

Sauk Creek TWA WQM Plan 2017

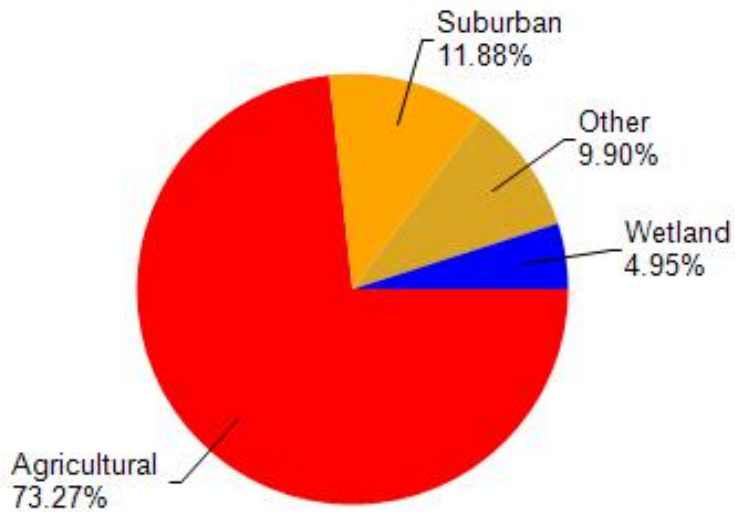
Sauk and Sucker Creeks (SH01)



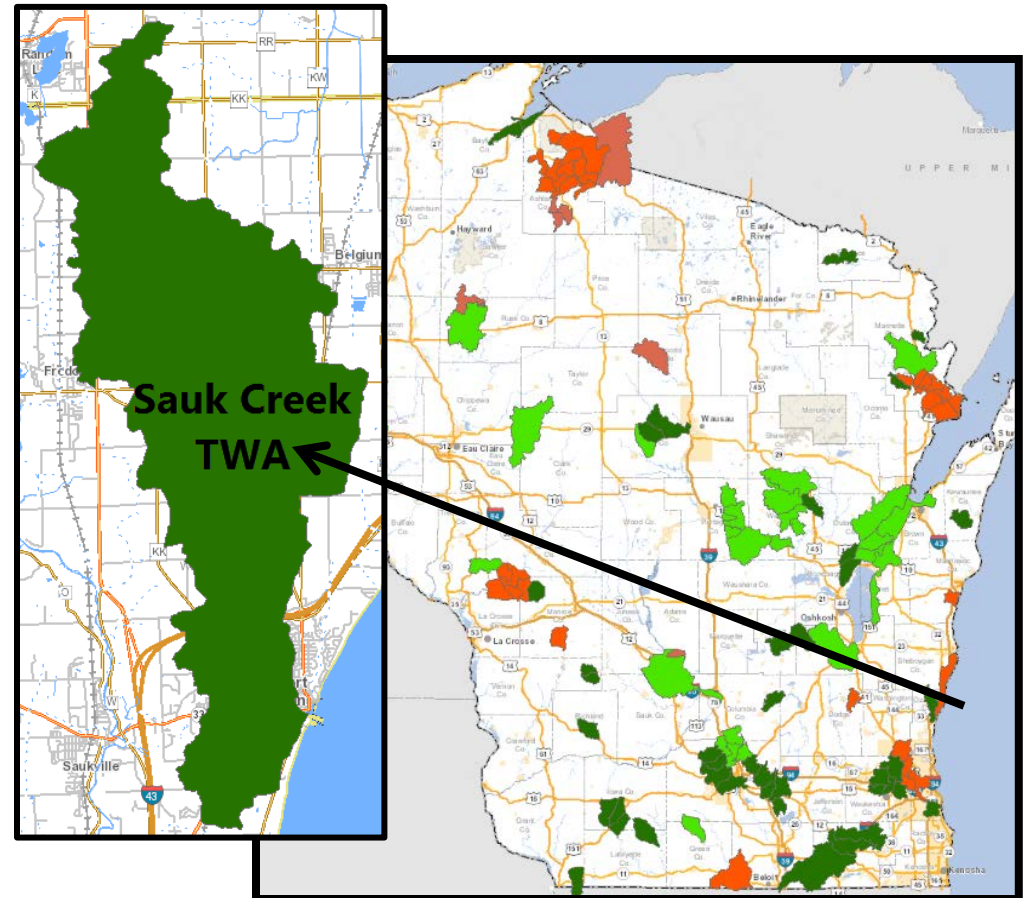
Craig Helker, Stream Biologist, DNR

The cover of the report features a photograph of a stream flowing through a lush green forest. Below the photo, the text reads "Sauk Creek Photo by Vic Pappas, DNR". The title "SAUK CREEK TWA WQM PLAN 2017" is prominently displayed in white on a blue background. Below the title, it says "Sauk and Sucker Creeks (SH01) HUC: 040301011204 Monitored 2014". At the bottom left, there are two maps: a larger map of Wisconsin with various colored regions, and a smaller map of the Sauk Creek TWA area. On the right side, there is a vertical blue bar with white text: "Watershed Report created by the Bureau of Water Quality in support of the Clean Water Act." At the bottom right, there is the Wisconsin Department of Natural Resources logo and the text "EGAD # 3200-2017-07 Water Quality Bureau, Wisconsin DNR".

Sauk Creek Watershed Location & Land Use

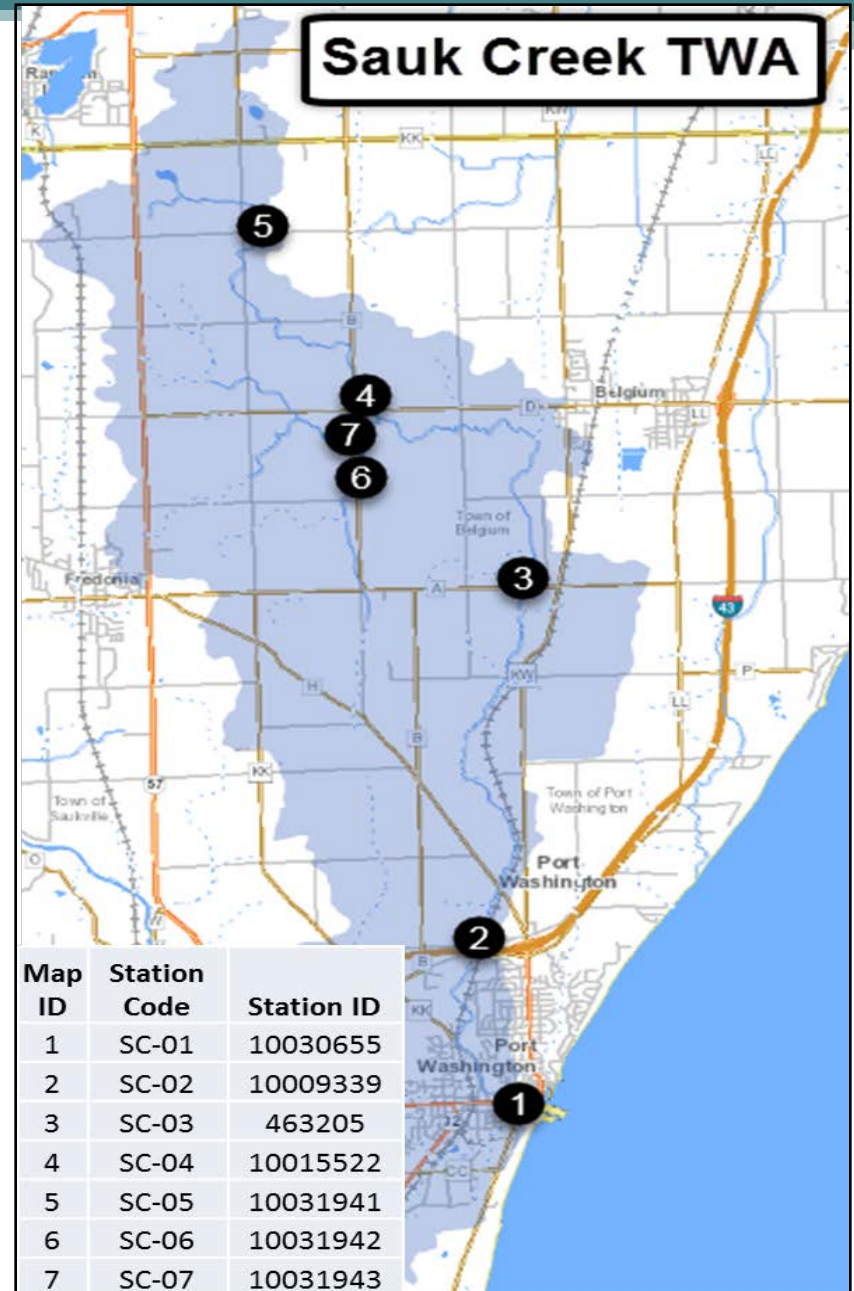


Sauk Creek is located in the Sauk and Sucker Creeks watershed which is 58.43 mi². Land use in the watershed is primarily agricultural (74%), suburban (12%) and a mix of wetland (5%) and other uses (10%). This watershed has 83.35 stream miles, 8,362.44 lake acres and 1,578.16 wetland acres.



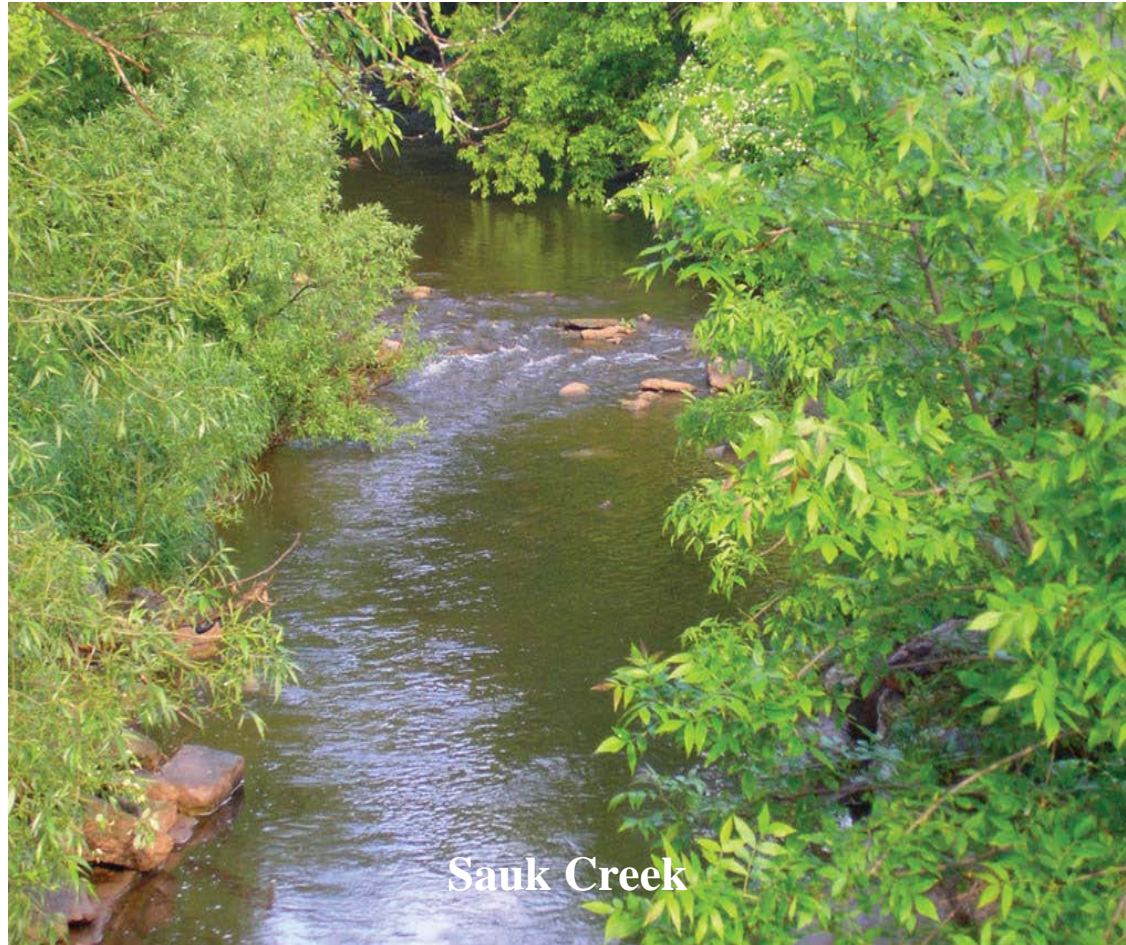
Study Purpose

- Monitor waters to determine condition for Fish and Aquatic Life and Recreational Uses.
- Fish community, macroinvertebrates, stream chemistry, and stream habitat were surveyed and assessed.
- Assessments are used to document condition, list or confirm impairments, and to make recommendations for actions at DNR and with partners in the area.



Study Results – Natural Community

Sauk Creek is cool-warm transitional headwater, besides from the mouth at Lake Michigan upstream 0.3miles which is cold-cool transitional headwater natural community.



Results for Stations SC1 through SC7

Parameter	Station Code						
	SC-1	SC-2	SC-3	SC-4	SC-5	SC-6	SC-7
TP (mg/L)	0.104, 0.399 0.121, 0.172 0.339, 0.0831	0.328	0.432	0.262	0.214	0.61	0.366
DO (mg/L)	11.6	10.08	5.26	8.56	6.89	0.83	5.97
Hilsenhoff's Biotic Index (Score)	Very Good (4.497)	Fair (5.996)	Poor (7.527)	Good (5.45)	Fairly Poor (7.392)	Fairly Poor (7.36)	Fairly Poor (6.58)
Macroinvertebrat e IBI (Score)	Fair (2.934)	Fair (2.942)	Poor (1.874)	Poor (2.98)	Poor (0.8386)	Poor (2.07)	Good (7.142)
Appropriate Fish Index of Biotic Integrity* (Score)	Excellent (90) ¹	Excellent (70) ¹	Fair (30) ¹	Excellent (100) ²	Good (70) ²	Poor (30) ²	Excellent (100) ²

* Appropriate Fish Index is either Cool-Water¹ or Small Stream²

Sauk Creek, (WATERS ID: 11342)

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Impaired River or Stream

Name: Sauk Creek

WBIC: 49500

Miles: 0 to 15.9

Last Update: 12/01/2016 09:52:18 PM

WQ Trend: Water is impaired due to one or more pollutants and associated quality impacts.

Pollutants: Total Phosphorus

Impairments: Water Quality Use Restrictions

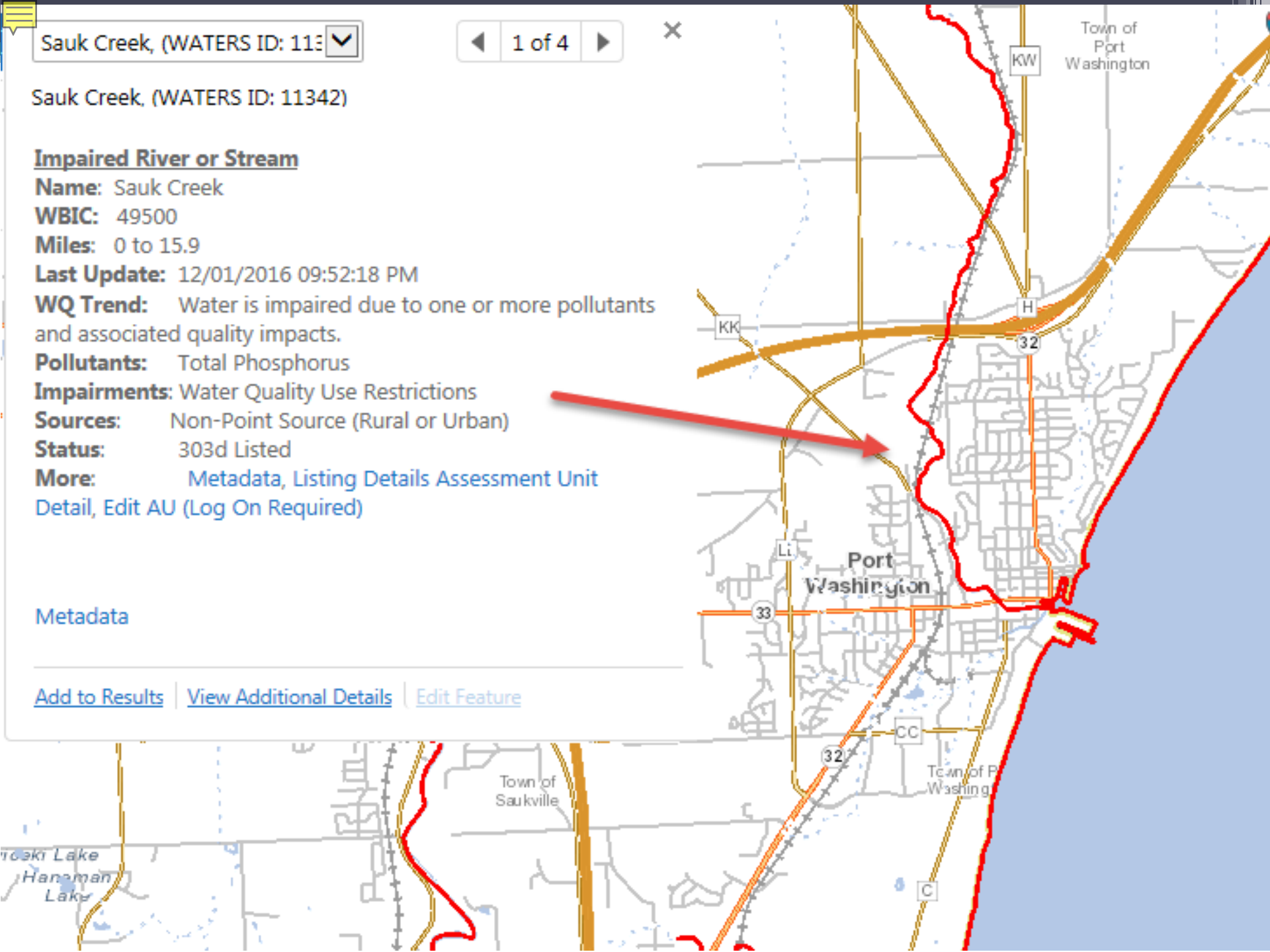
Sources: Non-Point Source (Rural or Urban)

Status: 303d Listed

More: [Metadata](#), [Listing Details](#) [Assessment Unit Detail](#), [Edit AU \(Log On Required\)](#)

Metadata

[Add to Results](#) | [View Additional Details](#) | [Edit Feature](#)



Station ID: 10030655, Clearly

5 of 9

Station ID: 10030655, Clearly Exceeds*

TP Stream Stations

Water Name: Sauk Creek

Station Name: Sauk Creek - South Wisconsin Street

WBIC: 49500

TP Threshold: 75

Mean: 209.3333

Median: 212.5

No. Values: 6

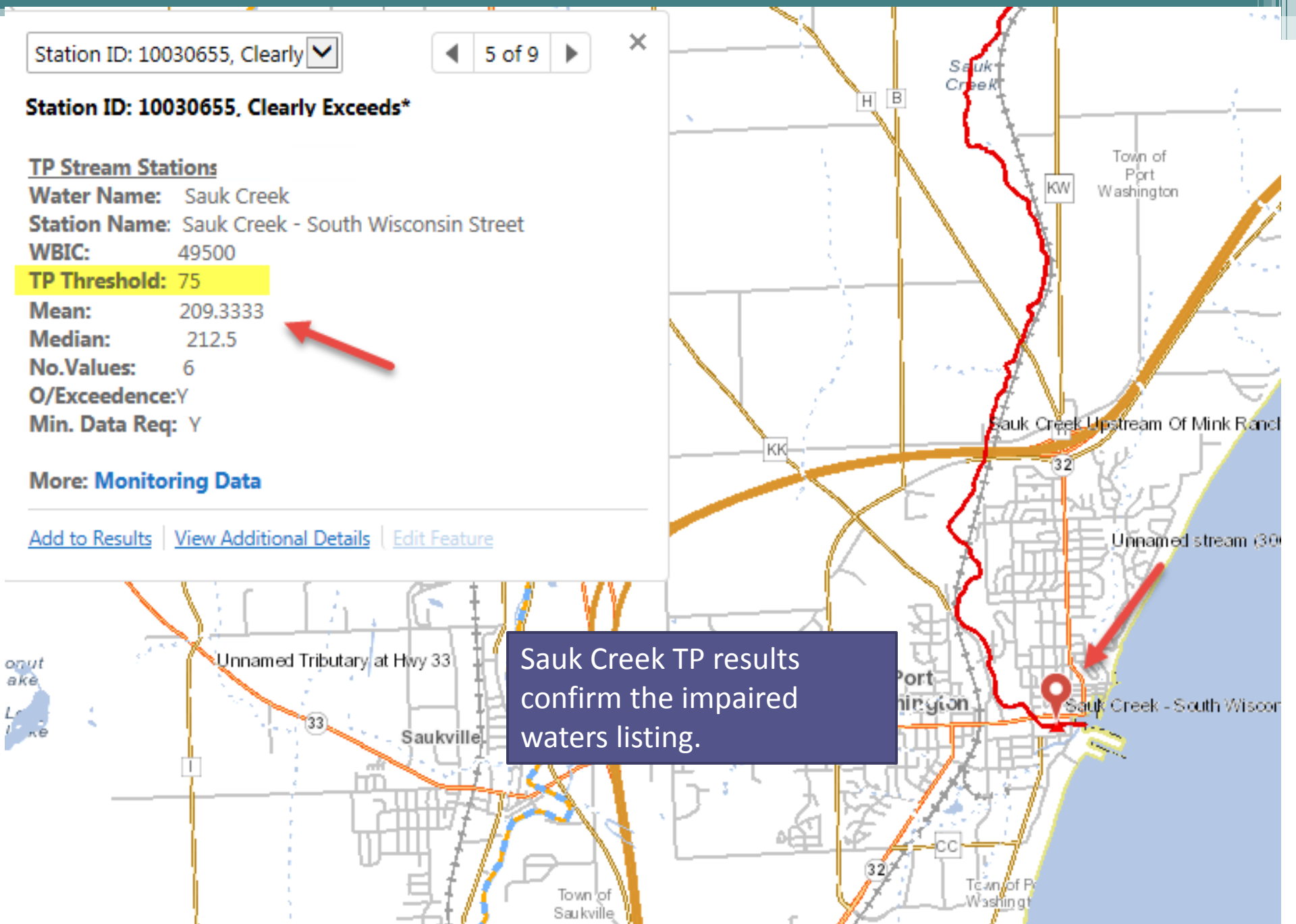
O/Exceedence: Y

Min. Data Req: Y

More: [Monitoring Data](#)

[Add to Results](#) | [View Additional Details](#) | [Edit Feature](#)

Sauk Creek TP results confirm the impaired waters listing.





Overall Watershed Condition

- Overall, the water quality of Sauk Creek is considered “good” at some stations for biology and “poor” for excess total phosphorus.
- Sauk Creek is listed as impaired on the state’s list of impaired waters for total phosphorus; the survey results confirmed this listing.
- Despite the elevated levels of phosphorus at multiple stations, especially the most downstream station (10030655) biological conditions varied considerable for fish and macroinvertebrates.
- Fish and macroinvertebrate communities rated excellent to poor in lower and upstream reaches.
- Throughout the watershed, stream habitat is a limiting factor.



Management Actions

Management Priorities

- Identify areas where stream habitat can be restored.
- Identify primary sources of phosphorus in watershed.
- Pursue runoff management practices with partners.

Restoration Goals

- Reduce nutrient loading.
- Expand and improve conditions and protections for existing and potentially restorable wetlands.
- Expand aquatic life passages in the watershed.



Recommendations

- Conduct monitoring of Sauk Creek to evaluate the effectiveness of implemented best management practices.
- Conduct follow-up site visit to Spring Creek to confirm site remediation.
- Recruit monitoring volunteers through the WAV program.
- Map the location of invasive species.
- Continue building partnerships with communities, Ozaukee Land Conservation Department, agricultural community, etc.
- Fisheries and water quality staff work together to improve habitat.

For more information

- Contact:
 - Email: craig.helker@wisconsin.gov
 - Phone: (262) 884-2357
 - Link to [TWA WQM Plans website](#)
 - [Link to Draft Report](#)