

8 Natural Resource Analysis

The natural resource base in Winchester is a primary element affecting land use. The natural resource base is defined and identified by physiographic (physical nature of land), geologic, vegetative, and hydrologic characteristics, and includes the following elements:

- ◆ Topography and Soils
- ◆ Surface Water
- ◆ Floodplains
- ◆ Wetlands
- ◆ Groundwater
- ◆ Woodlands
- ◆ Areas of Critical Environmental Sensitivity

Land development patterns should be coordinated with consideration for impacts on the natural resource base elements. Land use plans and development policies, including specific development of housing, roadways, etc., should be compatible with the natural resource base.

This section of the plan will analyze the influence natural resources have concerning future (land) development. The protection of these resources is necessary for the welfare of both people and the environment. Certain natural resources have more than merely aesthetic and leisure activity value; they are essential to long-term human survival and general welfare. Therefore, it should clearly be in the public interest to plan for, preserve and protect the resources that serve as the catalyst for many who desire to live and own property in the northwoods.

8.1 Topography

Part of the Northern Highland physiographic region of Wisconsin, the Town of Presque Isle is characterized by short, steep slopes and ridges, and by wet depressions, most of which have no outlet. The terrain is heavily forested, which is typical of many northern Wisconsin communities. The town is included in what is called the Winegar moraine, a major end moraine that is dominantly undulating to steep, which extends across the northwest portion of Vilas County. Elevations in the town range from approximately 1,662 feet above mean sea level to 1771 feet above mean sea level. Therefore, relief is generally low.

8.2 Soils

Soils have a direct relationship with land development. Knowledge of the potentials and limitations of soil types is therefore necessary to evaluate crop production capabilities or when considering construction of buildings, infrastructure, or other uses of land. Development may be limited on soils which are characterized by poor filtration, slow percolation, flooding/ponding, wetness, (steep) slope and subsidence.

A detailed study of the soils of Vilas County was conducted by the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS - formerly Soil Conservation Service, SCS), in 1984 which resulted in the Soil Survey of Vilas County, Wisconsin, June, 1988. The survey includes a detailed identification of the specific soils found throughout the county, and also provides a grouping of soils into generalized soil associations or predominant soil patterns.

Important to land use planning, the study identifies the limitations of each soil type to certain forms of development. A soil which exhibits a "severe" limitation is one in which one or more soil properties or site features are so unfavorable or difficult to overcome that a major increase in construction effort, special design, or intensive maintenance is required. For some soils rated severe, it may not be feasible to proceed with development.

The following provides a general discussion of the general soil associations found within the Town of Presque Isle. It should be noted however, that these general descriptions are only guidelines and should be referred to as such. Soils mapping was not included in the scope of this project.

The majority of the town is dominated by the Gogebic-Pence-Fence association which are nearly level to steep, moderately well-drained and well-drained, loamy and silty soils on uplands. This association is on glacial end moraine where slopes are short and uneven, and small wet areas and depressions are common. Approximately 14% of the county is made up of soils of this association. Primarily, these soils are used for and suited to woodlands. However, there is concern of erosion hazard and equipment limitations with managing these areas on steeper slopes. Most less-sloping areas of this association are poorly-suited to residential development because of the seasonal high-water table, in which case residential septic system effluent can percolate into the groundwater rather easily.

The Rubicon-Sayner-Karlin association is present along the Eastern portion of the town, which are nearly level to very steep, excessively drained and somewhat excessively, sandy soils on uplands. This association consists of soils on glacial outwash plains, stream terraces, kames, eskers, and moraines. The landscape ranges from broad, nearly level plains to pitted outwash plains that have short, uneven slopes (0-35%), many closed drainageways, and common depressions. Approximately 42% of the county is made up of soils of this association. Primarily, these soils are used as woodlands, although some areas are used for crops or pasture. Problems with drought, water erosion, and soil blowing are the major concerns when managing the soils for crops or pasture. In less sloping areas, the soils are well suited for residential development. Septic tank absorption fields functions satisfactory, although effluent can pollute groundwater due to rapid or very rapid permeability in the substratum.

The Padus-Pence association is present primarily in the south and in the northwest portion of Presque Isle. This association includes nearly level to very steep, well-drained loamy soils on uplands, and makes up about 21% of the county's land area. These soils are also suited to woodlands. A few areas are used for crops or pasture. Less sloping areas of this association are suited to residential development, and septic tank absorption fields function satisfactorily. However, because of the rapid soil permeability, there is concern that effluent will pollute groundwater.

The Keweenaw-Karlin association is present in a small south central portion of Presque Isle. This association is characterized by nearly level to steep, moderately well-drained to somewhat excessively drained, loamy and sandy soils on uplands. This association makes up about 5% of the county's land area. This association consists of soils on drumlins, water worked glacial moraines, and outwash plains. Most areas in this association are used as woodland and a few as crops and pasture. Nearly level to gently sloping areas of Keweenaw soils are poorly suited for residential development, whereas Karlin soils are suited for residential development in less sloping areas, although effluent may contaminate groundwater.

Further investigation is required for "site-specific" soils information, as is the case with individual soil tests. Soil tests (commonly called perk tests) are completed for each new building site application to determine the sites' capability to accommodate the septic loads.

At the time of this report preparation, the State of Wisconsin Department of Commerce adopted revisions February 04, 2000 to the existing on-site sanitary system disposal code (called COMM 83). The revisions change the private, on-site treatment system options allowed in the state septic system code by adding an assortment of sewage treatment options for residential applications that have not been previously allowed. For example, existing state code allows sanitary systems to be approved for conventional septic systems and certain types of above ground mound systems. Holding tanks are also allowed under state code, but counties and local municipalities have the authority to ban holding tanks within their jurisdiction (Vilas County allows holding tanks as a system of choice). The COMM 83 revisions expand treatment options to include five additional designs which would allow greater flexibility in siting and treating private septic system waste. For example, the construction of new septic systems would be allowed on land with 6-24 inches of native soil - areas where now only holding tanks are allowed. If approved, municipalities/local governments would have 36 months to implement the new rule.

The implications of the revised state sanitary code, effective July 1, 2000, may have dramatic land use impact. According to the Department of Commerce, the previous state code regulations allowed 47% of lands in the state to be permitted with conventional, in-ground septic systems due to the existing soil characteristics and depth to groundwater. The new code allows nearly 81% of lands in the state to be developable due to allowing the installation of treatment systems such as sand filters and aerobic treatment that require less restrictive depths to groundwater, while effectively treating wastewater at levels the same or better than current technology. Overall, the COMM 83 revisions open approximately 9 million acres for development throughout the state.

The proposed revisions have significant land use impacts in terms of emphasizing the importance of land use planning in managing how much land can be developed, where development could occur, and how dense the housing could. Hence, code revisions and their potential land use implications should be offset by the town and county land use plan's ability to direct the location, use, and density of development, regardless of how the state will permit septic systems in the future.

8.3 Surface Water

A watershed is an area of land in which water drains to a common point, such as a stream, lake or wetland. In Wisconsin, watersheds vary in scale from major river systems to small creek drainage areas, and typically range in size from 100 to 300 square miles. In relation, river basins are defined within the state which encompass several watersheds. There are 32 river basins in Wisconsin which range in size from 500 to over 5,000 square miles. The WDNR prepares water quality management plans for each river basin which identify the sources of water quality problems and identify management objectives that the WDNR, local communities, counties and other agencies should take to protect and improve the water resources within the basin.

The majority of the Town of Presque Isle lies within the Lake Superior Basin, which includes the Presque Isle Watershed. The remaining portion of Presque Isle lies within the Upper Chippewa River Basin, which includes the Manitowish River Watershed and Flambeau Flowage Watershed. All surface water and groundwater discharge moves through each watershed and eventually enters their corresponding basins.

The Town of Presque Isle contains approximately 9,586.33 acres of surface water, including lakes and streams, which comprises approximately 19.5% of the town's total land area. Map 8-1 illustrates the hydrographic features located within the town.

There are approximately 65 named lakes and 159 unnamed lakes within the town which range in size. Major lakes include Presque Isle Lake (1280 acres), Crab Lake (949 acres), Oxbow Lake (511 acres), Armour Lake (320 acres), and Lynx Lake (339 acres). The town also shares several lakes with neighboring towns, including Papoose Lake (428 acres) located in the southwest corner of the town. The town also has 54.7% of the total land area within the shoreland zone, which comprises 26,896 acres of area.

As high levels of development exist on some water bodies and increased pressure for development of shorelands on many others, and given the varied sensitivity of lakes, Vilas County developed a Lakes Classification System as part of the Vilas County Shoreland Zoning Ordinance (see Map 8-2). Each lake in Vilas County greater than 50 acres in surface area was individually evaluated and classified (low, medium, high) based upon its sensitivity to development and the level of existing development along privately-owned shoreline. Minimum lot size and setback requirements for specified uses were then developed based on the lakes' sensitivity level. Lakes 50 acres or less in surface area were not individually evaluated, but were classified as warranting the highest level of protection (minimum 65,340 sq. ft lot area, 300' frontage width, and 270' lot width). The town has adopted more restrictive regulations than Vilas County, with all back lots having a two acre minimum lot area (87,120 square feet) and all water frontage lots requiring a minimum 1.5 acres (65,340 square feet). Lakes classification data then regulates minimum lot width and minimum water frontage in accordance with Table 8-1.

The intent of the Lakes Classification process was to manage further development as determined by the waterways ability to accommodate the development, and thus protect and preserve surface water quality, fish and aquatic life, shoreland communities and natural beauty, and compatibility of proposed development with existing land and water usage. The ordinance will also maintain safe and healthful conditions, prevent and control water pollution and soil erosion, and control building sites and the placement of structures and other land uses.

Table 8-1 identifies the lake classifications for those lakes within the Town of Presque Isle which are 50 acres or greater in surface area. The lakes classification system identified that over 46% of the lakes in the Town of Presque Isle which are 50 acres or greater in size have a high sensitivity level, and over 43% are rated as having a medium sensitivity level.

In addition to the numerous lakes in the Town there are several creeks, some of which interconnect lakes within the Town. The most significant streams in the Town are the South Presque Isle River, the East Presque Isle River, Wildcat Creek, and Rice Creek.

The Vilas County Shoreland Zoning Ordinance separates rivers and streams into two classes for management and development purposes, based upon factors set forth in the Vilas County Lake and River Classification Study, February 1999. A Class I stream was designated as those water bodies that had low or limited adjacent development or potential for development, were classified as outstanding or exceptional resource waters by the WDNR, and those which were cold water trout streams. All other streams not classified as Class I were designated as a Class II. All of the streams in Presque Isle are classified as Class I streams.

The Vilas County Shoreland Zoning Ordinance and Lakes Classification System has the regulatory impact of determining lot size, lakeshore frontage requirements, and buildable area within the shoreland zone. The surface water implication relate to the amount and location of development that can occur within the Town, which has a direct impact on the resulting surface water quality.

Table 8-1
Classification of Lakes 50 Acres and Greater
Town of Presque Isle, On-Water Requirements

Lake Name	Sensitivity Level	Level of Existing Development	Minimum Lot Area*	Minimum Frontage Width	Minimum Lot Width
Armour Lake	High	Medium	65,340 ft ²	200 feet	180 feet
Oxbow Lake	High	Medium	65,340 ft ²	200 feet	180 feet
Stateline Lake	High	Low	65,340 ft ²	300 feet	270 feet
Murphy Lake	High	Low	65,340 ft ²	300 feet	270 feet
Minonk Lake	High	Low	65,340 ft ²	300 feet	270 feet
Little Horsehead Lake	Medium	Medium	65,340 ft ²	200 feet	180 feet
Presque Isle Lake	Medium	Medium	65,340 ft ²	200 feet	180 feet
Mermaid Lake	High	Low	65,340 ft ²	300 feet	270 feet
Horsehead Lake	Medium	Low	65,340 ft ²	200 feet	180 feet
Van Vliet Lake	Medium	Medium	65,340 ft ²	200 feet	180 feet
Papoose Lake	High	Medium	65,340 ft ²	200 feet	180 feet
Katinka Lake	High	Low	65,340 ft ²	300 feet	270 feet
Round Lake	Medium	Low	65,340 ft ²	200 feet	180 feet
Little Crab Lake	High	Low	65,340 ft ²	300 feet	270 feet
Carlin Lake	High	Low	65,340 ft ²	300 feet	270 feet
Averill Lake	Medium	Low	65,340 ft ²	200 feet	180 feet
Annabelle Lake	Medium	Medium	65,340 ft ²	200 feet	180 feet
Belle Lake	High	Low	65,340 ft ²	300 feet	270 feet
Jenny Lake	High	Low	65,340 ft ²	300 feet	270 feet
Twin Island Lake	Medium	Low	65,340 ft ²	200 feet	180 feet
Lone Pine Lake	Medium	Low	65,340 ft ²	200 feet	180 feet
Dunn Lake	Medium	Low	65,340 ft ²	200 feet	180 feet
Beaver Lake	Low	Medium	65,340 ft ²	200 feet	180 feet
Mcculough Lake	Low	Medium	65,340 ft ²	200 feet	180 feet
Morton Lake	Medium	Low	65,340 ft ²	200 feet	180 feet
Wildcat Lake	Medium	Medium	65,340 ft ²	200 feet	180 feet
Flora Lake	High	Low	65,340 ft ²	300 feet	270 feet
Rudolph Lake	High	Low	65,340 ft ²	300 feet	270 feet
Little Presque Isle Lake	Medium	Low	65,340 ft ²	200 feet	180 feet
Big Lake	Low	Medium	65,340 ft ²	200 feet	180 feet

Source: Vilas County Shoreland Zoning Ordinance, Article III, 3.4, A.

*The Town of Presque Isle has more restrictive minimum shoreland requirements than Vilas County, both on and off-water (see Appendix 9-1 - 9-3).

**All back lots must have a minimum 2 acres lot area.

***Town regulations for minimum lot area requirements are different for residential and commercial uses (see Appendix 9-2).

8.4 Floodplain

Areas susceptible to flooding are considered unsuitable for development because of risks to lives and property. Therefore, from a planning perspective, floodplains are a very important land use feature. Construction or development within these areas should be limited to uses which are associated with the floodplain, such as recreational activities or wildlife applications.

The most recent source for identifying areas subject to flooding in the Town of Presque Isle is the Flood Hazard Boundary Map (FHBM) for Vilas County developed by the Federal Emergency Management Agency (FEMA) which became effective in 1981. There are no flood hazard areas in the Town of Presque Isle.

The FHBM's are intended to be interim maps prior to the completion of a more detailed FEMA study, and therefore may not include all flood hazard areas in the town. Additional field checking may be required to determine whether or not a given area is in the floodplain before development is authorized or denied.

8.5 Wetlands

Wetlands are defined as an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions. Most wetlands are dominated by plants which can tolerate various degrees of flooding, with species composition and productivity dependent on the variations in water patterns.

Wetlands are critical elements of the natural resource base as they serve several significant functions, including:

- ◆ Wetlands act as a natural filtering system for nutrients such as phosphorus and nitrates, and thus aid in maintaining surface water and groundwater quality.
- ◆ Wetlands are very productive wildlife habitat, and consequently provide recreational activities such as hunting, trapping and bird watching.
- ◆ Wetlands provide open/green space.
- ◆ Wetlands recharge groundwater supplies, the source of drinking water for the Town of Presque Isle's residents.
- ◆ Wetlands attenuate flood flows which decreases the risk of flood damage to property owners.
- ◆ Wetlands maintain base flows of streams and watercourses which is important to the continued well-being of aquatic ecosystems and associated wildlife habitat.
- ◆ Wetlands reduce soil erosion.
- ◆ Wetlands serve as a natural buffer protecting shorelines and streambanks.

Map 8-1 delineates wetlands (2.5 acres and greater) as determined by the WDNR's 1996 digital Wisconsin Wetland Inventory (WWI) maps. These wetlands may not reflect all areas considered wetlands by the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), or the U.S. Army Corps of Engineers. As indicated on the map, wetlands of varying size are scattered throughout the town. Wetlands comprise approximately 8,767 acres of land in the Town of Presque Isle, or 17.8% of the town's total land area. These wetlands include a wide diversity of wetland types ranging from emergent/wet meadow to scrub/shrub, to deciduous and coniferous forested. The WDNR updated the 1987 Wisconsin Wetland Inventory maps in 1999, and is in the process of determining wetland loss rates that occurred over the last 20 years. According to the WDNR, it is expected that the information will be available sometime in 2001.

Due to the significant environmental functions served by wetlands, there is a complex set of local, state and federal regulations which place limitations on the development and use of wetlands (and shorelands). Counties are mandated to establish shoreland-wetland zoning districts. The Vilas County Shoreland Zoning Ordinance regulates use and development in all shoreland areas (300' of navigable streams, 1,000' of lakes), including all shorelands which are designated as wetlands on the WWI maps. The WDNR regulates the placement of structures and other alterations below the ordinary high water mark of navigable streams and lakes. In addition, the U.S. Army Corps of Engineers has authority over the placement of fill materials in virtually all wetlands, while the USDA incorporates wetland preservation criteria into its crop price support programs. Therefore, prior to placing fill or altering a wetland resource, the appropriate agency(ies) must be contacted to receive authorization.

8.6 Groundwater

Together with the lakes, streams and wetlands comprising surface water resources, groundwater is contained in subsurface aquifers. During periods of increased precipitation or thaw, this vast resource is replenished with water moving by gravity through permeable soils. In the north-central Wisconsin region, major areas of recharge occur in outwash sand and gravel deposits and glacial till composed of unstratified sand, gravel, and clay. Less expansive recharge areas also are found where decomposed and fractured granite lies at or near the surface.

Municipalities overlying the aquifer pump the available groundwater for use in public, domestic, industrial and recreational supplies. Rural wells supply the outlying population. Under natural conditions, the aquifers generally receive clean water from rainfall percolating through the overlying soils. However, contamination of groundwater reserves can result from such sources as percolation of water through improperly placed or maintained landfill sites, private waste disposal (septic effluent), excessive lawn and garden fertilizers and pesticides, leaks from sewer pipes, and seepage from mining operations into the aquifer. Runoff from livestock yards and urban areas, improper application of agricultural pesticide or fertilizers, and leaking petroleum storage tanks and spills can also add organic and chemical contaminants in locations where the water table is near the surface. Protection of these groundwater reserves is necessary to ensure adequate quality water to all users.

Groundwater is found primarily at 1,620 - 1,690 feet above mean sea level. This indicates that the water table is very high in the town as land elevations range from approximately 1,662 to 1,771 feet above mean sea level. Therefore, the groundwater in the Town of Presque Isle may be highly susceptible to contamination. This can be confirmed by viewing the map (not included in this report) titled Groundwater Contamination Susceptibility in Wisconsin, 1989, which was prepared by the U.W. Extension, Geological and Natural History Survey. Nearly all of Vilas County is identified on the map as being most susceptible to groundwater contamination.

Groundwater flow in the town varies by location, depending on which watershed an area belongs to. However, contamination that enters the groundwater today in Presque Isle can have serious consequences tomorrow in other areas.

8.7 Woodlands

The Town of Presque Isle, like most Vilas and other northern Wisconsin counties, is comprised primarily of significant tracts of woodland and forest cover. Overall, forest cover comprises approximately 79% of the total area of Presque Isle.

Woodland cover plays a key role in the function and value of sensitive environmental areas like steep slopes, wetlands and floodplains. Management of woodland vegetation is necessary to protect scenic beauty, control erosion, provide (critical) wildlife habitat, and reduce effluent and nutrient flows into surface water bodies/courses.

Woodlands in the town are owned and managed by several different entities including public, conservation/educational organizations, private landholders for industrial forest, and other private landholders. Some private landowners may have their wooded land enrolled in one of the management programs offered by the WDNR, including the Managed Forest Law (MFL) program, or the Forest Crop Law (FCL) and Woodland Tax Law (WTL) programs (no longer open to new enrollment). Such programs have been established to preserve and protect woodlands through practicing proper management techniques. Information about these programs is provided in Appendix 8-1.

Table 8-2 identifies the total acreage of wooded land within the town which is owned and managed by the public sector, non-profit conservation organizations, privately-held industrial forests, and private lands enrolled in forest management programs (see Map 8-3). The acreage owned by entities in the public sector includes all publicly-held lands for forestry or other uses such as administration buildings and service facilities. These lands are referred to as property under some form of land and resource protection. This information is also depicted in Figure 8-1.

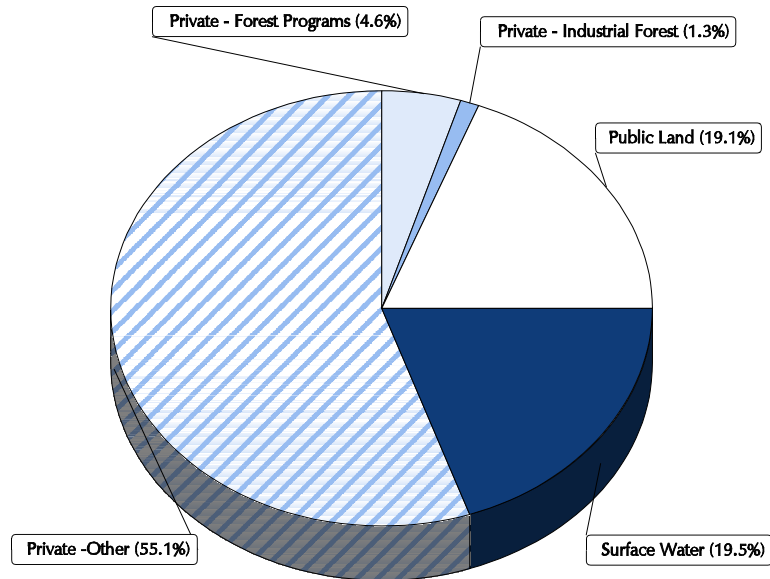
Table 8-2
Land and Resource Protection Acreage
Town of Presque Isle
1999

Land/Resource Protection Entity	Acreage	Percent of Total
Public	9,381.04	19.1
National Forest	0.00	0.0
State Lands/Forest (NHAL State Forest)	8,154.52	16.6
County Lands/Forest	0.00	0.0
Town Lands/Forest	1,226.52	2.5
Tribal Lands	0.00	0.0
School Forest	0.00	0.0
Private - Industrial Forest	654.35	1.3
MFL (Four States Timber Venture, Nagel Lumber Co.)	314.00	0.6
WTL	0.00	0.0
FCL (Four States Timber Venture, Nagel Lumber Co, Inc.)	340.35	0.7
Private - Forest Programs	2,271.75	4.6
MFL	800.70	1.6
WTL	41.00	0.1
FCL	1,430.05	2.9
Conservation/Educational Organization	174.99	0.4
Private - Other	27,070.80	55.1
Surface Water*	9,586.33	19.5
Total	49,139.26	100

*Includes islands.

Source: Wisconsin Department of Natural Resources; Vilas County Mapping Dept., North Central Regional Planning Commission.

Figure 8-1
Land and Resource Protection Acreage
Town of Presque Isle
1999



Source: Vilas County Mapping Department; North Central Regional Planning Commission.

This information reveals that nearly 40% of the town is either public lands (19.1%) or surface water (19.5%). Public ownership in Presque Isle includes state lands/forest and town lands/forest. The majority of publicly-owned land in the town is owned by the state of Wisconsin which is managed as part of the Northern Highland-American Legion State Forest.

The Northern Highland-American Legion State Forest (NHAL) occupies approximately 8,154.52 acres or 16.6% of the town's total area. This forest is the largest and most-visited state property and occupies over 220,000 acres in Vilas, Oneida and Iron counties. The NHAL not only provides abundant recreational opportunities, but is also a working forest which provides for timber production. The master plan for the management of this property is currently being revised and should be completed by fall, 2001. Public involvement in the forest planning process is encouraged, and interested persons should contact the WDNR NHAL headquarters in Woodruff for additional details. It would be advantageous for town residents to participate in the Forest Plan Revision process to ensure the town's needs and ideas are being considered.

The remaining 61.4% of land in the town is privately held, the majority of which is wooded. It is important to identify how the privately-owned woodlands are (or are not) managed or protected, and the value which private landowners place on maintaining these woodlands in a natural state.

There are approximately 654.35 acres of industrial forest land in the town which comprise 1.3% of the town's total area. This land is owned and managed by Four States Timber Venture and Nagel Lumber Company. The importance of identifying lands which are currently owned and managed for industrial purposes is that major land use impacts may occur if these industrial forest lands are sold, divided, and/or used for private purposes other than timber production. However, since there is not a significant amount of industrial forest land in the town, impacts would likely be minimal.

Approximately 2,271.75 acres of land (outside of enrolled industrial forest lands) were enrolled in WDNR forest management programs in 1999, totaling approximately 4.6% of the town's total acreage. Presque Isle has one of the highest acreages of lands enrolled in WDNR forest management programs when compared to other towns in the county. These programs provide tax relief to landowners of enrolled property in return for the landowner entering into a contract to manage the land as forest land for a specified length of time. Most property enrolled in these programs will likely remain under management throughout the planning period, and possibly beyond, as many of the contract agreements associated with these programs are 25 years or longer in length. It is important to encourage private landowner participation in these programs in order to ensure the current aesthetics of the community exist in the future.

Conservation and/or educational organizations own approximately 175 acres within the town comprising approximately 0.4% of the town's total area. These organizations are established with the intent of managing and maintaining woodlands and other natural features for the purpose of providing recreational, educational, or aesthetic opportunities, and may include school district property. Such ownership in Presque Isle includes the Crab Lake Conservation Foundation, Inc., and Presque Isle School District No. 1.

The remaining acreage, which comprises 55% of the town, is under private ownership and is not enrolled in any type of formalized management program. This land includes existing intensive development (i.e., residential, commercial, industrial). As mentioned previously, these private uses may significantly change the landscape and impact the town's rural character depending upon the type, density, and aesthetic quality of development which occurs. Therefore, private landowners in the town should be encouraged to participate in the Managed Forest Law program, or engage in some other form of formalized forest management practices, to ensure the preservation and health of the town's woodlands which define its "northwoods" character. There are numerous benefits which result from properly managing woodlands, including:

- ◆ Protection against overcutting.
- ◆ Low regular property tax (MFL).
- ◆ Protection against annual property tax hikes (MFL).
- ◆ Technical assistance for private forest lands (MFL).
- ◆ Predictable property tax (MFL).

- ◆ Long term forestry investment.
- ◆ Encourages woodland expansion.
- ◆ Preserves and manages wildlife habitat.
- ◆ Preserves "Northwoods" character.

8.8 Areas of Critical Environmental Sensitivity

Areas of critical environmental sensitivity are those unique elements and areas of the natural resource base which should be preserved, and therefore should be excluded from urban/intensive development. Typically, areas of critical environmental sensitivity include wetlands, floodplains/floodways, shorelands, areas of steep slope (especially those adjacent wetlands and shorelands), publicly-owned scientific and natural areas (i.e., fish and wildlife habitats), and identified archaeological sites. The protection of such areas is intended to 1) protect the health, safety, and welfare of the general public, 2) protect surface water and groundwater quality, 3) reduce damage from flooding and stormwater runoff, and 4) maintain important wildlife habitats or recreational areas.

Most of the areas of critical environmental sensitivity within the Town of Presque Isle are already managed/regulated at the federal, state, and/or county level, such as wetlands, floodplains, shorelands, and publicly-owned scientific and natural areas.

The Bureau of Endangered Resources, located within the Department of Natural Resources, administers the State Natural Areas Program for the State of Wisconsin. These areas are formally designates sites which are devoted to scientific research, the teaching of conservation biology, and especially to the preservation of their natural values and genetic diversity for future generations. They are not intended for recreational uses such as picnicking or camping.

The only state natural area in the Town of Presque Isle is the High Lake Spruce-Balsam Forest, located within the Northern Highland State Forest. In 1953, this site was designated as a representative boreal forest in Wisconsin. In the early 1980's the forest suffered a spruce budworm infestation, and a 75% canopy die-off followed. Since then, research on the ecological effects of a natural disturbance has become the major value of the site.