

Lower Fox River Volunteer Monitoring Program

Lower Fox River Basin TMDL

2022 Data Summary



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Lower Fox River Volunteer Monitoring Program

Summary- August 2023

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Project Overview

The Lower Fox River Volunteer Monitoring Program [Program] started in 2015 and is in support of the Lower Fox River Basin (LFRB) Total Maximum Daily Load (TMDL). The Program monitors 20 sampling locations on 16 streams within the Lower Fox River Basin in Northeast Wisconsin. These tributaries and streams in the Basin contribute nutrients and sediment directly to the Fox River, Lower Green Bay, and Fox River Area of Concern (AOC). The LFRB is approximately 640 sq. miles and extends from the outlet of Lake Winnebago to Green Bay and includes portions of four counties (Outagamie, Brown, Winnebago, and Calumet) and Oneida Nation.

The Program relies on citizen volunteers to collect monthly surface water samples, there have been over 40 volunteers in the program since it started in 2015. The samples are taken once a month during the growing season (May-October) and are analyzed for total suspended solids, dissolved orthophosphate, total phosphorus, and total nitrogen.

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.

Phosphorus is an essential nutrient for plant growth. When excess amounts are introduced to a system, harmful algal blooms can occur. Total phosphorus is a key indicator of water quality.

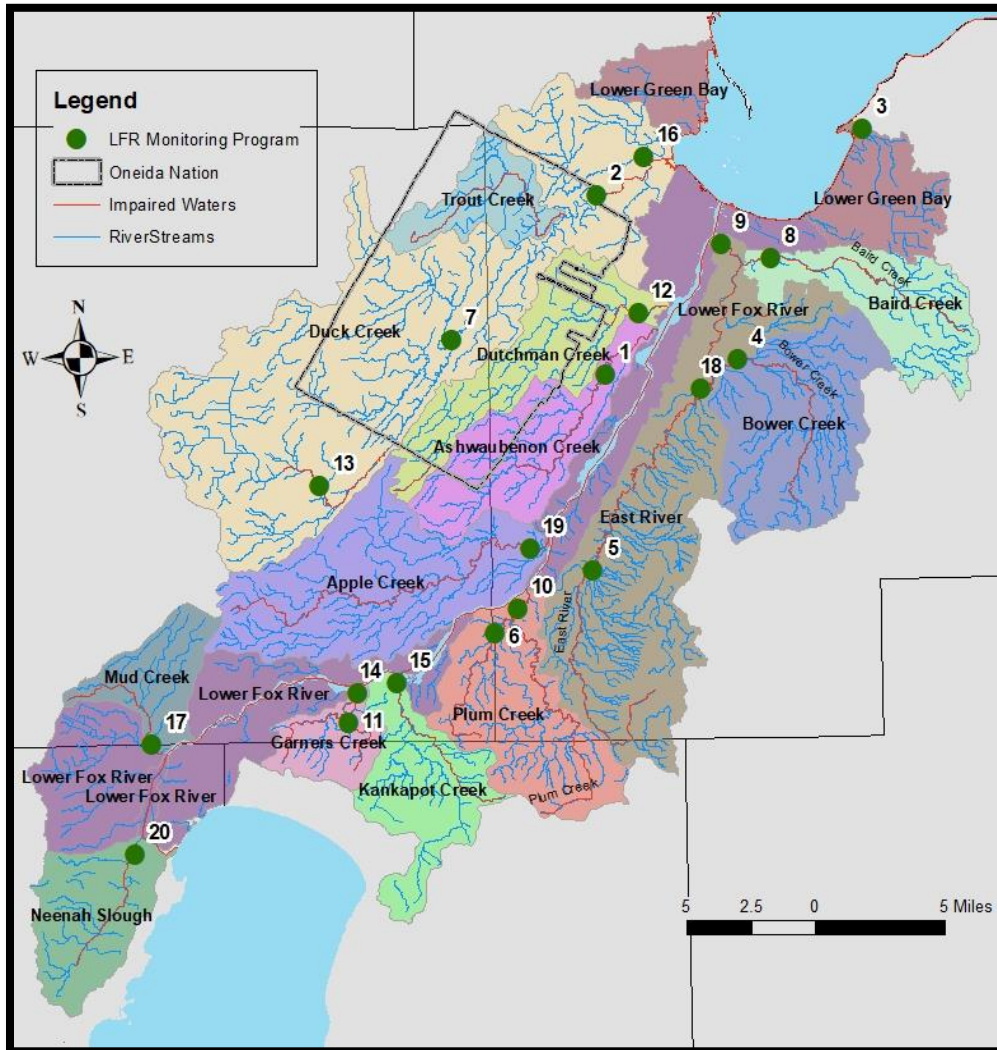
Project Goals

- 1) Increase public awareness and involvement of water quality issues by engaging the public in citizen science
- 2) The collection of reliable surface water quality data to assess long-term water quality trends/success
- 3) Evaluate nutrient and sediment concentrations in the tributaries discharging to the Fox River
- 4) Monitor the health of the watershed overtime
- 5) Provide a basis for evaluation of the long-term effectiveness of implementation of the Lower Fox River TMDL; are there water quality improvements in watersheds with the implementation of best management practices?
- 6) Share water quality data broadly among stakeholders to collectively assess water quality

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Median Total Phosphorus by Site

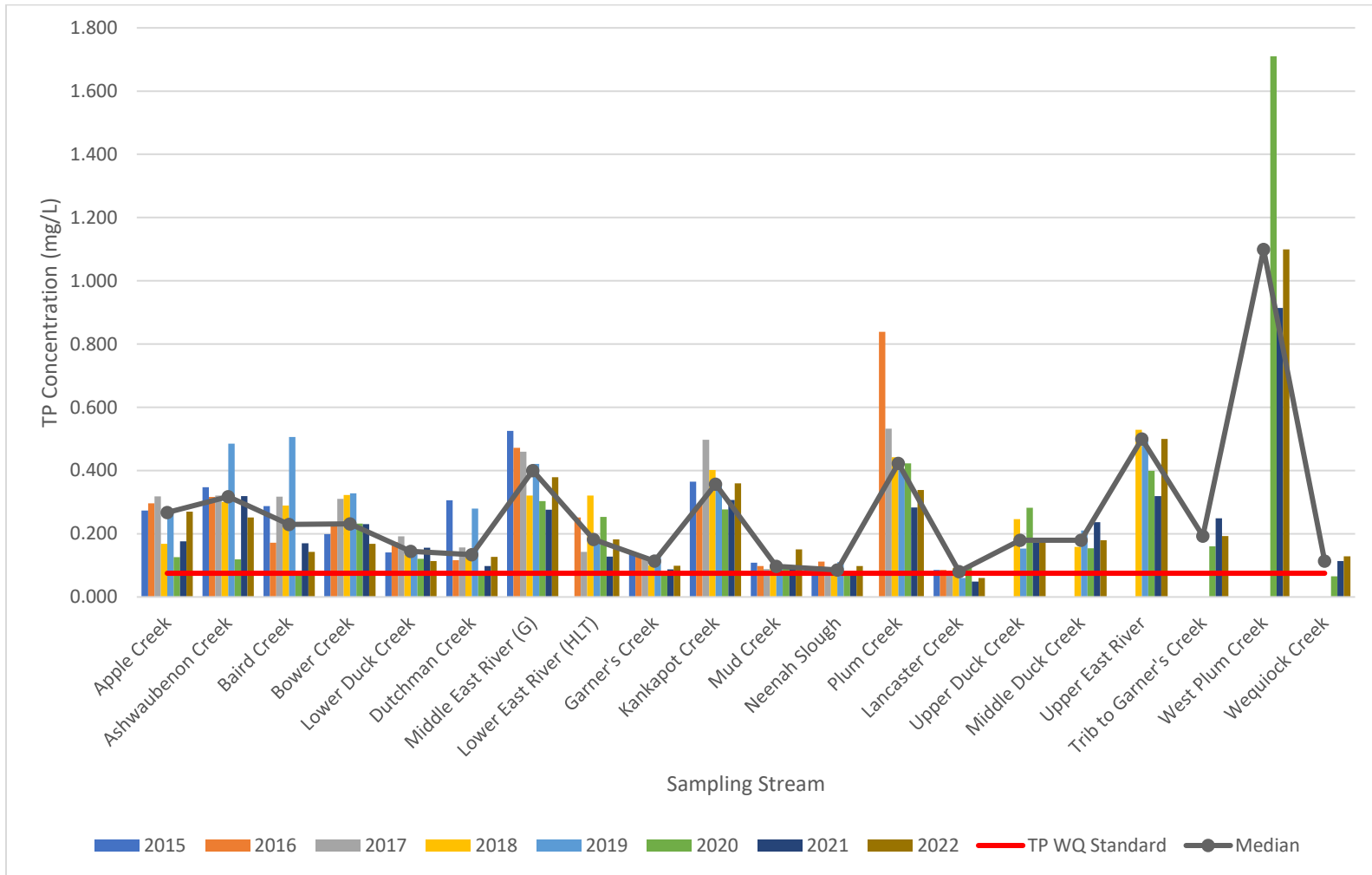


Median Total Phosphorus (2015-2022)		
Map #	Stream Name	TP (mg/L)
1	Ashwaubenon Creek	0.318
2	Lower Duck Creek (Pamperin Park)	0.144
3	Wequiock Creek	0.114
4	Bower Creek	0.231
5	Upper East River (Mallard Rd)	0.500
6	West Plum Creek (County Line Rd)	1.099
7	Middle Duck Creek (Seminary Rd)	0.180
8	Baird Creek	0.230
9	Lower East River (HLT)	0.182
10	Plum Creek (VandeHey Farm)	0.423
11	Trib to Garner's Creek	0.193
12	Dutchman Creek	0.134
13	Upper Duck Creek (CTH S)	0.180
14	Garner's Creek	0.114
15	Kankapot Creek	0.357
16	Lancaster Creek	0.081
17	Mud Creek	0.097
18	Middle East River (HWY G)	0.400
19	Apple Creek	0.267
20	Neenah Slough	0.086

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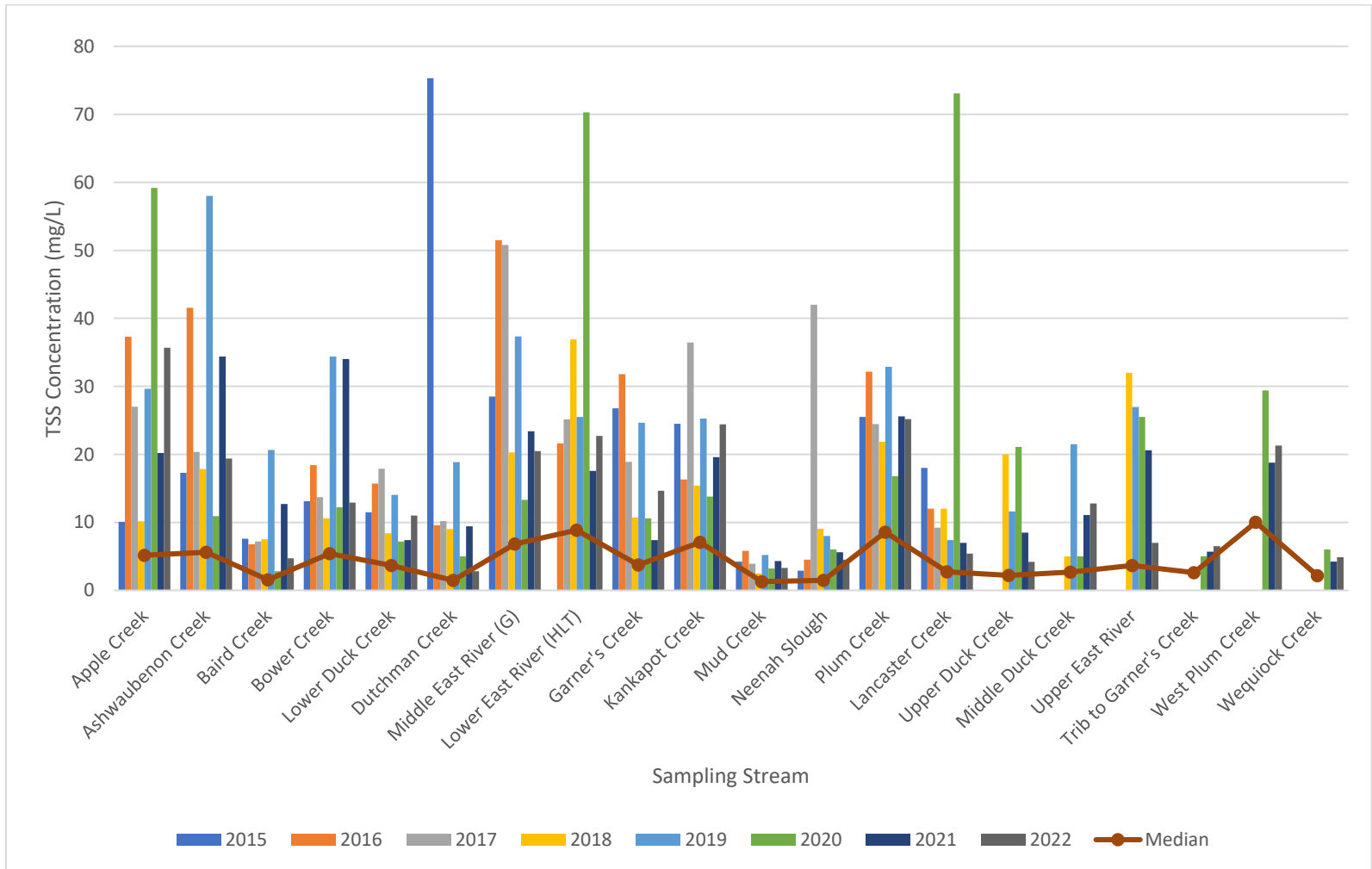
Annual Median Total Phosphorus Concentrations by Sampling Location



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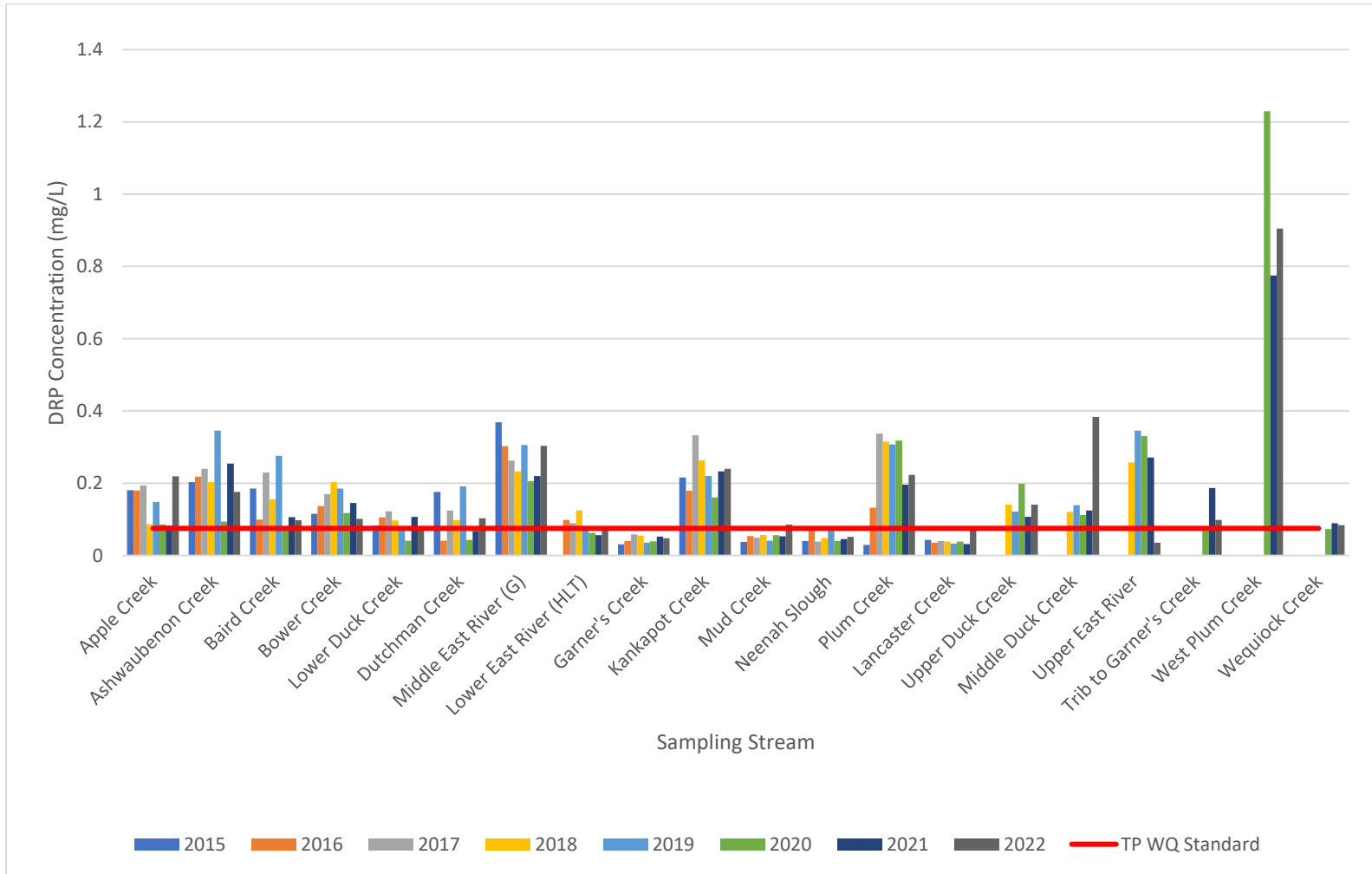
Annual Median Total Suspended Solids Concentrations by Sampling Location



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Annual Median Dissolved Reactive Phosphorus Concentrations by Sampling Location



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Annual Median Total Nitrogen Concentration by Sampling Location

