

CHAPTER 2

AGRICULTURAL, NATURAL, AND CULTURAL RESOURCES

Introduction

It is the abundance of natural resources that attracts people to the Town of Barnes. Vast forests and pristine lakes are highly valued for their aesthetics and recreational use. These positive aspects have created a large demand for seasonal homes and increased the development density along the lake shores and riverfronts. The protection of these natural resources is one of the main goals of the Town of Barnes Comprehensive Land Use Plan.

When asked how the quality of the environment in the Town of Barnes has changed in the last five years, 9.2% of property owners and renters indicated that it has gotten better, 55.7% said it has stayed the same, while 20.0% indicated that they felt it had gotten worse.

Groundwater

In the 2004 Town of Barnes Community Survey, 62.7% of property owners and renters stated that the groundwater quality in Town of Barnes is good while 10.7% thought there were problems with the groundwater.

Groundwater is a primary source for all water used for residential, industrial, and agricultural purposes. The need for clean, reliable water supplies is essential for the Town. Groundwater is drawn out through wells that tap into aquifers. These water supplies are recharged through rainfall and melt water, which seeps through the porous soil under the force of gravity, settling at an impervious layer such as bedrock.

Groundwater contamination potential is influenced by soil characteristics such as chemistry, permeability, slope, and the ability of the unconsolidated materials overlying bedrock to filter contaminants (attenuation capacity). Groundwater quality is closely linked to land use practices. Substances deposited on the land surface are transported through the porous soil to the aquifer where they may contaminate the water supply. Fertilizers, oil, lead, gasoline, and pesticides can readily leach into the aquifer causing contamination.

Septic systems are also a serious contamination source. Septic systems serve homes, businesses, and other buildings that are not connected to a city sewer system. An improperly installed or ill-maintained septic system can leak bacteria, nitrogen, phosphorus, household chemicals, and other contaminants. When these systems fail, unwanted nutrients, bacteria, and other materials can enter

the environment as pollutants. When a septic system is undersized, improperly installed, neglected, not inspected or pumped, its life expectancy is reduced and the potential for system failure is increased.

The Wisconsin Statutes define a failing private sewage system as one which causes or results in any of the following:

- The discharge of sewage into surface water or groundwater.
- The introduction of sewage into zones of saturation which adversely affects the operation of a private sewage system.
- The discharge of sewage to a drain tile or into zones of bedrock.
- The discharge of sewage to the surface of the ground.
- The failure to accept sewage discharges and back up of sewage into the structure served by the private sewage system.

Proper and routine maintenance is important in maintaining your septic systems. Wisconsin Statutes states the maintenance program shall include a requirement of inspection or pumping of the private sewage system at least once every three years.

According to the U.S. Environmental Protection Agency, a septic utility should provide the following three services:

- Initial soil test prior to installation of the system;
- Periodic inspections to determine if the system is malfunctioning; and
- Enforcement mechanism to assure that problems identified through inspection are corrected.

To protect the lakes within the Town of Barnes and their water quality environment and public health, regular inspection and maintenance of septic systems is necessary. As this maintenance is not readily observable, the Township should request copies of maintenance reports and scheduled maintenance for Town of Barnes residents from Bayfield County.

The septic tank and soil absorption field is one of the most popular on-site wastewater treatment options. With proper soil conditions and a maintained system, wastewater treatment is considered adequate.

Around the Eau Claire Chain of Lakes and other lakes in the Town of Barnes it is likely, as in any rural community, that some on-site systems need maintenance and possible upgrades. To ensure that the systems are functioning adequately, maintenance should include, but are not limited to the following:

- Education and research on how to identify if tanks are in poor or failing condition. Example: A workshop could be scheduled for the Town of Barnes property owners to demonstrate the installation of a conforming

septic system and the proper care and maintenance of the septic tank and septic system.

- Pumping maintenance campaign. Pump septic systems at least every three years. Example: Bayfield County could work with the Town of Barnes and local organizations in a coordinated campaign effort to get every septic tank associated with a permanent residence pumped every three years and every five years for seasonal residences.
- Repair/replacement campaign. Have all systems inspected at least every three years.
- Encourage a county ordinance implemented for shoreland areas (within 1000 feet of shore/river boundary). Work to implement and then get enforcement of a county ordinance, where septic systems must be “evaluated” at the time a property is transferred. The seller would obtain a septic system evaluation from Bayfield County at the time of property transfer. The evaluation would determine if the septic system is “failing, non-conforming, or conforming.” A failing septic system includes septic systems that discharge to the ground surface, discharges into tiles or surface waters, and systems found contaminating a well. The county would require a failing system be brought into compliance within a reasonable time frame.

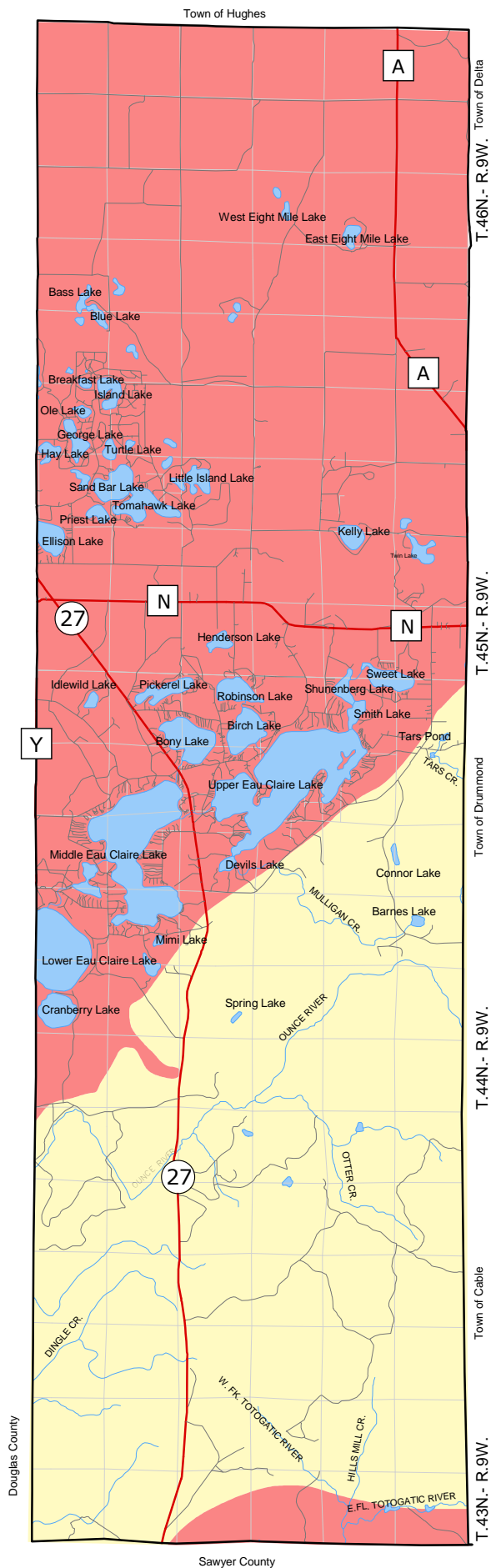
If many private septic systems are found to be failing, it is recommended that local unit of governments meet to consider development of a sanitary district. All septic systems should be inspected by a Certified Private Onsite Wastewater Treatment Systems (POWTS) inspector or Soil Scientist when properties change hands.

There is potential for groundwater contamination in the Town of Barnes due to the porous soils, shallow water table, and large number of septic systems that surround the lakes (see *Map 2-1 and 2-2*).

It is important to be aware of potential contamination risks when future land uses are considered as groundwater contamination can be very expensive and/or difficult to overcome.

GROUNDWATER CONTAMINATION RISK

TOWN OF BARNES
Bayfield County, Wisconsin
Map 2-1



LEGEND

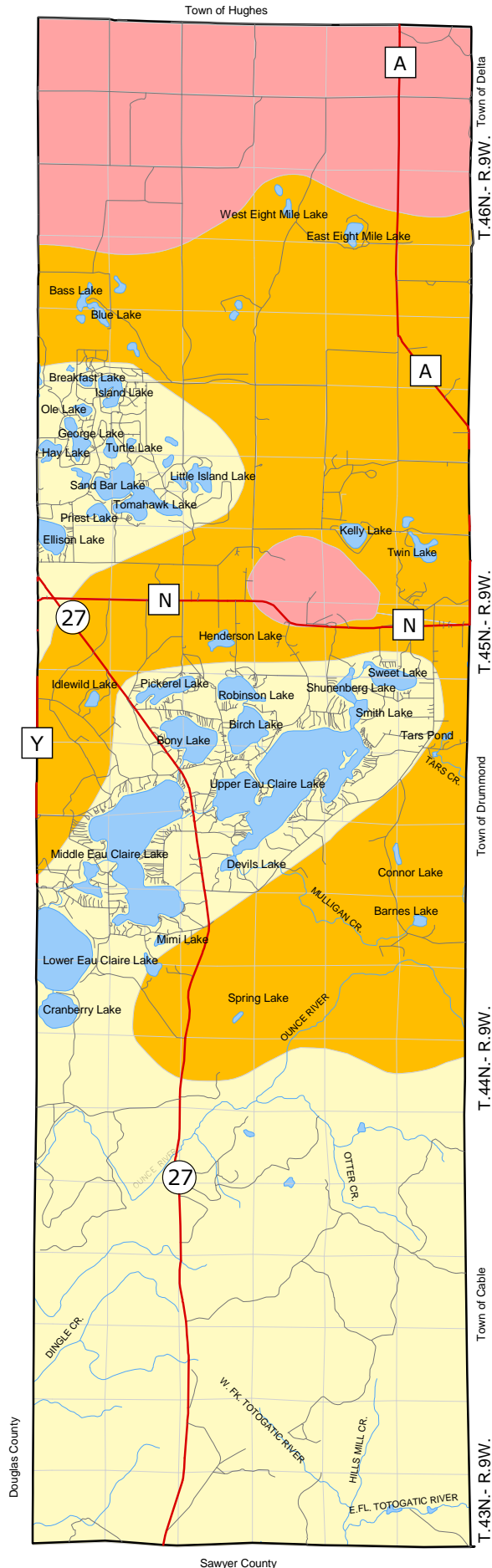
- Town Limits
- ROADS**
- Town Roads
- County/State Roads
- Streams
- Section Lines
- Lakes
- CONTAMINATION RISK**
- High
- High - Medium



0 1 2 3 Miles

WATER TABLE DEPTH

TOWN OF BARNES
Bayfield County, Wisconsin
Map 2-2



LEGEND

ROADS

- Town Roads
- County/State Roads
- Town Limits
- Streams
- Section Lines
- Lakes

WATER TABLE DEPTH

- 0'-20'
- 20'-50'
- > 50'



0 1 2 3 Miles

Environmentally Sensitive Areas / Wildlife Habitat

Environmentally sensitive areas and wildlife habitat are extremely important for the protection of aquatic and terrestrial wildlife and plants. The preservation and possible expansion of these areas is vital to maintain a diverse ecosystem. These areas are represented by wetlands, forests, shorelands, and surface water.

Forests

Over half of Wisconsin's 16 million acres of forest land is owned by private landowners. According to the Wisconsin DNR, forest products and forest-based recreation account for about 12% of the Gross State Product and 18% of the jobs in Wisconsin. Forests provide raw materials for manufacturing and building and a setting for hunting, camping, hiking, and many other forms of recreation. Forests provide valuable wildlife habitat and are the homes for less visible threatened and endangered plant and wildlife. Forests and trees can help protect other resources by reducing heating and cooling costs of homes and business. Forests and trees offer erosion control for river banks and steep slopes.

A contiguous forest is extremely important. Fragmented forests can result in the disruption of habitat and can lead to problems between wildlife and humans. Map 2-3 shows general forest land cover in the Town of Barnes. In the 2004 Town of Barnes Community Survey, property owners and renters were asked if it was important to save large tracts of private forest land. Of all respondents, 51.4% strongly agreed and 33.3% agreed.

Bayfield County Forest dominates forest land in the Town of Barnes (over 39,000 acres). The Bayfield County Forestry Department has a 10-year plan that is being revised. The plan will address recommended buffers and the aesthetics of forest management. Currently there are no requirements for these issues. The Wisconsin DNR Bureau of Forestry produced the *Silviculture and Forest Aesthetics Handbook* (also under revision) to help foresters meet varying aesthetic management objectives in diverse timber types. When completed, these documents will provide updated guidance for maintaining the benefits and proper management of public and private forests.

The Town of Barnes lies within two ecological landscapes. The first is the Northwest Sands. The Northwest Sands is characterized by soils of deep sands and low organic material and nutrients. Historical vegetation in this area is jack pine and scrub oak forest. Significant amounts of white and red pine were also present. The Wisconsin DNR has listed several opportunities for forest management in the Northwest Sands. They include:

- ✓ Increasing the extent of dry jack pine-northern pin oak forests as well as white and red pine restoration.
- ✓ Large scale restoration of oak-pine barrens and wetlands that benefit many rare birds, plants, and butterflies.

The second ecological landscape is the North Central Forest. The North Central Forest region is characterized by sandy loam, sand, and silt soils. The vegetation is mainly forests. Historic vegetation was primarily hemlock-hardwood forests comprised of hemlock, sugar maple, and yellow birch. Much of the hemlock was harvested to supply the tanneries a century ago. Today's landscape is dominated by sugar maple, red maple, and basswood. There are also pockets of hemlock and white pine. A variety of forested and non-forested wetland communities are also present. Several opportunities for forest management in the North Central Forest include:

- ✓ Maintaining larger blocks of northern hardwood forests.
- ✓ Restore missing or diminished conifers such as hemlock, white pine, and white cedar
- ✓ Restoration of larger forest patches

Within the Town of Barnes, the main forests are comprised of aspen and oak.

Agricultural Areas

Prime agricultural lands provide economic benefit, as well as providing open space and aesthetic value. Planning is important to guarantee lands for the continued production of food and preservation of the rural landscape.

Agricultural practices often increase runoff volumes and rates. This is primarily due to the drainage or filling of wetlands and low lying areas, changes in infiltration capacity brought about by agriculture practices, compacting and clearing the land, and quickly directing runoff into artificial ditches and channels. When removed, topsoil nutrients, pesticides, and organic materials enter the runoff which carries them to water bodies as pollutants.

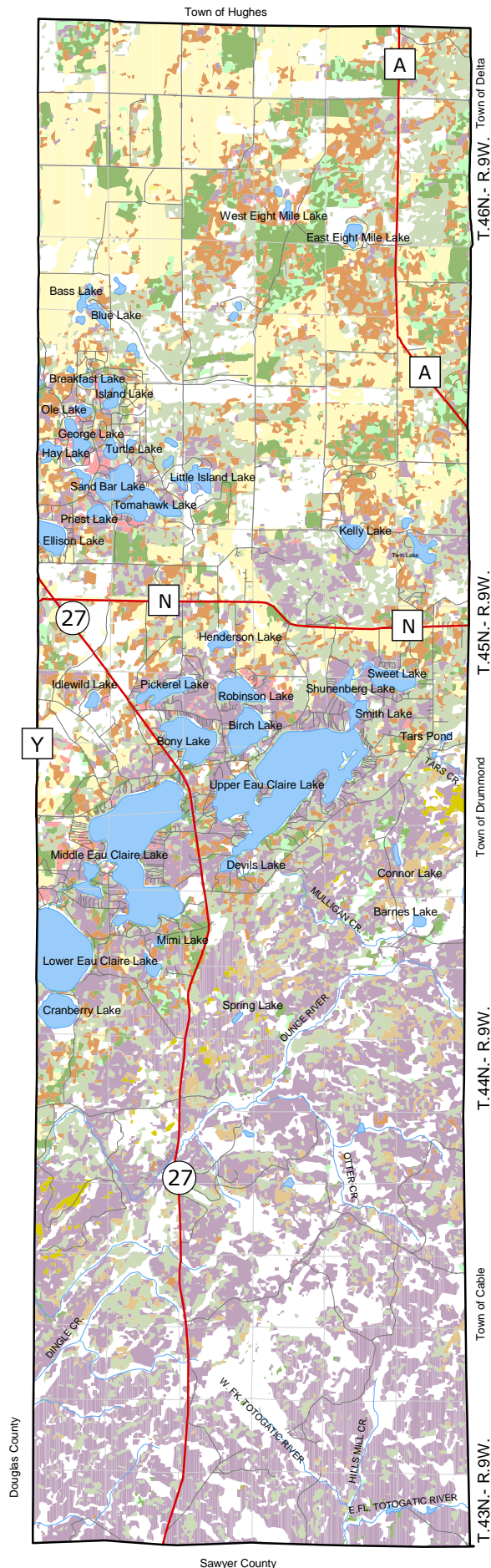
Though there is limited farming activity in the Town of Barnes, agriculture has never been a significant way of life for residents (*see Map 2-4*). In the 2004 Town of Barnes Community Survey, 47.4% of property owners and renters stated that it was important to preserve agricultural land while 21.6% responded that it wasn't important. As farms slowly cease to exist, especially in northern Wisconsin, it is likely that these lands will one day revert back to forest. For now, the agricultural areas in the Town of Barnes are not near the developed areas of the lakes. As long as farming is feasible in the area, farming practices should conform with soil erosion protection to minimize off site impacts to the environment.

FORESTLAND

TOWN OF BARNES

Bayfield County, Wisconsin

Map 2-3



LEGEND

Town Limits

ROADS

Town Roads

County/State Roads

Streams

Section Lines

Lakes

FOREST LAND COVER

Aspen

Jack Pine

Red Pine

Mxed/Other Coniferous

Mixed Deciduous/Coniferous

Maple

Northern Pine Oak

Oak

Red Oak

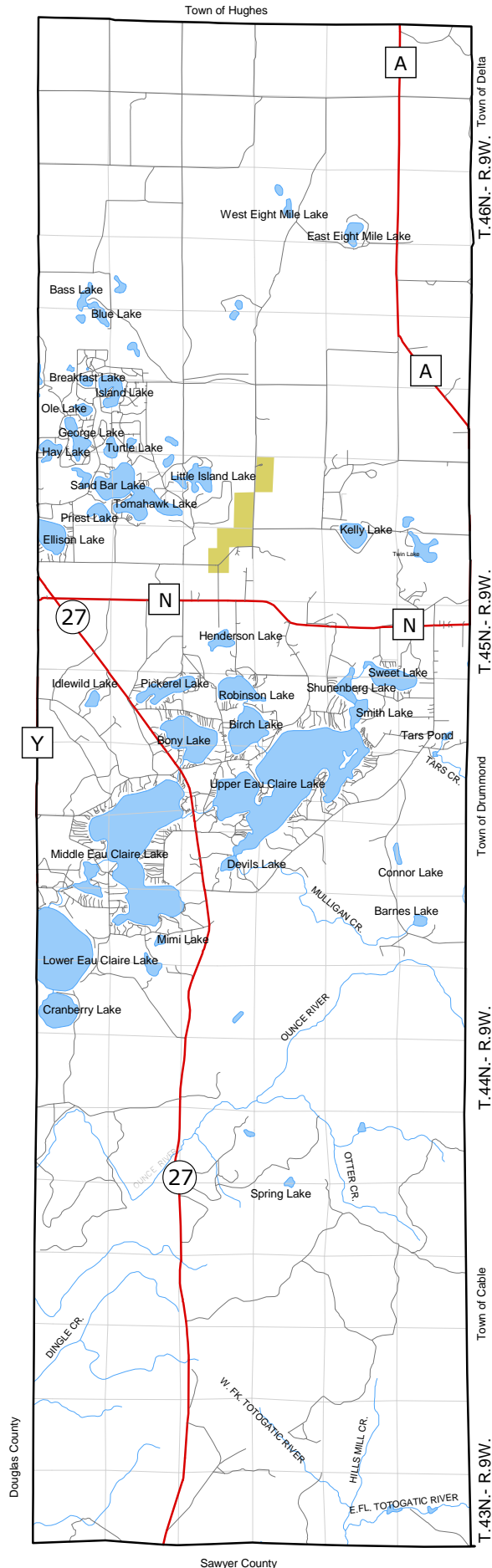
Mixed/Other Broad-Leaved Deciduous



0 1 2 3 Miles

AGRICULTURAL LAND

TOWN OF BARNES
Bayfield County, Wisconsin
Map 2-4



LEGEND

 Town Limits

ROADS

 Town Roads

 County/State Roads

 Streams

 Section Lines

 Lakes

 Land Used for Agriculture



0 1 2 3 Miles

Threatened, Endangered, and Rare Species

According to the U.S. Fish and Wildlife Service, an “endangered” species is one that is in danger of extinction throughout all or significant portion of its range. A “threatened” species is one that is likely to become endangered in the foreseeable future. Certain species are protected because of their scientific, educational, aesthetic, and ecological importance.

The Wisconsin Natural Heritage Inventory Program maintains data on the location and status of natural features, rare species, and natural communities in Wisconsin (see *Map 2-5*). These sites are broad in nature and provide a general location for rare, threatened, or endangered species as well as high-quality natural communities. There are 23 sections within the Town of Barnes that have recorded instances of rare species. Twenty-one of these occurrences involve aquatic plants, animals, or natural communities while the remaining two have both aquatic and terrestrial occurrences. A list of these occurrences and the year documented can be found at the Wisconsin DNR web site.

Development projects in the Town of Barnes may threaten the presence of protected species. Certain activities already require notification of the DNR to advise them of potential development and request notification of endangered species within the project area. This requirement could be expanded to include all major developments – industrial, residential, and commercial in order to protect these endangered species.

Watersheds

Roughly 60% of the Town of Barnes is located in the Upper St. Croix and Eau Claire Rivers Watershed with the remaining area being part of the Totogatic River Watershed (see *Map 2-6*). Small areas in the northeastern and northwestern parts of the Town belong to the White River or Bois Brule River Watersheds. Land uses within a watershed can dramatically affect water quality in that watershed. As rain or melt water flows across roads, parking lots, lawns, or agricultural fields, chemicals and sediment are transported to lakes and rivers where they are deposited, disrupting the natural system.

The more quickly water flows from high elevations, the more intense the velocity impacts on downstream points within the watershed. When more water reaches an outlet point at the downstream edge of any drainage area that can be accommodated by the outlet within a given time period, the drainage ways upstream of the outlet will back up and overflow, causing surface flooding on low-lying lands.

Runoff rates from natural landscapes such as prairies and woodlands are usually quite low due to the absorption capacity of the soil and the evaporative uptake of lush vegetation. However, if best forest management practices are not in place,

soil, water, nutrients, and other debris can be picked up by overland flow and carried to the lakes. Limiting the amount of impervious surface on developed lots will reduce runoff potential that will affect water quality. This practice will encourage infiltration and renew the ground water source.

Effective soil erosion control from all construction sites is key to improving water quality throughout the watershed. A rigorous and strict enforcement of the recently updated and adopted soil erosion control regulations administered by the Wisconsin DNR and Department of Commerce is necessary to minimize construction runoff into the lake. Town officials and community residents should insist on the best possible erosion control methods, update or adopt their own ordinances, and enforce these recommendations. Construction projects and related site erosion control plans should be reviewed by experienced professionals, consultants, and/or planners before implementation.

Surface Water / Water Resources

The water resources within the Town of Barnes are probably the biggest attraction in the area. Year-round and seasonal residents enjoy the lakes and rivers for the many opportunities for water recreational activities. Wisconsin's Public Trust Doctrine states that the waters of Wisconsin are held in trust by the state for the benefit of all. The Wisconsin DNR is assigned the task of protecting our water resources.

Surface waters provide habitat for a wide variety of animals and plants, which also serve to attract tourism and recreation. Protection of surface water resources is critical to maintaining the water quality, and diversity of life, which attracts people to these resources. Development in the watershed should be completed to minimize the impact on the function of natural systems, and address potential pollution problems through the use of best management practices such as shoreland buffers, erosion control, and the preservation of natural environmental corridors. Best Management Practices (BMP) designed to control stormwater runoff rates, volumes, and discharge quality can be used to protect water resources in developed areas.

The defining lakes in the Town of Barnes are the Eau Claire Lakes which consists of 11 lakes totaling approximately 3,500 acres and 45 miles of shoreland (see *Map NR-7*). The Upper, Middle, and Lower Eau Claire Lakes are located at the headwaters of the Eau Claire River and are recognized as outstanding water resources. Water quality appears to decline slightly moving downstream in this chain. The Upper, Middle, and Lower Eau Claire Lakes area residents are represented by the Barnes/Eau Claire Lakes Area Property Association, Inc. and continually participate in lake management activities along with other local organizations and individual volunteers.

Since Wisconsin passed its version of the Federal Clean Water Act in 1974, the improvement in the surface water quality protection and pollution control are not single objectives to be completed on one occasion, but require an on-going commitment to clean water. Section 305b of the Clean Water Act requires each state to construct “fishable” and “swimmable” goals.

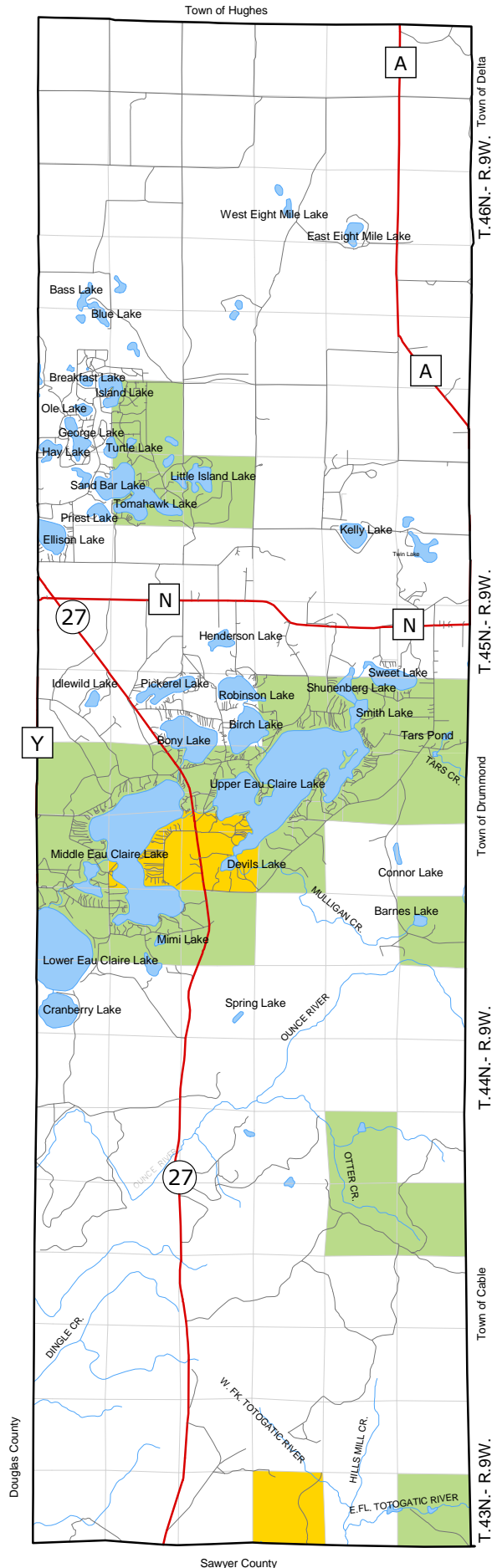
A major threat to our water resources is Eurasian Water Milfoil. The DNR states that the Eurasian Water Milfoil was first introduced in the 1960s and has significantly expanded its range to about 310 lakes in 54 of 72 Wisconsin counties. There are numerous exotic species of concern. To help prevent the spread of these exotic plants and animals, the DNR recommends:

- ✓ Drain all water from your boat, including live wells and containers before accessing or leaving lake and waterway access areas;
- ✓ Do not transfer water from one water body to another;
- ✓ Do not release bait or aquarium pets into waters of the State;
- ✓ Remove all aquatic plants and animals from all parts of your water recreational equipment and dispose of it; this material also makes excellent compost;
- ✓ Rinse and wash your boat, trailer, live wells and equipment that holds water with tap water when you return home.

Further recommendations for protecting the Town’s water resources can be found in the Eau Claire Lakes Lake Management Plan.

ENDANGERED SPECIES

TOWN OF BARNES
Bayfield County, Wisconsin
Map 2-5



LEGEND

- Town Limits
- ROADS**
 - Town Roads
 - County/State Roads
 - Streams
 - Section Lines
- Lakes
- ENDANGERED SPECIES**
 - Aquatic
 - Aquatic and Terrestrial

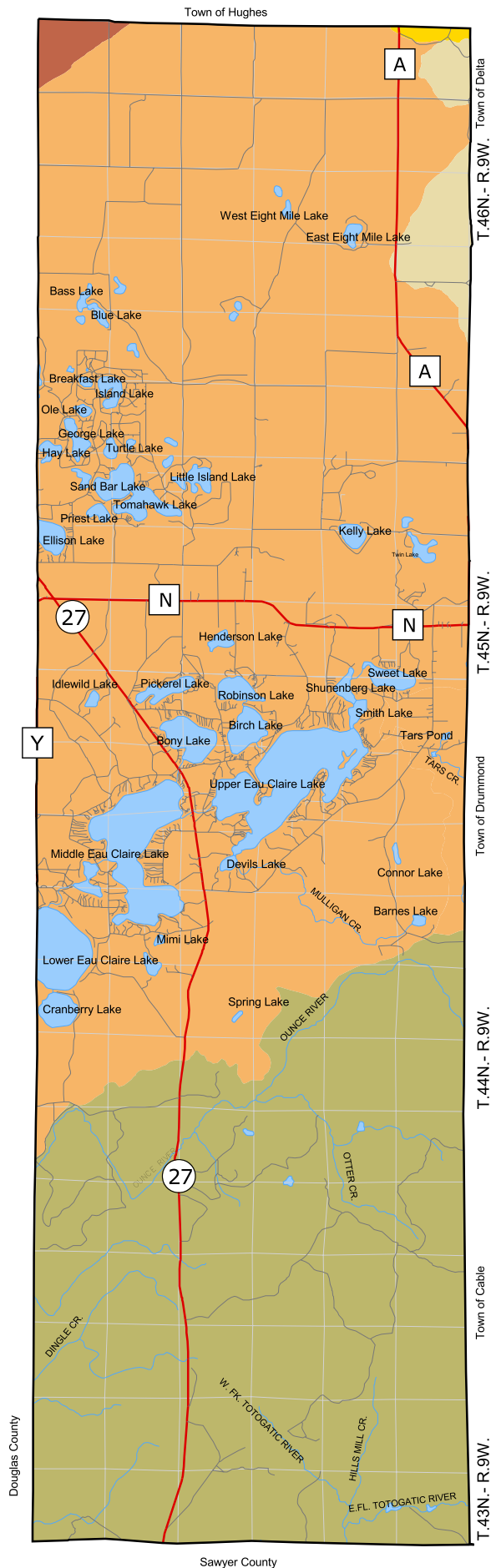


0 1 2 3 Miles

WATERSHEDS

TOWN OF BARNES
Bayfield County, Wisconsin

Map 2-6



LEGEND

Town Limits

ROADS

Town Roads

County/State Roads

Streams

Section Lines

Lakes

WATERSHEDS

Bois Brule River

Iron River

Totagatic River

Upper Saint Croix and Eau Claire Rivers

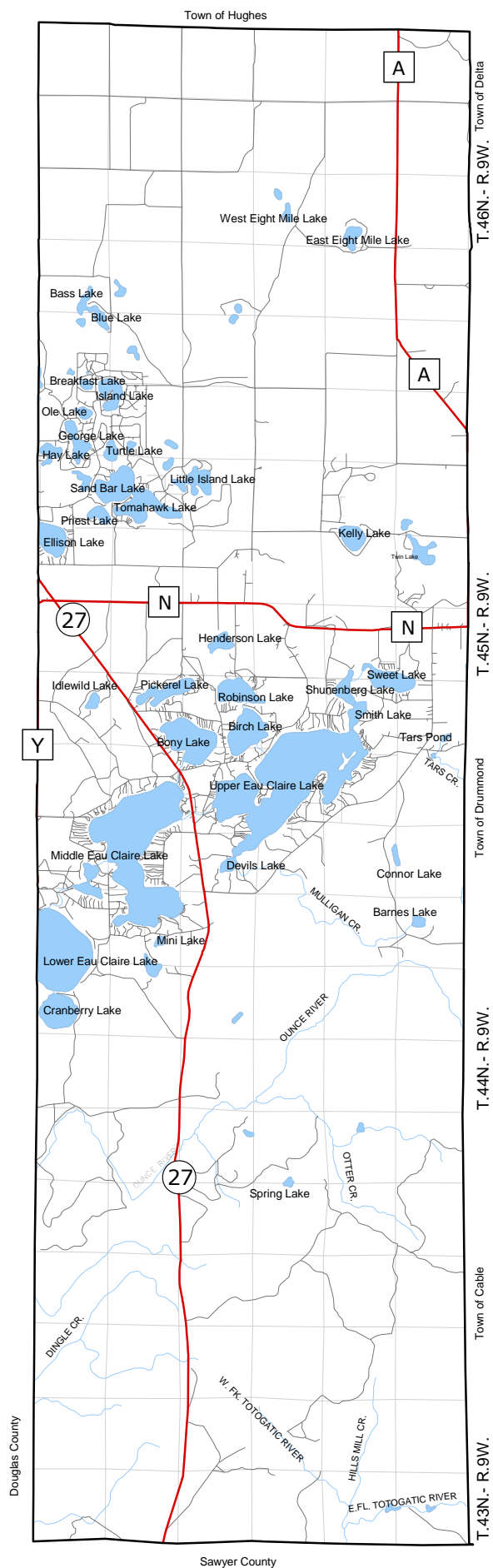
White River



0 1 2 3 Miles

SURFACE WATER

TOWN OF BARNES
Bayfield County, Wisconsin
Map 2-7



LEGEND

- Town Limits
- Sections
- Town Roads
- Highways
- Rivers and Creeks
- Lakes

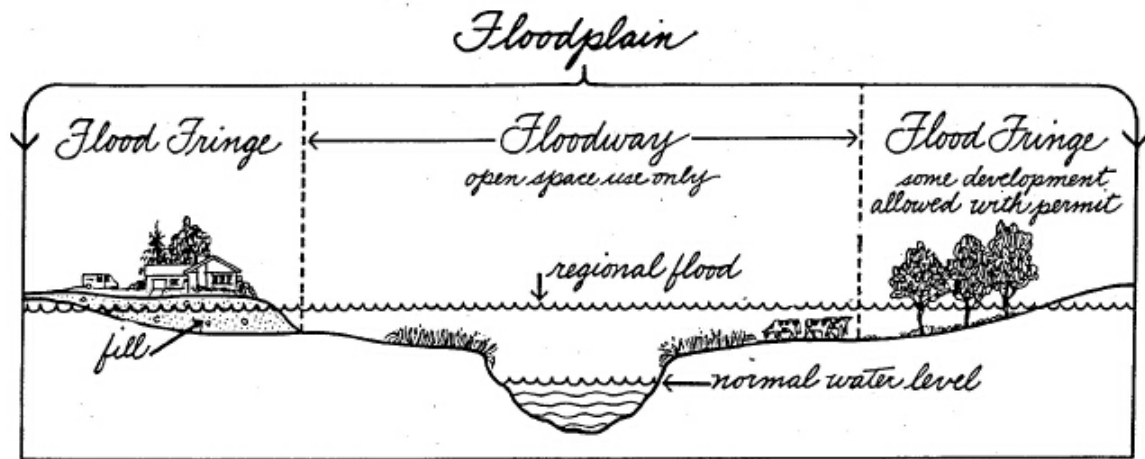


0 1 2 3 Miles

Floodplains

Floodplains are areas, which have been, or may become inundated with water during a regional flood. A regional flood is often referred to as a 100-year flood event or as an event having a 1% chance of occurring in any given year. Flood plains are comprised of two components, the floodway and flood fringe. Floodways directly adjoin the channel of a stream and are characterized by deep, fast moving water. The floodway is typically the most dangerous part of a floodplain, and uses in this area should be limited to conservation areas or open space. The flood fringe is associated with standing, or slow flowing water adjacent to the floodway (see Figure 2-1). Map 2-8 shows floodplains in the Town of Barnes.

Figure 2-1 Floodplain Components



Source: Wisconsin Department of Natural Resources.

Communities are required to protect and regulate floodplains.

- ✓ Section 87.30, Wisconsin statutes direct all Wisconsin counties, cities, and villages to adopt floodplain zoning ordinances.
- ✓ The Department of Natural Resources Chapter NR 116 Floodplain Management Program provides a uniform basis for the preparation and implementation of sound floodplain regulations.
- ✓ The Federal Emergency Management Agency (FEMA) has mapped flood plains. These maps delineate the entire flood plain boundary, but do not distinguish between floodway and flood fringe.

Buildings within the floodplain reduce the floodplain storage capacity causing the next flood of equal intensity and volume to crest at an even higher elevation. Because of the serious danger posed during a flood event, most structural development within a floodway is not allowed. Certain uses are permitted if they meet strict criteria. Development within the flood fringe is generally accepted, provided adequate flood proofing measures are in place.

The Floodplain Ordinance for Bayfield County specifies that no development shall be allowed in floodplain areas which obstructs the flow of floodwaters or causes an increase in regional flood height of 0.01 foot. Obstructions or increases may only be permitted if amendments are made to the ordinance and variances obtained from the WDNR.

Permitted uses are specified within the floodway and flood fringe. These uses are nonstructural or structures not intended for human habitation (historical structures) within the floodway while structures within the flood fringe have to be floodproofed.

Wetlands

Wisconsin statutes define a wetland as "an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic (water-loving) vegetation and which has soils indicative of wet conditions." Map 2-9 reveals the Town of Barnes has a significant amount of wetlands located south of the Eau Claire Lakes.

Wetlands act as natural filters, removing sediments and contaminants from water. Wetlands also regulate water levels by containing water during periods of excessive rain or snow melt. These unique environments are host to wide variety of plant and animal communities, including some threatened and endangered species. Wetlands also serve as rest areas for migratory waterfowl during the fall and spring months.

Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and human disturbance. They can be divided into coastal and inland wetlands. Coastal wetlands are found along our coasts and are located along our estuaries where sea water mixes with fresh water. Inland wetlands are most common on floodplains along rivers and streams, in depressions, along the margins of lakes and ponds, and in other low-lying areas where groundwater intercepts the soil surface.

The Bayfield County Shoreland-Wetland Zoning District includes all shorelands which are wetlands of five acres or more and are shown on the Wisconsin Wetland Inventory Maps. Permitted activities in wetlands that require no wetland alteration or zoning permit are:

- ✓ Hiking, fishing, trapping, hunting, swimming, snowmobiling, and boating
- ✓ The harvesting of wild crops
- ✓ The practice of silvaculture
- ✓ The pasturing of livestock
- ✓ The cultivation of agricultural crops
- ✓ The construction and maintenance of duck blinds

Permitted activities that require wetland alteration but no zoning permit are:

- ✓ The cultivation of cranberries
- ✓ The maintenance and repair of existing agricultural drainage systems
- ✓ Temporary water level stabilization measures to alleviate abnormally wet or dry conditions
- ✓ The construction and maintenance of fences for pasturing of livestock
- ✓ The maintenance, repair, replacement, and reconstruction of existing highways and bridges
- ✓ The construction and maintenance of piers, docks and walkways, observation decks, and trail bridges built on pilings.

Activities (with exceptions) that require a zoning permit are:

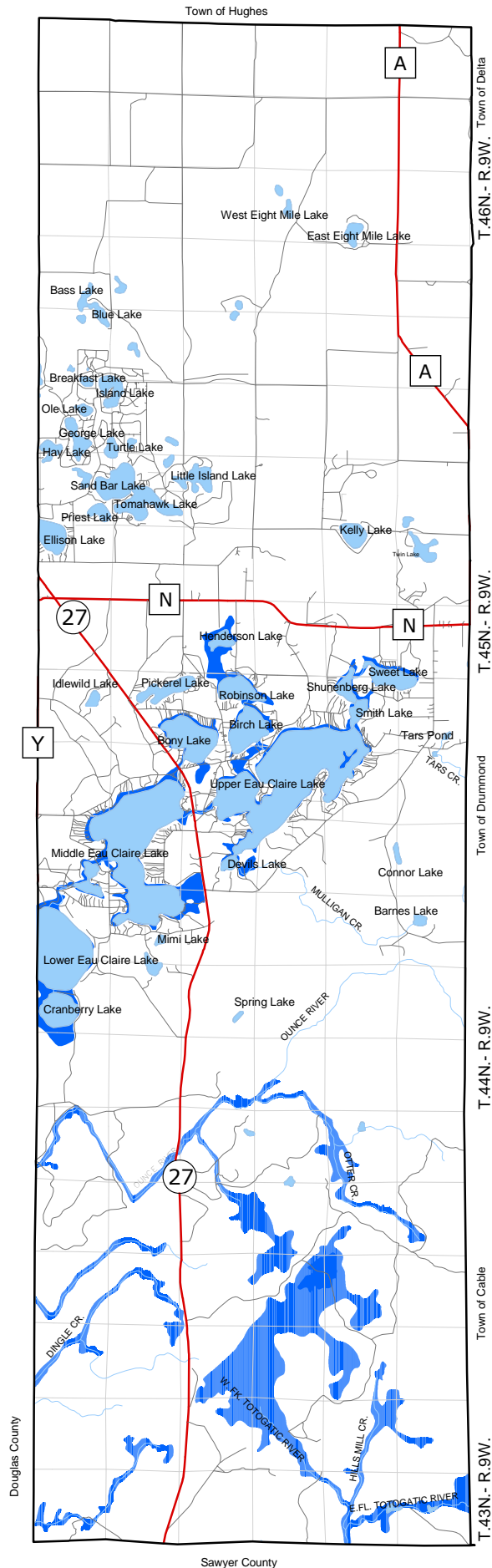
- ✓ Roads
- ✓ Buildings
- ✓ Park and recreation areas

FLOODPLAINS








TOWN OF BARNES

Bayfield County, Wisconsin

Map 2-8




LEGEND

-  Town Limits
-  Sections
-  Town Roads
-  Highways
-  Rivers and Creeks
-  Lakes
-  Floodplains



0 1 2 3 Miles

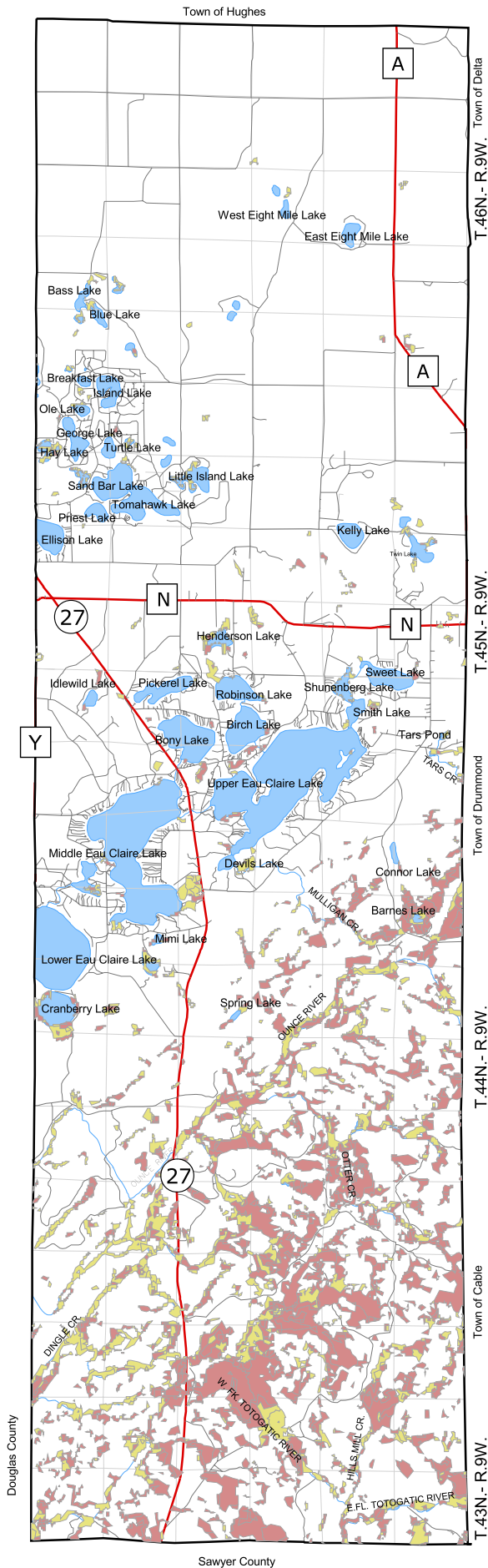


WETLANDS

TOWN OF BARNES

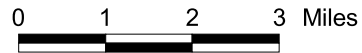
Bayfield County, Wisconsin

Map 2-9



LEGEND

- Town Limits
- Town Roads
- County/State Roads
- Streams
- Section Lines
- Lakes
- FORESTED WETLANDS
- WETLANDS



Shorelands

In the 2004 Town of Barnes Community Survey, 91.0% of property owners and renters stated that they agreed or strongly agreed that the Town of Barnes needs to protect its lakeshores and riverfronts. Shorelands are vital components of the relationship between the land and the water. Shoreland areas serve as environmental buffer zones, serving to catch potential pollutants and filter runoff before it enters the waterway. These buffer zones also provide habitat for a wide range of plant and animal species and would be considered environmentally sensitive areas. Shoreland areas are also very attractive as housing sites, and the demand for waterfront property is placing evermore pressure on these areas.

The four main shoreland management issues are identified as:

- ✓ Development density
- ✓ Nonconforming Structures
- ✓ Shoreland Buffers and Setbacks
- ✓ Flexibility and Mitigation

Bayfield County General Zoning Requirements defines shorelands as lands that are within 1,000 feet landward of the ordinary high water mark of navigable lakes, ponds, or flowages and within 300 feet landward of the ordinary high water mark of navigable rivers or streams or to the landward side of the floodplain, whichever distance is greater.

Most of the land along the lakeshores in the Town of Barnes is zoned R-1, R-2, or R-3. Table 2-1 presents the minimum dimensional requirements for residences.

Table 2-1 Bayfield County Zoning District Dimensional Requirements

Zoning Dist.	Min. Area	Min. Frontage	Min. Ave. Width	Minimum Side & Rear Yards	
				Principal	Accessory
R-1	30,000 Sq. ft.	150'	150'	10'	10'
R-2	4.5 acres	300'	300'	75'	30'
R-3	2.0 acres	200'	200'	20'	20'

Source: Bayfield County Zoning Ordinance.

Lakeshore homeowners often bring traditional urban landscape ideas to the lake. Having a conventional mowed yard with a green, well fertilized lawn to the water's edge is a typical exchange. Over time, this aspect of local lake development impacts water quality through loss of shoreline habitat and degrading water quality through incurred sedimentation and nutrient additions to the Lake. Keeping a native plant landscape, a natural shoreline, and a 35-foot natural buffer from the Ordinary High Water Mark (OHWM) will reduce degrading of the water quality.

Nutrient removal from runoff and wildlife benefits can be gained from installation or propagation of buffers. Some examples include:

- ✓ Brush and shrub buffers provide nesting habitat for lakeside songbirds and provide cover during migration.
- ✓ Forested buffers provide habitat for nesting birds, including warblers, wood ducks, and others. Upland birds use these for nesting and feeding habitat, such as orioles, woodpeckers, and others.
- ✓ Sedge, tall grass, flower buffers provide nesting cover for some birds and ground nesting for others.

There are three main efforts to native buffer landscaping:

- ✓ Naturalization: Residents allow their lot to go natural in areas they select to be “naturalized.” What ever currently present in the seed bed is what will grow. If they want to install a buffer along the shoreline, let a band of vegetation grow at least 35 feet deep back from the shoreline. This usually takes up to three years for native grass and flowers to grow and be noticed.
- ✓ Accelerated Naturalization: Residents may want to mimic some features sooner than three years. After generating a plan species list from their area, residents may lay out a planting scheme and plant into the existing vegetation. Many nurseries can help select plants and offer tips.
- ✓ Reconstruction: Introducing all new plants through construction to reestablish a native landscape with resident’s input and vision, while considering native growing plants, is another option for native buffer landscaping. Site preparation is a key factor, where elimination of invasive weeds and turf is required.

Parks / Open Space

Parks and open space are vital to the quality of our lives. They provide many benefits to individuals, communities, the environment, and the local economy.

First, individuals benefit by having opportunities for active and passive recreation. People use these spaces for exercise, relaxation, and play. Their lives are enhanced by bird watching, a pick-up game of football, quiet contemplation, and educational opportunities.

Second, a community benefits by providing a place for people to meet and interact with other members of the community. Parks and open spaces are inclusive. The use of these spaces is not based on economic background or physical limitations. The beauty of our communities is increased and families

that recreate together report greater stability and satisfaction. Green infrastructure can link parks and open spaces together providing a continuous network for people to enjoy.

Third, the environment benefits by improving air and water quality through the removal of carbon dioxide and reducing sedimentation. The effects of flooding and erosion are reduced and bio-diversity is improved.

Finally, the economy benefits by attracting businesses. Open spaces and parks have a positive effect on property values and increase tourism.

The Town of Barnes has two parks and a Parks and Recreation Committee. The Barnes Town Park is located on C.T.H. N behind the Barnes Town Hall. Amenities include a tennis and basketball court, ball field, pavilion, ice skating/roller rink, and playground equipment. Tomahawk Park, located on Moore Road, has a public beach, boat landing, pavilion, and playground equipment. The Town of Barnes also has boat landings on Upper, Middle, and Lower Eau Claire, Robinson, Pickerel, George, and Island Lakes.

There are several sources of funding for improvements to park areas.

- ✓ The Wisconsin DNR Recreational Boating Facilities Program is a 50/50 grant program. Grant funds can be used for boat landings/docks, sanitary facilities, parking lots, basic landscaping, and security lighting. Repairing an existing ramp is eligible, however, not very competitive with other grant applications. A major scoring criteria this program is introducing handicap accessibility. A boat landing (new or repaired) would require a handicap accessible dock and paced access to the dock from the parking lot. Applications are due quarterly.
- ✓ The Wisconsin DNR Stewardship Grant Program provides funding for stewardship projects such as:
 - Land acquisition
 - Trails
 - Restrooms
 - Parking lots
 - Picnic areas
 - Handicap accessibility modifications

Application deadline is May 1 each year. Grants are extremely competitive. The Wisconsin DNR uses a detailed point system to fund the project and land acquisition projects score the highest. Land acquisitions involve:

- An acquisition brochure must be given out at the first contact with the land owner.
- An appraisal is required by WDNR.
- If the grant is awarded, WDNR will pay one-half of the appraisal value.

Historical / Cultural Resources

In the 2004 Town of Barnes Community Survey, 75.4% of property owners and renters stated that the Town of Barnes should protect building, sites, and artifacts of historical importance. These sites add value to the Town by providing educational, aesthetic, and even commercial value.

The State Historical Society's website hosts the Wisconsin Architecture & History Inventory (AHI). The Architecture and History Inventory (AHI) is a collection of information on historic buildings, structures, sites, objects, and historic districts throughout the Wisconsin. This Inventory is housed at the Wisconsin Historical Society in Madison and is maintained by the Society's Division of Historic Preservation. The AHI is comprised of written text and photographs of each property, which document the property's architecture and history.

An architectural inventory was done in communities beginning in the mid-1970s until 1980 with the help of State grant money. Reconnaissance surveys were conducted by summer students and then intensive surveys were conducted by professional historic preservation consultants. These buildings and details may be viewed at www.wisconsinhistory.org. Follow the historical sites link.

Table 2-1 shows an example of the information you will find for properties at the web site. The AHI has information on 5 properties in the Town of Barnes. All five are part of Island Lake Camp which is now known as Gray-McCormick Lake Camp.

Table 2-1 Detailed Record State Historical Society

County: BAYFIELD	Record #: 24640	Location: ISLAND LAKE RD
City or Village:	Town, Range, Section: 4509W-17	Quarter Sections:
Civil Town:	National Register Date: 3/12/1982	State Register Date:
Unincorporated Community:	District: ISLAND LAKE CAMP	
Current Name: Gray-McCormick Island Lake Camp	NR Multiple Property Name:	

Survey Map: USGS Island Lake 7.5'	Historic Name: ISLAND LAKE CAMP	Wall Material: Log
Map Code: 0	Construction Date: 1888 1916	Structural System:
Survey Date: 2001	Designer Name:	Other Buildings on Site?:
Style or Form: Rustic Style		Cultural Affiliation:
Resource Type: camp/camp structure		Demolished Date:

Source: Wisconsin Historical Society.

The Wisconsin Historical Society also provides an extensive list of Wisconsin's major historic preservation statutes and grant resources.

Five archaeological sites have been identified in the Town of Barnes. These do not represent all sites in the Town, but know sites recorded by the State. Residents are encouraged to contact the State Historical Society if they have any questions.

The Wisconsin Historical Society does not reveal the exact location of archaeological sites to prevent the possible disturbance of these sites by people. The general location and contents of these sites are listed in Table 2-1.

Table 2-1 Archaeological Sites-Town of Barnes

Site	Town-Range-Section
1. Campsite/Village	T44N – R9W – S8
2. Campsite/Village	T44N – R9W – S0
3. Cemetery/Burial	T45N – R9W – S29
4. Cabin/Homestead/Logging Camp	T43N – R9W – S12
5. Campsite/Village	T45N – R9W – S25

As part of the Town of Barnes 2005 Centennial celebration, the Town of Barnes established the Barnes Area Historical Association (BAHA). BAHA is affiliated with the Wisconsin Historical Association as a Chapter of the Bayfield County Historical Society. The group's main focus will be establishing a history museum.

In the summer of 2005, the bones of a prehistoric elk and a fluted spearhead were found in Middle Eau Claire Lake. The fluted spearhead is estimated to be 9,000 – 11,000 years old. The bones and spearhead are currently being analyzed at the UW-Milwaukee Zooarchaeology Lab. It is the hope that the prehistoric elk bones, referred to as the Silver Beach Elk, and fluted spearhead will become part of the future history museum.

Agricultural, Natural, and Cultural Resources Goals, Objectives, and Policies, Programs, and Actions

Goal 1: Provide clean healthful groundwater

Objectives

1. Maintain current good to excellent groundwater quality
2. Improve current poor groundwater quality
3. Ongoing and increased education and outreach
4. Continue lake monitoring activities
5. Ordinance enforcement for erosion control and storm water management
6. Limitation of phosphorus containing fertilizers
7. Special shoreline practices in sensitive areas and shoreland restoration projects
8. Ongoing lake water quality monitoring

Programs, Policies, and Actions

1. Establish guidelines for fertilization and treatment of forests, gardens, and lawns
2. Provide informational workshops for citizen input and education
3. Review State, County, and Local ordinances as to what pesticides and fertilizers may be used, where, and how much
4. Review State, County, and Local ordinance enforcement as to chemical usage in light manufacture or building
5. Provide expert assistance in planning, improvement, and use of chemicals, pesticides, and fertilizers residents (perhaps through DNR)
6. Support County ordinances in regard to septic system inspections and maintenance
7. Support County ordinances in regard to sewage treatment hookup when available
8. Appoint committee to identify infractions
9. Establish procedures for identifying and reporting infractions

Goal 2: Preserve large tracts of private and public forest lands

Objectives

1. Reforest lands cleared by logging where natural regeneration is not taking place
2. Restore native trees
3. Retain the aesthetics offered by forested lands

Programs, Policies, and Actions

1. Encourage reforestation
2. Follow Wisconsin DNR Forestry Best Management Practices.
3. Leave timber on steep slopes.

4. When crossing streams and gully areas, build bridges per Wisconsin DNR Forestry Best Management Practices and uphold NR 151 Runoff Management rules.
5. If timber is taken from steep slopes or lowland areas, perform this work between January and March to ensure frozen ground and minimize erosion and sediment loss.
6. Contact County Forestry Department for recommendations for preferred species when tree planting.
7. Educate property owners on options for preserving land through enrollment in open land management programs, conservation easements, land trusts, etc.

Goal 3: Protect agricultural lands from erosion

Objectives

1. To keep existing agricultural lands productive
2. Ensure that soil erosion does not negatively affect local water resources
3. Ensure fertilizers do not negatively affect local water resources

Programs, Policies, and Actions

1. Minimize tillage
2. Leave winter cover crops.
3. Add only needed fertilizer per soil test results.
4. Do not apply manure to frozen ground or on steep slopes.
5. Fence pastured stream banks.

Goal 4: Protect threatened, endangered, and rare species and their habitats

Objectives

1. Reverse any damage due to human actions
2. Protect these resources for future generations to enjoy and study

Programs, Policies, and Actions

1. Contact and coordinate with the Wisconsin DNR if threatened, endangered, or rare species are found

Goal 5: Manage run-off to protect all water resources within The Town of Barnes' watersheds

Objectives

1. Reduce erosion of soil which makes its way into streams, rivers, and lakes
2. Protect water that recharges aquifers

Programs, Policies, and Actions

1. Adopt a Storm Water Management and Erosion Control Plan.

2. Conduct soil tests to determine the most appropriate fertilizer for lawns and golf courses.
3. Do not use phosphorus based products for fertilizer or cleaning.
4. Draft ordinance limiting or banning phosphate fertilizers.
5. Restore shorelines to native vegetative state and leave at least 35 foot wide shoreline buffer (zoning requirement).
6. Implement proper storm water management on properties by diverting impervious surface runoff to infiltration basins or other approved devices for treatment before being discharged to area receiving waters.
7. Ensure 80% reduction of total suspended solids from storm water runoff before it is discharged (DNR requirement).
8. Infiltrate roof water by redirecting roof downspout outlets from an impervious surface to a grassed area. If the grassed area does not allow for much infiltration, create a rain garden to encourage maximized infiltration. Dry wells or French drains can also be used to handle roof water infiltrations. Large volumes of roof water runoff from large buildings should be handled through a properly engineered device. Large infiltration systems require zoning permits and DNR review.
9. Grass swales are wide grassed lined ditches and are an alternative to standard curb and gutter, and reduce runoff impacts to receiving waters by increased infiltration of runoff. The vegetation in the swale acts as a sediment filter and a runoff velocity reduction device. Swales should be considered as options for storm water conveyance systems.
10. Review and follow recommendations in the Town's Eau Claire Lakes Lake Management Plan
11. Require permitted new construction and additions to have stormwater management plans for development within 1000' of shorelands.
12. Review setbacks on all lakes, rivers, and creeks and make recommendations for increases if needed.

Goal 6: Maintain or improve the water quality of the lakes and streams in the Town of Barnes

Objectives

1. Identify sources of water quality degradation
2. Ensure that future generations can continue to enjoy the aesthetic and recreational qualities of area lakes, rivers, and streams.

Programs, Policies, and Actions

1. Continue an annual water quality monitoring program
2. Compile a historic water quality evaluation, or paleolimnology. The Eau Claire Chain of Lakes and all lakes in the Town of Barnes could evaluate historic trends in lake sediment through this research.
3. Establish Eurasian Water Milfoil education and action plans.
4. Review and follow recommendations in the Town's Eau Claire Lakes Lake Management Plan

5. Propose a “Slow No Wake” ordinance on all Class 3 Lakes and navigable rivers.
6. Monitor boat house regulations and educate lake shore residents.
7. Request the DNR do sensitive area studies on all lakes in the Town and notify the Town when the studies are undertaken or completed.

Goal 7: Restrict development within the floodplain

Objectives

1. Maintain the effectiveness of natural growth within the floodplain to stop erosion
2. Preserve the storage capacity of the floodplain

Programs, Policies, and Actions

1. Adhere to the Floodplain Ordinance for Bayfield County

Goal 8: Protect wetlands to keep them in their natural state

Objectives

1. Prevent wetlands from filling in due to sediment from development

Programs, Policies, and Actions

1. Development must not increase or decrease the natural flow of water into wetlands
2. Restoration of wetlands where illegally altered

Goal 9: Protect shoreline from erosion

Objectives

1. Prevent destruction of shoreline
2. Protect fish and wildlife habitat

Programs, Policies, and Actions

1. Stabilize eroding shorelines to preserve aquatic habitat and visual aesthetics.
2. Encourage shoreline owners not to remove submerged dead wood from shoreline areas. This eliminates habitat and encourages erosion.
3. Restore shore land with native vegetation by incorporating a 35 foot wide shoreline buffer
4. Avoid lake shore burning of leaves as the ash is rich in phosphorus and can wash easily into lakes. The ash should be recovered when cool and set aside for disposal as a solid waste.
5. Reduce Fertilizer Usage. Soil test lawns and add only the necessary fertilizers. Implement this by ordinance so that no phosphorous fertilizers can be used in the Town of Barnes watershed. Other communities have instituted such an ordinance and local stores only supply this type of

- fertilizer. For example, Minnesota currently has a 0% phosphorus regulation for the Twin Cities metro area and 3% phosphorus for all of greater Minnesota. Amery, Wisconsin, has an ordinance that does not allow the sale of fertilizer containing phosphorus.
6. Consider property tax and/or other credits for shoreline restoration and other water quality improvement projects.
 7. Use educational materials, workshops, grants, and ordinance enforcement to protect shorelands.

Goal 10: Continue to maintain and improve local parks and boat landings

Objectives

1. Ensure quality parks and recreational resources for residents and visitors

Programs, Policies, and Actions

1. Complete inventory of parks and amenities and develop a 5-year plan for improvements if needed
2. Pursue grant monies and volunteer opportunities to keep park maintenance costs down

Goal 11: Protect and enhance sites and artifacts of cultural and historical importance

Objectives

1. Provide educational opportunities
2. Preserve and promote links to the past

Programs, Policies, and Actions

1. Collect artifacts pertaining to early life in the Town of Barnes
2. Obtain photographs pertaining to early life in the Town of Barnes
3. Determine the feasibility of a Town of Barnes Historical/Heritage Museum
4. Set guidelines for preservation of historical structures and carry out a structure inventory in the Town of Barnes
5. Use the Wisconsin Historical Society for advice and guidance on historical and archaeological issues in the Town of Barnes.
6. Support the Barnes Area Historical Association and its efforts to fund ongoing research of the Silver Beach Elk and making it part of a future Town museum.

Goal 12: Work with residents and organizations to create cooperation and education related to natural resources issues

Objectives

1. Protect the Town's natural resources
2. Promote cooperation

Programs, Policies, and Actions

1. Create strategies to increase awareness of ordinances, support enforcement of these ordinances, and monitor their enforcement.
2. Work with Bayfield County to create a process to keep the Town informed on the progress and status of mitigation orders.
3. Use the Town web site and other mediums to inform residents and visitors of important issues.
4. Collaborate with area ATV and snowmobile club members to create solutions to reduce soil erosion and noise pollution.