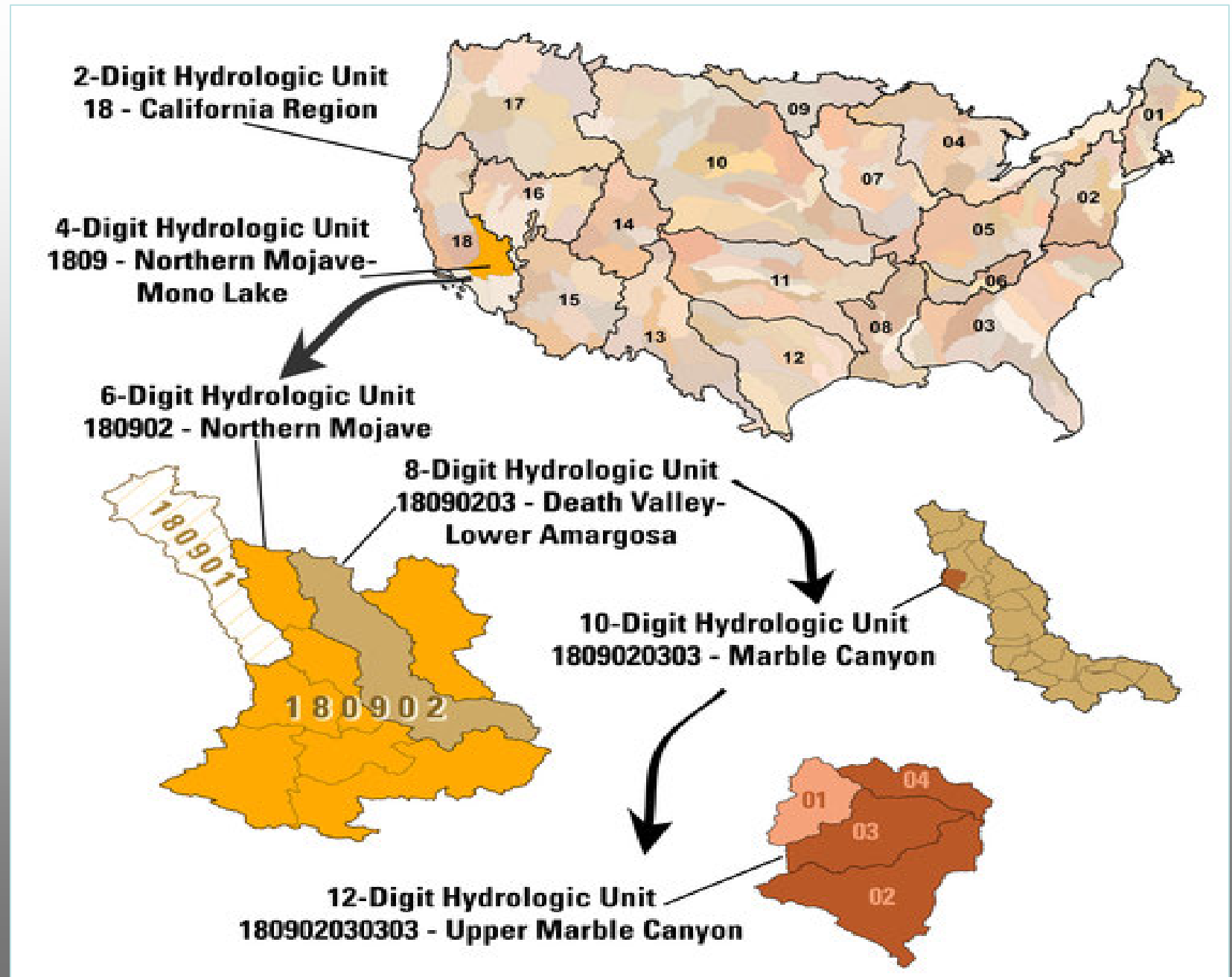


# Hydrologic Unit Code (HUC) for Watersheds: Practical Uses

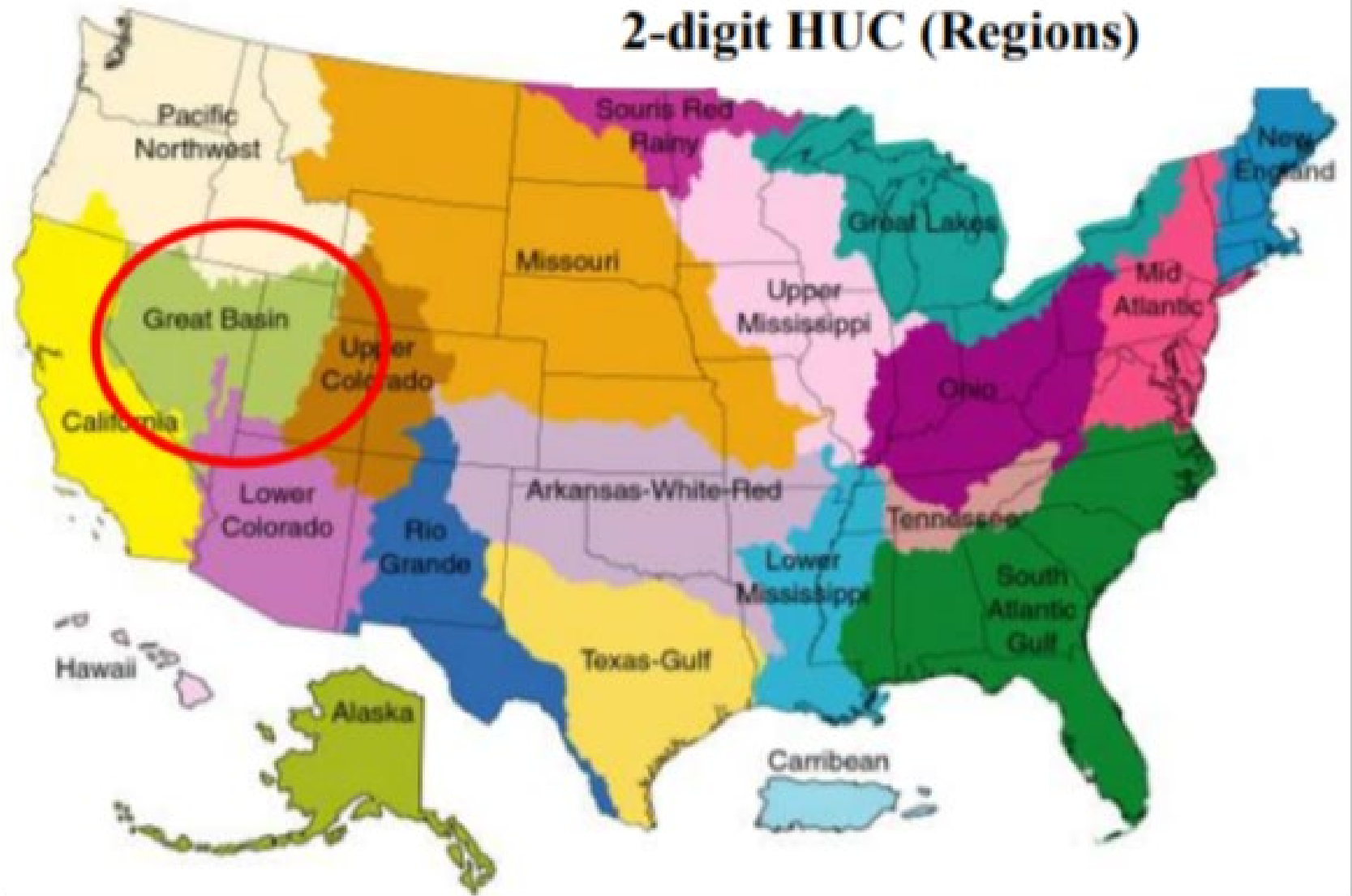
Brian Weigel, DNR and Angela Biggs, NRCS  
Land and Water Conservation Board  
06/01/21



- HUC is short for ‘hydrologic unit code’.
- HUC’s provide a hierarchical, numeric code that uniquely identifies hydrologic units or watershed boundaries.
- There are six levels of HUCs:
  - 2-digit (region),
  - 4-digit (subregion),
  - 6-digit (accounting unit),
  - 8-digit (cataloguing unit),
  - 10-digit (watershed),
  - 12-digit (subwatershed).



## 2-digit HUC (Regions)



<https://dnr.wisconsin.gov/topic/SurfaceWater/NutrientStrategy.html>

### Federal Watershed Codes

In this and other chapters we use the federal agency watershed code, the Hydrologic Unit Classification (HUC) system. The number of digits in the code increases as the size of the watershed decreases. In this document, 8-digit (HUC 8), 10-digit (HUC 10) and 12-digit (HUC 12) codes are used. The table below shows the number of HUCs in Wisconsin for each of these three commonly used levels.

Major Basin	HUC 8	HUC 10	HUC 12
Lake Superior	5	22	108
Lake Michigan	13	90	450
Mississippi River	32	256	1244
Total	50	368	1802

The average size of a HUC 10 in Wisconsin is about 150 square miles (100,000 acres) while the size of a HUC 12 is about 30 square miles (20,000 acres).

Since the federal delineation of HUC watersheds extends across state lines, a number of the HUCs have a very small area in Wisconsin with the smallest being less than 10 acres. These very small HUCs may have been combined with adjoining HUCs in the analyses described in this chapter or not included in the analysis.



## Wisconsin HUC 8 Map



## WDNR Water Management Units (WMUs) and HUC 8

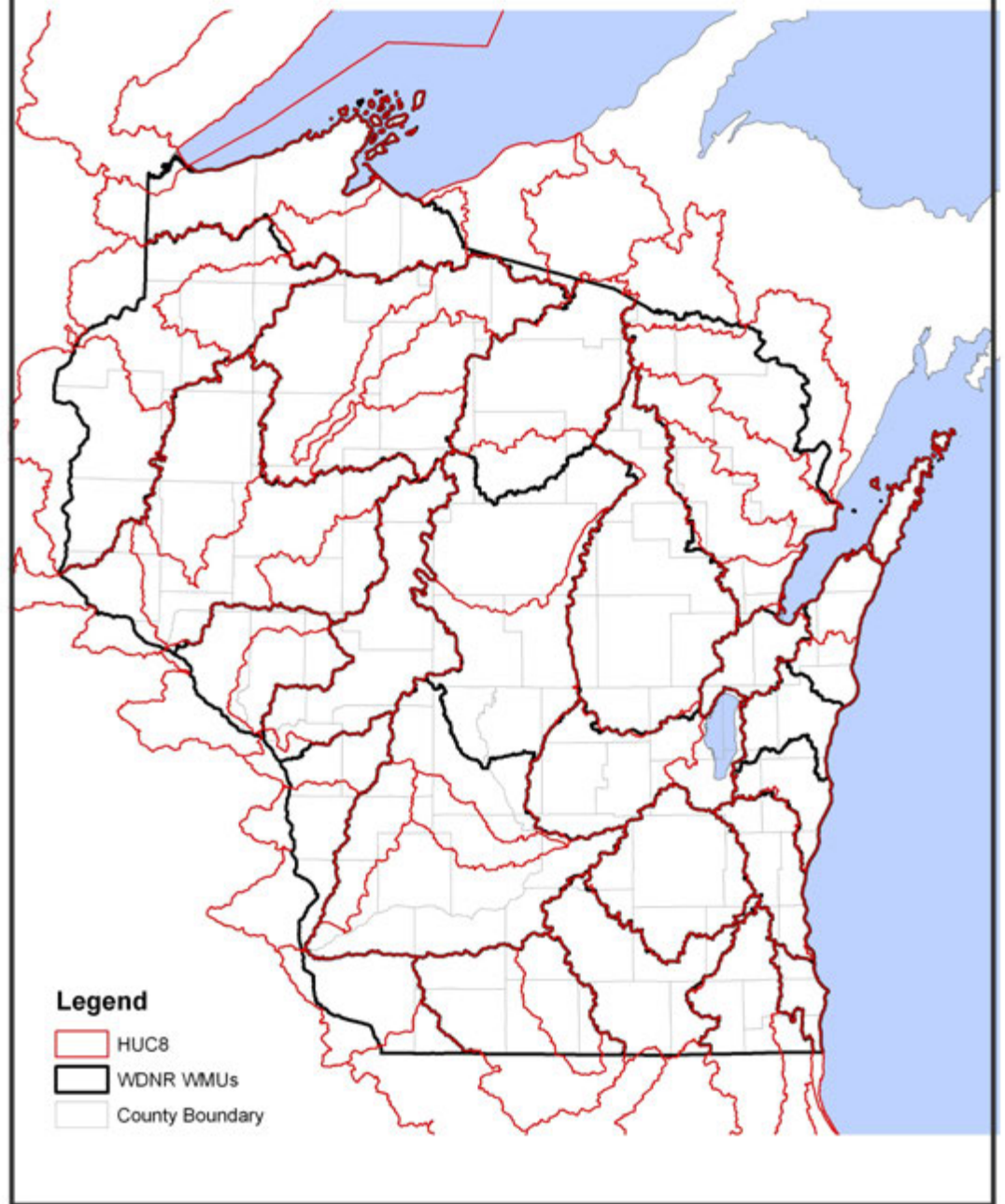
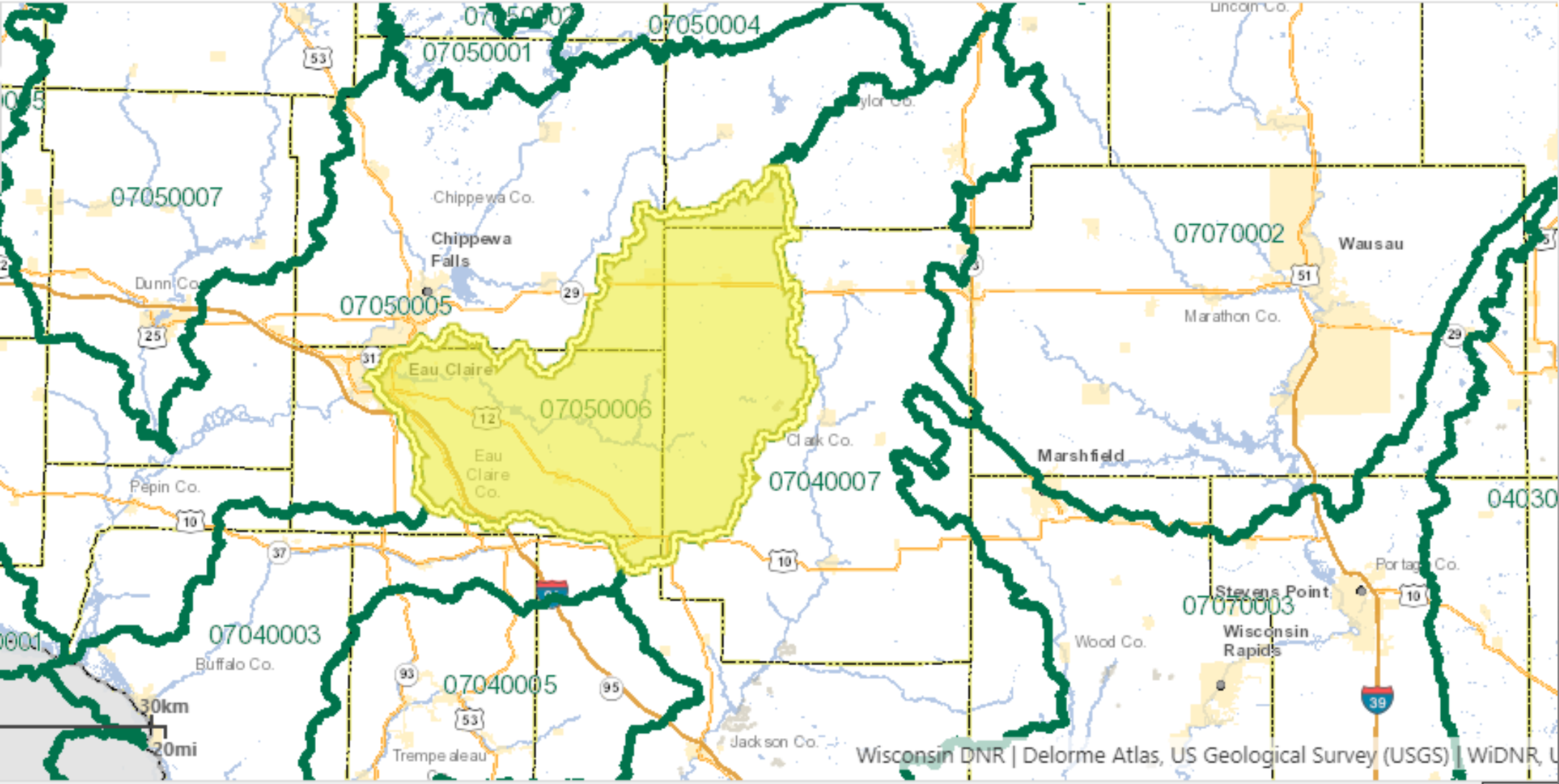
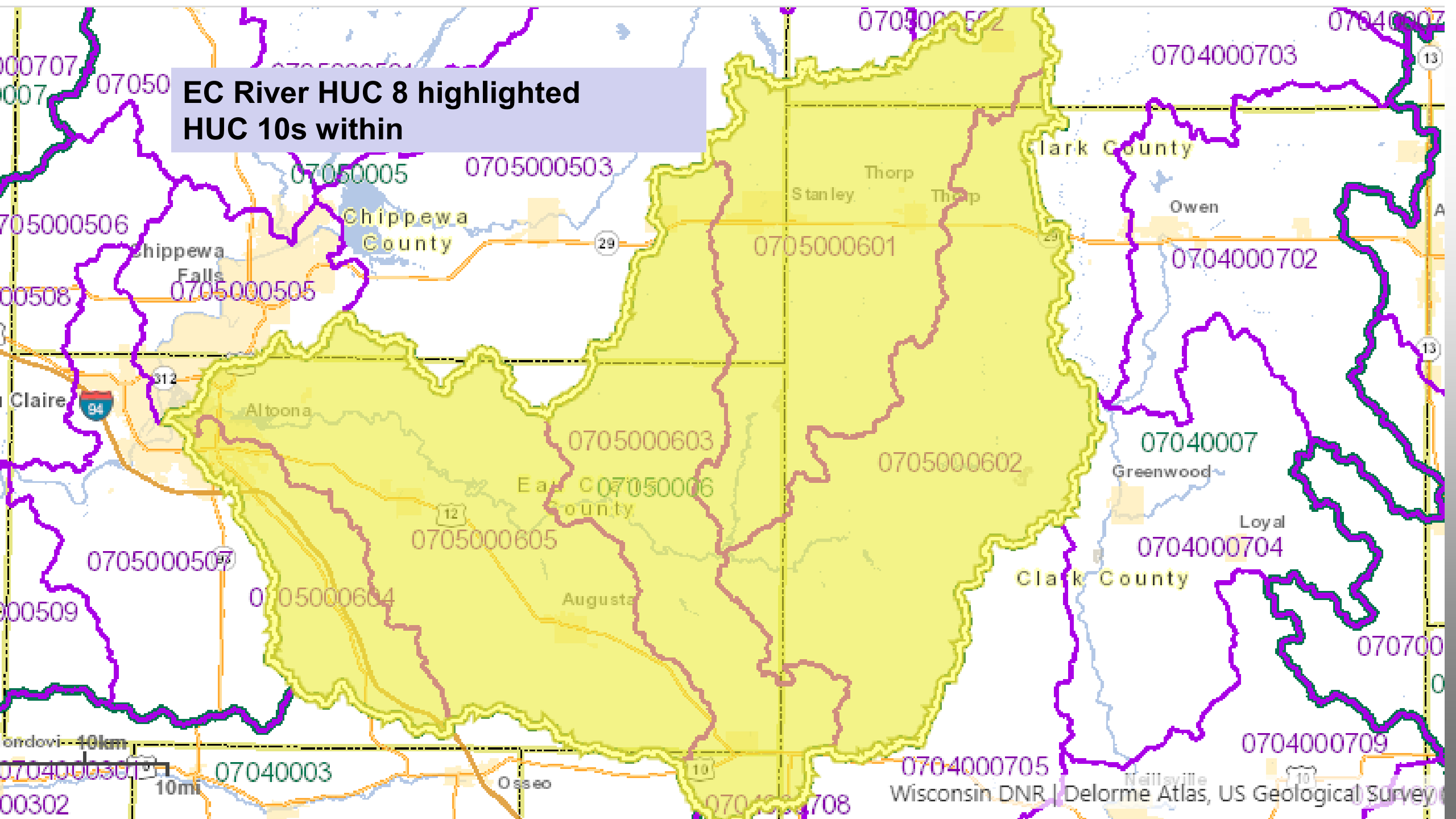


Figure 1.1 HUC 8 Watersheds in Wisconsin

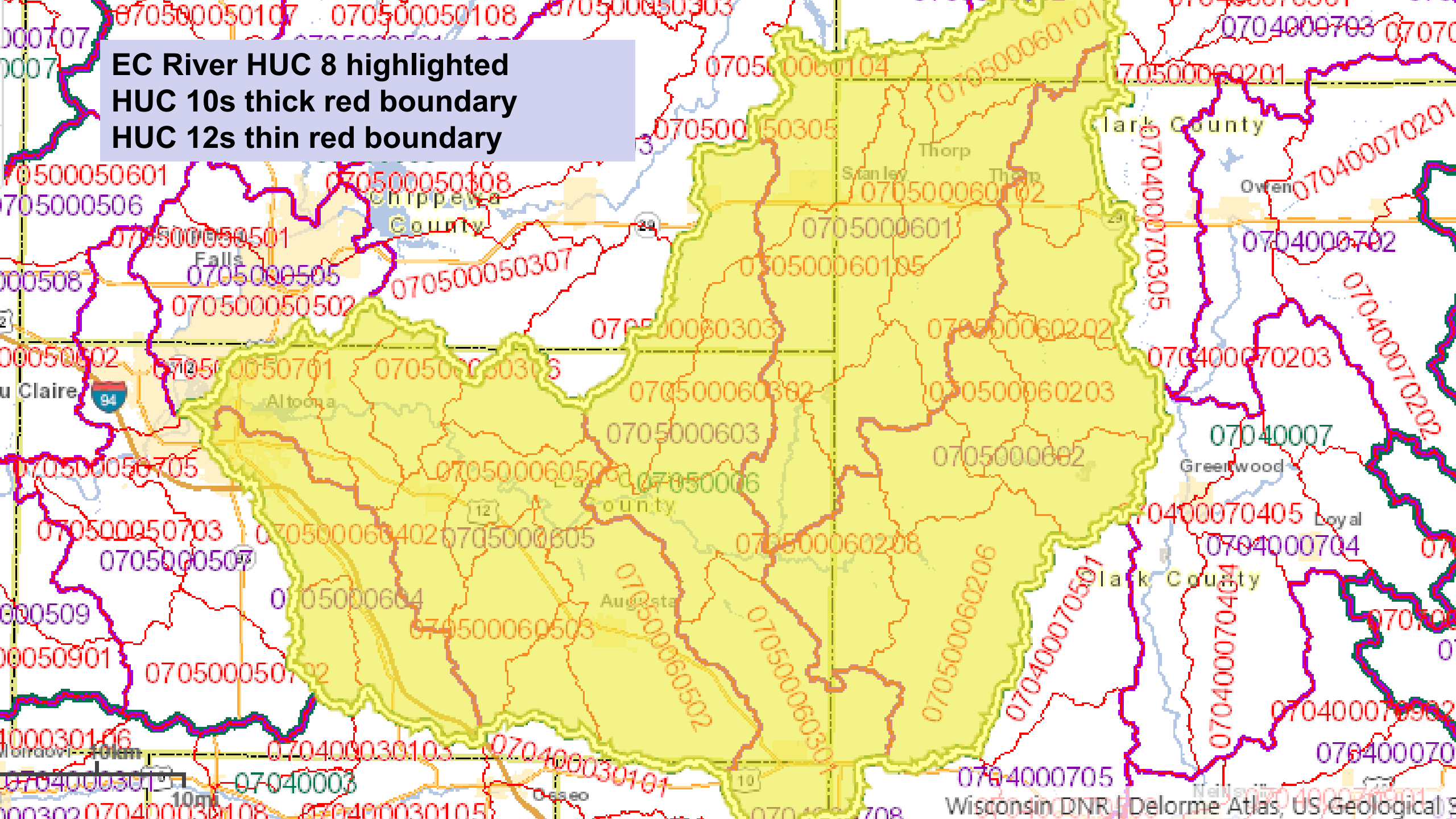
HUC 8's – Eau Claire River Watershed highlighted.



**EC River HUC 8 highlighted  
HUC 10s within**



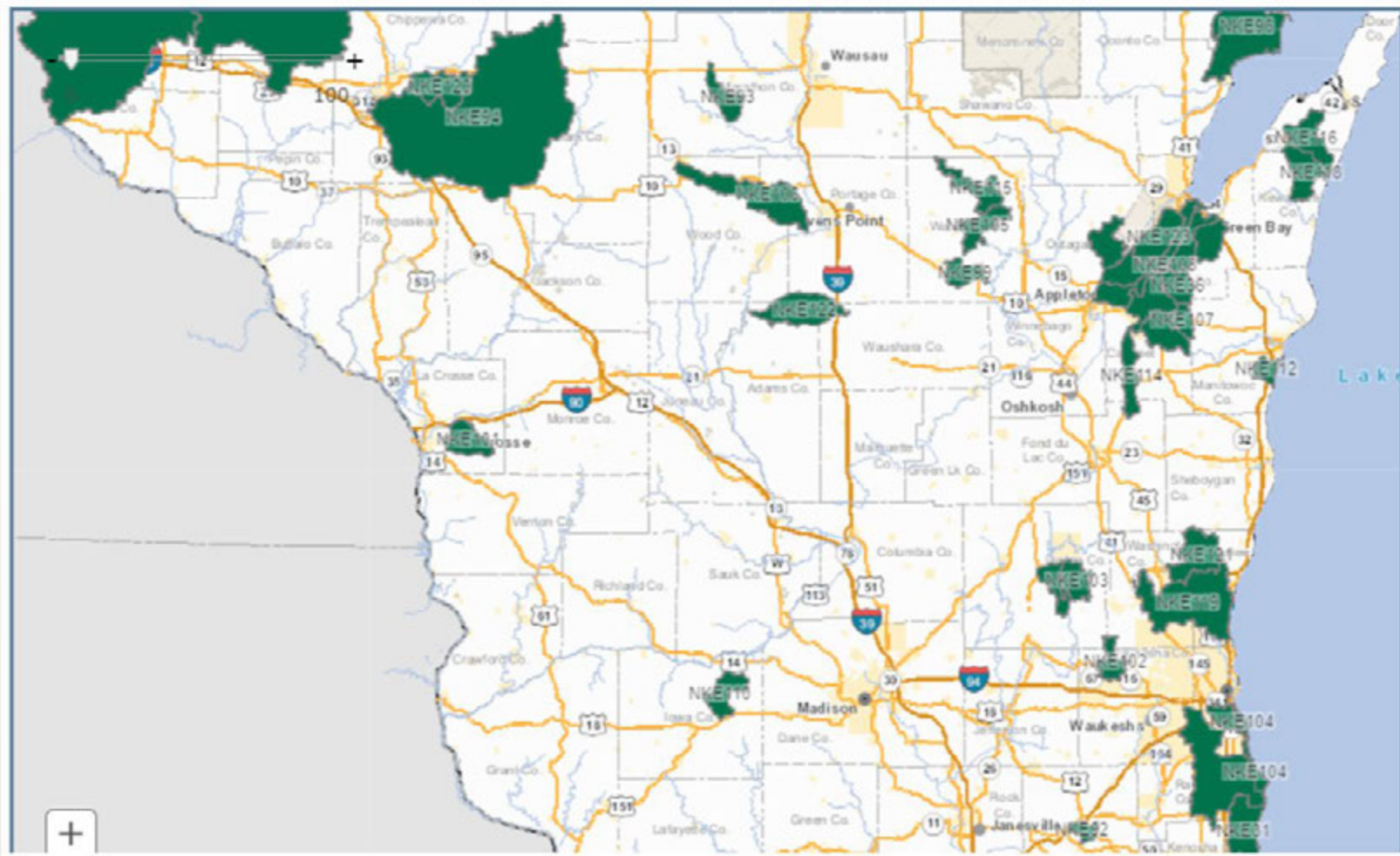
**EC River HUC 8 highlighted**  
**HUC 10s thick red boundary**  
**HUC 12s thin red boundary**

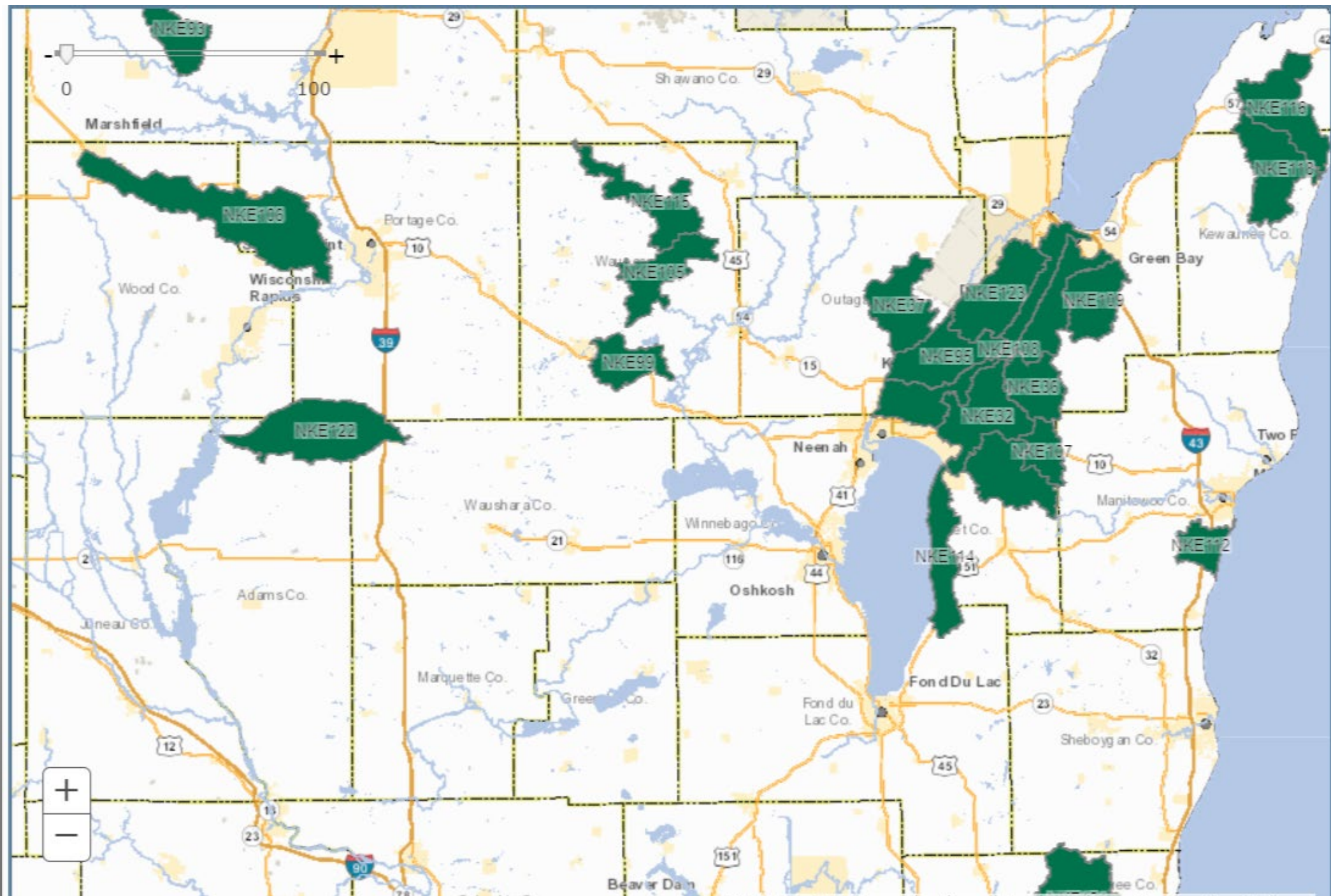






## ACTIVE WATERSHED/LAKE PLAN AREAS







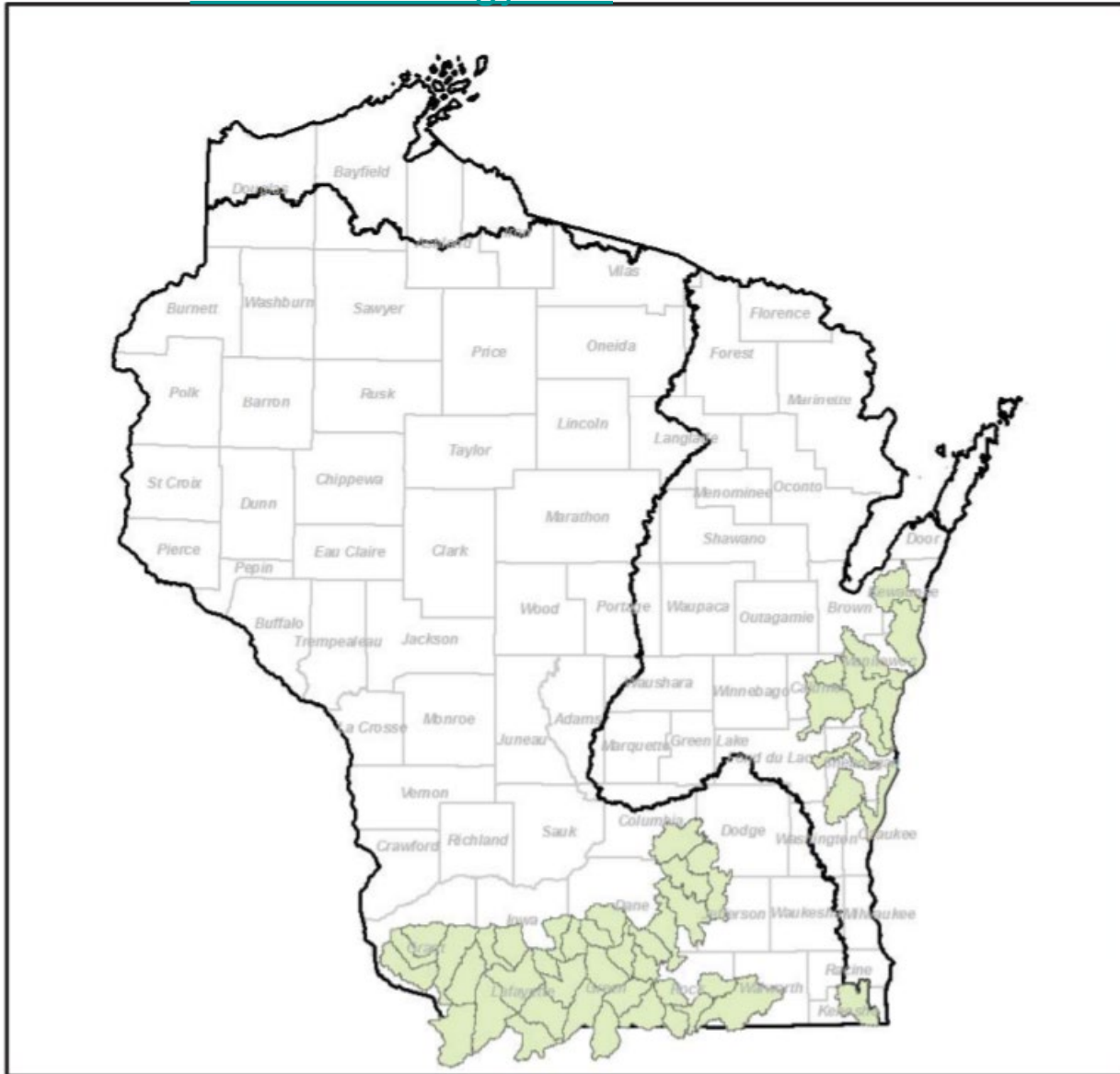
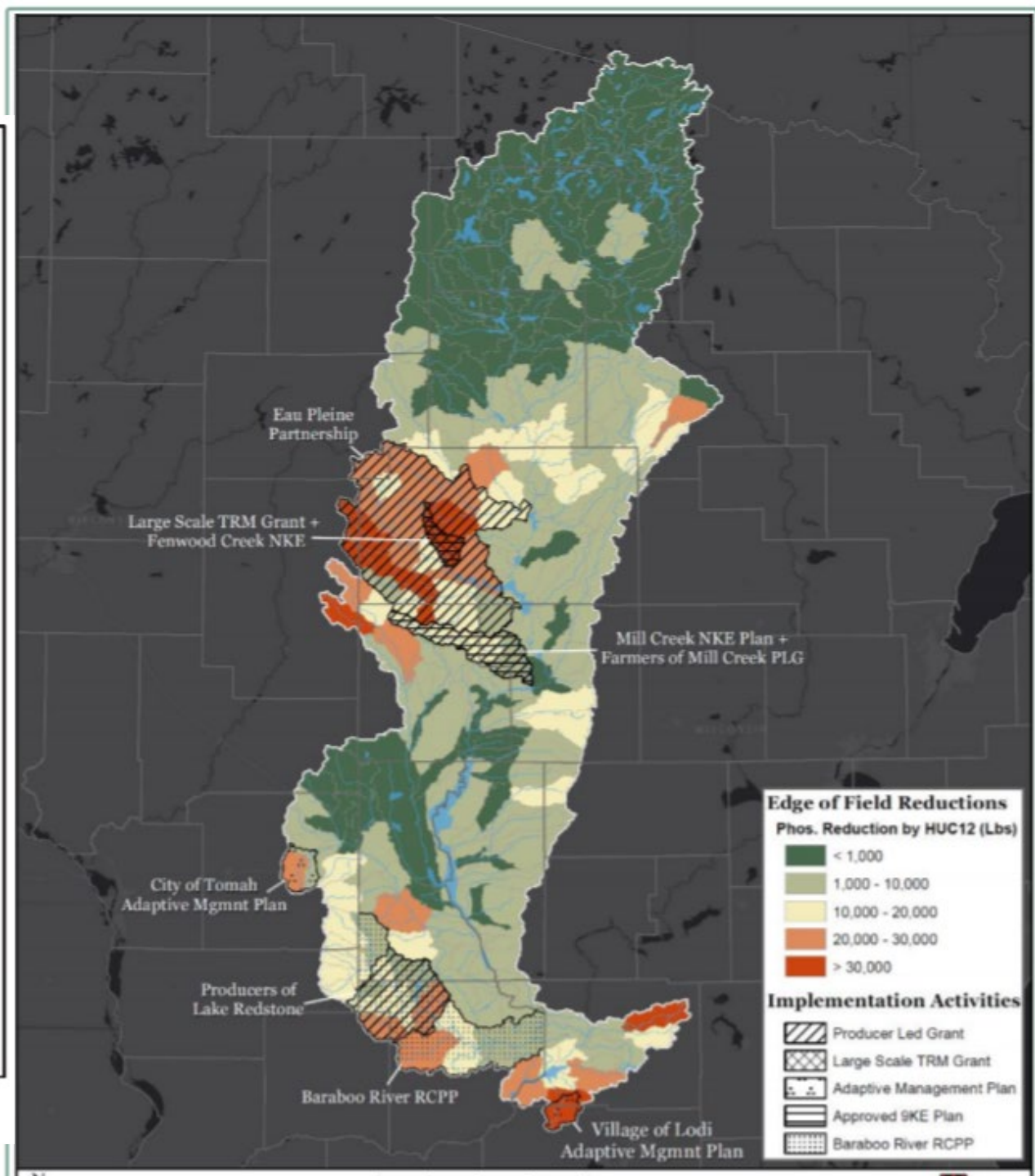


Figure ES.3 Top Group Watersheds for Nitrogen



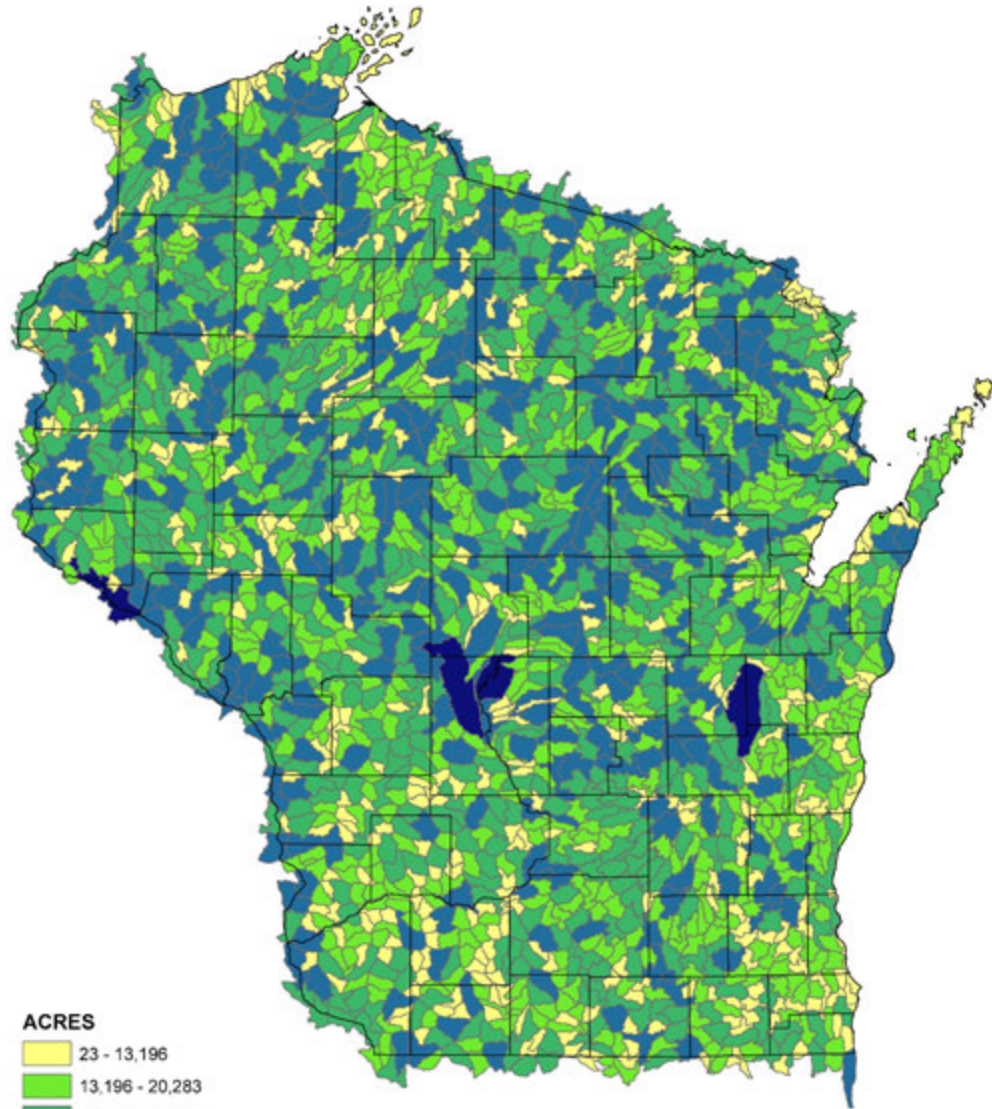
**DNR is working with counties and other partners to focus water quality protection and restoration efforts at the HUC 10 and HUC 12 scales.**

**Why are HUC's important to counties? It provides a common geographic area/scale for counties to:**

- **Focus/track LW plan implementation efforts**
- **Submit Grant Applications**
- **Develop and Implement 9 Element Watershed Based Plans**
- **Work to restore impaired waters and TMDLs**
- **Coordinate with DNR to complete WQ Monitoring**

**For more HUC information see: [NRCS Hydrologic Units](#)**

### Wisconsin HUC12 Watershed Acreage



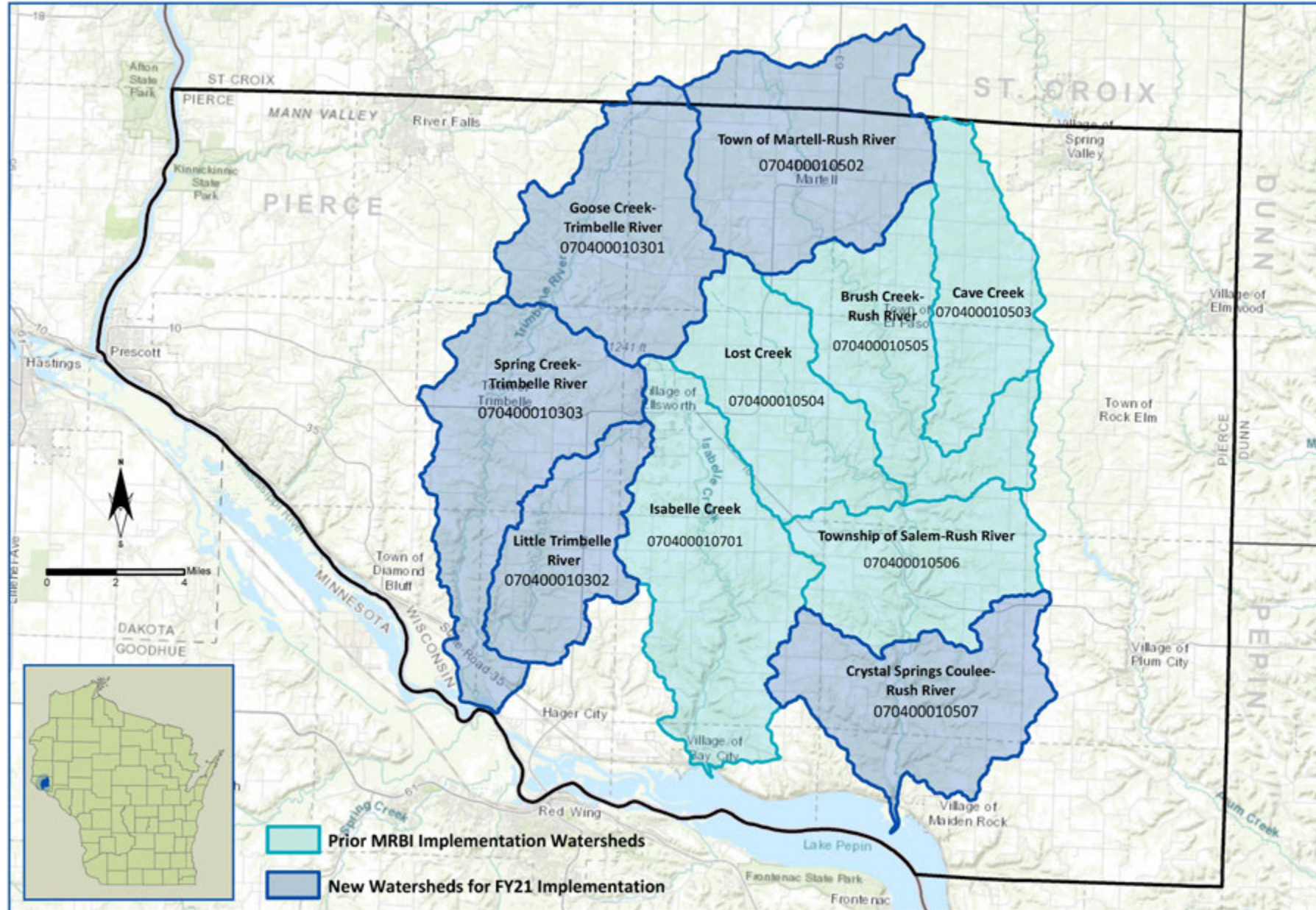
#### ACRES

- 23 - 13,196
- 13,196 - 20,283
- 20,283 - 26,260
- 26,620 - 64,469
- 64,469 - 152,171



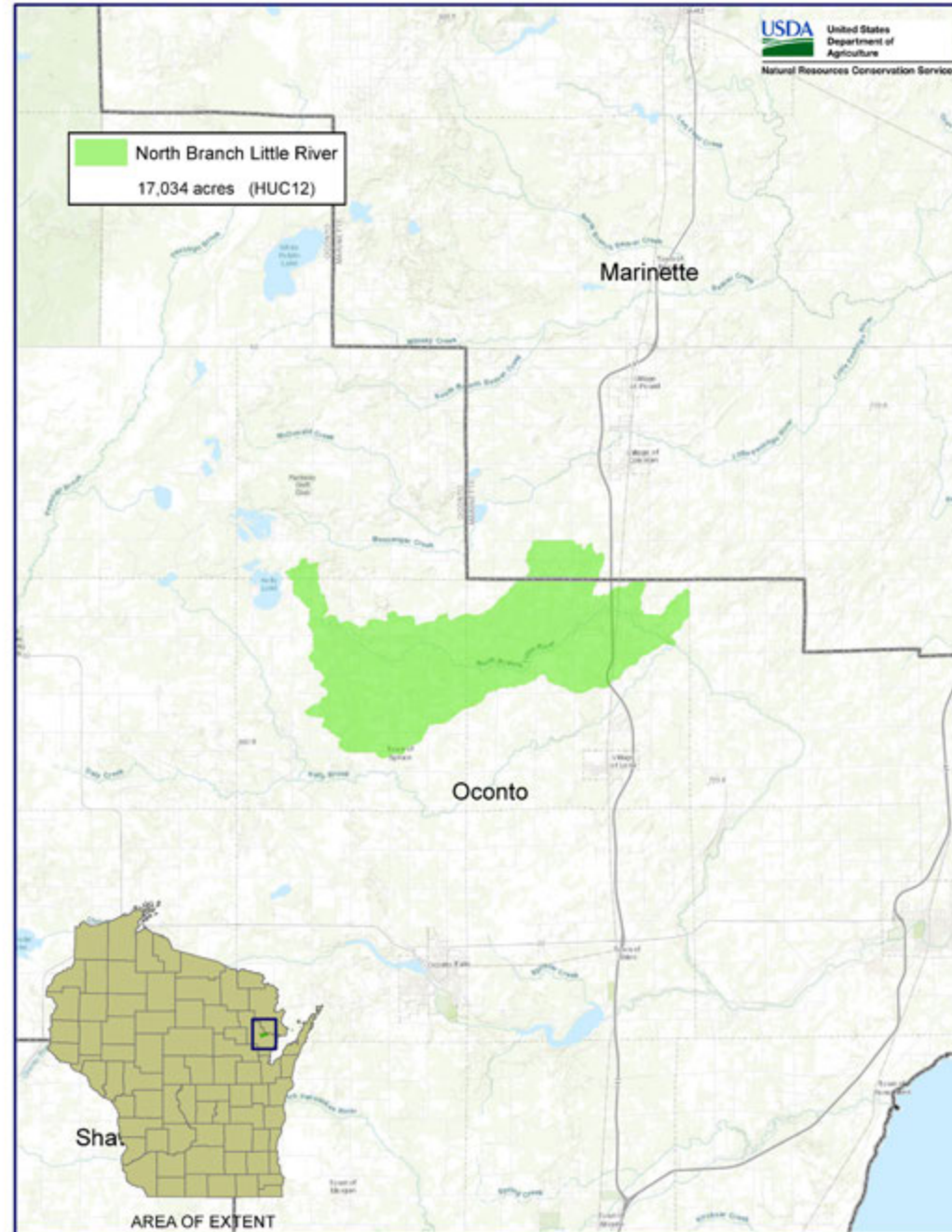
# Mississippi River Basin Healthy Watersheds Initiative

## Prior and New Implementation Sub-watersheds

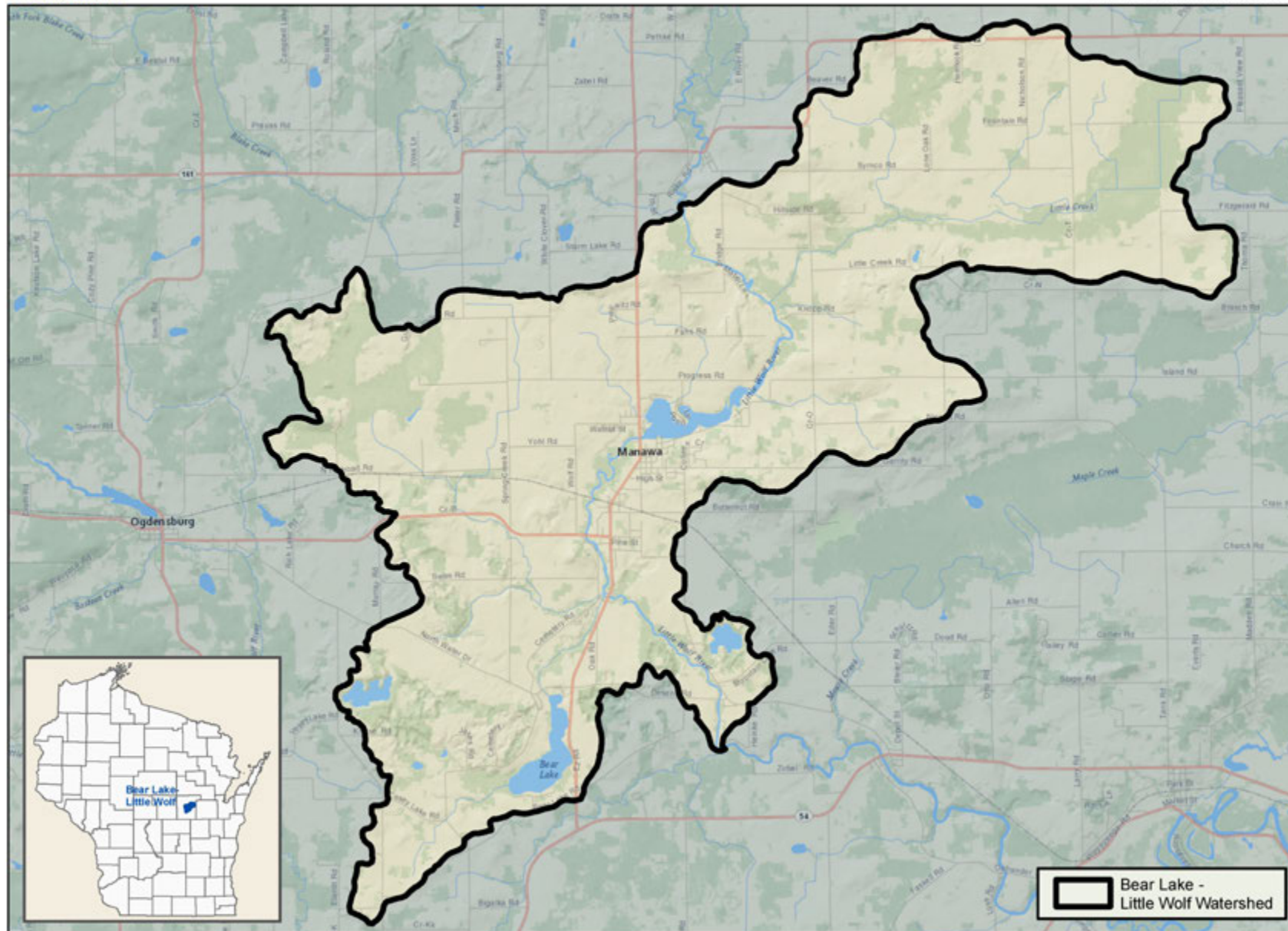


Dataset Sources:  
ESRI StreetMap World 2D  
NRCS 12 Digit WBD HUC

# National Water Quality Initiative North Branch Little River







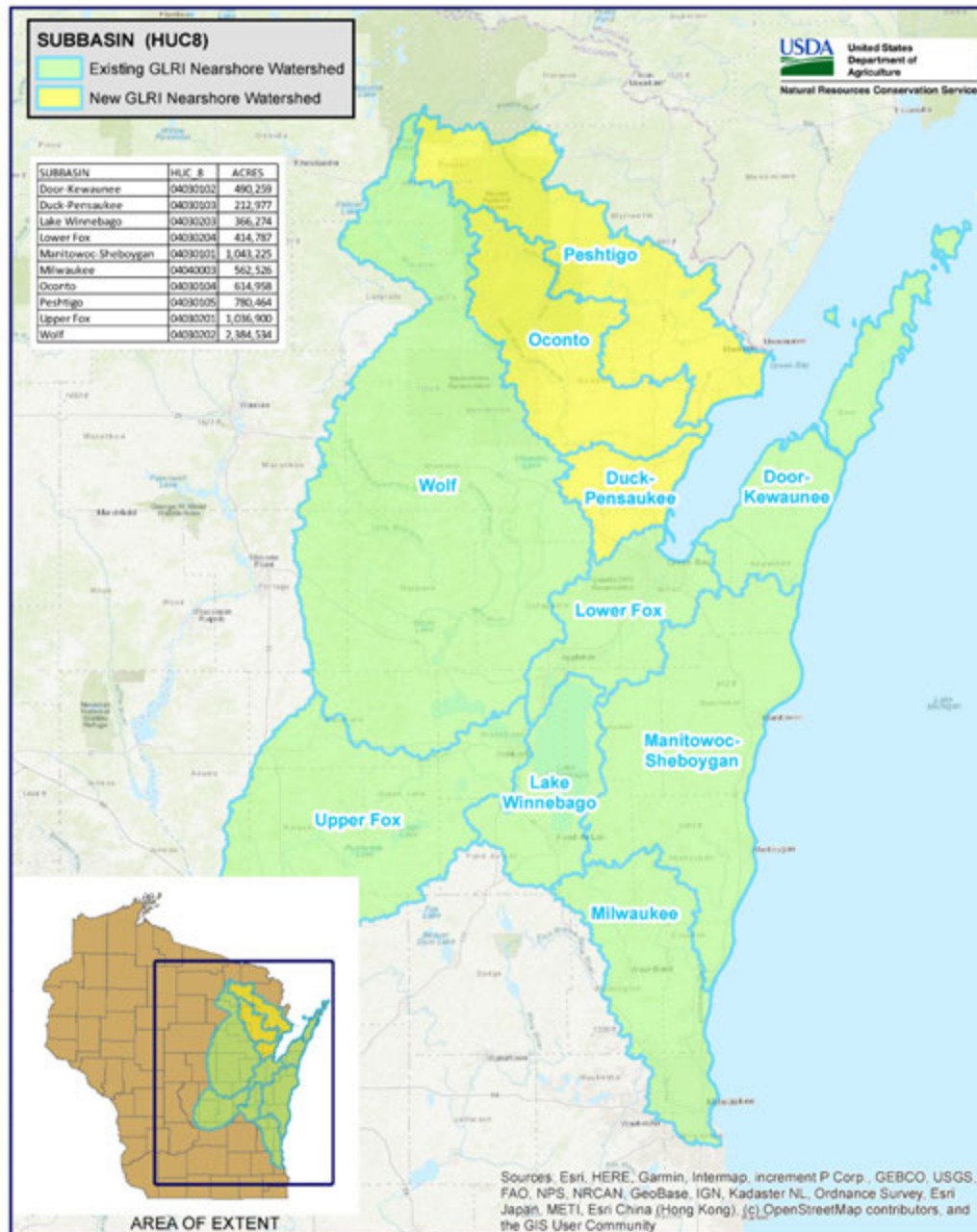
# Great Lakes Restoration Initiative

## Lake Michigan Nearshore GLRI Watersheds - Existing and New

SUBBASIN (HUC8)		
	Existing GLRI Nearshore Watershed	New GLRI Nearshore Watershed
	Existing GLRI Nearshore Watershed	
		New GLRI Nearshore Watershed

SUBBASIN	HUC_8	ACRES
Door-Kewaunee	04030202	490,239
Duck-Pensaukee	04030203	212,977
Lake Winnebago	04030204	366,274
Lower Fox	04030204	414,787
Manitowoc-Sheboygan	04030205	1,043,225
Milwaukee	04030206	562,526
Oconto	04030207	614,958
Peshigo	04030208	780,464
Upper Fox	04030201	1,036,900
Wolf	04030202	2,384,534

USDA United States Department of Agriculture  
Natural Resources Conservation Service



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Mapbox, OpenStreetMap contributors, and the GIS User Community

# Links to NRCS Resources

- NRCS Wisconsin Resources: [www.wi.nrcs.usda.gov](http://www.wi.nrcs.usda.gov)
- Watersheds, Hydrologic Units, Hydrologic Unit Codes, Watershed Approach: [www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1042207.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1042207.pdf)
- National Geospatial Center of Excellence (NGCE) | NRCS: [www.nrcs.usda.gov/wps/portal/nrcs/main/national/ngce/](http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/ngce/)
- Rapid Watershed Assessments: [www.nrcs.usda.gov/wps/portal/nrcs/main/wi/technical/dma/rwa/](http://www.nrcs.usda.gov/wps/portal/nrcs/main/wi/technical/dma/rwa/)
- NRCS 12 Digit HUC Subwatersheds Lists: [www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/home/?&cid=nrcsdev11\\_024117](http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/home/?&cid=nrcsdev11_024117)
- NRCS Watershed Resources
  - National Water Quality Initiative: [www.nrcs.usda.gov/wps/portal/nrcs/detail/wi/programs/landscape/?cid=nrcs142p2\\_020763](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/wi/programs/landscape/?cid=nrcs142p2_020763)
  - Mississippi River Basin Healthy Watersheds Initiative: [www.nrcs.usda.gov/wps/portal/nrcs/detail/wi/programs/landscape/?cid=nrcs142p2\\_020764](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/wi/programs/landscape/?cid=nrcs142p2_020764)
  - Great Lakes Restoration Initiative: [www.nrcs.usda.gov/wps/portal/nrcs/detail/wi/programs/landscape/?cid=nrcs142p2\\_020762](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/wi/programs/landscape/?cid=nrcs142p2_020762)