Lower Fox River Basin Volunteer Monitoring Program

Lower Fox River Basin TMDL

2024 Data Summary

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Project Overview
The Lower Fox River Basin (LFRB) volunteer monitoring program started in 2015 and is in support of the Lower Fox River Basin Total Maximum Daily Load (TMDL). The volunteer program has 20 surface water monitoring sites on 16 streams within the LFRB in Northeast Wisconsin. These tributaries and streams in the LFRB 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 LFRB volunteer monitoring program relies on citizen volunteers to collect monthly surface water samples during the growing season (May-October). In 2024 there were 15 volunteers, and since the program started in 2015 there have been over 40 volunteers that have participated. The samples are analyzed for total phosphorus (TP), total suspended solids (TSS), dissolved reactive phosphorus (DRP), and total nitrogen (TN) at the Wisconsin State Laboratory of Hygiene.

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, however 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 in 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 Basin 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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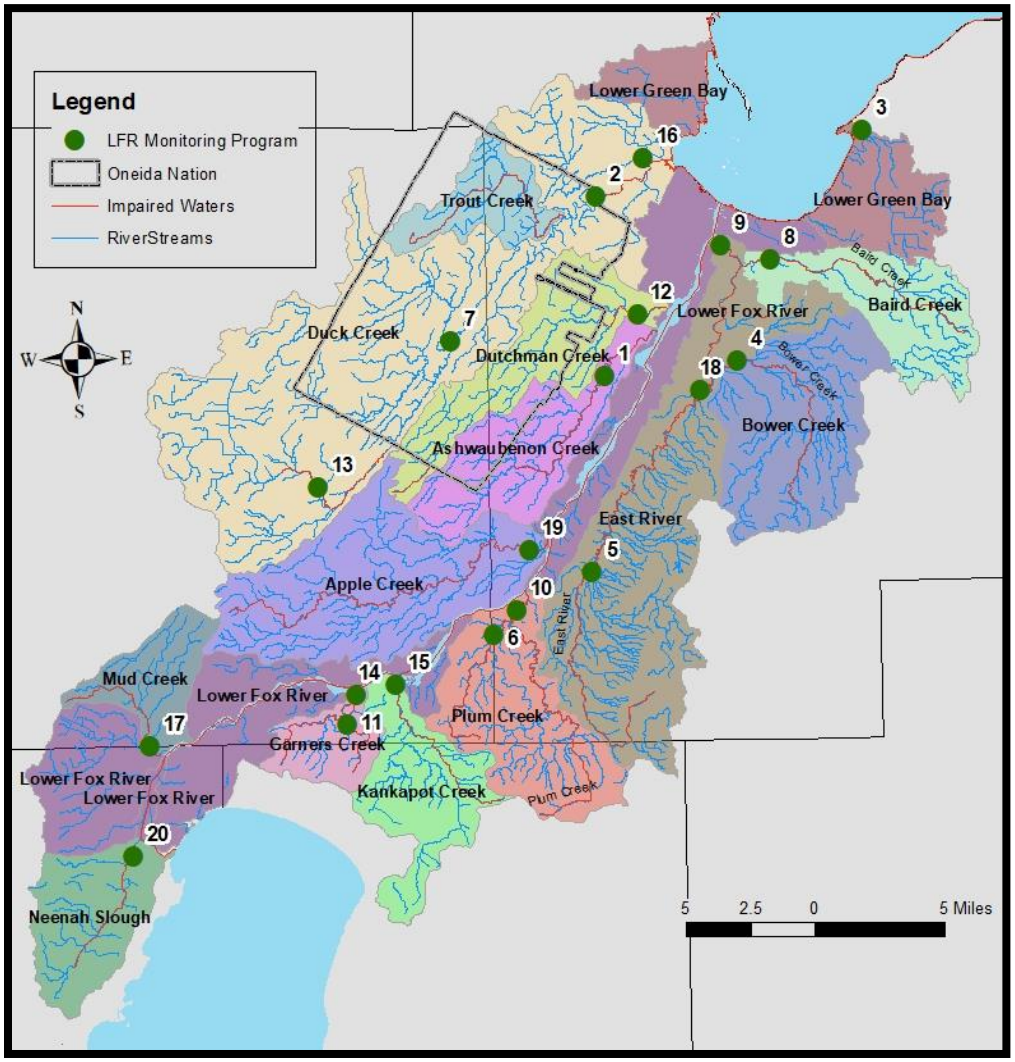
Median Total Phosphorus by Monitoring Site



The median is calculated for rivers and streams in accordance with Wisconsin Consolidated Assessment and Listing Methodology (WisCALM) protocol. Rivers and streams tend to have high variability in concentrations and medians are used for datasets with high variability.

Median Total Phosphorus (mg/L)			
Map #	*Monitoring Site*	*2015-2024*	*2024*
1	Ashwaubenon Creek- Grant St	0.318	0.473
2	Lower Duck Creek- Pamperin Park	0.144	0.156
3	Wequiock Creek- Nicolet Rd/CTH A	0.114	0.166
4	Bower Creek- 50m Upstream of CTH GV	0.231	0.245
5	Upper East River- Mallard Rd	0.500	0.457
6	West Plum Creek- Downstream of County Line Rd	0.915	0.770
7	Middle Duck Creek- Seminary Rd	0.199	0.236
8	Baird Creek- Preble, WI	0.189	0.206
9	Lower East River- Harold Lewis Trail off Main St	0.170	0.152
10	Plum Creek- VandeHey Farm Crossing	0.401	0.380
11	Trib to Garner's Creek- CTH CE	0.185	0.185
12	Dutchman Creek- Oneida St	0.134	0.114
13	Upper Duck Creek- CTH S	0.180	0.153
14	Garner's Creek- Downstream of CTH Z	0.106	0.090
15	Kankapot Creek- CTH Z Dodge St 100ft upstream of bridge	0.331	0.220
16	Lancaster Creek- Lakeview Dr	0.070	0.063
17	Mud Creek- CTH BB	0.097	0.071
18	Middle East River-CTH G	0.376	0.305
19	Apple Creek- Rosin Rd	0.226	0.170
20	Neenah Slough- 100ft South of Adams St	0.086	0.102

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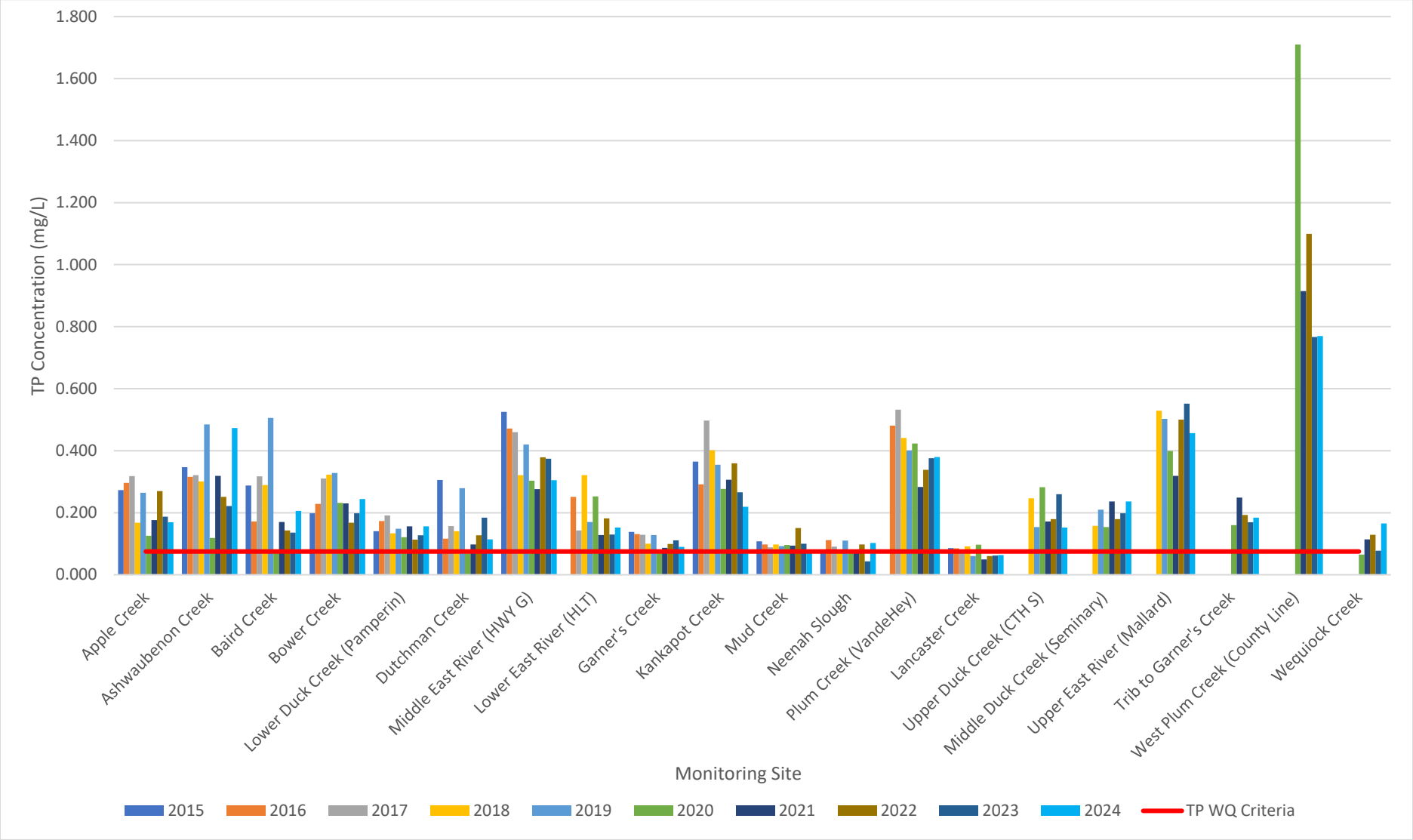
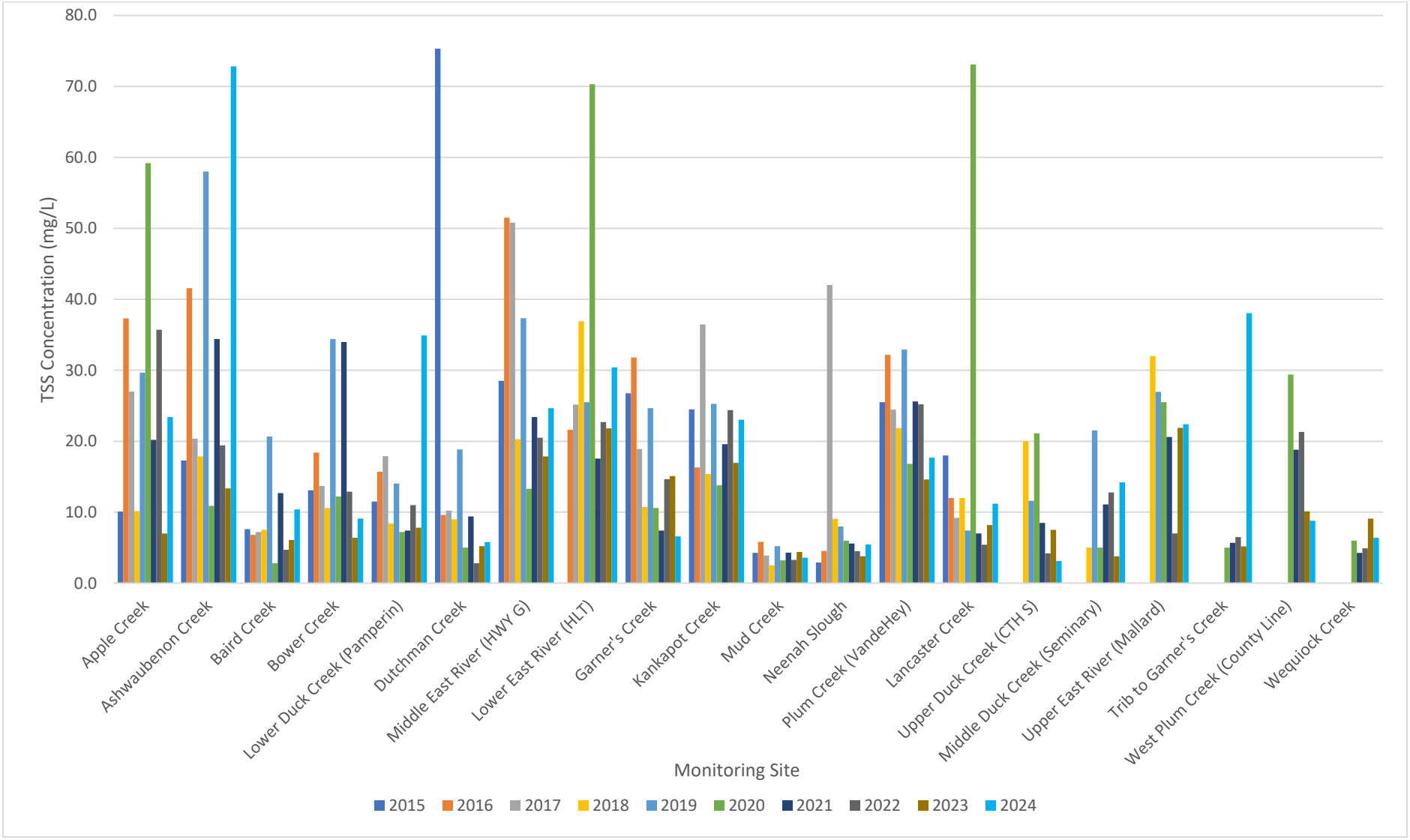
Annual Median Total Phosphorus Concentration by Monitoring Site



TP WQ Criteria stands for TP Water Quality Criteria, which is 0.075mg/L.

Annual Median Total Suspended Solids Concentration by Monitoring Site



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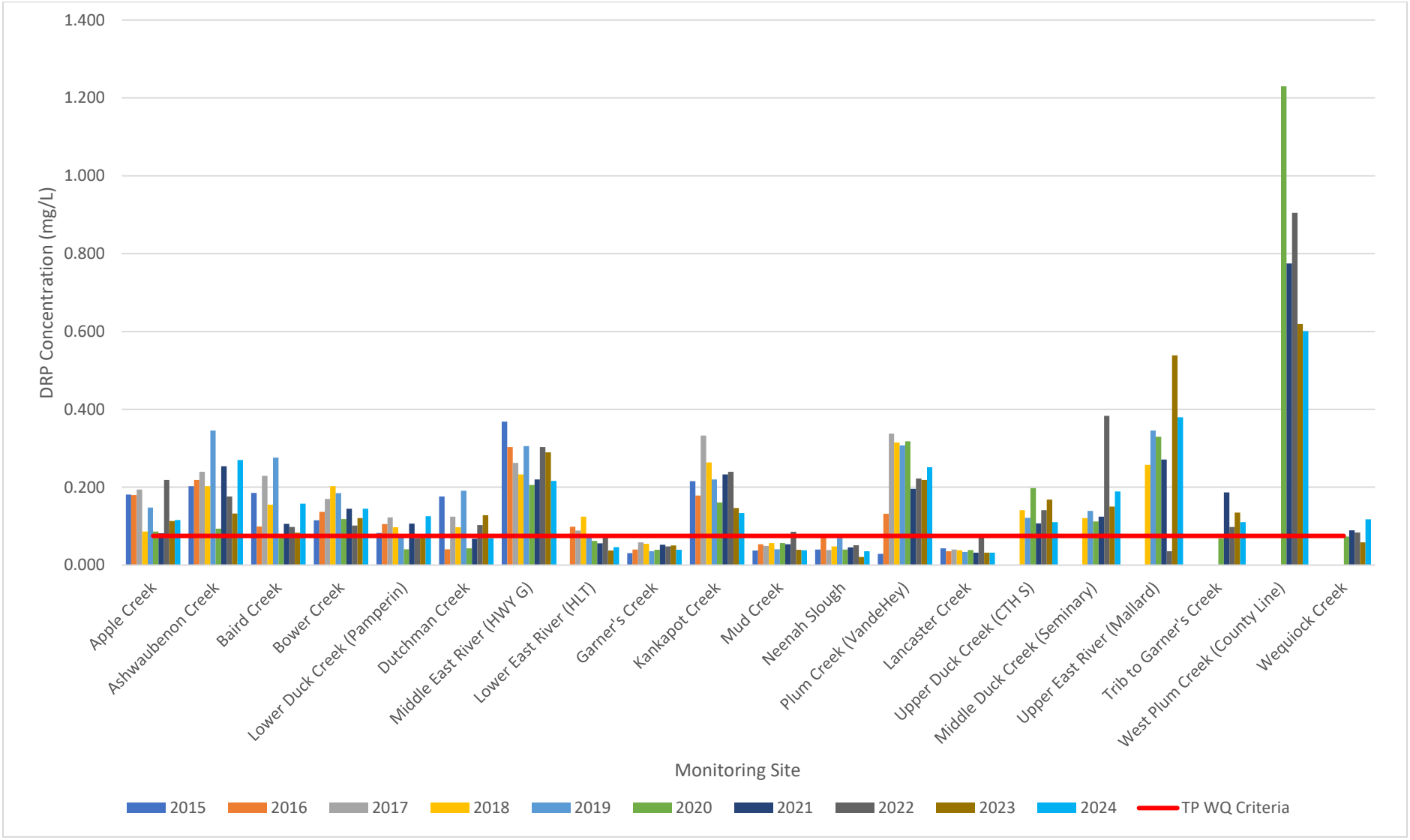
Annual Median Dissolved Reactive Phosphorus Concentration by Monitoring Site



TP WQ Criteria stands for TP Water Quality Criteria, which is 0.075mg/L.

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Annual Median Total Nitrogen Concentration by Monitoring Site