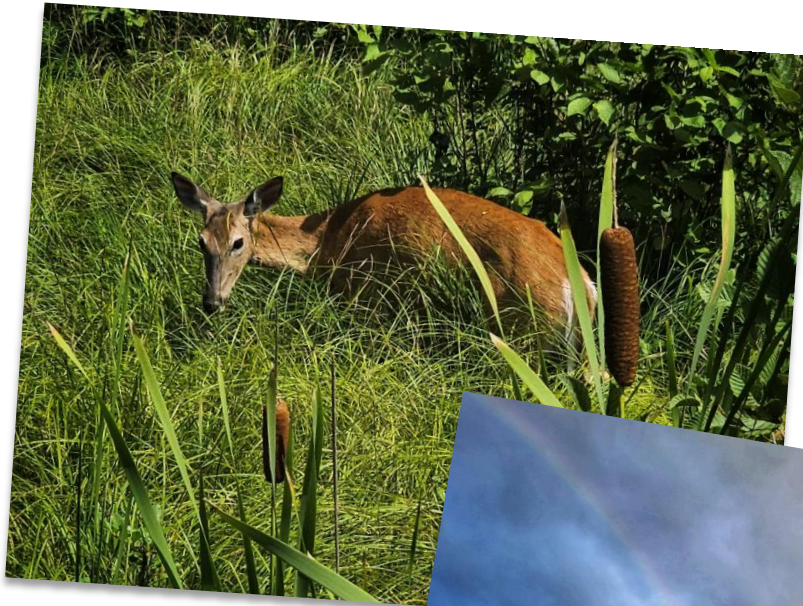




**LAND AND WATER RESOURCE  
MANAGEMENT PLAN**

2025 – 2034 For Approval



## **ACKNOWLEDGEMENTS**

Langlade County's Land and Water Resource Management Plan was developed with the following residents and staff. Special thanks are extended to the following people:

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**December 2024**

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## **PREFACE**

*“You do not really understand something unless you can explain it to your grandmother.” -Albert Einstein*

Reader,

To write this plan, my staff and I consulted many pages of plans, reports, and technical requirements for Land and Water Resource Management Plans and the role(s) of County Land Conservation Departments. We learned many important lessons, but we weren't satisfied with keeping this knowledge to ourselves. We pushed ourselves to develop a plan that everyone could understand if they cared enough to read it.

In our attempt to simplify and communicate our efforts we felt it was necessary to have a guiding ethos, which is “the characteristic spirit of a culture, era, or community as manifested in its beliefs and aspirations” (Oxford Dictionary). The ethos we developed for this plan is, *“We have natural resources worthy of our stewardship.”* This fundamental truth is both the purpose and the justification for this plan and for our goals and objectives as a department.

Thank you for taking this opportunity to let us share what we know about the natural resources of Langlade County and how we, your Land Conservation Department, plan to be stewards of those resources.

Chris Arrowood  
County Conservationist

# Introduction *(Chapter 1)*

The purpose of this Chapter is to explain the background and purpose (role) of **Land and Water Resource Management (LWRM)** plans in Wisconsin. To introduce this subject, we begin with the values, state law, and intentions that form the basis of natural resource stewardship in Wisconsin. Then we cover the administrative code/policy derived from those laws and intent that empowers and guides county (local) efforts to conserve our soil and water resources. Finally, we introduce and summarize the purpose of LWRM plans in those efforts.

## **Chapter 92 & Wisconsin Legislature**

Local leadership; natural resource stewardship; and interagency cooperation are long-held and highly valued concepts in Wisconsin. Wisconsin's values were formalized in 1937 when the State Legislature adopted **Wisconsin Statutes Chapter 92**. This chapter has been revised many times and is currently known as the *Soil and Water Conservation and Animal Waste Management* chapter with the following legislative intent (**92.02, WI Stats.**):

- (1) The legislature finds that the soil resources of this state are being depleted by wind and water erosion and that the waters of this state are being polluted by nonpoint sources of pollution. The legislature further finds that these are statewide problems endangering the health and welfare of the state's citizens, its recreational resources, agricultural productivity and industrial base.
- (2) The legislature declares it to be the policy of this state to halt and reverse the depletion of the state's soil resources and pollution of its waters.
- (3) It is the intent of the legislature to implement this policy by enacting this soil and water conservation law to:
  - a. Establish goals and standards for conservation of soil and water resources;
  - b. Provide for cost sharing, technical assistance, educational programs and other programs to conserve soil and water resources;
  - c. Encourage coordinated soil and water conservation planning and program implementation; and
  - d. Enable the regulation of harmful land use and land management practices by county ordinance where necessary to achieve the purposes of this chapter.

In order to implement this intent, the legislature tasked the **Department of Agriculture, Trade, and Consumer Protection (DATCP)** with setting state conservation policy; established the requirement for each county to have a **Land Conservation Committee (LCC)** to set and oversee local conservation policy; and later established county **Land Conservation Departments (LCDs)** to carry out conservation programming in 1982.

### **ATCP 50 & DATCP**

In order to set conservation policy and clarify/expand on the intent and requirements set in Chapter 92, DATCP established [Administrative Code ATCP 50 Soil and Water Resource Management Program](#). ATCP 50 requires counties to do the following:

- (1) **Program elements.** Every county land conservation committee shall establish and maintain a county soil and water conservation program. The program shall include all of the following elements:
  - a. A county land and water resource management plan under [s. ATCP 50.12](#), and a program to implement that plan.
  - b. A program to implement soil and water conservation standards.
  - c. A program to prepare and submit annual reports under [s. ATCP 50.18](#) and annual grant applications under [s. ATCP 50.20](#).
  - d. A program to receive, distribute, and account for soil and water resource management grants under this chapter.
  - e. A procedure to ensure that conservation practices funded under this chapter are designed and installed according to this chapter.
  - f. An accounting and recordkeeping system under [s. ATCP 50.22](#).
  - g. An information and education program to promote effective soil and water resource management.
  - h. Other program elements, if any, required under this chapter.
- (2) **Coordination.** A county land conservation committee shall, to the extent practicable, coordinate the program elements under sub. (1) with each other and with all of the following:
  - a. The county's land information and modernization program under [ss. 16.967](#) and [59.72 \(3\)](#), Stats.
  - b. The related activities of NRCS, state agencies. and other governmental entities in that county.

### **LWRM Plan Purpose (Role)**

LWRM plans are a required part of county LCD programs ([ATCP 50.10\(1a\)](#)), because they serve as a long-term strategic plan for the LCD, county residents, and partnering state and federal natural resource agencies. The plan directs conservation efforts within the county and assists in forming annual work plans for the LCD and agencies. They are also used to support applications for conservation grant funds, including annual state grants for county staff and support costs.

## Plan Development *(Chapter 2)*

Due to their importance, LWRM plan development is a complicated process. The purpose of this chapter is to clarify significant roles in the development process, list the legally required plan content, and provide an overview of how process requirements were met for this plan. Content requirements are cited in other chapters.

### *Significant Roles*

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1. The Department of Agriculture, Trade, and Consumer Protection (DATCP) **sets state conservation program policy** that forms the foundation of this plan.
2. The Land and Water Conservation Board (LWCB) reviews **LWRM** content and development and is responsible for **state approval** of this plan.
3. The county Land Conservation Committee (LCC) **sets local conservation program policy** and is responsible for **local approval** of this plan.
4. The county Land Conservation Department (LCD) **administers LWRM development and implementation.**
5. The Wisconsin Department of Natural Resources (DNR) **provides information** on area natural resources essential to **LWRM** development
6. The Local Resource Advisory Committee **advises the LCD** on plan content.
7. The North Central Wisconsin Regional Planning Commission (NCWRPC) **facilitates the LWRM's development** to ensure consistency with other regional planning efforts.

### *LWRM Plan Requirements*

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[ATCP 50.12](#) covers all the requirements of a LWRM, including contents, public involvement, and approval procedures; it reads:

- (1) **Requirement.** A county land conservation committee shall prepare and submit, for department approval, a land and water resource management plan. The department shall approve the county plan before allocating any funds to the county under subch. [IV](#).
- (2) **Plan contents.** A land and water resource management plan shall describe all of the following in reasonable detail:
  - (a) Water quality and soil erosion conditions throughout the county, including identification of the causes of water quality impairment and pollutant sources. The plan shall include water quality assessments for each watershed in the county available from DNR, if any.
  - (b) State and local regulations that the county will use to

implement the county plan. The department may require the county to provide copies of relevant local regulations, as necessary, and may comment on those regulations.

**Note:** See state rules under chs. [ATCP 48](#), [ATCP 50](#), [NR 151](#), and [NR 243](#).

- (c) Water quality objectives for each watershed, including any available pollutant load reduction targets, consistent with conditions identified in par. (a). The county shall consult with DNR to determine water quality objectives and to identify pollutant load reduction targets.
- (d) Key water quality and soil erosion problem areas. The county land conservation committee shall identify key water quality problem areas in consultation with DNR.
- (e) Conservation practices needed to address key water quality and soil erosion problems.
- (f) A plan to identify priority farms in the county.

**Note:** The identification of priority farms may vary between counties, depending on local conditions, strategies, and information. A county should focus on identifying or working with the following farms, or other categories of farms that the county identifies in its plan:

- Farms subject to a DNR notice of intent under s. [281.20](#), Stats., or notice of discharge under ch. [283](#), Stats.
- Farms located in watersheds draining to waters that DNR has listed pursuant to [33 USC 1313](#). This is also known as the "303(d) list of impaired waters."
- Farms that have large numbers of livestock, or significant problems with manure management.
- Farms making clearly excessive nutrient applications.
- Farms with clearly excessive rates of cropland erosion.

- (g) County strategies to encourage voluntary implementation of conservation practices under s. [ATCP 50.04](#). A county shall estimate the amount of information and education, cost-sharing and other financial assistance, and technical assistance needed to implement its plan.
- (h) Compliance procedures, including notice, hearing, enforcement, and appeal procedures, that will apply if the county takes action against a landowner for failure to implement conservation practices required under this chapter, ch. [NR 151](#), or related local regulations.

**Note:** See ss. [ATCP 50.04](#) to [50.08](#) and subch. VII.

- (i) The county's multi-year workplan to implement the farm conservation practices under s. [ATCP 50.04](#), and achieve compliance with performance standards under ch. [NR 151](#). The plan shall identify priorities, benchmarks for performance, and expected costs, including an estimate of costs to implement conservation practices to achieve the objectives identified in par. (c).

**Note:** The county workplan under par. (i) should be based on a reasonable assessment of available funding and resources.

- (j) The measurable annual and multi-year benchmarks the county will utilize to periodically monitor and measure its progress in meeting performance targets and achieving plan goals and objectives under the workplan in par. (i).
- (jm) How a county will meet its responsibilities for monitoring



conservation compliance of landowners claiming farmland preservation tax credits.

**(k)** How the county will provide information and education related to land and water conservation, including information related to farm conservation practices and cost-share funding.

**(l)** How the county will coordinate its land and water conservation program with federal, state, and local agencies.

**Note:** The department and DNR will work with counties to develop more detailed guidelines and suggestions for county land and water resource management plans, but individual counties have some flexibility and discretion to propose plans that are appropriate for their local conditions.

**(3) Plan development.** A county land conservation committee, when preparing a land and water resource management plan, shall do all of the following:

**(a)** Appoint and consult with a local advisory committee of interested persons.

**Note:** A local advisory committee should reflect a broad spectrum of public interests and perspectives. For example, it could include:

- Affected farmers, businesses, and landowners.
- Agricultural, business, environmental, civic, and recreational organizations.
- Federal, state, local, and tribal officials.
- The University of Wisconsin and other educational institutions.

**(b)** Assemble relevant data, including relevant land use, natural resource, water quality, and soil data.

**(c)** Consult with DNR.

**Note:** The county land conservation committee should normally consult with the appropriate DNR staff to obtain needed planning information, effectively address resource management concerns, and ensure that its plan incorporates elements that satisfy planning requirements under section 319 of the Clean Water Act.

**(d)** Assess resource conditions and identify problem areas.

**(e)** Establish and document priorities and objectives.

**(f)** Project available funding and resources.

**(g)** Establish and document a plan of action.

**(h)** Identify roles and responsibilities.

**(4) Public notice and hearing.** Before a county land conservation committee submits a land and water resource management plan for department approval, the committee shall do all of the following:

**(a)** Hold at least one public hearing on the plan.

**(b)** Make a reasonable effort to notify landowners affected by committee findings under sub. [\(2\)](#) [\(d\)](#) and [\(e\)](#), and give them an opportunity to present information related to the accuracy of the committee's findings.

**Note:** The county land conservation committee should consult with the department before holding public hearings on a land and water resource management plan.

**(5) Plan approval.** The department shall review a county land and water resource management plan, and shall approve or disapprove the plan after consulting with the LWCB. The department shall review the plan based on the criteria identified in this section, s. [ATCP 50.30 \(3\)](#), and s. [92.10 \(6\)](#), Stats. The secretary shall sign the order approving or disapproving the county plan. The department shall approve a plan for a specified period of time that shall not exceed 10

years, subject to conditions that the department specifies in the order. The department's approval does not take effect if the county board does not approve the county plan.

**Note:** The county board may approve the county land and water resource management plan before or after the department approves the plan. The plan approved by the county board must be the same plan approved by the department. If the department requires changes to a plan previously approved by the county board, the department's approval does not take effect until the county board approves the modified plan.

- (6) **Plan implementation.** The department may review county implementation of an approved county land and water resource management plan. The department may consider information obtained in its review when it makes annual grant allocations to counties under subch. [IV](#).

## ***Langlade County LWRM Development***

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While capable of serving as Langlade County's Land & Water Plan until its expiration at the end of 2034, to better accommodate DATCP and LWCB workloads this plan is intended to be revised and replaced at the end of 2033. This section summarizes the steps Langlade County took to develop this LWRM plan to meet the requirements. It is divided into three stages: drafting, review, and approval.

### **Stage 1: Drafting**

#### **LCD Review & Update**

9/14/2023 LCD reviewed the *2020-2029 Land & Water Resource Management Plan* and found that it was no longer well-suited to guide the LCD. Conditions in the county had changed drastically over the previous 4 years.

10/9/2023 LCC directed LCD to begin revision process on their behalf. This includes locating willing Local Resource Advisory Committee appointee's, surveying community concerns, and completing a draft LWRM.

10/17/2023 The *Land & Water Resource Community Concerns Survey* was posted on website. The goal of this survey is to inform LCD staff and the Local Resource Advisory Committee of general community sentiment & priorities.

11/15/2023 Base plan was completed by staff. It is now ready to be shared with trusted technical experts for information updates.

11/26/2023 The *Land & Water Resource Community Concerns Survey* closes. LCD staff summarize the results and use them to complete the *Initial Draft* version of the LWRM Plan.

12/11/2023 LCD staff present the *Initial Draft* the LWRM Plan to the LCC their review. This draft was available to the public by request and was specifically sent to technical partners for inputs.

3/15/2024 LCD staff completed the incorporation of partner inputs for the 2025-2034 LWRM the draft was retitled to *Department Draft*.

### **Local Resource Advisory Committee Selection**

03/29/2024 LCD staff & the Langlade County Land Conservation Committee Vicechair & Water & Land Use Planning Committee Chair (Rick Bina) to appoint of a diverse group of interested individuals from our community to the Local Resource Advisory Committee (LRAC). All Local Resource Advisory Committee members are listed with their representation on the back of this plan's cover.

### **Technical Review Finalized**

04/12/2024 LCD worked with DATCP, [North Central Wisconsin Regional Planning Commission \(NCWRPC\)](#) & [Wisconsin Department of Natural Resources \(DNR\)](#) to ensure all needed information was accurately acquired and assimilated into the LWRM draft is retitled *Advisory Committee Draft*. Materials are posted to the County website, and a date for the LRAC meeting is determined.

### **Local Resource Advisory Committee Confirmation**

4/30/2024 The Langlade County Water & Land Use Planning & Land Conservation Committee confirmed the appointment of the members of the LRAC. LRAC set 9 members with 2 potential alternates.

### **Local Resource Advisory Committee Meeting**

05/30/2024 The Local Resource Advisory Committee convenes for their first meeting. LCD staff present the draft plan. Committee reviews each chapter and provides input. Particular emphasis is placed on the review of Chapters 3 and 5. Citizen Advisory Committee recommends adjustment of priority of Resource Concerns from community survey. "Water" should return to the Top Priority. "Watershed Strategies" should move from the seventh priority to the 4<sup>th</sup> Priority.

### **Advisory Committee Revisions Completed**

05/31/2024 LCD staff completed incorporation of LRAC suggestions (see [Attachment A](#)), the LWRM is retitled to *Review 1<sup>st</sup> Draft*.

06/14/2024 LCD staff complete last minute minor additions (one sentence per revision), clarifications, and updates from technical partners. The LWRM is retitled *Review Draft* and is posted publicly on the county website. At this point, only changes required by approval authorities will be made.

## **Stage 2: Review**

### **LCC 1<sup>st</sup> Review**

6/25/2024 The Langlade County Water & Land Use Planning & Land Conservation Committee reviewed and approved the 2025-2034 LWRM to go to public hearing, pending DATCP Review.

### **DATCP Review**

06/27/2024 The LCD forwards the *Review Final Draft* to DATCP for review and meets with DATCP Staff. Document is reviewed and found to be complete, with no required changes needed at this time.

07/15/2024 Minor changes and grammar edits are completed. The LWRM is retitled to *Public Hearing Draft*. Electronic version of the plan is posted to the county website. Print copies available by request and at local libraries.

7/19/2024 Required public notices are sent to the Antigo Daily Journal for publishing. The notice was published on July 29<sup>th</sup> and August 12<sup>th</sup>. The county also mailed notices to the local towns and surrounding counties.

### **Public Hearing & LCC Approval**

8/27/2024 The LCC holds a public hearing for the LWRM. The LCC directs the LCD on required changes that need to be made. The Water & Land Use Planning & Land Conservation Committee recommends approval of the plan with Resolution 12-2024 and it is sent to the Langlade County Board for their approval.

8/28/2024 LCD completes any changes. LWRM plan is retitled to *For Approval*. DATCP is notified of any changes so they might determine if the changes will affect certification.

### **Stage 3: Approval**

#### **County Board Approval**

9/30/2024 the Langlade County Board approves the LWRM plan.

#### **LWCB Approval**

12/03/2024 The Langlade County LCD presents the LWRM plan to the LWCB and they certify it.

## Resource Assessments (Chapter 3)

This chapter summarizes the natural resources of Langlade County and highlights areas of potential stewardship action for land and water conservation in Langlade County. This chapter draws upon existing inventories and information from previously prepared reports, especially the [2019 Langlade County Comprehensive Plan](#).

### Background

Langlade County is located in northeastern Wisconsin and is bounded on the north by Forest and Oneida counties, on the east by Oconto County, on the south by Marathon, Shawano, and Menominee counties, and on the west by Lincoln County. (See Figure 3.1)

The county is a predominantly rural area with a large proportion of its land in forests, agriculture, and wetlands. Residents and visitors from both near and far utilize its water and expansive natural areas for recreational purposes. The City of Antigo is the county seat and largest community in the county with a population of about 8,000.

**Figure 3.1: Langlade & Neighboring Counties**



## ***Geography & Topography***

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The county's total surface area is about 888 square miles or 567,621 acres; of which about 77% is forested, 15% is used for agriculture, 2% is water, and the remaining 5% is used for transportation, residential, commercial and industrials uses. Elevations in Langlade County range from 1,070 feet above sea level where the Wolf River leaves the county, to about 1,900 feet above sea level in the Town of Langlade.

Langlade County's topography or the arrangement of natural physical features of an area is of glacial origin, and is characterized mostly by moraines and outwash plains and partly by drumlins, eskers, kames, lake plains, bogs. The moraines terrain includes older drift area largely in the western part of the county. Older drifts exist in the west central part of the county in the Towns of Vilas, Peck and Summit. The outwash plains include the Antigo Flats, which are located in the south-central part of Langlade County.

The eastern part of the county is within the drainage basin of the Wolf River, and the western part is within the Wisconsin River drainage basin. In Langlade County, the Wolf River starts at Upper Post Lake, flows generally south and east, and leaves the county just south of Markton. The Wolf River drops about 440 feet in elevation while crossing the county, with the highest gradients between the communities of Lily and Markton. (See [Map 5](#))

## ***Climate***

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Langlade County has a continental climate characterized by cold, snowy winters, warm summer days and cool summer nights. The short frost-free period during the summer restricts suitable crops mainly to forage, small grain, and vegetables. Precipitation is well suited to outdoor activities with an annual snow fall range from 20 to 90+ inches and an annual mean of 51.9 inches during the past 40 years. June is generally the wettest month and the last part of August the driest. Precipitation averages 30.6 inches annually. The sun shines 65 percent of the time possible in summer, and 45 percent in winter. The prevailing wind is from the southwest. Average wind speed is highest in spring at 12 miles per hour.

### **Climate Resiliency**

Climate resiliency means a comprehensive effort to anticipate, prepare for, quickly respond to, and recover from the adverse impacts of climate change. It involves proactively identifying potential climate risks and vulnerabilities, integrating adaptive strategies into community planning, and fostering the resilience of critical infrastructure. A resilient community engages in systematic risk assessment, ensuring the involvement of diverse stakeholders in decision-making processes to address social equity and inclusivity.

Resilient communities prioritize the development of robust emergency preparedness plans, incorporating continuous monitoring of climate conditions and adaptation measures. This involves the construction of resilient infrastructure (including health systems capable of responding to extreme weather events) designed to withstand extreme weather events and the promotion of economic activities less susceptible to climate impacts. Natural resource management focuses on the conservation and restoration of ecosystems, enhancing their capacity to provide essential services.

Pertaining to County Forest lands, the Langlade County Forestry, Parks and Recreation Department has incorporated a chapter titled “Forest Management for Forest Resilience including Projected Climate Change” into the 15-year

### **County Forest Comprehensive Land Use Plan 2021-2025.**

Moreover, climate resiliency emphasizes ongoing learning and flexibility, adjusting strategies based on evolving climate conditions and community needs. Policies supporting climate resilience at local, regional, and national levels are crucial, integrating climate considerations into land-use planning, zoning, and building codes. Through community engagement and education, residents are empowered with the knowledge and skills necessary to adapt to changing conditions. Ultimately, climate resiliency is a holistic and integrated approach that addresses the interconnected social, economic, and environmental aspects of a community, fostering adaptability and sustainability in the face of a volatile and variable climate.

## Land Use

Utilizing 2015 air photos, the NCWRPC categorized all lands into several broad general land use categories or classifications (See Table 3-1). These classifications are: Agriculture, Commercial, Industrial, Woodlands, Residential, Transportation, Quarry, Open Grassland, Outdoor Recreation, Government/Public/Institutional, and Water.

<b>Table 3-1: Existing Land Use, 2015</b>		
<b>General Category</b>	<b>Acres</b>	<b>Percent</b>
<b>Agriculture</b>	82,200	14.5%
<b>Commercial</b>	1,304	0.2%
<b>Industrial/Quarry</b>	844	0.1%
<b>Governmental/Public/Institutional</b>	1,022	0.2%
<b>Open Lands</b>	17,002	3.0%
<b>Outdoor Recreation</b>	837	0.1%
<b>Residential</b>	11,739	2.1%
<b>Transportation</b>	5,866	1.0%
<b>Woodlands</b>	435,896	76.8%
<b>Water</b>	11,125	1.9%
<b>Total Acres*</b>	567,824	100.0%
<b>Source: Existing Land Use Map based on Local Plans, Cluster Meeting Maps &amp; NCWRPC GIS</b>		
<b>* These calculations do not include the City of Antigo</b>		

The following is a brief description of the two major land uses (Woodlands/Forest and Agriculture) and their trends in Langlade County. Comparing the Langlade County Generalized Existing Land Use ([See Map 1](#)) and The Langlade County Future Land Use Map (also Map 9 & Map 10 in the Comprehensive Plan) reflects no major changes in land use over the Comprehensive Plan period 2020-2029. Forestry will continue to be the major land use in the county followed by agriculture.

### **Forestry (Woodlands)**

At one time, much of Wisconsin was covered with magnificent stands of pine, hemlock, and hardwoods on the highlands, and cedar, spruce, and balsam on its lowlands. In Langlade County, this is still the case as Woodlands cover over 435,000 acres (or 76.8%) of the county and still exist in large blocks of public and private forests.

### **Ecosystem Services of Forests and Woodlands**

Forests and Woodlands provide a wide range ecosystem services including protection of air quality, water quality, soil quality, wildlife and plant habitat and aesthetic appearance.

Air quality is maintained by forests directly by use of carbon dioxide by trees and  
*Langlade County LWRM Plan 2025-2034* **FOR APPROVAL**



plant and transpiration of oxygen. Intake of carbon dioxide and conversion of that carbon to the fibers contained within trees provides a “carbon sink” for carbon emissions from both human and natural carbon sources. Carbon sinks provide storage of carbon external to carbon in the air, resulting in reductions in airborne carbon which has been shown to be a large influence on climate change. It should be noted that forest provide carbon sinks both within the forest and also when carbon is stored within forest products such as lumber in homes and structures. Agricultural land use also provides for carbon storage and air quality improvements but not to the extent of forests. Conversion of land to developmental uses results in loss of air filtering capacity of lands that need to be assessed at a global scale.

Water quality is provided by the filtering capacity of the forest canopy, leaf litter and understory plant by processing water from the ground and air. Through this process trees and plant utilize water much of which is held within the fibers of the trees and within the leaves and released back into the air in a process called evapotranspiration. Trees utilize many sources of nutrients and those are filtered from the water taken up by the trees and plants, resulting in the release of clean water. Forests also protect water quality by reducing impact erosion from rain events and absorbing and slowly releasing water, reducing soil erosion and the influx of organic solids into surface waters and wetlands that result from erosion. Agricultural land use also provides for water filtering abilities but introductions of pesticides, herbicides and organic materials through agricultural practices often result in water quality degradation and contamination. Conversion of land from forests and woodlands to developmental uses and agriculture results in loss of water filtering capacity of lands that need to be assessed at a global scale, with specific attention to headwater areas of major basins.

Soil quality and protection is provided primarily in forests and woodlands by plants roots and tree roots providing soil stability and reducing in soil compaction and soil loss from natural and unnatural sources. Forests also provide a natural influx of nutrients into the soil as woody debris and leaf litter break down into nutrients which are beneficial for many reasons. An often under recognized ability of the forest and trees are their ability to take harmful substances from the soil and storing them through compartmentalization over long terms. An example of this in the common components of substances such as arsenic and other highly toxic substances within tree heartwood, originally absorbed from the soil and air. Agricultural land use also provides for soil enhancement and erosion protection when properly implemented, however many agricultural practices are completed with improper timing resulting in both wind and water erosion of soils. Conversion of land from forests and woodlands to developmental uses results in loss of soil productivity from natural soil amendments. Conversion of forests and woodlands to agriculture often results in loss of soil through wind and water erosion.

Natural and intrinsic values of forests and woodlands are wildlife and plant

habitat and aesthetic pleasure. Forest and woodlands and interconnectivity of a variety of forest and woodland types are essential to maintaining wildlife and plants that developed within those habitats since the beginning of time. Although often misunderstood, wildlife and plants dependent upon forest habitats provide historically critical components used in everyday life of humans. As an example, simple items such as aspirin, were developed from historic use of willow bark as a pain relief by native people. Although not highly recognized in today's civilization, wildlife and plants contained within forest and woodlands provide food security for local gathering of meat and edible products for many people that prefer natural products and sometimes for those that cannot afford purchase of needed foods. Aesthetic pleasure is an additional value provided by forests and woodlands, although not an essential value, aesthetic pleasure provides property value increases for lands. Conversion of land from forests and woodlands to developmental uses results in direct loss of wildlife and plant habitat and related aesthetic values of impacted lands. Conversion of smaller portions of large forest and woodland blocks results in forest fragmentation which reduces the interconnectivity which is important to many species of wildlife, reducing wildlife values overall.

#### Naturally-Produced Threats to Forests and Woodlands

Fire, insect damage, and extraordinary weather events are the most visible causes of widespread resource damage and those impacts are expected to increase with projected climate change.

Less recognized but equally important is the potential impact of invasive plant species, insects and diseases on the forest resources. The County provides aggressive campaign to survey for, monitor and control destructive invasive plants, insects and diseases from the forest and associated recreational sites on County lands and assist private landowners with their needs.

Damage to forests and forest regeneration from wildlife such as beaver, deer and porcupine also exists. The County provides a campaign to survey for, monitor and control destructive animals from the forest and associated recreational sites. Control will be completed through contracts with the APHIS.

#### Human-Produced Threats to Forests & Woodlands

Land development, land conversion and reduction in or improper forest and woodland management provide major threats to forests and woodlands and the ecosystem services they provide. Land development may include but not limited to construction of buildings, roads, power lines and high use recreational use facilities (campgrounds, parks and play areas) and high use trails. Land conversion may include but not be limited to general land clearing, land flooding or establishment of agricultural use resulting from human actions.

Unauthorized and illegal human uses of the forested areas provide additional threats to forest and the ecosystem services that they provide. Illegal hunting practices and baiting and illegal dumping of trash are some examples.

Human introduction of new species of invasive plant species, insects and diseases are likely the highest-level threat to the forests and woodlands of Langlade County.

Forests and Woodlands provide critical environmental services which maintain ecological balances at local, regional and global scales. Conversion of forests and woodlands to other land uses can be detrimental to the ecological services provided. The health of a forest is measured by its capacity for renewal, for recovery from a wide range of disturbances, and for retention of its ecological resiliency at local, regional and global scales.

At the same time, forests and woodlands must meet current and future needs of people for desired levels of future development, environmental values, recreational uses, forest products, and needed human services. Thousands of products are derived from forest management practices and are utilized by millions of people every day. Demand for products and land conversions for economic development and agriculture is not projected to decline in the future. Proper management of forests and woodlands, practices to control threats to forests and woodlands and planned land conversion to minimize negative effects will be critical for the future.

Table 3-2 displays information on the amount of forestland in Langlade County. The change in forest cover over time can be an important indicator of the sustainability of the forests and woodlands within Langlade County. From 1983 to 2015, forested land within Langlade County has increased by 44,000 acres or about 11%. The county and state increased at the same rate.

<b>Table 3-2: Area of Forest Land (Public and Private Acreage)</b>					
<b>Minor Civil Division</b>	<b>1983 Forest Land</b>	<b>2004 Forest Land</b>	<b>2015 Forest Land</b>	<b>1983-2015 % Change</b>	<b>1983-2015 Net Change</b>
<b>Langlade County</b>	391,700	404,442	435,896	11%	44,196
<b>State</b>	15,351,300	16,037,233	17,055,100	11%	1,703,800

**Source: USDA Forest Service, 1983, 2004 & 2016 & NCWRPC GIS, 2015**

### **Public Forests**

Langlade County has a variety of Public Forest types a brief overview is given below (also See [Map 4: Public Forests](#)).

#### Locally Owned Forests

- County Forest
  - Langlade County Forest, 130,000+ acres.
- School Forests
  - Unified School District of Antigo
    - Pleasant View School Forest, 20 acres;
    - Crestwood School Forest, 38 acres;

- Forestview School Forest, 38 acres;
    - Liberty Bell Forty, 40 acres;
    - Deerbrook School Forest, 80 acres;
    - Noboken School Forest, 168 acres;
  - Elcho School District
    - Elcho School Forest, 31 acres;
    - Summit Lake School Forest, 78 acres;
  - White Lake School District
    - School Park Forest, 6 acres;
- Town Forests
  - Town of Peck
    - Peck Town Forest, 2,333 acres;
    - Peck School's Forest, 80 acres;

### National Forest

The Chequamegon-Nicolet National Forest has lands in several counties including Langlade. The Lakewood area of the Chequamegon-Nicolet National Forest covers about 39,680 acres in the eastern portion of the county.

### Forest Legacy Area (FLA)

The WDNR purchased the development rights for two industrial forests in the towns of Langlade and Wolf River (see [Map 4](#)). No additional land in the county is targeted for FLA creation at this time, but all land in Langlade County is within the Northern Forest FLA, which makes it eligible for this program.

### **Private Forests**

Forested lands that may be open to the public but are not part of a public forest are privately held lands that are enrolled in the Forest Crop Law (FCL) or Managed Forest Law (MFL), both administered by WDNR.

In 2006 there were 114,682 total acres enrolled in both FCL and MFL.

In 2013 there were 119,536 total acres enrolled in both FCL and MFL.

In 2018 there were 121,165 total acres enrolled in both FCL and MFL.

In 2023 there were 130,800 total acres enrolled in both FCL and MFL.

More land continues to remain in FCL and be enrolled in MFL in Langlade County.

The FCL program was enacted in 1927 as a landowner incentive program that encourages long-term sustainable management of private woodlands. In exchange for following an FCL management schedule, the landowner pays reduced property taxes. Enrollment in FCL was closed on January 1, 1986; but expiring FCL contracts may be enrolled into MFL.

The Managed Forest Law (MFL) program is a landowner incentive program that encourages sustainable forestry on private woodland. In exchange for following sound forest management, the landowner pays reduced property taxes. It was

enacted in 1985 and replaced the Woodland Tax Law and the Forest Crop Law.

Property Taxes and Public Access

To participate in the MFL program, landowners designate property as “Open” or “Closed” to public access for recreation and commit to a 25 or 50-year sustainable forest management plan. The plan sets the schedule for specific forestry practices which landowners must complete. In return, MFL participants make a payment in lieu of regular property taxes. Lands enrolled in the MFL are designated as “Open” or “Closed” to public recreation. Open designation allows public access to the property only for hunting, fishing, hiking, sight-seeing and cross-country skiing without additional permission from landowners.

MFL land designated as “Open” must be accessible to the public on foot by public road or from other land open to public access. All land enrolled in the MFL program must meet the access requirements for land designated as “Open”, regardless of enrollment date. “Closed” designation affords landowners the right to restrict access.

No later than June 30 of each year, the DNR must pay 100% of each payment received under the open/closed designation to the treasurer of the municipality in which the land is located. Each municipal treasurer must pay 20% of each payment received from the DNR or directly to the county treasurer and must deposit the remainder in the municipal treasury. Current Annual Property Tax Rates for Lands Enrolled in or after 2005

Open enrolled lands ..... \$2.04 per acre  
Closed enrolled lands ..... \$10.20 per acre

Rates were recalculated in 2022 and will be again every fifth year thereafter.

As of January 1, 2017, lands being enrolled or renewed in the MFL program are not eligible if they contain a building or an improvement unless it is used exclusively for storage.

Eligible Property MFL lands receive modified tax status to sustainably grow timber for wood products. To qualify and comply with the law, the lands are restricted from other industry or land use. Prohibited usage includes, but is not limited to, agriculture, grazing, commercial storage facilities, game farms, cell towers, mines, quarries, orchards and recreational developments such as golf courses, campgrounds or raceways.

To help landowners get the most from their land, MFL plans contain recommendations related to forestry, wildlife, watershed, endangered resources and aesthetics. The plan describes the property and spells out any mandatory forest management practices required during the MFL entry period. Landowners and their local Tax Law Forestry Specialist may adjust management plans as

stand conditions, knowledge on woodland management and landowner objectives change.

### **Other Lands Containing Woodlands**

#### Wildlife, Fish, & Natural Areas

The State of Wisconsin, primarily through the Department of Natural Resources, holds several tracts of land within Langlade County as Wildlife Areas, Fishery Areas, and Natural Areas. In total, WDNR owns over 17,000 acres in the county mainly as state natural, fishery, or wildlife areas; These lands are open to the public for a variety of uses. Boundary signs posted near parking lots and along borders explain the uses on that parcel.

#### State Wildlife Areas (SWA):

SWA were acquired to preserve habitat for wildlife. Two State wildlife areas exist in Langlade County.

1. Ackley Wildlife Area is 1,158 acres, plus 20,000 acres of county lands managed to complement the state ownership in the Town of Ackley.
2. Peters Marsh Wildlife Area is 1,687 acres, and is mostly surrounded by county forest in the Towns of Ainsworth and Price.

#### State Fishery Areas (SFA):

SFA have been purchased to protect important waterways from improper land use due to agriculture or urban runoff. Some protect and improve spawning grounds for area fisheries, while others prevent the blocking of important waterways. Some fishery areas consist of fee-title ownership as well as easements. Boundary signs posted near parking lots and along borders explain the property's use.

Ten state fishery areas exist in Langlade County. They are:

1. Clubhouse Lake-Sunshine Springs Fishery Area is 41 acres and is located in the Town of Evergreen.
2. Daneault Springs Fishery Area is 40 acres and is located in the Town of Rolling.
3. Demlow's Lake Fishery Area is 74 acres along Upper and Lower Demlow Lake in the Town of Norwood.
4. Eau Claire River Fishery Area is 44 acres and is also in the Peters Marsh Wildlife Area in the Town of Upham.
5. Evergreen River Fishery Area is 1,391 acres along the Evergreen River west of White Lake in the Town of Wolf River.
6. Lambert Springs Fishery Area is 40 acres east of STH 52 at CTH A and is located in the Town of Langlade.
7. Prairie River Fishery Area is 151 acres along the Prairie River in the Town of Parrish.
8. Rabes Lake Fishery Area is 120 acres and is located around Rabe Lake

in the Town of Polar.

9. Upper Wolf River Fishery Area is 9,273 acres along the Wolf River in the Town of Langlade.
10. Woods Flowage Fishery Area is 1,232 acres and is located mainly in the Town of Evergreen.

#### State Natural Areas (SNA):

SNA's were designated to protect the state's natural diversity, provide sites for research and environmental education, and serve as benchmarks for assessing and guiding use of other lands in the state. Natural areas are defined as tracts of land or water, which have native biotic communities, unique natural features, or significant geological or archeological sites. Generally, natural areas are remnant areas that largely have escaped disturbances since settlement or which exhibit little recent disturbance so that recovery has occurred and pre-settlement conditions are approached.

Natural areas provide an important reservoir of our state's genetic or biologic diversity. They act as important reserves for native biotic communities and provide habitat for endangered, threatened, or critical species or other species of special concern to scientists. They often include areas with highly significant geological or archaeological features. They tend not to have much facility development, though there may be a designated trail or two on site. Some properties allow limited hunting.

Langlade County has nine state natural areas. They are:

1. Flora Spring Pond (No. 78) is 40 acres and is located in the Town of Evergreen. This natural area is part of the Langlade County Forest and managed under a cooperative agreement.
2. Oxbow Rapids, Upper Wolf River (No. 163) is 40 acres and is located within the Upper Wolf River State Fishery Area in the central area in the Town of Wolf River.
3. Bear Caves (No. 286) is 50 acres and is located in the Town of Wolf River. This natural area is on Langlade County lands and managed under a cooperative agreement.
4. Bogus Swamp (No. 287) is 870 acres and is located in the Town of Upham. This natural area is part of the Langlade County Forest and managed under a cooperative agreement.
5. Minito Lake (No. 288) is 24 acres and is located in the western half of the Town of Elcho. This natural area is part of the Langlade County Forest and managed under a cooperative agreement.
6. Lawrence Lake (No. 404) is 326 acres and is located in the Town of Price. This natural area is part of the Langlade County Forest and managed under a cooperative agreement.
7. Hunting River Alders (No.527) is 104 acres and is located in the eastern

half of the Town of Elcho. This natural area is part of the Langlade County Forest and managed under a cooperative agreement.

8. Kelly Lynn Bog (No. 528) is 774 acres and is located in the Town of Parrish. This natural area is part of the Langlade County Forest and managed under a cooperative agreement.
9. Swamp Creek Fen (No. 589) is 115 acres and is located just south-west of Mole Lake. This natural area is part of the Langlade County Forest and managed under a cooperative agreement.

WisDOT also maintains the Bina Wetland Mitigation Bank in Ackley.

### **Sustainable Forestry**

"the practice of managing dynamic forest ecosystems to provide ecological, economic, social and cultural benefits for present and future generations" NR 44.03(12) Wis. Adm. Code and s.28.04(1)(e), Wis. Stats.

Under the Langlade County County Forest Comprehensive land use plan 2021-2035, the County recognizes sustainable forestry as the management of the Forest to meet the needs of the present without knowingly compromising the ability of future generations to meet their own needs (economic, social, and ecological) by practicing a land stewardship ethic which integrates the growing, nurturing, and harvesting of trees for useful products with the conservation of soil, air and water quality, and wildlife and fish habitat. This process is dynamic, and changes as we learn from past management.

Sustainable practices in forestry management involve carefully planned techniques and practices to protect the environmental services which forests and woodlands provide

### **Forest Certification**

Forest certification is an independent verification that forests and woodland management conforms to standards for sustainability and best practices. In the context of forest certification, sustainability includes the ecological, economic and social components of forests and surrounding communities.

Forest certification, and associated labelling, is a way of informing consumers about the **sustainability** of the forests from which wood and other forest products were produced. There are two types of forest certification:

1. Certification of forest management, which assesses whether forests are being managed according to a specified set of standards.
2. Certification of the chain of custody (sometimes referred to as CoC certification), which verifies that certified material is identified or kept separate from non-certified or non-controlled material through the



production process, from the forest to the final consumer.

To label an end-product as certified, both forest management certification and chain-of-custody certification are required.

Forest certification can help boost the public image of the industry, landowners and companies – both those that pursue certification in their own forest operations, and those that purchase only certified products.

#### Certified Forests in Langlade County:

1. Langlade County Forest- The Langlade County Forestry, Parks, and Recreation Department manages over 130,000 acres of county forest and associated park and recreational facilities (7th largest in Wisconsin). This land is managed for multiple uses, and is independently certified as sustainably managed and harvested. Some of the county forest is closed to motorized vehicles. Examples of permitted recreational activities are hunting, fishing, hiking, snowmobiling, camping, bough cutting (permit required), firewood collection (permit required), and wildlife observation. For more information on how Langlade County manages its forest resources, please refer to the **Langlade County Forest Comprehensive Land Use Plan 2021-2035** plan and the **Langlade County Outdoor Recreation Plan 2022-2026**. Certification of the County Forest is maintained through a third-party certificate held by the Wisconsin Department of Natural Resources and third-party audits are scheduled as required by the certificate.
2. Selected Managed Forest Law Land- Lands enrolled in the Wisconsin Managed Forest Law may be Certified if the landowner chooses the to be in the Certified Group. Certification of the MFL Certified Group lands is maintained through a third-party certificate held by the Wisconsin Department of Natural Resources and third party audits are scheduled as required by the certificate.
3. DNR Owned and Managed Lands- Lands owned and managed by the Wisconsin Department of Natural Resources are Certified through a third-party certificate and third-party audits are scheduled as required by the certificate

#### Agriculture

In the early 1870's the first European traders established posts in the Northwoods. Soon after the areas vast forests provided lumber for the developing cities of the Midwest. Farming began as an auxiliary use to forestry, but with the

arrival of rail in the 1880's new markets for commodities opened. Oats, potatoes, and wheat were and remain important commodities for the county, and later dairy farming.

Today, a variety of other vegetables are grown in the county, such as: snap beans, peas, and sweet corn. Acreage of these crops can swing year to year. Acreage has increased recently as canning contracts have shifted northward out of the Central Sands region of Wisconsin due to the increased demand for field corn acreage there. Soybeans are also extensively grown for both the use on local dairy farms and as a commodity sold outside of the County.

According the 2022 U.S. Census of Agriculture, Langlade County produced \$145.7 million dollars in market value of agricultural products. These agricultural products can be put into two major categories; crops and livestock. Crops contributed \$85 million dollars of market value with the main contributor being vegetables and potatoes (\$67.7 million). Livestock represented a market value of \$60.6 million with dairy/milk contributing \$52.3 million in value.

Potatoes are by far the most important cash crop in the County. The production of certified seed potatoes for domestic and international markets has added value to the commodity over the last decades. Several factors make Langlade County an excellent location for seed production: skilled management, cool climate, silt loam soils, packaging equipment, and management of crop protectants.

**Farm Size**

Table 3-3 provides data regarding the total amount of farmland and the size of farms in the county and state. Between 2012 and 2022, the county lost farmland acres, while average farm size increased.

<b>Table 3-3: County Farmlands (acres)</b>						
<b>Minor Civil Division</b>	<b>Farmlands (acres)</b>			<b>Average Farm Size (acres)</b>		
	2012	2017	2022	2012	2017	2022
<b>Langlade County</b>	113,881	116,386	109,487	288	269	329
<b>State</b>	14,568,926	14,318,630	13,784,678	209	221	236

**Source: Census of Agriculture, 2012 2017, & 2022**

Table 3-4 shows the number of farms by size in the county. Between 2012 and 2022, data indicated that the total number of farms decreased from 396 to 333, a decrease of 63 farms. The data shows the number of small farms and large increasing, while the number of medium is decreasing.

The trend toward small farms indicates the increase of “hobby farming.” These farms generally produce on a small scale and do not have full time employees. Large farms are producing large quantities of food but often are so modernized

that they require only a fraction of the labor force.

<b>Table 3-4: Langlade County Farms by Size</b>						
<b>Year</b>	<b>1 to 49</b>	<b>50-179</b>	<b>180-499</b>	<b>500-999</b>	<b>1000 plus</b>	<b>Total Farms</b>
<b>2012</b>	106	139	103	34	24	396
<b>2017</b>	103	155	121	34	19	432
<b>2022</b>	111	95	60	39	28	333
<b>2012-2022 Net Change</b>	5	(44)	(43)	5	4	(63)

**Source: Census of Agriculture, 2012, 2017, & 2022**

### Row Crops

Major crop exports produced in Langlade County include grain corn, potatoes, and soybeans. In terms of acres harvested, potatoes lead the way with over 10,000 acres, followed by oats, soybeans, and corn for grain. Langlade County is one of the major producers of potatoes in Wisconsin. Table 3-5 provides historical data on crop production in Langlade County.

<b>Table 3-5: Langlade County Major Crop Type (acres harvested)</b>					
<b>Crop</b>	<b>2012</b>	<b>2017</b>	<b>2022</b>	<b>2022 % Of Harvest</b>	<b>2012-2022 Net Change</b>
<b>Corn (for grain)</b>	7,933	7,588	4,964	7.8%	(2,969)
<b>Oats</b>	5,810	9,232	6,013	10.0%	203
<b>Soybeans</b>	4,532	6,931	5,412	9.0%	880
<b>Potatoes (all)</b>	10,018	10,630	10,530	17.5%	512
<b>Subtotal</b>	28,293	34,381	26,919	44.3%	(1,374)
<b>Other Crops</b>	40,085	32,901	33,151	55.7%	(6,934)
<b>Total Harvest</b>	68,378	67,282	60,070	100%	(8,308)

**Source: Census of Agriculture, 2012, 2017, & 2022**

### Livestock

There are about 19,000 cattle and calves in the county. In 2021 there were 9,300 dairy cows in 24 total herds. Between 2017 and 2022, the number of cows increased by about 100 animals. Overall milk production increased to 232,500,000 pounds or about 25,000 pounds per cow. Milk production in Langlade County continues to trend with the State of Wisconsin. Farmers are decreasing the number of cows while increasing the pounds of milk produced. There are several beef herds also in the county. (2022 Wisconsin Agricultural Statistics)

Langlade County producers still have many options to market their milk. While some of the milk produced is used by the local dairy plant, a large amount of milk

is hauled into neighboring counties. Some small herds are pursuing organic certification and shipping milk to this rapidly growing market.

### **Productive Agricultural Areas**

The most productive agricultural areas are to be found on the Antigo Flats. Quality soils, flat land, and limited development make this area productive. Other areas with high water tables and steep slopes are less productive for row crop production, but many are suited well for forage and managed pasture. Irrigation is widely used throughout this area of the county. Approximately 23,000 acres of cropland are now irrigated. These areas are mostly flat and therefore conducive to the use of large farm machinery and the efficient application of chemicals. Even irregular fields are planted into potato production if they can be suitably irrigated. Productive agricultural areas are used in the determination of farmland preservation areas.

### **Farm Infrastructure**

Farm-to-market roads, commodity storage and processing plants, and implement dealerships are probably the most significant farming infrastructure. Quality roads are absolutely necessary to the farmer for transporting the wholesale farm product to the appropriate market in a timely manner. Farm-to-market roads are discussed in more detail in the Transportation Chapter of the Comprehensive Plan. Adequate land and electricity must be available to store and process the harvested crops. There are many potato storage facilities in and around the City of Antigo. Tractors break down, and other implements need replacement parts. The number and type of farms in the county support several businesses to service modern farm implements. Depending upon the type of farming, irrigation wells may also be extremely important. Irrigation equipment is a common sight in Langlade County as farmers seek to maintain proper soil moisture on a crop that needs steady soil moisture.

### **Gross Regional Product (GRP)**

Total gross regional product (GRP) in Langlade County in 2018 was over \$665,456,000. The revenues from NAICS 11: Agriculture, Forestry, Fishing and Hunting in the county resulted in a total GRP of \$61,460,000. In comparison to other industries, the agriculture industry generates the third largest gross regional product (excluding government) and accounts for almost nine percent of the county's GRP. Only the manufacturing and retail sectors produced a higher GRP than the agriculture industry in 2018.

### **Exports**

In 2018, Langlade County firms exported over \$900 million in total revenue. Agriculture, Forestry, Fishing and Hunting was the second highest export industry accounting for over \$124 million in export revenue, or about 14 % of total export revenue. Only manufacturing exported more goods and services. The ability to export goods and services is essential to the county's economy as it introduces new money to the economy, rather than simply circulating money that

is already in the region. This influx of new revenue is redistributed throughout the economy at local restaurants, suppliers, and retailers.

**Agricultural Land Values**

Agricultural land values throughout Wisconsin have changed since use-value assessment of farmland was implemented nearly two decades ago. Use values for most farmland are grouped into four categories based on relative soil productivity within the county. The Department of Revenue (DOR) determines actual values assigned to farmland in these categories each year for every municipality in the state. Land associated with the farmstead, road rights-of-way, un-grazed woodland and swampland, etc. is excluded from use value assessment.

Land and buildings in the farmstead area are assessed at full market value, as are woodlands, swamp, and any fields or pasture areas not actually used for cropland or pasture. If agricultural land is converted to another use, the county where the land is located will administer a penalty on the property tax. The DOR will determine the penalty within each county based on the difference between the average per-acre fair market value of agricultural land sold in the county in the previous year and the average per-acre equalized value of agricultural land in the county in the previous year.

The number of agricultural land sale transactions per year has increased from 2016 to 2021. Table 3-6 indicates that farms when sold are continuing in that use. Data indicates that agricultural land values have decreased slightly from 2016 to 2021, however, anecdotal evidence disagrees with this finding.

<b>Table 3-6: Agricultural Land Sales (Land Without Buildings and Improvements)</b>								
<b>Minor Civil Division</b>	<b>Number of transactions</b>		<b>Agricultural land continuing in agricultural use</b>		<b>Agricultural land being diverted to other uses</b>		<b>Total of all agricultural land</b>	
	2016	2021	2016	2021	2016	2021	2016	2021
	<b>Number</b>		<b>Acres</b>					
			886	448	0	0	886	448
<b>Langlade County</b>	12	16	<b>Dollars per acre</b>					
			\$3,013	\$2,672	N/A	N/A	\$3,013	\$2,672

**Source: Wisconsin Agriculture Statistics, 2016 & 2022**

### Agricultural Land Uses

Table 3-7, provides data related to cropland, woodlands and pasture land in the county. Over the ten-year period cropland, woodland, and permanent pasture declined, while there was an increase in other lands such as farmsteads.

<b>Table 3-7: Agricultural Land Uses</b>				
<b>Land Use</b>	<b>Acres</b>			
	<b>2017</b>	<b>2022</b>	<b>% Change</b>	<b>Net Change</b>
<b>Total Cropland</b>	75,817	70,639	-6.8%	- 5,178
<b>Total Woodland</b>	28,286	26,860	-5.0%	-1,426
<b>Permanent Pasture</b>	7,188	6,473	-9.9%	-715
<b>Other</b>	5,095	5,515	8.2%	420
<b>Total</b>	<b>116,386</b>	<b>109,487</b>	<b>-5.9%</b>	<b>-6,899</b>

**Source: Census of Agriculture, 2022**

### Farmland Preservation Areas

The goal of the farmland preservation is to identify and maintain land areas that are important to protect for agriculture and related uses. (This process is described in more detail in Chapter 3 of the Langlade County Comprehensive Plan.)

Landowners in Farmland Preservation areas may apply for farmland preservation income tax credits, if the town has adopted County zoning. In an un-zoned town, the residents may apply for an Agricultural Enterprise Area if they meet the criteria. These areas have been identified during the planning process to be agricultural uses or open spaces. No non-agricultural development is planned in the next ten years for those areas identified as farmland preservation areas.

Over 325,000 acres has been included in the farmland preservation areas, or about 57% of the county. (See [Map 8 Farmland Preservation Map](#))

### Agricultural Enterprise Areas

In addition to the farmland preservation areas discussed above, there is another level of protection for farmland. Agricultural enterprise areas, or AEAs, are community led efforts establishing designated areas important to Wisconsin’s agricultural future. More specifically, an AEA is an area of productive agriculture that has received designation from the state at the request of landowners and local governments. As a part of the state’s Farmland Preservation Program, AEAs strive to support local farmland protection goals.

Local communities can voluntarily pursue designation of an AEA by submitting a petition to the Department of Agriculture, Trade and Consumer Protection (DATCP). Through this designation, the community can encourage continued agricultural production and investment in the agricultural economy. Landowners within designated AEAs are eligible to enter into voluntary farmland preservation agreements.

There are two such areas designated in Langlade County. One is located the Antigo Flats, which connects with areas in Marathon County; the other is the Evergreen-Wolf River. The Antigo Flats AEA is about 70,000 acres, while the Evergreen- Wolf River is about 20,000 acres. Refer to the Comprehensive Plan for Agricultural Enterprise Map.

### **Agricultural Sustainability**

Sustainable practices in agriculture involve carefully planned techniques to prevent soil erosion, soil contamination, non-point water pollution, and productivity loss. Organizations such as the State Department of Natural Resources (DNR) and the [Natural Resources Conservation Service \(NRCS\)](#), along with county staff support responsible land and water management practices with the intent of preserving land productivity for the long-term.

#### Related Issues:

- Decline in the number of dairy farms.[and resultant increase in large farm operations]
- Farm & Non-Farm conflict. As more and more non-farm development occurs in the rural area conflicts arise. Some of these relate to odors, noise or uses. These conflicts need to be minimized.
- Preservation of productive agricultural land. Scattered, low-density development is found in many parts of the County. These developments can also encroach on farm and forestry areas, taking land out of production in a piecemeal fashion and change the rural character of an area. Future development needs should be well planned to conserve appropriate agricultural and forestry lands while providing for planned growth.
- Non-Point Source Pollution. To produce increased yields, farmers apply nitrogen, phosphorus and other nutrients to their crops. Excess nitrates not used by plants can leach into the groundwater and excess phosphorus may runoff or leach via shallow groundwater into lakes, streams and wetlands, resulting in degradation of those water resources. Proper measuring of nitrogen and phosphorus available in the soil and manure saves farmers the cost of purchasing extra commercial fertilizer – and also protects groundwater. Spring snowmelt or excessive rainfall can lead to fish kills and contamination of drinking water wells due to bacteria in manure that has run off from farm fields.
- Cropland Soil Erosion. Tillage practices (particularly those required in potato production) create conditions where soil erosion can occur. Potatoes are a relatively shallow rooted crop that requires intensive management to promote growth and yield. There is currently great interest and efforts being made to develop management strategies such cover crops that can address cropland soil erosion.
- Agricultural Best Management Practices. Adoption & implementation

of sustainable methods to maintain or improve the quantity and quality of the land and water resources. e.g. cover crops, soil health practices, riparian and wetland buffers, manure application BMPs; and water quality and quantity stewardship.

### **CAFOs & Manure Storage**

Large scale animal operations, including CAFOs, that produce large quantities of animal manure may pose a greater risk to water quality in the absence of careful management and regulation. Operators must be careful with storage and spreading of manure. CAFOs are regulated by the Department of Natural Resources under [NR 243](#).

## **Soils**

There are 33 different soil types in Langlade County identified in the County Soil Survey. The Natural Resource Conservation Service (NRCS) is a federal agency that produced the Langlade County Soil Survey. The survey contains predictions of soil behavior for selected land uses and also highlights the limitations and hazards inherent in the County's soil. A series of detailed maps identifying the location of soil types in Langlade County accompanies the survey.

These soils are grouped into six major soil associations that have distinct soil patterns, relief, and drainage features. The Langlade County Soil Survey contains detailed descriptions of each soil type, and includes tables to determine suitability and limitations. (See [Map 2: Soils](#))



Antigo silt loam was selected to represent the more than 550 different soils in Wisconsin. It is a productive, well-drained soil with a light-colored surface layer developed under northern hardwood forests. Antigo soils are formed in silty material underlain by sand and gravel on glacial outwash plains.

### **General Soil Map Unit Descriptions**

#### **Antigo-Langlade**

Well drained, nearly level and gently sloping, silty soils on outwash plains. These soils make a roughly triangular outwash plain called the Antigo Flats. The State soil (Antigo Silt Loam) is named for this soil unit.

This soil association is part of a large, roughly triangular outwash plain that is called the Antigo Flats. Areas are broad and are rather flat, except for a few knolls, swells, swales, the foot slopes bordering terminal moraines, drainageways, and valleys. The one major valley, which is along Spring Brook, is very long, flat floored, and frequently flooded during wet periods. Secondary valleys or drainageways carry runoff to Spring Brook. Slopes are mostly long and smooth.



Soils are well drained, nearly level and gently sloping, silty soils on outwash plains.

Some of the acreage is woodland, including a few small, wooded swamps. The upland woods are mostly areas of sloping soils and soils bordering terminal moraines. The main concern in managing woodland is controlling competing plants that interfere with tree regeneration.

The Antigo-Langlade soils are the most intensively farmed soils in the county. Dairying and potato farming are the main enterprises. The major crops are oats, alfalfa, red clover, potatoes, and corn. The main concerns in managing cropland are water erosion and crusting of the surface layer. Applications of lime are needed for most crops. Coarse gravel and cobbles in the surface layer interfere with potato harvesting.

Generally, these soils have few limitations for building site development. The effluent from waste disposal facilities, however, can pollute ground water because of the poor filtering capacity of the substratum. Also, local roads and streets may be damaged by frost heave. The substratum of the soils is a source of sand and gravel.

### **Antigo-Pence**

Well drained, nearly level to very steep, silty and loamy soils on outwash plains, kames, and eskers.

This soil association consists mostly of soils on rather flat outwash plains that are pitted with kettles and interspersed with hills and ridges of outwash deposits. Soils are well drained, nearly level to very steep, silty and loamy soils on outwash plains, kames, and eskers

Most of the acreage is woodland, including some wooded swamps. The main concerns in managing woodland are the restricted use of machinery, erosion, seedling survival, and competing plants that interfere with tree regeneration.

In mostly the southern part of the County the soils are used for farming as well. Dairying and potato farming are the main farm enterprises. The major crops are oats, alfalfa, corn, red clover, and potatoes.

The main concerns in managing cropland are soil blowing and low fertility on the Pence soils, water erosion on both of the major soils, and crusting of the surface layer in the Antigo soils. Applications of lime are needed for most crops. Coarse gravel and cobbles in the surface layer interfere with potato harvesting. Most of the gravel pits in the county are in areas of Antigo soils. Generally, these soils have few limitations for sanitary facilities or building site development. The effluent from waste disposal facilities can pollute ground water because of the poor filtering capacity of the substratum, which consists of sand and gravel.

### **Kennan-Keweenaw**

Well drained, undulating to very steep, stony, loamy and silty soils on moraines and drumlins.

This soil association consists of soils on terminal and recessional end moraines and partly of soils on ground moraines and drumlins. Soils are well drained loamy sand, undulating to very steep, stony, loamy and silty soils on moraines and drumlins.

Most of the acreage is woodland, including a few small, wooded swamps. The main concerns in managing woodland are the restricted use of machinery, erosion, seedling survival, and competing plants that interfere with tree regeneration.

In some areas the soils are used for farming. Dairying is the main farm enterprise on these soils. The major crops are oats, alfalfa, and corn. The main concerns in managing cropland are soil blowing and low fertility on the Keweenaw soils and water erosion and stoniness on both of the major soils. Applications of lime are needed for most crops.

Building site development may be limited by large stones and slopes related to this soil group. Local roads and streets on the Kennan soils may be damaged by frost heave.

### **Magnor-Cable**

Somewhat poorly drained and very poorly drained, nearly level and gently sloping, silty and mucky soils on moraines.

This soil association mostly consists of soils on ground moraines that have little local relief and few prominent features. The landscape is one of broad swells with long side slopes interspersed with long drainageways that broaden into large basins in places. Small swells or knolls are within some of the basins. The drainageways are frequently ponded during wet periods. Many streams and a few hills and manmade impoundments are in areas of this unit. Slopes are mostly long and smooth. Soils are somewhat poorly drained and very poorly drained, nearly level and gently sloping, silty and mucky soils on moraines.

Most of the acreage is woodland, including many wooded swamps. Large woodlots are common. The main concerns in managing woodland are the restricted use of machinery, windthrow, seedling survival, and competing plants that interfere with tree regeneration.

In some areas the soils are used for dairy farming. The major crops are oats, red clover, and forage grasses. The main concerns in managing cropland are wetness, water erosion, and crusting of the surface layer. Applications of lime are needed

for most crops.

Sanitary facilities, building site development, and roadways are generally limited by wetness or ponding. Also, restricted permeability limits the use of the soils for sanitary facilities, and frost heave may damage local roads and streets.

### **Milladore-Sherry-Mylrea**

Somewhat poorly drained and very poorly drained, nearly level and gently sloping, silty and mucky soils on moraines. Granite bedrock is close to the surface.

This soil association consists of soils on ground moraines that have little local relief and few prominent features. Granite bedrock is close to the surface. The landscape is one of broad swells with long side slopes interspersed with long drainageways that broaden into large basins in places. The drainageways are frequently ponded during wet periods. A few streams and manmade impoundments are in areas of this unit. Slopes are mostly long and smooth. Soils are somewhat poorly drained and very poorly drained, nearly level and gently sloping, silty and mucky soils on moraines

Most of the acreage is woodland, including many wooded swamps. The main concerns in managing woodland include the restricted use of machinery, windthrow, seedling survival, and competing plants that interfere with tree regeneration.

Sanitary facilities, building site development, and roadways are generally limited by wetness or ponding. Restricted permeability limits the use of Milladore and Sherry soils for sanitary facilities. Granite bedrock can restrict excavations. Local roads may be damaged by frost heave.

These soil associations demonstrate the relationship between soil types and characteristics to the various types of development or use. Residential, commercial, and industrial buildings are limited by shallow depth to bedrock which restricts foundation depth or increases construction costs; by high water tables which cause wet basements and are often found with unstable soils; and by land with steep slopes (over 12 percent) which hampers commercial and industrial uses more than residential.

These conditions also pose problems for underground utilities to serve such areas. Soils and soil conditions greatly affect certain types of development. Depth to bedrock, poor filtration capabilities, slow water percolation, wetness, ponding, susceptibility to erosion (slope), and subsidence are all factors that make development activities difficult. These types of soils are generally found in wetlands, on hillsides, and in shallow soils overlying bedrock. Due to their fragile nature, destruction of vegetative cover on such soils can trigger damage from wind and gully erosion.

Modern codes and ordinances that regulate land development and building location are based upon soil characteristics. Several ways of guiding development where soils are poor include not allowing residential/commercial/industrial development unless sewer is available; requiring alternative systems to on-site absorption of septic; prohibiting the use of holding tanks requiring large lot sizes.

### **Oesterle-Minocqua-Scott Lake**

Somewhat poorly drained, very poorly drained, and moderately well drained, nearly level, silty and mucky soils on outwash plains.

This soil association is on outwash plains where most of the soils have a seasonal high water table. The landscape is one of low flats interspersed with depressional areas, such as drainageways and basins. The low flats are not much higher than the depressional areas. The drainageways are frequently ponded during wet periods. Many streams and a few lakes are in areas of this unit. Slopes are mostly long and smooth. Soils are somewhat poorly drained, very poorly drained, and moderately well drained, nearly level, silty and mucky soils on outwash plains.

Most of the acreage is woodland, including many wooded swamps. Large woodlots are common. The main concerns in managing woodland are the restricted use of machinery, windthrow, seedling survival, and competing plants that interfere with tree regeneration.

In some areas the soils are used for dairy farming. The major crops are oats, red clover, potatoes, and forage grasses. The main concerns in managing cropland are wetness and crusting of the surface layer. Applications of lime are needed for most crops. Coarse gravel and cobbles in the surface layer interfere with potato harvesting.

Sanitary facilities, building site development, and roadways are generally limited by wetness or ponding. Also, the effluent from waste disposal facilities can pollute ground water because of the poor filtering capacity of the substratum, and local roads and streets may be damaged by frost heave.

## **Water Resources**

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### **Watersheds**

Langlade County is divided into 16 watersheds and four drainage basins. The sub-continental divide separates the Mississippi River drainage basin from the Lake Michigan drainage basin. On the eastern side of the divide, water flows into the Wolf and Oconto Rivers, which lead to Lake Michigan. On the Western side of the divide, the water flows into the Wisconsin River then to the Mississippi River. See [Map 5 Natural Resources](#).

The eastern part of the county is within the drainage basin of the Wolf and Oconto Rivers, and the western part is within the drainage basin of the Wisconsin

River. In Langlade County, the Wolf River enters at Upper Post Lake, flows generally south and east, and leaves the county just south of Markton. Seven principal tributaries of the Wolf River that are at least partly in the county include: Swamp Creek, Pickerel Creek, Hunting River, Lily River, Ninemile Creek, Evergreen River, and Red River. Five principal tributaries of the Wisconsin River that drain the western part of the county include: Prairie, Pine, Trappe, Spring Brook Creek, and Eau Claire Rivers.

The Antigo Flats are drained by Spring Brook, a tributary of the Eau Claire River, and by the east and west branches of the Eau Claire River. All of these streams drop about 7 feet per mile. The drainage valleys are large in relation to the size of the streams occupying them, because of the large volume of glacial meltwater that they once carried.

Prior to this plan revision, Langlade County's involvement in watershed management efforts were limited to assisting in DNR Total Maximum Daily Load (TMDL) monitoring of the Wolf River, and consideration of TMDL objectives in Nutrient Management Plan reviews. The [LCD](#) plans on increasing participation in state watershed initiatives including [TMDL](#) and the [Healthy Watersheds, High-Quality Waters](#) initiative as well as the Antigo Flats phosphorus runoff project, led by AgSource Laboratories and funded by a 2016 Wisconsin Potato and Vegetable growers association grant.

### **Producer-led Watershed Involvement**

In addition to the state initiatives above, the LCD plans on encouraging and assisting local citizen science and efforts to address water quality concerns. In particular, we plan on assisting our local farmers in their efforts to apply for and implement producer-led watershed projects in Langlade County. This effort includes, but is not limited to, the Antigo Flats phosphorus runoff project.

### **Groundwater**

Groundwater supplies nearly all of the water for residential, commercial, and industrial uses in Langlade County. In general, groundwater use has increased in the county as urban areas continue to grow and agricultural users install more high capacity wells. The increase in rural housing developments and a water bottling facility, each with their own private well, also places demands on groundwater. The availability of groundwater has not been a major community concern, but cumulative impact of the use of groundwater for irrigation has not been studied locally, may be a cause for future concern.

### **Groundwater Quantity**

Groundwater is comprised of the portion of rainfall that does not run off to streams or rivers and that does not evaporate or transpire from plants. This water percolates down through the soil until it reaches the saturated zone of an aquifer. The average recharge from precipitation on 1 square mile of the Antigo Flats is about 256,000 gallons per day (USGS, 1954). The groundwater generally

moves southward, and the level generally rises in spring, declines in summer, rises slightly in fall, and declines in winter. The depth to groundwater ranges to as much as 138 feet beneath the hills on the moraines. On the Antigo Flats, groundwater depth averages about 25 feet. Groundwater yields from the glacial deposits vary. Generally, the outwash yields more than the glacial till. Till is derived from the erosion and entrainment of material by the moving ice of a glacier. It is deposited some distance down-ice to form terminal, lateral, medial and ground moraines. The underlying crystalline bedrock yields little or no water.

In general, the infiltration and recharge rates in Langlade County are relatively high due to the coarse texture of surficial materials. Calculated groundwater recharge rates for the Eau Claire River basin in southwestern Langlade County and the Wolf River basin in eastern Langlade County were 6.1 inch/year and 10.8 inch/year, respectively. The lower recharge rate for the Eau Claire River basin is likely due to lower permeability and infiltration rates of the tight, finer grained Wausau and Merrill tills that cover the western part of the basin. (WGNHS).

Natural groundwater generally discharges at streams, marshes, lakes and springs or as underflow. The continued flow of perennial streams during long dry periods is caused by the natural discharge of the groundwater reservoir. Langlade County uses approximately 1.4 billion gallons of groundwater for irrigation, bottling and mining operations each year. Urban groundwater uses in the County are approaching 400 million gallons annually from the three municipal water systems combined (Antigo, White Lake and Elcho). Ensuring an adequate supply of usable groundwater is an important issue in Langlade County since water could become more difficult to obtain for everyone when the resource is more heavily used.

#### **Potential Groundwater Quantity Concerns:**

Groundwater is currently in abundant supply in Langlade County, but careful consideration should be given to planned development and climate resiliency planning efforts to ensure the supply is maintained.

#### **Groundwater Quality**

The quality of the ground water is generally very good with many areas of Langlade County. Many soils however have horizons with high rates of infiltration and permeability, are generally poor filters for domestic waste and agricultural chemicals and thus have a higher susceptibility for groundwater contamination. See Figure 3.3. The impact of development and agriculture has caused or contributed to deterioration of the ground water in some limited areas. In 2021, the DNR identified sensitive areas for nitrate contamination as part of a proposed rule for amending the NR 151 agricultural performance standards. See Figure 3.4. The sensitive areas consisted of cropland containing specific soil types (i.e., high permeability, shallow bedrock or shallow groundwater soils) or

township areas with confirmed groundwater contamination of > 5mg or > 10 mg/L nitrate. The sensitive areas within Langlade county are shown in figure Z and align with the southern part of the county under vegetable and potato production. Generally, the content of dissolved solids in the ground water is relatively low in the western half of Langlade County and relatively high in the eastern half. The higher content in the eastern part probably results from a higher content of limestone in the glacial deposits.

Groundwater quality can be impaired by a variety of pollutants including leaking underground storage tanks (LUSTs), landfills, septic tanks, over-application of pesticides and fertilizers, and intentional or unintentional (spills) use of hazardous chemicals. The most common contaminants found in Wisconsin's groundwater are pesticides, nitrates, nitrogen, and volatile organic compounds (VOCs). These contaminants come from a multitude of sources including nitrogen-based fertilizers, septic systems, animal waste storage, feedlots, municipal and industrial wastewater discharges, and sludge disposal. Nitrate contamination is an issue in the southern part of the county in vegetable and potato production areas. Private and Public well monitoring results from Langlade county confirm this area has elevated nitrate levels of > 5 or > 10 mg/L (see Figures 3.5 & 3.6). Groundwater contaminants can affect the health of humans, livestock, and wildlife. Because groundwater seeps more slowly than surface runoff, pollution that occurs today may not become evident for several years to decades or longer. Once polluted, groundwater is difficult to purify and may take years, decades, or longer to dilute or inactivate/transform pollutants, and some pollutants called "forever chemicals" are understood to never become inactive. The topic of PFAS (Per- and Polyfluoroalkyl Substances) is an emerging concern due to their persistence in the environment, potential health risks, and widespread contamination of water sources, posing significant threats to human health and ecosystems. Sparking urgent discussions and the need for proactive mitigation measures. As of 2024, the DNR is conducting a number of initiatives related to (PFAS) contamination and water quality in Wisconsin. These initiatives are:

1. PFAS surface water rule and implementation;
2. Surface water and fish tissue sampling; and
3. PFAS and biosolids.

Additional PFAS information from the DNR can be found here:

<https://dnr.wisconsin.gov/topic/PFAS>

Public water systems (such as schools, hotels, restaurants, taverns and manufacturing facilities) are required to meet certain quality and testing standards set in state or federal statutes. Wisconsin DNR drinking and groundwater staff provide one-on-one technical assistance to owners/operators of a public water systems to help understand public water system regulations and provide safe and healthy drinking water. The DNR also has a contract with the Wisconsin Rural Water Association (WRWA) to provide technical assistance to other-than-municipal (OTM) and non-transient non-community (NN) systems.

These systems can receive one-on-one assistance on drinking water issues from the WRWA.

Additional DNR public water system information can be found at: <https://dnr.wisconsin.gov/topic/SmallBusiness/DrinkingWater.html>

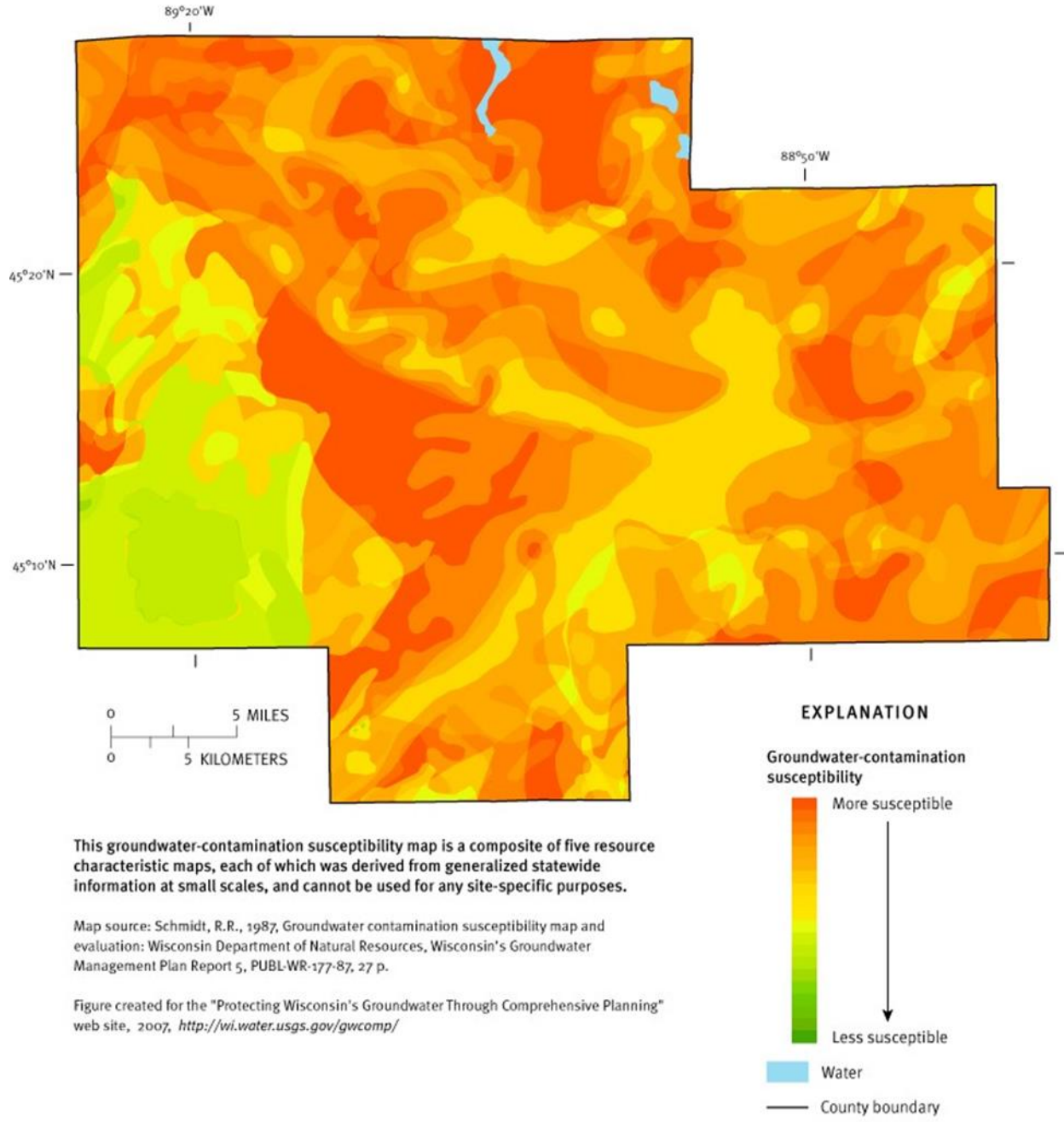
Most private wells in the county provide a clean, safe supply of water; however, contaminants can pollute private wells and without a noticeable change to look, smell, or taste. Private wells usually serve a single home or farmhouse and have less than 15 connections and serve fewer than 25 people. Contamination sources can be from pollution of the groundwater from adjacent/nearby land use activities or cracks in well casings and poorly sealed caps allowing contaminants to enter the drinking water. The only way to detect these contaminants is to regularly test drinking water. There is no state or county requirement to test a private well, except for bacteria when it is drilled or when the pump is changed, so most homeowners forget to test their well on a regular basis. Homeowners are responsible for making sure their water is safe. Wisconsin DNR Private water staff offer technical assistance to private well owners for the following:

- Well testing and contamination;
- Well and pump installation rules;
- Questions about well drillers or pump installers;
- Proper well location; and  
Proper well filling and sealing



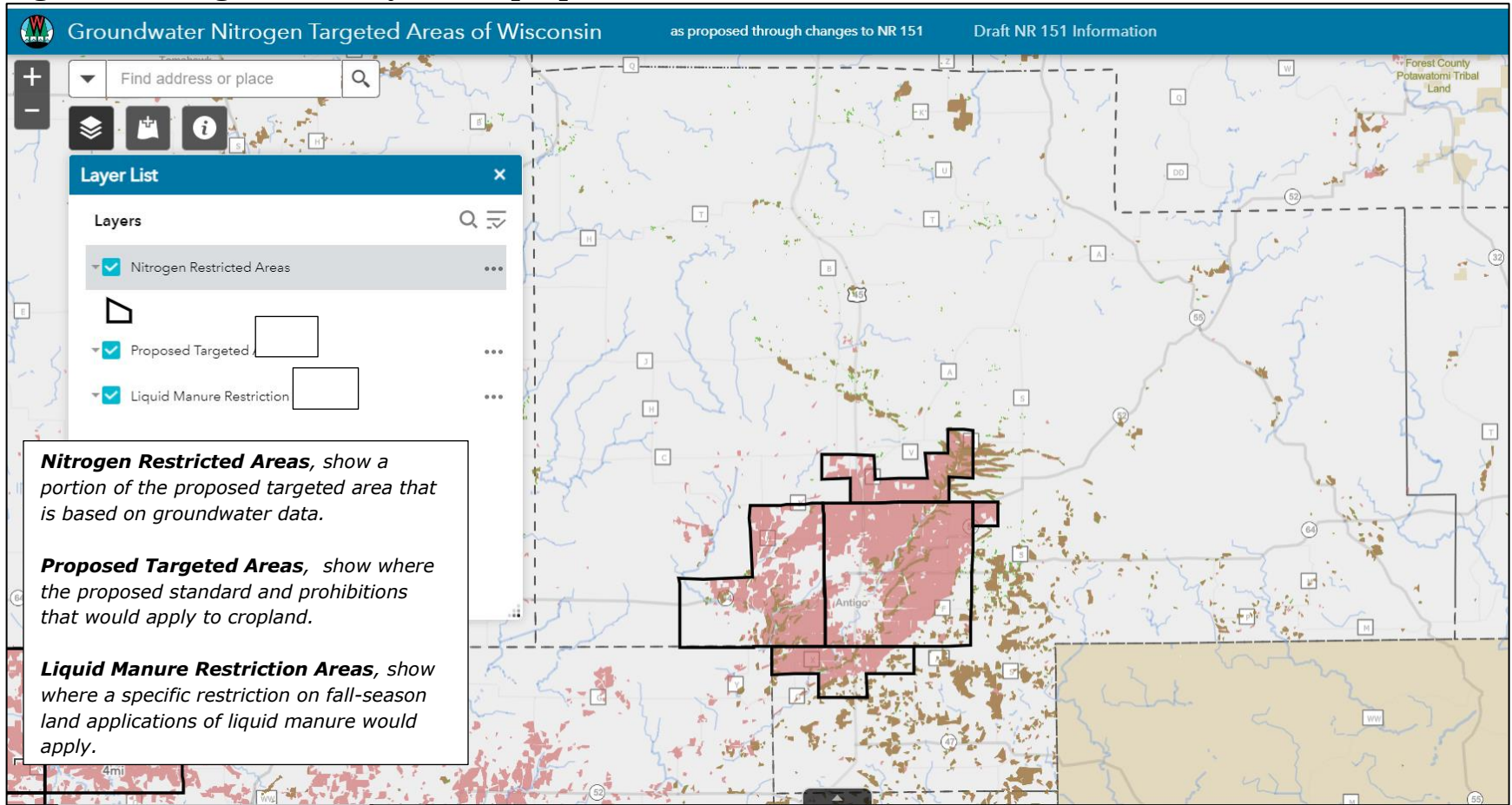
### Figure 3.3 Groundwater Susceptibility Analysis

#### Langlade County – Groundwater-Contamination Susceptibility Analysis



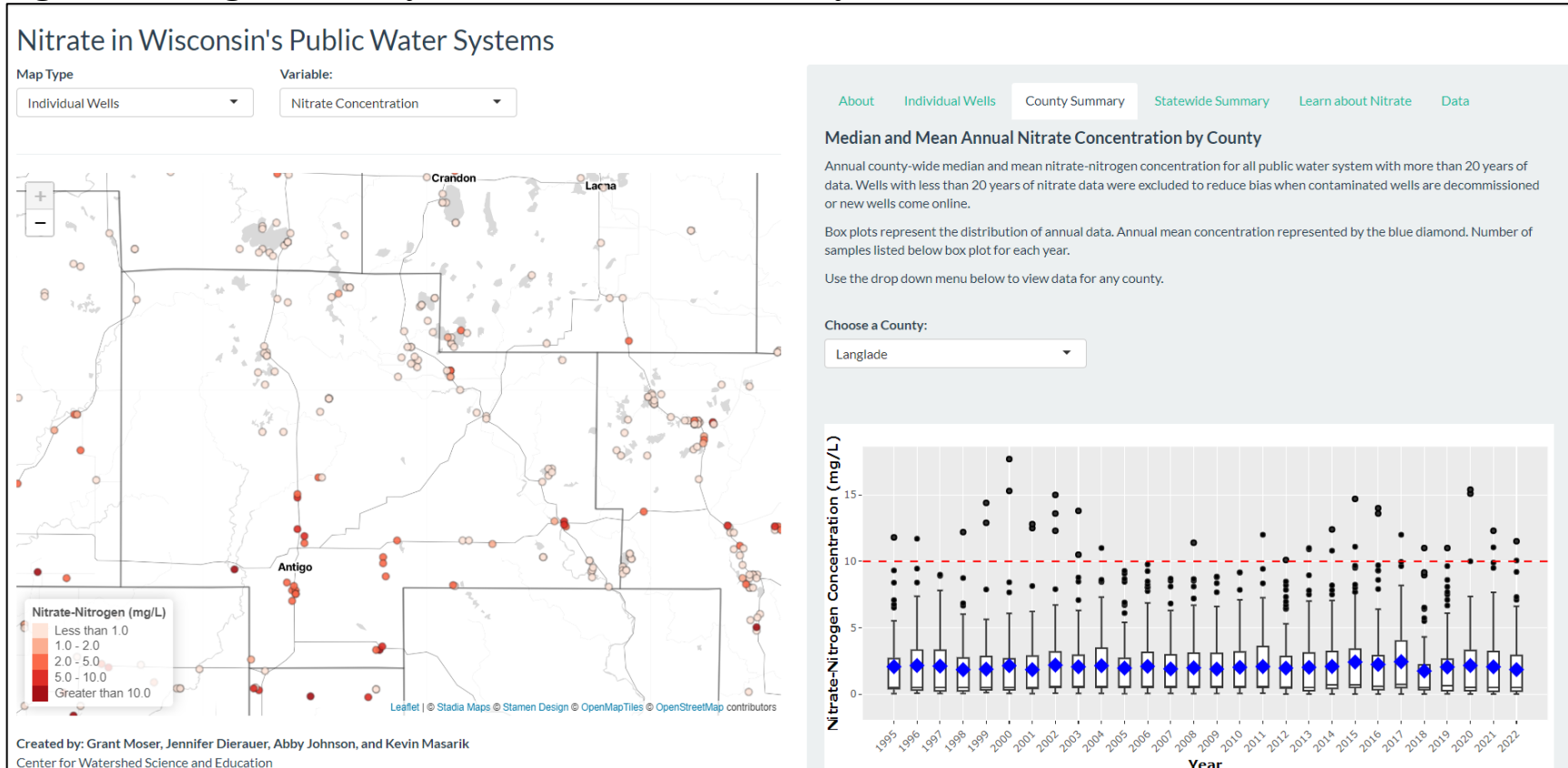
Source: USGS Groundwater contamination susceptibility map,  
 Accessed via website: Protecting WI's Groundwater Through Comprehensive Planning.

**Figure 3.4 Langlade County – DNR proposed Sensitive Areas for Nitrate Contamination**



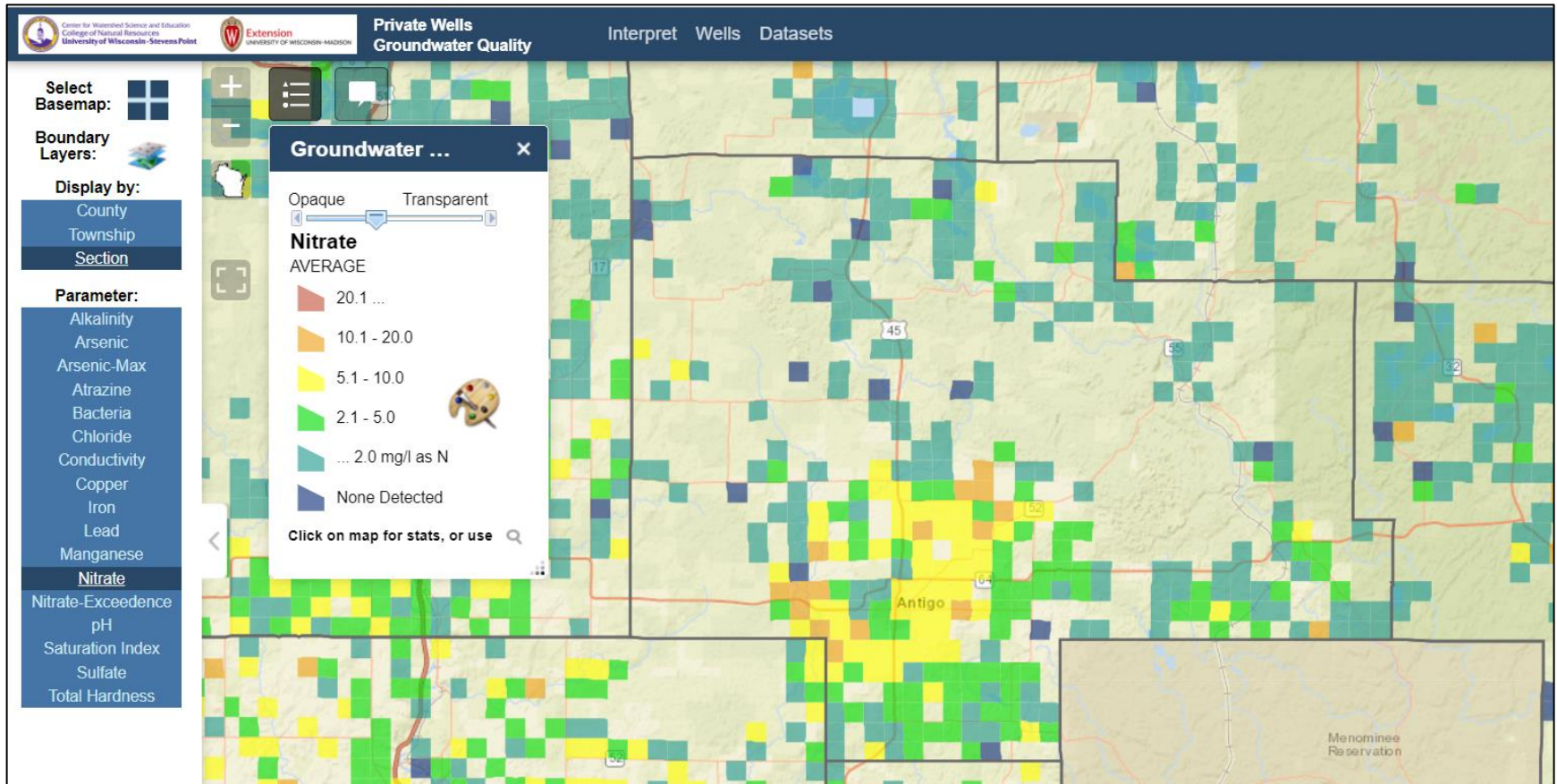
Source: Wisconsin DNR - <https://dnr.wisconsin.gov/topic/nonpoint/nr151nitrate.html>

**Figure 3.5 Langlade County – Nitrate in Public Water Systems**



Source: UW Stevens Point Center for Watershed Science and Education - [https://www3.uwsp.edu/cnr-ap/watershed/Pages/nitrate\\_trends.aspx](https://www3.uwsp.edu/cnr-ap/watershed/Pages/nitrate_trends.aspx)

**Figure 3.6 Langlade County – Private Wells Groundwater Quality – Average Nitrate Concentrations by Section**



Source: UW Stevens Point Center for Watershed Science and Education - <https://www3.uwsp.edu/cnr-ap/watershed/Pages/WellWaterViewer.aspx>

### **Potential Groundwater Contamination Sources:**

- There are 10 open-status sites in Langlade County that have contaminated groundwater and/or soil. These sites consist of 2 Leaking Underground Storage Tank (LUST) sites, and 8 Environmental Repair (ERP) sites.
- There are no open sanitary landfills in Langlade County.
- There are 8,018 active Private Onsite Wastewater Treatment Systems (POWTS) in Langlade County as of 12/31/2023, according to county records. The installation and maintenance of these systems is monitored by the Langlade County Land Records & Regulations Department.
- There are approximately 52 active Manure Storage Facilities in Langlade County.
- There are 3 concentrated animal feeding operations (CAFOs) in Langlade County.
- Areas under vegetable and potato production that receive frequent commercial fertilizer applications.
- Chemical and manure spills occur occasionally in Langlade County, but are infrequent and usually involve small quantities of hazardous material.
- There are no Superfund sites in Langlade County.

### **Surface Waters**

Langlade County has 843 lakes covering 9,148 acres, 225 streams with a total length over 500 miles and a surface area of about 1,800 acres, and about 108,800 acres of wetland greater than five acres in size based on Wisconsin Wetland Inventory data. The largest body of water is the Wolf River, which flows through the eastern part of the county, and is one of the most valuable rivers in the state. The Wolf River in Langlade County is 46.0 miles long, 984 acres, of which 34.5 miles is classified trout water. Lakes cover 8,864 surface acres and 381 miles of shoreline, with 418 of the 843 lakes having public access. See Table 3-8 and [Map 4 Natural Resources](#).

### **Wetlands**

Wetlands are important for groundwater aquifer recharge, wildlife habitat, and serving social functions such as open space, recreation, and aesthetics. They also act as water storage “sponges” in times of high water by absorbing excess water and then releasing it back into the watershed slowly, thereby preventing flooding and minimizing flood damage. Wetlands have valuable ground and surface water purification capabilities since potentially harmful compounds and bacteria in the water are absorbed into plant tissues thus buffering the adjacent water body. Wetlands occur in areas where the water level is usually near or above the soil surface. Wetlands cover over 108,000 acres of land throughout the county, which accounts for more surface area than our lakes & streams combined.

Swamps, bogs, marshes, potholes, wet meadows, and sloughs are all considered

wetlands. The soils in these areas are usually saturated within a few inches of the surface during the growing season. Besides their ecological value, wetlands are also an important recreational, educational, and aesthetic resource. Wetlands are a breeding and nesting ground for waterfowl and for many other animals depending upon aquatic habitats. Maintaining these breeding grounds ensures a variety and adequate amount of game for hunting and wildlife observation. Sometimes a particular wetland complex can be home to a rare or endangered species thereby provoking interest from scientists and educators. Lastly, the visual appearance of the wetlands themselves can constitute a scenic resource.

Historically, the greatest threats to wetlands in the county have been agricultural drainage and urban development. Given their important role, destruction and degradation of wetlands negatively affects the public and environment in many ways. The development of impermeable surfaces and the addition of fill materials can destroy the hydrological function of a wetland site while simultaneously increasing flood dangers downstream. The DNR has promulgated minimum standards for managing wetlands to help reduce the negative impacts of developing in or near wetland areas.

The DNR identifies the location of wetlands on their Wisconsin Wetland Inventory maps and associated database. According to this database, Langlade County has over 108,000 acres of wetlands, which also includes wooded wetlands. The DNR has also worked with the Nature Conservancy to create an interactive viewer that shows the wetland services/functions provided by every mapped wetland ([Freshwater Network | Wisconsin's Waters, Wetlands and Watersheds](#)). Significant concentrations of wetlands in Langlade County include Bogus Swamp in the Town of Upham, Ackley State Wildlife Area and surrounding county forest, the Antigo Flats west of USH 45, and in scattered areas along the Wolf River. Additional wetlands associated with the floodplains and smaller wetlands are scattered throughout the County.

Table 3-8: Langlade County Lakes over 100 acres		
Lake Name	Acreage	Township
Boulder Lake*	370	Wolf River-South
Duck Lake	120	Elcho-West
Dynamite Lake	100	Upham-North
Enterprise Lake	509	Elcho-West
Greater Bass Lake	244	Upham-West
Little Sand Lake*	237	Ainsworth-North
Mary Lake	154	Wolf River
Moccasin Lake	113	Elcho-West
Moose Lake	113	Norwood
Pickrel Lake*	1272	Ainsworth-North
Post (Lower) Lake	379	Elcho-East
Post (Upper) Lake*	765	Elcho-East
Rolling Stone Lake	682	Ainsworth-North
Rose Lake (Bear)	115	Wolf River-Central
Sawyer Lake (Edith)	149	Wolf River-Central
Summit Lake	279	Elcho-West & Upham-West
White Lake	153	Wolf River-South

Source: WDNR, \*A portion of this lake is not in Langlade County.

## Lakes

Langlade County’s 843 lakes are placed into four basic classifications: Seepage, Spring, Drainage, and Drained (See [Map 5: Natural Resources](#)).

Seepage lakes (552/843) are landlocked (no inlets or outlets) water bodies, with the principal sources of water being precipitation or runoff, supplemented by groundwater from the immediate drainage area. Seepage lakes are the most common lake type in Wisconsin.

Spring lakes (207/843) are abundant throughout the county. These lakes have no inlet, but do have an but have a permanently flowing outlet creek. The primary source of water for spring lakes is groundwater flowing into the bottom of the lake from inside and outside the immediate surface drainage area. Spring lakes are particularly valued in Langlade County because of their abundance and tendency to have high-quality water, they offer the community valuable scenic beauty and recreation opportunities such as trout fishing, and kayaking.

Drainage lakes (66/843) are impoundments or natural lakes whose main water source is from stream drainage. Upper Post Lake, an impoundment and a drainage lake, is the largest lake in the County.

Drained lakes (18/843) are lakes or impoundments that receive water primarily from groundwater and have a limited outflow of water.

### **Citizen Lake Monitoring Network**

Established in 2003, the Citizen Lake Monitoring Network (CLMN) creates a bond between over 1,000 citizen volunteers and the DNR statewide. The CLMN prides itself to collect high quality data, and to educate and empower volunteers and to share the data and knowledge they collect while monitoring.

There are several different types of data CLMN volunteer can collect: water clarity monitoring; water chemistry monitoring; ice on and ice off monitoring; aquatic invasive species monitoring, and native plant monitoring.

The data collected by volunteers can be used for: state and national water quality reporting; lake basin and assessment planning; fulfillment of requests from Wisconsin state legislature; remote sensing research, and understanding long-term ecological trends. Many lake associations collect Citizens Lake Monitoring Network data to help them develop a lake management plan. This helps the lake association to better understand the health of their waterbody and helps the association be proactive if lake health issues arise.

### **Rivers & Streams**

A popular method to quickly judge the quality of rivers and streams in Wisconsin is to check its classification as a trout stream. Wisconsin trout streams are classified based on their ability to sustain reproducing trout. Class I trout streams are high quality waters able to support a reproducing trout population without need of any fish stocking. Class II trout streams have some natural reproduction, but not enough to sustain a desired sport fishery. Some fish stocking is necessary to maintain the fishery. Class III trout streams have no reproduction and have marginal trout habitat. Fish stocking is required to support the fishery in these streams.

Langlade County has 171 trout streams, which combined total 395 miles. There are 143 miles of Class I trout water, 246 miles of Class II trout stream and 6 miles of Class III trout streams in Langlade County. The Wolf River, Eau Claire River, Evergreen River and Spring Brook Creek, Elton River, East Branch Eau Claire River, Prairie River, Spring Brook, Red River, Mayking Creek, Drew Creek, Middle Branch Embarrass River, Dalton Creek, and South Branch Oconto River constitute highly regarded Class I trout fishing resources in the County. See Trout Streams Map in [Attachment F](#)

The Wolf River flows southeast through the county from its headwaters in Pine Lake near Hiles, Wisconsin (located in Forest County). From the Langlade-Menominee County line downstream (which is not in Langlade County) to Keshena Falls, the Wolf River is designated as a national Wild and Scenic River. No additional dams are permitted on the Wolf River in Langlade County (§30.25(1) Wis. Stats.). The gradient is very steep for a Midwestern river. It drops 420 feet in 50 miles from the Upper Post Lake Dam to the Menominee Indian Reservation.



There are 23 named rapids on the Wolf River in Langlade County.

### **Water Action Volunteers**

Similar to CLMN for lakes streams & rivers have the Water Action Volunteers (WAV) volunteer stream monitoring program is an ongoing partnership between the University of Wisconsin–Madison Division of Extension, the Wisconsin Department of Natural Resources (WDNR) and nearly 50 local partner groups and organizations. The program aims to preserve, protect and restore Wisconsin’s 86,000+ miles of streams and rivers by educating and empowering volunteers to (1) gather high-quality stream data useful for decision-making and natural resource management, and (2) share their data and knowledge.

### **Outstanding/Exceptional Resource Waters**

To provide a more comprehensive assessment of a waterbody’s value and quality than ability to produce trout, Wisconsin designates the state’s highest quality waters as Outstanding Resource Waters (ORWs) or Exceptional Resource Waters (ERWs). An Outstanding Resource Water is defined as a lake or stream which has excellent water quality, high recreational and aesthetic value, and high-quality fishing and is free from point source or nonpoint source pollution. An Exceptional Resource Water is defined as waters which exhibit the same high-quality resource values as outstanding waters, but which may be impacted by point source pollution or have the potential for future discharge from a small sewer community. ORWs & ERWs are listed in Table 3-9 and visualized on [Map 3: Designated Waters](#).

ORW and ERW status identifies waters that the State of Wisconsin has determined warrant additional protection from the effects of pollution. These designations are intended to meet federal Clean Water Act obligations requiring Wisconsin to adopt an “antidegradation” policy that is designed to prevent any lowering of water quality – especially in those waters having significant ecological or cultural value.

<b>Table 3-9: Langlade County Outstanding and Exceptional Resource Waters</b>		
<b>Waterbody</b>	<b>Portion of waterbody classified ORW or ERW</b>	<b>Classification</b>
<b>Clearwater Creek</b>	All	ORW
<b>Dalton Creek</b>	All	ERW
<b>Demlow Springs</b>	All	ERW
<b>Demster Creek</b>	All	ERW
<b>Drew Creek</b>	All	ORW
<b>East Branch Eau Claire River</b>	From STH 64 upstream to firelane crossing in T33N R11E S35 SW 1/4	ERW
<b>Elton Creek</b>		ORW
<b>Little Evergreen Creek</b>	All	ORW
<b>Evergreen River</b>	All	ORW

**Table 3-9: Langlade County Outstanding and Exceptional Resource Waters**

Waterbody	Portion of waterbody classified ORW or ERW	Classification
Lower Post Lake	All	ORW
Gartkze Flowage	All	ERW
Getchell Creek	All	ERW
Hansen Creek	All	ERW
Hunting River	From Fitzgerald Dam Road downstream to T33N R11E S1	ERW
Little West Branch Wolf River	All	ERW
Markgraf Creek	All	ERW
Mayking Creek	All	ORW
McCloud Creek	Above Hwy H	ERW
McGee Creek	All	ERW
Michelson Creek	All	ORW
Middle Branch Embarrass River	All	ORW
Mondl Creek	All	ERW
Oldens Creek	All	ERW
Plover River	All	ERW
Prairie River	All	ERW
Rabes Creek	All	ERW
Rasmussen Creek	All	ERW
Silver Creek	All	ERW
South Branch Oconto River	All	ORW
Spring Brook	Above Antigo, & Downstream from CTH Y south of Antigo to the Marathon County Line	ERW
Spring Creek	All	ERW
Squaw Creek	All	ERW
Stevens Creek	All	ERW
Thompson Creek	All	ERW
West Branch Red River	All	ERW
Woods Flowage	All	ERW
Upper Post Lake	All	ORW

Source: WDNR

### Heathy Lakes and Rivers

Langlade County looks to the Heathy Lakes and Rivers grant program to promote heathy watersheds in the county. The Heathy Lakes and Rivers program focuses on helping shoreland landowners that want to install practices on their property to improve habitat and water quality. Healthy Lakes and Rivers grants support

five simple and inexpensive best practices that may be installed in the littoral, transition/buffer, and upland zones of shoreland properties. The five best practices laid out by the Healthy Lakes and Rivers Program are: fish sticks, native plantings, diversion, rock infiltration, and rain gardens.

### **Healthy Watersheds, High Quality Waters**

Launched in April 2022, the DNR's Healthy Watersheds, High-Quality Waters (HWHQW) initiative, is a comprehensive program aimed at balancing restoration and protection of our state's lakes, streams, rivers and wetlands. The initiative relies on meaningful partnerships at all levels—federal, state, regional, and local. The initiative focuses on maintaining the current conditions of already healthy waterbodies and watersheds, with key objectives including increased technical assistance, enhanced funding utilization, tool adaptation for optimal results, and increased awareness.

The program defines Healthy Watersheds as areas supporting dynamic processes, habitat size, connectivity, and water quality conducive to healthy biological communities. High-Quality Waters encompass lakes, streams, and rivers meeting specific criteria. The plan identifies the healthiest watersheds, focusing on the top 30% as geographic protection priorities. Vulnerability and opportunity assessments guide the identification of stressors and management actions. The full technical report and details of the modeling and assessment efforts are available online on the [DNR's website](#) but a list and map of these top priority resources are included in [Attachment F](#). Overall, this initiative represents a concerted effort to proactively protect Wisconsin's water resources for current and future generations through collaboration and strategic planning.

At the county level, using the DNR's Healthy Watersheds, High-Quality Waters program involves aligning our conservation efforts with the identified state priorities, collaborating with partners, and customizing stressor and opportunity indicators to address specific county needs, thereby contributing to the broader goal of safeguarding and enhancing our water resources.

A particular focus area of interest to local environmental groups that has been identified to be of interest is stream connectivity. Stream connectivity is important because it facilitates aquatic organism passage, or the ability for fish and other aquatic creatures to move up or downstream under roads. Protecting and restoring stream connectivity benefits all native aquatic and riparian species over all of their life stages to provide for robust communities and resilience to climate change stresses.

### **Impaired Waters – 303(d) Waters**

Surface waters are an important resource to Langlade County; however, they are threatened by both point and non-point source pollution. Nonpoint source pollution, often the result of stormwater runoff and erosion, is pollution that cannot be traced to a single source, and can come from roadways, parking lots, farm fields and construction sites. The more of these impervious surfaces the

greater the runoff that is carried into the waterways.

The Wisconsin State Legislature created the Wisconsin Nonpoint Source Water Pollution Abatement Program (NPS) in 1978 (§281.66, Wis. Stats.). The goal of the NPS Program is to improve and protect the water quality of streams, lakes, wetlands, and groundwater by reducing pollutants from agricultural and residential non- point sources. The WDNR and DATCP administer the program, which focuses on critical hydrologic units called priority watersheds. The program is implemented through priority watershed projects led by local units of government. Landowners, land renters, counties, cities, villages, towns, sewer districts, sanitary districts, lake districts, and regional planning commissions are eligible to participate. The program combines voluntary and regulatory approaches with financial and technical assistance. Abatement activities include agriculture, urban, forestry, wetlands and hydrologic modifications. The core activities of the program — research, monitoring, data assessment and management, regulation and enforcement, financial and technical assistance, education and outreach and public involvement — work to address current water quality impairments and prevent future threats caused by NPS pollution.

The Wisconsin Department of Natural Resources (WDNR), per requirements of the U.S. Environmental Protection Agency (EPA), maintains a list of water bodies that do not currently meet water quality standards under the Clean Water Act. This list is commonly known as the "303(d) list," corresponding to the applicable subsection of the Clean Water Act. The WDNR is required to update the list every two years. Langlade County has 16 water bodies appearing on the 2022 303(d) list (5 of which have TMDL plans are considered “Restoration Waters”). See Table 3-10 and Map 6: Impaired Waters.

<b>Table 3-10: Langlade County Impaired Waters [303(d)]</b>			
<b>Waterbody</b>	<b>Pollutant</b>	<b>Impairment Indicator</b>	<b>TMDL Priority</b>
<b>Deep Wood Lake</b>	Mercury	Contaminated Fish Tissue	Low
<b>Dynamite Lake</b>	Total Phosphorus	Excess Algal Growth	Low
<b>Enterprise Lake</b>	Unknown	Excess Algal Growth	Low
<b>Greater Bass Lake</b>	Mercury	Contaminated Fish Tissue	Low
<b>Lily River</b>	Unknown	Elevated Water Temperature	Low
<b>Little Sand Lake</b>	Mercury	Contaminated Fish Tissue	Low
<b>Ninemile Creek</b>	Unknown	Elevated Water Temperature	Low
<b>Upper Post Lake</b>	Total Phosphorus	Excess Algal Growth	Restoration
<b>Spring Brook Creek</b>	Total Phosphorus	Degraded Biological Community	Restoration
<b>Spring Brook Creek</b>	Total Phosphorus	LOW DO	Restoration
<b>Spring Brook Creek</b>	Unspecified Metals	Chronic Aquatic Toxicity	Low
<b>Spring Brook Creek</b>	Unknown	Degraded Biological Community	Low
<b>Spring Brook Creek</b>	Unspecified Metals	Chronic Aquatic Toxicity	Low

<b>Table 3-10: Langlade County Impaired Waters [303(d)]</b>			
<b>Waterbody</b>	<b>Pollutant</b>	<b>Impairment Indicator</b>	<b>TMDL Priority</b>
<b>Summit Lake</b>	Mercury	Contaminated Fish Tissue	Low
<b>W BR Eau Claire River**</b>	Total Phosphorus	Degraded Biological Community	Restoration
<b>W BR Eau Claire River**</b>	Total Phosphorus	Degraded Biological Community	Restoration

**Source: WDNR 2022 Water Condition List**

**Pollutant Sources for Table 3-10:**

Mercury pollution originates from either soil parent material or from atmospheric deposition of mercury from coal fired power plants. The closest plant is in Rothschild. Mercury is known to cycle rapidly through certain ecosystems. The following lakes are on the list because of mercury contamination from atmospheric deposition: Clear Lake, Deep Wood Lake, Greater Bass Lake, Little Sand Lake, Lower Bass Lake, and Summit Lake. The DNR issues fish consumption advisories based upon atmospheric mercury pollution.

The segment of Spring Brook that runs southwest through the City of Antigo has been on the State’s 303(d) impaired waters list since 1998 for Total Phosphorus and unspecified metals. In 2014, Total Phosphorus was removed as a pollutant. Starting in 2016, and continuing in 2018, this segment was observed to have a biological impairment, in addition to unspecified metals.

### **Total Maximum Daily Load (TMDL)**

A Total Maximum Daily Load (TMDL) is a plan to reduce the amount of specific pollutants reaching an impaired lake or stream to the extent that water quality standards will be met. Waste load allocations will be implemented through the WPDES permit program for point sources, and load allocations will be implemented through Wisconsin's nonpoint source program, this plan's priority farm strategy and achieving compliance with the NR 151 agricultural performance standards and prohibitions..

Two TMDLs cover most of Langlade County (see Map 7: TMDL Coverage). The [Wisconsin River TMDL, 2019](#) for phosphorus covers about the western half of Langlade County. The [Upper Fox and Wolf TMDL, 2020](#) for phosphorus and total suspended solids covers the County east of the Subcontinental Divide. Both TMDLs were initiated to limit phosphorus accumulation within the whole watersheds that are causing annual downstream algae blooms. The impaired waterbodies addressed by these TMDLs include Wisconsin's two largest inland lakes: Winnebago and Petenwell. While water quality in Langlade County is generally good, waterbodies in the county do contribute phosphorus to these downstream impaired waters. Both TMDLs confirm some sub-watershed areas within Langlade county have higher phosphorus loading than others. Reducing phosphorus loading, using these high sub-watersheds as a first priority, to local surface waters acts not only to protect local water quality and local economies which rely on clean water, it also benefits these downstream impaired waters. See the specific pollutant load reductions for each watershed in [Attachment D](#).

### ***Invasive Species***

[Wisconsin Statute Section 23.22\(1c\)](#) defines invasive species as nonindigenous species whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Langlade County separates invasive species into two management categories: land or "terrestrial" invasive species and water or "aquatic" invasive species. These invasive species and their negative impacts are a topic of great community concern in Langlade County.

Invasive species concern the Langlade County community because they can and do negatively impact the economy by affecting agriculture, recreation, and private and commercial lands. Invasive species received the highest level of average concern per our *Community Concerns Survey* (see Table 5-2). Certain invasives also impact human and wildlife health examples include phyto-photodermatitis caused by wild parsnip and higher populations of disease bearing ticks around Japanese barberry and exotic bush honeysuckle. Invasive species disrupt natural ecosystems and ecological processes. Impacts include outcompeting native plants, loss of species diversity, habitat degradation, and the ability to reproduce quickly, as well as others.

All invasive species are regulated under [Chapter NR 40, Wis. Adm. Code \(The Invasive Species Identification, Classification, and Control Rule\)](#) which classifies

invasive species in Wisconsin as “Prohibited” or “Restricted” and regulates the transportation, possession, transfer, and introduction of those species. This rule also establishes “Preventative Measures” to show what actions we can take to slow the spread of invasive species. Chapter NR 40 lists over 245 species and affects everyone in Wisconsin.

NR 40 PROHIBITED species are:

- Not yet in the state or only in a few places.
- Likely to cause environmental and/or economic harm.
- Eradication and prevention is feasible.

Regulations on Prohibited species:

- Cannot transport, possess, transfer, or introduce without a permit.
- Control is required. DNR may order or conduct a control effort.

NR 40 RESTRICTED species are:

- Already widely established in the state.
- High environmental and/or economic impacts are evident with these species.
- Complete eradication is unlikely.

Regulations on Restricted species:

- Cannot transport, transfer, or introduce without a permit.
- Possession is allowed except for fish or crayfish.
- Control is encouraged but not required.

### **Terrestrial Invasive Species**

Langlade County as a whole addresses terrestrial invasive species concerns in many ways and in multiple departments & outside partnerships. The primary resource the Land Conservation Department uses to address terrestrial invasive species concerns our partnership with the Timberland Invasives Partnership (TIP).

### **Timberland Invasives Partnership**

Langlade County is a partner in the Timberland Invasives Partnership (TIP), a cooperative endeavor with the Lumberjack RC&D and USDA Forest Service. This Cooperative Invasive Species Management Area (CISMA) is a partnership between Langlade, Menominee, Oconto, and Shawano Counties; and the Menominee Indian Tribe of Wisconsin and Stockbridge-Munsee Community. Officially formed in 2014, TIP currently has 20 formal partners, four of which are within the Langlade County borders. Langlade County has been a partner since TIP’s formation and a representative from Langlade County Land Conservation sits on TIP’s Steering Committee.

TIP is devoted to the management of invasive species through cooperative education, control, and native habitat restoration efforts. Inventory of invasive

species occurs throughout various areas within the county, including county roads, town roads, public and private lands. Monitoring of new and known populations and control of invasive species occurs within the road right of way, public lands, and private lands. Outreach is used to inform Langlade County residents and visitors of invasive species through newspaper ads, radio interviews, and paper materials. In addition, educational outreach to landowners and students occurs through various events in the community. Restoration efforts through planting and seeding take place in areas that have been previously controlled for invasive species to minimize the occurrence of reestablishment and rehabilitate areas back to native vegetation.

Langlade County has a long history of cooperative work with TIP. This work includes not only invasive species management, but also education and outreach. Examples of projects completed with the collaboration of Langlade County and TIP:

- Weed Management Area-Private Forest Grant Program (WDNR)- Inventory of 33 properties and as many as 37 properties along 11 miles of trails along the Langlade County public ATV and snowmobile trail system. Creation of invasive plant assessment reports for landowners with information on control of invasive plants.
- Contract with Town of Upham- Inventory approximately 50 miles of roads and control invasive species identified during inventory.
- Lumberjack RD&D Grants- Eight grants funded operations in Langlade County including 200 hours of inventory and control work on Langlade County Forestry lands as well as providing organizational, educational, and on the ground resources to citizens within the county.
- USFS Great Lakes Restoration Initiative Grants- Five grants funded the control of 750 acres of control between TIP's four-county area, as well as inventory and monitoring of invasive populations.
- Contract with the City of Antigo- Inventory and control of wild parsnip, garlic mustard, and Japanese barberry along Springbrook Trail.
- Contracts with Town of Rolling- Inventory of approximately 50 miles of roads and control of invasive populations identified during inventory.
- Weed Management Area-Private Forest Grant Program (WDNR)- Inventory and control of bishop's goutweed population on private land in the Town of Upham. In addition, an invasive species workshop hosted in Langlade County.
- WMA-PFGP-Rapid Response Grant- Rapid response to control a population of the prohibited species, Japanese wisteria, in Elcho.
- WMA-PFGP- Continued monitoring and control of the prohibited species, Japanese wisteria, in Elcho.
- Landscape Scale Restoration Grant- Control of 250 acres of invasive species and 25 acres of restoration within Lumberjack RC&D's 10 county area. Control and restoration of demonstration sites in Langlade County (i.e.,



Springbrook Trail) and installation of educational signage and education events. Additionally, media outreach conducted throughout the county includes billboards in Antigo, radio ads that reach county residents and visitors, and local newspaper ads to inform residents about invasive species and how they can get involved within the grant.

### **Aquatic Invasive Species**

Aquatic Invasive Species (AIS) represent a potential threat to lake, stream, & wetland health in Langlade County. 53 lakes and rivers in Langlade County have aquatic invasive species in them as of 2023. The Langlade County Land Conservation Department works to address this threat with a multi-county collaborative approach that relies heavily on DNR grant programs, allocations, and initiatives.

### **Lake Monitoring Protection Network**

Langlade, Forest, Marinette, and Oconto Counties along with Lumberjack Resource Conservation and Development Council joined together starting in 2021 To hire a full time Aquatic Invasive Species (AIS) Coordinator through the Lake Monitoring Protection Network grant funding (see description below) through the Wisconsin Department of Natural Resources. It is the duty of the AIS Coordinator to carry out the responsibilities outlined in the FLOW AIS Cooperative Agreement set in place by Forest, Langlade, Marinette, and Oconto Counties and Lumberjack Resource Conservation and Development Council. Responsibilities include but are not limited to working with citizens, volunteers, county staff, DNR staff, and other AIS professionals to educate the public on aquatic invasive species, as well as monitor for, and control if needed aquatic invasive species in the FLOW AIS area.

The Lake Monitoring Protection Network is a statewide program funded by the Surface Water Grant Program. It provides an annual, non-competitive, consistent source of match free funding to each of the state's 72 counties to implement aquatic invasive species (AIS) outreach and monitoring activities as well as assist with the Citizen Lake Monitoring Network (CLMN). Counties can either implement the program in-house or identify a 'designated agent' often in the form of a natural resource non-profit. In most cases, counties have found that pooling their allocations on a regional scale is most successful in order to foster consistency and collaboration. Key activities, known as 'core services,' include hosting Clean Boats Clean Waters (CBCW) workshops, represent AIS at outreach events, assist with response efforts, and coordinate volunteer opportunities such as Purple Loosestrife Biocontrol Program, Snapshot Day, and some components of CLMN monitoring.

### **Clean Boats Clean Waters (CBCW)**

The Clean Boats, Clean Waters watercraft inspection program is an opportunity to take a front-line defense against the spread of aquatic invasive species and educate water enthusiasts on the impacts invasive species can cause on

waterways within Wisconsin. Since 2004 when the Clean Boats, Clean Waters program was initiated, hundreds of workshops have been held and thousands of folks in over fifty counties have been trained as watercraft inspectors.

Clean Boats, Clean Waters inspectors can be paid staff, grant recipients, or interested volunteers. They come from all walks of life, including lake residents, county board members, tribal community members, representatives from county park and forest programs, boat marina operators, and realtors. The inspectors are trained to organize and conduct boater education programs in their communities. It is the goal of the inspectors to educate boaters on how and where invasive species are most likely to hitch a ride into waterbodies. Inspectors perform boat and trailer checks for invasive species, distribute informational brochures, and collect and report any new AIS presence in waterbodies.

The Clean Boats, Clean Waters watercraft inspection program is a cost-effective effort to engage communities in helping prevent and contain the spread of aquatic invasive species throughout Wisconsin.

### **County Invasive Species Management Plan**

Langlade County does not have a comprehensive county-wide invasive species management plan to help coordinate and direct invasive species management efforts. This hinders the county's ability to fully manage and understand the extent of invasives. As invasive species become increasingly prevalent throughout the county, knowledge of populations and best management practices to control them are necessary to combat the growing concern over invasive species. As recreation becomes increasingly popular within Langlade County, invasive species management is necessary to ensure the safety of residents and visitors as well as protect the environment from increased degradation. Langlade County would benefit from investing time and effort into developing a county invasive species management plan to combat the current and future invasive species within county boundaries.

### **Previous Planning Efforts Summarized**

Plans that were used to make this resource assessment are summarized below:

#### **(Langlade County) Comprehensive Plan, 2019**

The comprehensive plan is a combination of nine chapters—Issues & Opportunities; Natural, Cultural, & Agricultural Resources; Housing; Transportation; Economic Development; Land Use; Utilities & Community Facilities; Intergovernmental Cooperation; and Implementation. Zoning and subdivision ordinances must be consistent with the comprehensive plan. An extensive inventory of natural and agricultural resources exists in this plan for use in the LWRM Plan.

#### **(Langlade County) Forest Comprehensive Land Use Plan, 2021-2026**

The mission of the Langlade County Forest is to manage, conserve and protect

natural resources on a sustainable basis for present and future generations. These resources, such as those provided by the County Forest, are the base for addressing the ecological and socioeconomic needs of society.

County Forest resources should be protected from natural catastrophes such as fire, insect and disease outbreaks, and from human threats such as encroachment, over-utilization, environmental degradation and excessive development. While managed for environmental needs including watershed protection, protection and maintenance of biotic diversity, these same resources must also be managed and provide for sociological needs, including the production of raw materials for wood-using industries that provide a wide variety of products fulfilling consumer demands, and provisions for recreational opportunities.

#### **(Langlade County) Outdoor Recreation Plan, 2022-2026**

The purpose of this plan is to provide continued direction toward meeting the current and future recreation needs of Langlade County. This is accomplished through an inventory and analysis of outdoor recreational facilities, asking the public what they are looking for and the establishment of recommendations to meet identified needs during the term of the plan.

#### **Protecting Wisconsin's Groundwater Through Comprehensive Planning**

USGS, UW Extension, and DNR developed this website as an inventory of groundwater data from a variety of public sources.

#### **(NRCS) Soil Survey for Langlade County, 1986**

The Natural Resource Conservation Service (NRCS) is a federal agency that prepared the Langlade County, Wisconsin Soil Survey. The survey contains predictions of soil behavior for selected land uses and also highlights the limitations and hazards inherent in the county's soil. A series of detailed maps identifying the location of soil types in Langlade County accompanies the survey. (Also see the online **Web Soil Survey** tool for the most accurate and up-to-date information on soils)

#### **Water Resources of Langlade County, Wisconsin, 1987**

The USGS in cooperation with UW Extension, WI Geological and Natural History Survey (WGNHS), and Langlade County prepared this report in 1987 just after the Soil Survey was completed.

# Administrative Assessment *(Chapter 4)*

This chapter summarizes the resources available to the county to administer the land and water of Langlade County. These resources include enforceable regulations, estimated staffing levels, and an estimated Land Conservation Department budget over the planned period.

## Regulations

The regulation of harmful land use and land management practices (where necessary) for addressing local water quality priorities related to controlling erosion, sedimentation, and nonpoint source water pollution is essential. To this point, in addition to developing state-level regulations, the state legislature granted local communities the authority to develop their own regulations in [Chapter 92.11\(1\) of WI Statutes](#), which states:

“To promote soil and water conservation or nonpoint source water pollution abatement, a county, city, village or town may enact ordinances for the regulation of land use, land management and pollutant management practices.”

### State Regulations

State regulations have been organized by state department that holds the authority, subject area, relevant administrative code, and related statute. While more regulations and standards exist, Langlade County has relied on or anticipates relying on the following state regulations for the protection of natural resources:

#### ❖ Department of Natural Resources (WDNR)

##### ➤ Invasive Species

- [WI Administrative Code Chapter NR 40](#)- DNR’s Administrative Code that identifies, classifies, and requires the control of invasive species in Wisconsin.
  - [WI Statute Section 23.22\(1c\)](#)
- [WI Administrative Code Chapter NR 107](#)- DNR’s Administrative Code that establishes procedures for the management of aquatic plants and control of other aquatic organisms pursuant.
  - WI Statute Section. [227.11 \(2\) \(a\)](#) and interpreting [s. 281.17 \(2\)](#)
- [WI Administrative Code Chapter NR 109](#)- DNR’s Administrative Code that establishes requirements for the protection & regulation of aquatic plants.
  - WI Statutes Section(s) [23.24](#) and [30.07](#).

##### ➤ Wisconsin Pollution Discharge Elimination System

- [WI Administrative Code Chapter NR 205](#)- DNR’s administrative code that establishes permit general conditions for all Wisconsin Pollutant Discharge Elimination System (WPDES) permits, procedures for establishing permit limits in WPDES permits, effluent limitations applicable to non-POTWS where pH is continuously monitored, and procedures to be used for issuing general WPDES permits.

- [WI Statutes Chapter 283- Pollution Discharge Elimination](#)
- Navigable Water Determinations
  - [WI Statutes Chapter 30- Navigable Waters, Harbors, and Navigation](#)
- Runoff Management (Performance Standards)
  - [WI Administrative Code Chapter NR 151](#)– DNR’s administrative code that establishes runoff pollution performance standards for non-agricultural facilities and transportation facilities and performance standards and prohibitions for agricultural facilities and practices designed to meet water quality standards.
    - [WI Statutes Chapter 281](#)- Water and Sewage
- Stormwater Discharge Permits (Construction Site Erosion Control)
  - [WI Administrative Code Chapter NR 216](#)– DNR’s administrative code to minimize the discharge of pollutants carried by storm water runoff from certain industrial facilities, construction sites and municipal separate storm sewer systems (MS4s).
    - [WI Statutes Chapter 283 - Pollution Discharge Elimination](#)
- Noxious Substances
  - [WI Statutes Section 29.601- Noxious Substances](#)
- Wisconsin’s Shoreland Protection Program
  - [WI Administrative Code Chapter NR 115](#)– DNR’s administrative code that requires counties to adopt DNR’s minimum shoreland zoning standards to limit the direct and cumulative impacts of shoreland development on water quality; near-shore aquatic, wetland and upland wildlife habitat; and natural scenic beauty.
    - [WI Statutes Chapter 281.31- Navigable Waters Protection Law](#)
    - [WI Statutes Chapter 59.692 – Zoning of Shorelands on Navigable Waters](#)
- ❖ **Department of Agriculture, Trade, & Consumer Protection (DATCP)**
  - Soil and Water Resource Management Program
    - [WI Administrative Code Chapter ATCP 50](#)
      - [WI Statutes Chapter 92 – Soil and Water Conservation and Animal Waste Management](#)
- ❖ **Department of Safety & Professional Services (DSPS)**
  - Private Onsite Wastewater Treatment Systems
    - [WI Administrative Code Chapter SPS 383](#) – DSPS’s administrative code that establishes uniform standards and criteria for the design, installation, inspection and management of a private onsite wastewater treatment system, POWTS, so that the system is safe and will protect public health and the waters of the state
      - [WI Statutes Chapter 145– Plumbing and Fire Protection Systems](#)

## and Swimming Pool Plan Review

### **Local Regulations**

Local regulations used to protect natural resources in Langlade County have been organized by the County department that administers them and include:

#### ❖ **Land Records & Regulations Department**

- Langlade County Code of Ordinances Chapter 15- Private Onsite Wastewater Treatment System (POWTS)
  - Regulates the installation and maintenance of private onsite waste treatment systems.
- Langlade County Code of Ordinances Chapter 17- Zoning Code
  - The general zoning ordinance, shoreland/wetland ordinance, floodplain ordinance and farmland preservation make up these regulations.
- Langlade County Code of Ordinances Chapter 18- Land Division Ordinance
  - Regulates the creation of parcels and the division of land.
- Langlade County Code of Ordinances Chapter 20- Nonmetallic Mining Reclamation Ordinance
  - It regulates new and existing non-metallic mines and reclamation of mine sites.

#### ❖ **Land Conservation Department**

- Langlade County Code of Ordinances Chapter 24- Manure Storage Ordinance
  - Regulates the location, design, construction, installation, alteration, operation, maintenance, closure, use, and management of manure storage facilities. It is also intended to provide for the administration and enforcement of the Ordinance and to provide penalties for its violation.

#### ❖ **Forestry, Parks and Recreation Department**

- Langlade County Code of Ordinances Chapter 16- Forestry, Parks and Recreation Ordinance
  - Regulates uses of County Forestry, Parks and Recreation Lands. It is also intended to provide for the administration and enforcement of the Ordinance and to provide penalties for its violation.
- Langlade County Code of Ordinances Chapter 8- Motorized Recreational Vehicle Ordinance
  - Regulates use of Motorized Recreational Vehicles countywide on all lands. It is also intended to provide for the administration and enforcement of the Ordinance and to provide penalties for its violation.

### **Enforcement Process**

Langlade County aspires to achieve 100% voluntary implementation, cooperation, and ultimately compliance with the above listed regulations and standards. Our strategies to achieve this are described in the [Strategies Section](#) of the Workplan Development Chapter of this plan. However, if a landowner is found to be out of compliance with minimum legal requirements or program standards the LCD will:

1. Mail the landowner a letter notifying them of their failure to comply with standards, establishing a compliance schedule, & a formal offer of technical and/or financial assistance (if possible).
2. If they refuse the offer or no response is received, the LCD will work with relevant partner agencies (WDNR, DATCP, NRCS, local authorities) to send a multi-agency communication that informs the landowner of consequences for failure to comply.
3. If compliance still is not achieved, the LCD may work with relevant partners to select appropriate enforcement actions and implement them.

### **Staffing**

Langlade County's staffing levels are low relative to workload when compared to other Wisconsin counties. An internal assessment by LCD staff in 2023 supports an average staffing level of 5 Full-Time Employees (FTEs). In 2023, the Langlade County Board of Supervisors approved an increase in department staffing levels from 1.65 FTEs to 3.15 FTEs. This is the largest staffing increase in the Land Conservation Department's history.

### **Current Land Conservation Positions:**

#### **Land Records & Regulations Department Director (15%)**

This position manages the Land Records & Regulations Department (LRRD) staff Land Conservation Department (LCD) staff and ensures consistency between both departments.

#### **County Conservationist (100%)**

This position is the LCD Department Head and is responsible for administering and implementing all LCD plans, grants, and programs.

#### **Conservation Technician (100%)**

This position implements the county's cost-share program and serves as the LCD's in-house technical design resource.

#### **Conservation Specialist (100%)**

This position is the LCD's education and outreach expert and aides the Conservationist in the implementation of their duties especially those related to grants and water resources.

### **Future Staffing Positions:**

There is no expectation of a significant increase in Langlade County's revenues that can be used to support additional staff for the foreseeable future. Therefore, despite being understaffed, the LCD has no expectation of increasing staffing levels over this planned period. If opportunities to acquire additional staff present themselves, the LCD has identified the following positions as priorities:

#### **Water Resource Specialist (Desired)**

This position would implement water-related grants, programs, and watershed strategies.

#### **Agronomist (Desired)**

This position would be responsible for technical review of nutrient management plans in the county and monitoring compliance and implementation.

#### **Conservation Assistant (Desired)**

This position would provide administrative assistance to the LCD.

### **Budget**

The budget below reflects the costs the LCD has incurred since 2021 and projects incurring in implementing this [LWRM](#) plan over the 2025-2034 timeframe. The categories provided are:

#### **County Staff**

The annual anticipated cost to county taxpayers of staffing the LCD.

#### **Non-County Staff**

The estimated annual amount of LCD staffing costs that will be reimbursed by the grants, such as the Soil & Water Resource Management (SWRM) Staffing Grant.

#### **County Support**

The estimated annual cost of LCD program implementation costs provided by the county to the LCD (i.e. computer costs, office supplies, printing, etc.).

#### **Non-County Support**

The estimated annual amount of LCD program implementation support costs for which the county will be reimbursed (i.e. grants, allocations, landowner incentives, etc.).



**Table 4-1. Langlade County LCD Budget Estimate**

Year	County Staff	Non-County Staff	County Support	Non-County Support	Total
2022	\$26,963.64	\$101,913.00	\$13,164.47	\$156,917.66	\$298,958.77
2023	\$67,286.47	\$112,609.91	\$17,531	\$148,881.73	\$346,309.11
2024	\$120,741	\$107,988	\$18,585	\$172,551	\$419,865
2025	\$124,000 <sup>(1)</sup>	\$130,000 <sup>(2)</sup>	\$18,750 <sup>(1)</sup>	\$97,000 <sup>(2)</sup>	\$ 369,750
2026	\$127,000	\$130,000	\$19,000	\$97,000	\$ 373,000
2027	\$130,000	\$130,000	\$19,250	\$97,000	\$ 376,250
2028	\$133,000	\$130,000	\$19,500	\$97,000	\$ 379,500
2029	\$136,000	\$130,000	\$19,750	\$97,000	\$ 382,750
2030	\$139,000	\$130,000	\$20,000	\$97,000	\$ 386,000
2031	\$142,000	\$130,000	\$20,250	\$97,000	\$ 389,250
2032	\$145,000	\$130,000	\$20,500	\$97,000	\$ 392,500
2033	\$148,000	\$130,000	\$20,750	\$97,000	\$ 395,750
2034	\$151,000	\$130,000	\$21,000	\$97,000	\$ 399,000

**Notes:** <sup>(1)</sup> “County Staff” and “County Support” values increased by a set amount to reflect a *general* increase in these expenses overtime.  
<sup>(2)</sup> “Non-County Staff” and “Non-County Support” reflect future anticipated SWRM Grant allocations only, unless funds have already been awarded.

**Local Support for Local Priorities**

The investment of local tax dollars is critical for the implementation of local conservation priorities. Budgeting to provide service to our communities is a challenge faced by all levels of government, but the more local the level of government the greater the connection to the community. That connection means local government recognizes stewardship problems and priorities sooner and more deeply than higher levels of government.

## Workplan Development (Chapter 5)

The purpose of this chapter is to establish a multi-year Workplan to protect the land and water of the county. The development of this Workplan is complicated and so this chapter is broken into three sections: *Local Land and Water Stewardship*; *Strategies; Goals, Objectives, & Actions*; and *Workplan*.

### **Local Land and Water Stewardship**

To provide context for the development of our 2025-2034 Workplan, it is essential to understand the status and successes of our local stewardship history. To help achieve this insight, this section contains an assessment of our local implementation of the state-required NR 151 Agricultural Performance Standards, and accomplishments related to our local priorities.

#### **Implementation of Agricultural Performance Standards**

In Langlade County, the Farmland Preservation Program is widely utilized by landowners. One of the requirements for eligibility to claim the Farmland Preservation Income Tax Credit is to meet and maintain compliance with all NR 151 Agricultural Performance Standards. In 2023, Langlade County completed a transition to using the Farmland Preservation Program and available tools to track the implementation of all Agricultural Performance Standards in Langlade County. In 2023, Langlade County tracked compliance on 325 landowners, 2,488 parcels, and 74,055 acres. All of these are in compliance and 67,500 acres (91%) are eligible to claim the Farmland Preservation Income Tax Credit.

#### **Nutrient Management Planning**

Local Status: Based on 2022 Nutrient Management Plan (NMP) reported acreage to DATCP, 96% (64,538 acres) of cropland acres within the county have a NMP.

Assessment: Per DATCP's 2022 *Nutrient Management Planning Data* report, 37.3% of Wisconsin's Croplands have Nutrient Management Plans. At 96%, Langlade County is far above the statewide average. However, this rate may be artificially high due to low staffing levels limiting the review of submitted plans for reporting acreage located in other counties and/or reporting the same acreage in multiple plans. The 2023 staffing level increase will allow for better staff review NM of plans, and it is anticipated that reported acreage with a plan will be reduced as out-of-county and double-planned acreage are accounted for.

Contributing factors to Langlade County's success in this program area include: efforts by local Certified Crop Advisors and LCD staff in promoting the value of plans; embracing DATCP's Nutrient Management Farmer Education Grant Program; a long-standing partnership with the University of Wisconsin Extension and Nutrient & Pest Management Program.

It should be noted that having an NMP does not ensure that applicable NR 151

(or other) standards are being met. Omissions during planning, and failure to follow the plans as written can result in these standards not being met. When circumstances have allowed, more thorough reviews of plans by county staff have only rarely discovered discrepancies.

### **Local Priority Accomplishments**

Listed below are the seven goals from the 2020-2029 Lantlade County Land & Water Resource Management Plan, and one LCD accomplishment from over the last 10 years (or more) relating to each.

#### **Protect and Improve Surface and Groundwater.**

- 96% of harvestable acres in the County have Nutrient Management Plans. Protecting our waters from sedimentation, and nitrate leeching.

#### **Mitigate Invasive Species Impacts**

- Since 2014 Lantlade County has worked with and developed relationships with multiple partner organizations to develop the Timberland Invasives Partnership and the FLOW AIS program to address invasive species in our county.

#### **Promote Working Forests and Farms**

- Lantlade County adopted Farmland Preservation Zoning and added the Evergreen-Wolf River Agricultural Enterprise Area, this has allowed the LCD to certify our compliant landowners to receive up to \$575,000 in income tax credits in 2023.

#### **Promote Stewardship of the Land and Water Through Public Education**

- In 2023 the Lantlade County Board approved the creation of a Conservation Specialist position, which is dedicated to bringing natural resources education to our county.

#### **Protect Public Health from Unwanted Chemical Waste**

- From 1995 to 2024 Lantlade County has hosted 16 Hazardous Waste Clean Sweep events and 3 electronic waste disposal events. These events have resulted in the collection and proper disposal of over 340,000 pounds of hazardous waste and at least 5 semi loads of electronic waste.

#### **Improve Forest Silviculture for Multiple Uses**

- Worked with the DNR, County Forestry Department, and private landowners on projects to strengthen native habitats and improve access.

#### **Manage Wildlife Conflicts**

- Represented Agricultural concerns to our local Deer Advisory Committee, and administered our local wildlife damage program.

## Strategies

This section covers the strategies or “plans of action” the county will use to achieve the LWRM Goals. Strategies explain how the county intends to address our goals. For the development of this plan, LCD staff identified five strategies that have been practiced to achieve our goals. These strategies are covered in detail in their own subsections.

To align the LCD application of these strategies, with community beliefs, participants in the *Land & Water Resource Community Concerns Survey* (completed 12/4/2024) were asked to prioritize the strategies. Then, the Local Resource Advisory Committee reviewed and approved or adjusted the rankings their meeting in order of preference to help prioritize *Objectives & Actions* later. The results of these efforts are summarized in Table 5-1.

<b>Ranking</b>	<b>Prior Practice</b>	<b>Survey</b>	<b>Final</b>
<b>1</b>	Coordination	Education & Outreach	<b>Education &amp; Outreach</b>
<b>2</b>	Implementation	Monitoring & Evaluation	<b>Monitoring &amp; Evaluation</b>
<b>3</b>	Monitoring & Evaluation	Coordination	<b>Coordination</b>
<b>4</b>	Education & Outreach	Implementation	<b>Implementation</b>
<b>5</b>	Enforcement	Enforcement	<b>Enforcement</b>

**Notes: Final Rankings were set by the Land Conservation Committee.**

## **Education & Outreach Strategy**

### **Principle Belief**

If our community is aware of our natural resources, threats to them, and how they can be responsible stewards of them, they will be.

### **Plan of Action**

The Land Conservation Department will make our community aware of Langlade County's natural resources, threats to them, and how they can be responsible stewards.

### **Prioritization of Effort**

When prioritizing education and outreach efforts, there are two major considerations, content and audience. The content priorities of Langlade County's education & outreach efforts are set by the prioritization of the "Goals" in the following section. The audience priorities are listed in order as follows:

1. Priority Farms (as defined in "Implementation")
2. Groups with existing relationships.
3. General or non-targeted education.
4. Groups without existing relationships.

### **Example Actions**

- Posting information on LCD website
- Developing or updating brochures
- Holding workshops or trainings
- Writing articles
- Participating in Radio Broadcasts
- Hosting presentations
- Any other action not mentioned that fits in the "Plan of Action" above.

## **Monitoring & Evaluation**

### **Principle Belief**

If the community sees the progress and value of taking natural resource stewardship actions, they will support them.

### **Plan of Action**

The Land Conservation Department will identify the results of our stewardship actions and share their status and the measurable benefits with the community.

### **Prioritization of Effort**

Langlade County will prioritize monitoring and evaluation efforts as follows:

1. Compliance with [State Regulations](#). (NR 151, etc.)
2. Compliance with [Local Regulations](#).
3. Compliance with contracts (voluntary agreements).
4. Programs or actions that address [Resource Concerns](#) listed in this plan.
5. Programs or actions that address [Resource Concerns](#) not listed in this plan.

### **Example Actions**

- Nutrient Management Plan reporting
- Conservation compliance spot-checks including Farmland Preservation.
- On-site inspections
- Maintenance of the Conservation Compliance Database
- Annual workplan reports to DATCP
- Any other action not mentioned that fits in the “Plan of Action” above.

## **Implementation**

### **Principle Belief**

If staff, funding, and tools to address our community's resource concerns are available, they will be used.

### **Plan of Action**

The Land Conservation Department will acquire the staff, funding, and tools, to implement projects to address our community's resource concerns.

### **Prioritization of Effort**

Langlade County will prioritize implementation of projects as follows:

1. ***Priority Farms:***

A priority farm is a farm that is found to be non-compliant with the state's NR 151 performance standards and prohibitions. Langlade County prioritizes these farms as follows with the highest priority listed first:

- Farms with valid citizen complaints filed against them;
- Farms enrolled in the Farmland Preservation Program spot checked and found to be not in compliance;
- Farms not enrolled in Farmland Preservation Program found to be not in compliance.
- Farms located within areas identified as high priority for DNR Non-Point Source Pollution Abatement Program (i.e., Spring Brook Watershed, TMDL high phosphorus loading sub-watersheds, sensitive areas for nitrate leaching and areas with > 10 mg/L nitrate well sampling results).

2. Landowners out of compliance with state or local regulations.

3. ***Voluntary Participants:***

A voluntary educational approach will continue to be the primary method used to achieve erosion control and nutrient management standards in Langlade County. One-on-one contacts with landowners and operators who request technical assistance is the most common method used to promote soil and water conservation in Langlade County. A list of landowners willing to resolve water quality issues with cost-share projects will be maintained. The projects on the list will be evaluated on-site and ranked to determine which project has the most significant negative water quality or soil erosion impacts. High ranking projects are then the priority projects to be selected for technical assistance and cost sharing during the calendar year.

### **Example Actions**

- Installation ATCP 50-funded Cost Share Program Projects (See [Attachment C](#))
- Host a Hazardous Waste Collection Event
- Any other action not mentioned that fits in the "Plan of Action"

above.



## **Coordination**

### **Principle Belief**

We will be able to address our community's needs more effectively by working together with other groups.

### **Plan of Action**

The Land Conservation Department will partner with and ask to be supported by groups interested in Langlade County's natural resource stewardship.

### **Prioritization of Effort**

When prioritizing coordination of efforts, Langlade County will first seek to aide:

1. Partner efforts that address resource concerns listed in this plan.
2. LCD efforts that address resource concerns listed in this plan.
3. Partner efforts that address resource concerns not listed in this plan.
4. LCD efforts that address our resource concerns not listed in this plan.

### **Example Actions**

- Applying for or supporting grant applications
- Hosting or participating in education & outreach opportunities.
- Participating in meetings
- Collaborating on plan development
- Coordinating projects.
- Any other action not mentioned that fits in the "Plan of Action" above.

## **Enforcement**

### **Principle Belief**

Our community has set standards to be responsible stewards of our natural resources, and will meet the intent of those standards.

### **Plan of Action**

The Land Conservation Department will uphold our community's natural resource standards.

### **Prioritization of Effort**

Langlade County will prioritize enforcement actions as follows:

1. Working with landowners out of compliance with the intent of [local standards](#).
2. Working with landowners out of compliance with the intent of [state standards](#).
3. Working with landowners out of compliance with technical requirements of state and local standards.

### **Example Actions<sup>1</sup>**

- Developing Compliance Schedule(s).
- Developing standards/regulations necessary to address community [Resource Concerns](#).
- Taking enforcement actions prescribed by standards.
- Any other action not mentioned that fits in the "Plan of Action" above.

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<sup>1</sup> All actions undertaken should align with the [Enforcement Process](#).

## ***Goals, Objectives, & Actions***

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This section covers how the prioritized Goals, Objectives and Actions were established for this plan. “Prioritized” for the purposes of this plan means that a higher ranked resource concern category should receive greater consideration for staff efforts such as continuing programs, seeking opportunities to expand offerings, etc. Priority rank doesn’t dictate the amount of staff time that should be spent on a subject, that is determined by program requirements, the LCD on a day-to-day basis, and the LCC on a policy basis.

### **Resource Concern Categories**

The first step in the process of developing goals, objectives, actions for the county was to establish the “Resource Concern Categories”. These categories are broad conservation stewardship topics. For this plan LCD staff used the “Annual Workplan Template” provided by DATCP was used to establish the base resource concern categories. This was done to help ensure that the county is well aligned with state priorities and practices. Additional categories were included based on the *Special Resource Concerns* of Lantlade County and LCD activities included on recent Annual Workplan submissions. These Resource Concern Categories were organized & prioritized based on the *Community Concerns* survey results and Local Resource Advisory Committee input. Interestingly, there several categories were ranked differently based on concern level vs priority level (See Table 5-2)

<b>Table 5-2. LWRM Plan Goal Categories Survey Results &amp; Rank</b>				
<b>Category</b>	<b>Average Concern Level<sup>1</sup></b>	<b>Identified as Top 5 Priority<sup>2</sup> (%)</b>	<b>Priority Point Value<sup>3</sup></b>	<b>Final Rank</b>
<b>Cropland</b>	6.69	58%	83	<b>7</b>
<b>Forestry</b>	6.81	65%	95	<b>6</b>
<b>Hazardous Waste Disposal</b>	7.46	67%	123	<b>2</b>
<b>Invasive Species</b>	8.21	75%	118	<b>3</b>
<b>Livestock</b>	6.79	33%	42	<b>8</b>
<b>Preservation of Undeveloped Lands</b>	7.58	62%	106	<b>5</b>
<b>Urban</b>	6.91	19%	17	<b>10</b>
<b>Water</b>	8.00	63%	120	<b>1</b>
<b>Watershed Management Strategies</b>	7.62	40%	53	<b>4</b>
<b>Wildlife Damage Abatement</b>	6.27	17%	23	<b>9</b>
<b>AVERAGE</b>	7.16	50%	78	

<sup>1</sup>Ranked 1-10, with 1 = No Concern and 10 = Extreme Concern.  
<sup>2</sup>Participants were asked to identify what the top 5 department priorities should be.  
<sup>3</sup>Points were awarded based on actual priority placement. Highest priority = 5 points, 5<sup>th</sup> highest = 1 point.

### **Goals**

This plan’s “Goals” are an aspirational statement that has been developed to a determine a desired stewardship direction for each “Resource Concern Category”. These statements were developed based on the Resource Assessments found in [Chapter 3](#) of this plan. The Goals have been prioritized base on their Resource Concern Category’s priority level. It is important to note that while a concern may be a high community priority, objectives and deliverables in the plan reflect LCD work priorities. This means that due to limited resources, lack of authority<sup>2</sup>, or overlap with partner organizations, objectives and deliverables in the Workplan may not appear to reflect priority levels.

### **Objectives**

This plan’s “Objectives” are statements that explain how the LCD intends to use each of the five prioritized “Strategies” in the previous section to achieve the goal. This resulted in objectives with a broad scope and provides more specific and measurable outcomes for our actions.

<sup>2</sup> County governments only have the authority (or ability to take actions such as the adoption of ordinances) granted to them by the state government.

## **Actions**

This plan’s “Actions” are the SMART (Specific, Measurable, Achievable, Relevant, and Timely) activities the LCD will undertake to achieve the listed objective. Given the large number of goals & objectives in this plan, for each objective a single “Deliverable” was established as the intended measure for achieving each objective. Other actions that achieve the goals and objectives of this plan or address community needs may occur during implementation of this plan, but Deliverables are intended to be the primary measure of successful plan implementation.

It should be noted that this plan is intended to serve until 12/31/2033. This is less than 10-years, but will allow the county to better fit into the state’s revision schedule.

## **Workplan**

The following multi-year workplan was developed by LCD staff with the input from local citizens, the LRAC, LCC, County Board, & DATCP. It has been organized to reflect the local prioritization of resource concerns and management strategies. It serves as a guide to appropriate LCD activities and not all activities listed will occur in a single year. Many factors including available resources, support, and changes in community needs will affect implementation of this plan. It will be the responsibility of the Langlede County Land Conservation Department Staff and Land Conservation Committee to review this plan to achieve or otherwise address the actions called for below.

Langlade County Workplan (Page 1 of 5)	Plan Of Action	Strategy 1: (Education & Outreach) The Land Conservation Department will make our community aware of Langlade County's natural resources, threats to them, and how they can be responsible stewards.	Strategy 2: (Monitoring & Evaluation) The Land Conservation Department will identify the results of our stewardship actions and share their status and the measurable benefits with the community.	Strategy 3: (Coordination) The Land Conservation Department will partner with and ask to be supported by groups interested in Langlade County's natural resource stewardship.	Strategy 4: (Implementation) The Land Conservation Department will acquire the staff, funding, and tools, to implement projects to address our community's resource concerns.	Strategy 5: (Enforcement) The Land Conservation Department will uphold our community's natural resource standards.
Goal 1: (Water) Protect and improve surface and groundwater.	<b>Objective</b>	Increase public awareness of water resources & status.	Increase voluntary monitoring of surface & groundwater.	Increase collaboration with FLOW AIS and DNR on water issues.	Protect our shorelands by implementing cost-share projects.	Our community will be compliant with all water protection laws.
	<b>Deliverable</b>	By 12/31/2033, the LCD will host or partner on 8 water quality or quantity educational events reaching at least 160 individuals.	In 2033, our community will have 50% more volunteer Citizen Lake Monitors, and groundwater tests (done by the Langlade County Health Department), than in 2024.	By 12/31/2033, the LCD will have collaborated with our water partners on at least 12 grant projects.	By 12/31/2033, the LCD will have assisted in the installation of 8 water protection cost-share projects.	Be a resource advocate by engaging in a proactive and positive manner with every reported community concern.
Goal 2: (Hazardous Waste Disposal) Protect Public Health from chemical waste.	<b>Objective</b>	Increase public awareness of local waste disposal requirements & resources.	Review disposal records and assess the needs for disposal opportunities.	Work with partners to coordinate and host Clean Sweep events as necessary.	Work with the state, private industry, & grant programs to create hazardous waste disposal opportunities for the public.	Our community will be compliant with all waste disposal laws & BMP's
	<b>Deliverable</b>	By 12/31/2033, the Langlade County LCD will have updated all physical and digital informational materials, and provided 8 waste disposal educational opportunities reaching at least 240 individuals.	After every Clean Sweep event, the LCD will report the collection totals and interpret trends for the community.	By 12/31/2033, the Langlade County LCD will have hosted at least 4 hazardous waste Clean Sweep events.	By 12/31/2033, the Langlade County LCD will have provided \$50,000 of support to our community for waste disposal events to our community.	Be a resource advocate by engaging in a proactive and positive manner with every reported community concern.

Langlade County Workplan (Page 2 of 5)	Plan Of Action	Strategy 1: (Education & Outreach)	Strategy 2: (Monitoring & Evaluation)	Strategy 3: (Coordination)	Strategy 4: (Implementation)	Strategy 5: (Enforcement)
Goal 3: (Invasive Species) Mitigate the negative impacts of invasive species.	<b>Objective</b>	Increase public awareness of invasive species and their impacts.	Assess the costs to our community of invasive species.	Increase collaborative efforts to mitigate invasive species.	Implement the county-wide invasive species management plan.	Our community will be compliant with all invasive species laws.
	<b>Deliverable</b>	By 12/31/2033, the LCD will host or partner on 8 invasive species educational events reaching at least 400 individuals	By 12/31/2033 we will provide our community an assessment of the biological & financial impacts of invasive species.	By 12/31/2033 we will have developed a county-wide invasive species management plan. (Work with partners to acquire grants and funding.)	By 12/31/2033 we will have dedicated 800 staff hours to carrying out activities related to our county-wide invasive species management plan.	Be a resource advocate by engaging in a proactive and positive manner with every reported NR 40 violation or community concern.
Goal 4: (Watershed Management Strategies) Implement a watershed strategy locally.	<b>Objective</b>	Increase public awareness of Langlade County's watershed management strategies.	Collect data necessary to aid the county's preferred watershed management strategy.	Work with DNR & County Staff to identify the most appropriate watershed strategies for Langlade County and resources to implement them.	Implement a watershed management strategy in Langlade County.	No enforcement objective for watershed protection at this time.
	<b>Deliverable</b>	By 12/31/2033 we will host or partner on 4 watershed management strategy outreach and/or educational events reaching at least 250 individuals.	By 12/31/2033, the Langlade County LCD will provide our community a report on what data has been collected to aid our watershed management strategy.	Before 12/31/2033, the Langlade County LCD will have worked with partners to develop one or more county-wide watershed management strategies.	By 12/31/2033, the Langlade County LCD will have acted to make progress on a watershed management strategy.	No action planned.

Langlade County Workplan (Page 3 of 5)	Plan Of Action	Strategy 1: (Education & Outreach) The Land Conservation Department will make our community aware of Langlade County’s natural resources, threats to them, and how they can be responsible stewards.	Strategy 2: (Monitoring & Evaluation) The Land Conservation Department will identify the results of our stewardship actions and share their status and the measurable benefits with the community.	Strategy 3: (Coordination) The Land Conservation Department will partner with and ask to be supported by groups interested in Langlade County’s natural resource stewardship.	Strategy 4: (Implementation) The Land Conservation Department will acquire the staff, funding, and tools, to implement projects to address our community’s resource concerns.	Strategy 5: (Enforcement) The Land Conservation Department will uphold our community’s natural resource standards.
Goal 5: (Preservation of Undeveloped Lands) Preserve our working farms and forests.	<b>Objective</b>	Increase public awareness of the Farmland Preservation Program.	Increase the amount of Farmland Preservation related field spot-checks.	Work closely with all partners to align our Farmland Preservation program with DATCP and community objectives.	Increase available incentives for preserving undeveloped and productive agricultural lands.	Our community will be compliant with all Farmland Preservation program rules.
	<b>Deliverable</b>	By 12/31/2033, the Langlade County LCD will have automatically enrolled & informed every landowner in the county eligible to receive the Farmland Preservation tax credit.	By 12/31/2033, the Langlade County LCD will conduct field spot-checks of not less than 25% of the required spot-checks for each year.	By 12/31/2033, the Langlade County LCD will annually audit of our Farmland Preservation Program with DATCP and the Langlade County Land Records & Regulations Department.	By 12/31/2033, the Langlade County LCD will provide at least \$4,500,000 in potential income tax credits, and \$2,800,000 claimed income tax credits.	Be a resource advocate by engaging in a proactive and positive manner with every reported community concern.
Goal 6: (Forestry) Improve forest silviculture for multiple productive uses.	<b>Objective</b>	Increase public awareness of our importance of diverse forest management	Assist local partners in acquiring data about our forests.	Increase collaborative efforts to increase sustainable use of our county forests.	Implement forestry-related cost share projects such as access roads and invasive species management.	Our community will be compliant with all forest management laws.
	<b>Deliverable</b>	By 12/31/2033 we will host or partner on 4 forest management educational events and reach at least 200 individuals.	No actions planned. Deferred to local partners.	By 12/31/2033, the Langlade County LCD will have met with lead partner staff 30 times to discuss sustainable forestry roles and projects.	By 12/31/2033, the Langlade County LCD, will have provided support for the implementation of 4 forestry projects.	Be a resource advocate by engaging in a proactive and positive manner with every reported community concern.



Langlade County Workplan (Page 4 of 5)	Plan Of Action	Strategy 1: (Education & Outreach)	Strategy 2: (Monitoring & Evaluation)	Strategy 3: (Coordination)	Strategy 4: (Implementation)	Strategy 5: (Enforcement)
Goal 7: (Croplands) Increase Nutrient Management Plan use.	Objective	Increase operator knowledge of Nutrient Management Plans.	Spot-check Nutrient Management Plans for accuracy, NRCS 590 compliance, and implementation.	Collaborate with the Certified Crop Advisors that develop Nutrient Management Plans in Langlade County.	Langlade County will work with the community to implement more than 100% of our SEG SWRM grant allocated funds.	Our community will be compliant with all cropland laws.
	Deliverable	By 12/31/2033 we will host or partner on 8 NMFE Trainings 40 participants; \$20,000 in stipends.	By 12/31/2033 the LCD will spot-check 25 Nutrient Management Plans and field verify 27,500 acres.	By 12/31/2033, the LCD will have an in-person meeting with every NMP plan writer in the county.	By 12/31/2033, the LCD will have worked with our community to implement at least \$260,000 (or an estimated 6,500 ac) in SEG funding to address cropland concerns.	Be a resource advocate by engaging in a proactive and positive manner with every reported NR 151 violation or community concern.
Goal 8: (Livestock) Ensure agricultural performance standards are implemented.	Objective	Increase community understanding of Agricultural Performance Standards.?	Increase non-Farmland Preservation related field monitoring of livestock.	Increase collaborative efforts with our agricultural community partner organizations (UWEX, NRCS, & DNR (especially CAFO & Non-point pollution positions)	Provide support (money and technical expertise) for the implementation of agricultural cost-share projects.	Our community will be compliant with all NR 151 laws.
	Deliverable	By 12/31/2033 we will host or partner on 8 Agricultural Performance Standard educational opportunities, including development of digital resources.	By 12/31/2033 the Langlade County LCD, will have developed and implemented a plan to assess the amount of livestock operations not currently working with the department, and their compliance with Agricultural Performance Standards.	By 12/31/2033 the Langlade County LCD will have worked with partners to voluntarily address 24 community concerns.	By 12/31/2033, the Langlade County LCD will have provided support for 16 projects to implement agricultural performance standards and valued over \$340,000.	Be a resource advocate by engaging in a proactive and positive manner with every reported NR 151 violation or community concern.

Langlade County Workplan (Page 5 of 5)	Plan Of Action	Strategy 1: (Education & Outreach)	Strategy 2: (Monitoring & Evaluation)	Strategy 3: (Coordination)	Strategy 4: (Implementation)	Strategy 5: (Enforcement)
<p><b>Goal 9: (Wildlife)</b> Mitigate the negative impacts of wildlife.</p> <p><b>Goal 10: (Urban)</b> Reduce pollution from urban stormwater runoff.</p>	<b>Objective</b>	Increase public awareness of the Wildlife Damage Abatement & Venison Donation Programs.	Provide easy access to our community on the assessed costs of Wildlife Damage.	Increase cooperation and program alignment with wildlife partners ( <a href="#">APHIS</a> , DNR, CDAC)	Participate in Wildlife Damage Abatement and Venison Donation Program.	None. Low community priority.
	<b>Deliverable</b>	By 12/31/2033 we will have promoted the Wildlife Damage Abatement & Venison Donation Programs 16 times.	By 12/31/2033 we will provide our community with convenient access to Wildlife Damage information on our county website.	By 12/31/2033 the LCD, will ensure that all department decisions regarding wildlife management are consistent with partner efforts.	The LCD will continue to participate in the Wildlife Damage Abatement and Venison Donation Program every year.	No planned actions.
	<b>Objective</b>	Increase public awareness of the impacts of urban stormwater runoff.	None. Low community priority	Work with individuals on a case-by-case basis to address urban stormwater runoff concerns.	None. Low community priority.	None. Low community priority.
	<b>Deliverable</b>	By 12/31/2033 we will host or partner on an urban stormwater runoff pollution educational opportunity reaching at least 30 individuals.	No planned action.	No action planned.	No action planned.	No action planned.

# APPENDIX *(Chapter 6)*

## *Glossary*

### **Animal and Plant Health Inspection Service – Wildlife Services (APHIS)**

Part of USDA, in Langlade County, APHIS provides assistance in the form of abatement measures to manage animal damage to agricultural crops.

### **Department of Agriculture, Trade, and Consumer Protection (DATCP)**

The State agency responsible for establishing Statewide soil and water conservation policies and administering the State’s soil and water conservation programs. The DATCP administers State cost-sharing funds for a variety of LCD operations, including support for staff, materials and conservation practices. Referred to in the LWRM plan guidelines as the “department.”

### **Department of Natural Resources (DNR)**

The State agency responsible for managing State owned lands and protecting public waters. DNR also administers programs to regulate, guide and assist LCCs, LCDs and individual land users in managing land, water, fish and wildlife. The DNR administers state cost-sharing funds for priority watershed projects, Targeted Runoff Management (TRM) grants, and Urban Nonpoint Source Construction and Planning grants.

### **Farm Service Agency (FSA)**

USDA agency that administers agricultural assistance programs including price supports, production controls, and conservation cost sharing.

### **Land and Water Conservation Board (LWCB)**

This statewide board is composed of three local elected officials, four appointed by the Governor (one shall be a resident of a city with a population of 50,000 or more, one shall represent a governmental unit involved in river management, one shall be a farmer, and one shall be a member of a charitable corporation, charitable association or charitable trust) and leaders from DNR, DATCP, and DOA. The LWCB oversees the approval of county land and water management plans (s.92.04, stats.).

### **Land & Water Resource Management Plan (LWRM)**

A locally developed and implemented multi-year strategic plan with an emphasis on partnerships and program integration. The plan includes a resource assessment, identifies the applicable performance standards and related control of pollution from nonpoint sources, identifies a multi-year description of planned activities, establishes a progress tracking system, and describes an approach for coordinating information and implementation programs with other local, State and federal agencies, communities and organization (s. ATCP 50.12).

**Land Conservation Committee (LCC)**

The Land Conservation Committee of Langlade County is the unit of county government empowered by Chapter 92 of the Wisconsin Statutes to conserve and protect the County’s soil, water and related natural resources. Referred to in the LWRM guidelines as the “committee.” In Langlade County this committee is called the *Land Conservation/Solid Waste Committee*.

**Land Conservation Department (LCD)**

The department of Langlade County responsible for administering the conservation programs and policies of the Langlade County LCC.

**Natural Resources Conservation Service (NRCS)**

Part of USDA, NRCS provides soil survey, conservation planning and technical assistance to local land users.

**North Central Wisconsin Regional Planning Commission (NCWRPC)**

A voluntary association of governments established in 1973 under Wisconsin Statute §66.0309, to provide: economic development, geographic information systems (GIS), intergovernmental cooperation, land use, and transportation services to member communities.

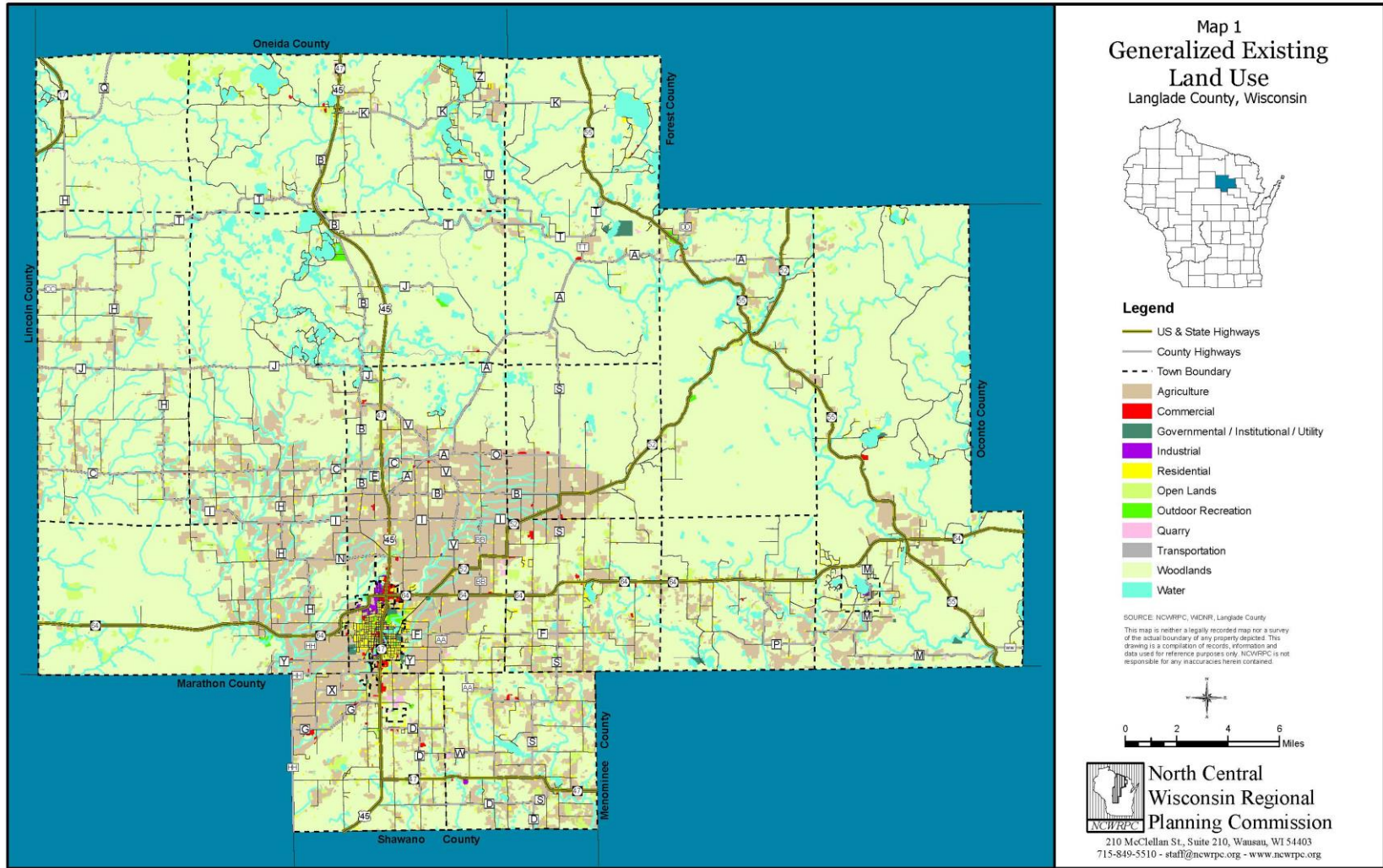
**United States Department of Agriculture (USDA)**

Branch of federal government with responsibilities in the areas of food production, inspection, and storage. Agencies with resource conservation programs and responsibilities, such as FSA, NRCS, APHIS-WS, and Forest Service and others are agencies of the USDA.

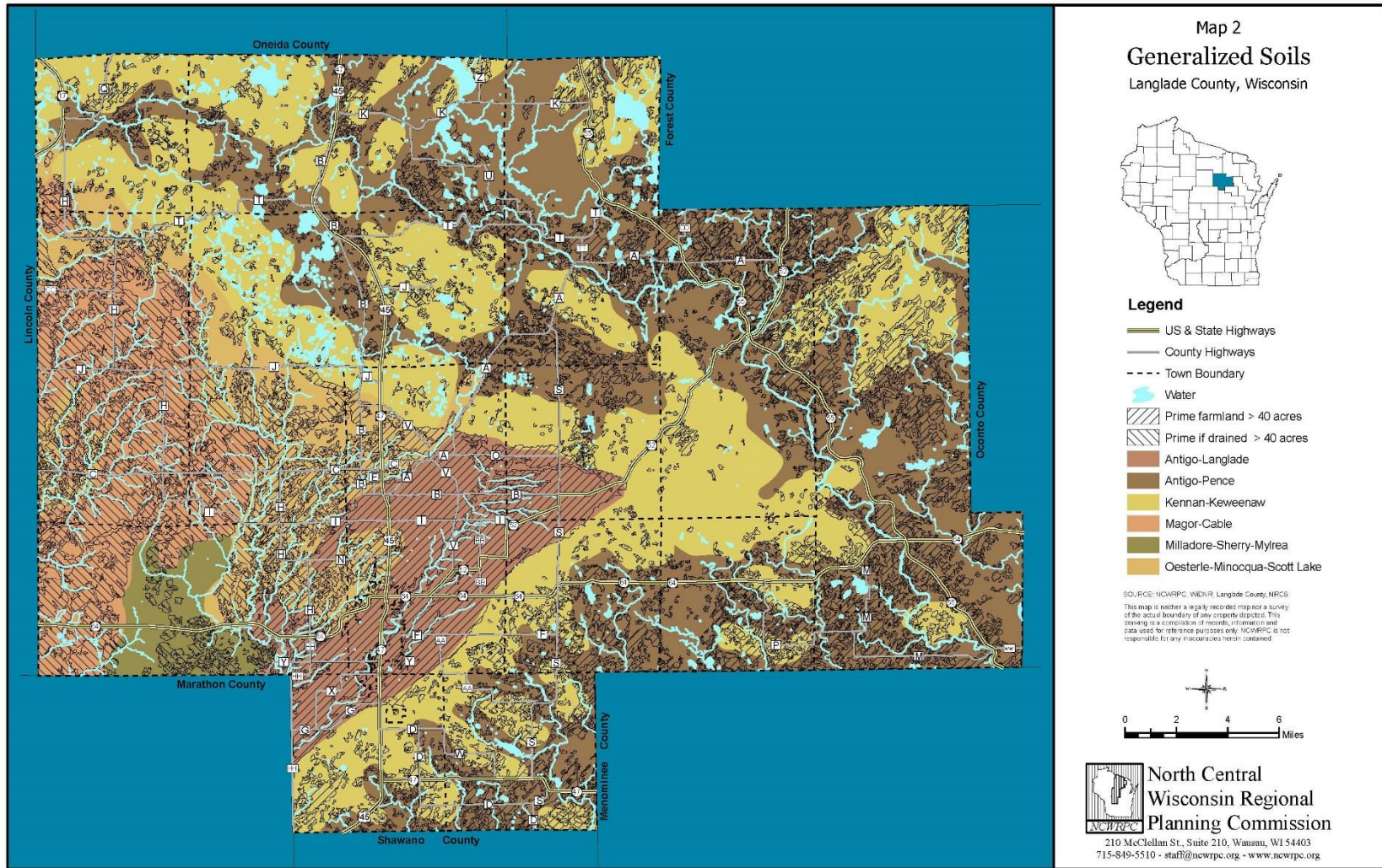
## *Referenced Maps*

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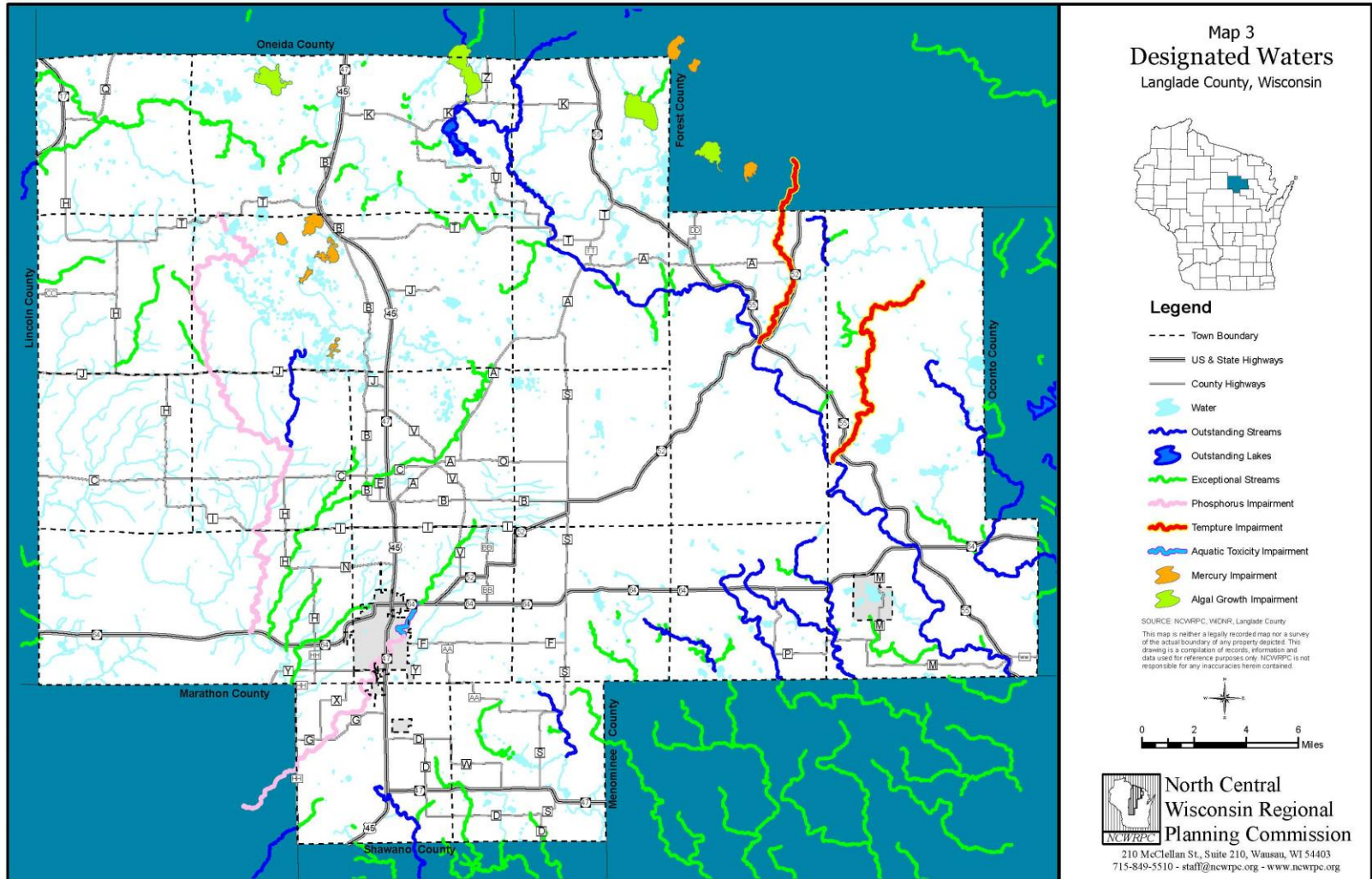
# Map 1: Existing Land Use



## Map 2: General Soils

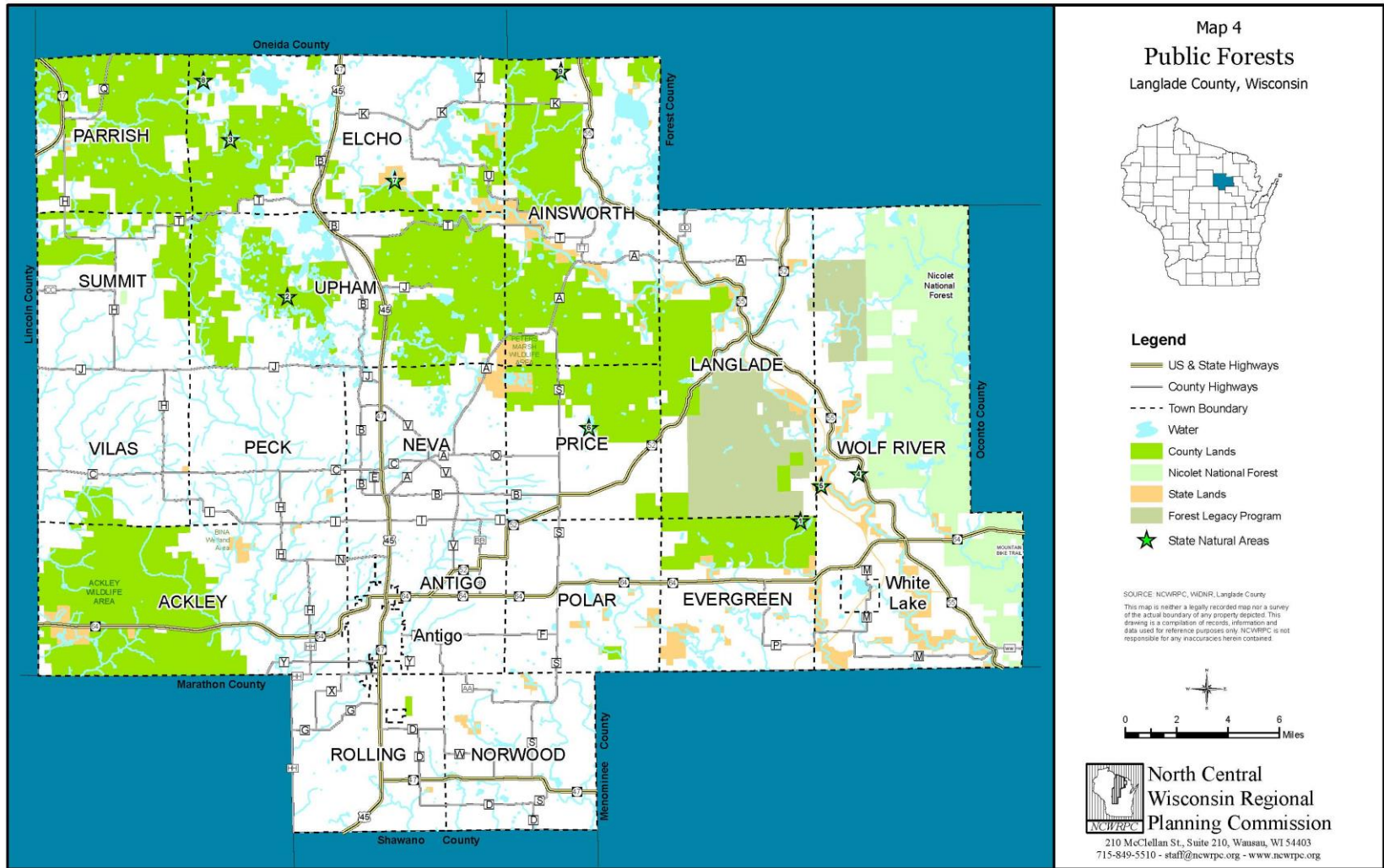


### Map 3: Designated Waters

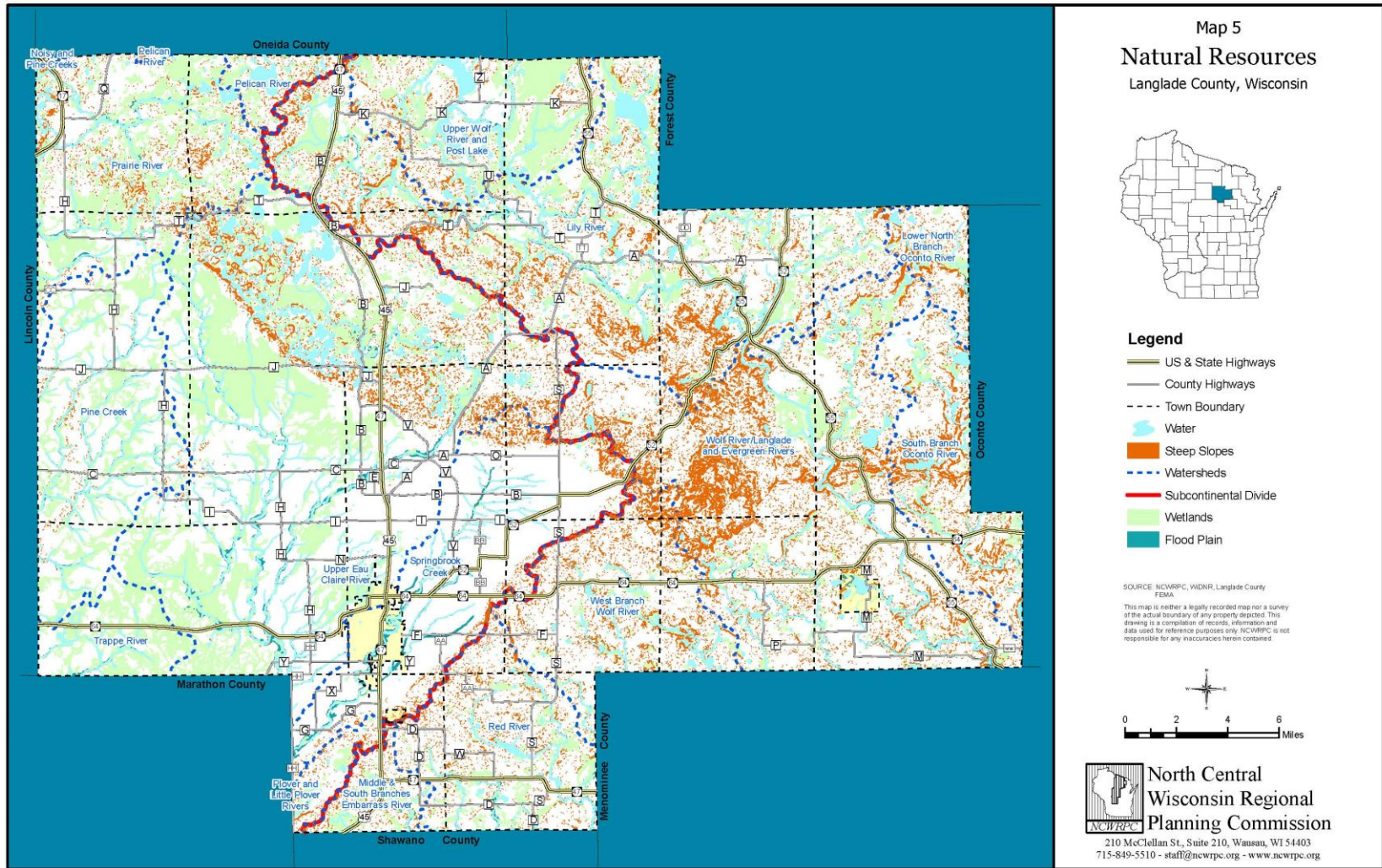




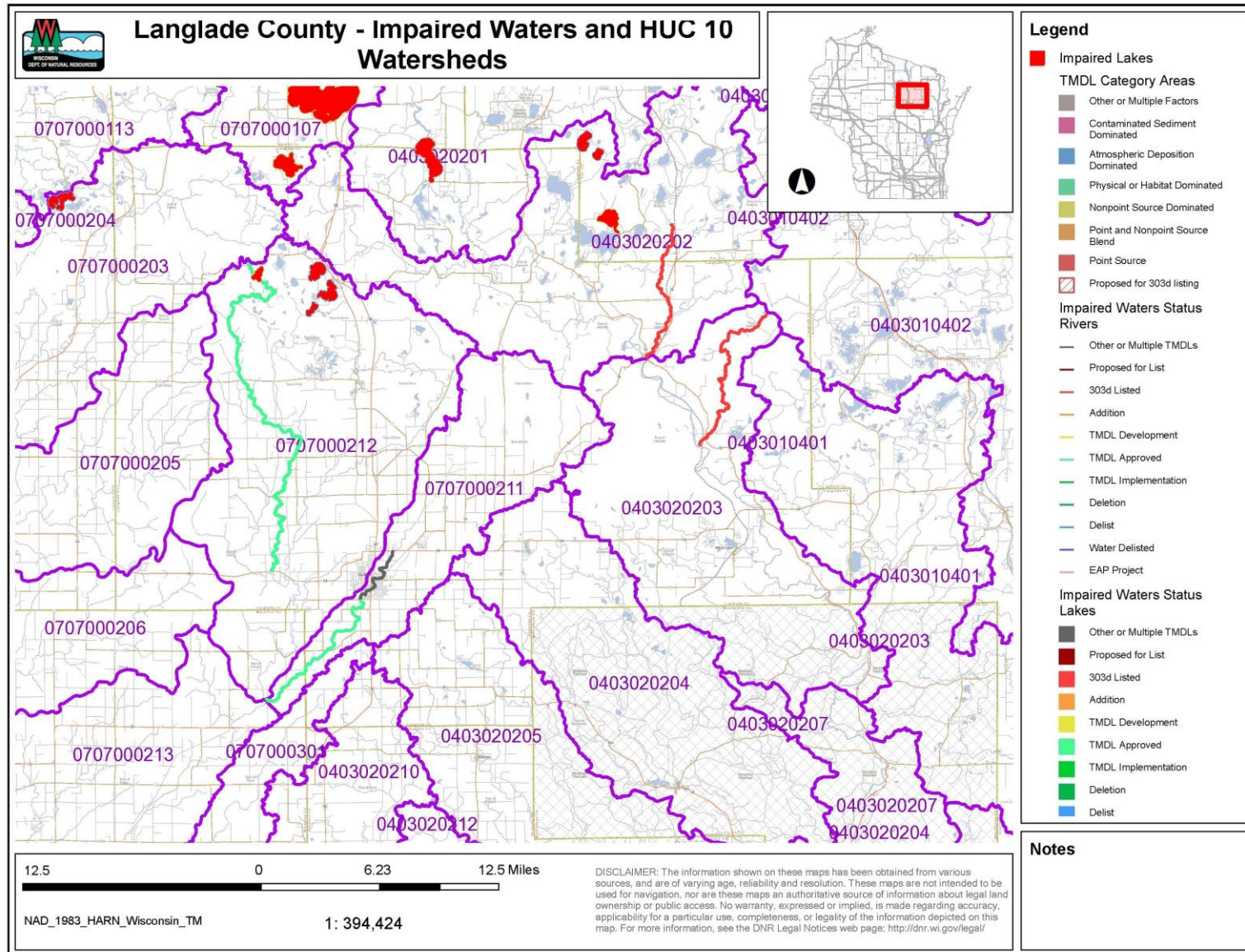
# Map 4: Public Forests



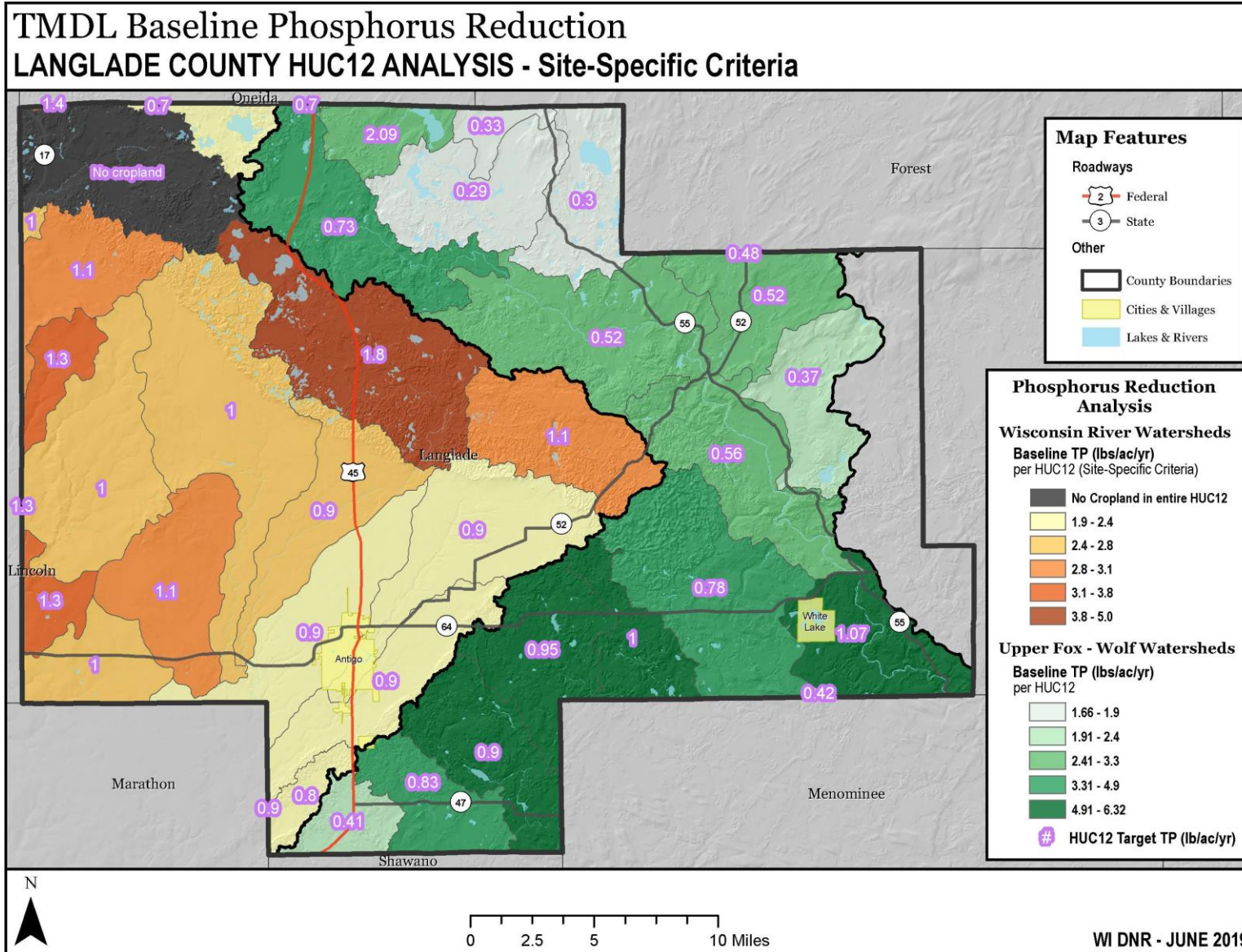
# Map 5: Natural Resources



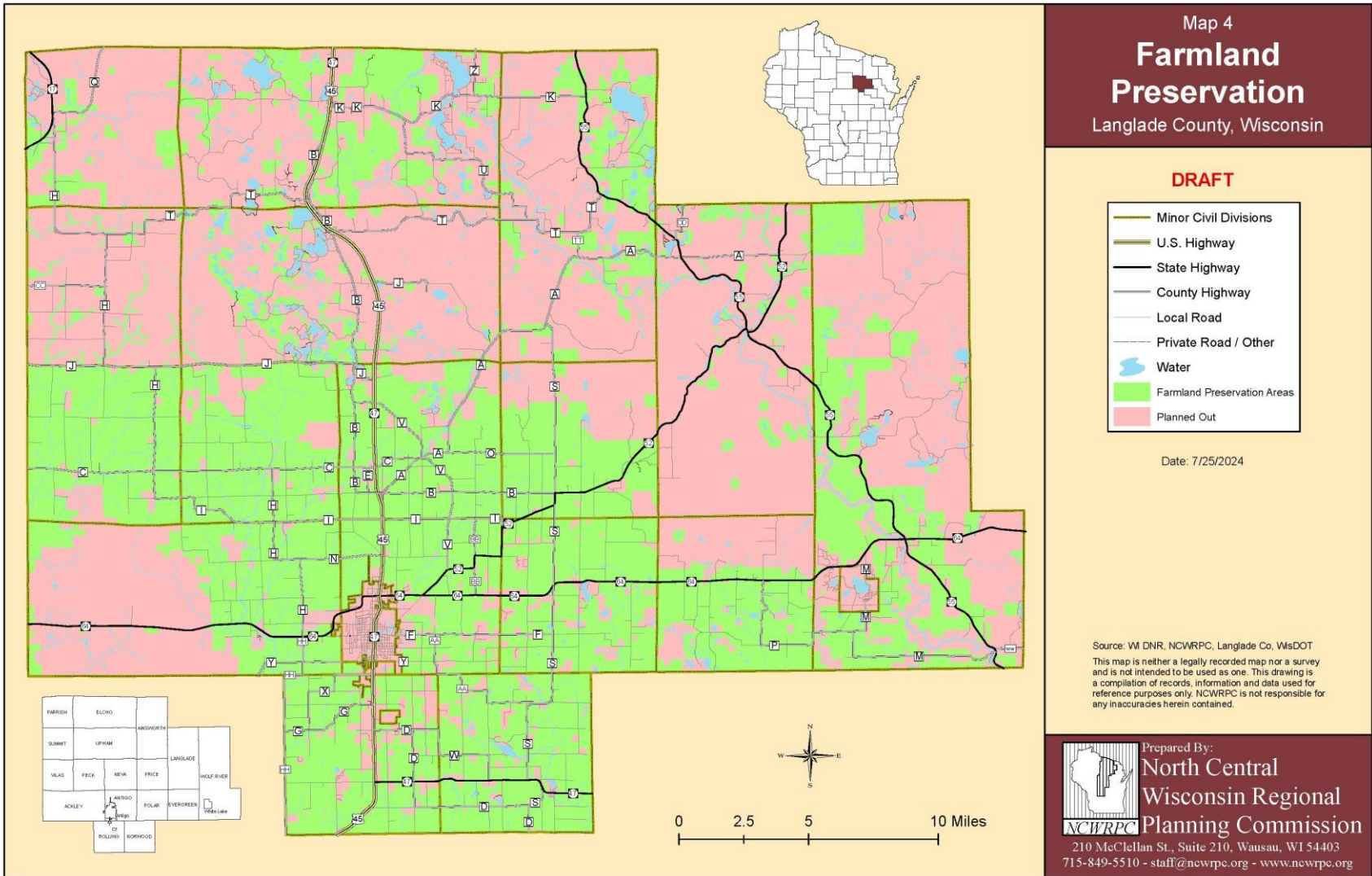
# Map 6: Impaired Waters



**Map 7: TMDL Coverage In Langlade County**



**Map 8: 2025 Farmland Preservation Map**



***ATTACHMENT A Advisory Committee Meeting  
Minutes***

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800 CLERMONT STREET  
 ANTIGO, WI 54409-1948  
[WWW.CO.LANGLADE.WI.US](http://WWW.CO.LANGLADE.WI.US)

LANGLADE COUNTY



TELEPHONE: (715)627-6200  
 FAX: (715)627-6303

## MEETING MINUTES

**Committee:** Citizen Advisory Committee for Comp Plan and Farmland Preservation Plan Revisions

**Date:** Thursday, May 30, 2024

**Time:** 5:00 P.M.

**Location:** County Board Room, Safety Building, 840 Clermont Street, Antigo, WI

The following discussion was held by the Committee at the meeting detailed above:

1. Meeting called to order at 5:00 pm, brief Introductions

Citizen Advisory Committee for Comp & Farmland Preservation Plan Members)			
Name	Role	Status	
Ed Bubb	Member	Present	
Ronald E. Krueger	Member	Present	
Dale Fronck	Member	Present	
Leah Antoniewicz	Member	Present	
Scott Popelka	Member	Present	
Jane Kolpack	Member	Present	
Dave Kautza	Member	Present	
Rick Bina	Member	Absent	
Keith Lindner	Member	Absent	
Non-Committee Members Present			
Name	Interest	Name	Interest
Chris Arrowood	Land Conservationist	Duane Haakenson	Zoning Administrator
Fred Heider	NCWRPC	Katie Bahr-Bender	Conservation Technician
Judy Nagel	County Clerk, Rec. Secretary		

2. **Election of Chairman and Vice-Chairman:** The group agreed to let Chris Arrowood lead the discussion.

3. **Overview of Meeting Goals and Purposes:** Arrowood explained that the Citizen Advisory Committee is to review the Comp Plan proposed revisions and the Land & Water Resource Management Plan proposed revisions. Arrowood discussed the update to the Farmland Preservation Maps, discussing the work plan that was omitted in the last Land and Water Plan, and having the plan fit Langlade County and the Land Conservation Goals.

4. **Presentation of Comprehensive Plan Revisions:** Arrowood explained that the Farmland Preservation Maps are expiring, explaining how land owners qualify for tax credits, and noting that the Farmland Preservation Program is the largest program in the Land Conservation Department, with 368 landowners. Arrowood gave four options for the Committee to consider. Option 1: let the maps expire. Option 2: update the maps with no changes to the criteria, as Elcho and Ainsworth are excluded. Option 3: update the maps and criteria to retain all Towns, with Elcho and Ainsworth excluded. Option 4: update the maps and criteria to retain all Towns including Elcho and Ainsworth. Discussion held, and agreed that the Committee is to update the maps and criteria to meet State Certification. Arrowood explained that a Comprehensive Plan is a guide of a local government unit, per Wis. Stats.

## Meeting Minutes (Continued)

59.69(2)(3), Farmland Preservation is an income tax credit program to incentivize the landowners. Arrowood explained an ag product and revenue to be eligible on the credit. Discussion on farmland preservation overlay. Arrowood stated the City of Antigo and the Village of White Lake are not eligible to update the mapping criteria.

**5. Discussion on Comprehensive Plan Revisions:** The Committee discussed Arrowood's presentation, being fair and consistent, and changing the criteria, not the zoning.

**6. Approval of Committee Recommendations for Comprehensive Plan Revisions:** The Committee agreed to Option 4, updating the maps and criteria to retain all Towns including Elcho and Ainsworth.

**7. Presentation of Land & Water Resource Management Plan:** Arrowood discussed the Land & Water Resource Management Plan, led by the Land Conservation Staff, including the public and partners, using hyperlinks in the plan, with a mind that natural resources are worthy of our management. Arrowood's proposed strategies and goals include education and outreach, monitoring and evaluation, implementation, coordination, and enforcement. Plan goal survey results were shared, discussed, and determined: #1 to be water, #2 to hazardous waste disposal, #3 invasive species, #4 watershed management, #5 preservation of undeveloped lands, #6 forestry, #7 cropland, #8 livestock #9 wildlife damage abatement, and #10 urban.

**8. Discussion of Land & Water Resource Management Plan:** The Committee discussed the proposed plan changes.

**9. Approval of Committee Recommendations for Land & Water Resource Management Plan:** Arrowood will make the changes to the plan and share this with the Committee.

**10. Schedule next meeting:** No next meeting, public hearing to be scheduled, will also need the approval of DATCP, the Water and Land Use & Land Conservation Solid Waste Committee, and the County Board.

**11. Adjourn meeting:** The CAC Meeting was adjourned at 7:40 p.m.

Minutes transcribed and submitted by: Judy Nagel, County Clerk, Recording Secretary



***ATTACHMENT B Public Hearing Notices***

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**AFFIDAVIT OF PUBLICATION**

**NOTICE OF PUBLIC HEARING**

NOTICE IS HEREBY GIVEN THAT THE Langlade County Water & Land Use Planning & Land Conservation Committee will hold a public hearing on Tuesday, August 27, 2024 at 3:30 P.M., in County Board Room, Safety Building, 840 Clermont Street, Antigo, WI 54409 on the following:

**1. A revision to the Langlade County Comprehensive Plan 2019**

The County has prepared a revision to the Langlade County Comprehensive Plan 2019, containing all maps and descriptive materials, with the assistance of the County Land Conservation Committee and North Central Wisconsin Regional Planning Commission, under section 66.1001, Wisconsin Statutes. The purpose of the amendment is to complete the incorporation of the County's Farmland Preservation Plan in Wisconsin Statute §91.10(3) in the plan. Resolutions and Ordinances in the Plan may be addressed by the Board at the hearing.

**2. The Langlade County Land & Water Resource Management Plan 2024**

Due to staffing, partnership, and administrative changes in the Langlade County Land Conservation Department, a new Langlade County Land & Water Resource Management Plan (LWRMP) for 2025-2034 has been created. The existing LWRMP Plan 2020-2029 will be replaced with this new LWRMP 2025-2034 which is a guide for the integration of land and water resource management in a county.

Copies of the revisions to Langlade County Comprehensive Plan 2019 and Langlade County Land & Water Resource Management Plan 2025-2034 are available for public inspection:

- During normal business hours at the Langlade County Land Recordations Department, Antigo Public Library, Elcho, and White Lake Branch, and,
- Online at <https://www.co.langlade.wi.us/departments/land-recordations/land-conservation/conservation-plan-updates/>

Anyone may attend the public hearing and be heard. Interested parties unable to attend may send written comments prior to the hearing date to the County Land Conservation Department, c/o Chris Arrowood, County of Langlade County Resource Center, 837 Clermont Street, Antigo, WI, comment to [carrowood@co.langlade.wi.us](mailto:carrowood@co.langlade.wi.us) also via the Land Recordations Department on the Langlade County website.

A public information meeting is set for August 27th, 2024, at 2:00 p.m. presentation starting at 2:30 p.m. in the County Board Room, Safety Building, 840 Clermont Street, Antigo, WI 54409.

Rick Bina, Chairperson  
Langlade County Water & Land Use Planning & Land Conservation Co

LEROY M. WOOD  
Notary Public  
State of Wisconsin

STATE OF WISCONSIN }  
COUNTY OF LANGLADE } ss

Judith Kline being duly sworn, says that he/she is the principal clerk of Antigo Daily Journal, a corporation under and by virtue of the laws of Wisconsin, whose principal place of business is at Antigo, Wisconsin, and that, as such principal clerk he/she makes this affidavit in its behalf and is authorized to do so:

That the said corporation is the publisher and printer of the Antigo Daily Journal, a daily newspaper published and printed in the City of Antigo, Langlade County, State of Wisconsin, and that the notice of which the annexed is a copy and which is taken from the paper in which it was published, was published in the said newspaper two times, once each week for two successive weeks: that the first publication of said notice therein was on the 29th day of July A.D., 2024, and that the last publication of said notice therein was on the 12th day of August A.D., 2024.

Affiant further says that said newspaper has a bona fide circulation to actual subscribers of more than three thousand copies per day, and is regularly and continuously published in said city of Antigo, Langlade County, State of Wisconsin, at least three days in each calendar week, holidays excepted, and that all facts set forth in the affidavit are true, to his/her personal knowledge.

Judith Kline

Subscribed and sworn to before me this 13th day of August, 2024

LeRoy M. Wood  
LeRoy M. Wood, Notary Public, Marinette County, Wisconsin  
My Commission Expires 5-3-2026

Publisher's Fees 3x8 Lines ..... Insertions \$ 208.32

Affidavit ..... \$1.00

Received Payment ..... (total) \$ 416.64

Date ..... By .....

***ATTACHMENT C Conservation Practices***

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## SECTION 2.2

### **COST-SHARE FUNDING SOURCE TABLE AND NR151 CODE GUIDANCE**

The following will help you in signing cost-share contracts and completing reimbursement requests. It consists of two parts:

- (1) A table listing all conservation practices cost-shareable under Ch. ATCP 50, the source of funds you must use for cost-sharing the specific practice, and the units of measurement to quantify each cost-shared practice, and
- (2) Guidance for completing the column on the reimbursement form related to the NR 151 compliance.

<b>PRACTICE or ACTIVITY</b>	<b>ATCP 50 Reference</b>	<b>Fund Source</b>	<b>Units of Measurement</b>
Land taken out of agricultural production Cost-share contract must list the new or existing farm practice that takes land out of production	50.08(3)	Structural	Acres
Riparian land taken out of agricultural production (CREP Equivalent) (Cost-share contract must list the new or existing farm practice that takes land out of production)	50.08(4), 50.42(1)	Structural	Acres
Manure storage systems	50.62	Structural	Number
Manure storage closure	50.63	Structural	Number
Barnyard runoff control systems (specify components including heavy use area protection)	50.64	Structural	Number
Access road	50.65	Structural	Linear Ft.
Trails and walkways	50.66	Structural	Linear Ft.
Contour farming	50.67	SEG <sup>1</sup>	Acres
Cover and green manure crop	50.68	SEG <sup>1</sup>	Acres
Critical area stabilization	50.69	Structural	Number
Diversions	50.70	Structural	Linear Ft.
Field windbreaks	50.71	Structural	Linear Ft.
Filter strips	50.72	Structural	Acres
Feed storage runoff control systems	50.705	Structural	Number
Grade stabilization structures	50.73	Structural	Number
Livestock fencing	50.75	Structural	Linear Ft.
Livestock watering facilities	50.76	Structural	Number
Milking center waste control systems	50.77	Structural	Number
Nutrient management for cropland or pasture	50.78	SEG <sup>1</sup>	Acres

<sup>1</sup> While DATCP awards SEG funds primarily to cost-share nutrient management plans, a county may use a limited portion of the its award (cumulative expenditures may not exceed 25 percent of a county's annual cost-share allocation unless otherwise allowed in the allocation plan for that year) if the following conditions are met:

- (1) The landowner agrees to remain in compliance with the soil erosion control standard (NR 151.02) and the nutrient management standard (NR 151.08) for as long as the land is farmed;
- (2) The landowner submits a nutrient management plan checklist covering the cropland where the soft practice is installed; and
- (3) The county documents that cover crop or other cost-shared "soft" practice is required to meet "T" or other requirement of the NRCS 590 standard, and is the most cost-effective approach to meeting the NRCS 590 requirement.

<b>PRACTICE or ACTIVITY</b>	<b>ATCP 50 Reference</b>	<b>Fund Source</b>	<b>Units of Measurement</b>
Pesticide Management Plans	50.79		
1. Management Plans	50.79(1)	No Funds Available	Number
2. Structures (as described in the plan for structure's design)	50.79(2)	Structural	Number
Prescribed Grazing	50.80		
1. Management Plan	50.80(1)	No Funds Available	Number
2. Fencing (not permanent)	50.80(2)	No Funds Available	Linear Ft.
3. Fencing (permanent)	50.80(3)	Structural	Linear Ft.
4. Establish Permanent Pasture (seeding)	50.80(4)	Structural	Acres
Relocating or abandoning animal feeding operations	50.81	Structural	Number
Residue Management	50.82	SEG <sup>1</sup>	Acres
Riparian Buffers	50.83		
1. Installation (including land out of production and first 10 years of maintenance)	50.83(1)	Structural	Acres
2. Mowing and maintenance beyond initial 10 year period	50.83(2)	No Funds Available	Acres
Roofs	50.84	Structural	Number
Roof Runoff Systems	50.85	Structural	Number
Sediment Basins	50.86	Structural	Number
Sinkhole Treatment	50.87	Structural	Number
Stream Bank and Shoreline Protection	50.88	Structural	Linear Ft.
Stream Crossing	50.885	Structural	Linear Ft.
Strip-Cropping	50.89	SEG <sup>1</sup>	Acres
Subsurface Drains	50.90	Structural	Number
Terrace Systems	50.91	Structural	Linear Ft.
Underground Outlet	50.92	Structural	Number
Waste Transfer Systems	50.93	Structural	Number
Wastewater Treatment Strips	50.94	Structural	Linear Ft.
Water and Sediment Control Basins	50.95	Structural	Number
Waterway Systems	50.96	Structural	Acres
Well Decommissioning	50.97	Structural	Number
Wetland Restoration	50.98	Structural	Acres
Engineering services provided in connection with a completed cost-share practice for which Structural revenue may be used (also refer to 50.40(7)).	50.34(4)	Structural	
Other practices with DATCP's written approval	50.40(3)(a)		

# ATTACHMENT D Pollutant Load Reduction Tables

## Pollutant Load Reduction Tables

Wisconsin River TMDL		Row	Translated TMDL Allocations					
			Crop	TP Baseline (lb/ac/yr)	Current Criteria		Recommended SSC	
					Acres	Reduction Needed	TP Target (lb/ac/yr)	Reduction Needed
HUC12	HUC12 Name							
070700010702	Upper Pelican River	0	-	-	-	-	-	
070700011301	Noisy Creek	0	-	-	-	-	-	
070700011304	Big Pine Creek	0	-	-	-	-	-	
070700020301	Upper Prairie River	0	-	-	-	-	-	
070700020303	Big Hay Meadow Creek	300	3	79%	0.6	63%	1.1	
070700020304	Middle Prairie River	2	2.8	79%	0.6	63%	1.0	
070700020501	Upper Pine River	1,707	2.7	79%	0.5	63%	1.0	
070700020502	North Branch of the Pine River	455	3.5	79%	0.7	63%	1.3	
070700020503	Middle Pine River	38	3.5	79%	0.7	63%	1.3	
070700020601	Prospect Creek-Trappe River	10	2.8	79%	0.6	63%	1.0	
070700021101	Peters and Lawrence Lakes-Non-Contributing-Spring	200	2.9	79%	0.6	63%	1.1	
070700021102	City of Antigo-Spring Brook	14,819	2.4	79%	0.5	63%	0.9	
070700021103	Elmwood Cemetary-Spring Brook	9,671	2.3	79%	0.5	63%	0.9	
070700021201	Bogus Swamp-East Fork of the Eau Claire River	418	5	79%	1.0	63%	1.8	
070700021202	Black Brook	2,217	2.9	79%	0.6	63%	1.1	
070700021203	Antigo Flats-East Branch of the Eau Claire Rivers	6,664	2.5	79%	0.5	63%	0.9	
070700021204	West Branch of the Eau Claire River	4,418	2.8	79%	0.6	63%	1.0	
070700021205	Oldens Creek-Eau Claire River	11,629	2.4	79%	0.5	63%	0.9	
070700030101	Headwaters of the Plover River	531	2.1	79%	0.4	63%	0.8	

Upper Fox - Wolf TMDL		Row Crop Acres	Translated TMDL Allocations					
			TP (Total Phosphorus)			TSS (Total Suspended Solids)		
			TP Baseline (lb/ac/yr)	Reduction Needed	TP Target (lb/ac/yr)	TP Baseline (tons/ac/yr)	Reduction Needed	TP Target (tons/ac/yr)
HUC12	HUC12 Name							
040302020103	Upper Post Lake-Wolf River	331	3.18	34%	2.09	2.00	35%	1.30
040302020105	Squaw Creek-Swamp Creek	83	1.90	83%	0.33	1.45	35%	0.94
040302020106	Spider Creek-Wolf River	558	1.66	83%	0.29	1.71	35%	1.10
040302020201	Pickeral Creek	127	1.74	83%	0.30	1.18	35%	0.76
040302020202	Hunting River	698	4.20	83%	0.73	2.21	35%	1.43
040302020204	Bog Brook-Lily River	-	-	-	-	-	-	-
040302020205	East Branch of the Lily River	471	3.06	83%	0.52	2.15	35%	1.39
040302020206	Squaw Creek-Wolf River	1,016	3.04	83%	0.52	1.60	35%	1.03
040302020301	Ninemile Creek	175	2.20	83%	0.37	1.44	35%	0.93
040302020302	Slough Gundy Rapids-Wolf River	746	3.32	83%	0.56	1.87	35%	1.21
040302020303	Elton Creek- Evergreen River	2,732	4.58	83%	0.78	2.72	35%	1.76
040302020304	McCall Creek-Evergreen River	69	2.47	83%	0.42	1.94	35%	1.25
040302020305	White Lake Creek-Wolf River	1,877	6.32	83%	1.07	3.93	35%	2.53
040302020401	Little West Branch of the Wolf River	3,681	5.61	83%	0.95	3.43	35%	2.21
040302020402	Elma Creek- West Branch of the Wolf River	1,393	5.89	83%	1.00	3.49	35%	2.25
040302020501	Mattoon Creek-West Branch of the Red River	2,993	4.91	83%	0.83	3.25	35%	2.10
040302020503	Moose Lake-Red River	3,944	5.32	83%	0.90	3.21	35%	2.07
040302021004	Elmhurst-Middle Branch of the Embarrass Rive	593	2.42	83%	0.41	1.66	35%	1.07

Compiled by: WDNR

## ***ATTACHMENT E: Public Hearing Comments***

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Hearing minutes are available from the county but this is a summary of any comments received:


No Public Comment was received.





***ATTACHMENT F: Additional Resources for Interested Parties***

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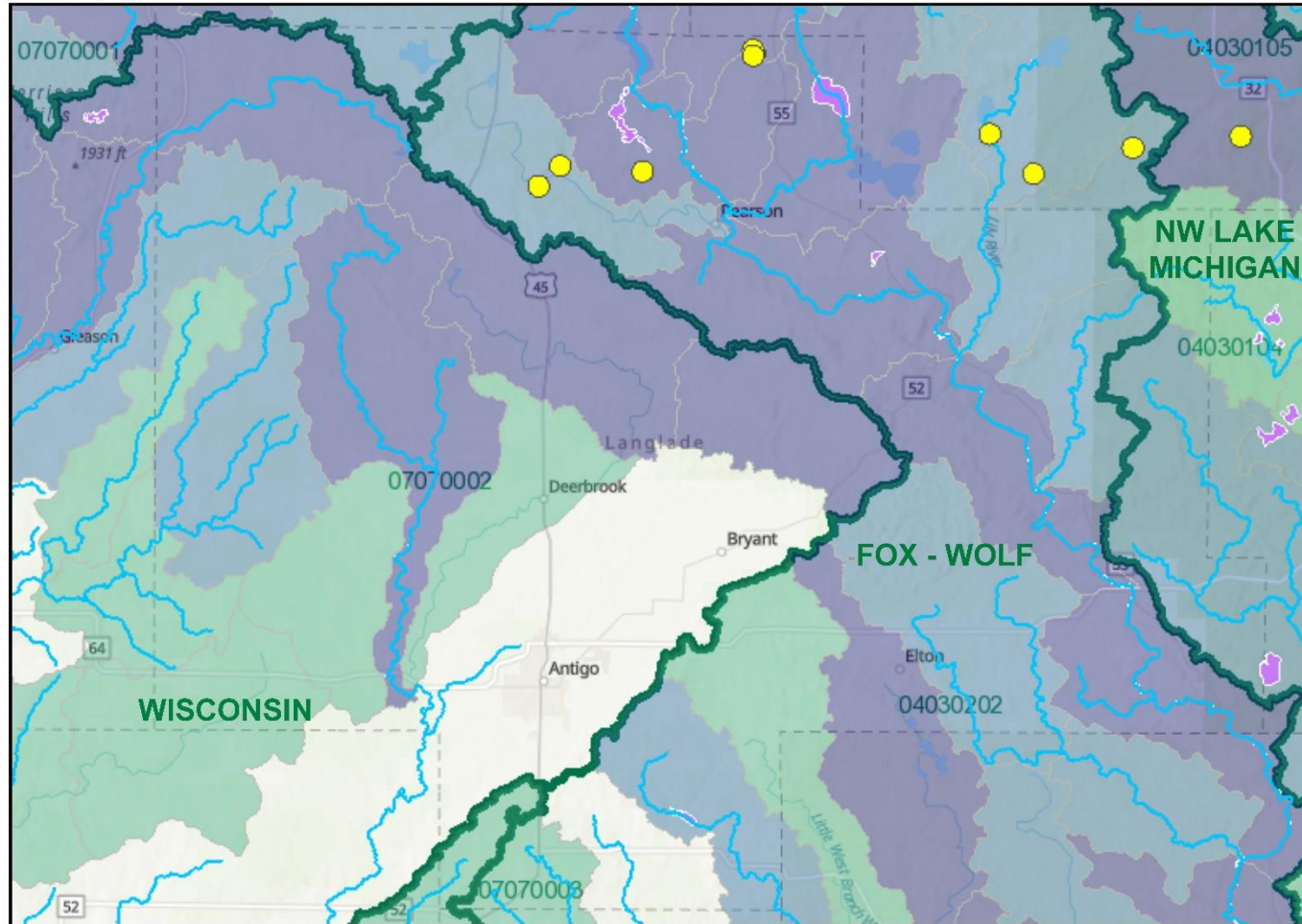
# Healthy Watersheds High Quality Water

 <b>2021 High-Quality Waters: Lakes, Rivers, Streams</b>											
<b>Langlade County - 18 High-Quality Waters identified in 2021</b> Data sorted by alphabetical county and alphabetical waterbody name											
OFFICIAL NAME	LOCAL NAME	WVIC	PRIORITY WATERSHEDS		COUNTY NAME (STREAM MOUTH & LAKE LOCATION)	HUC6	HUC12 CODE (STREAM MOUTH & LAKE LOCATION)	UNIQUE & RARE RESOURCES (COUNT)	Attaining WQS (COUNT)	IBIs (COUNT)	HQW CRITERIA (COUNT)
			HUC6: *	State: ** Both: ***							
Big Twin Lake		182200	***		Langlade	Fox	040302020206		1	2	2
Clearwater Creek		1447000	***		Langlade	Wisconsin	070700021204	2		1	2
Dalton Creek		493700	***		Langlade	NW Lake Michigan	040301040102	2		3	2
East Branch Pratt Creek		1479300	***		Langlade	Wisconsin	070700020501	1		1	2
Lily River		370900	***		Langlade	Fox	040302020206	1		3	2
Lloyd Creek		1479500	***		Langlade	Wisconsin	070700020501	1	1	2	3
Lower Post Lake		397100	***		Langlade	Fox	040302020106	1	1		2
McCloud Creek		1478600	***		Langlade	Wisconsin	070700020501	3		3	2
Moose Lake		337600	***		Langlade	Fox	040302020503		1	1	2
Ninemile Creek		366800	***		Langlade	Fox	040302020302	1		3	2
Pickereel Creek		387300	***		Langlade	Fox	040302020201	1		1	2
Rolling Stone Lake		389300	***		Langlade	Fox	040302020201		1	1	2
Spring Creek		364500	***		Langlade	Fox	040302020305	2	1		2
Stevens Creek		382900	***		Langlade	Fox	040302020206	2		3	2
Unnamed		379600	***		Langlade	Fox	040302020206	2	1		2
Unnamed		1479900	***		Langlade	Wisconsin	070700020501	1		1	2
Unnamed		1485200	***		Langlade	Wisconsin	070700020303	1		2	2
West Branch Eau Claire River		1445700	***		Langlade	Wisconsin	070700021204	3		1	2

 <b>2021 High-Quality Waters: Healthy Wetlands</b>											
<b>Langlade County - 3 Healthy Wetlands identified in 2021</b> Data sorted by alphabetical county and increasing Healthy Wetland ID											
WETLAND ID	SITE NAME	SITE ID	PRIORITY WATERSHEDS		COUNTY NAME	HUC6	HUC12 CODE	DISTURBANCE RANK	PLANT COMMUNITY CONDITION	LAT	LONG
			HUC6: *	State: ** Both: ***							
Healthy_350	Hunting River Alders SNA	NL489	***		Langlade	Fox	040302020202	2	2	45.390149	-89.153748
Healthy_356	Swamp Creek Fen SNA	NL491	***		Langlade	Fox	040302020106	1	1	45.45612	-89.0008
Healthy_357	Swamp Creek Fen SNA	NL490	***		Langlade	Fox	040302020106	2	2	45.457792	-89.002065

 <b>2021 High-Quality Waters: Rare &amp; Unique Wetlands</b>											
<b>Langlade County - 3 Rare &amp; Unique Wetlands identified in 2021</b> Data sorted by alphabetical county and increasing Rare & Unique Wetland ID											
WETLAND ID	WETLAND TYPE	SITE ID	PRIORITY WATERSHEDS		COUNTY NAME	HUC6	HUC12 CODE	SRANK	GRANK	LAT	LONG
			HUC6: *	State: ** Both: ***							
Rare_290	Poor Fen	CPHER069WI	***		Langlade	Fox	040302020106	S3	G3G4	45.397407	-89.080032
Rare_292	Wild Rice Marsh	CPHER057WI	***		Langlade	Fox	040302020202	S3	G3G4	45.400186	-89.138315
Rare_297	Boreal Rich Fen	CPHER065WI	***		Langlade	Fox	040302020106	S2	G4G5	45.45506	-89.001812

# Statewide Top 30% Protection Priority Watersheds of Langlade County



## Legend

- Protection - Healthy Watersheds, High-Quality Waters
- Healthy & Rare Wetlands
- High-Quality Streams
- High-Quality Lakes & Large Rivers
- Watershed Health Score
  - Top 10%
  - Top 10 - 20%
  - Top 20 - 30%
- Base Maps & Imagery
- HUC 8

## Notes

WDNR Identified Statewide Top 30% Protection Priority Watersheds (HUC 12) with High-Quality Waters also identified. For most up to date information, please cross reference information and mapping services at <https://dnr.wisconsin.gov/topic/SurfaceWater/HQW.html>

Service layer credits:  
 U. S. Department of Agriculture, Natural Resources Conservation Service | Luke Beringer, Pamela Toshner, Aaron Marti



1:480,000

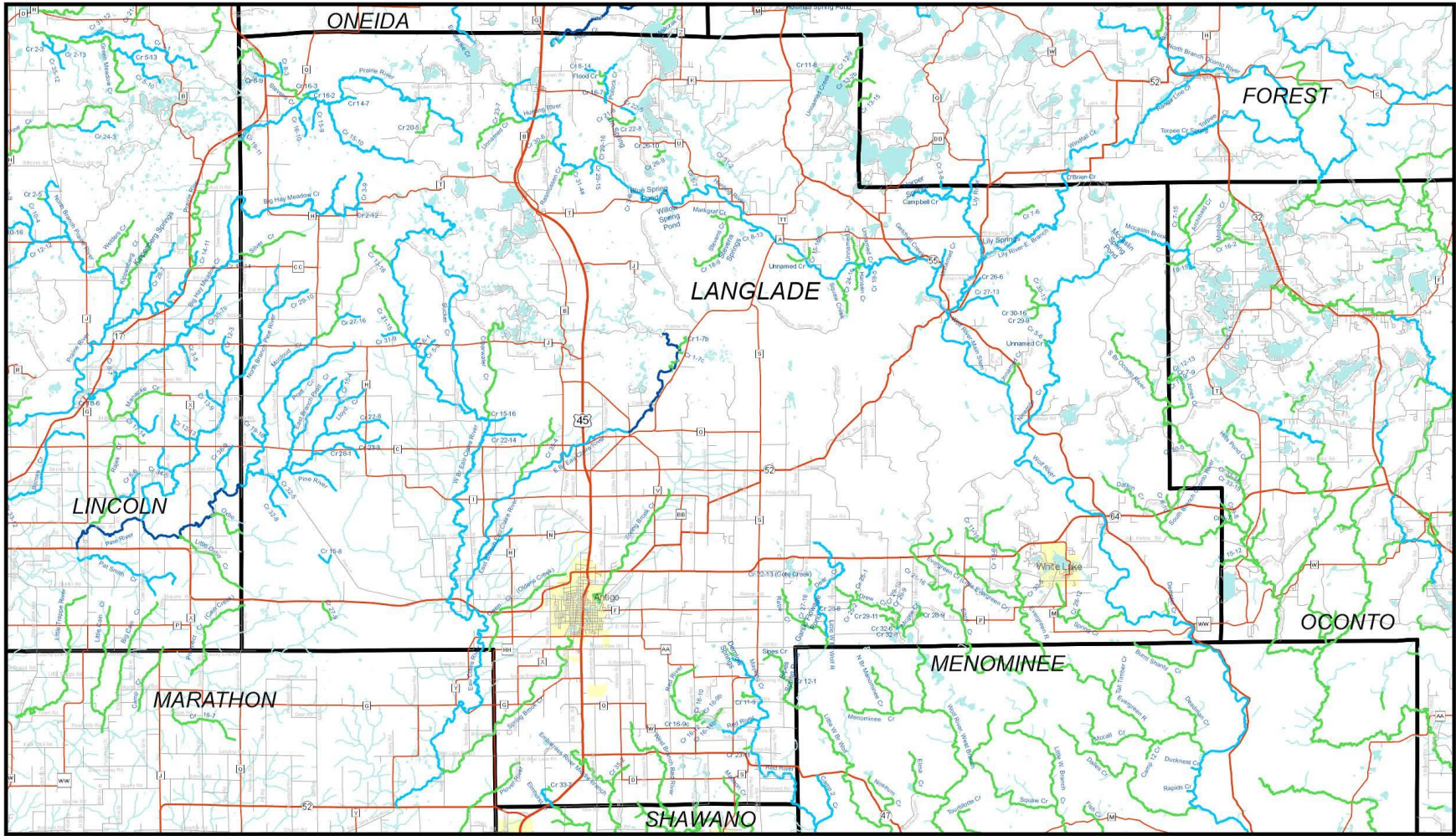


**This map is a product generated by a DNR mapping application**

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Date Printed: 06/12/2024

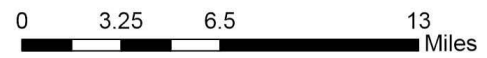
# WDNR Trout Waters Map for Langlade County



## Langlade County



Map Updated: January 6, 2017



LEGEND	
<span style="color: blue;">—</span>	Trout Streams
<span style="color: green;">—</span>	Class I
<span style="color: blue;">—</span>	Class II
<span style="color: blue;">—</span>	Class III
<span style="color: red;">—</span>	Interstate Highway
<span style="color: red;">—</span>	US Highway
<span style="color: red;">—</span>	State Highway
<span style="color: red;">—</span>	County Road
<span style="color: red;">—</span>	Local Road
<span style="color: lightblue;">—</span>	Other Streams
<span style="color: lightblue;">—</span>	Open Water
<span style="background-color: yellow;"> </span>	Municipality