



# SHAWANO COUNTY LAND & WATER RESOURCE MANAGEMENT PLAN 5 - YEAR REVIEW

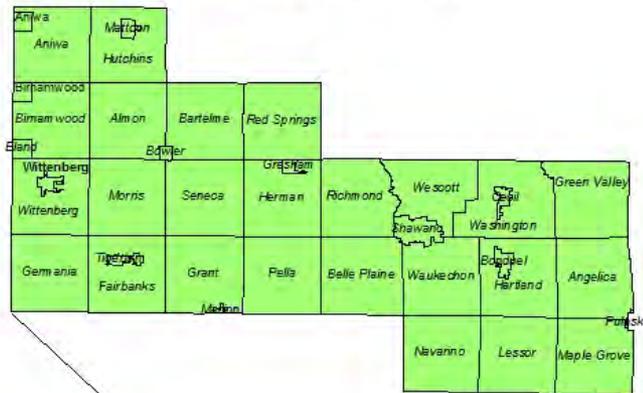
LAND & WATER CONSERVATION BOARD MEETING  
MADISON (VIRTUAL) - APRIL 6, 2021

Scott M. Frank, Conservationist & Arlyn Tober, LCC Chair  
Shawano County Land Conservation Department  
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# LOCATION & MAKEUP

## Shawano County



- 25 Towns
- 11 Villages
- 2 Cities

Population – 41,775  
Land Area – 910 sq mi

County Seat - Shawano  
Population – 9,164

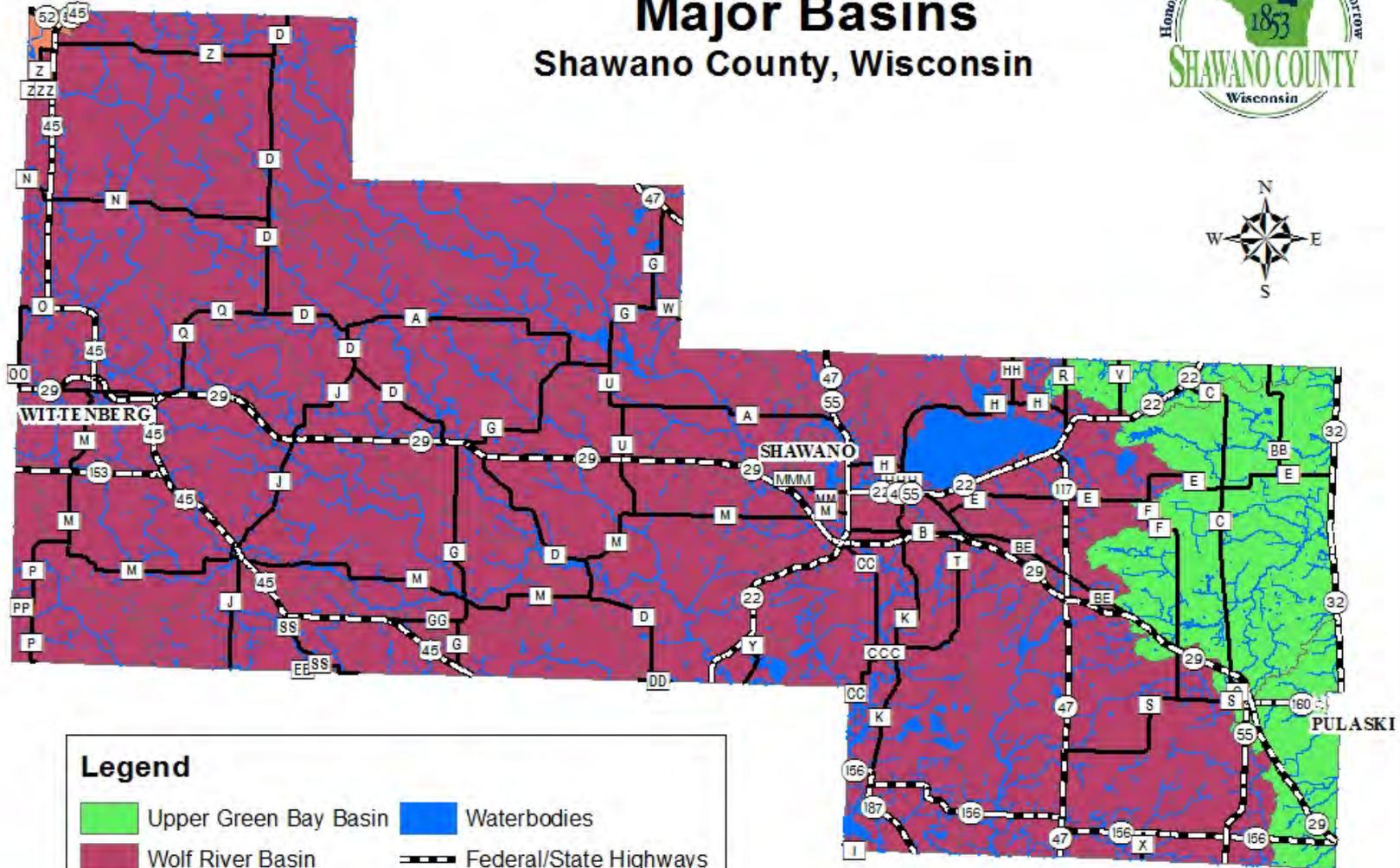


# LCD ORGANIZATIONAL CHART



# Major Basins

## Shawano County, Wisconsin

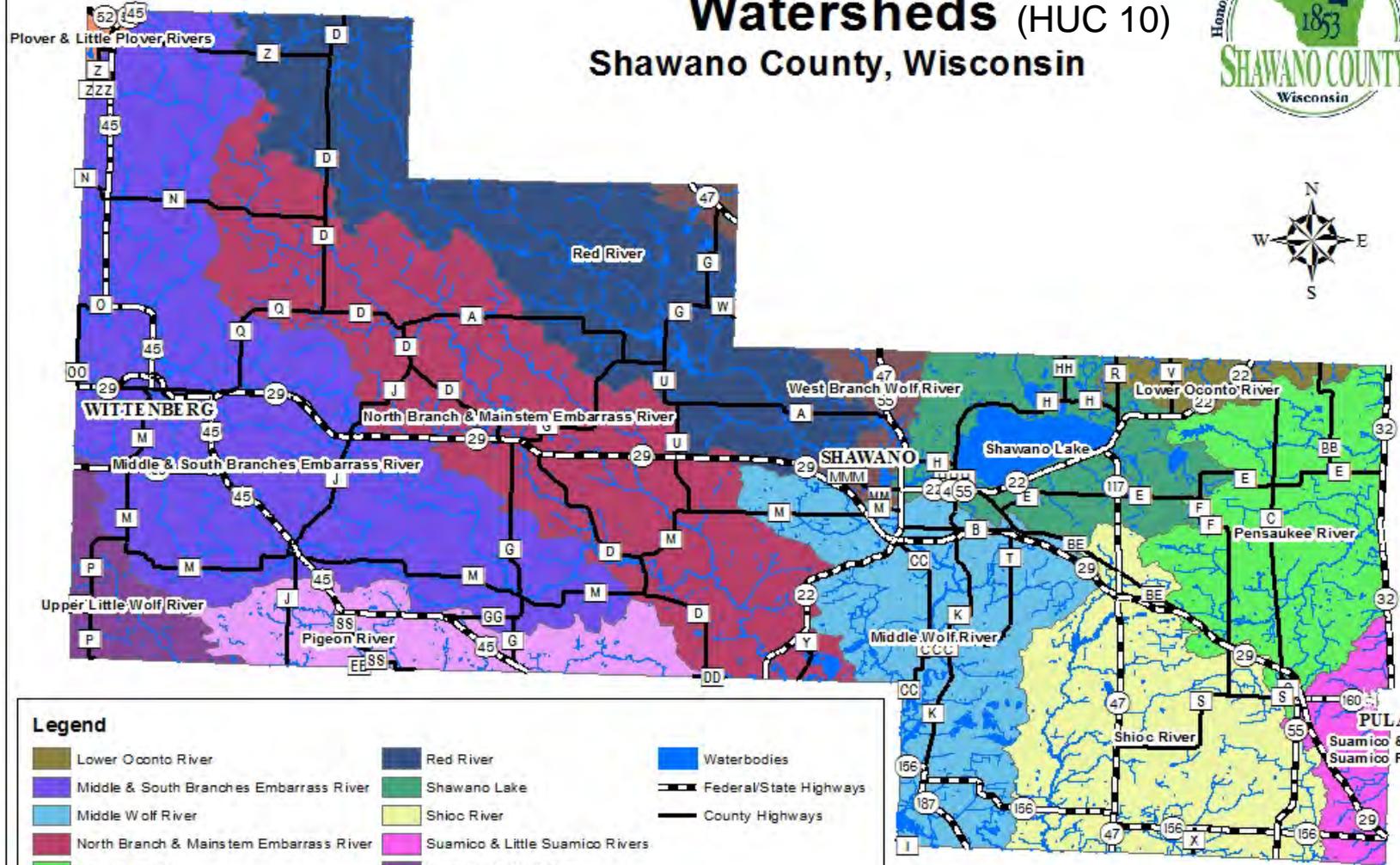


**Legend**

|   |                       |   |                        |
|---|-----------------------|---|------------------------|
|  | Upper Green Bay Basin |  | Waterbodies            |
|  | Wolf River Basin      |  | Federal/State Highways |
|  | Wisconsin River Basin |  | County Highways        |

1 inch = 5 miles

# Watersheds (HUC 10) Shawano County, Wisconsin

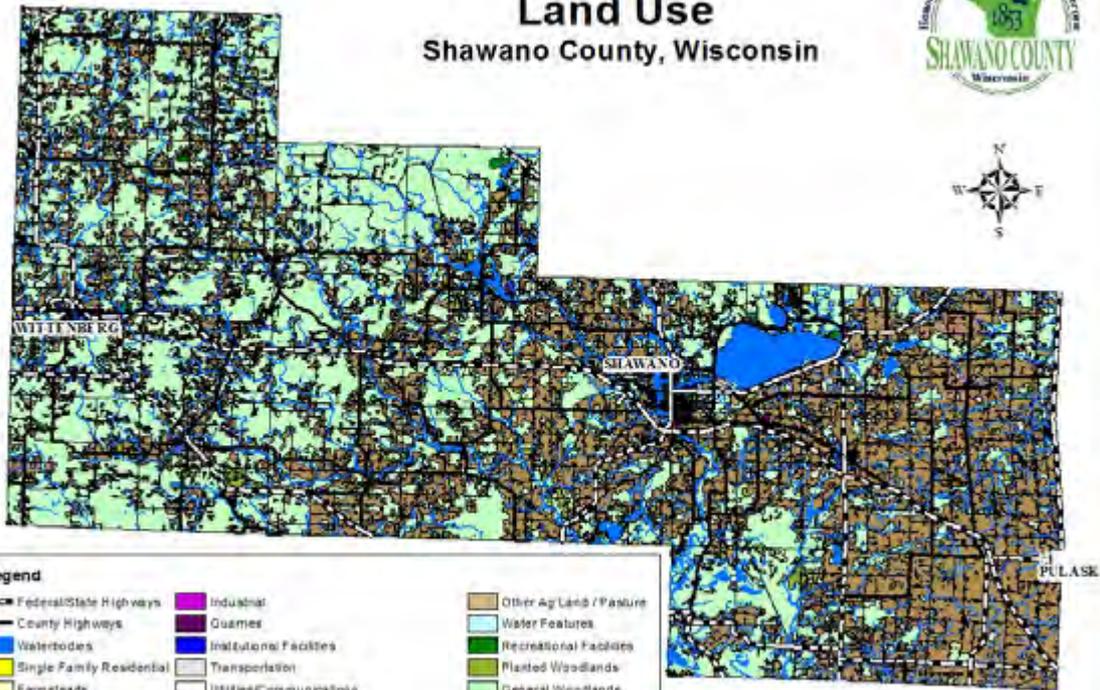


**Legend**

|   |                                 |                        |
|---|---------------------------------|------------------------|
| Lower Oconto River                      | Red River                       | Waterbodies            |
| Middle & South Branches Embarrass River | Shawano Lake                    | Federal/State Highways |
| Middle Wolf River                       | Shiock River                    | County Highways        |
| North Branch & Mainstem Embarrass River | Suamico & Little Suamico Rivers |                        |
| Pensaukee River                         | Upper Little Wolf River         |                        |
| Pigeon River                            | West Branch Wolf River          |                        |
| Plover & Little Plover Rivers           |                                 |                        |

1 inch = 5 miles

## Land Use Shawano County, Wisconsin



| Legend                    |  |                         |
|---------------------------|--|-------------------------|
| Federal/State Highways    | Industrial                                 | Other Ag Land / Pasture |
| County Highways           | Quaries                                    | Water Features          |
| Waterbodies               | Institutional Facilities                   | Recreational Facilities |
| Single Family Residential | Transportation                             | Planted Woodlands       |
| Farmsteads                | Utilities/Communications                   | General Woodlands       |
| Multi-Family              | Non-Irrigated Cropland                     | Open Other Land         |
| Mobile Home Parks         | Irrigated Cropland                         |                         |
| Commercial                | Intensive Dairy Cattle and Milk Production |                         |

1 inch = 5 miles

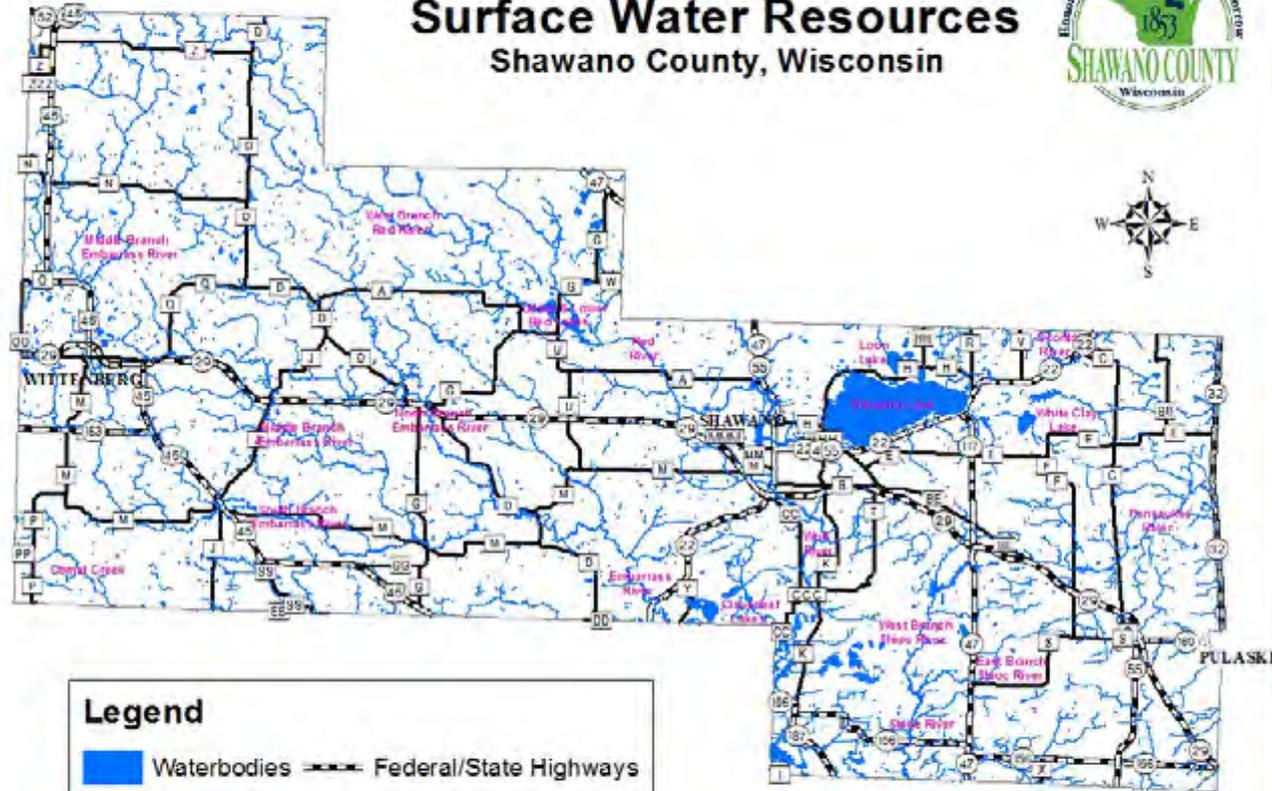


## Statistics

- Agriculture 208,500 acres (36%)
- Forestry and Open Space 320,750 acres (55%)
- Surface Water 14,125 acres (2.5%)

# Surface Water Resources

## Shawano County, Wisconsin



### Legend

- Waterbodies
- Federal/State Highways
- County Highways

1 inch = 5 miles

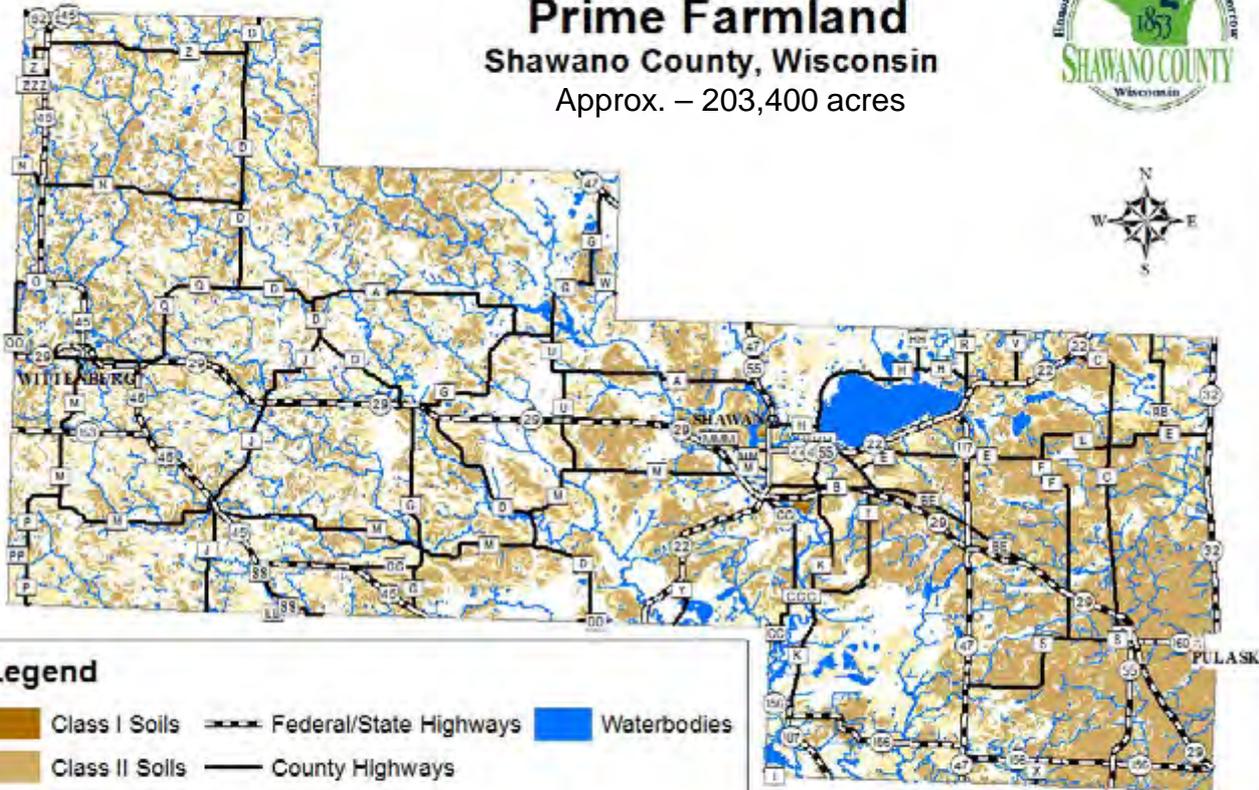


## Statistics

- 135 Lakes and Ponds
- 595 Miles of Rivers and Streams
  - 400 Miles of Trout Streams



# Prime Farmland Shawano County, Wisconsin Approx. – 203,400 acres



### Legend

- Class I Soils
- Class II Soils
- Class III Soils
- Federal/State Highways
- County Highways
- Waterbodies

1 inch = 5 miles

\*Soil Classifications - Digital Soils Layer created by NRCS For more information about soils mapping go to <http://soils.usda.gov>



## Agriculture Statistics & Trends

| Demographic            | 1997    | 2012    | 2017    | % Change | Demographic           | 1997   | 2012   | 2017   | % Change |
|------------------------|---------|---------|---------|----------|-----------------------|--------|--------|--------|----------|
| Number of Farms        | 1,337   | 1,278   | 1,139   | - 14.8   | Acres of Corn Silage  | 26,020 | 28,420 | 34,000 | 30.7     |
| Total Acres in Farms   | 270,487 | 261,141 | 247,241 | - 8.6    | Acres in Soybeans     | 6,528  | 21,400 | 31,800 | 387.1    |
| Acres of Hay & Haylage | 87,935  | 59,337  | 56,267  | - 36.0   | Total Head of Cows    | 40,097 | 39,105 | 37,000 | - 7.7    |
| Acres of Corn Grain    | 41,898  | 55,460  | 41,500  | - 1.0    | No. of Farms w/Cattle | 856    | 509    | 553    | - 35.4   |

# COUNTY ORDINANCES

- Livestock Waste Management Ordinance
  - Performance Standards & Prohibitions
    - Manure Storage (NR 151.05 and NR 151.08)
      - Nutrient Management plans required
    - Process wastewater (NR 151.055)
  - Livestock Waste Permits (waste storage / transfer)
    - 45 issued (2016-2020)
- Livestock Facilities Licensing Ordinance
  - Farms with >500 Animal Units
  - 24 Conditional Use Permits (2007-2017)
  - Transitioned to Licenses in 2018
    - Approved 4 new Licenses
    - Approved 7 License Modifications
    - 2 new License requests in 2021 with more expected
  - Coordinate compliance checks w/DNR CAFO reviews



# FARMLAND PRESERVATION

## ➤ 7 Townships with FP Zoning

### ➤ New software in 2016

- Annual maintenance - \$4,630

### ➤ Annual self-certification mailing

### ➤ Conservation Compliance Checks

- Participants divided into 4 groups in 2017
- 205 Active Certificates of Compliance
- 37,525 acres in compliance
- 27 Current Notices of Non-compliance

### ➤ Maple Grove AEA approved in 2010

- Includes almost entire Township
- 16 agreements (2,607 acres)
- Working with DATCP to promote AEA and increase participation

### ➤ Targeted mailing in 2020

- 72 landowners w/60 or more acres
- 6 new participants (571 acres)

## ➤ Tax credits claimed

### ➤ 182 claimants in 2018 tax year

- 33,503 acres
- \$242,932



# NUTRIENT MANAGEMENT

- Increase number of acres with NMPs to 65% of cropland acres over next 10 years.
  - Tracking and Mapping since 2010
  - Farmer NMP Workshops annually since 2013
    - Partner with DATCP and UWEX
    - 76 participants (26 farms)
  - Annual Work Plan Goal: Increase NMP – 2,000 acres / year
    - 2016 – 73,039 acres = 39% cropland acres
    - 2017 – 80,986 acres
    - 2018 – 82,546 acres = 44% cropland acres
    - 2019 – 85,396 acres
    - 2020 – 87,561 acres = 47% cropland acres



SnapPlus



# SUMMARY OF BMP'S 2016-2020

- 7 Waste Storage Systems
- 19 Waste Transfer
- 15 Waste Storage Closure
- 1 Shoreland Erosion Control
- 2 Well Abandonments
- 1 Managed Grazing
- NM (590) Plans (cost-shared)
  - 8 plans; 1,819 acres; \$55,533
- 12 Shoreline Protection/Restoration
- 1 Barnyard Runoff Control
- 4 Feed Leachate Control



Combined total of 70 BMP's

DATCP - \$248,769

DNR - \$305,842

County - \$13,548

# YOUTH EDUCATION

- Youth Conservation Field Day (2013-2019) - DNR, UWEX, NRCS, NNC
  - Over 225 5<sup>th</sup> graders each year



- WI Land+Water Conservation Awareness Poster Contest (2018-2020)
  - Participants: 17 ('18), 52 ('19), 5 ('20)



2020 1<sup>st</sup> place at State – Grades 2-3  
Flynn Bushman – Wittenberg Elementary

# PROMOTING CONSERVATION

- Public Presentations (Towns Association, Lake Organizations, County Board, etc.)
- Annual Shawano County Agricultural Awards Banquet
- Annual Activities Tour with Land Conservation Committee
- Counselor at WI Land+Water Youth Conservation Camp
- Scholarships for WI Land+Water Youth Conservation Camp



# LCD PARTNERING

## ➤ NRCS – EQIP \$

- LCD technical assistance for EQIP (Ag-waste projects)



- Participate in Local Workgroup mtgs.
- Demonstration Farm Networks

## ➤ DNR – Tree Planting Program

- County owned tree planters



## ➤ Invasive Species

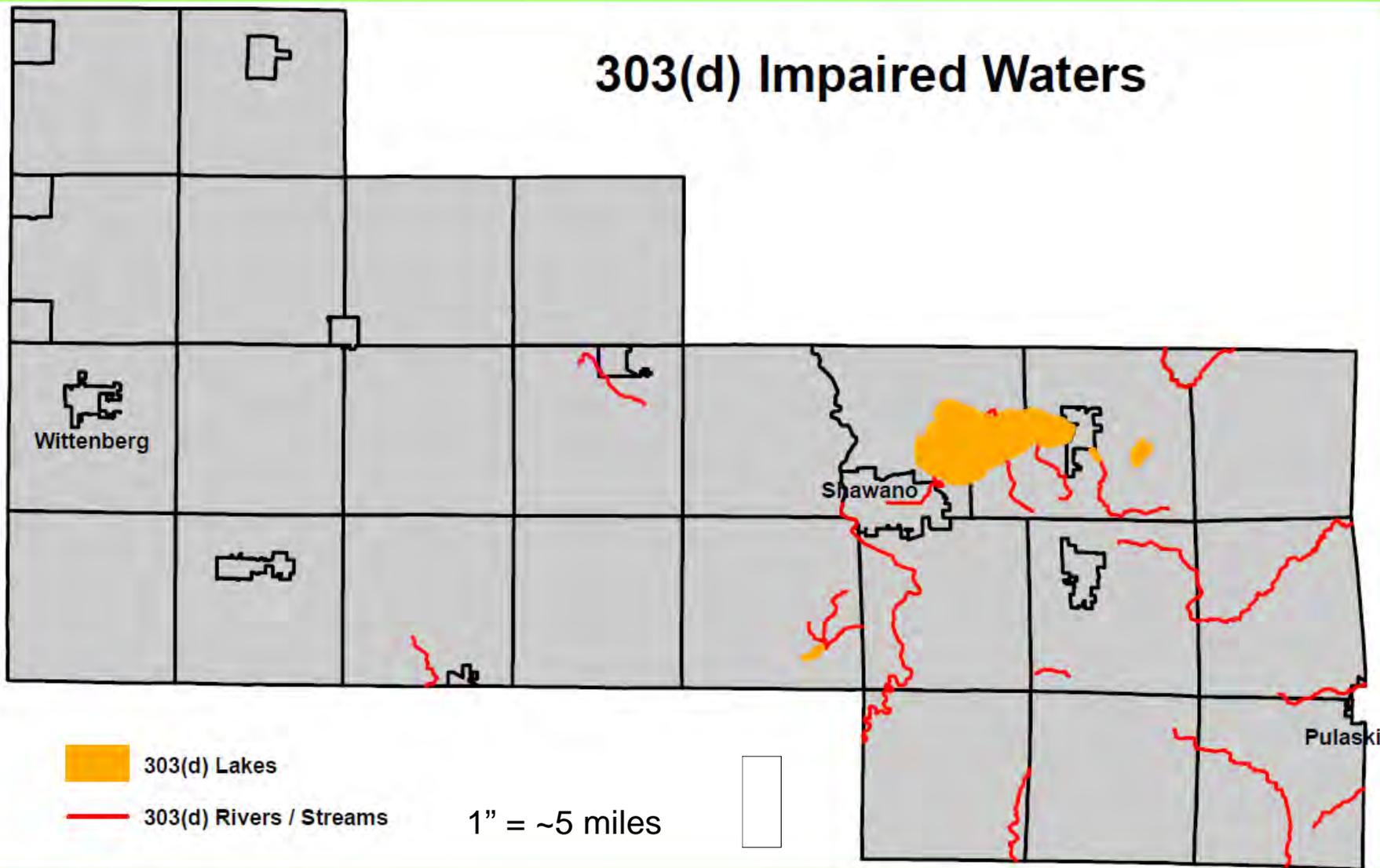
- AIS Boat Landing Kiosks



Timberland  
Invasives  
Partnership



# 303(d) Impaired Waters



*Listed prior to 2016: 7 (4 due to Total Phosphorus)  
Listed since 2016: 16 (13 due to Total Phosphorus)*

*Tillage Transect Survey - annually since 1999  
Soil loss average increased since 2004  
0.9 T/ac/yr to 1.5 T/ac/yr*

# MOVING AHEAD

## Re-integrating the watershed approach

### ➤ Demonstration Farm Network

- Promoting soil health practices
- Upper Fox/Wolf
  - Started in 2019
  - Partner w/ NRCS and 8 other counties
- Green Bay West Shore
  - Started in 2021
  - Partner w/NRCS and 3 other counties



Photo by Barry Bubolz



# MOVING AHEAD

## Re-integrating the watershed approach

### ➤ Upper Fox/Wolf River TMDL

- Approved in 2020
  - Total Phosphorus & Total Suspended Solids

### ➤ Targeted Runoff Management Grants

- (3) active small-scale ag-waste grants; applying for one in 2021 grant cycle
- Large-scale project

### ➤ Surface Water Management Grants

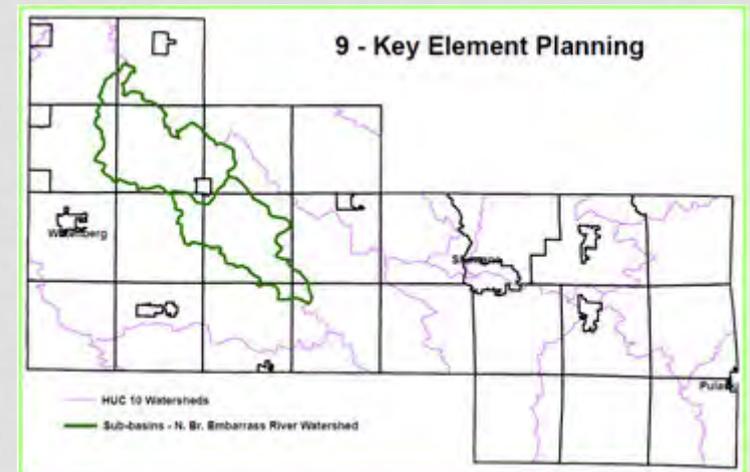
- Working w/Waterways Association of Menominee and Shawano Counties (WAMSCO) and WDNR
  - Management Plan Implementation
- Planning / Implementation for Lakes & Watersheds
- Lake Monitoring & Protection Network
  - Started in 2021

### ➤ Multi-Discharger Variance Program

- Funds for use in specific watersheds
  - Phosphorus reducing BMPs

### ➤ 9 – Key Element Planning

- Started in 2020
- North Branch Embarrass River
  - 2 subwatersheds
  - In top ten sub-basins for both Total Phosphorus and Total Suspended Solids (by modeling)





Join us as we make our way to greener pastures while protecting our natural resources

Questions? / Discussion

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