STH 54) and Little Wolf River sites as their medians are below the 0.100 mg/L criteria. In 2025, 38% of the TP samples in the Upper Fox basin were below the criteria, while 63% of the samples were below in the Wolf basin. For both basins this percentage is smaller in 2025 compared to previous seasons, but there is less than a 10% difference.

The DRP concentrations have similar trends as the TP concentrations between both basins. In the Upper Fox basin, a majority of the 2025 DRP samples were in the 60-80% and 40-60% ranges, while the Wolf basin had more samples in the 20-40% range. The Wolf basin also has

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more sites that are consistently below the TP criteria, Wolf has 10 sites while the Upper Fox basin has 6.

Across both basins there is a TSS target of 12 mg/L. In the Upper Fox basin there are only 2 sites that have had medians below this target, while the Wolf has 9 sites always below. This indicates that the Wolf basin has lower TSS concentrations.

There is not a WQC or target established for TN. After analyzing the medians, it was concluded the Wolf basin has lower TN concentrations. The maximum median concentration for the Wolf sites is below 3 mg/L, and there are 2 sites with medians consistently below 1 mg/L. The Upper Fox sites have median concentrations above 5 mg/L and the sites with the lowest concentrations still have medians above 1 mg/L.

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Key Takeaways for 2020-2025

- The number of TP samples below the State WQC of 0.075 mg/L has stayed around 50% in recent seasons, in 2024 there were 70 samples (out of 129 total samples) below the TP WQC and in 2025 there were 71 samples (out of 143 total samples).
 - This does not include samples from Embarrass River (STH 54) and Little Wolf River because the TP WQC for these rivers is 0.1 mg/L. 75% of the TP samples from these sites were below 0.1 mg/L in 2025 compared to 50% of the samples in 2024.
- Nine of the 26 monitoring sites sampled in the UFWB “Clearly Meet” TP WQC and 6 “May Meet” according to their confidence limits calculated with data from 2025.
 - Confidence limits for 11 of the 26 monitoring sites exceeded the State WQC in 2025, 10 of the streams “Clearly Exceed” and the 1 “May Exceed”.
- DRP concentrations were slightly lower in 2025 compared to 2024. The highest percentage of samples had 40-60% of their TP concentrations from DRP (44 out of 154 samples, 29%).
 - There were more samples in the <20% range in 2025, this amount is similar to prior seasons (not including 2024).
- In 2025, 8 of the monitoring sites had a median TSS concentration over the TSS target of 12 mg/L.
 - This number has doubled since the 2024 monitoring season.
- Monthly TSS and TP median concentrations have a similar trend for part of the sampling season, with high concentrations in July and from August to October median concentrations decrease.
- TN median results were lower in 2025 compared to 2024, only 8 of the sites had higher median results in 2025 (Fox River, Little Wolf River, Mud Creek, Neenah Creek, Pigeon River, Pipe Creek, Sawyer Creek, and White River).
- Precipitation varied across the basin in 2025. May, September, and October had below average precipitation, while June, July, and August had above average precipitation.
- Nutrient concentrations are distinctly different between the Upper Fox and Wolf basins.
 - The Wolf basin has lower median concentrations for all parameters, and a larger number of monitoring sites with concentrations meeting the TP criteria and TSS targets.

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Conclusions

Data Conclusions

The UFWB volunteer monitoring program was established six years ago; there is not enough data to see a definitive trend in the sampling streams. This program is in its early stages, observed trends are expected to change over time. Continued implementation of best management practices throughout the UFWB is anticipated to improve water quality within the monitored watersheds. Raw data may suggest that variations in weather patterns, temperature, and time of year may have an impact on the TP, DRP, TSS, and TN concentrations. Weather varies each sampling season which is why it's important to sample consecutive years; precipitation across the basin varied in 2025, some areas had average rain while others experience higher/lower precipitation depending on the month.

In 2025 there were 13 monitoring sites with a median TP value below the WQC of 0.075 mg/L, this number does not include Embarrass River (STH 54) and Little Wolf River which had a median below their WQC of 0.1 mg/L. Appendix H contains a graph showing the median TP values for each monitoring site. There was a decrease in samples meeting the TP WQC of 0.075 mg/L in 2025. In 2024 54% of TP samples met the WQC and in 2025 it was 50%. This percentage has stayed consistent since the program began in 2020. As of now the data does not show water quality improvement, it is important to continue monitoring for improvements and trends.

DP percentages increased in 2024, but in 2025 they decreased and were similar to previous seasons. Appendix I provides a table of the percentage of DRP making up each TP sample and Table 4 categorizes the values into percentage categories. In 2025 the DRP percentage range with the most samples was 40-60%, this is the same as 2024 but there were less samples in this range in 2025. The dissolved form of phosphorus is readily available for plant uptake and contributes to harmful algal blooms, it is important best management practices focus on reducing DRP along with TP.

TSS results continue to vary by site. There is a TSS target of 12 mg/L defined by the UFWB TMDL, eight of the monitoring sites had a median above this target in 2025. For 16 of the monitoring sites, the TSS median was higher in 2025 than 2024, this could be due to the increased precipitation for some of the basin throughout the season. Median TSS and TP results by month show a similar trend for part of the sampling season, median concentrations for these parameters are high in July and decrease from August to October. TSS concentrations are higher in May and June compared to TP; this could be due to the lack of vegetation cover during these months which increases TSS runoff into waterways.

TN does not have a WQC or goal in surface waters. TN median concentrations for eight monitoring sites were higher in 2025 than 2024, this is a decrease in nitrogen concentrations as most of the sites had an increase in 2024. There is not a clear trend for TN, median concentrations for many of the sites have stayed consistent since the start of the program, while few show a clear increase or decrease.

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The data collected through the UFWB volunteer monitoring program shows there are water quality improvements that still need to be made, establishing best management practices in these basins is important and monitoring should continue.

Program Conclusions

The primary goal of the UFWB volunteer monitoring program is to engage the public and increase their awareness of water quality issues. In 2025, 24 volunteers, including two new ones, collected samples across 26 monitoring sites. Some of these volunteers are part of larger organizations, making the contribution much higher. With the knowledge the volunteers possess, they can communicate with others and be an extension of the program reaching a larger audience.

Volunteer recruitment has been carried out through various ways throughout the project. Two main means for volunteer recruitment were expanding outreach through Fox Wolf Watershed Alliance and outreach to County Land and Water Conservation Departments. These partnerships allowed the DNR to recruit volunteers on a bigger platform and spread awareness about the volunteer monitoring program.

The use of volunteers has proved important for success. Many volunteers are involved with the program which requires constant coordination and communication by the DNR coordinator to ensure success of the program. Communication proves to be the most important aspect of the DNR coordinator's position. The coordinator is the liaison between the volunteers and other DNR staff that are involved within the program. Without proper communication, some aspects of the program can potentially be impacted.

The water quality data is crucial to assessing long-term trends. The water quality data can be used to determine where additional monitoring should occur and target other monitoring efforts in particular watersheds. Two sites were added in 2025 due to an interest in monitoring data because implementation is planned in these watersheds. Six watersheds within the UFWB currently have 9 Key Element plans to reduce phosphorus and sediment in high loading watersheds: Bear Creek (2024), Bear Lake-Little Wolf River (2017), Big Green Lake (2022), Pipe Creek (2018), Shaw Creek-Little Wolf River (2019), and Weyauwega Lake-Waupaca River (2019). As implementation of these plans occur, monitoring data will be used to help track implementation progress and determine where additional data and information is needed to track progress.

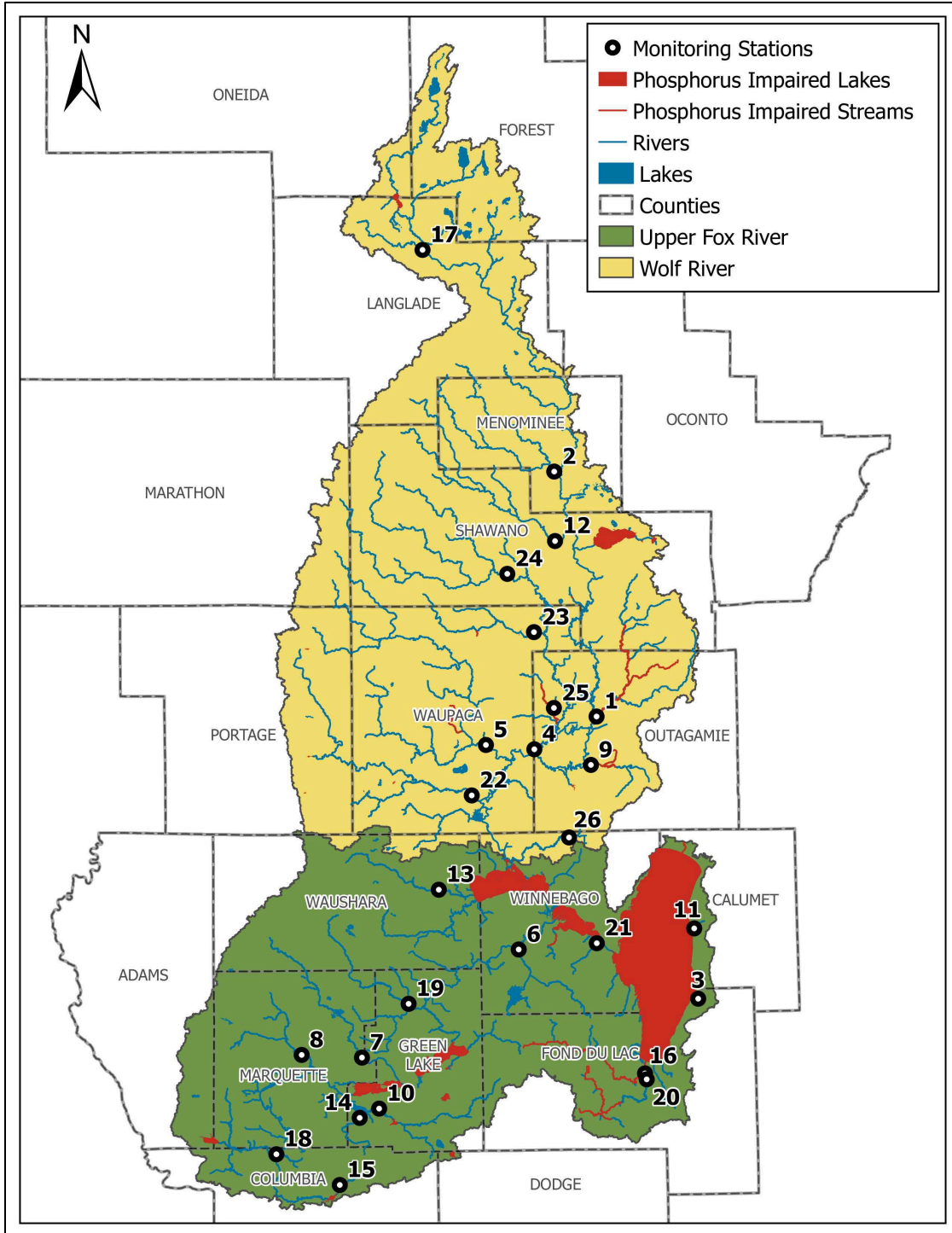
Acknowledgements

Thank you to all the volunteers, present and past, that have made the Upper Fox and Wolf River Basins Volunteer Monitoring Program possible. Thank you to the Wisconsin DNR and the WAV program for funding and support. The WAV program manages a nutrient data database, where results can be viewed for monitoring sites across the state ([WAV Data Dashboard \(wisc.edu\)](https://wisc.edu/wav-data-dashboard)).

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Appendices

Appendix A: Upper Fox and Wolf River Basins Volunteer Monitoring Sites and TMDL Basin Boundaries



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<i>Site</i>	<i>Stream Name</i>	<i>SWIMS ID</i>	<i>SWIMS Station Name</i>	<i>County</i>	<i>Latitude</i>	<i>Longitude</i>
1	Shioc River	453030	Shioc River at STH 187	Outagamie	44.46438	-88.56017
2	West Branch Wolf River	403003	West Branch Wolf River at West Branch Rd	Menominee	44.94093	-88.66435
3	Pipe Creek	10016803	Pipe Creek- 30 ft above STH 151 Bridge	Fond du Lac	43.91841	-88.3103
4	Embarrass River	10033493	Embarrass River at New London STH 54	Outagamie	44.40595	-88.73024
5	Little Wolf River	693217	Little Wolf River at Royalton STH 54	Waupaca	44.41828	-88.85648
6	Waukau Creek	713285	Waukau Creek at CTH E USGS Site ID 04073970	Winnebago	44.01841	-88.7854
7	Mecan River	393005	Mecan River at CTH C	Marquette	43.81679	-89.20955
8	Montello River	10022879	Montello River at 11 th St Bridge USGS Site ID 04072845	Marquette	43.82047	-89.3575
9	Bear Creek	453259	Bear Creek at STH 76	Outagamie	44.36569	-88.57791
10	Grand River	243015	Grand River at CTH H Near Kingston, WI	Green Lake	43.71198	-89.1541
11	Mud Creek	083121	Mud Creek at Mud Creek Rd	Calumet	44.05352	-88.3171
12	Red River	10014632	Red River at Maple Ave	Shawano	44.80352	-88.65981
13	Pine River	10032735	Pine River at STH 49	Waushara	44.13583	-88.9962
14	Belle Fountain Creek	243028	Belle Fountain Creek at CTH B	Green Lake	43.70417	-89.21482
15	Fox River	10014339	Fox River at STH 33	Columbia	43.56994	-89.27703
16	West Branch Fond du Lac River	10037662	West Branch FDL at Forest Ave	Fond du Lac	43.77697	-88.4553
17	Wolf River	343057	Wolf River at CTH T	Langlade	45.36753	-89.01287
18	Neenah Creek	113070	Neenah Creek at CTH CM	Columbia	43.63128	-89.43518
19	White River	10041320	White River at White River Rd Landing	Green Lake	43.91748	-89.07898
20	East Branch Fond du Lac River	10014745	East Branch FDL at 12 th St	Fond du Lac	43.76557	-88.4511
21	Sawyer Creek	10034847	Sawyer Creek at N Westfield St	Winnebago	44.02862	-88.57722
22	Waupaca River	693020	Waupaca River at River Rd Weyauwega	Waupaca	44.31608	-88.90498
23	Pigeon River	693135	Pigeon River at Klemp Rd	Waupaca	44.62791	-88.73169
24	Embarrass River	593168	Embarrass River at CTH M	Shawano	44.74056	-88.80111
25	Bear Creek	10031787	Bear Creek at Stilen Rd	Outagamie	44.48167	-88.68143
26	Rat River	10059500	Rat River at CTH M	Winnebago	44.23240	-88.64630

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Appendix B: Upper Fox and Wolf River Basins Volunteer Monitoring Fact Sheet

Upper Fox and Wolf River Basins Volunteer Monitoring Fact Sheet

The U.S Environmental Protection Agency (EPA) approved the Upper Fox and Wolf River Basins (UFW) Total Maximum Daily Load (TMDL) in 2020. The TMDL identifies the need for reductions in Total Phosphorus (TP) and Total Suspended Solids (TSS) in waterbodies throughout the basin to meet water quality standards. A total of 43 streams and rivers and 19 lakes and reservoirs are impaired for excess phosphorus, while a total of 19 streams and rivers are impaired for excess sediment. Phosphorus is an essential nutrient for plant growth, but can have detrimental effects on lakes, rivers, and streams when excess amounts are introduced. Common forms of pollutant delivery in these systems include surface runoff from urban and agricultural areas and discharges from wastewater treatment facilities, industrial businesses, and farms.

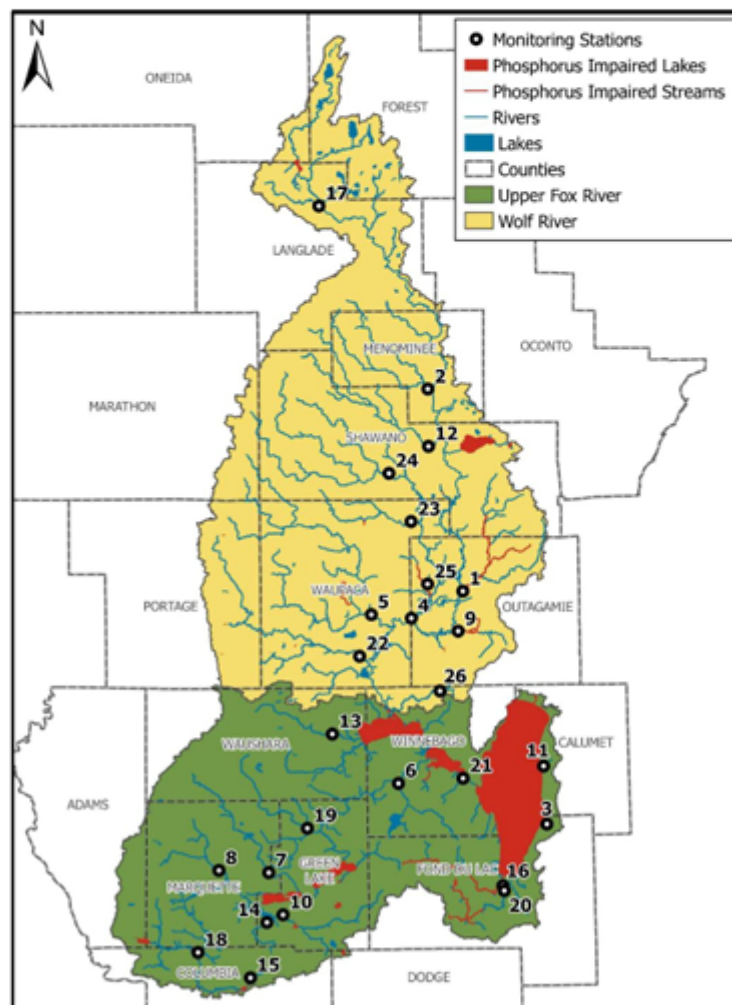
To assess long-term trends in water quality, 26 stream sites were chosen as part of the UFW Volunteer Monitoring Program to collect surface water samples throughout the UFW basin. There were 20 sites when the program started in 2020 and six have been added since, bringing the total to 26 sites. The UFW Volunteer Monitoring Program relies on volunteers to collect reliable data to assist the DNR in tracking water quality trends overtime. Volunteers collect water samples once per month, May through October. Samples are shipped to the State Lab of Hygiene in Madison and are analyzed for Total Phosphorus, Dissolved Reactive Phosphorus, Total Suspended Solids, and Total Nitrogen.

Upper Fox and Wolf River Basin Facts:

- Watershed area: 5,900 square miles
- Covers 18 counties
- Includes 5 tribal lands
- 32 Concentrated Animal Feeding Operations (CAFOs)
- 29 permitted Municipal Separate Storm Sewer System (MS4s*)
- 78 dischargers (municipal and industrial)

Want to get involved or have questions? Contact:

Grace Hiley
Water Resource Management
Specialist
Phone: (920) 296-5126
Email: Grace.Hiley@wisconsin.gov
See backside for exact sample locations.



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	<i>Stream Name</i>	<i>SWIMS ID</i>	<i>SWIMS Station Name</i>	<i>County</i>	<i>Latitude</i>	<i>Longitude</i>
1	Shioc River	453030	Shioc River at STH 187	Outagamie	44.46438	-88.56017
2	West Branch Wolf River	403003	West Branch Wolf River at West Branch Rd	Menominee	44.94093	-88.66435
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6	Waukau Creek	713285	Waukau Creek at CTH E USGS Site ID 04073970	Winnebago	44.01841	-88.7854
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18	Neenah Creek	113070	Neenah Creek at CTH CM	Columbia	43.63128	-89.43518
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23	Pigeon River	693135	Pigeon River at Klemp Rd	Waupaca	44.62791	-88.73169
24	Embarrass River	593168	Embarrass River at CTH M	Shawano	44.74056	-88.80111

*SWIMS – Surface Water Integrated Monitoring System; a Wisconsin DNR information system that holds chemistry (water, sediment), physical, and biological (macroinvertebrate, aquatic invasive species) surface water data.

More information can be found at:

<https://dnr.wisconsin.gov/topic/TMDLs/FoxWolf/VolunteerMonitoring.html>

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Appendix C: Impaired Monitoring Streams

Local Waterbody Name	Waters ID	WBIC	County	Start Mile	End Mile	Total Size	Date Listed	Source Category	Pollutant	Impairment	Listing Condition Category
Bear Creek	9791	316000	Outagamie	0.5	2	1.5	4/1/2012	PS/NPS	Total Phosphorus	High Phosphorus Levels	TMDL approved by EPA in 2020 (4A)
Bear Creek	9792	316000	Outagamie	2	8	6	4/1/2012	NPS	Total Phosphorus	High Phosphorus Levels	TMDL approved by EPA in 2020 (4A)
Bear Creek	10414	292100	Outagamie, Waupaca	8.4	12	3.6	4/1/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	TMDL approved by EPA in 2020 (4A)
Bear Creek	10414	292100	Outagamie, Waupaca	8.4	12	3.6	4/1/2002	NPS	Total Suspended Solids	Degraded Habitat	TMDL approved by EPA in 2020 (4A)
East Branch Fond Du Lac River	10991	135900	Fond Du Lac	0	14.5	14.5	4/1/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL approved by EPA in 2020 (4A)

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Local Waterbody Name	Waters ID	WBIC	County	Start Mile	End Mile	Total Size	Date Listed	Source Category	Pollutant	Impairment	Listing Condition Category
East Branch Fond Du Lac River	3990279	135900	Fond Du Lac	14.5	22.81	8.31	4/1/2018	PS/NPS	Total Phosphorus	High Phosphorus Levels	Phosphorus only (5P)
West Branch Fond Du Lac River	10990	134000	Fond Du Lac	0	26.79	26.79	4/1/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	TMDL Needed (5A)
West Branch Fond Du Lac River	10990	134000	Fond Du Lac	0	26.79	26.79	4/1/2016	PS/NPS	Total Phosphorus	High Phosphorus Levels	TMDL approved by EPA in 2020 (4A)
Fox River	5535277	117900	Columbia	176	183.2	7.2	4/1/2022	NPS	Total Phosphorus	Impairment Unknown	TMDL approved by EPA in 2020 (4A)
Fox River	6778560	117900	Green Lake, Marquette	126.8	134.3	7.4	4/1/2022	PS/NPS	Total Phosphorus	Degraded Biological Community	TMDL approved by EPA in 2020 (4A)
Grand River	11097	159300	Green Lake, Marquette	0	21	21	4/1/2014	PS/NPS	Total Phosphorus	Degraded Biological Community	TMDL approved by EPA in 2020 (4A)
Grand River	10702	159300	Fond Du Lac, Green Lake, Marquette	21	43	22	4/1/2016	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL approved by EPA in 2020 (4A)

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Local Waterbody Name	Waters ID	WBIC	County	Start Mile	End Mile	Total Size	Date Listed	Source Category	Pollutant	Impairment	Listing Condition Category
Mud Creek	10259	131600	Calumet	0	3	3	4/1/2016	NPS	Total Phosphorus	Degraded Biological Community	TMDL approved by EPA in 2020 (4A)
Pigeon River	9711	293100	Waupaca	0	5.2	5.2	4/1/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL approved by EPA in 2020 (4A)
Pigeon River	8107179	293100	Waupaca	7.7	10.7	3	4/1/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL approved by EPA in 2020 (4A)
Pipe Creek	10979	132800	Fond Du Lac	0	2.5	2.5	4/1/2020	NPS	Total Phosphorus	Degraded Biological Community	TMDL approved by EPA in 2020 (4A)
Rat River	10752	251800	Outagamie, Winnebago	13.1	24.8	11.7	4/1/1998	NPS	Total Phosphorus	Low DO	TMDL approved by EPA in 2020 (4A)

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Local Waterbody Name	Waters ID	WBIC	County	Start Mile	End Mile	Total Size	Date Listed	Source Category	Pollutant	Impairment	Listing Condition Category
Shioc River	9800	316800	Outagamie, Shawano	0	27.96	27.96	4/1/2012	PS/NPS	Total Phosphorus	Degraded Biological Community, High Phosphorus Levels	TMDL approved by EPA in 2020 (4A)
Waukau Creek	18163	140700	Winnebago	0	4.22	4.22	4/1/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL approved by EPA in 2020 (4A)
Waupaca River	315887	257400	Waupaca	17.3	46	28.7	4/1/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	TMDL needed (5a)
Wolf River- Main Stem	11237	241300	Winnebago	0	9.5	9.5	4/1/1998	NPS	Total Phosphorus	Low DO	TMDL approved by EPA in 2020 (4A)
Wolf River- Main Stem	11237	241300	Winnebago	0	9.5	9.5	4/1/1998	NPS	Sediment/ Total Suspended Solids	Degraded Habitat	TMDL approved by EPA in 2020 (4A)

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Appendix D: Sample Completeness Percentage by Monitoring Site

Out of 156 samples per year (6 samples/site)

Monitoring Site	2020	2021	2022	2023	2024	2025
Bear Creek (STH 76)	33%	83%	100%	100%	100%	100%
Bear Creek (Stilen Rd)	N/A	N/A	N/A	N/A	N/A	100%
Belle Fountain Creek	N/A	100%	67%	100%	100%	100%
East Branch FDL River	50%	100%	100%	100%	100%	100%
Embarrass River (CTH M)	N/A	N/A	N/A	100%	100%	100%
Embarrass River (STH 54)	33%	100%	100%	100%	100%	100%
Fox River	N/A	100%	50%	100%	83%	100%
Grand River	50%	100%	100%	100%	100%	100%
Little Wolf River	33%	100%	100%	100%	100%	100%
Mecan River	N/A	100%	67%	100%	100%	100%
Montello River	N/A	100%	67%	100%	100%	100%
Mud Creek	N/A	83%	100%	100%	100%	100%
Neenah Creek	N/A	100%	50%	100%	100%	100%
Pigeon River	N/A	N/A	N/A	100%	100%	100%
Pine River	N/A	83%	100%	100%	100%	100%
Pipe Creek	N/A	83%	100%	100%	100%	100%
Rat River	N/A	N/A	N/A	N/A	N/A	100%
Red River	50%	83%	100%	100%	100%	83%
Sawyer Creek	N/A	N/A	N/A	100%	100%	100%
Shioc River	33%	83%	83%	100%	100%	100%
Waukau Creek	50%	83%	100%	100%	100%	100%
Waupaca River	N/A	N/A	N/A	100%	100%	100%
West Branch FDL River	50%	100%	100%	100%	100%	100%
West Branch Wolf River	33%	83%	100%	100%	83%	100%
White River	50%	100%	100%	100%	100%	100%
Wolf River (CTH T)	50%	100%	100%	100%	83%	100%
Combined Percentage	23%	93%	89%	100%	98%	99%

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Appendix E: Confidence Interval Table

River	TP Calculation	2021	2022	2023	2024	2025
Bear Creek (STH 76)	U90% (mg/L)	0.1678	0.2044	0.2149	0.232	0.248
Bear Creek (STH 76)	Median (mg/L)	0.117	0.168	0.171	0.191	0.199
Bear Creek (STH 76)	L90% (mg/L)	0.09297	0.1316	0.1261	0.15	0.149
Bear Creek (STH 76)	Relation to Criteria	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds
Bear Creek (Stilen Rd)	U90% (mg/L)	N/A	N/A	N/A	N/A	0.319
Bear Creek (Stilen Rd)	Median (mg/L)	N/A	N/A	N/A	N/A	0.249
Bear Creek (Stilen Rd)	L90% (mg/L)	N/A	N/A	N/A	N/A	0.179
Bear Creek (Stilen Rd)	Relation to Criteria	N/A	N/A	N/A	N/A	Clearly Exceeds
Belle Fountain Creek	U90% (mg/L)	0.11686	0.0858	0.0792	0.109	0.096
Belle Fountain Creek	Median (mg/L)	0.0944	0.0602	0.0645	0.078	0.064
Belle Fountain Creek	L90% (mg/L)	0.06939	0.0345	0.0498	0.047	0.032
Belle Fountain Creek	Relation to Criteria	May Exceed	May Meet	May Meet	May Exceed	May Meet
East Branch FDL River	U90% (mg/L)	0.31633	0.3865	0.1958	0.281	0.232
East Branch FDL River	Median (mg/L)	0.296	0.289	0.16	0.206	0.189
East Branch FDL River	L90% (mg/L)	0.21489	0.1915	0.1242	0.13	0.146
East Branch FDL River	Relation to Criteria	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds
Embarrass River (CTH M)	U90% (mg/L)	N/A	N/A	0.0372	0.058	0.058
Embarrass River (CTH M)	Median (mg/L)	N/A	N/A	0.0337	0.047	0.047
Embarrass River (CTH M)	L90% (mg/L)	N/A	N/A	0.0302	0.035	0.037
Embarrass River (CTH M)	Relation to Criteria	N/A	N/A	Clearly Meets	Clearly Meets	Clearly Meets
Embarrass River (STH 54)	U90% (mg/L)	0.09931	0.1057	0.0706	0.12	0.112
Embarrass River (STH 54)	Median (mg/L)	0.0825	0.0892	0.0558	0.092	0.092
Embarrass River (STH 54)	L90% (mg/L)	0.06145	0.0727	0.0409	0.065	0.072
Embarrass River (STH 54)	Relation to Criteria	Clearly Meets	May Meet	Clearly Meets	May Meet	May Meet
Fox River	U90% (mg/L)	0.14288	0.1241	0.0833	0.147	0.083
Fox River	Median (mg/L)	0.09775	0.0891	0.0752	0.099	0.072

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River	TP Calculation	2021	2022	2023	2024	2025
Fox River	L90% (mg/L)	0.07302	0.0541	0.067	0.051	0.06
Fox River	Relation to Criteria	May Exceed	May Exceed	May Exceed	May Exceed	May Meet
Grand River	U90% (mg/L)	0.18069	0.201	0.2717	0.029	0.233
Grand River	Median (mg/L)	0.174	0.161	0.2245	0.024	0.175
Grand River	L90% (mg/L)	0.11518	0.121	0.1773	0.019	0.117
Grand River	Relation to Criteria	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	Clearly Meets	Clearly Exceeds
Little Wolf River	U90% (mg/L)	0.05411	0.0599	0.0417	0.12	0.109
Little Wolf River	Median (mg/L)	0.0486	0.0511	0.0366	0.087	0.089
Little Wolf River	L90% (mg/L)	0.03603	0.0422	0.0314	0.055	0.069
Little Wolf River	Relation to Criteria	Clearly Meets	Clearly Meets	Clearly Meets	May Meet	May Meet
Mecan River	U90% (mg/L)	0.06915	0.0605	0.052	0.039	0.046
Mecan River	Median (mg/L)	0.0603	0.0468	0.0399	0.029	0.035
Mecan River	L90% (mg/L)	0.04103	0.0331	0.0277	0.019	0.023
Mecan River	Relation to Criteria	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets
Montello River	U90% (mg/L)	0.11042	0.1099	0.0526	0.06	0.082
Montello River	Median (mg/L)	0.1002	0.0901	0.0445	0.043	0.067
Montello River	L90% (mg/L)	0.06758	0.0703	0.0363	0.025	0.052
Montello River	Relation to Criteria	May Exceed	May Exceed	Clearly Meets	Clearly Meets	May Meet
Mud Creek	U90% (mg/L)	0.6824	0.9406	0.7975	0.283	0.247
Mud Creek	Median (mg/L)	0.626	0.7815	0.6	0.24	0.223
Mud Creek	L90% (mg/L)	0.569609575	0.6224	0.4025	0.197	0.199
Mud Creek	Relation to Criteria	Clearly Meets	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds
Neenah Creek	U90% (mg/L)	0.15073	0.1098	0.1067	0.188	0.124
Neenah Creek	Median (mg/L)	0.13	0.0892	0.0939	0.119	0.107
Neenah Creek	L90% (mg/L)	0.10178	0.0686	0.0811	0.05	0.09
Neenah Creek	Relation to Criteria	Clearly Exceeds	May Exceed	Clearly Exceeds	May Exceed	Clearly Exceeds
Pigeon River	U90% (mg/L)	N/A	N/A	0.0735	0.088	0.074
Pigeon River	Median (mg/L)	N/A	N/A	0.0671	0.078	0.065
Pigeon River	L90% (mg/L)	N/A	N/A	0.0606	0.067	0.056
Pigeon River	Relation to Criteria	N/A	N/A	Clearly Meets	May Exceed	Clearly Meets

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River	TP Calculation	2021	2022	2023	2024	2025
Pine River	U90% (mg/L)	0.087070636	0.0491	0.0399	0.045	0.048
Pine River	Median (mg/L)	0.0496	0.0424	0.0368	0.039	0.042
Pine River	L90% (mg/L)	0.012129364	0.0356	0.0337	0.033	0.035
Pine River	Relation to Criteria	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets
Pipe Creek	U90% (mg/L)	0.328516516	0.2608	0.4231	0.495	0.678
Pipe Creek	Median (mg/L)	0.222	0.2205	0.2985	0.276	0.411
Pipe Creek	L90% (mg/L)	0.1155	0.1802	0.1739	0.056	0.144
Pipe Creek	Relation to Criteria	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	May Exceed	Clearly Exceeds
Rat River	U90% (mg/L)	N/A	N/A	N/A	N/A	0.194
Rat River	Median (mg/L)	N/A	N/A	N/A	N/A	0.138
Rat River	L90% (mg/L)	N/A	N/A	N/A	N/A	0.081
Rat River	Relation to Criteria	N/A	N/A	N/A	N/A	Clearly Exceeds
Red River	U90% (mg/L)	0.02607	0.0239	0.0264	0.037	0.033
Red River	Median (mg/L)	0.02295	0.0178	0.0211	0.025	0.025
Red River	L90% (mg/L)	0.01859	0.0116	0.0158	0.013	0.017
Red River	Relation to Criteria	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets
Sawyer Creek	U90% (mg/L)	N/A	N/A	0.1373	0.246	0.222
Sawyer Creek	Median (mg/L)	N/A	N/A	0.1032	0.12	0.134
Sawyer Creek	L90% (mg/L)	N/A	N/A	0.0691	-0.007	0.046
Sawyer Creek	Relation to Criteria	N/A	N/A	May Exceed	May Exceed	May Exceed
Shioc River	U90% (mg/L)	0.37548	0.3623	0.4322	0.308	0.344
Shioc River	Median (mg/L)	0.3065	0.3148	0.3435	0.216	0.284
Shioc River	L90% (mg/L)	0.2364	0.2672	0.2548	0.123	0.224
Shioc River	Relation to Criteria	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds
Waukau Creek	U90% (mg/L)	0.138	0.1788	0.1308	0.124	0.114
Waukau Creek	Median (mg/L)	0.10785	0.1305	0.1032	0.079	0.071
Waukau Creek	L90% (mg/L)	0.07286	0.0822	0.0755	0.033	0.027
Waukau Creek	Relation to Criteria	May Exceed	Clearly Exceeds	Clearly Exceeds	May Exceed	May Meet
Waupaca River	U90% (mg/L)	N/A	N/A	0.0313	0.051	0.04
Waupaca River	Median (mg/L)	N/A	N/A	0.0273	0.039	0.031

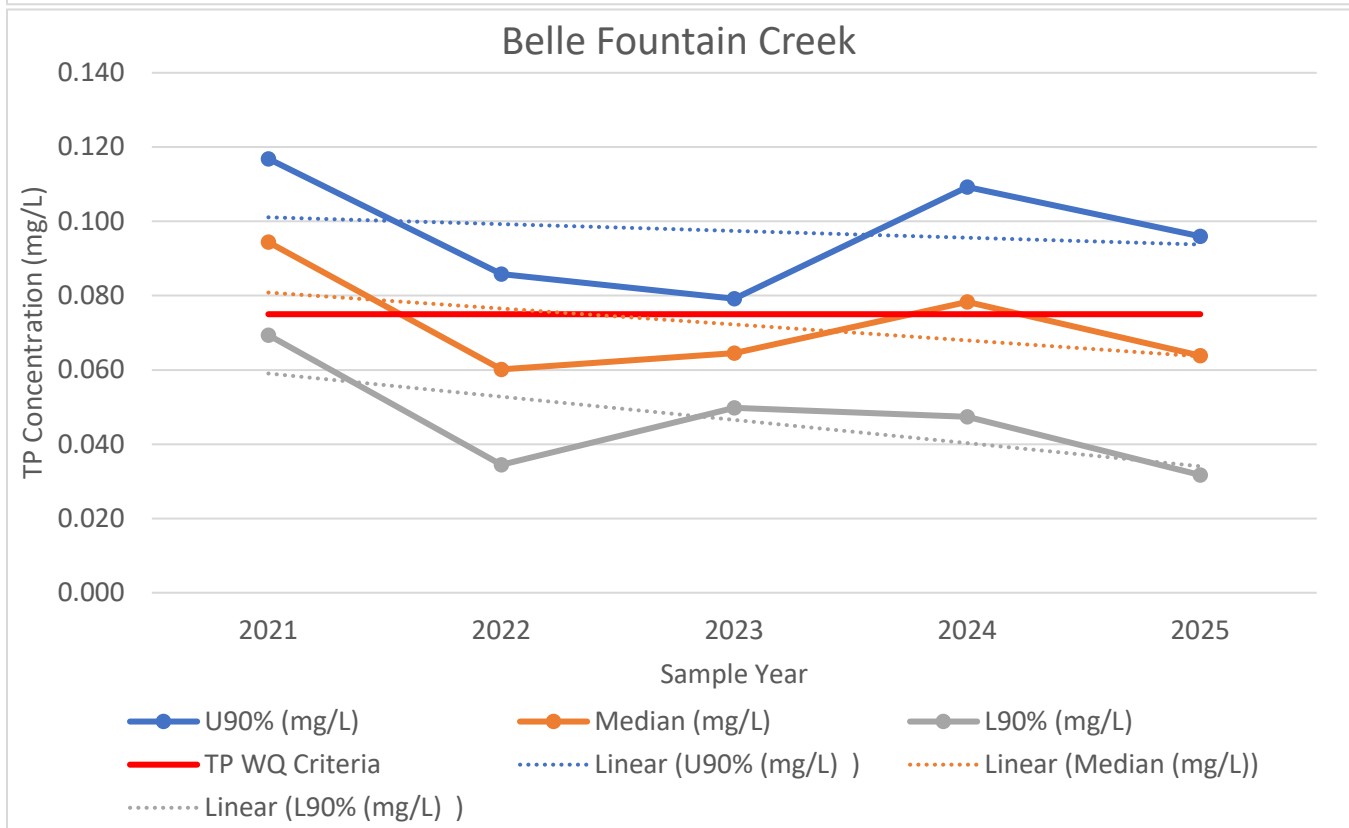
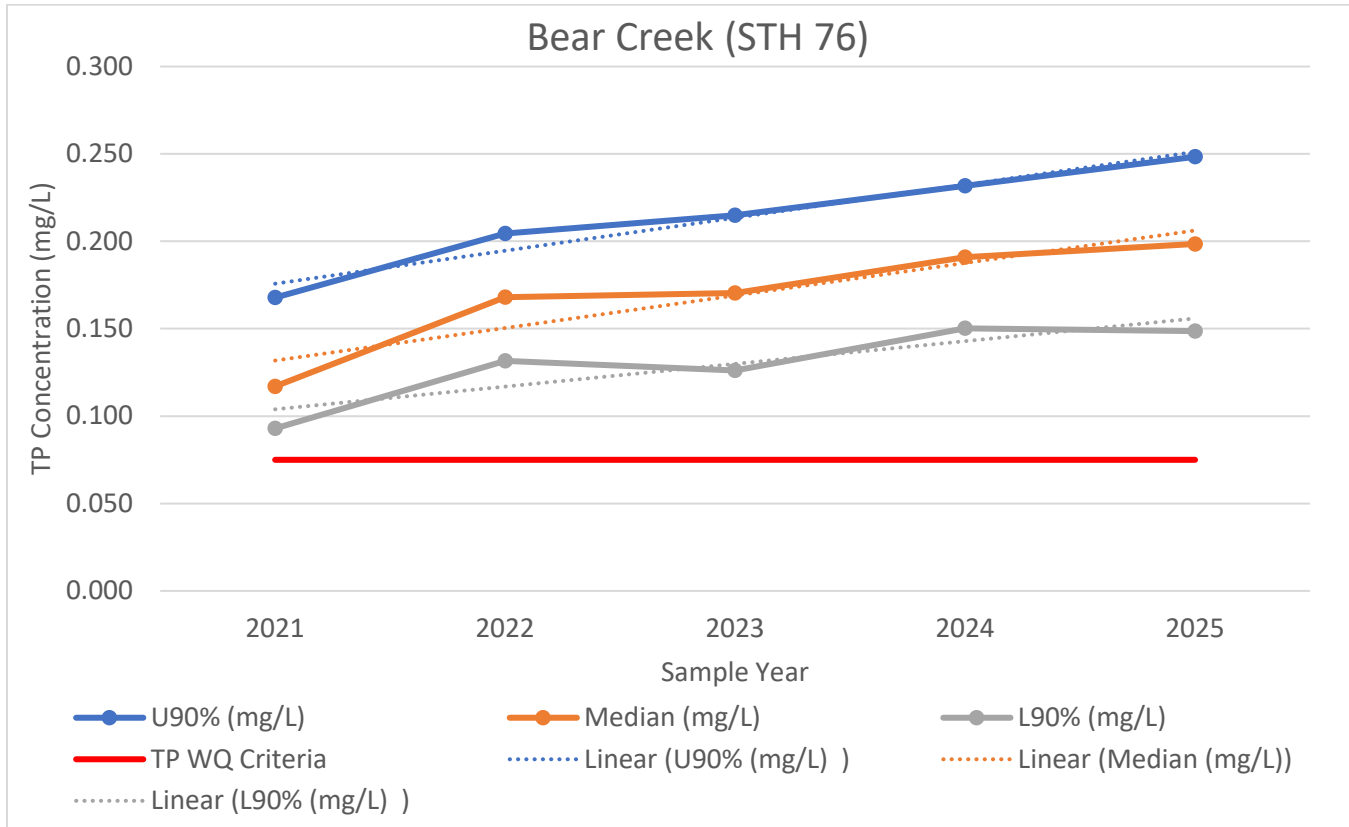
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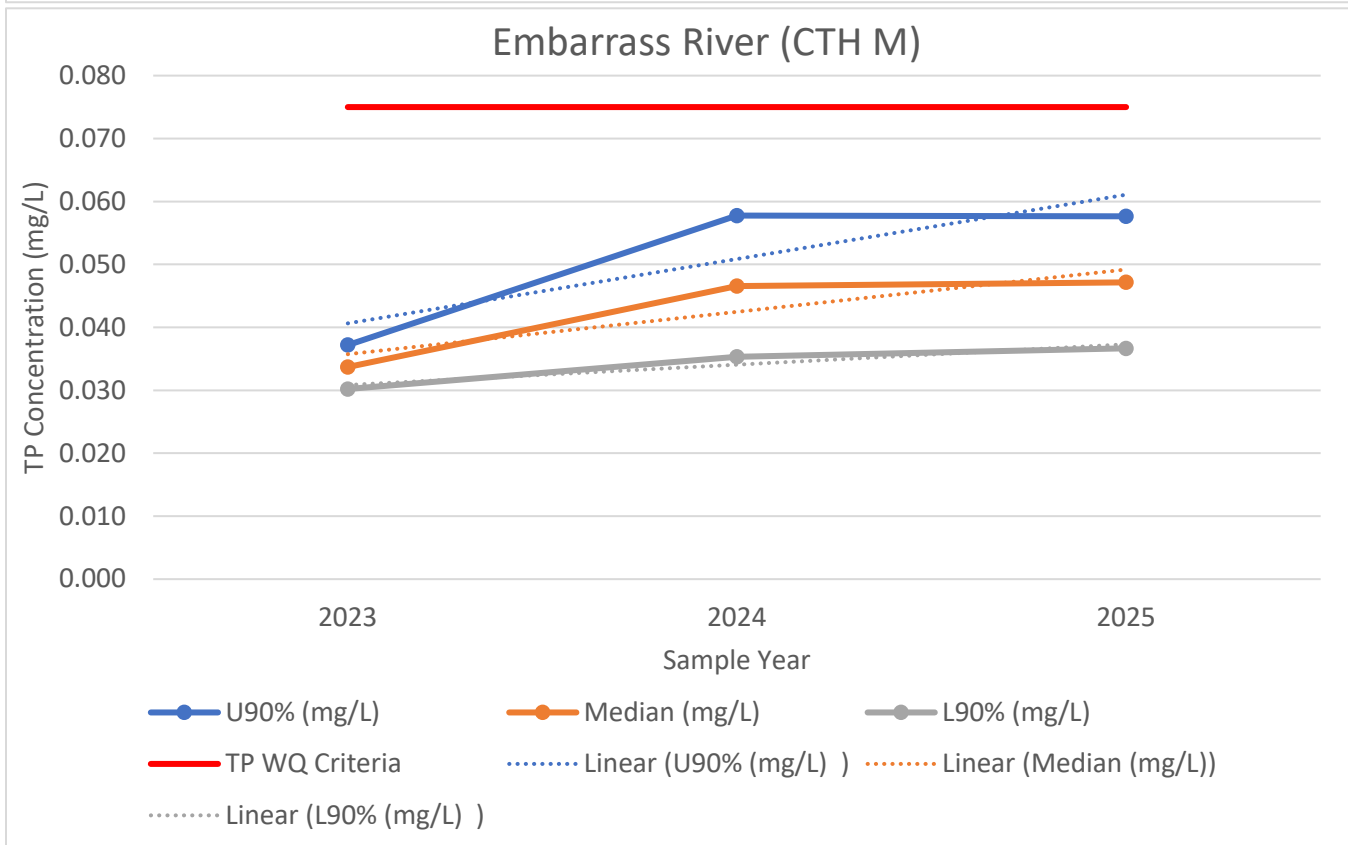
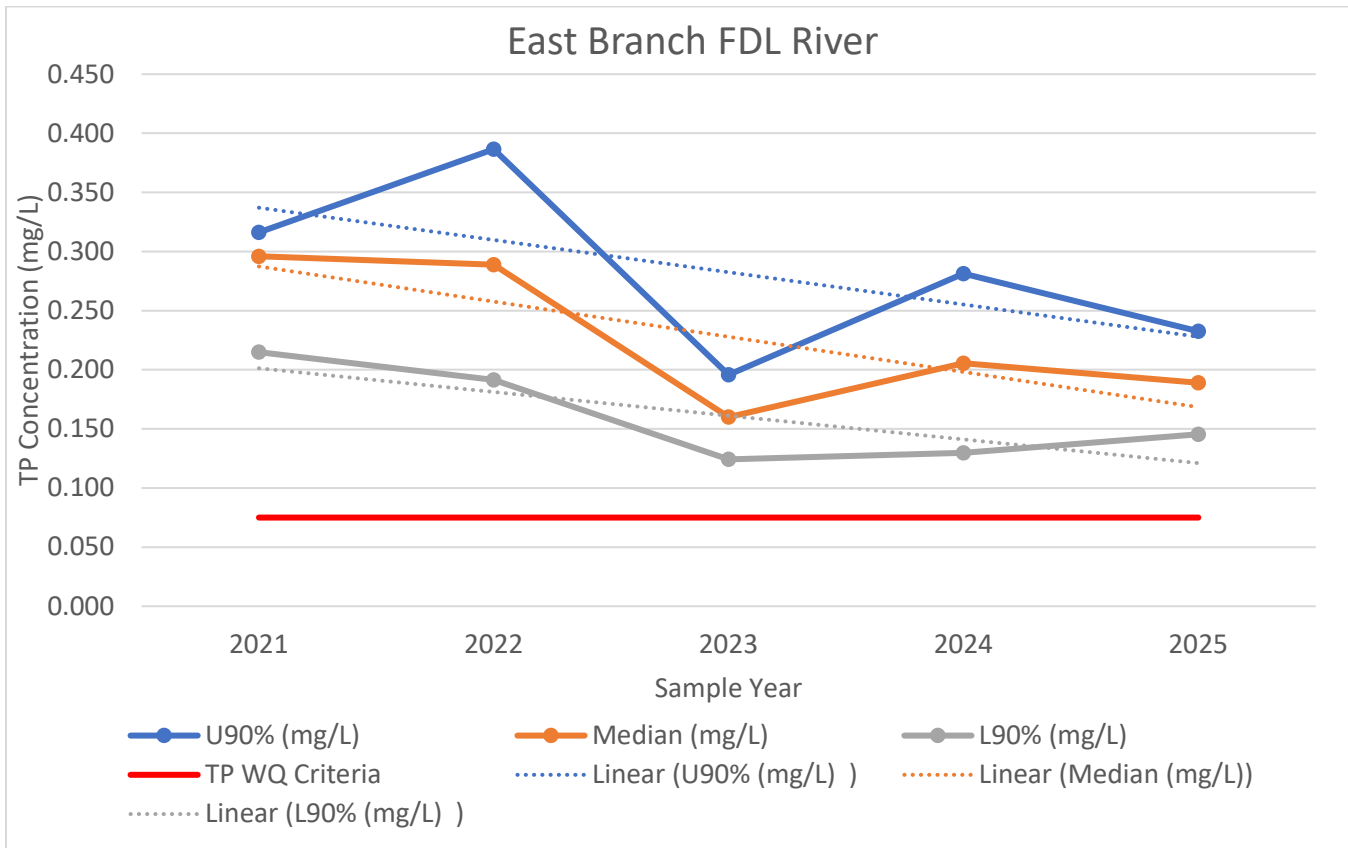
River	TP Calculation	2021	2022	2023	2024	2025
Waupaca River	L90% (mg/L)	N/A	N/A	0.0233	0.027	0.022
Waupaca River	Relation to Criteria	N/A	N/A	Clearly Meets	Clearly Meets	Clearly Meets
West Branch FDL River	U90% (mg/L)	0.3607	0.4996	0.6498	0.417	0.342
West Branch FDL River	Median (mg/L)	0.31	0.4095	0.409	0.321	0.277
West Branch FDL River	L90% (mg/L)	0.19822	0.3194	0.1682	0.225	0.212
West Branch FDL River	Relation to Criteria	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds	Clearly Exceeds
West Branch Wolf River	U90% (mg/L)	0.03794	0.0224	0.0243	0.021	0.021
West Branch Wolf River	Median (mg/L)	0.0238	0.0189	0.0165	0.016	0.017
West Branch Wolf River	L90% (mg/L)	0.01858	0.0153	0.0086	0.012	0.012
West Branch Wolf River	Relation to Criteria	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets
White River	U90% (mg/L)	0.03775	0.0423	0.0381	0.039	0.056
White River	Median (mg/L)	0.0289	0.0314	0.031	0.029	0.044
White River	L90% (mg/L)	0.02435	0.0205	0.0239	0.018	0.032
White River	Relation to Criteria	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets
Wolf River (CTH T)	U90% (mg/L)	0.03661	0.03	0.0465	0.037	0.037
Wolf River (CTH T)	Median (mg/L)	0.0343	0.0266	0.035	0.033	0.032
Wolf River (CTH T)	L90% (mg/L)	0.02939	0.0232	0.0235	0.029	0.027
Wolf River (CTH T)	Relation to Criteria	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets	Clearly Meets

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Appendix F: Confidence Interval Graphs

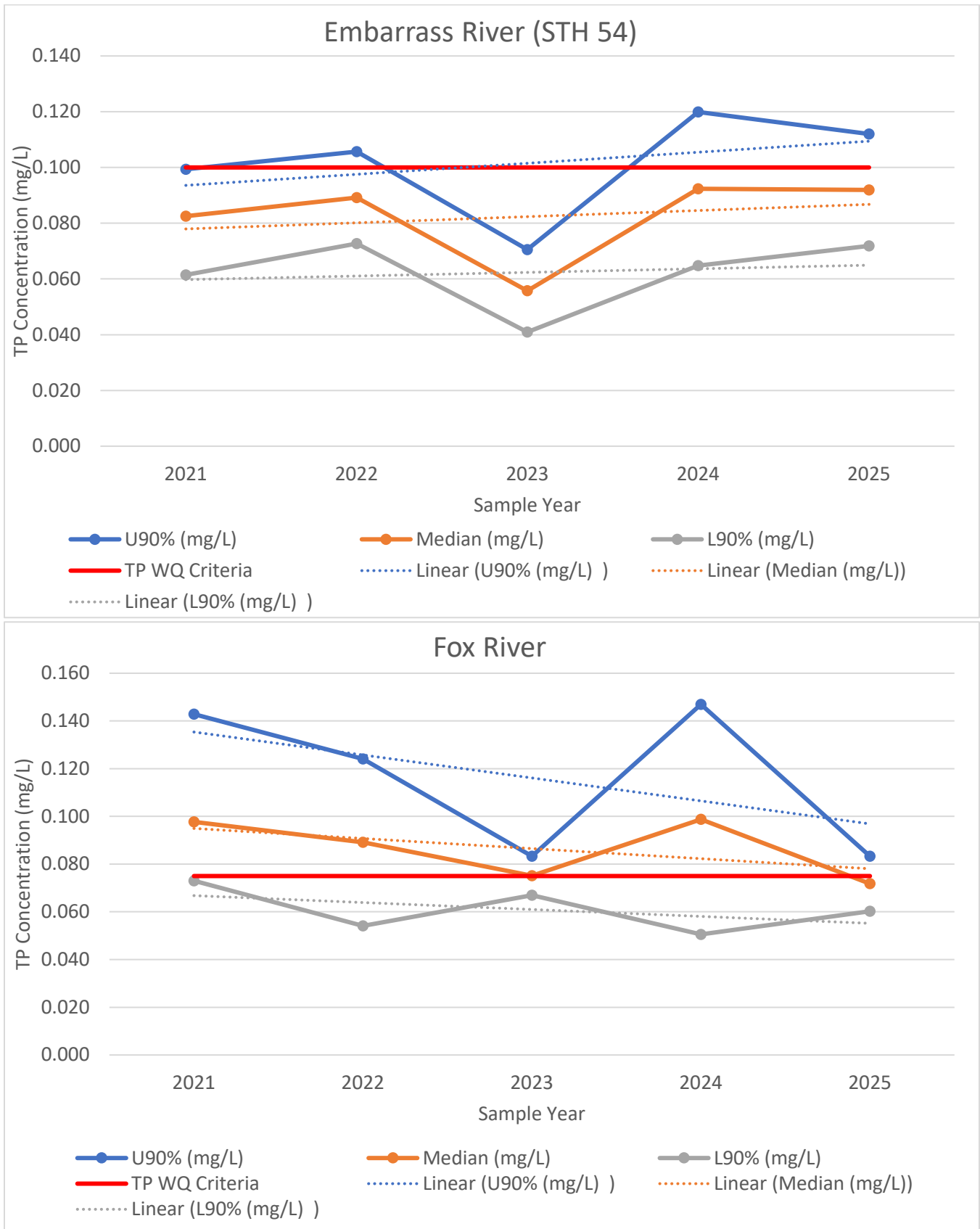


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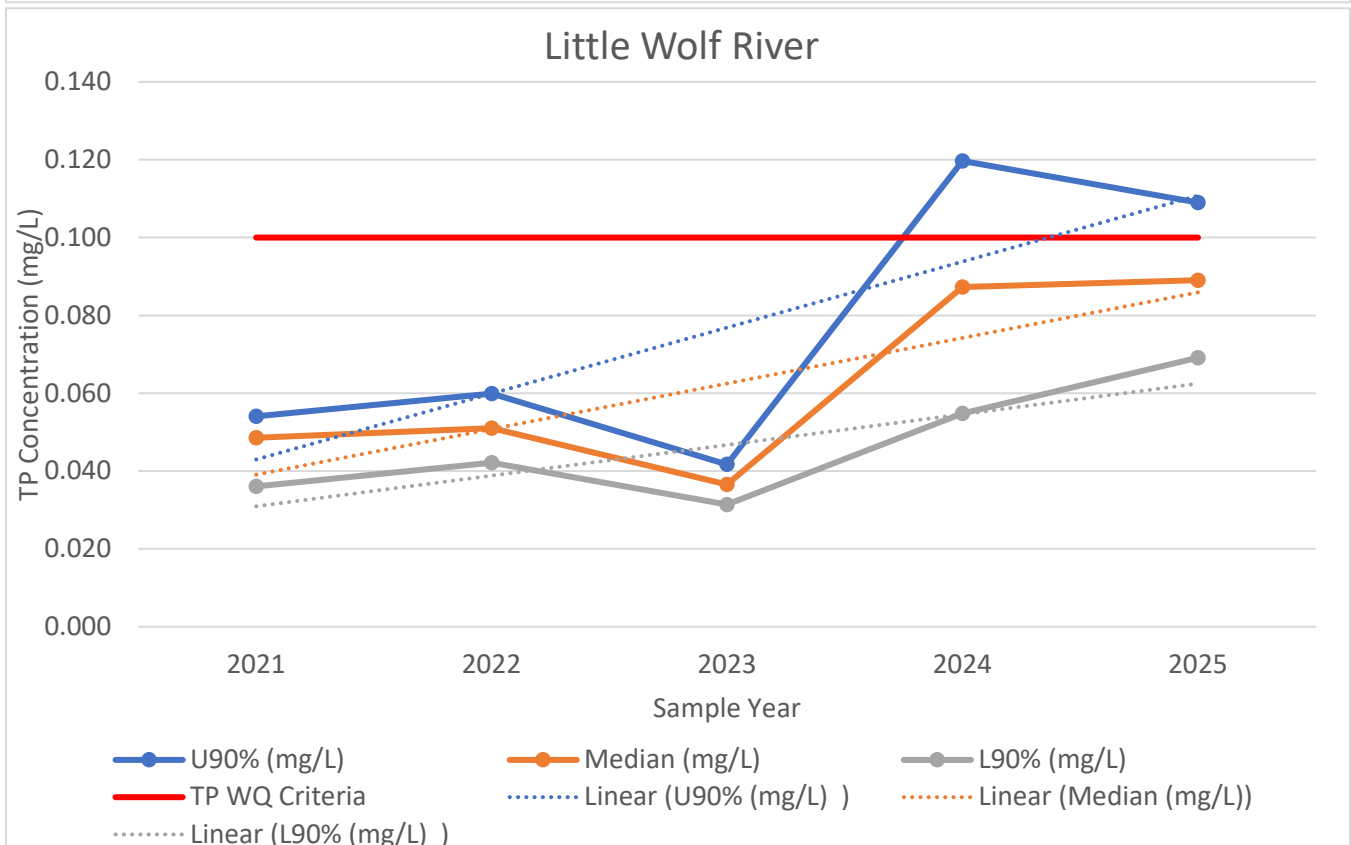
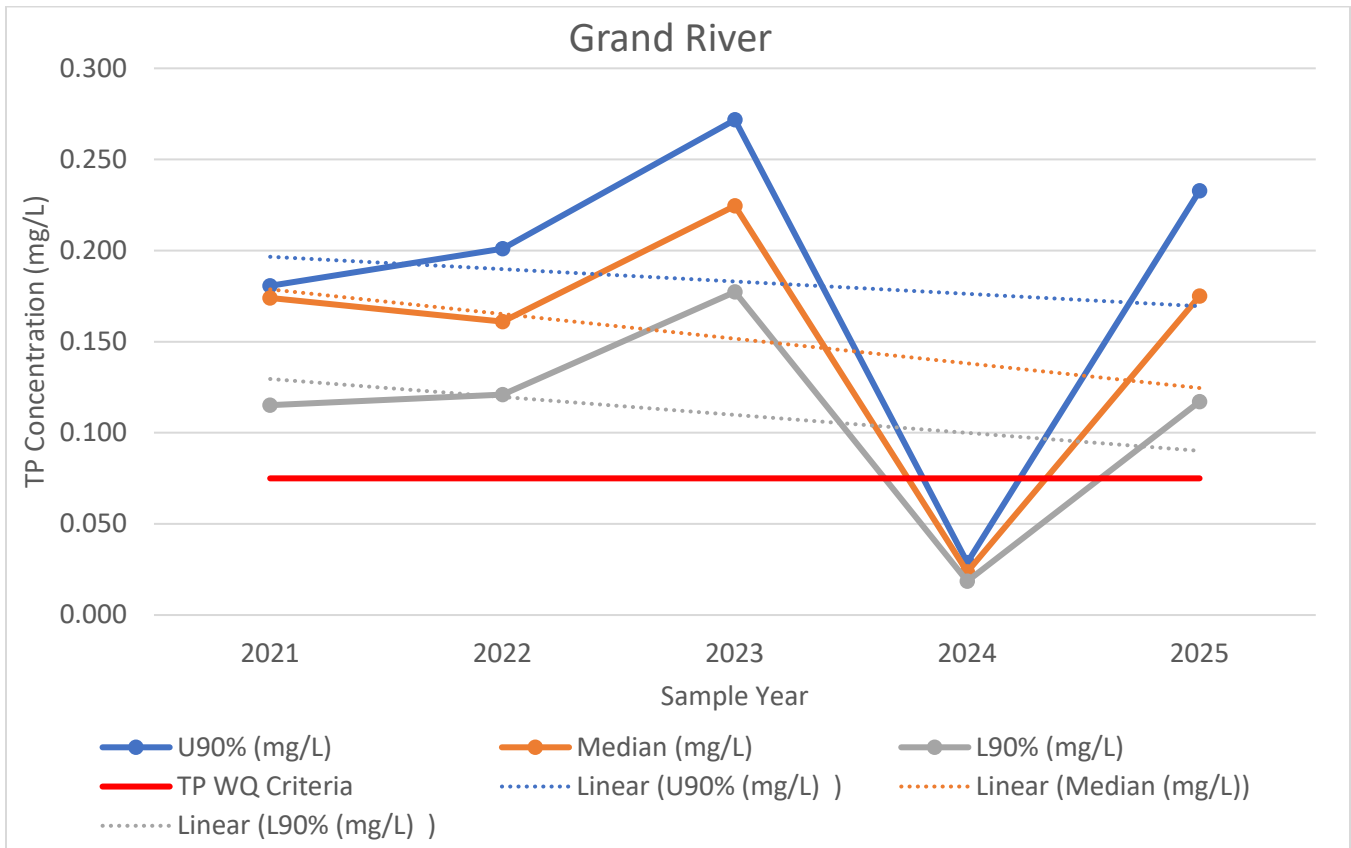
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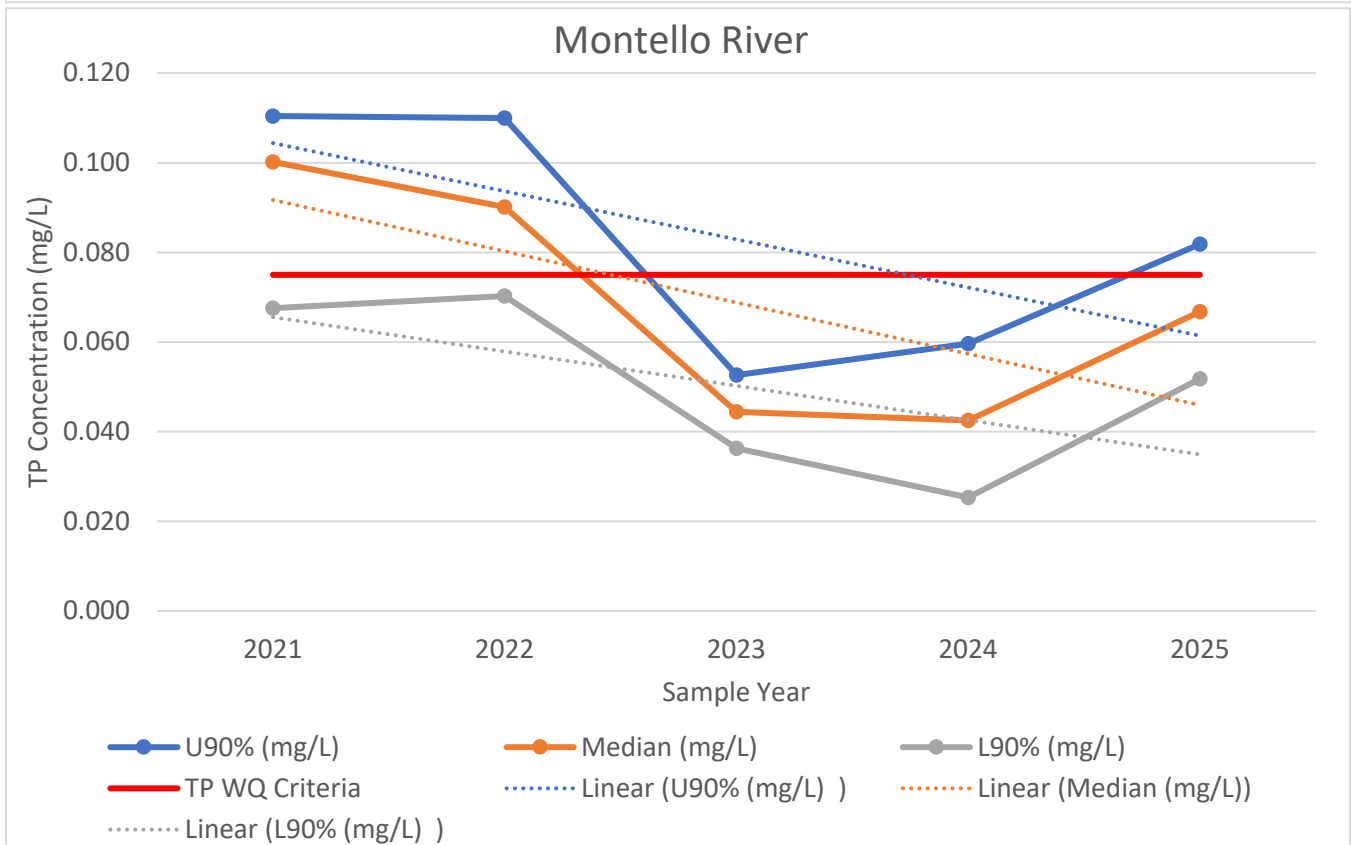
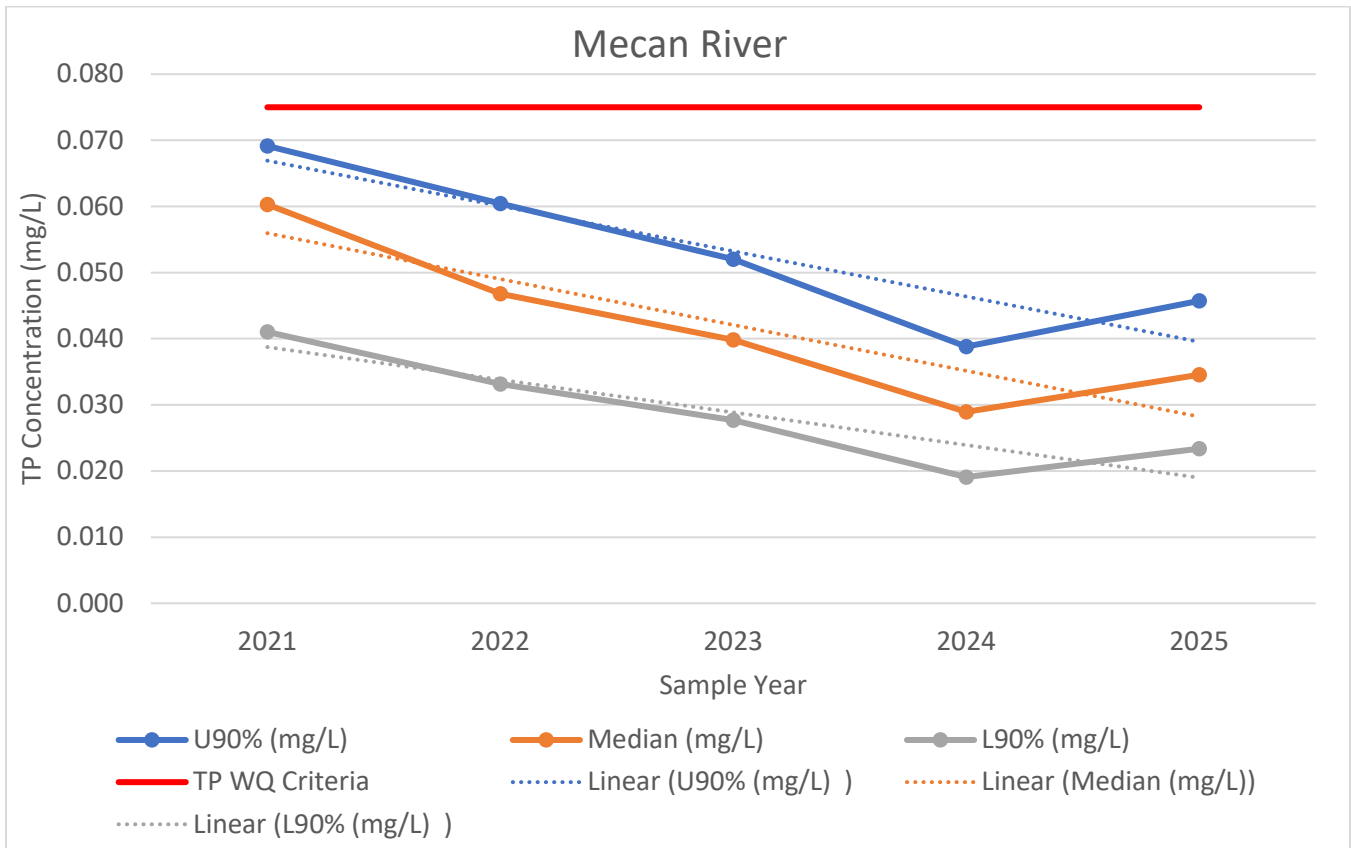
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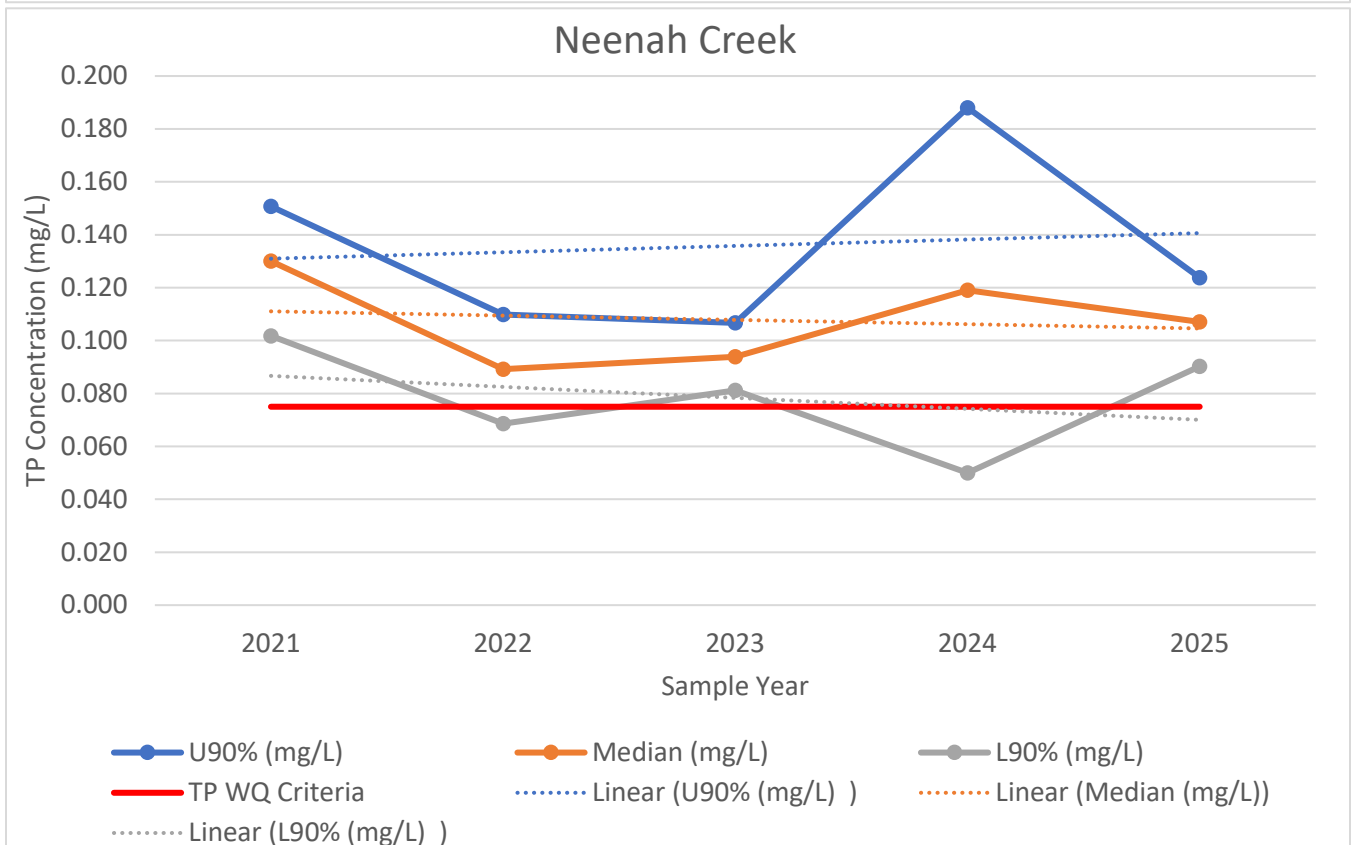
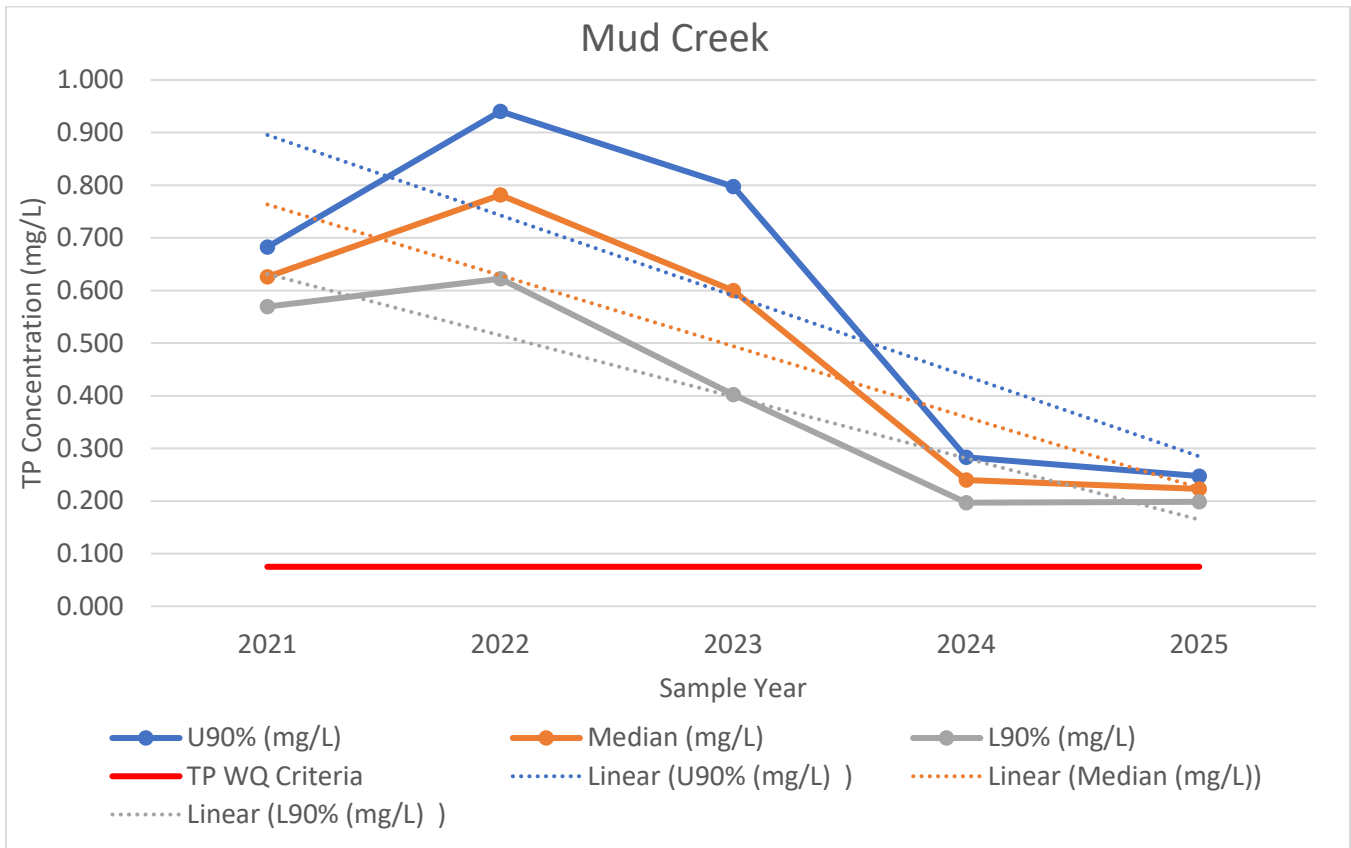
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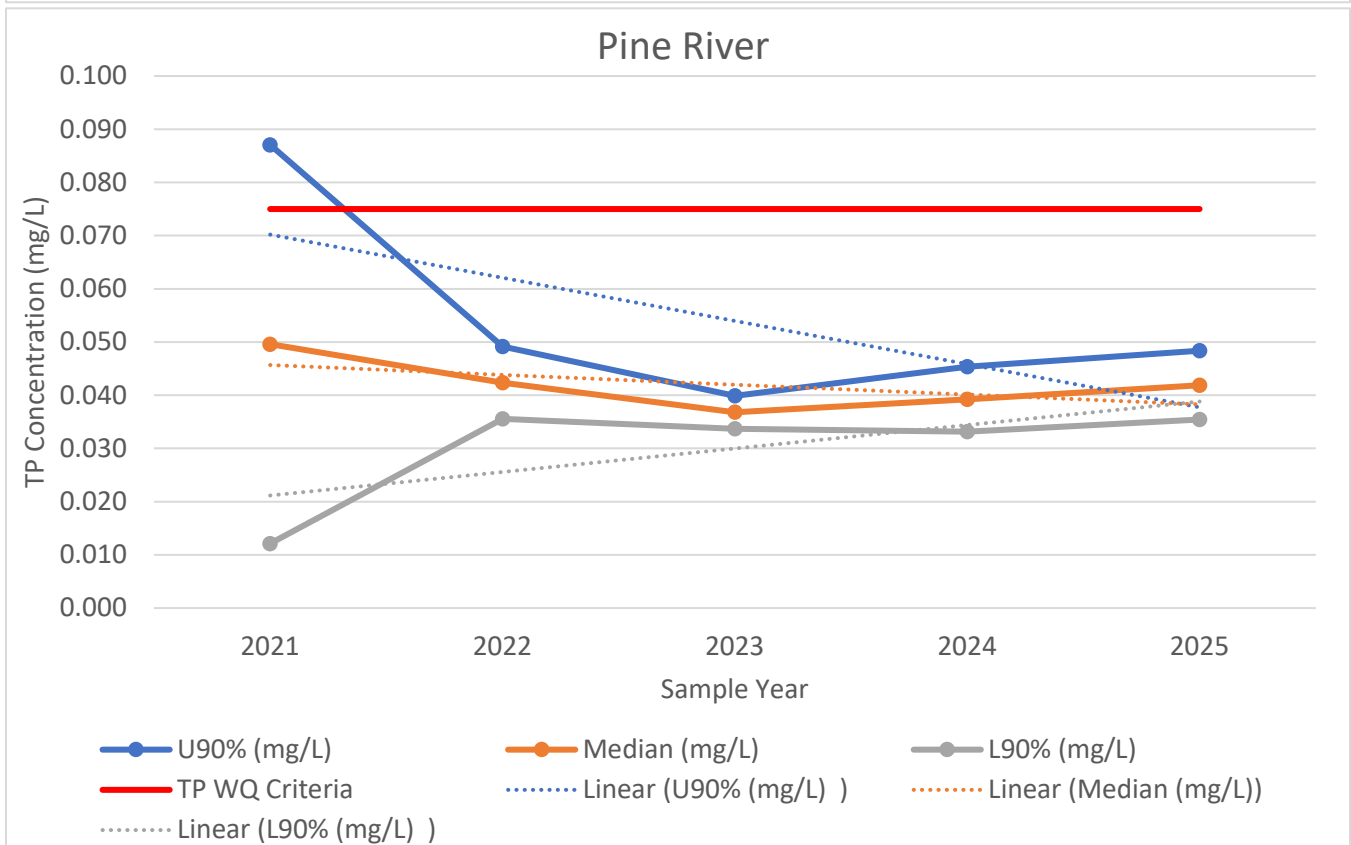
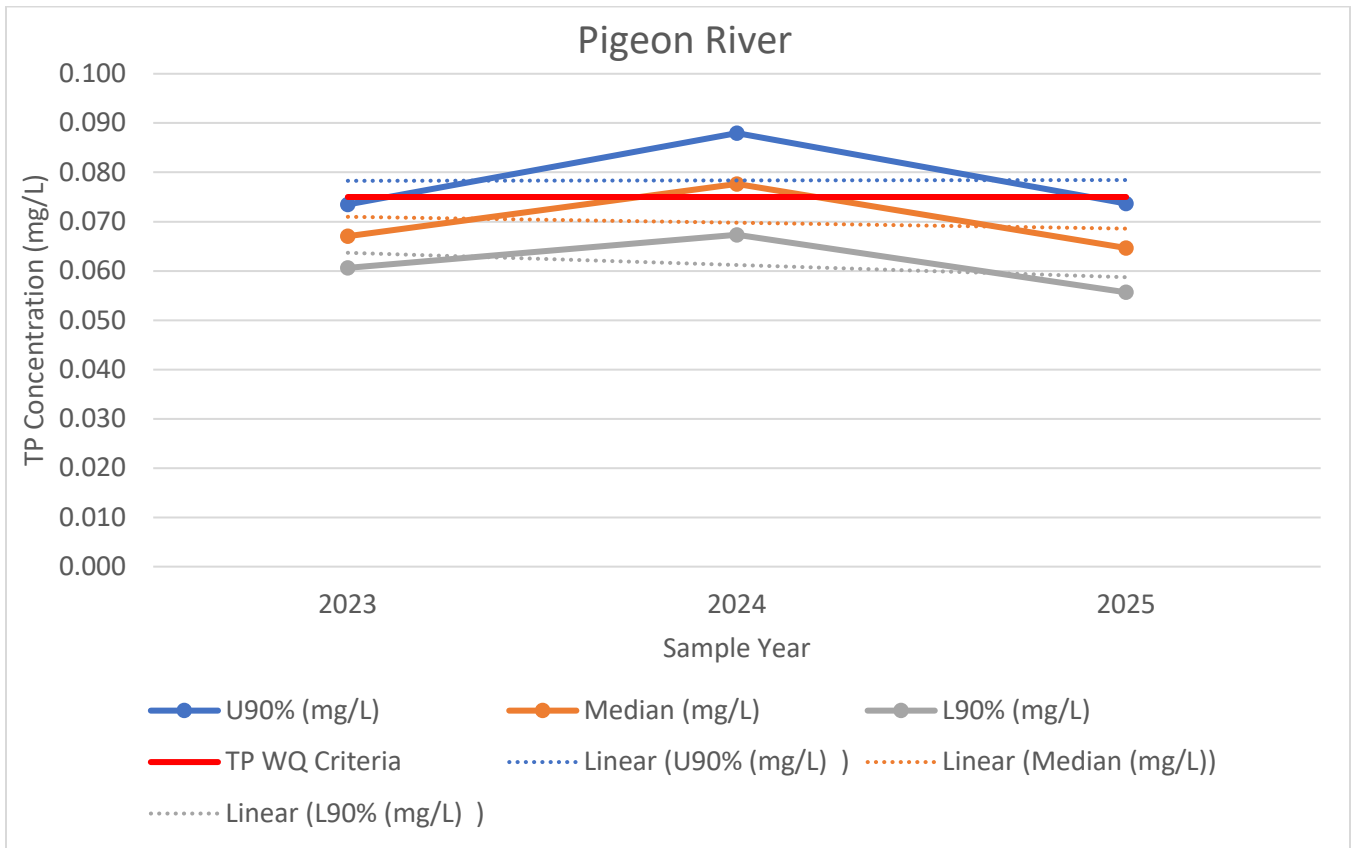
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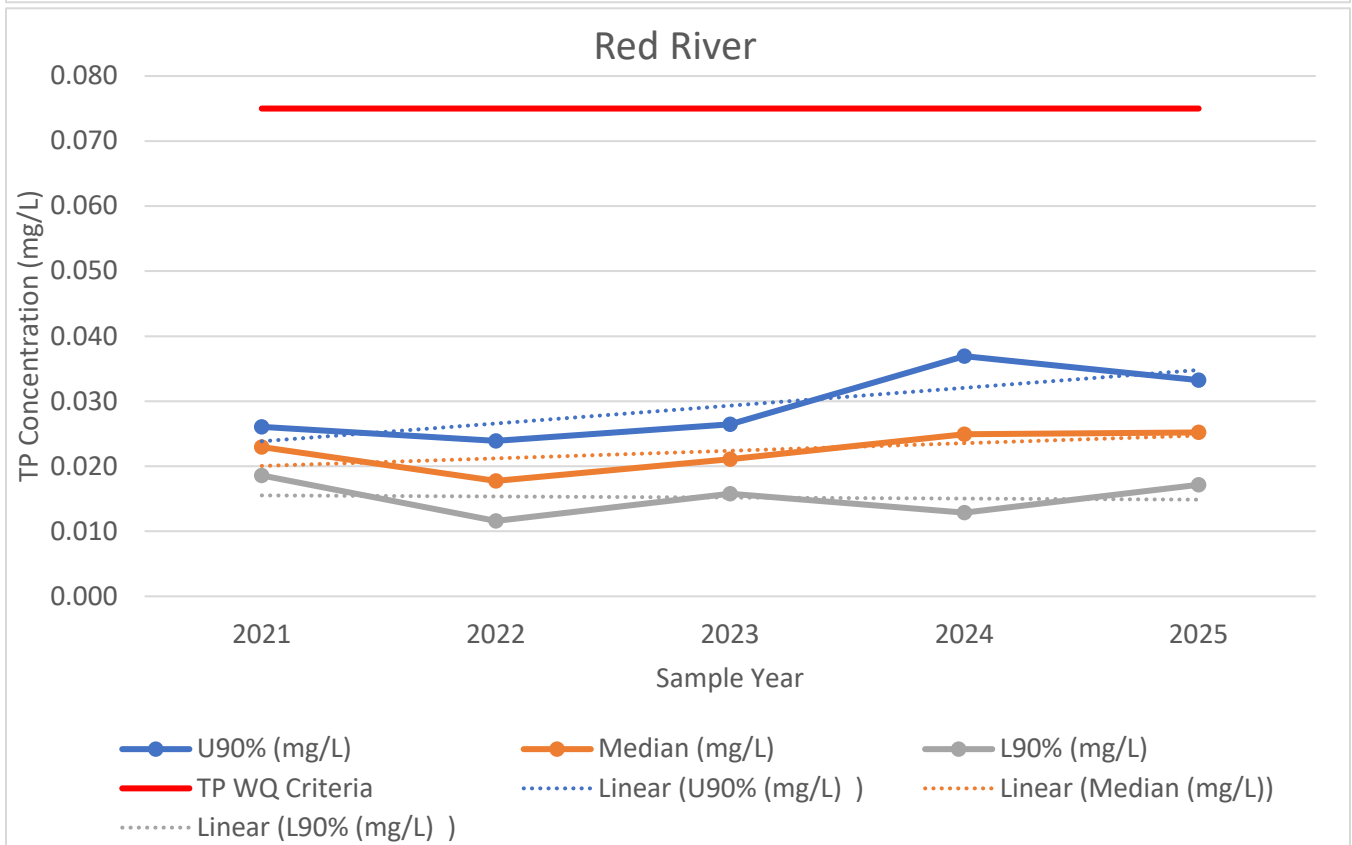
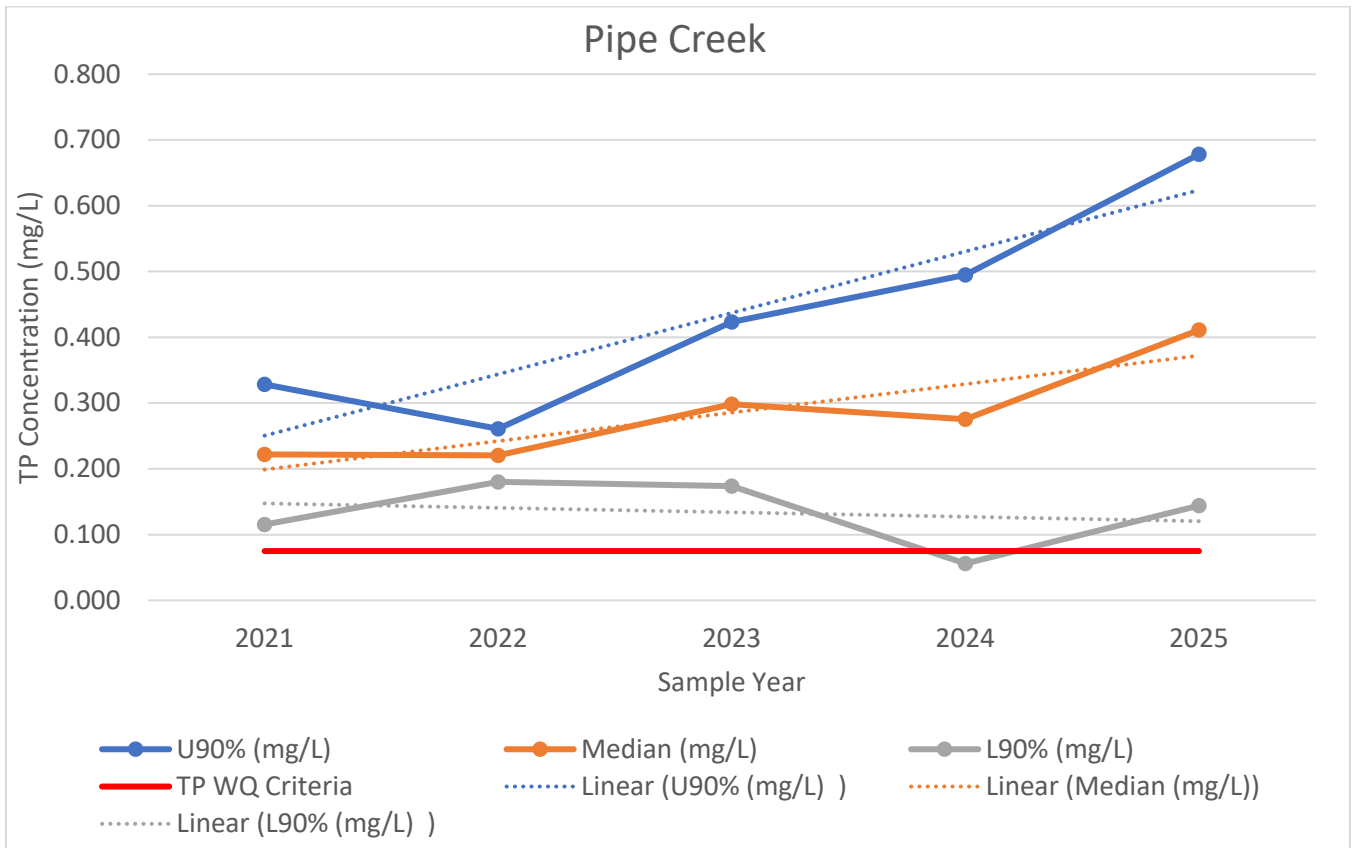
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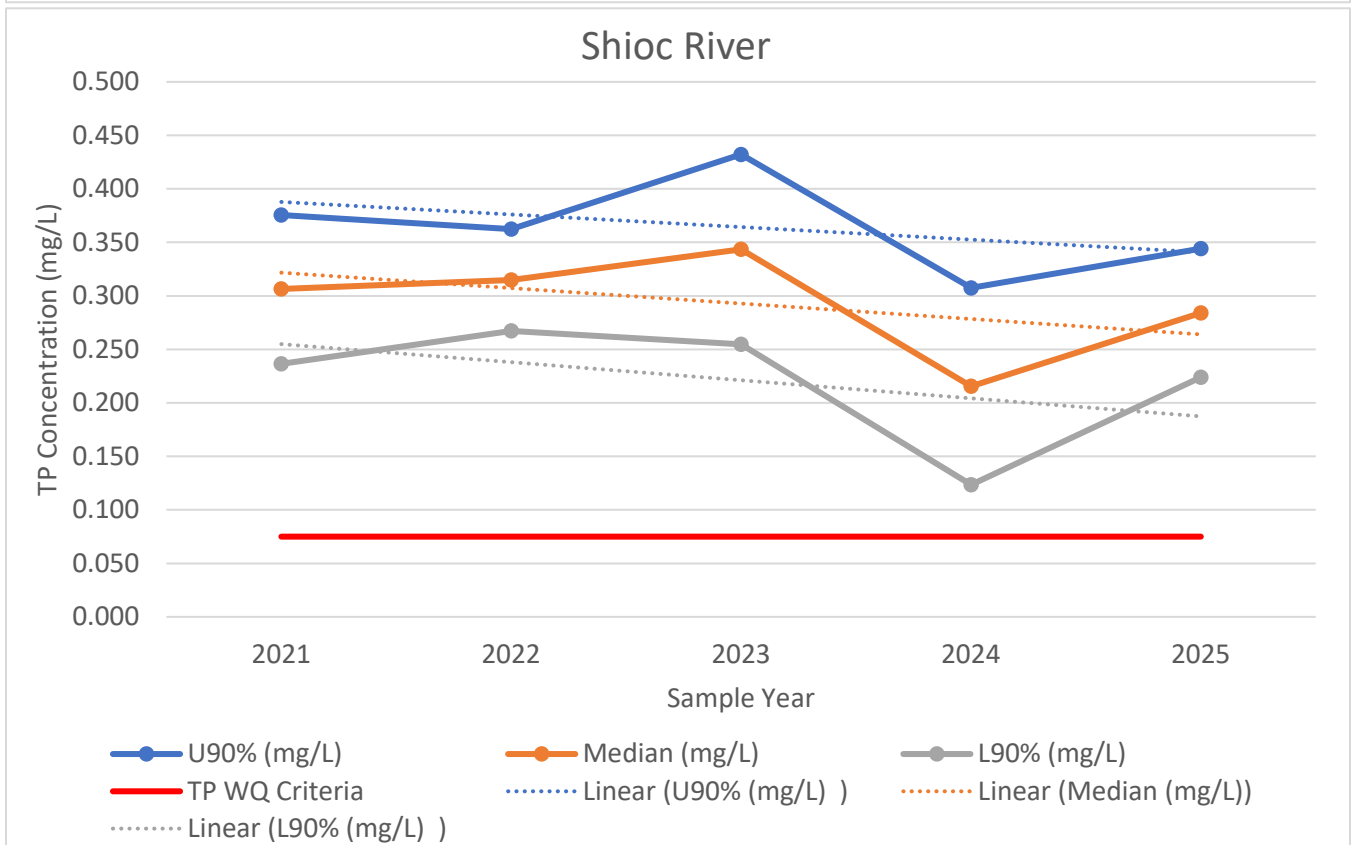
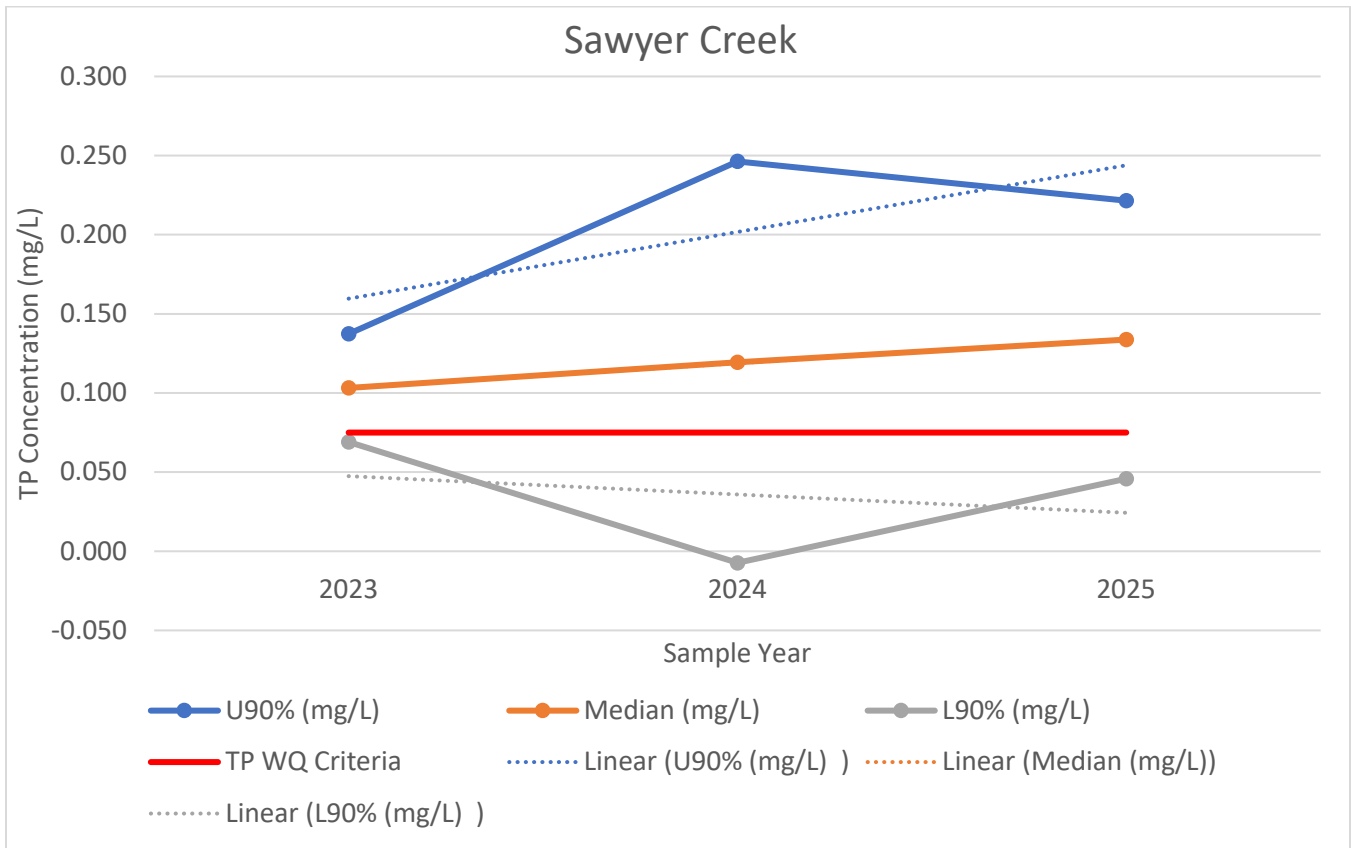
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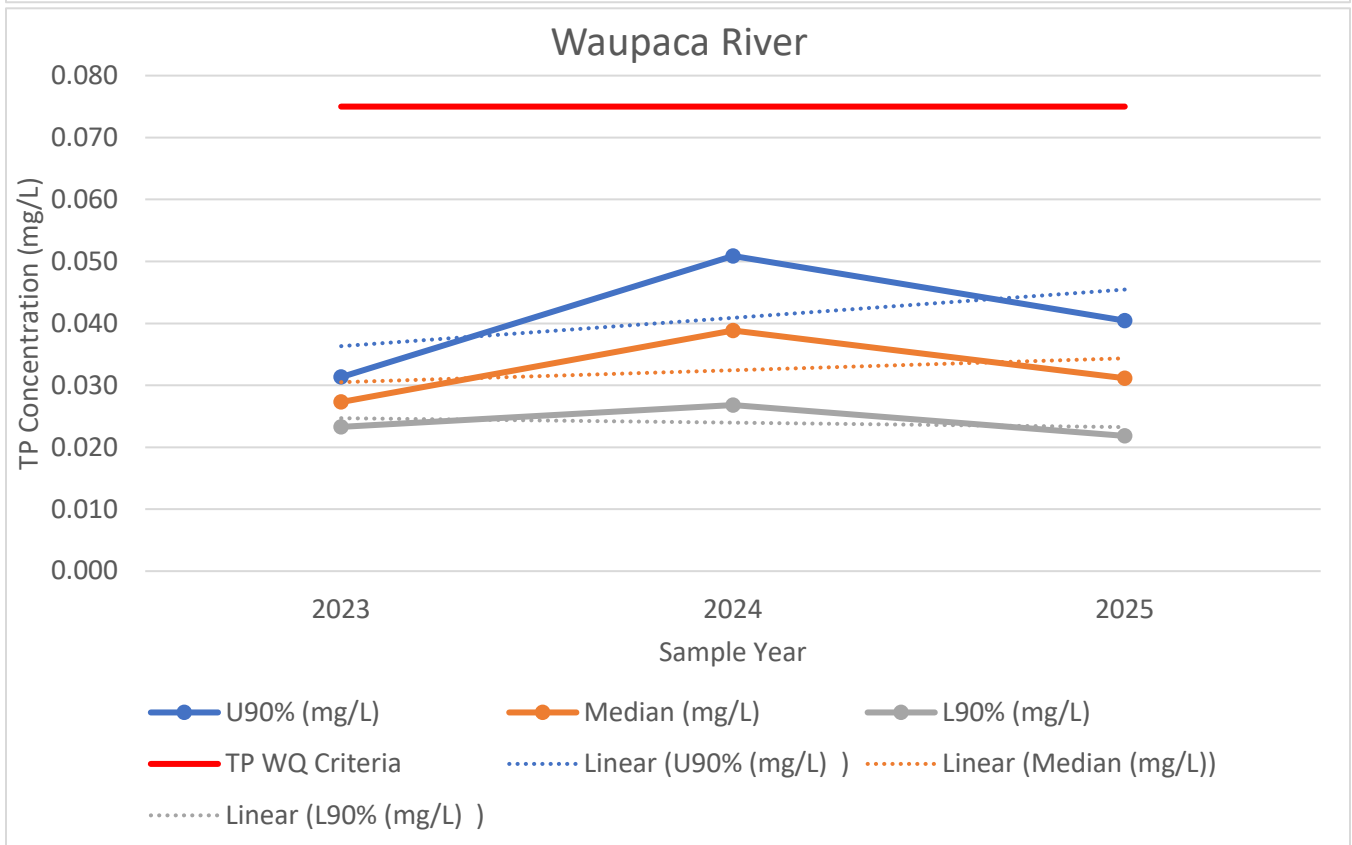
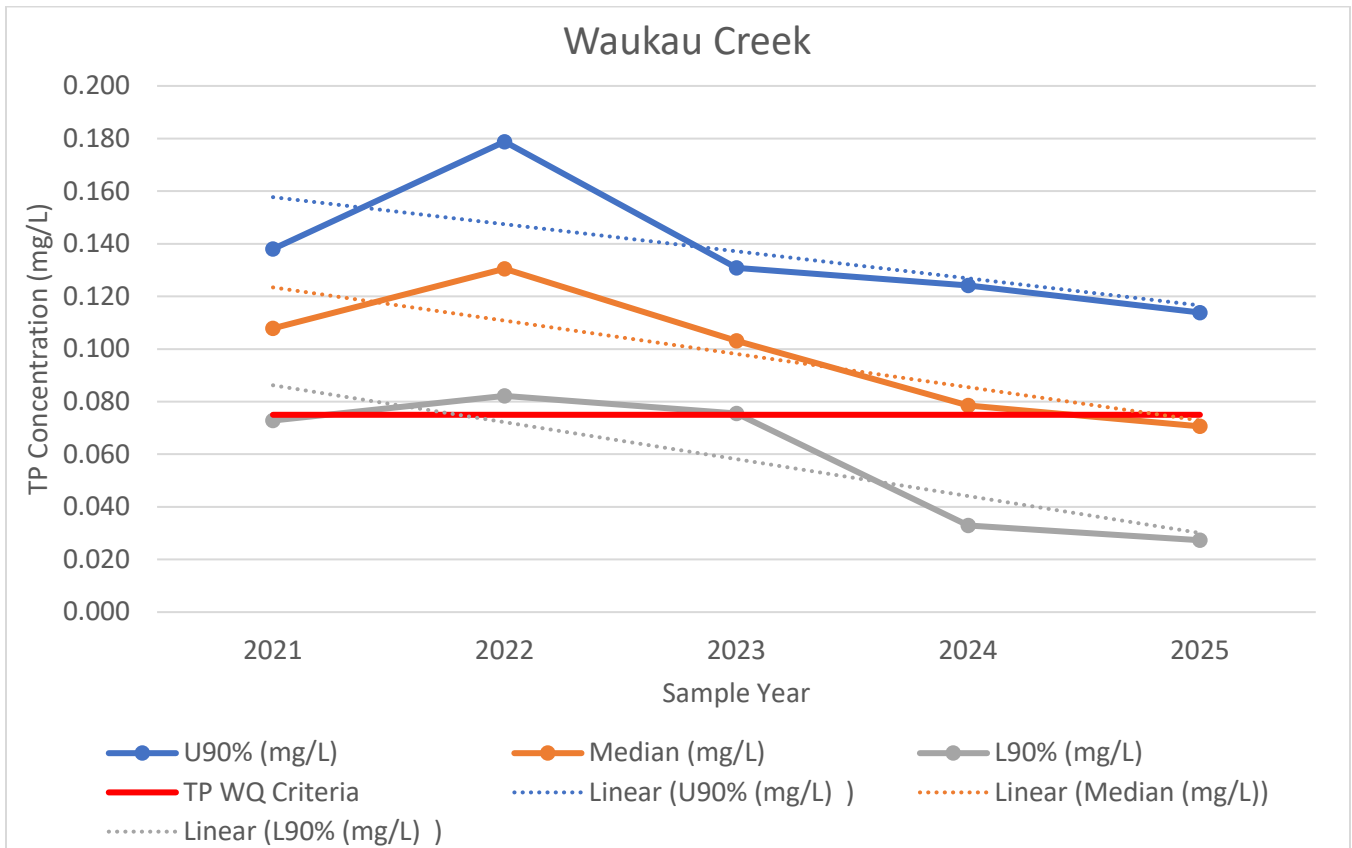
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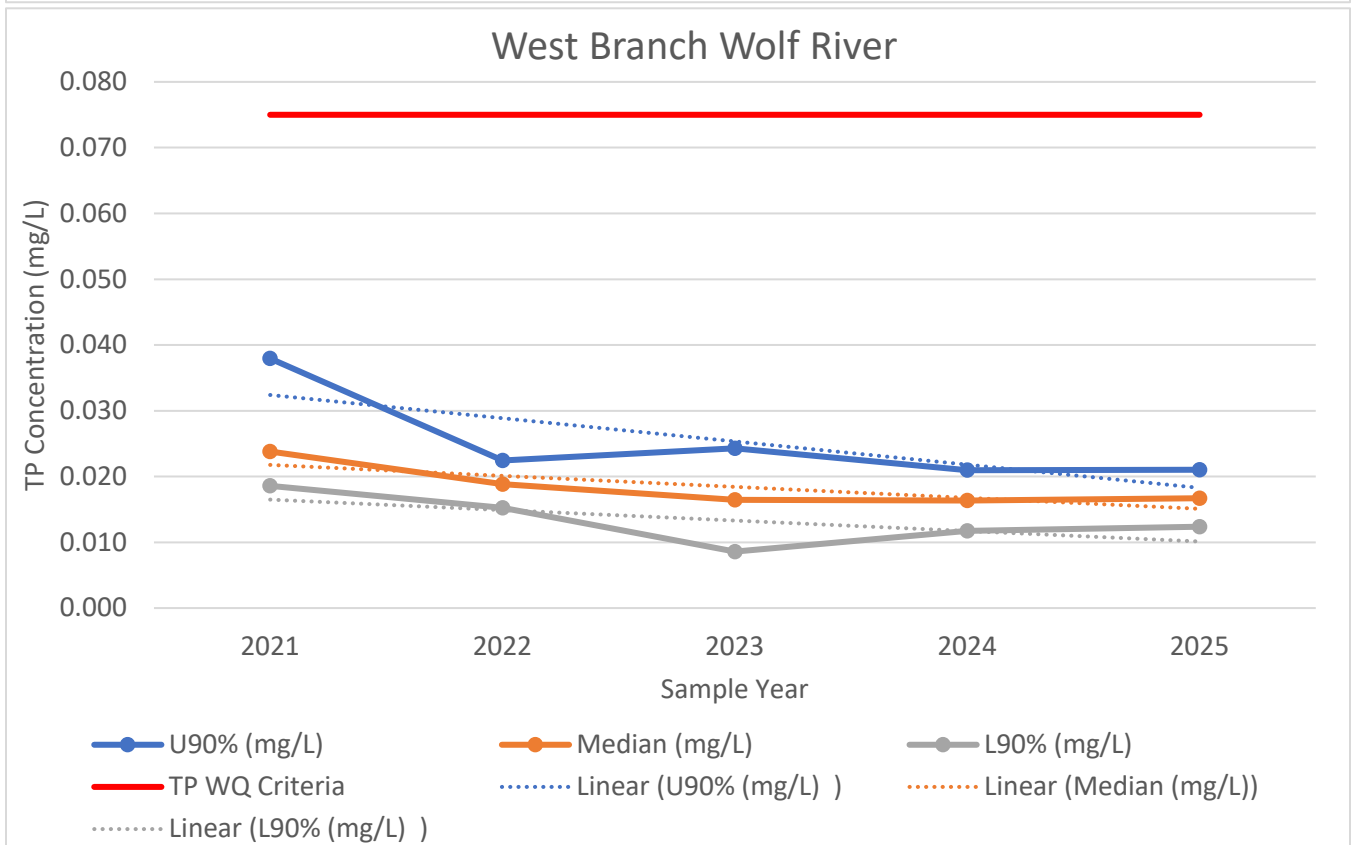
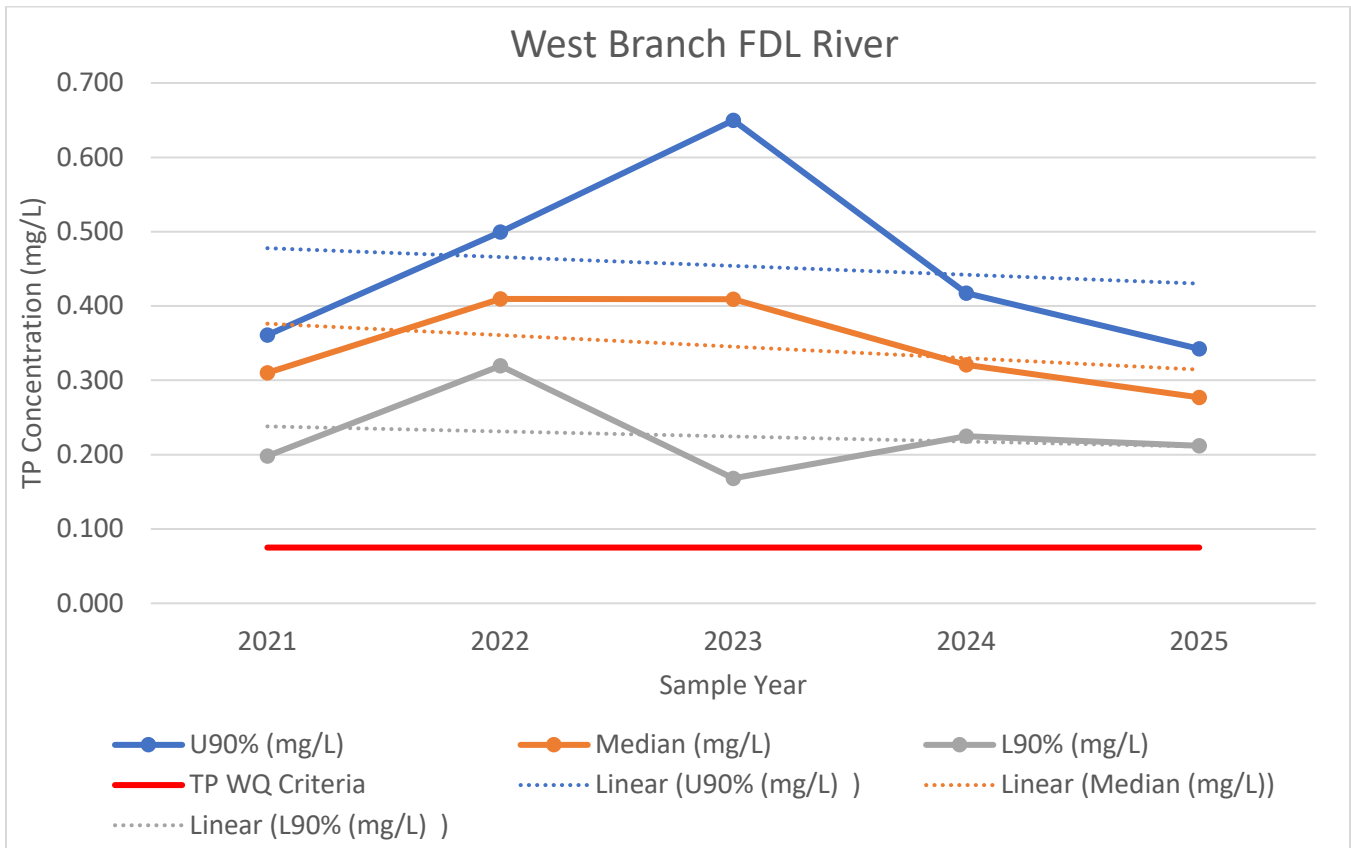
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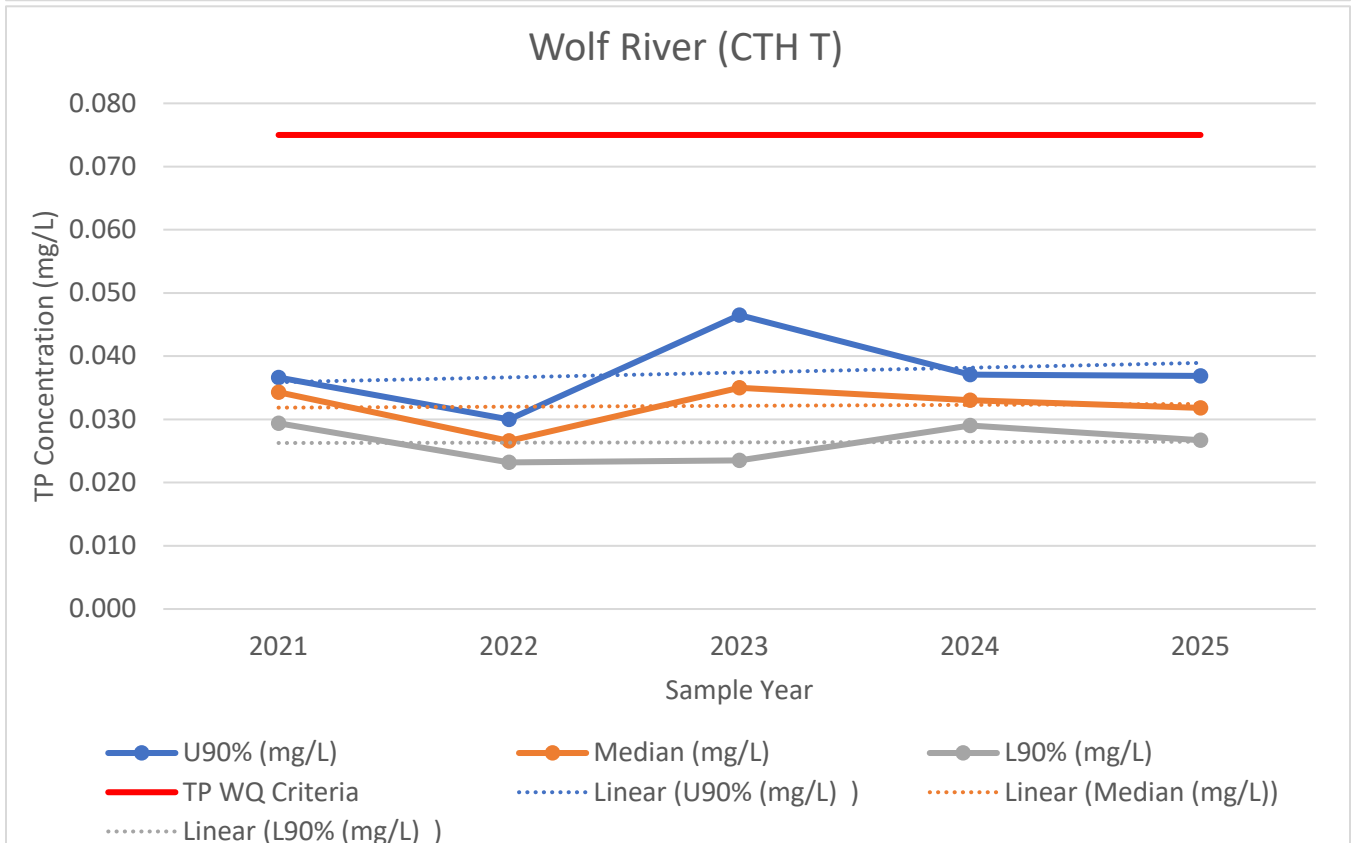
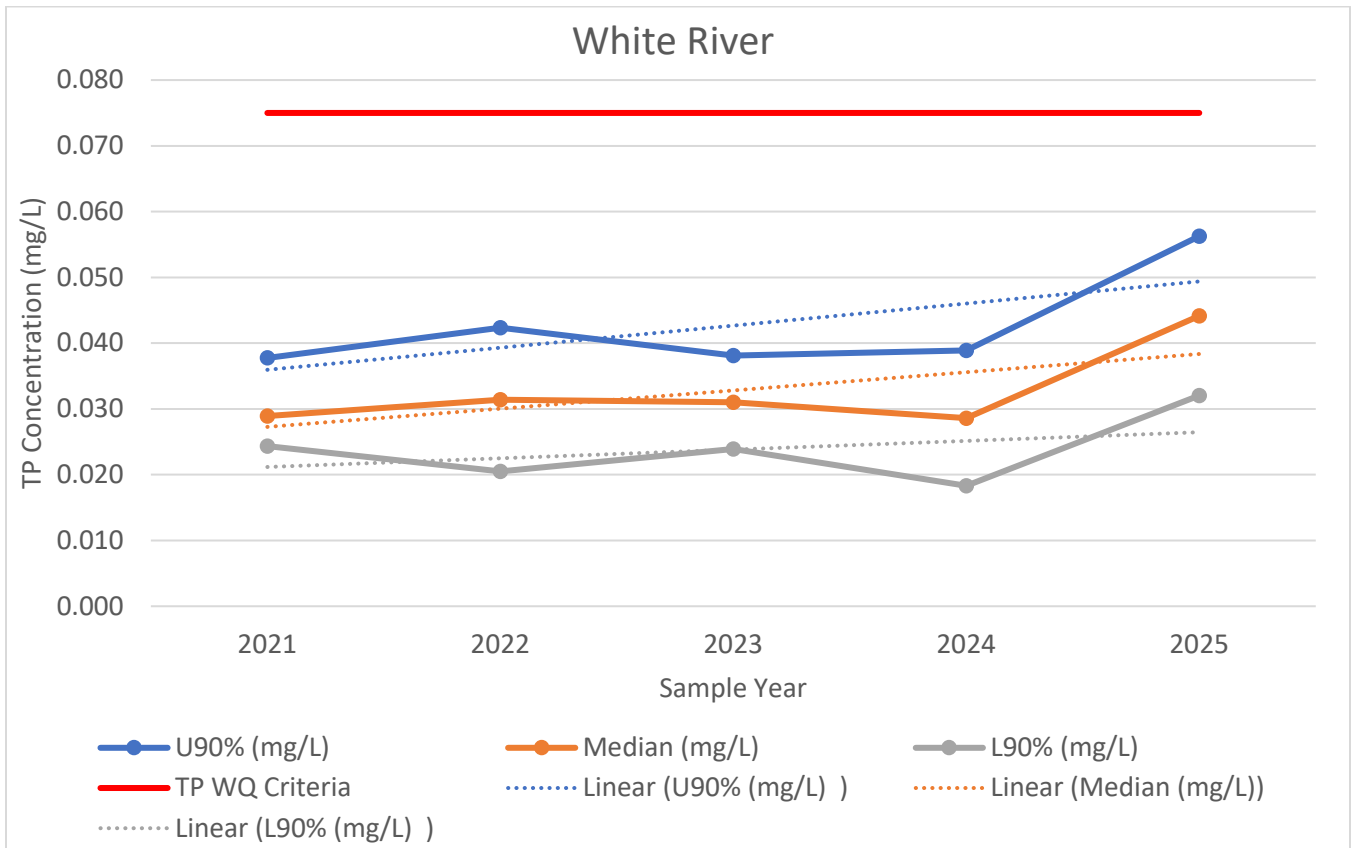
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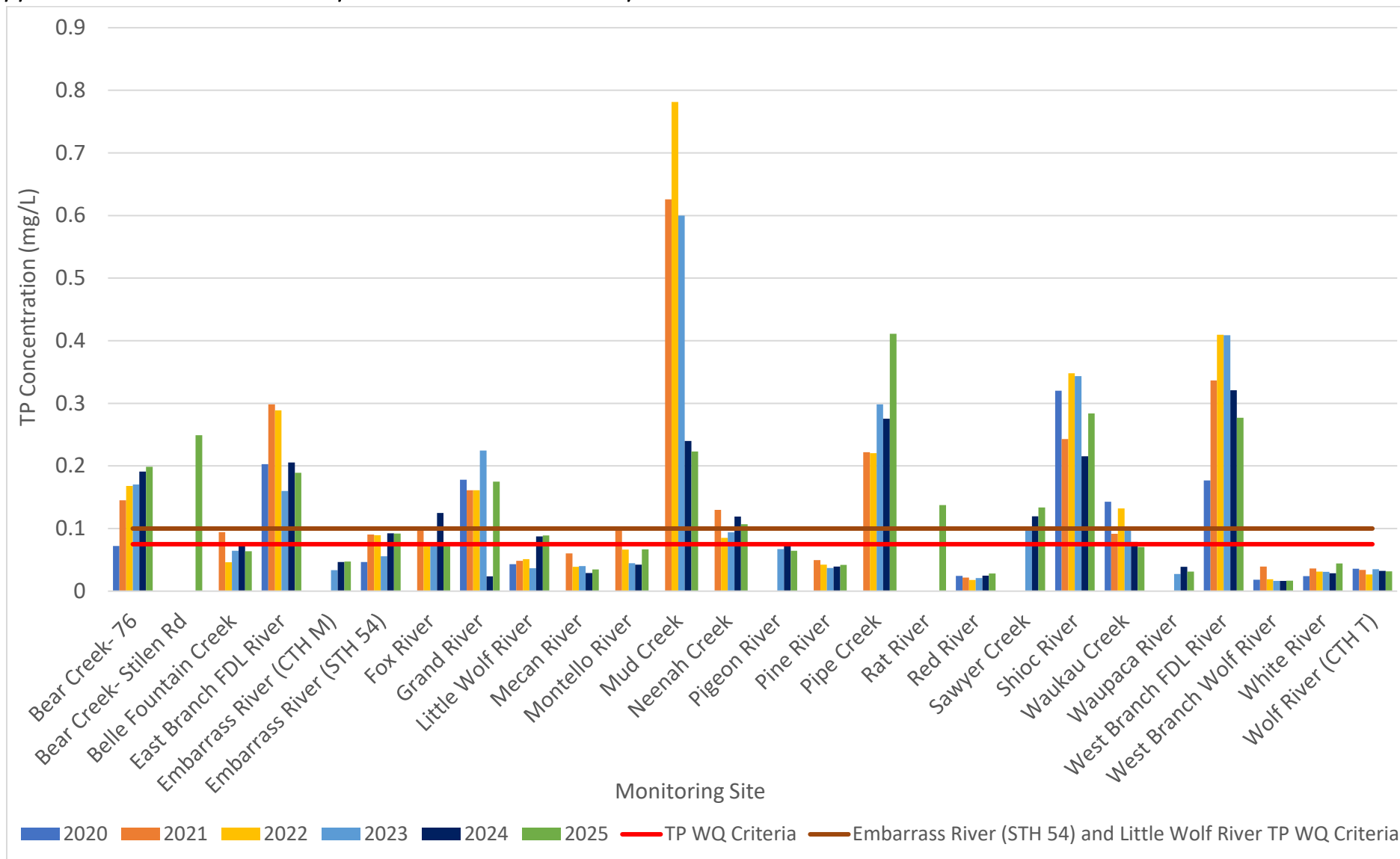
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Appendix G: Median Total Phosphorus Concentration (mg/L) by Monitoring Site
Highlighted values indicate years with missing data.

Monitoring Site	2020	2021	2022	2023	2024	2025
Bear Creek (STH 76)	0.0722	0.1450	0.1680	0.1705	0.1910	0.1985
Bear Creek (Stilen Rd)	N/A	N/A	N/A	N/A	N/A	0.2490
Belle Fountain Creek	N/A	0.0944	0.0460	0.0645	0.0783	0.0639
East Branch FDL River	0.2030	0.2985	0.2890	0.1600	0.2055	0.1890
Embarrass River (CTH M)	N/A	N/A	N/A	0.0337	0.0466	0.0472
Embarrass River (STH 54)	0.0466	0.0904	0.0892	0.0558	0.0924	0.0920
Fox River	N/A	0.0978	0.0722	0.0752	0.1250	0.0718
Grand River	0.1780	0.1610	0.1610	0.2245	0.0237	0.1750
Little Wolf River	0.0432	0.0486	0.0511	0.0366	0.0873	0.0891
Mecan River	N/A	0.0603	0.0389	0.0399	0.0290	0.0346
Montello River	N/A	0.1002	0.0665	0.0445	0.0425	0.0668
Mud Creek	N/A	0.6260	0.7815	0.6000	0.2400	0.2230
Neenah Creek	N/A	0.1300	0.0852	0.0939	0.1190	0.1070
Pigeon River	N/A	N/A	N/A	0.0671	0.0777	0.0647
Pine River	N/A	0.0496	0.0424	0.0368	0.0393	0.0419
Pipe Creek	N/A	0.2220	0.2205	0.2985	0.2755	0.4110
Rat River	N/A	N/A	N/A	N/A	N/A	0.1375
Red River	0.0243	0.0218	0.0178	0.0211	0.0249	0.0283
Sawyer Creek	N/A	N/A	N/A	0.1032	0.1195	0.1338
Shioc River	0.3200	0.2430	0.3480	0.3435	0.2155	0.2840
Waukau Creek	0.1430	0.0917	0.1320	0.1032	0.0786	0.0706
Waupaca River	N/A	N/A	N/A	0.0273	0.0389	0.0312
West Branch FDL River	0.1770	0.3365	0.4095	0.4090	0.3210	0.2770
West Branch Wolf River	0.0183	0.0393	0.0189	0.0165	0.0162	0.0167
White River	0.0238	0.0361	0.0314	0.0310	0.0286	0.0442
Wolf River (CTH T)	0.0360	0.0339	0.0266	0.0350	0.0323	0.0318

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Appendix H: Median Total Phosphorus Concentration Graph



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Appendix I: Percentage of Total Phosphorus Concentrations from Dissolved Reactive Phosphorus

Monitoring Site	Month	2020	2021	2022	2023	2024	2025
Bear Creek (STH 76)	May	N/A	N/A	50%	54%	59%	53%
Bear Creek (STH 76)	June	N/A	82%	72%	65%	64%	56%
Bear Creek (STH 76)	July	N/A	71%	84%	75%	76%	71%
Bear Creek (STH 76)	August	N/A	77%	84%	76%	80%	82%
Bear Creek (STH 76)	September	57%	67%	78%	70%	79%	74%
Bear Creek (STH 76)	October	82%	74%	62%	79%	74%	77%
Bear Creek (Stilen Rd)	May	N/A	N/A	N/A	N/A	N/A	64%
Bear Creek (Stilen Rd)	June	N/A	N/A	N/A	N/A	N/A	71%
Bear Creek (Stilen Rd)	July	N/A	N/A	N/A	N/A	N/A	67%
Bear Creek (Stilen Rd)	August	N/A	N/A	N/A	N/A	N/A	81%
Bear Creek (Stilen Rd)	September	N/A	N/A	N/A	N/A	N/A	67%
Bear Creek (Stilen Rd)	October	N/A	N/A	N/A	N/A	N/A	59%
Belle Fountain Creek	May	N/A	29%	30%	16%	21%	25%
Belle Fountain Creek	June	N/A	20%	N/A	25%	56%	18%
Belle Fountain Creek	July	N/A	20%	49%	26%	34%	36%
Belle Fountain Creek	August	N/A	56%	N/A	32%	37%	48%
Belle Fountain Creek	September	N/A	50%	37%	45%	44%	38%
Belle Fountain Creek	October	N/A	63%	32%	50%	59%	48%
East Branch FDL River	May	N/A	71%	74%	67%	80%	64%
East Branch FDL River	June	N/A	61%	58%	71%	70%	66%
East Branch FDL River	July	N/A	80%	65%	75%	65%	70%
East Branch FDL River	August	88%	82%	81%	66%	68%	65%
East Branch FDL River	September	82%	78%	75%	53%	75%	66%
East Branch FDL River	October	90%	84%	63%	68%	79%	76%
Embarrass River (CTH M)	May	N/A	N/A	N/A	30%	45%	42%
Embarrass River (CTH M)	June	N/A	N/A	N/A	22%	55%	52%

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Monitoring Site	Month	2020	2021	2022	2023	2024	2025
Embarrass River (CTH M)	July	N/A	N/A	N/A	18%	56%	62%
Embarrass River (CTH M)	August	N/A	N/A	N/A	27%	71%	39%
Embarrass River (CTH M)	September	N/A	N/A	N/A	24%	44%	37%
Embarrass River (CTH M)	October	N/A	N/A	N/A	35%	46%	43%
Embarrass River (STH 54)	May	N/A	45%	47%	52%	54%	36%
Embarrass River (STH 54)	June	N/A	13%	35%	17%	44%	40%
Embarrass River (STH 54)	July	N/A	11%	10%	7%	63%	46%
Embarrass River (STH 54)	August	N/A	62%	14%	11%	45%	46%
Embarrass River (STH 54)	September	42%	34%	27%	25%	49%	35%
Embarrass River (STH 54)	October	87%	51%	51%	16%	42%	0%
Fox River	May	N/A	27%	N/A	35%	25%	32%
Fox River	June	N/A	50%	34%	46%	41%	48%
Fox River	July	N/A	48%	64%	53%	50%	65%
Fox River	August	N/A	62%	N/A	62%	61%	331%
Fox River	September	N/A	70%	N/A	67%	41%	50%
Fox River	October	N/A	58%	54%	53%	N/A	71%
Grand River	May	N/A	61%	49%	31%	36%	48%
Grand River	June	N/A	77%	84%	77%	52%	86%
Grand River	July	N/A	83%	76%	85%	63%	78%
Grand River	August	98%	93%	69%	78%	38%	81%
Grand River	September	73%	76%	85%	85%	48%	80%
Grand River	October	42%	82%	52%	79%	55%	55%
Little Wolf River	May	N/A	50%	37%	31%	43%	35%
Little Wolf River	June	N/A	59%	39%	26%	45%	23%
Little Wolf River	July	N/A	52%	41%	45%	28%	30%

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Monitoring Site	Month	2020	2021	2022	2023	2024	2025
Little Wolf River	August	N/A	77%	47%	39%	28%	18%
Little Wolf River	September	50%	43%	53%	45%	16%	22%
Little Wolf River	October	132%	61%	55%	27%	47%	27%
Mecan River	May	N/A	22%	16%	15%	23%	42%
Mecan River	June	N/A	18%	N/A	22%	26%	15%
Mecan River	July	N/A	75%	12%	15%	25%	27%
Mecan River	August	N/A	39%	N/A	23%	31%	30%
Mecan River	September	N/A	59%	32%	9%	30%	45%
Mecan River	October	N/A	27%	27%	34%	33%	N/A
Montello River	May	N/A	31%	34%	37%	55%	17%
Montello River	June	N/A	38%	N/A	51%	51%	32%
Montello River	July	N/A	12%	37%	62%	49%	47%
Montello River	August	N/A	62%	N/A	52%	55%	47%
Montello River	September	N/A	52%	48%	56%	54%	49%
Montello River	October	N/A	29%	29%	48%	59%	48%
Mud Creek	May	N/A	87%	81%	58%	86%	62%
Mud Creek	June	N/A	N/A	80%	67%	76%	59%
Mud Creek	July	N/A	92%	88%	79%	71%	69%
Mud Creek	August	N/A	84%	84%	89%	84%	68%
Mud Creek	September	N/A	97%	94%	92%	81%	41%
Mud Creek	October	N/A	81%	93%	91%	77%	70%
Neenah Creek	May	N/A	20%	N/A	8%	9%	14%
Neenah Creek	June	N/A	19%	16%	14%	37%	18%
Neenah Creek	July	N/A	25%	15%	9%	30%	13%
Neenah Creek	August	N/A	18%	N/A	10%	21%	16%
Neenah Creek	September	N/A	7%	18%	15%	25%	31%
Neenah Creek	October	N/A	7%	15%	12%	34%	0%

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Monitoring Site	Month	2020	2021	2022	2023	2024	2025
Pigeon River	May	N/A	N/A	N/A	26%	31%	15%
Pigeon River	June	N/A	N/A	N/A	30%	41%	30%
Pigeon River	July	N/A	N/A	N/A	31%	54%	43%
Pigeon River	August	N/A	N/A	N/A	20%	45%	18%
Pigeon River	September	N/A	N/A	N/A	19%	23%	15%
Pigeon River	October	N/A	N/A	N/A	20%	23%	22%
Pine River	May	N/A	N/A	14%	38%	48%	42%
Pine River	June	N/A	16%	35%	20%	47%	35%
Pine River	July	N/A	29%	37%	58%	32%	40%
Pine River	August	N/A	28%	45%	43%	41%	25%
Pine River	September	N/A	40%	39%	45%	47%	31%
Pine River	October	N/A	8%	61%	24%	55%	45%
Pipe Creek	May	N/A	N/A	20%	54%	45%	48%
Pipe Creek	June	N/A	84%	83%	66%	51%	48%
Pipe Creek	July	N/A	83%	7%	60%	76%	75%
Pipe Creek	August	N/A	88%	71%	38%	40%	87%
Pipe Creek	September	N/A	81%	45%	18%	67%	58%
Pipe Creek	October	N/A	76%	84%	52%	74%	59%
Rat River	May	N/A	N/A	N/A	N/A	N/A	35%
Rat River	June	N/A	N/A	N/A	N/A	N/A	47%
Rat River	July	N/A	N/A	N/A	N/A	N/A	56%
Rat River	August	N/A	N/A	N/A	N/A	N/A	59%
Rat River	September	N/A	N/A	N/A	N/A	N/A	46%
Rat River	October	N/A	N/A	N/A	N/A	N/A	15%
Red River	May	N/A	N/A	23%	0%	24%	17%
Red River	June	N/A	33%	33%	33%	30%	32%
Red River	July	N/A	82%	22%	30%	39%	N/A

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Monitoring Site	Month	2020	2021	2022	2023	2024	2025
Red River	August	85%	65%	41%	32%	21%	34%
Red River	September	89%	27%	30%	40%	33%	39%
Red River	October	180%	26%	N/A	ND	56%	0%
Sawyer Creek	May	N/A	N/A	N/A	36%	40%	21%
Sawyer Creek	June	N/A	N/A	N/A	58%	64%	45%
Sawyer Creek	July	N/A	N/A	N/A	80%	72%	81%
Sawyer Creek	August	N/A	N/A	N/A	66%	63%	78%
Sawyer Creek	September	N/A	N/A	N/A	49%	73%	70%
Sawyer Creek	October	N/A	N/A	N/A	61%	88%	91%
Shioc River	May	N/A	N/A	58%	50%	46%	59%
Shioc River	June	N/A	78%	81%	67%	84%	62%
Shioc River	July	N/A	59%	78%	88%	79%	80%
Shioc River	August	N/A	79%	79%	92%	72%	67%
Shioc River	September	53%	82%	56%	81%	84%	70%
Shioc River	October	70%	75%	N/A	79%	79%	79%
Waukau Creek	May	N/A	47%	17%	40%	40%	45%
Waukau Creek	June	N/A	78%	45%	68%	64%	33%
Waukau Creek	July	N/A	N/A	74%	78%	83%	66%
Waukau Creek	August	46%	67%	69%	77%	72%	55%
Waukau Creek	September	74%	29%	38%	70%	65%	42%
Waukau Creek	October	68%	53%	0%	37%	55%	29%
Waupaca River	May	N/A	N/A	N/A	34%	37%	29%
Waupaca River	June	N/A	N/A	N/A	33%	35%	46%
Waupaca River	July	N/A	N/A	N/A	60%	44%	59%
Waupaca River	August	N/A	N/A	N/A	48%	52%	64%
Waupaca River	September	N/A	N/A	N/A	54%	51%	49%
Waupaca River	October	N/A	N/A	N/A	22%	47%	49%

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Monitoring Site	Month	2020	2021	2022	2023	2024	2025
West Branch FDL River	May	N/A	80%	77%	72%	71%	62%
West Branch FDL River	June	N/A	85%	79%	81%	80%	65%
West Branch FDL River	July	N/A	64%	84%	87%	70%	71%
West Branch FDL River	August	80%	83%	87%	89%	77%	80%
West Branch FDL River	September	101%	78%	71%	81%	N/A	74%
West Branch FDL River	October	96%	86%	71%	72%	65%	80%
West Branch Wolf River	May	N/A	N/A	30%	35%	33%	31%
West Branch Wolf River	June	N/A	23%	28%	0%	N/A	20%
West Branch Wolf River	July	N/A	39%	26%	0%	0%	35%
West Branch Wolf River	August	N/A	5%	43%	43%	39%	0%
West Branch Wolf River	September	134%	35%	36%	43%	54%	56%
West Branch Wolf River	October	98%	19%	39%	11%	50%	0%
White River	May	N/A	30%	27%	14%	19%	28%
White River	June	N/A	33%	20%	18%	29%	21%
White River	July	N/A	38%	36%	16%	38%	37%
White River	August	63%	35%	29%	28%	22%	0%
White River	September	122%	33%	40%	ND	28%	30%
White River	October	71%	38%	37%	39%	56%	0%
Wolf River (CTH T)	May	N/A	14%	31%	9%	28%	16%
Wolf River (CTH T)	June	N/A	26%	31%	0%	17%	23%
Wolf River (CTH T)	July	N/A	26%	27%	23%	38%	18%
Wolf River (CTH T)	August	51%	12%	19%	15%	N/A	23%
Wolf River (CTH T)	September	71%	25%	29%	31%	29%	0%
Wolf River (CTH T)	October	74%	40%	24%	11%	33%	26%

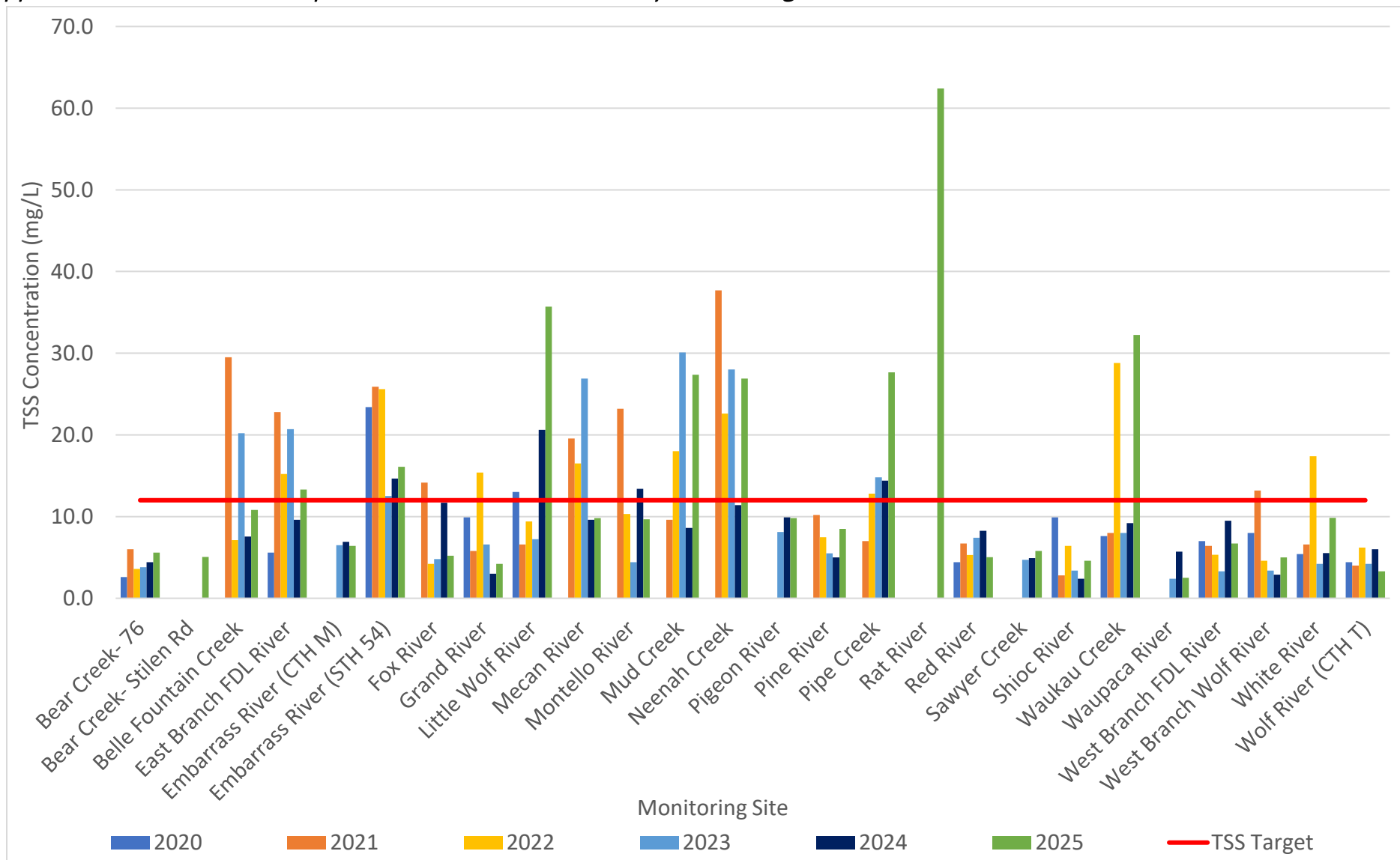
Highlighted percentages indicate the DRP concentration exceeded the TP concentration (DRP >100%).

Italicized and bold percentages indicate the DRP sample concentration was above the TP WQC.

Upper Fox and Wolf River Basins Volunteer Monitoring Program

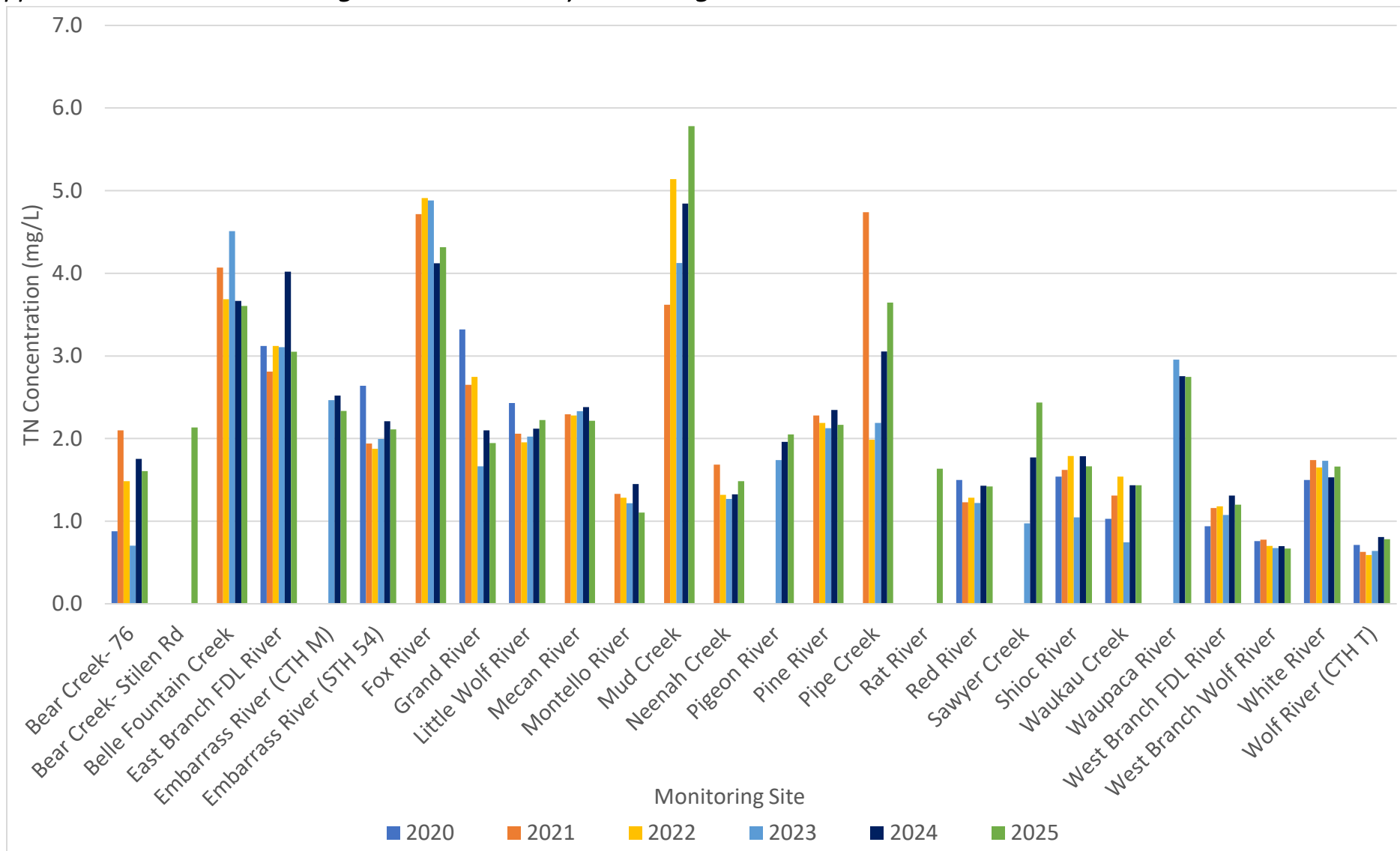
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Appendix J: Median Total Suspended Solids Concentration by Monitoring Site



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Appendix K: Median Total Nitrogen Concentration by Monitoring Site



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Appendix L: 2020-2025 Sampling Data

TP Data (mg/L)

Stream Name	Month	2020	2021	2022	2023	2024	2025
Bear Creek (STH 76)	May	N/A	N/A	0.0871	0.0686	0.096	0.067
Bear Creek (STH 76)	June	N/A	0.324	0.167	0.162	0.18	0.155
Bear Creek (STH 76)	July	N/A	0.163	0.217	0.179	0.258	0.272
Bear Creek (STH 76)	August	N/A	0.145	0.194	0.203	0.286	0.242
Bear Creek (STH 76)	September	0.0576	0.117	0.169	0.152	0.193	0.144
Bear Creek (STH 76)	October	0.0867	0.106	0.0686	0.291	0.189	0.262
Bear Creek (Stilen Rd)	May	N/A	N/A	N/A	N/A	N/A	0.212
Bear Creek (Stilen Rd)	June	N/A	N/A	N/A	N/A	N/A	0.253
Bear Creek (Stilen Rd)	July	N/A	N/A	N/A	N/A	N/A	0.303
Bear Creek (Stilen Rd)	August	N/A	N/A	N/A	N/A	N/A	0.512
Bear Creek (Stilen Rd)	September	N/A	N/A	N/A	N/A	N/A	0.211
Bear Creek (Stilen Rd)	October	N/A	N/A	N/A	N/A	N/A	0.245
Belle Fountain Creek	May	N/A	0.0969	0.056	0.11	0.12	0.0815
Belle Fountain Creek	June	N/A	0.143	N/A	0.0614	0.166	0.177
Belle Fountain Creek	July	N/A	0.132	0.036	0.0676	0.102	0.0696
Belle Fountain Creek	August	N/A	0.0919	N/A	0.0714	0.0484	0.0463
Belle Fountain Creek	September	N/A	0.0726	0.0643	0.0552	0.0546	0.0581
Belle Fountain Creek	October	N/A	0.0437	0.0301	0.0383	0.0354	0.0283
East Branch FDL River	May	N/A	0.298	0.318	0.159	0.23	0.161

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Stream Name	Month	2020	2021	2022	2023	2024	2025
East Branch FDL River	June	N/A	0.299	0.445	0.223	0.338	0.202
East Branch FDL River	July	N/A	0.501	0.507	0.283	0.429	0.322
East Branch FDL River	August	0.203	0.405	0.254	0.161	0.181	0.258
East Branch FDL River	September	0.208	0.296	0.26	0.129	0.123	0.128
East Branch FDL River	October	0.129	0.191	0.0572	0.145	0.122	0.176
Embarrass River (CTH M)	May	N/A	N/A	N/A	0.0342	0.0448	0.049
Embarrass River (CTH M)	June	N/A	N/A	N/A	0.0398	0.0483	0.066
Embarrass River (CTH M)	July	N/A	N/A	N/A	0.0307	0.0788	0.0538
Embarrass River (CTH M)	August	N/A	N/A	N/A	0.0439	0.0519	0.0453
Embarrass River (CTH M)	September	N/A	N/A	N/A	0.0332	0.0285	0.0196
Embarrass River (CTH M)	October	N/A	N/A	N/A	0.0289	0.03	0.0279
Embarrass River (STH 54)	May	N/A	N/A	N/A	0.0931	0.14	0.0755
Embarrass River (STH 54)	June	N/A	0.122	0.0887	0.0527	0.108	0.0878
Embarrass River (STH 54)	July	N/A	0.144	0.0897	0.067	0.15	0.108
Embarrass River (STH 54)	August	N/A	0.0918	0.101	0.0588	0.0767	0.0961
Embarrass River (STH 54)	September	0.0633	0.0889	0.081	0.027	0.0698	0.153
Embarrass River (STH 54)	October	0.0298	0.0674	0.0263	0.0323	0.0324	0.0575
Fox River	May	N/A	0.173	N/A	0.0778	0.228	0.0719
Fox River	June	N/A	0.0895	0.169	0.0588	0.125	0.105
Fox River	July	N/A	0.209	0.0722	0.057	0.226	0.0753

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Fox River	August	N/A	0.106	N/A	0.0821	0.0679	0.0501
Fox River	September	N/A	0.0706	N/A	0.091	0.06	0.0717
Fox River	October	N/A	0.0469	0.0321	0.0725	N/A	0.0583
Grand River	May	N/A	0.24	0.149	0.0767	0.0278	0.0722
Grand River	June	N/A	0.208	0.184	0.147	0.0376	0.337
Grand River	July	N/A	0.174	0.237	0.235	0.0147	0.167
Grand River	August	0.178	0.148	0.16	0.296	0.0237	0.183
Grand River	September	0.11	0.0666	0.162	0.223	0.0237	0.193
Grand River	October	0.229	0.0705	0.0382	0.226	0.016	0.0893
Little Wolf River	May	N/A	0.0515	0.0555	0.0447	0.111	0.0332
Little Wolf River	June	N/A	0.0566	0.0545	0.041	0.055	0.0993
Little Wolf River	July	N/A	0.0658	0.0476	0.032	0.146	0.0796
Little Wolf River	August	N/A	0.0457	0.0581	0.0391	0.0635	0.101
Little Wolf River	September	0.0664	0.0323	0.038	0.021	0.151	0.0985
Little Wolf River	October	0.02	0.0384	0.0201	0.034	0.0209	0.0338
Mecan River	May	N/A	0.0708	0.0482	0.0474	0.042	0.0601
Mecan River	June	N/A	0.0855	N/A	0.0266	0.0355	0.0603
Mecan River	July	N/A	0.0498	0.0454	0.0502	0.0608	0.0413
Mecan River	August	N/A	0.074	N/A	0.0323	0.0224	0.0278
Mecan River	September	N/A	0.0314	0.0323	0.0756	0.0197	0.0164

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Mecan River	October	N/A	0.0326	0.0312	0.0218	0.0209	0.0278
Montello River	May	N/A	0.122	0.0838	0.0476	0.0547	0.0449
Montello River	June	N/A	0.104	N/A	0.0628	0.0723	0.0958
Montello River	July	N/A	0.123	0.107	0.0539	0.0944	0.0843
Montello River	August	N/A	0.0964	N/A	0.0413	0.0303	0.0798
Montello River	September	N/A	0.0452	0.0492	0.0292	0.0278	0.0343
Montello River	October	N/A	0.0611	0.0278	0.0298	0.0264	0.0538
Mud Creek	May	N/A	0.694	0.291	0.0929	0.271	0.15
Mud Creek	June	N/A	N/A	0.348	0.375	0.386	0.24
Mud Creek	July	N/A	0.626	0.88	0.482	0.229	0.255
Mud Creek	August	N/A	0.597	0.751	0.774	0.235	0.206
Mud Creek	September	N/A	0.728	0.815	0.997	0.245	0.252
Mud Creek	October	N/A	0.51	0.812	0.718	0.176	0.206
Neenah Creek	May	N/A	0.131	N/A	0.111	0.116	0.112
Neenah Creek	June	N/A	0.143	0.0914	0.064	0.134	0.0592
Neenah Creek	July	N/A	0.177	N/A	0.0967	0.362	0.121
Neenah Creek	August	N/A	0.126	N/A	0.0911	0.122	0.136
Neenah Creek	September	N/A	0.129	0.0852	0.0981	0.0737	0.102
Neenah Creek	October	N/A	0.067	0.038	0.0581	0.0463	0.0858
Pigeon River	May	N/A	N/A	N/A	0.0511	0.0791	0.0586

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Pigeon River	June	N/A	N/A	N/A	0.0673	0.08	0.0567
Pigeon River	July	N/A	N/A	N/A	0.0668	0.0887	0.0864
Pigeon River	August	N/A	N/A	N/A	0.078	0.0762	0.0909
Pigeon River	September	N/A	N/A	N/A	0.0674	0.0502	0.0629
Pigeon River	October	N/A	N/A	N/A	0.0514	0.0487	0.0664
Pine River	May	N/A	N/A	0.0614	0.036	0.052	0.0394
Pine River	June	N/A	0.0908	0.0373	0.0317	0.0507	0.0598
Pine River	July	N/A	0.0438	0.0435	0.0378	0.0441	0.0444
Pine River	August	N/A	0.0496	0.0466	0.0464	0.0344	0.0518
Pine River	September	N/A	0.0364	0.0412	0.0376	0.0287	0.0345
Pine River	October	N/A	0.173	0.028	0.034	0.032	0.0323
Pipe Creek	May	N/A	N/A	0.183	0.0814	1.05	1.1
Pipe Creek	June	N/A	0.205	0.299	0.415	0.123	0.126
Pipe Creek	July	N/A	0.154	0.137	0.356	0.335	0.204
Pipe Creek	August	N/A	0.31	0.226	0.241	0.065	1.08
Pipe Creek	September	N/A	0.222	0.215	0.672	0.216	0.292
Pipe Creek	October	N/A	0.561	0.306	0.221	0.356	0.53
Rat River	May	N/A	N/A	N/A	N/A	N/A	0.06
Rat River	June	N/A	N/A	N/A	N/A	N/A	0.109
Rat River	July	N/A	N/A	N/A	N/A	N/A	0.119

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Rat River	August	N/A	N/A	N/A	N/A	N/A	0.202
Rat River	September	N/A	N/A	N/A	N/A	N/A	0.156
Rat River	October	N/A	N/A	N/A	N/A	N/A	0.321
Red River	May	N/A	N/A	0.0361	0.031	0.0568	0.0321
Red River	June	N/A	0.0408	0.0309	0.0366	0.0574	0.0535
Red River	July	N/A	0.0218	0.0192	0.018	0.0252	N/A
Red River	August	0.0243	0.0241	0.0153	0.0211	0.0193	0.0245
Red River	September	0.0255	0.0144	0.0163	0.016	0.0246	0.0193
Red River	October	0.0142	0.0203	0.01	ND	0.0119	ND
Sawyer Creek	May	N/A	N/A	N/A	0.0408	0.0914	0.0885
Sawyer Creek	June	N/A	N/A	N/A	0.109	0.113	0.0658
Sawyer Creek	July	N/A	N/A	N/A	0.203	0.149	0.179
Sawyer Creek	August	N/A	N/A	N/A	0.131	0.1	0.243
Sawyer Creek	September	N/A	N/A	N/A	0.0715	0.126	0.0648
Sawyer Creek	October	N/A	N/A	N/A	0.0974	0.62	0.433
Shioc River	May	N/A	N/A	0.209	0.135	0.0658	0.114
Shioc River	June	N/A	0.243	0.404	0.31	0.311	0.177
Shioc River	July	N/A	0.194	0.393	0.449	0.512	0.374
Shioc River	August	N/A	0.658	0.348	0.567	0.216	0.314
Shioc River	September	0.275	0.338	0.264	0.331	0.215	0.323

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Shioc River	October	0.365	0.198	N/A	0.356	0.187	0.254
Waukau Creek	May	N/A	0.0917	0.129	0.0695	0.0455	0.052
Waukau Creek	June	N/A	0.18	0.0984	0.14	0.084	0.0823
Waukau Creek	July	N/A	N/A	0.132	0.187	0.247	0.209
Waukau Creek	August	0.143	0.124	0.168	0.123	0.0842	0.162
Waukau Creek	September	0.0432	0.0772	0.285	0.0833	0.0731	0.0589
Waukau Creek	October	0.247	0.0424	0.0537	0.0796	0.0559	0.0301
Waupaca River	May	N/A	N/A	N/A	0.0293	0.0743	0.0299
Waupaca River	June	N/A	N/A	N/A	0.0253	0.0362	0.0636
Waupaca River	July	N/A	N/A	N/A	0.0347	0.0546	0.0324
Waupaca River	August	N/A	N/A	N/A	0.0324	0.0351	0.0385
Waupaca River	September	N/A	N/A	N/A	0.0166	0.0415	0.0217
Waupaca River	October	N/A	N/A	N/A	0.0237	0.0165	0.0243
West Branch FDL River	May	N/A	0.338	0.462	0.128	0.279	0.142
West Branch FDL River	June	N/A	0.452	0.479	0.245	0.614	0.236
West Branch FDL River	July	N/A	0.856	0.462	0.533	0.559	0.414
West Branch FDL River	August	0.31	0.335	0.357	0.504	0.244	0.318
West Branch FDL River	September	0.177	0.204	0.252	1.23	0.348	0.169
West Branch FDL River	October	0.114	0.125	0.112	0.314	0.294	0.347
West Branch Wolf River	May	N/A	N/A	0.0252	0.0134	0.0216	0.0188

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Stream Name	Month	2020	2021	2022	2023	2024	2025
West Branch Wolf River	June	N/A	0.0435	0.0222	0.0302	N/A	0.0293
West Branch Wolf River	July	N/A	0.0238	0.0248	0.0195	0.0162	0.0221
West Branch Wolf River	August	N/A	0.0691	0.0151	0.0116	0.0165	0.0146
West Branch Wolf River	September	0.0188	0.00988	0.0155	0.0107	0.0111	0.011
West Branch Wolf River	October	0.0178	0.0393	0.0111	0.043	0.0097	0.0114
White River	May	N/A	0.044	0.0535	0.0457	0.0481	0.0407
White River	June	N/A	0.0729	0.0556	0.031	0.0546	0.0565
White River	July	N/A	0.0289	0.0376	0.0325	0.0224	0.0476
White River	August	0.0238	0.0433	0.0177	0.0187	0.0198	0.0731
White River	September	0.0211	0.0168	0.0252	ND	0.0348	0.0371
White River	October	0.0326	0.0196	0.0144	0.0164	0.0123	0.0143
Wolf River (CTH T)	May	N/A	0.041	0.0354	0.0701	0.0338	0.0393
Wolf River (CTH T)	June	N/A	0.0454	0.0258	0.0263	0.0421	0.0332
Wolf River (CTH T)	July	N/A	0.0343	0.0267	0.0306	0.0323	0.0423
Wolf River (CTH T)	August	0.036	0.0299	0.0351	0.0394	N/A	0.0304
Wolf River (CTH T)	September	0.036	0.0213	0.0265	0.0207	0.0249	0.0192
Wolf River (CTH T)	October	0.0249	0.0335	0.0216	0.0543	0.0278	0.0281

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DRP Data (mg/L)

Stream Name	Month	2020	2021	2022	2023	2024	2025
Bear Creek (STH 76)	May	N/A	N/A	0.0438	0.0369	0.0563	0.0356
Bear Creek (STH 76)	June	N/A	0.267	0.121	0.106	0.116	0.0869
Bear Creek (STH 76)	July	N/A	0.116	0.183	0.135	0.196	0.192
Bear Creek (STH 76)	August	N/A	0.112	0.162	0.155	0.229	0.199
Bear Creek (STH 76)	September	0.033	0.0785	0.132	0.107	0.153	0.106
Bear Creek (STH 76)	October	0.071	0.0783	0.0422	0.229	0.14	0.203
Bear Creek (Stilen Rd)	May	N/A	N/A	N/A	N/A	N/A	0.135
Bear Creek (Stilen Rd)	June	N/A	N/A	N/A	N/A	N/A	0.18
Bear Creek (Stilen Rd)	July	N/A	N/A	N/A	N/A	N/A	0.204
Bear Creek (Stilen Rd)	August	N/A	N/A	N/A	N/A	N/A	0.415
Bear Creek (Stilen Rd)	September	N/A	N/A	N/A	N/A	N/A	0.141
Bear Creek (Stilen Rd)	October	N/A	N/A	N/A	N/A	N/A	0.144
Belle Fountain Creek	May	N/A	0.0279	0.0169	0.0174	0.0256	0.0202
Belle Fountain Creek	June	N/A	0.0292	N/A	0.0154	0.0926	0.0314
Belle Fountain Creek	July	N/A	0.0263	0.0176	0.0173	0.0345	0.0248
Belle Fountain Creek	August	N/A	0.0512	N/A	0.0226	0.018	0.0221
Belle Fountain Creek	September	N/A	0.036	0.0238	0.0248	0.0242	0.022
Belle Fountain Creek	October	N/A	0.0277	0.00975	0.0191	0.0208	0.0136
East Branch FDL River	May	N/A	0.211	0.235	0.106	0.185	0.103

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Stream Name	Month	2020	2021	2022	2023	2024	2025
East Branch FDL River	June	N/A	0.183	0.256	0.158	0.235	0.134
East Branch FDL River	July	N/A	0.399	0.329	0.213	0.279	0.225
East Branch FDL River	August	0.179	0.331	0.205	0.107	0.123	0.168
East Branch FDL River	September	0.17	0.231	0.195	0.0688	0.0918	0.084
East Branch FDL River	October	0.116	0.161	0.036	0.0988	0.0969	0.133
Embarrass River (CTH M)	May	N/A	N/A	N/A	0.0102	0.02	0.0206
Embarrass River (CTH M)	June	N/A	N/A	N/A	0.0087	0.0265	0.0343
Embarrass River (CTH M)	July	N/A	N/A	N/A	0.00553	0.0442	0.0334
Embarrass River (CTH M)	August	N/A	N/A	N/A	0.0119	0.0369	0.0178
Embarrass River (CTH M)	September	N/A	N/A	N/A	0.00812	0.0124	0.00733
Embarrass River (CTH M)	October	N/A	N/A	N/A	0.0101	0.0139	0.012
Embarrass River (STH 54)	May	N/A	0.0345	0.0434	0.0485	0.0754	0.0269
Embarrass River (STH 54)	June	N/A	0.0159	0.031	0.00903	0.0476	0.0352
Embarrass River (STH 54)	July	N/A	0.0162	0.00853	0.0046	0.0945	0.0502
Embarrass River (STH 54)	August	N/A	0.0567	0.0145	0.00658	0.0344	0.0439
Embarrass River (STH 54)	September	0.0264	0.0301	0.0219	0.00665	0.0344	0.0533
Embarrass River (STH 54)	October	0.0258	0.0344	0.0133	0.00511	0.0137	ND
Fox River	May	N/A	0.0471	N/A	0.0273	0.0573	0.0231
Fox River	June	N/A	0.0446	0.0567	0.0271	0.051	0.0504
Fox River	July	N/A	0.101	0.0462	0.03	0.114	0.049

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Fox River	August	N/A	0.0654	N/A	0.0508	0.0414	0.166
Fox River	September	N/A	0.0494	N/A	0.0606	0.0243	0.0361
Fox River	October	N/A	0.0271	0.0174	0.0382	N/A	0.0415
Grand River	May	N/A	0.147	0.0723	0.0234	0.0101	0.0346
Grand River	June	N/A	0.16	0.154	0.113	0.0196	0.291
Grand River	July	N/A	0.144	0.179	0.199	0.00924	0.13
Grand River	August	0.174	0.138	0.11	0.231	0.00901	0.148
Grand River	September	0.0808	0.0503	0.137	0.19	0.0113	0.154
Grand River	October	0.0965	0.0579	0.0198	0.178	0.00873	0.0495
Little Wolf River	May	N/A	0.0259	0.0204	0.0138	0.0478	0.0116
Little Wolf River	June	N/A	0.0332	0.021	0.0106	0.0246	0.0228
Little Wolf River	July	N/A	0.034	0.0193	0.0145	0.0404	0.0237
Little Wolf River	August	N/A	0.035	0.0273	0.0151	0.0178	0.0179
Little Wolf River	September	0.0335	0.0319	0.02	0.0095	0.0236	0.0212
Little Wolf River	October	0.0263	0.0236	0.0111	0.00915	0.00981	0.00915
Mecan River	May	N/A	0.0158	0.00751	0.0069	0.00981	0.0253
Mecan River	June	N/A	0.0155	N/A	0.00572	0.00926	0.00899
Mecan River	July	N/A	0.0373	0.00547	0.00744	0.0153	0.011
Mecan River	August	N/A	0.0291	N/A	0.00739	0.00704	0.00838
Mecan River	September	N/A	0.0186	0.0102	0.00653	0.00595	0.00743

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Mecan River	October	N/A	0.00875	0.00854	0.00732	0.00691	N/A
Montello River	May	N/A	0.038	0.0285	0.0178	0.0299	0.00774
Montello River	June	N/A	0.04	N/A	0.0321	0.0366	0.0302
Montello River	July	N/A	0.0149	0.0394	0.0336	0.0462	0.0399
Montello River	August	N/A	0.0593	N/A	0.0214	0.0167	0.0377
Montello River	September	N/A	0.0236	0.0235	0.0163	0.0149	0.0168
Montello River	October	N/A	0.0176	0.008	0.0143	0.0157	0.0258
Mud Creek	May	N/A	0.606	0.236	0.054	0.232	0.093
Mud Creek	June	N/A	N/A	0.278	0.25	0.293	0.141
Mud Creek	July	N/A	0.573	0.774	0.383	0.162	0.175
Mud Creek	August	N/A	0.501	0.634	0.69	0.197	0.14
Mud Creek	September	N/A	0.704	0.766	0.918	0.199	0.104
Mud Creek	October	N/A	0.414	0.752	0.654	0.135	0.145
Neenah Creek	May	N/A	0.0264	N/A	0.00836	0.0103	0.0162
Neenah Creek	June	N/A	0.0266	0.0145	0.00907	0.0502	0.0107
Neenah Creek	July	N/A	0.0435	N/A	0.0091	0.107	0.0158
Neenah Creek	August	N/A	0.023	N/A	0.00866	0.0255	0.0213
Neenah Creek	September	N/A	0.00846	0.015	0.0146	0.0185	0.0319
Neenah Creek	October	N/A	0.00451	0.00578	0.00683	0.0158	ND
Pigeon River	May	N/A	N/A	N/A	0.0133	0.0248	0.00867

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Pigeon River	June	N/A	N/A	N/A	0.0204	0.033	0.0172
Pigeon River	July	N/A	N/A	N/A	0.0206	0.0476	0.0372
Pigeon River	August	N/A	N/A	N/A	0.0153	0.0344	0.0163
Pigeon River	September	N/A	N/A	N/A	0.0126	0.0116	0.00934
Pigeon River	October	N/A	N/A	N/A	0.0105	0.0111	0.0143
Pine River	May	N/A	N/A	0.00838	0.0136	0.0247	0.0165
Pine River	June	N/A	0.0146	0.013	0.0064	0.0236	0.0207
Pine River	July	N/A	0.0129	0.0163	0.0218	0.0139	0.0176
Pine River	August	N/A	0.014	0.0209	0.0198	0.014	0.0129
Pine River	September	N/A	0.0145	0.0162	0.0171	0.0136	0.0108
Pine River	October	N/A	0.0146	0.017	0.00819	0.0177	0.0145
Pipe Creek	May	N/A	N/A	0.0369	0.044	0.471	0.531
Pipe Creek	June	N/A	0.173	0.249	0.275	0.0629	0.0611
Pipe Creek	July	N/A	0.128	0.01	0.212	0.253	0.152
Pipe Creek	August	N/A	0.272	0.161	0.0926	0.0263	0.94
Pipe Creek	September	N/A	0.18	0.0976	0.122	0.145	0.168
Pipe Creek	October	N/A	0.425	0.258	0.114	0.262	0.315
Rat River	May	N/A	N/A	N/A	N/A	N/A	0.0212
Rat River	June	N/A	N/A	N/A	N/A	N/A	0.0515
Rat River	July	N/A	N/A	N/A	N/A	N/A	0.0671

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Rat River	August	N/A	N/A	N/A	N/A	N/A	0.119
Rat River	September	N/A	N/A	N/A	N/A	N/A	0.0714
Rat River	October	N/A	N/A	N/A	N/A	N/A	0.0493
Red River	May	N/A	N/A	0.00832	ND	0.0137	0.00554
Red River	June	N/A	0.0134	0.0103	0.012	0.0171	0.0172
Red River	July	N/A	0.0178	0.00418	0.00543	0.00973	N/A
Red River	August	0.0207	0.0157	0.0062	0.00677	0.00406	0.00823
Red River	September	0.0228	0.00386	0.00496	0.00634	0.008	0.00762
Red River	October	0.0256	0.00531	ND	ND	0.00666	ND
Sawyer Creek	May	N/A	N/A	N/A	0.0146	0.0367	0.0183
Sawyer Creek	June	N/A	N/A	N/A	0.0633	0.0728	0.0297
Sawyer Creek	July	N/A	N/A	N/A	0.163	0.108	0.145
Sawyer Creek	August	N/A	N/A	N/A	0.0863	0.0632	0.19
Sawyer Creek	September	N/A	N/A	N/A	0.0353	0.0922	0.0455
Sawyer Creek	October	N/A	N/A	N/A	0.0596	0.543	0.393
Shioc River	May	N/A	N/A	0.121	0.0674	0.0304	0.0667
Shioc River	June	N/A	0.189	0.327	0.207	0.261	0.11
Shioc River	July	N/A	0.114	0.306	0.394	0.405	0.299
Shioc River	August	N/A	0.523	0.274	0.522	0.155	0.209
Shioc River	September	0.147	0.278	0.148	0.267	0.18	0.226

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Shioc River	October	0.257	0.149	N/A	0.281	0.147	0.201
Waukau Creek	May	N/A	0.0433	0.0223	0.0281	0.0183	0.0234
Waukau Creek	June	N/A	0.14	0.0445	0.0945	0.0541	0.0275
Waukau Creek	July	N/A	N/A	0.0971	0.145	0.204	0.138
Waukau Creek	August	0.0659	0.0832	0.116	0.0943	0.061	0.0894
Waukau Creek	September	0.032	0.0226	0.108	0.0583	0.0477	0.025
Waukau Creek	October	0.167	0.0223	ND	0.0294	0.0309	0.0088
Waupaca River	May	N/A	N/A	N/A	0.00986	0.0278	0.00868
Waupaca River	June	N/A	N/A	N/A	0.00843	0.0127	0.0294
Waupaca River	July	N/A	N/A	N/A	0.0209	0.0239	0.0191
Waupaca River	August	N/A	N/A	N/A	0.0154	0.0184	0.0248
Waupaca River	September	N/A	N/A	N/A	0.00899	0.0211	0.0107
Waupaca River	October	N/A	N/A	N/A	0.0052	0.00774	0.012
West Branch FDL River	May	N/A	0.269	0.357	0.092	0.198	0.0875
West Branch FDL River	June	N/A	0.383	0.379	0.199	0.489	0.154
West Branch FDL River	July	N/A	0.552	0.39	0.463	0.393	0.293
West Branch FDL River	August	0.249	0.277	0.312	0.451	0.189	0.255
West Branch FDL River	September	0.179	0.159	0.18	0.991	N/A	0.125
West Branch FDL River	October	0.11	0.107	0.0797	0.227	0.19	0.277
West Branch Wolf River	May	N/A	N/A	0.00761	0.00473	0.0072	0.00581

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Stream Name	Month	2020	2021	2022	2023	2024	2025
West Branch Wolf River	June	N/A	0.0101	0.00616	ND	N/A	0.006
West Branch Wolf River	July	N/A	0.00931	0.00653	ND	ND	0.00768
West Branch Wolf River	August	N/A	0.00338	0.00654	0.00504	0.00638	ND
West Branch Wolf River	September	0.0251	0.00344	0.0056	0.00455	0.006	0.00621
West Branch Wolf River	October	0.0174	0.00754	0.00438	0.00483	0.00484	ND
White River	May	N/A	0.013	0.0145	0.00622	0.00895	0.0112
White River	June	N/A	0.0244	0.0109	0.00556	0.0161	0.012
White River	July	N/A	0.011	0.0135	0.00517	0.00856	0.0178
White River	August	0.015	0.0151	0.00519	0.00518	0.00441	ND
White River	September	0.0258	0.00552	0.00996	ND	0.00985	0.0112
White River	October	0.0232	0.00739	0.00531	0.00639	0.00684	ND
Wolf River (CTH T)	May	N/A	0.00579	0.0109	0.00603	0.00943	0.00619
Wolf River (CTH T)	June	N/A	0.0118	0.00794	ND	0.00714	0.00755
Wolf River (CTH T)	July	N/A	0.00879	0.00732	0.00703	0.0124	0.00781
Wolf River (CTH T)	August	0.0182	0.00368	0.00668	0.00591	N/A	0.00703
Wolf River (CTH T)	September	0.0254	0.00528	0.00759	0.0065	0.0072	ND
Wolf River (CTH T)	October	0.0184	0.0135	0.00519	0.00585	0.00912	0.00719

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TSS Data (mg/L)

Stream Name	Month	2020	2021	2022	2023	2024	2025
Bear Creek (STH 76)	May	N/A	N/A	5.4	3.8	2	4.8
Bear Creek (STH 76)	June	N/A	7.4	4.75	10.3	14	6.4
Bear Creek (STH 76)	July	N/A	6.2	2.6	4.8	13.6	9.6
Bear Creek (STH 76)	August	N/A	4.6	2.6	2.8	5	4.4
Bear Creek (STH 76)	September	2.6	6	4.6	2.4	3	ND
Bear Creek (STH 76)	October	ND	5.4	2.6	ND	3.8	ND
Bear Creek (Stilen Rd)	May	N/A	N/A	N/A	N/A	N/A	5.33
Bear Creek (Stilen Rd)	June	N/A	N/A	N/A	N/A	N/A	2.6
Bear Creek (Stilen Rd)	July	N/A	N/A	N/A	N/A	N/A	4.8
Bear Creek (Stilen Rd)	August	N/A	N/A	N/A	N/A	N/A	4.6
Bear Creek (Stilen Rd)	September	N/A	N/A	N/A	N/A	N/A	7
Bear Creek (Stilen Rd)	October	N/A	N/A	N/A	N/A	N/A	18.2
Belle Fountain Creek	May	N/A	32	8.2	25	28.5	21
Belle Fountain Creek	June	N/A	42.6	N/A	19.4	7.5	60
Belle Fountain Creek	July	N/A	44.6	6	14.2	38	14.4
Belle Fountain Creek	August	N/A	14.6	N/A	22	7.6	7.2
Belle Fountain Creek	September	N/A	24.4	13.2	21	4.8	5.2
Belle Fountain Creek	October	N/A	27	3.8	2.8	4.4	2.8
East Branch FDL River	May	N/A	29.6	13.8	4.8	9.4	17.2

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Stream Name	Month	2020	2021	2022	2023	2024	2025
East Branch FDL River	June	N/A	56.6	60.8	25	35.2	6.2
East Branch FDL River	July	N/A	30	69	42.6	55.2	32.4
East Branch FDL River	August	5.6	16	14.8	18.8	6.6	30
East Branch FDL River	September	21	13.8	15.6	22.6	9.8	8.8
East Branch FDL River	October	4	8.8	3.8	12.6	4.4	9.4
Embarrass River (CTH M)	May	N/A	N/A	N/A	6.2	9.6	9.2
Embarrass River (CTH M)	June	N/A	N/A	N/A	6.8	5.6	6.8
Embarrass River (CTH M)	July	N/A	N/A	N/A	6	10.6	8
Embarrass River (CTH M)	August	N/A	N/A	N/A	8.67	8.2	6
Embarrass River (CTH M)	September	N/A	N/A	N/A	7.8	4.6	4
Embarrass River (CTH M)	October	N/A	N/A	N/A	5	5	4.2
Embarrass River (STH 54)	May	N/A	16	14	5.8	18.5	6
Embarrass River (STH 54)	June	N/A	44.8	23.2	15.2	32.8	18.8
Embarrass River (STH 54)	July	N/A	44.8	47.2	19	10.8	15.4
Embarrass River (STH 54)	August	N/A	17.4	28	22.8	18.8	16.8
Embarrass River (STH 54)	September	44	23.2	28.4	9.8	10.4	20.5
Embarrass River (STH 54)	October	2.8	28.6	2	5.25	7.8	13.8
Fox River	May	N/A	55.7	N/A	7	37	4.6
Fox River	June	N/A	19.2	44.5	4.6	15.8	12.2
Fox River	July	N/A	35.4	4.2	4.4	11.7	4.6

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Fox River	August	N/A	9.14	N/A	5	4.4	91.2
Fox River	September	N/A	4.8	N/A	6	6	5.8
Fox River	October	N/A	3.2	2.8	4.2	N/A	2.4
Grand River	May	N/A	25.4	18.4	15.6	2.4	2.6
Grand River	June	N/A	23	3.6	ND	3.25	ND
Grand River	July	N/A	2.4	15.4	10.6	ND	ND
Grand River	August	ND	5.8	43.2	6.6	2.8	5.8
Grand River	September	2	ND	5	2.6	ND	ND
Grand River	October	17.8	4.4	ND	3.4	3.2	ND
Little Wolf River	May	N/A	10.3	9.8	9.4	18	7.2
Little Wolf River	June	N/A	7.4	10.8	10.2	12.4	45.4
Little Wolf River	July	N/A	8.2	9	4.6	61	26
Little Wolf River	August	N/A	5.8	9.8	8.2	23.2	48.9
Little Wolf River	September	24	5.2	6.4	4.8	36.3	50
Little Wolf River	October	2	5.4	2.8	6.25	4.8	10
Mecan River	May	N/A	46.5	25	26	19.6	10.4
Mecan River	June	N/A	33.4	N/A	11.6	18.6	37
Mecan River	July	N/A	23.3	23.4	127	10.8	20.4
Mecan River	August	N/A	7.4	N/A	27.8	6	9.2
Mecan River	September	N/A	15.8	9.6	88.5	4.6	4.8

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Mecan River	October	N/A	9.2	9.6	7.8	8.4	8.8
Montello River	May	N/A	43.8	8.8	10.6	11.4	26.6
Montello River	June	N/A	33.6	N/A	7.4	13.4	25.2
Montello River	July	N/A	16.6	5.2	3	13.6	7.33
Montello River	August	N/A	12	N/A	2.4	ND	12
Montello River	September	N/A	24.2	20	4.2	ND	2.4
Montello River	October	N/A	22.2	11.8	4.6	ND	3.4
Mud Creek	May	N/A	9.6	13	3	4.6	23.8
Mud Creek	June	N/A	N/A	13.4	35.6	33.2	32.8
Mud Creek	July	N/A	18.4	38	46.8	22.3	33.8
Mud Creek	August	N/A	17.6	28.8	53	12.4	15
Mud Creek	September	N/A	7.4	22	24.6	4.8	30.9
Mud Creek	October	N/A	4.4	14	13.3	4.8	10.4
Neenah Creek	May	N/A	35.8	N/A	49.6	48	56.4
Neenah Creek	June	N/A	60	24.8	21.2	8.8	34
Neenah Creek	July	N/A	43.6	N/A	29.6	10.8	30
Neenah Creek	August	N/A	20.4	N/A	26.4	29.1	22.6
Neenah Creek	September	N/A	39.6	20.4	37	12	23.8
Neenah Creek	October	N/A	23.6	10.8	15.2	8.2	17
Pigeon River	May	N/A	N/A	N/A	8	10.2	9.4

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Pigeon River	June	N/A	N/A	N/A	10.2	10.2	10.2
Pigeon River	July	N/A	N/A	N/A	8.2	8.6	8.6
Pigeon River	August	N/A	N/A	N/A	7.6	9	9.2
Pigeon River	September	N/A	N/A	N/A	11.2	10.6	12.8
Pigeon River	October	N/A	N/A	N/A	8	9.6	15.3
Pine River	May	N/A	N/A	5	3.2	5	6
Pine River	June	N/A	17	6.75	6.4	7	11.4
Pine River	July	N/A	10.2	12	3.4	6.6	8.8
Pine River	August	N/A	12.4	8.2	6.5	4.6	18.4
Pine River	September	N/A	2.6	9.8	4.6	5	8.2
Pine River	October	N/A	3.6	2.4	7	2.8	5
Pipe Creek	May	N/A	N/A	8.6	2.8	356	340
Pipe Creek	June	N/A	7	3.6	16.6	12.8	11.8
Pipe Creek	July	N/A	3.2	23.4	13	16	5
Pipe Creek	August	N/A	5.4	7.2	17.1	8.6	24.8
Pipe Creek	September	N/A	17.6	19.3	330	9	30.5
Pipe Creek	October	N/A	10.6	17	11	58.8	40.8
Rat River	May	N/A	N/A	N/A	N/A	N/A	4.8
Rat River	June	N/A	N/A	N/A	N/A	N/A	4
Rat River	July	N/A	N/A	N/A	N/A	N/A	ND

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Rat River	August	N/A	N/A	N/A	N/A	N/A	124
Rat River	September	N/A	N/A	N/A	N/A	N/A	62.4
Rat River	October	N/A	N/A	N/A	N/A	N/A	150
Red River	May	N/A	N/A	6.2	5	11.6	4.67
Red River	June	N/A	11.2	4.4	9.8	8.25	14.4
Red River	July	N/A	ND	ND	ND	2.2	N/A
Red River	August	ND	2.2	ND	ND	ND	5.4
Red River	September	4.4	ND	ND	ND	ND	3
Red River	October	ND	ND	ND	ND	ND	ND
Sawyer Creek	May	N/A	N/A	N/A	4.8	4.4	6
Sawyer Creek	June	N/A	N/A	N/A	8.8	7.8	3.8
Sawyer Creek	July	N/A	N/A	N/A	3.2	5	2.8
Sawyer Creek	August	N/A	N/A	N/A	4.4	4.8	40.4
Sawyer Creek	September	N/A	N/A	N/A	5	4.2	ND
Sawyer Creek	October	N/A	N/A	N/A	4.6	15	5.8
Shioc River	May	N/A	N/A	3.4	10	ND	2.4
Shioc River	June	N/A	2.8	12	2	2.4	6.6
Shioc River	July	N/A	7.6	8.2	9.78	2	ND
Shioc River	August	N/A	4.6	3.4	2.2	2.75	2.6
Shioc River	September	14.8	2	6.4	3.4	4.2	11.3

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Shioc River	October	5	2.6	N/A	ND	2.2	ND
Waukau Creek	May	N/A	8.6	75.8	19.8	3.8	21.4
Waukau Creek	June	N/A	5.8	46.8	4.2	8.8	56.6
Waukau Creek	July	N/A	N/A	5.4	9.6	3.4	38.5
Waukau Creek	August	7.4	8	6.6	4.8	9.6	86.4
Waukau Creek	September	7.6	38.2	133	6.6	10.8	26
Waukau Creek	October	117	7.2	10.8	9.4	16	6.4
Waupaca River	May	N/A	N/A	N/A	2.8	7.2	2
Waupaca River	June	N/A	N/A	N/A	2.6	5.2	3.8
Waupaca River	July	N/A	N/A	N/A	2	6.2	ND
Waupaca River	August	N/A	N/A	N/A	ND	ND	2.5
Waupaca River	September	N/A	N/A	N/A	ND	4.4	ND
Waupaca River	October	N/A	N/A	N/A	2.2	ND	ND
West Branch FDL River	May	N/A	7	2.4	3.2	16.9	8.6
West Branch FDL River	June	N/A	6.2	10.8	3.4	8.6	21.8
West Branch FDL River	July	N/A	19.8	7.43	5.4	12.4	5.8
West Branch FDL River	August	12	5.8	3.2	2	2	7.6
West Branch FDL River	September	7	6.6	15.4	16.4	3.2	2.6
West Branch FDL River	October	5	2.4	2.2	3.2	10.4	2.6
West Branch Wolf River	May	N/A	N/A	5.6	ND	4.8	3.8

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Stream Name	Month	2020	2021	2022	2023	2024	2025
West Branch Wolf River	June	N/A	5	4.6	3.4	N/A	7.6
West Branch Wolf River	July	N/A	9.2	6.4	3.4	2.4	5
West Branch Wolf River	August	N/A	17.2	2.6	ND	3.4	ND
West Branch Wolf River	September	ND	ND	2.2	2.2	ND	ND
West Branch Wolf River	October	8	26	ND	20.6	2.2	ND
White River	May	N/A	22	21.6	24.2	18.2	25
White River	June	N/A	6	35.4	18	12	11.3
White River	July	N/A	7.6	17.4	4.2	3.25	2.2
White River	August	6.8	7.2	3.2	2	2.89	90.8
White River	September	4	3	5	ND	7.8	8.4
White River	October	ND	4.8	ND	2.8	2	3
Wolf River (CTH T)	May	N/A	7.2	6.2	6.4	8.29	6.89
Wolf River (CTH T)	June	N/A	26.2	3.8	3.2	7	2.4
Wolf River (CTH T)	July	N/A	4.4	ND	4.2	6	7.11
Wolf River (CTH T)	August	4.4	3.2	6.4	8.4	N/A	3.2
Wolf River (CTH T)	September	4.6	3	4	2.4	2	2.8
Wolf River (CTH T)	October	2.6	3.6	47.6	ND	5.8	3.4

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TN Data (mg/L)

Stream Name	Month	2020	2021	2022	2023	2024	2025
Bear Creek (STH 76)	May	N/A	N/A	1.49	1.85	1.75	2.16
Bear Creek (STH 76)	June	N/A	1.29	1.66	0.999	2.63	1.74
Bear Creek (STH 76)	July	N/A	2.1	1.21	0.883	2	3.03
Bear Creek (STH 76)	August	N/A	2.59	0.888	0.527	1.75	1.47
Bear Creek (STH 76)	September	0.99	2.34	1.48	0.505	1.76	1.21
Bear Creek (STH 76)	October	0.763	1.76	1.74	0.521	1.51	1.14
Bear Creek (Stilen Rd)	May	N/A	N/A	N/A	N/A	N/A	2.33
Bear Creek (Stilen Rd)	June	N/A	N/A	N/A	N/A	N/A	2.14
Bear Creek (Stilen Rd)	July	N/A	N/A	N/A	N/A	N/A	2.57
Bear Creek (Stilen Rd)	August	N/A	N/A	N/A	N/A	N/A	2.13
Bear Creek (Stilen Rd)	September	N/A	N/A	N/A	N/A	N/A	1.14
Bear Creek (Stilen Rd)	October	N/A	N/A	N/A	N/A	N/A	1.26
Belle Fountain Creek	May	N/A	4.05	3.7	4.52	3.41	3.5
Belle Fountain Creek	June	N/A	3.81	N/A	4.59	1.95	3.11
Belle Fountain Creek	July	N/A	4.35	4.13	4.5	3.81	3.71
Belle Fountain Creek	August	N/A	3.11	N/A	3.58	3.78	3.75
Belle Fountain Creek	September	N/A	4.09	3.67	4.59	3.55	3
Belle Fountain Creek	October	N/A	4.31	3.66	3.73	4.18	4.03
East Branch FDL River	May	N/A	2.91	2.53	3.22	3.76	2.57

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Stream Name	Month	2020	2021	2022	2023	2024	2025
East Branch FDL River	June	N/A	5.46	2.97	3.92	3.52	1.07
East Branch FDL River	July	N/A	2.71	5.71	3.4	2.77	3.46
East Branch FDL River	August	3.51	2.48	3.27	2.57	4.28	2.64
East Branch FDL River	September	2.26	2.64	2.81	1.86	5.5	5.98
East Branch FDL River	October	3.12	3.14	3.78	2.99	6.56	5.01
Embarrass River (CTH M)	May	N/A	N/A	N/A	2.07	1.58	2.26
Embarrass River (CTH M)	June	N/A	N/A	N/A	2.49	2.61	2.18
Embarrass River (CTH M)	July	N/A	N/A	N/A	2	1.86	2.41
Embarrass River (CTH M)	August	N/A	N/A	N/A	2.44	2.43	2.26
Embarrass River (CTH M)	September	N/A	N/A	N/A	2.7	2.68	2.73
Embarrass River (CTH M)	October	N/A	N/A	N/A	2.89	2.93	2.79
Embarrass River (STH 54)	May	N/A	2.03	1.58	1.37	1.8	1.74
Embarrass River (STH 54)	June	N/A	1.85	1.78	2.1	2.31	2.14
Embarrass River (STH 54)	July	N/A	1.83	1.97	1.82	1.8	2.09
Embarrass River (STH 54)	August	N/A	1.34	2.02	1.89	2.38	1.91
Embarrass River (STH 54)	September	2.88	2.47	1.76	2.14	2.11	2.13
Embarrass River (STH 54)	October	2.4	2.05	2.41	2.36	3.07	2.32
Fox River	May	N/A	4.56	N/A	5.23	3.44	3.56
Fox River	June	N/A	5.51	4.25	5.23	4.12	4.2
Fox River	July	N/A	2.21	5.08	4.94	1.8	4.43

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Fox River	August	N/A	4.87	N/A	4.82	4.69	2.22
Fox River	September	N/A	4.43	N/A	4.42	4.77	4.7
Fox River	October	N/A	4.91	4.91	4.6	N/A	4.56
Grand River	May	N/A	3.61	2.77	4	2.06	2.7
Grand River	June	N/A	1.64	2.72	2.35	1.53	1.27
Grand River	July	N/A	1.86	2.12	1.08	2.14	1.37
Grand River	August	2.07	2.57	1.97	1.11	2.3	2.11
Grand River	September	3.32	2.73	3.04	1.23	1.56	1.78
Grand River	October	3.94	3.94	3.24	2.1	3.3	2.85
Little Wolf River	May	N/A	2.11	1.62	2	1.6	2.31
Little Wolf River	June	N/A	2.01	2.08	2.31	2.31	1.81
Little Wolf River	July	N/A	1.98	1.86	1.74	2.2	2.16
Little Wolf River	August	N/A	1.84	2.05	1.85	1.73	2.29
Little Wolf River	September	2.31	2.34	1.86	2.05	2.04	2.11
Little Wolf River	October	2.55	2.14	2.56	2.2	2.8	2.49
Mecan River	May	N/A	2.34	2.22	2.08	2.31	1.32
Mecan River	June	N/A	1.9	N/A	2.29	2.38	2.16
Mecan River	July	N/A	2.25	2.25	2.37	1.88	2.17
Mecan River	August	N/A	1.28	N/A	2.09	2.38	2.26
Mecan River	September	N/A	2.56	2.31	2.62	2.47	2.44

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Mecan River	October	N/A	2.42	2.38	2.84	2.81	2.58
Montello River	May	N/A	1.8	1.4	1.66	1.44	2.28
Montello River	June	N/A	1.73	N/A	2.18	1.71	1.56
Montello River	July	N/A	1.16	1.17	0.874	1.46	1.1
Montello River	August	N/A	1.23	N/A	0.682	1.17	0.871
Montello River	September	N/A	1.08	1.01	0.766	1.25	0.877
Montello River	October	N/A	1.43	1.87	1.56	1.63	1.11
Mud Creek	May	N/A	3.27	2.56	2.83	4.17	4.07
Mud Creek	June	N/A	N/A	16.2	17.4	5.33	3.35
Mud Creek	July	N/A	3.62	5.56	5.32	5.97	3.92
Mud Creek	August	N/A	2.35	3.82	2.93	4.36	7.49
Mud Creek	September	N/A	5.01	4.72	5.41	2.17	8.18
Mud Creek	October	N/A	4.02	7.18	0.972	6.3	8.9
Neenah Creek	May	N/A	1.78	N/A	1.5	1.88	1.56
Neenah Creek	June	N/A	1.64	2.07	1.28	1.89	1.48
Neenah Creek	July	N/A	1.95	N/A	1.09	1.31	1.48
Neenah Creek	August	N/A	1.25	N/A	0.949	1.13	1.49
Neenah Creek	September	N/A	1.54	1.27	1.26	0.944	1.46
Neenah Creek	October	N/A	1.73	1.32	1.36	1.34	1.63
Pigeon River	May	N/A	N/A	N/A	1.7	1.74	1.93

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Pigeon River	June	N/A	N/A	N/A	2.19	2.11	2.21
Pigeon River	July	N/A	N/A	N/A	1.8	1.85	2.28
Pigeon River	August	N/A	N/A	N/A	1.46	1.91	1.77
Pigeon River	September	N/A	N/A	N/A	1.72	2.14	2.03
Pigeon River	October	N/A	N/A	N/A	1.76	2.01	2.07
Pine River	May	N/A	N/A	2.22	2.22	2.06	2.13
Pine River	June	N/A	2.09	2.18	2.27	2.37	2.07
Pine River	July	N/A	2.28	2.2	1.89	2.47	2.11
Pine River	August	N/A	1.97	1.89	1.77	2.73	2.2
Pine River	September	N/A	2.3	2.09	2.03	2.32	2.46
Pine River	October	N/A	2.39	2.28	2.33	2.32	2.46
Pipe Creek	May	N/A	N/A	1.84	8.96	12	37.4
Pipe Creek	June	N/A	1.22	12	38.2	3.72	10.2
Pipe Creek	July	N/A	8.14	7.03	1.72	8.83	1.76
Pipe Creek	August	N/A	4.74	2.1	1.1	2.39	5.53
Pipe Creek	September	N/A	2.28	1.59	2.66	1.49	1.38
Pipe Creek	October	N/A	4.92	1.87	1.07	1.25	1.51
Rat River	May	N/A	N/A	N/A	N/A	N/A	1.71
Rat River	June	N/A	N/A	N/A	N/A	N/A	1.56
Rat River	July	N/A	N/A	N/A	N/A	N/A	1.54

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Rat River	August	N/A	N/A	N/A	N/A	N/A	1.71
Rat River	September	N/A	N/A	N/A	N/A	N/A	1.13
Rat River	October	N/A	N/A	N/A	N/A	N/A	2.64
Red River	May	N/A	N/A	1.26	1.48	1.22	1.42
Red River	June	N/A	1.22	1.31	1.03	2.16	1.56
Red River	July	N/A	1.23	1.06	0.973	0.437	N/A
Red River	August	1.38	2.28	1.15	1.11	1.45	1.25
Red River	September	1.5	1.23	1.34	1.33	1.41	1.39
Red River	October	2.2	1.62	1.57	1.54	1.85	1.72
Sawyer Creek	May	N/A	N/A	N/A	3.48	2.15	4.81
Sawyer Creek	June	N/A	N/A	N/A	5.6	4.35	3.63
Sawyer Creek	July	N/A	N/A	N/A	0.832	3.71	3.87
Sawyer Creek	August	N/A	N/A	N/A	1.08	0.821	0.88
Sawyer Creek	September	N/A	N/A	N/A	0.866	0.821	0.681
Sawyer Creek	October	N/A	N/A	N/A	0.665	1.39	1.24
Shioc River	May	N/A	N/A	1.79	1.74	2.59	1.78
Shioc River	June	N/A	1.62	1.71	1.22	2.03	2.14
Shioc River	July	N/A	2.75	1.13	1.04	1.61	1.55
Shioc River	August	N/A	1.8	1.86	1.05	1.64	1.95
Shioc River	September	1.74	1.41	2.74	0.736	1.93	1.4

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Shioc River	October	1.34	1.59	N/A	0.773	1.56	1.52
Waukau Creek	May	N/A	1.31	1.37	1.52	1.5	2.6
Waukau Creek	June	N/A	0.916	2.48	1.17	2.28	1.66
Waukau Creek	July	N/A	N/A	1.26	0.88	1.94	2.02
Waukau Creek	August	0.964	1.41	1.54	0.606	1.37	1.21
Waukau Creek	September	1.03	1.24	4.6	0.397	1.11	1.03
Waukau Creek	October	1.84	1.36	1.21	0.47	1.07	0.927
Waupaca River	May	N/A	N/A	N/A	3.13	2.13	2.92
Waupaca River	June	N/A	N/A	N/A	2.78	2.91	2.43
Waupaca River	July	N/A	N/A	N/A	2.52	2.45	2.57
Waupaca River	August	N/A	N/A	N/A	2.45	2.75	2.51
Waupaca River	September	N/A	N/A	N/A	3.15	2.76	3.45
Waupaca River	October	N/A	N/A	N/A	3.91	3.69	3.62
West Branch FDL River	May	N/A	1.18	1.21	0.792	1.4	0.884
West Branch FDL River	June	N/A	2.01	1.32	1.03	1.53	3.38
West Branch FDL River	July	N/A	1.46	1.2	1.12	1.22	1.29
West Branch FDL River	August	1.23	1.14	1.09	0.986	1.11	1.17
West Branch FDL River	September	0.938	1.03	1.16	1.57	1.03	1.01
West Branch FDL River	October	0.911	0.799	0.777	1.39	2.2	1.23
West Branch Wolf River	May	N/A	N/A	0.718	0.708	0.697	0.684

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Stream Name	Month	2020	2021	2022	2023	2024	2025
West Branch Wolf River	June	N/A	0.777	0.772	0.931	N/A	0.808
West Branch Wolf River	July	N/A	0.652	0.681	0.544	1.45	0.654
West Branch Wolf River	August	N/A	0.926	0.546	0.577	0.61	0.56
West Branch Wolf River	September	0.623	0.588	0.561	0.643	0.583	0.574
West Branch Wolf River	October	0.892	0.997	0.847	1.08	0.813	0.728
White River	May	N/A	1.88	1.57	1.95	1.51	1.85
White River	June	N/A	1.4	1.87	1.55	1.31	1.36
White River	July	N/A	1.6	1.46	1.32	1.61	1.28
White River	August	1.38	1.43	1.55	1.48	1.43	1.85
White River	September	1.95	1.97	1.73	1.91	1.55	1.47
White River	October	1.5	2.43	2.09	2.38	2.12	2.33
Wolf River (CTH T)	May	N/A	0.657	0.656	0.912	0.79	0.816
Wolf River (CTH T)	June	N/A	0.658	0.577	0.64	0.91	0.745
Wolf River (CTH T)	July	N/A	0.601	0.602	0.64	0.725	0.854
Wolf River (CTH T)	August	0.755	0.566	0.652	0.639	N/A	0.771
Wolf River (CTH T)	September	0.711	0.556	0.552	0.641	0.809	0.788
Wolf River (CTH T)	October	0.642	0.858	0.51	0.793	0.826	0.779

ND indicates sample concentration was not detected.

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Appendix M: Duplicate Sample Data

Monitoring Location	Date	Parameter	Duplicate Sample	Regular Sample	Absolute Difference	Unit	Relative Percent Difference
Montello River at 11th St	9/22/2022	PHOSPHATE ORTHO DISS	0.0241	0.0235	0.0006	MG/L	2.52
Montello River at 11th St	9/22/2022	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	6.8	20	-13.2	MG/L	-98.51
Montello River at 11th St	9/22/2022	PHOSPHORUS TOTAL	0.0589	0.0492	0.0097	MG/L	17.95
Montello River at 11th St	9/22/2022	NITROGEN TOTAL	1.08	1.01	0.07	MG/L	6.7
West Branch Fond Du Lac River Immediately below 12th St	9/20/2022	PHOSPHATE ORTHO DISS	0.182	0.18	0.002	MG/L	1.1
West Branch Fond Du Lac River Immediately below 12th St	9/20/2022	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	19.4	15.4	4	MG/L	22.99
West Branch Fond Du Lac River Immediately below 12th St	9/20/2022	PHOSPHORUS TOTAL	0.254	0.252	0.002	MG/L	0.79

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Monitoring Location	Date	Parameter	Duplicate Sample	Regular Sample	Absolute Difference	Unit	Relative Percent Difference
West Branch Fond Du Lac River Immediately below 12th St	9/20/2022	NITROGEN TOTAL	1.16	1.16	0	MG/L	0
White River - White River Rd Landing	8/24/2022	PHOSPHATE ORTHO DISS	0.00513	0.00519	-0.00006	MG/L	-1.16
White River - White River Rd Landing	8/24/2022	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	3	3.2	-0.2	MG/L	-6.45
White River - White River Rd Landing	8/24/2022	PHOSPHORUS TOTAL	0.0177	0.0177	0	MG/L	0
White River - White River Rd Landing	8/24/2022	NITROGEN TOTAL	1.55	1.55	0	MG/L	0
Little Wolf River - HWY 54	8/17/2022	PHOSPHATE ORTHO DISS	0.0267	0.0273	-0.0006	MG/L	-2.22
Little Wolf River - HWY 54	8/17/2022	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	10.4	9.8	0.6	MG/L	5.94
Little Wolf River - HWY 54	8/17/2022	PHOSPHORUS TOTAL	0.0584	0.0581	0.0003	MG/L	0.52
Little Wolf River - HWY 54	8/17/2022	NITROGEN TOTAL	2.06	2.05	0.01	MG/L	0.49
Wolf River at CTH T	8/16/2022	PHOSPHATE ORTHO DISS	0.00705	0.00668	0.00037	MG/L	5.39

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Monitoring Location	Date	Parameter	Duplicate Sample	Regular Sample	Absolute Difference	Unit	Relative Percent Difference
Wolf River at CTH T	8/16/2022	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	7.6	6.4	1.2	MG/L	17.14
Wolf River at CTH T	8/16/2022	PHOSPHORUS TOTAL	0.0449	0.0351	0.0098	MG/L	24.5
Wolf River at CTH T	8/16/2022	NITROGEN TOTAL	0.753	0.652	0.101	MG/L	14.38
Mud Creek - Mud Creek Rd	7/26/2022	PHOSPHATE ORTHO DISS	0.466	0.774	-0.308	MG/L	-49.68
Mud Creek - Mud Creek Rd	7/26/2022	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	34.2	38	-3.8	MG/L	-10.53
Mud Creek - Mud Creek Rd	7/26/2022	PHOSPHORUS TOTAL	0.529	0.88	-0.351	MG/L	-49.82
Mud Creek - Mud Creek Rd	7/26/2022	NITROGEN TOTAL	1.9	5.56	-3.66	MG/L	-98.12
Bear Creek- STH 76	6/13/2022	PHOSPHATE ORTHO DISS	0.12	0.121	-0.001	MG/L	-0.83
Bear Creek- STH 76	6/13/2022	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	4.4	4.75	-0.35	MG/L	-7.65
Bear Creek- STH 76	6/13/2022	PHOSPHORUS TOTAL	0.161	0.167	-0.006	MG/L	-3.66
Bear Creek- STH 76	6/13/2022	NITROGEN TOTAL	1.64	1.66	-0.02	MG/L	-1.21

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Monitoring Location	Date	Parameter	Duplicate Sample	Regular Sample	Absolute Difference	Unit	Relative Percent Difference
Pipe Creek - 30 ft Above HWY 151 Bridge	6/14/2023	PHOSPHATE ORTHO DISS	0.277	0.275	0.002	MG/L	0.72
Pipe Creek - 30 ft Above HWY 151 Bridge	6/14/2023	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	16.8	16.6	0.2	MG/L	1.2
Pipe Creek - 30 ft Above HWY 151 Bridge	6/14/2023	PHOSPHORUS TOTAL	0.417	0.415	0.002	MG/L	0.48
Pipe Creek - 30 ft Above HWY 151 Bridge	6/14/2023	NITROGEN TOTAL	38.3	38.2	0.1	MG/L	0.26
West Branch FDL on Forest Ave	8/21/2023	PHOSPHATE ORTHO DISS	0.453	0.451	0.002	MG/L	0.44
West Branch FDL on Forest Ave	8/21/2023	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	2.2	2	0.2	MG/L	9.52
West Branch FDL on Forest Ave	8/21/2023	PHOSPHORUS TOTAL	0.504	0.504	0	MG/L	0
West Branch FDL on Forest Ave	8/21/2023	NITROGEN TOTAL	0.98	0.986	-0.006	MG/L	-0.61
Mecan River - CTH C East of Montello	8/13/2024	PHOSPHATE ORTHO DISS	0.00664	0.00704	-0.0004	MG/L	-5.85
Mecan River - CTH C East of Montello	8/13/2024	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	5.8	6	-0.2	MG/L	-3.39

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Monitoring Location	Date	Parameter	Duplicate Sample	Regular Sample	Absolute Difference	Unit	Relative Percent Difference
Mecan River - CTH C East of Montello	8/13/2024	PHOSPHORUS TOTAL	0.0231	0.0224	0.0007	MG/L	3.08
Mecan River - CTH C East of Montello	8/13/2024	NITROGEN TOTAL	2.36	2.38	-0.02	MG/L	-0.84
Little Wolf River - Hwy 54	6/23/2025	PHOSPHATE ORTHO DISS	0.0226	0.0228	-0.0002	MG/L	-0.88
Little Wolf River - Hwy 54	6/23/2025	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	46.1	45.4	0.7	MG/L	1.53
Little Wolf River - Hwy 54	6/23/2025	PHOSPHORUS TOTAL	0.102	0.0993	0.0027	MG/L	2.68
Little Wolf River - Hwy 54	6/23/2025	NITROGEN TOTAL	1.82	1.81	0.01	MG/L	0.55
Waukau Creek at Cth E	9/2/2025	PHOSPHATE ORTHO DISS	0.0241	0.025	-0.0009	MG/L	-3.67
Waukau Creek at Cth E	9/2/2025	RESIDUE TOTAL NFLT (TOTAL SUSPENDED SOLIDS)	30.2	26	4.2	MG/L	14.95
Waukau Creek at Cth E	9/2/2025	PHOSPHORUS TOTAL	0.0593	0.0589	0.0004	MG/L	0.68
Waukau Creek at Cth E	9/2/2025	NITROGEN TOTAL	1.08	1.03	0.05	MG/L	4.74

Highlighted cells indicate variance (relative percent difference >30%) between regular and duplicate sample results.

Mud Creek at Mud Creek Road duplicate (7/26/2022) was taken on a different day than original sample, disregarded as duplicate sample.

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Appendix N: Streamflow and Transparency Data

Streamflow (CFS)

Stream Name	Month	2020	2021	2022	2023	2024	2025
Bear Creek (STH 76)	May	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (STH 76)	June	N/A	4.67	N/A	N/A	N/A	N/A
Bear Creek (STH 76)	July	N/A	40.7	N/A	N/A	N/A	N/A
Bear Creek (STH 76)	August	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (STH 76)	September	N/A	64.2	N/A	N/A	N/A	N/A
Bear Creek (STH 76)	October	6.5	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	May	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	June	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	July	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	August	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	September	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	October	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	May	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	June	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	July	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	August	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	September	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	October	N/A	N/A	N/A	N/A	N/A	N/A
East Branch FDL River	May	N/A	10.76	38.12	22.2	17.725	29.9

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Stream Name	Month	2020	2021	2022	2023	2024	2025
East Branch FDL River	June	N/A	N/A	93.1	17.85	49.2	N/A
East Branch FDL River	July	N/A	11.28	N/A	14	N/A	149.3
East Branch FDL River	August	0.6	N/A	15.9	11.8	26.7	N/A
East Branch FDL River	September	420	10.8	N/A	12.1	10.2	N/A
East Branch FDL River	October	19.06	0.65	11.2	7.3	9.8	N/A
Embarrass River (CTH M)	May	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (CTH M)	June	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (CTH M)	July	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (CTH M)	August	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (CTH M)	September	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (CTH M)	October	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	May	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	June	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	July	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	August	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	September	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	October	N/A	N/A	N/A	N/A	N/A	N/A
Fox River	May	N/A	N/A	N/A	N/A	N/A	N/A
Fox River	June	N/A	N/A	N/A	N/A	N/A	N/A
Fox River	July	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Fox River	August	N/A	N/A	N/A	N/A	N/A	N/A
Fox River	September	N/A	N/A	N/A	N/A	N/A	N/A
Fox River	October	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	May	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	June	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	July	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	August	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	September	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	October	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	May	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	June	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	July	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	August	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	September	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	October	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	May	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	June	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	July	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	August	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	September	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Mecan River	October	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	May	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	June	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	July	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	August	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	September	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	October	N/A	N/A	N/A	N/A	N/A	N/A
Mud Creek	May	N/A	1.18	1.3	8.18	N/A	N/A
Mud Creek	June	N/A	N/A	15.1	N/A	1.52	N/A
Mud Creek	July	N/A	0	1.4	N/A	N/A	N/A
Mud Creek	August	N/A	N/A	0.6	0	N/A	N/A
Mud Creek	September	N/A	N/A	0.053	0	N/A	N/A
Mud Creek	October	N/A	N/A	N/A	0	N/A	N/A
Neenah Creek	May	N/A	N/A	N/A	N/A	N/A	N/A
Neenah Creek	June	N/A	N/A	N/A	N/A	N/A	N/A
Neenah Creek	July	N/A	N/A	N/A	N/A	N/A	N/A
Neenah Creek	August	N/A	N/A	N/A	N/A	N/A	N/A
Neenah Creek	September	N/A	N/A	N/A	N/A	N/A	N/A
Neenah Creek	October	N/A	N/A	N/A	N/A	N/A	N/A
Pigeon River	May	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Pigeon River	June	N/A	N/A	N/A	N/A	N/A	N/A
Pigeon River	July	N/A	N/A	N/A	N/A	N/A	N/A
Pigeon River	August	N/A	N/A	N/A	N/A	N/A	N/A
Pigeon River	September	N/A	N/A	N/A	N/A	N/A	N/A
Pigeon River	October	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	May	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	June	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	July	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	August	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	September	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	October	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	May	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	June	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	July	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	August	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	September	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	October	N/A	N/A	N/A	N/A	N/A	N/A
Rat River	May	N/A	N/A	N/A	N/A	N/A	N/A
Rat River	June	N/A	N/A	N/A	N/A	N/A	N/A
Rat River	July	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Rat River	August	N/A	N/A	N/A	N/A	N/A	N/A
Rat River	September	N/A	N/A	N/A	N/A	N/A	N/A
Rat River	October	N/A	N/A	N/A	N/A	N/A	N/A
Red River	May	N/A	N/A	N/A	N/A	N/A	N/A
Red River	June	N/A	N/A	N/A	N/A	N/A	N/A
Red River	July	N/A	N/A	N/A	N/A	N/A	N/A
Red River	August	209.76	N/A	N/A	N/A	N/A	N/A
Red River	September	N/A	N/A	N/A	N/A	N/A	N/A
Red River	October	93	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	May	N/A	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	June	N/A	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	July	N/A	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	August	N/A	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	September	N/A	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	October	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	May	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	June	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	July	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	August	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	September	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Shioc River	October	N/A	N/A	N/A	N/A	N/A	N/A
Waukau Creek	May	N/A	44.3	N/A	N/A	N/A	N/A
Waukau Creek	June	N/A	21.1	N/A	N/A	N/A	N/A
Waukau Creek	July	N/A	N/A	N/A	N/A	N/A	N/A
Waukau Creek	August	N/A	N/A	N/A	N/A	N/A	N/A
Waukau Creek	September	N/A	N/A	N/A	N/A	N/A	N/A
Waukau Creek	October	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	May	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	June	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	July	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	August	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	September	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	October	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	May	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	June	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	July	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	August	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	September	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	October	N/A	N/A	N/A	N/A	N/A	N/A
West Branch Wolf River	May	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
West Branch Wolf River	June	N/A	N/A	N/A	N/A	N/A	N/A
West Branch Wolf River	July	N/A	N/A	N/A	N/A	N/A	N/A
West Branch Wolf River	August	N/A	N/A	N/A	N/A	N/A	N/A
West Branch Wolf River	September	N/A	N/A	N/A	N/A	N/A	N/A
West Branch Wolf River	October	N/A	N/A	N/A	N/A	N/A	N/A
White River	May	N/A	N/A	N/A	102.9	N/A	N/A
White River	June	N/A	N/A	N/A	61.4	N/A	N/A
White River	July	N/A	N/A	N/A	N/A	N/A	N/A
White River	August	N/A	N/A	N/A	56.97	N/A	N/A
White River	September	N/A	N/A	N/A	N/A	N/A	N/A
White River	October	N/A	N/A	N/A	61.78	N/A	N/A
Wolf River (CTH T)	May	N/A	N/A	N/A	N/A	N/A	0.4
Wolf River (CTH T)	June	N/A	N/A	N/A	N/A	N/A	0.5
Wolf River (CTH T)	July	N/A	N/A	N/A	N/A	N/A	0.4
Wolf River (CTH T)	August	N/A	N/A	N/A	N/A	N/A	0.4
Wolf River (CTH T)	September	N/A	N/A	N/A	N/A	N/A	N/A
Wolf River (CTH T)	October	N/A	N/A	N/A	N/A	N/A	0.3

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Transparency (CM)

Stream Name	Month	2020	2021	2022	2023	2024	2025
Bear Creek (STH 76)	May	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (STH 76)	June	N/A	4.67	N/A	N/A	N/A	N/A
Bear Creek (STH 76)	July	N/A	40.7	N/A	N/A	N/A	N/A
Bear Creek (STH 76)	August	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (STH 76)	September	N/A	64.2	N/A	N/A	N/A	N/A
Bear Creek (STH 76)	October	6.5	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	May	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	June	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	July	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	August	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	September	N/A	N/A	N/A	N/A	N/A	N/A
Bear Creek (Stilen Rd)	October	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	May	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	June	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	July	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	August	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	September	N/A	N/A	N/A	N/A	N/A	N/A
Belle Fountain Creek	October	N/A	N/A	N/A	N/A	N/A	N/A
East Branch FDL River	May	N/A	10.76	38.12	22.2	17.725	29.9
East Branch FDL River	June	N/A	N/A	93.1	17.85	49.2	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
East Branch FDL River	July	N/A	11.28	N/A	14	N/A	149.3
East Branch FDL River	August	0.6	N/A	15.9	11.8	26.7	N/A
East Branch FDL River	September	420	10.8	N/A	12.1	10.2	N/A
East Branch FDL River	October	19.06	0.65	11.2	7.3	9.8	N/A
Embarrass River (CTH M)	May	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (CTH M)	June	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (CTH M)	July	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (CTH M)	August	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (CTH M)	September	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (CTH M)	October	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	May	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	June	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	July	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	August	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	September	N/A	N/A	N/A	N/A	N/A	N/A
Embarrass River (STH 54)	October	N/A	N/A	N/A	N/A	N/A	N/A
Fox River	May	N/A	N/A	N/A	N/A	N/A	N/A
Fox River	June	N/A	N/A	N/A	N/A	N/A	N/A
Fox River	July	N/A	N/A	N/A	N/A	N/A	N/A
Fox River	August	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Fox River	September	N/A	N/A	N/A	N/A	N/A	N/A
Fox River	October	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	May	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	June	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	July	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	August	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	September	N/A	N/A	N/A	N/A	N/A	N/A
Grand River	October	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	May	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	June	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	July	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	August	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	September	N/A	N/A	N/A	N/A	N/A	N/A
Little Wolf River	October	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	May	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	June	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	July	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	August	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	September	N/A	N/A	N/A	N/A	N/A	N/A
Mecan River	October	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Montello River	May	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	June	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	July	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	August	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	September	N/A	N/A	N/A	N/A	N/A	N/A
Montello River	October	N/A	N/A	N/A	N/A	N/A	N/A
Mud Creek	May	N/A	1.18	1.3	8.18	N/A	N/A
Mud Creek	June	N/A	N/A	15.1	N/A	1.52	N/A
Mud Creek	July	N/A	0	1.4	N/A	N/A	N/A
Mud Creek	August	N/A	N/A	0.6	0	N/A	N/A
Mud Creek	September	N/A	N/A	0.053	0	N/A	N/A
Mud Creek	October	N/A	N/A	N/A	0	N/A	N/A
Neenah Creek	May	N/A	N/A	N/A	N/A	N/A	N/A
Neenah Creek	June	N/A	N/A	N/A	N/A	N/A	N/A
Neenah Creek	July	N/A	N/A	N/A	N/A	N/A	N/A
Neenah Creek	August	N/A	N/A	N/A	N/A	N/A	N/A
Neenah Creek	September	N/A	N/A	N/A	N/A	N/A	N/A
Neenah Creek	October	N/A	N/A	N/A	N/A	N/A	N/A
Pigeon River	May	N/A	N/A	N/A	N/A	N/A	N/A
Pigeon River	June	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Pigeon River	July	N/A	N/A	N/A	N/A	N/A	N/A
Pigeon River	August	N/A	N/A	N/A	N/A	N/A	N/A
Pigeon River	September	N/A	N/A	N/A	N/A	N/A	N/A
Pigeon River	October	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	May	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	June	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	July	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	August	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	September	N/A	N/A	N/A	N/A	N/A	N/A
Pine River	October	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	May	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	June	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	July	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	August	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	September	N/A	N/A	N/A	N/A	N/A	N/A
Pipe Creek	October	N/A	N/A	N/A	N/A	N/A	N/A
Rat River	May	N/A	N/A	N/A	N/A	N/A	N/A
Rat River	June	N/A	N/A	N/A	N/A	N/A	N/A
Rat River	July	N/A	N/A	N/A	N/A	N/A	N/A
Rat River	August	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Rat River	September	N/A	N/A	N/A	N/A	N/A	N/A
Rat River	October	N/A	N/A	N/A	N/A	N/A	N/A
Red River	May	N/A	N/A	N/A	N/A	N/A	N/A
Red River	June	N/A	N/A	N/A	N/A	N/A	N/A
Red River	July	N/A	N/A	N/A	N/A	N/A	N/A
Red River	August	209.76	N/A	N/A	N/A	N/A	N/A
Red River	September	N/A	N/A	N/A	N/A	N/A	N/A
Red River	October	93	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	May	N/A	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	June	N/A	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	July	N/A	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	August	N/A	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	September	N/A	N/A	N/A	N/A	N/A	N/A
Sawyer Creek	October	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	May	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	June	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	July	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	August	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	September	N/A	N/A	N/A	N/A	N/A	N/A
Shioc River	October	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
Waukau Creek	May	N/A	44.3	N/A	N/A	N/A	N/A
Waukau Creek	June	N/A	21.1	N/A	N/A	N/A	N/A
Waukau Creek	July	N/A	N/A	N/A	N/A	N/A	N/A
Waukau Creek	August	N/A	N/A	N/A	N/A	N/A	N/A
Waukau Creek	September	N/A	N/A	N/A	N/A	N/A	N/A
Waukau Creek	October	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	May	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	June	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	July	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	August	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	September	N/A	N/A	N/A	N/A	N/A	N/A
Waupaca River	October	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	May	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	June	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	July	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	August	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	September	N/A	N/A	N/A	N/A	N/A	N/A
West Branch FDL River	October	N/A	N/A	N/A	N/A	N/A	N/A
West Branch Wolf River	May	N/A	N/A	N/A	N/A	N/A	N/A
West Branch Wolf River	June	N/A	N/A	N/A	N/A	N/A	N/A

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Stream Name	Month	2020	2021	2022	2023	2024	2025
West Branch Wolf River	July	N/A	N/A	N/A	N/A	N/A	N/A
West Branch Wolf River	August	N/A	N/A	N/A	N/A	N/A	N/A
West Branch Wolf River	September	N/A	N/A	N/A	N/A	N/A	N/A
West Branch Wolf River	October	N/A	N/A	N/A	N/A	N/A	N/A
White River	May	N/A	N/A	N/A	102.9	N/A	N/A
White River	June	N/A	N/A	N/A	61.4	N/A	N/A
White River	July	N/A	N/A	N/A	N/A	N/A	N/A
White River	August	N/A	N/A	N/A	56.97	N/A	N/A
White River	September	N/A	N/A	N/A	N/A	N/A	N/A
White River	October	N/A	N/A	N/A	61.78	N/A	N/A
Wolf River (CTH T)	May	N/A	N/A	N/A	N/A	N/A	0.4
Wolf River (CTH T)	June	N/A	N/A	N/A	N/A	N/A	0.5
Wolf River (CTH T)	July	N/A	N/A	N/A	N/A	N/A	0.4
Wolf River (CTH T)	August	N/A	N/A	N/A	N/A	N/A	0.4
Wolf River (CTH T)	September	N/A	N/A	N/A	N/A	N/A	N/A
Wolf River (CTH T)	October	N/A	N/A	N/A	N/A	N/A	0.3