



Stormwater Infrastructure Mapping for the Lake Nagawicka Watershed in Waukesha and Washington Counties

April 20, 2018

WI Lakes Partnership Convention and Water
Action Volunteers Symposium

Waukesha County Department of Parks & Land Use – Land Resources Division





Stevens
Point

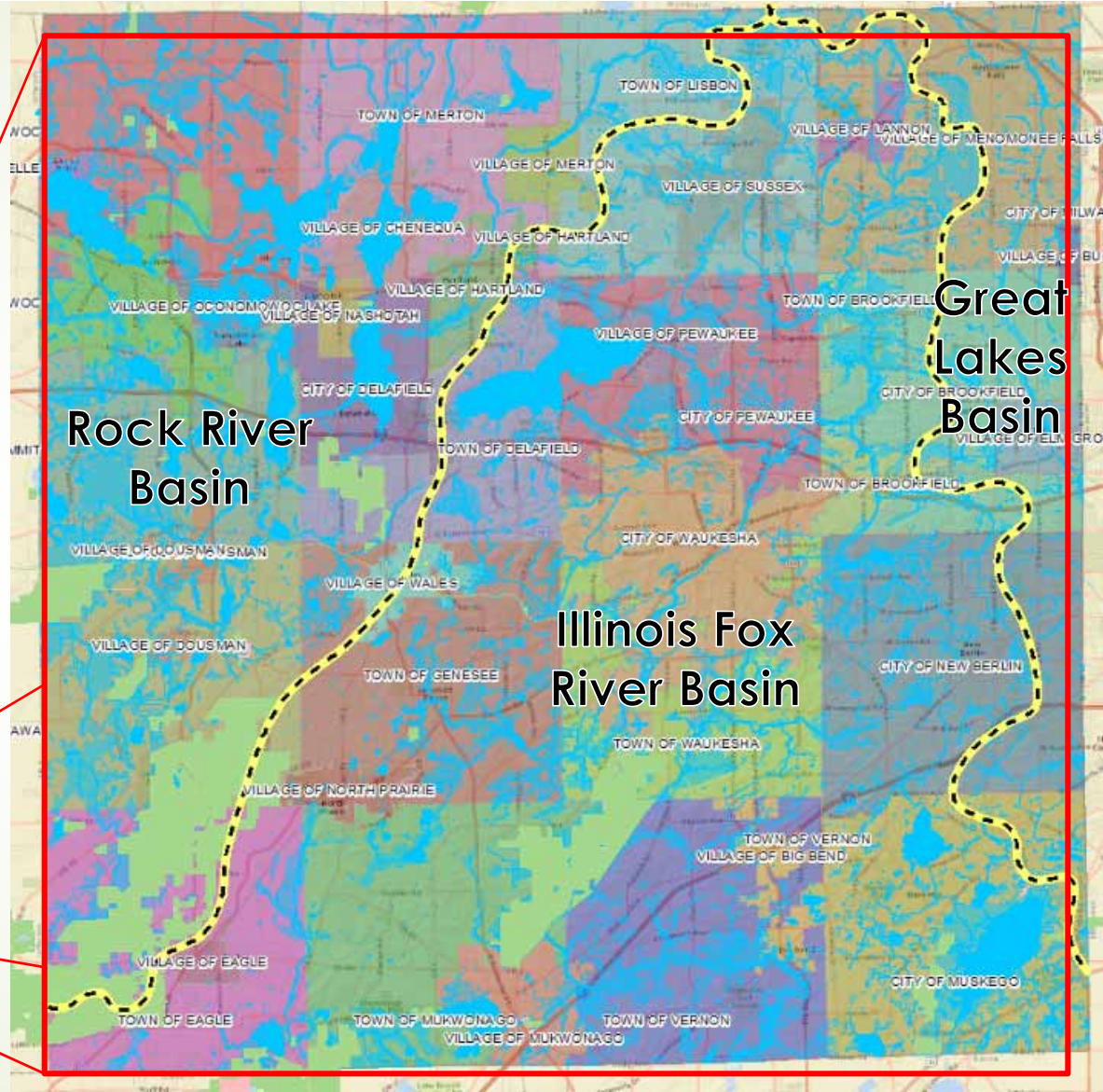
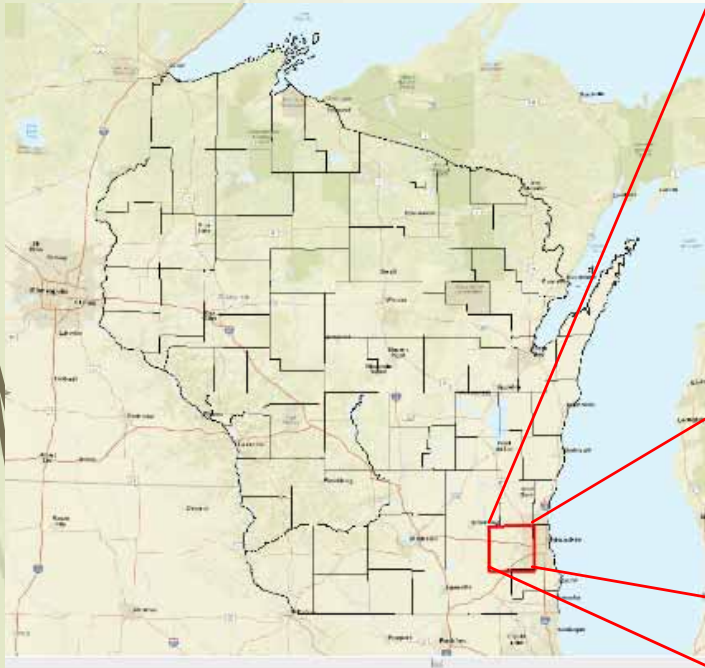
Waukesha
County





Waukesha Co.

- 37 Municipalities
- Population 394,000 (approx.)
- Three Major Basins (including the sub-continental divide)





Lake Nagawicka Watershed Info.

42 square miles

Bark River Watershed
Rock River Basin

10 municipalities

City of Delafield
Village of Hartland
Village of Merton
Village of Nashotah
Village of Richfield
Town of Delafield
Town of Lisbon
Town of Merton
Waukesha County
Washington County





Lake Nagawicka Info.



- Nagawicka Lake is a 981 acre lake located in Waukesha County.
- It has a maximum depth of 90 feet.
- Visitors have access to the lake from a public boat landing.
- Fish include Panfish, Largemouth Bass, Smallmouth Bass, Northern Pike and Walleye.
- The lake's water is moderately clear.

Source: WDNR





What is an MS4?

- About 245 municipalities in Wisconsin are currently required to have a Municipal Separate Storm Sewer System (MS4) permit under NR 216, Wis. Adm. Code
- A MS4 permit is required for a municipality that meets one of the following criteria:
 - It is located within a federally-designated Urbanized Area
 - Its population equals 10,000 or more based on the latest decennial census; or
 - When the Department of Natural Resources designates the municipality for permit coverage in accordance with s. NR 216.025. The MS4 permits are effective for a period of up to five years, at which point the permits are updated and re-issued.





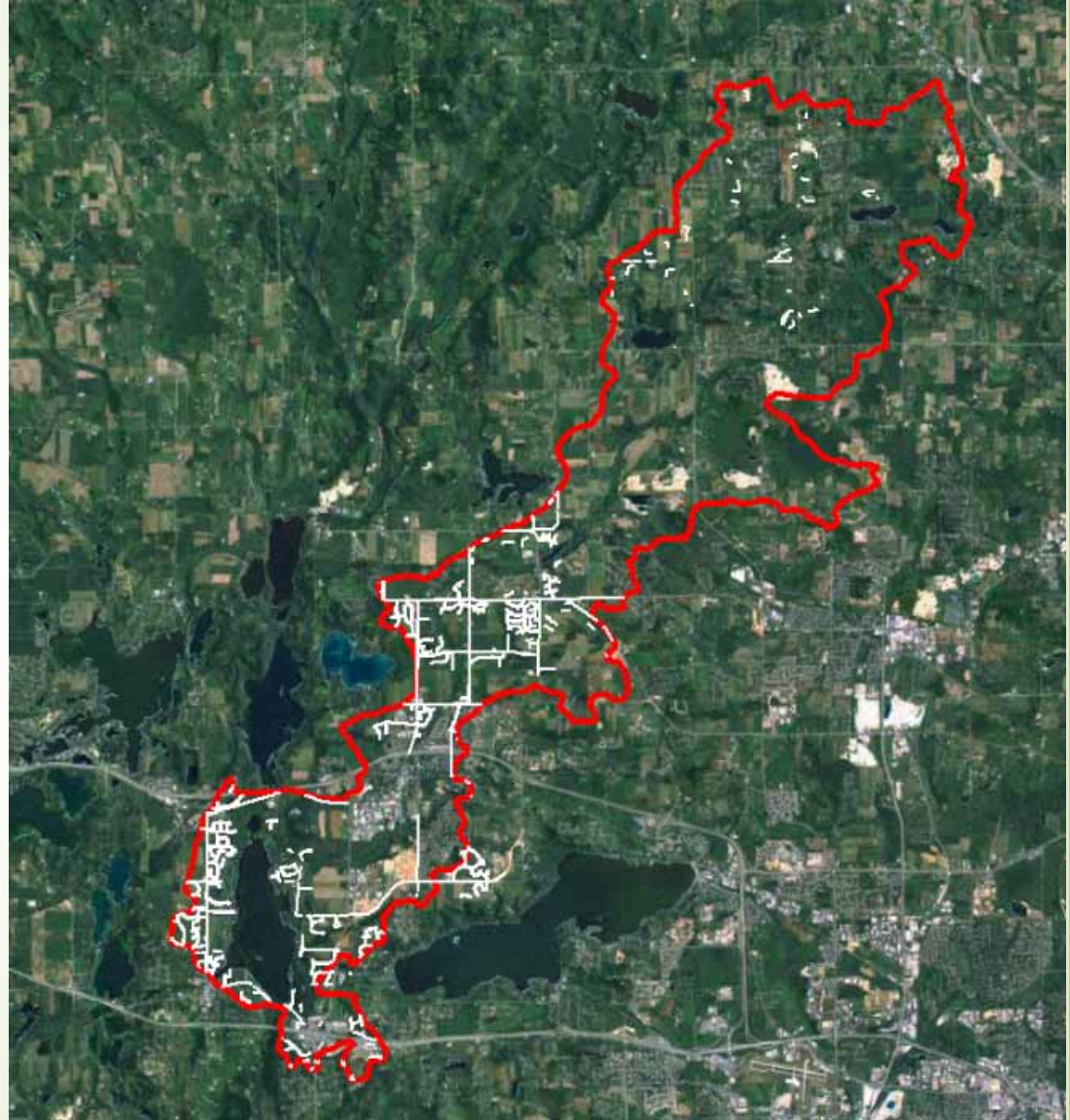
What Stormwater Management Assets Are Mapped by an MS4 Community?

- Swales
- Roads with curb and gutter
- Storm sewer outfalls larger than 36" ("major")
- Storm sewer outfalls smaller than 36" ("minor")
- Storm sewer inlets
- Storm pipes
- Stormwater basins



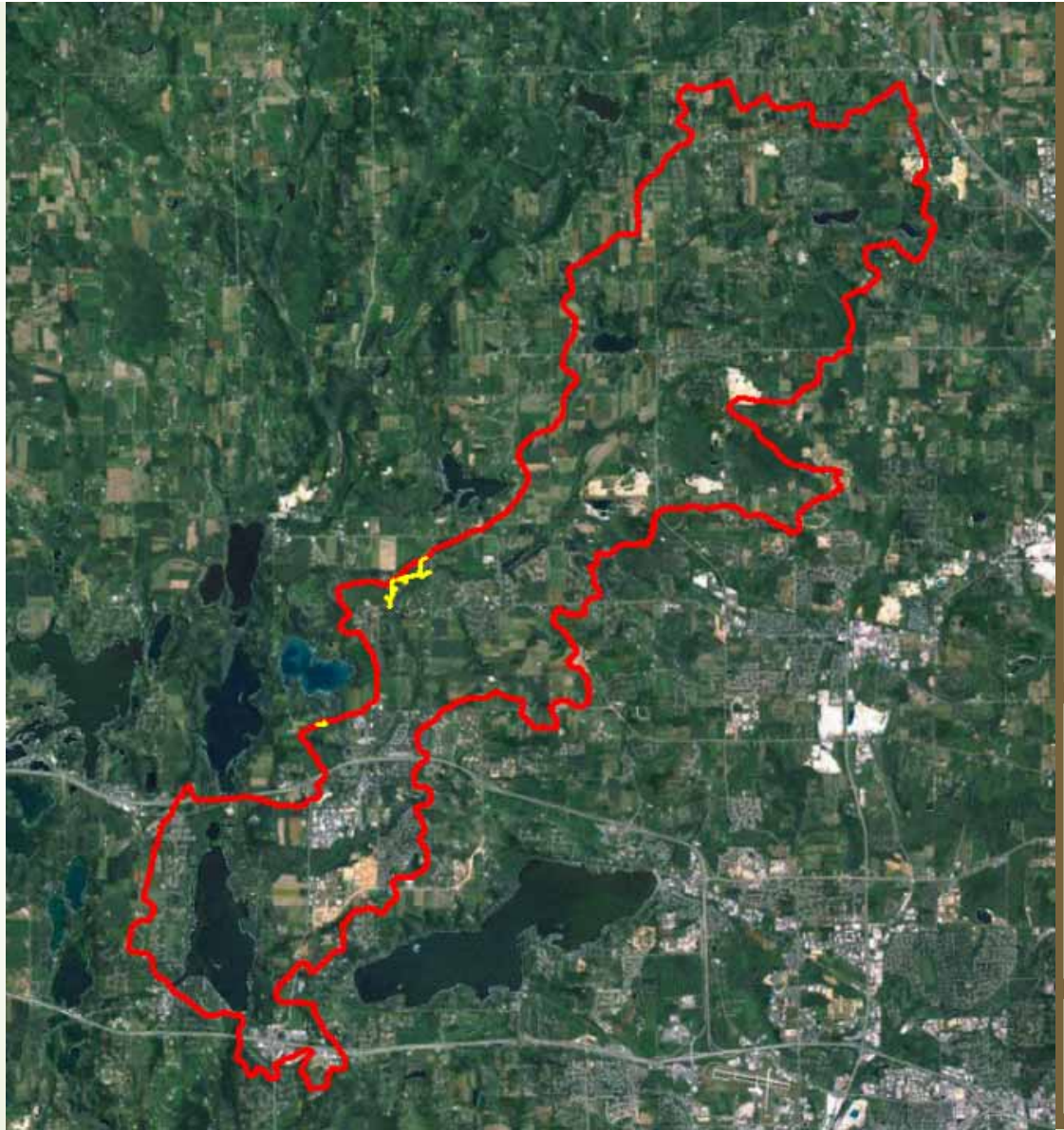


Swales



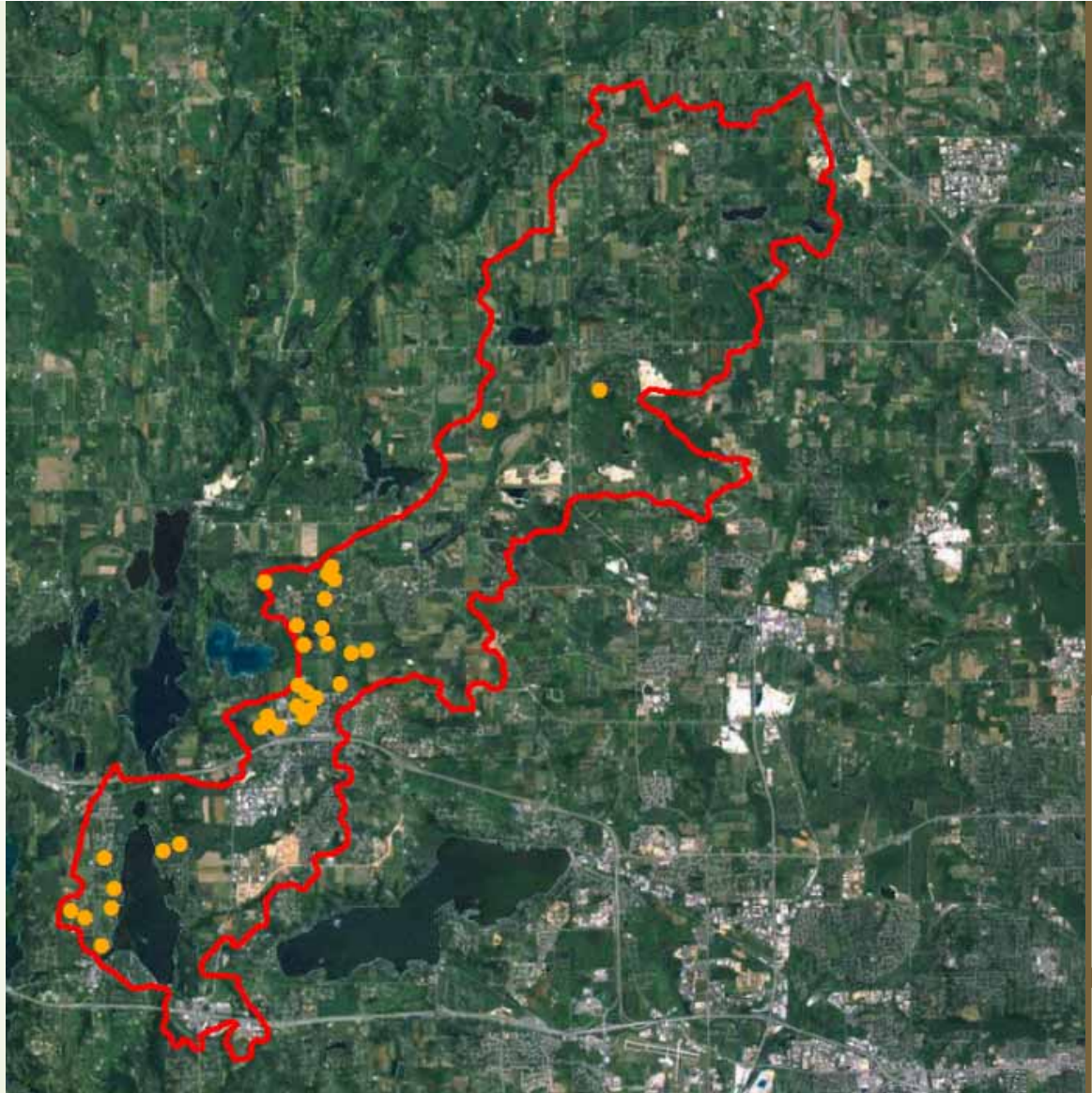


Curb and Gutter



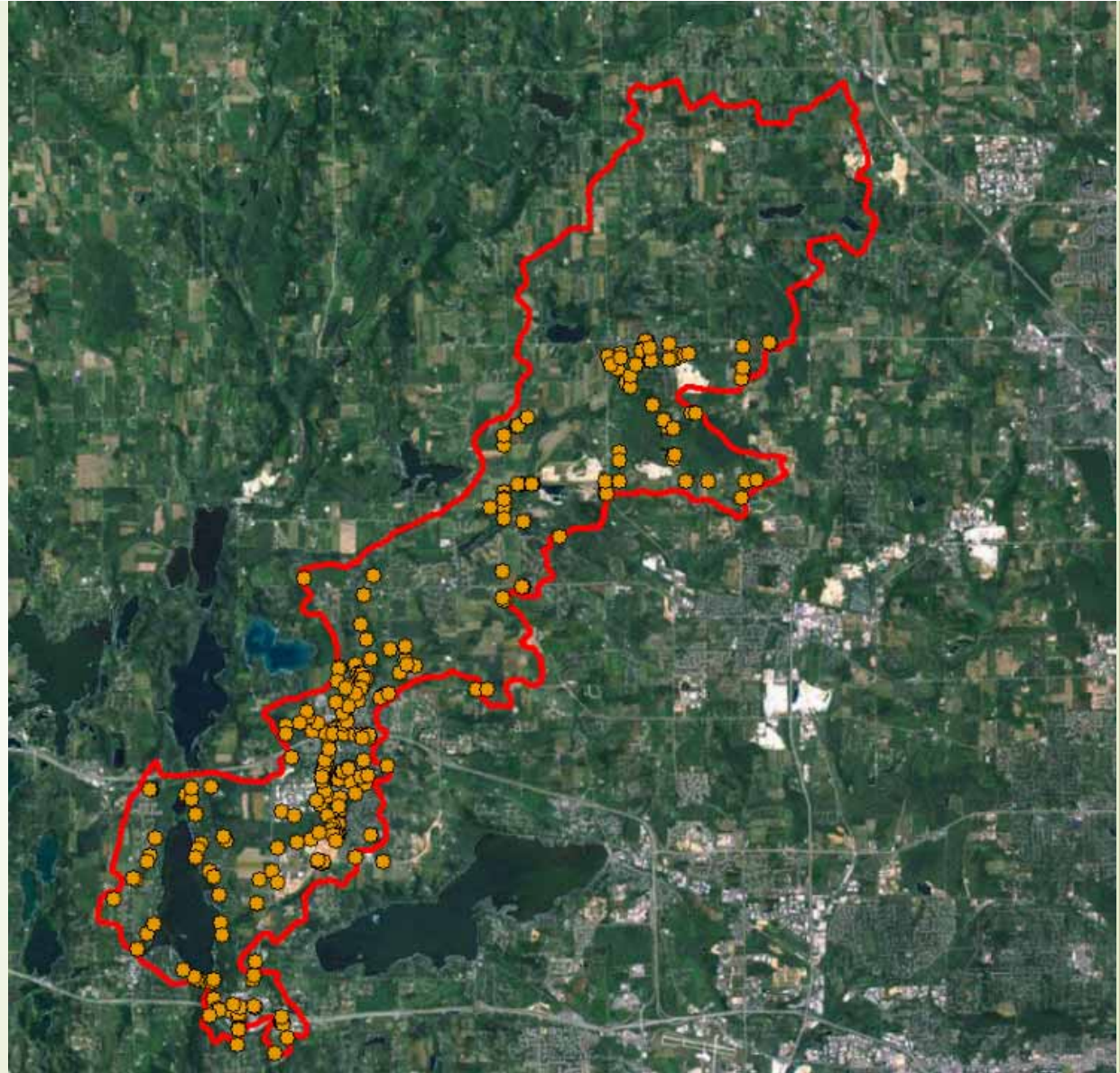


Major Storm Sewer Outfalls (>36")



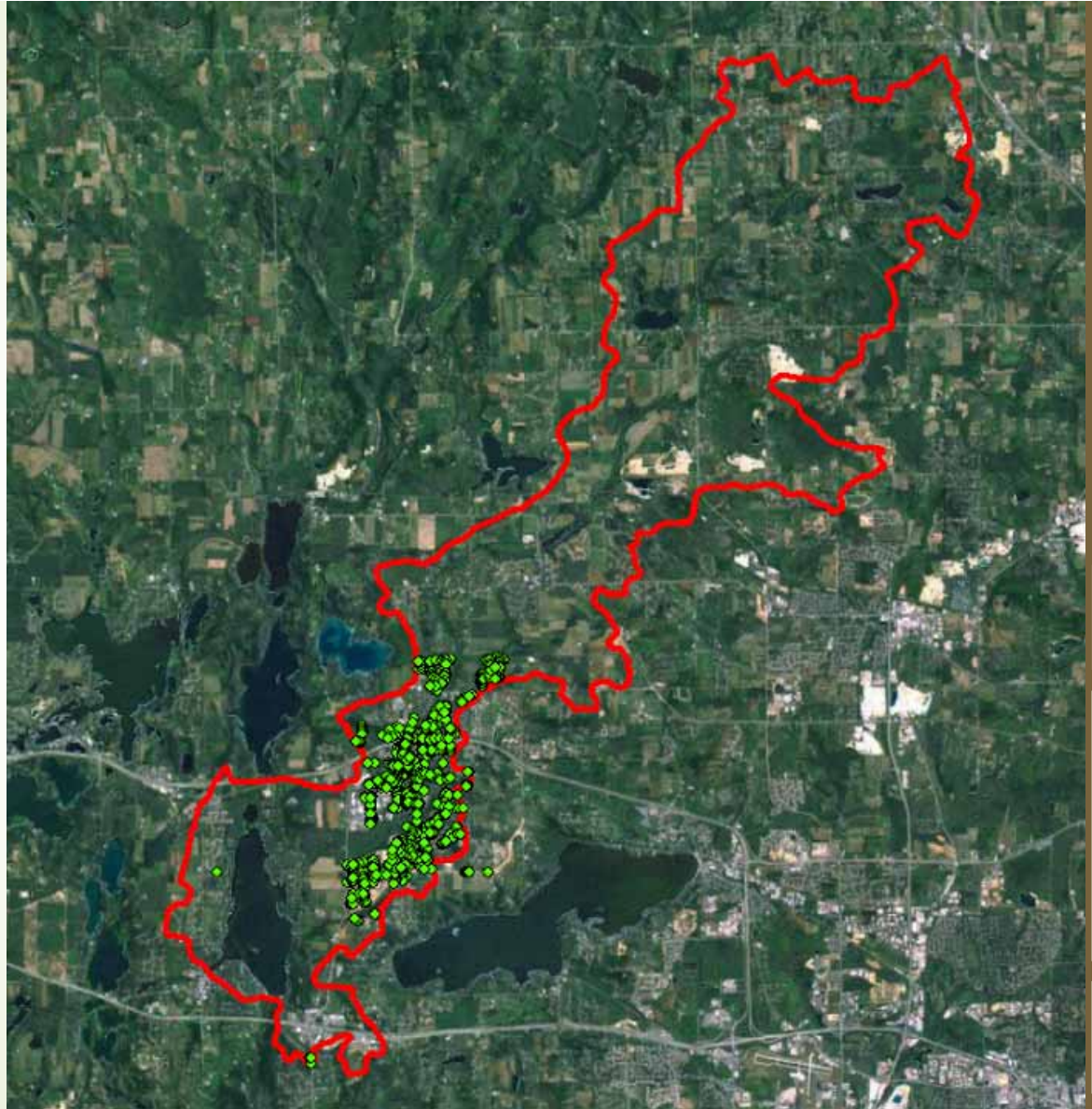


Minor Storm Sewer Outfalls



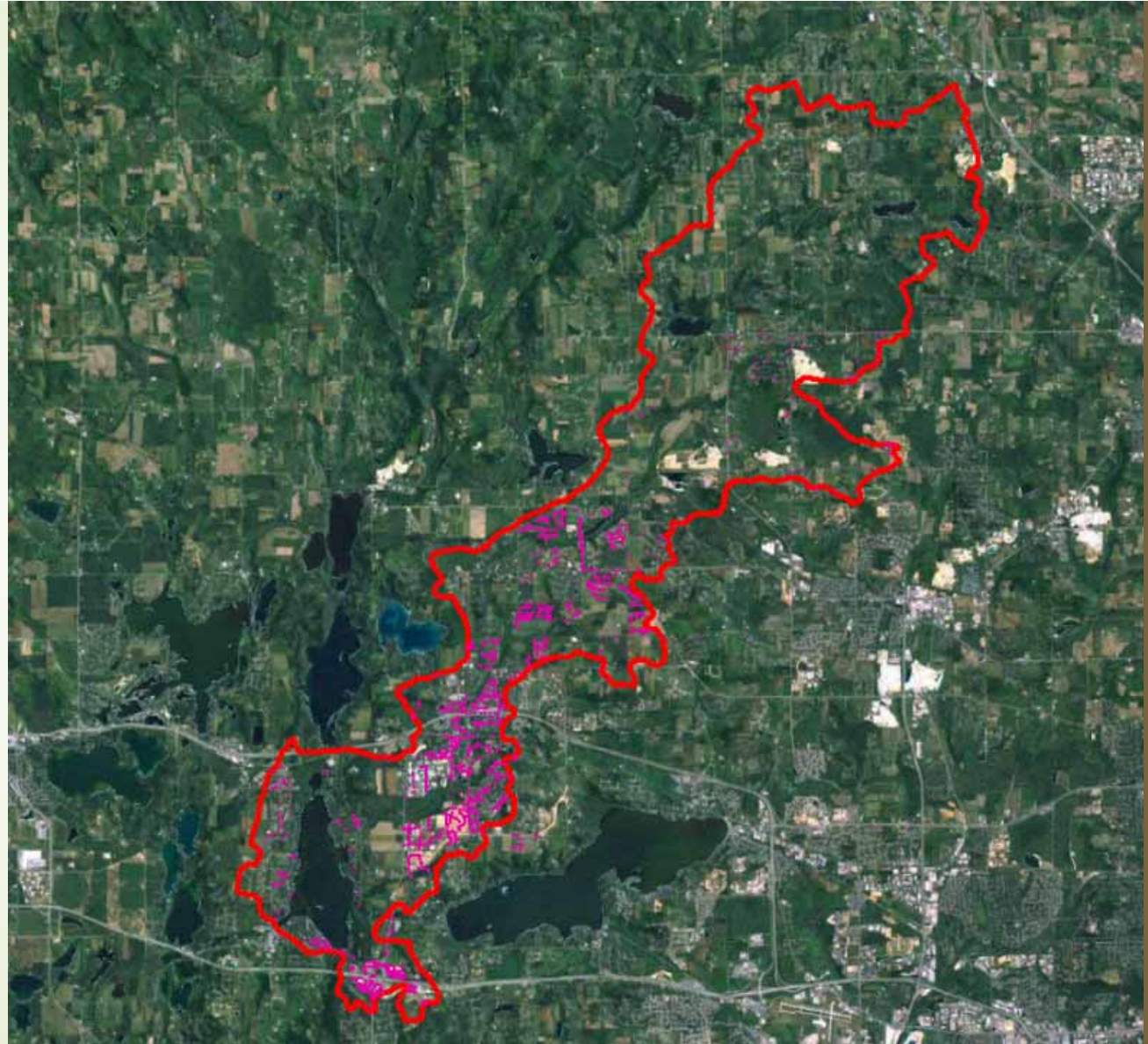


Storm Sewer Inlets



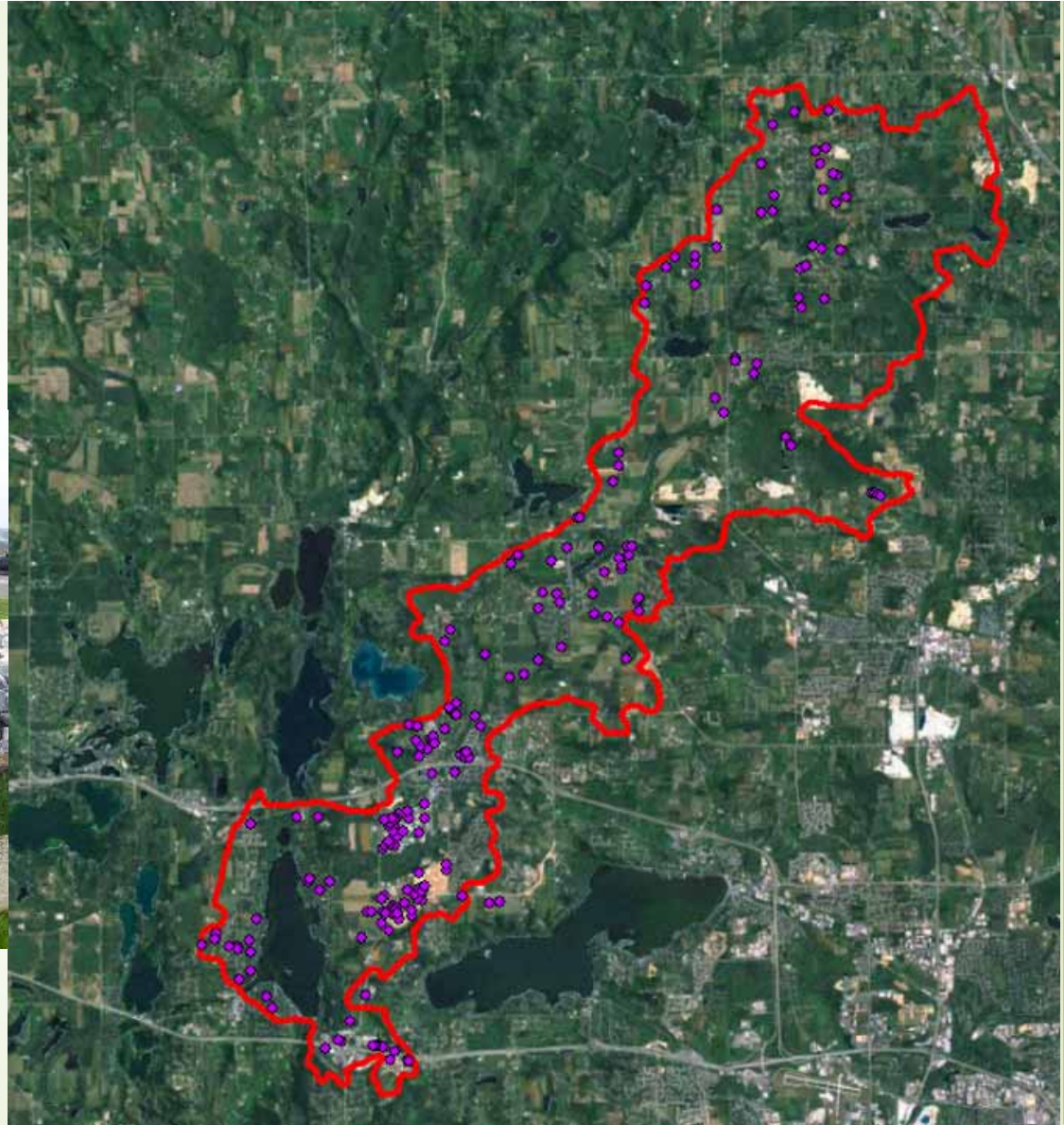


Storm Pipes





Stormwater Basins (Dry)



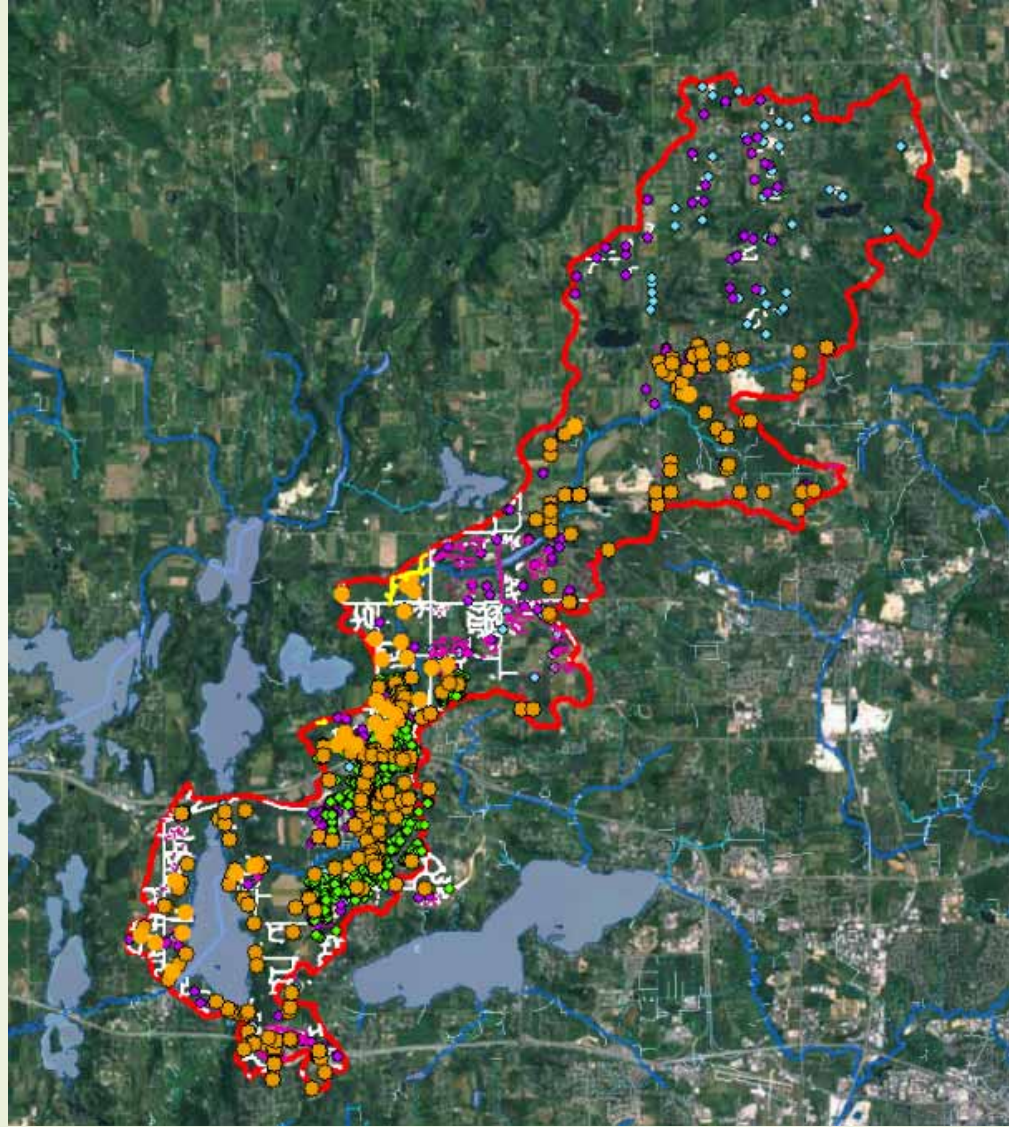


Stormwater Basins (Wet)



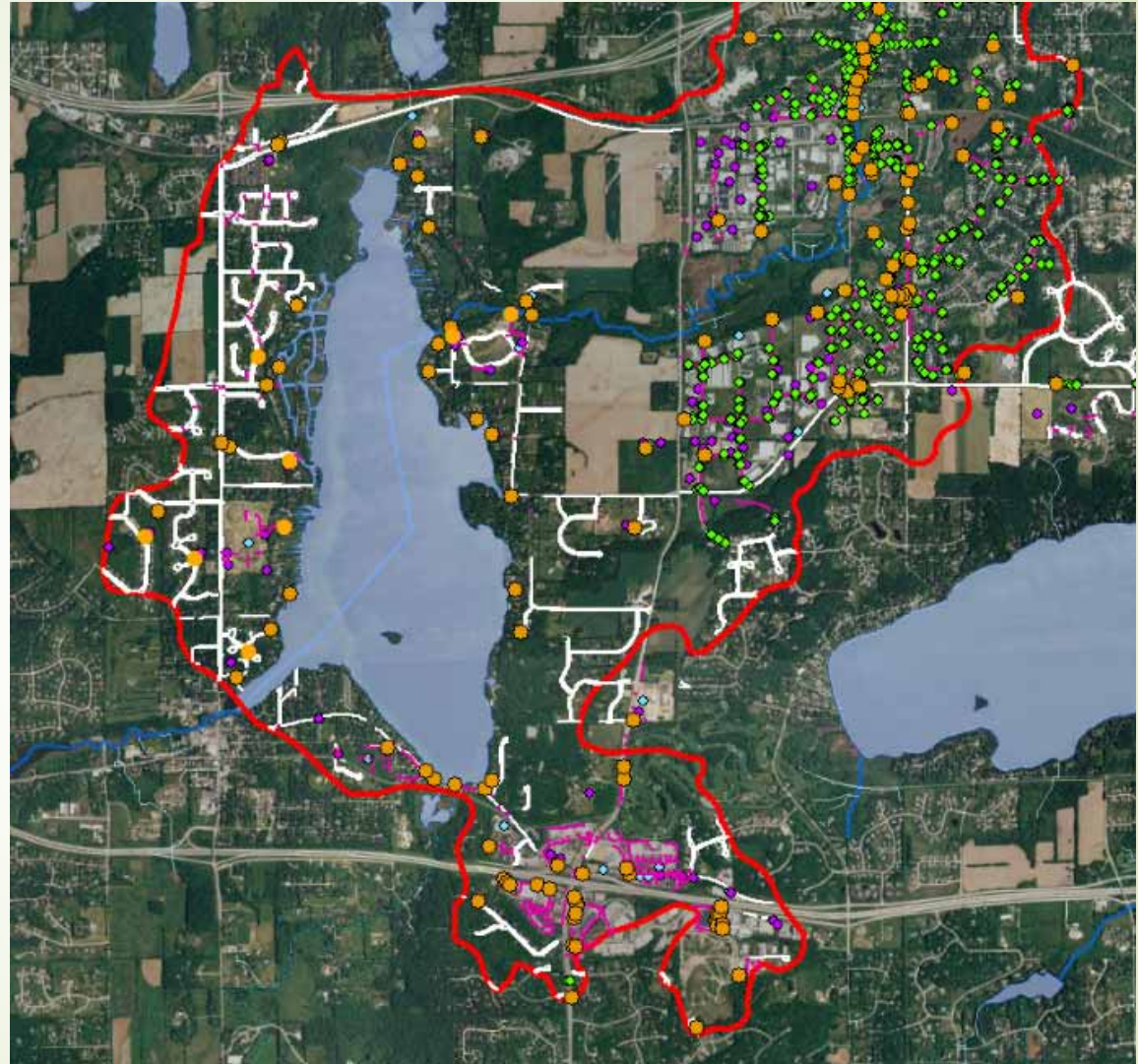


All MS4 Map Elements Together





A Closer Look





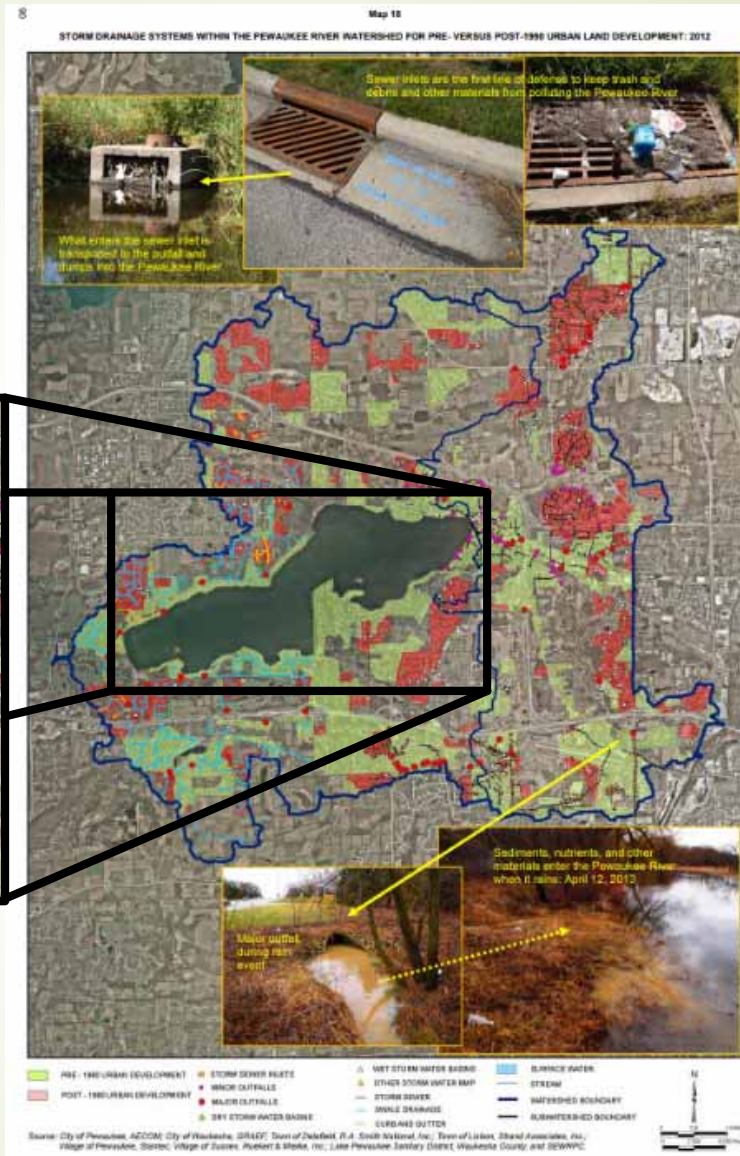
Now What?

- The map can be used for updating drainage area maps that may have been based on topo maps alone;
- Data can be used for strategic planning to supplement pollutant loading models by adding in "practices";
- Map can be used by emergency managers to prevent or isolate spills;
- Serve as a foundation for targeting areas for improvement/investment in new infrastructure;
- Make recommendations for MS4 mapping standards.





Stormwater Infrastructure for The Pewaukee River Watershed 2013



Source: Pewaukee River Watershed Protection Plan, Southeastern Wisconsin Regional Planning Commission, December 2013, Page 90





Comments or Questions?

Thank you for sticking around!

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