

## **CHAPTER 5      Agricultural, Natural and Cultural Resources Element**

66.1001(2)(e) Wis. Stat.:

**Agricultural, natural and cultural resources element.** A compilation of objectives, policies, goals, maps and programs for the conservation, and promotion of the effective management, of natural resources such as groundwater, forests, productive agricultural areas, environmentally sensitive areas, threatened and endangered species, stream corridors, surface water, floodplains, wetlands, wildlife habitat, metallic and nonmetallic mineral resources consistent with zoning limitations under s. 295.20 (2), parks, open spaces, historical and cultural resources, community design, recreational resources and other natural resources.

### **Section 5.1      Introduction**

The agricultural, natural and cultural resources of the Town of Amherst often serve as the foundation for why people choose to live here. Substantial natural woodlands, varied and abundant wildlife, and productive farms and farmland all come together to create a unique Wisconsin landscape.

The residents of the Town of Amherst recognize the value of their unique landscape and understand that it supports and sustains a way of life of which they are proud. For those who choose to farm the land here, the community supports their efforts and works to minimize barriers that impede this industry. The residents also understand that the identification and protection of the historical and cultural resources of the community will help sustain a rich quality of life that is enjoyed by all who settle here.

### **Section 5.2      Agricultural Resources**

#### **A.    Agricultural Potential Based on Land Evaluation Site Assessment Rating (LE-SA)**

Land Evaluation and Site Assessment (LESA) is a tool that can be helpful in assisting Town leaders to identify land that has the highest value for agricultural use within the community. The LESA system is a point-based approach that can be used for rating the relative value of agricultural land resources. It does so by defining and measuring two separate sets of factors. The first set, **Land Evaluation**, includes factors that measure the inherent soil-based qualities of land as they relate to agricultural suitability. The second set, **Site Assessment**, includes factors that are intended to measure social, economic, and geographic attributes that also contribute to the overall value of agricultural land.

A Land Evaluation (LE) rating was developed for use across all of Portage County. Three soil property indexes, all published by the Natural Resources Conservation Service (NRCS), were combined to produce the LE rating: prime farmland classification, land capability class – natural condition, and productivity index. LE ratings reflect the productivity potential, as well as the economic and environmental costs of producing a crop. Possible LE ratings range from 0 to 100, with **higher numbers meaning greater value for agriculture**. Many physical and chemical soil properties are considered in the LE rating, either directly or indirectly, including soil texture and rock fragments, slope, wetness and flooding, soil erodibility, climate, available water capacity, pH (alkalinity versus acidity), and permeability.

A Site Assessment (SA) rating was also developed for the Town of Amherst. The site assessment factors are further evaluated in the Land Use element of this plan. As with the LE rating, SA ratings range from 0 to 100, with higher numbers meaning greater value for agriculture. The LE

and SA scores are combined to yield a score for each two-acre block of land within the Town ranging between 0 and 200 points, with a score of 200 representing lands that are of the highest value for agriculture (excluding specialty crops such as cranberries). Communities will then determine an appropriate threshold for ranking lands recommended for protection (i.e. areas with a score higher than 150 and greater than 40 contiguous acres in size). Weighting factors can be changed by each community to reflect its own priorities. See Appendix D for a complete explanation of this system.

The Town of Amherst has decided to use a modified LESA model as an advisory tool to help identify areas in the community that should remain in agricultural use.

#### **B. Highly Productive Agricultural Soils**

Highly productive agricultural soils in the Town of Amherst have been identified, with the assistance of the County Conservationist, based on highest productivity and lowest degree of limitations for farming (Map 5.1 Highly Productive Agricultural Soils). Slopes greater than 6% were excluded from the “highly productive” designation (due to severe hazard for water or wind erosion), along with stony, rough, and eroded sites. Highly productive soils in Amherst include:

- Billett sandy loam, 0-2% slopes
- Richford loamy sand, 0-2% slope
- Richford loamy sand, 2-6% slope
- Rosholt loam, 2-6% slope
- Wyocena sandy loam, 2-6% slope
- Oesterle sandy loam

#### **C. Farming Systems, Demographics, and Land Tenure**

The agricultural landscape of the Town of Amherst can best be described as a “coming together” of farming systems. The Town is located within the two major farm regions in Wisconsin. First, and most prominent, is the dairy region. In Wisconsin, dairying is most concentrated in a belt that begins near Hudson (St. Croix County), heads east to Wausau and Green Bay (Brown County), then turns southwest through Fond du Lac, Madison and ends near Dubuque (Iowa County). Wisconsin Department of Agriculture 2012 permit information listed fifteen (15) active farms operating in the Town of Amherst. To the north in New Hope, there were eight (8) such farms; to the south in Lanark, there were six (6); and to the west in Stockton, there were eighteen (18).

The second farming region that includes Amherst is that of fresh vegetable production. The irrigated soils of the “Golden Sands” region of Wisconsin lay between Amherst and the Stevens Point area. Amherst is on the eastern edge of this large irrigated plain and there are a number of producers who have scattered vegetable operations within the Town. The presence of pivot irrigation rigs is one key indicator of vegetable production. There were approximately 7 irrigation pivots in Amherst based on 2000 aerial photo interpretation.

The amount of land dedicated to agricultural production can and often does change from one year to the next. In 2000, the Portage County Planning and Zoning Department analyzed aerial photography of Amherst to identify active farmland within the Town. The land in farms was broken down by: presence of irrigation, 1,033 acres; use for row crops or hay, 9,632 acres; and permanent pasture, 491 acres. Total agricultural acres identified for 2000 were 11,847, which represents approximately 48% of the Town's land area. An aerial photography analysis of this kind has not been completed by the Planning and Zoning Department since 2000.

# Map 5.1 Productive Agricultural Soils

## Soil Class

### Prime

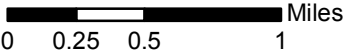
Billett Sandy Loam, 0-2% Slopes  
Mecan Loamy Sand, 2-6% Slopes  
Mecan Sandy Loam, 2-6% Slopes  
Rosholt Loam, 2-6% Slopes  
Rosholt Loam, Loamy Substratum, 0-2% Slopes  
Wyocena Sandy Loam, 2-6% Slopes

### Prime Where Drained

Oesterle Sandy Loam  
Oesterle Loam, Silty Subsoil Variant

### Prime Where Irrigated

Richford Loamy Sand, 0-2% Slopes  
Richford Loamy Sand, 2-6% Slopes



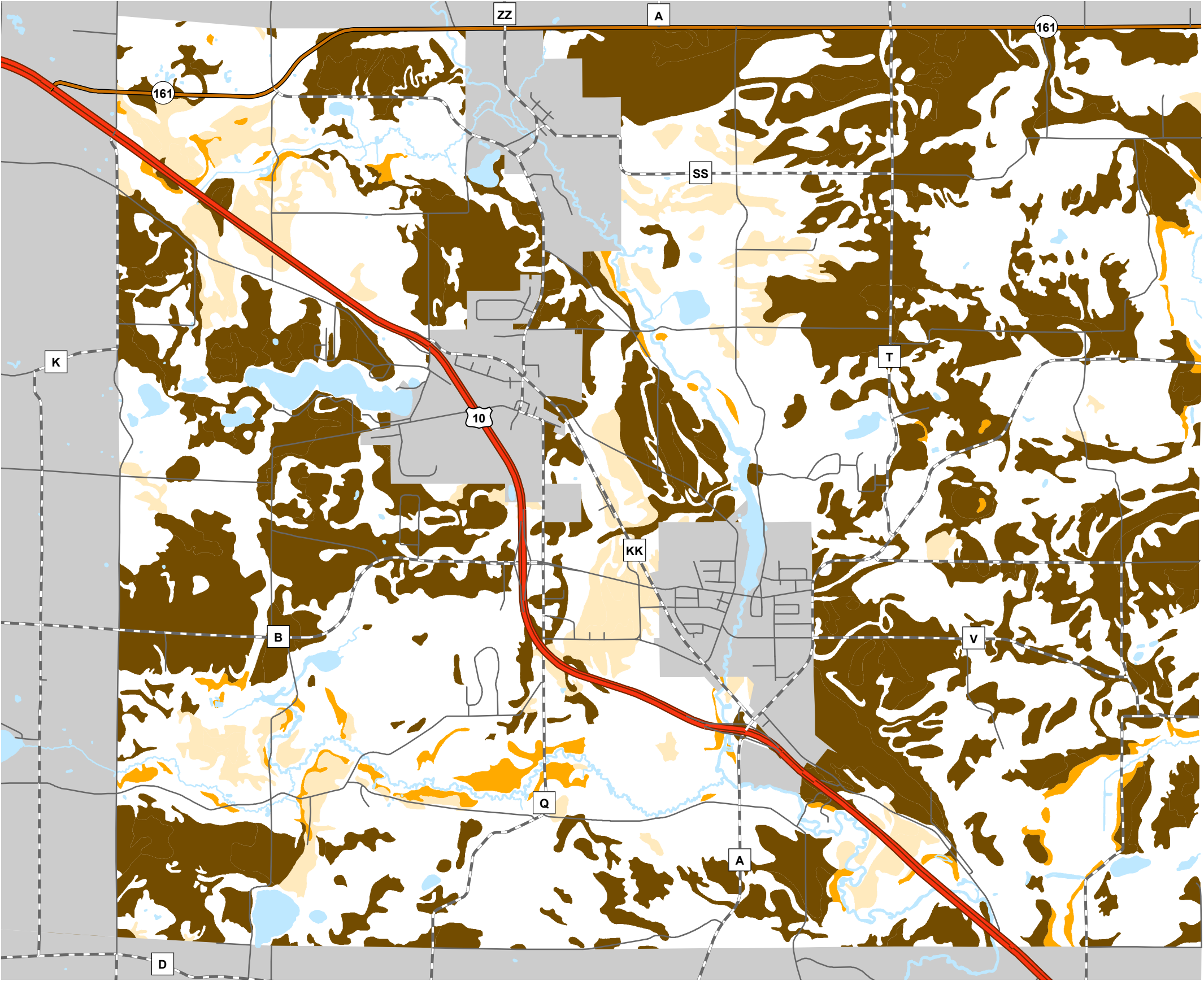
Source: Natural Resource Conservation Service (1998)

Adopted: August 13, 2015

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There were 90 persons employed in an agriculturally-related field in the Town of Amherst in 2010. This represented 12 % of employment for the Town (Figure 1.3, Issues and Opportunities element), and a 3.2 % increase from 2000. Although this is down substantially from the 1980 figure of 138 persons (27.3%), Amherst still has a higher percentage of agriculture-related employment in 2010 when compared to the Portage County Town average (6.0%). Decreasing farm employment is not a unique trend by any means. The number of farms is decreasing, while acreage and animal units per farm are up. Farm consolidation is a common practice in this industry.

#### D. Farm Economy and Infrastructure

Because of the lack of farm economy information available at the town level, a detailed discussion of the farm economy at the town level is not practical. Please see the complete discussion of the Portage County farm economy in the Agriculture, Natural and Cultural Resource element of the Portage County Comprehensive Plan.

#### E. Other Local Influences on Agriculture

Over the past few years, the Amherst area has seen an increase in non-farm related development. With the expansion of USH 10 to a four lane highway between Appleton and Stevens Point, there will be even greater development pressure in the coming years. Increased interest in Amherst can bring more homes and other urban-type developments onto the agricultural landscape, leading to increased conflict between residential and agricultural lifestyles. Increased demand for residential uses can also increase the sale price per acre of land beyond the point of being economically viable for purchase as farmland. The expansion of the USH 10 facility (bypass around the Village of Amherst), in addition to being constructed through highly productive soils, has been identified by the Plan Commission as the single most influential threat against the preservation of agricultural lands.

#### F. Legislative Influences on Agriculture

##### 1. Wisconsin Right-to-Farm Law (State Statute 823.08)

Dating back to the early 1980's, the State of Wisconsin saw the need to protect farmers from lawsuits pertaining to everyday operations and created State Statute 823.08, commonly referred to as the "Right-to-Farm" law. The Right-to-Farm law was substantially revised in 1995 in an effort to thwart lawsuits against farmers dealing with standard farming operations and consequences such as odor, noise, dust, flies and slow-moving vehicles. As part of the law, the Legislature notes that local units of government are in the best position to handle possible farm and non-farm conflicts through zoning and other land use controls.

##### 2. Wisconsin Act 377 – Implements of Husbandry (2014)

As the size of modern agricultural equipment continues to grow, so has the misconception within the agricultural community that implements of husbandry are exempt from State size and weight regulations. In short, Act 377 clarifies the definition of implements of husbandry, defines the new term "agricultural commercial vehicles," increases weight limitations (essentially 15%) for implements of husbandry and agricultural commercial motor vehicles (Ag-CMV), and details a new 'no-fee permit' that can be issued by Department of Transportation and local units of government.

Through Act 377, implements of husbandry are defined as – A self-propelled or towed vehicle that is manufactured, designed, or reconstructed to be used and that is exclusively used in the conduct of agricultural operations. These include, but are not limited to, farm tractors; self-propelled combines, forage harvesters, and pesticide or fertilizer equipment. Developing a definition Ag-CMV allows these vehicles to comply with federal regulations while still receiving the same benefits of exclusive agricultural use. An Ag-CMV refers to a commercial vehicle to which all of the following apply: 1) the vehicle is substantially designed for agricultural use, 2) the vehicle is designed for highway use and is manufactured for Federal Motor Vehicle Safety Standard Certification, 3) the vehicle is used exclusively for agricultural operations, and 4) the vehicle directly engages in harvesting farm products, applying fertilizer, spray or seeds to a farm field or distributes feed to livestock.

#### G. Agricultural Programs

A number of programs are available to agricultural landowners to help achieve desired outcomes ranging from enhancing wildlife habitat to minimizing soil erosion. The following is a partial list obtained from the Natural Resources Conservation Service (NRCS). For more information about these and other programs contact the local NRCS office at 715-346-1325 or the Farm Service Agency at 715-346-1313.

1. Wis. Working Lands Initiative Program

The Wisconsin Working Lands Initiative can be found primarily in Chapter 91 of the Wis. State Statutes. The main components include: Expand and modernize the state's existing farmland preservation program; establish agricultural enterprise areas (AEAs); develop a purchase of agricultural conservation easement matching grant program (PACE). Although the PACE program remains on the books, it has remained unfunded since 2010.

2. Conservation Reserve Program (CRP)

The Conservation Reserve Program, administered through the Farm Service Agency (FSA), is a voluntary program for agricultural landowners. Through CRP, one can receive annual rental payments and cost-share assistance to establish long-term, resource conserving covers on eligible farmland. Participants enroll in CRP for 10 to 15 years.

3. Environmental Quality Incentives Programs (EQIP)

The Environmental Quality Incentives Program (EQIP) is a voluntary conservation program. It supports production agriculture and environmental quality as compatible goals. Through EQIP, farmers may receive financial and technical help with structural and management conservation practices on agricultural land. EQIP may pay up to 75 percent of the costs of eligible conservation practices. Incentive payments may be made to encourage a farmer to adopt land management practices, such as nutrient management, manure management, integrated pest management, and wildlife habitat management.

4. Wetlands Reserve Program (WRP)

The Wetlands Reserve Program is a voluntary program to restore and protect wetlands on private property. It is an opportunity for landowners to receive financial incentives to restore wetlands that have been drained for agriculture. Landowners who choose to

participate in WRP may sell a conservation easement or enter into a cost-share restoration agreement with USDA to restore and protect wetlands. The landowner voluntarily limits future use of the land, yet retains private ownership. The landowner and NRCS develop a plan for the restoration and maintenance of the wetland. The program offers landowners three options: permanent easements, 30-year easements, and restoration cost-share agreements of a minimum 10- year duration.

#### 5. Wildlife Habitat Incentives Program (WHIP)

The Wildlife Habitat Incentives Program is a voluntary program for people who want to develop or improve wildlife habitat on private lands. It provides both technical assistance and cost sharing to help establish and improve fish and wildlife habitat. Landowners agree to prepare and implement a wildlife habitat development plan. The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) provides technical and financial assistance to implement the wildlife habitat restoration practices.

### **Section 5.3 Agricultural Issues**

- For the 1995 Land Use Plan, much of the land that logically could be put into A1 zoning was, if landowners agreed. How can land be classified by its suitability for agriculture, instead of merely enrolling land in farm programs to receive tax credits?
- Changes in the economics of agriculture have put great pressures on the need to produce income from the sale of land for non-agricultural purposes. To what extent will the Town place a value on protection of productive agricultural lands?
- The Amherst area development potential is pressuring the agricultural potential. How will the increased demands for residential use be weighed against the loss of productive farmlands?
- To what extent should the Town encourage the exploration and development of niche agricultural markets?
- How will the Town address the consequences and possible impacts on the environment from large agricultural operations (concentrated animals, etc)?
- How can the Town increase awareness of existing farm practices to individuals choosing to move into a rural or agricultural area?
- Irrigation is a necessary practice for many farmers, but implementation can be a challenge with increased public pressure to limit groundwater usage.
- Younger generations are faced with an increasingly difficult start-up climate as today's agricultural practices carry with them enormous upfront costs.
- How does the Town deal with increasingly large agriculture equipment as it pertains to maintaining and improving Town roads?
- The expansion and/or relocation of US HWY 10 is a major threat to the preservation of highly productive agricultural lands.

### **Section 5.4 Agricultural Goals, Objectives, and Policies**

**Goal 1:** Provide a reasonable degree of farmland protection for those wishing to farm.

Objective 1.1: Discourage land divisions on highly productive farmland.

Policies:

1. In some cases A1 zoning should be used to help protect productive agricultural areas.

2. In some instances, Agricultural Enterprise Areas (Working Lands Initiative) could be used to help protect productive agricultural areas.

**Goal 2:** Minimize conflicts between farm and non-farm uses.

Objective 2.1: Encourage residential and commercial development in areas least suited for agricultural purposes.

Policy: Use the LESA system to help identify productive agricultural regions.

Objective 2.2: Protect farming operations from incompatible adjacent land uses.

Policies:

1. Provide information regarding agricultural operations to individuals moving into rural areas.
2. For new subdivisions, encourage the use of recorded covenants that identify the presence of adjacent agricultural operations and the impacts they may have.
3. Encourage the use of density-based development adjacent to areas identified as productive agricultural areas and lands zoned A1, Exclusive Agriculture.
4. Recommend that new residences be set back 300 feet from areas zoned A-1 or lands identified as productive agricultural areas.
5. Vegetative or spatial buffers between intensive agricultural activities and sensitive environmental areas should be established.

**Section 5.5 Natural Resources**

Natural resources in the Town serve as the foundation for residents' physical and economic well-being – from groundwater quality to land suitability for agricultural, residential, recreational, or commercial development. According to the results of the 2001 Comprehensive Planning and Zoning Survey, a majority of Town residents favored *managing the natural resources that support, sustain, and entertain them*.

This section will describe the existing natural resources inventory and state the issues, goals, objectives, and policies that were identified and adopted by the Town of Amherst Plan Commission and Town Board.

A. Geomorphology

The present Portage County landscape primarily reflects the last or Wisconsin stage of the pleistocene or glacial epoch (Holt, 1965). The glacial ice transported large amounts of rock debris known as drift. The drift is called till if deposited directly by the ice, and outwash if placed by glacial meltwater.

The Town of Amherst is located in the geologic drift province. The drift province covers the eastern 1/3 of the County and is made up of a series of end moraines that represent the accumulation of ice-transported debris that piled up at the forward edge of the ice sheet. The hills and ridges are composed of a combination of silts, sands, gravels, and outwash till.

As the ice melted and the end moraines were formed, large amounts of ice-transported materials were removed by the meltwaters. This glaciofluvial (outwash) material was deposited between and in a large area to the west of the moraines. The deep deposits of the drift province, which



includes the entire Town, were formed in this way. The silt, sand, gravel, and till is well sorted and contains small amounts of silt and clay. Deeper gravel deposits are found adjacent to the end moraines. The sands are generally finer further from the moraine. The thickness of outwash deposits ranges from less than 30 feet northeast of Stevens Point to over 200 feet near the outer moraine, and averages about 100 feet.

The topography of the Town is slightly rolling and includes two moraine ridges and scattered lowland wet areas. The elevation ranges from 1,230 feet above sea level in the north and northwest part of the Town to 970 feet above sea level in the east and southeast corner (Map 5.2). Depth to bedrock throughout the Town is between 50-100 feet.

## B. Soils

Soils in the Town can be grouped into two soil associations (Map 5.3), as follows:

- Wyocena-Rosholt association: Well-drained, gently sloping to very steep soils that formed in loamy deposits and sandy glacial till or outwash sand and gravel. These soils are found in the northeastern corner of the Town and are used for crops, pasture or woodland. Wyocena soils have a moderately rapid permeability and a medium water capacity. Rosholt soils have a moderately rapid permeability and a low water capacity.
- Richford-Rosholt-Billett association: Well-drained, nearly level to gently sloping soils that formed in sandy and loamy deposits and outwash sand and gravel. These soils are found in the western and central part of the Town and are used for crops, woodland or pasture. These soils have a moderately rapid permeability and a low to medium available water capacity.

Soil testing by a certified soil tester is strongly recommended for more detailed, site specific information.

## C. Surface Water, Wetlands, and Flood Plains

The major surface water bodies that are present in the Town of Amherst are: Lake Emily, Myers Lake, Lime Lake, Mud Lake, Ell Lake, Thorn Lake, Lake Elaine, and Turtle Lake, which are scattered throughout the Town. Other surface water features running throughout the Town include the Tomorrow River and Bear Creek.

The Town of Amherst is situated in the Upper Little Wolf River and the Tomorrow-Waupaca River watersheds. A watershed can be defined as interconnected areas of land draining from surrounding ridge tops to a common point such as a lake or stream junction with a neighboring land area.

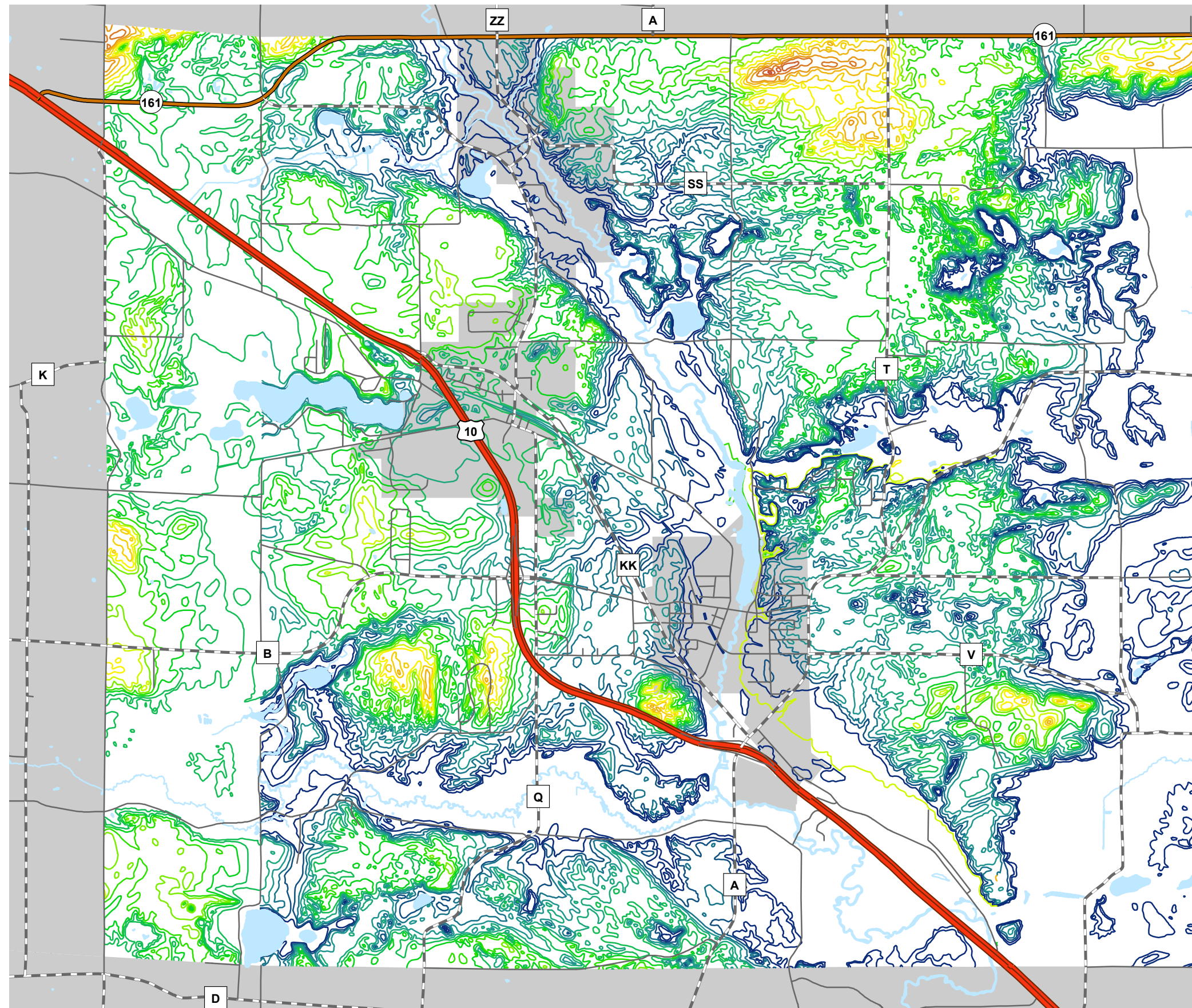
Wetlands are an important part of the watershed, as they act as a filter system for pollutants, nutrients, and sediments, along with serving as buffers for shorelands and providing essential wildlife habitat, flood control and groundwater recharge. Wetlands within the Town of Amherst are very limited (Map 5.4), but include three general types: forested, scrub or shrub, and emergent/wet meadow.

- **Forested** wetlands are the predominant type, including bogs and forested floodplain complexes that are characterized by trees 20 feet or more in height such as, tamarack, white cedar, black spruce, elm, black ash, and silver maple. These wetlands are located primarily along the edges of the Tomorrow River, Bear Creek, and along the eastern edge of the Township.

- **Emergent/wet meadow**, the second most numerous type of wetland within the Town, consists of areas that may have saturated soils more often than have standing water. Vegetation includes sedges, grasses and reeds as dominant plants, but may also include blue flag iris, milkweed, sneezeweed, mint and several species of goldenrod and aster. These types of wetlands are primarily found along the edges of the Tomorrow River, Bear Creek, Mud Lake, Lime Lake, and along the eastern edge of the town.
- **Scrub/shrub** wetlands are the third most abundant type. These wetlands, which include bogs and alder thickets, are characterized by wood shrubs and small trees such as tag aster, bog birch, willow and dogwood. These are also found primarily along the water bodies in the southern part of the Town, including Bear Creek and Thorn Lake.

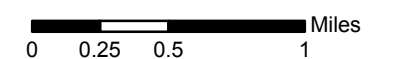
A flood plain is defined as that land which has been or may be covered by floodwater during a regional flood. The flood plain includes the floodway and flood-fringe areas. A 100-year flood is defined as a flood event having a 1% chance of reaching the 100-year flood elevation in any given year. Contrary to popular belief, it is not a flood occurring once every 100 years. A 100-year flood plain is the area adjoining a river, stream, or watercourse covered by water in the event of a 100-year flood. According to Federal Emergency Management Agency (FEMA) maps, the area along the entire length of the Tomorrow River is designated as a 100-year flood plain (Map 5.5).

# Map 5.2 Topography



## Elevation (Feet)

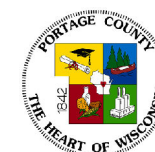
1060 - 1070
1071 - 1080
1081 - 1090
1091 - 1100
1101 - 1110
1111 - 1120
1121 - 1130
1131 - 1140
1141 - 1150
1151 - 1160
1161 - 1170
1171 - 1180
1181 - 1190
1191 - 1200
1201 - 1210
1211 - 1220
1221 - 1230



Source: Portage County Planning & Zoning (2015)  
U.S. Geological Survey (1967-1971)

Adopted: August 13, 2015

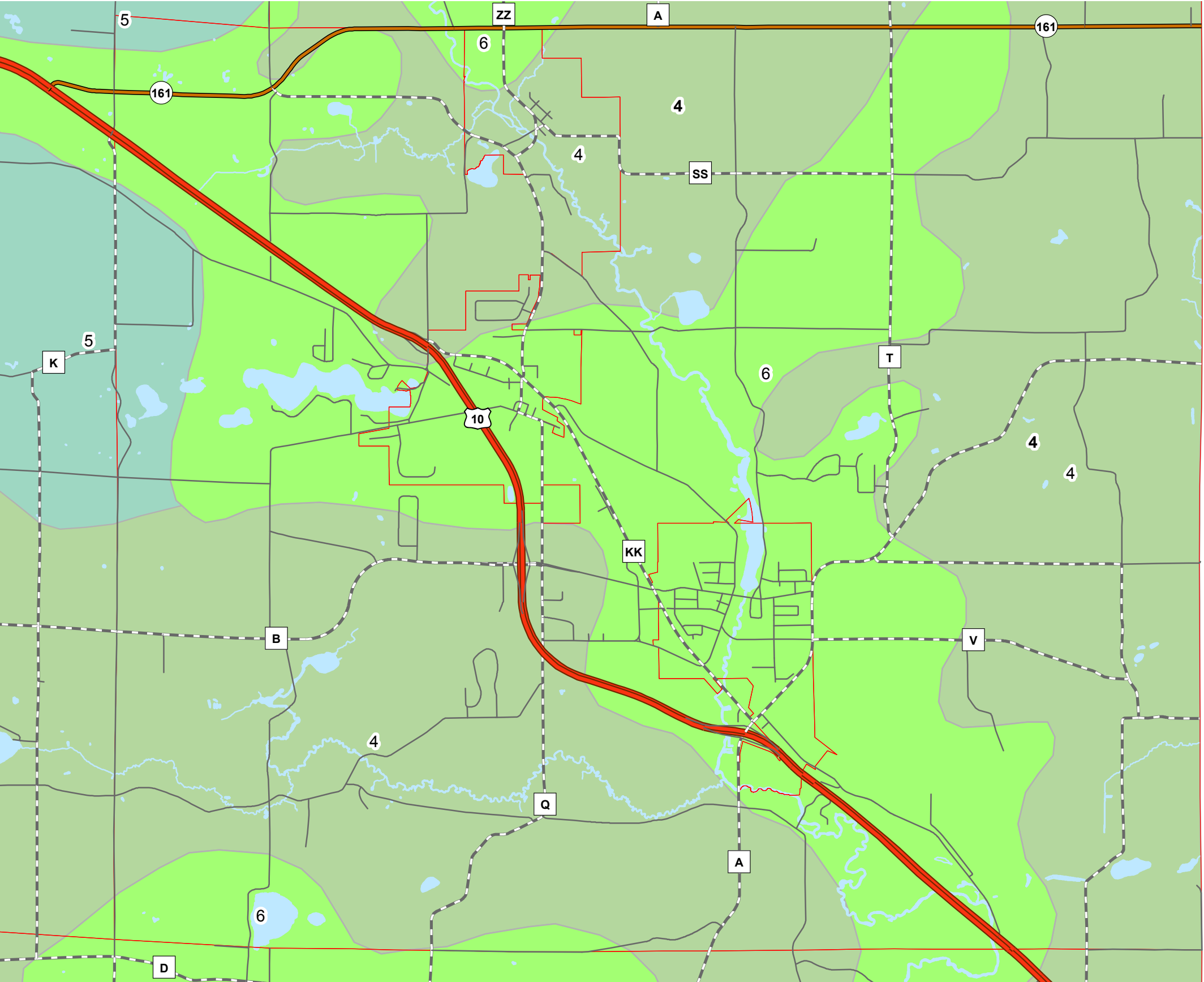
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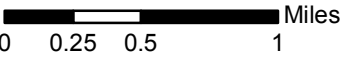




# Map 5.3 General Soil Association

## Soil Associations

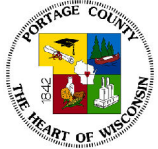
- Soils formed in sandy glacial drift**
- 4 Wyocena-Rosholt Association
  - 5 Kranski-Coloma-Mecan Association
- Soils formed mainly in outwash sand and gravel or sand**
- 6 Richford-Rosholt-Billett Association



Source: Portage County Planning & Zoning (2015)  
U.S.D.A. Soil Conservation Service (1977)

Adopted: August 13, 2015

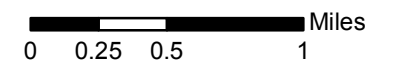
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Emergent/ Wet Meadow  
Scrub/Shrub  
Forested



This map is intended for general planning purposes. Site specific wetland determination should be made by the Army Corps of Engineers, the WI Dept. of Natural Resources, or those qualified to delineate wetlands.

Source: Portage County Planning & Zoning (2015)  
DNR - Wisconsin Wetland Inventory (1986)

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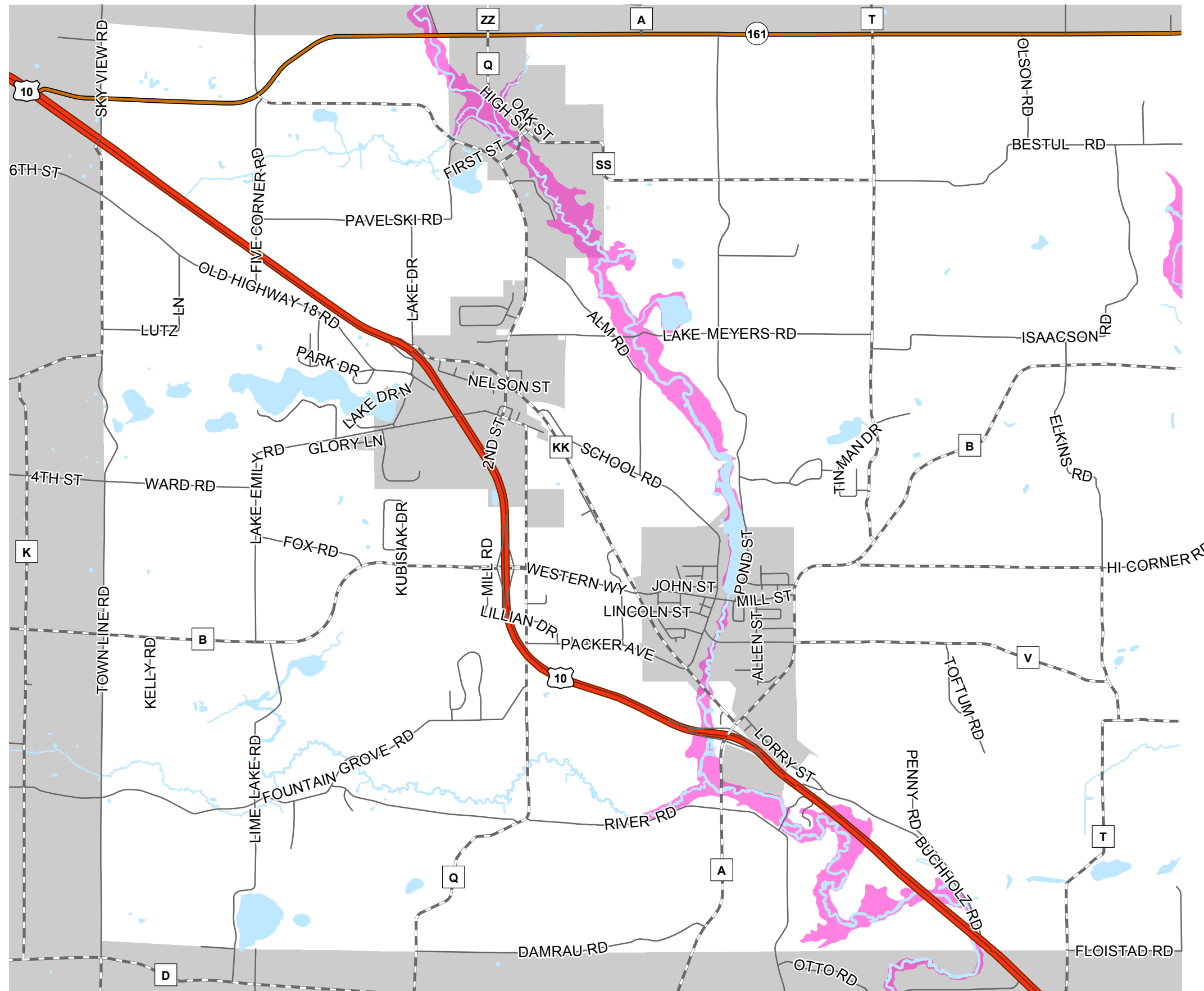
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# Map 5.5 Floodplain

100 Year Floodplain

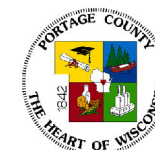


0 0.25 0.5 1 Miles

Source: Portage County Planning & Zoning (2015)  
Federal Emergency Management Agency (2009)

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#### D. Groundwater

All Town residential water use comes from groundwater sources; therefore, protection of this resource is important. Generally, a thick unsaturated zone exists; however, given the sandy soil type, there is little second-line defense against pollutants regardless of the nature of the subsurface materials. Although some of the soils ranked moderate to good in pollution attenuation, this area of the County should be considered vulnerable overall given the sandy soil type. Depth to groundwater varies greatly throughout the Town, ranging between 20 to 100 feet.

Potential pumping yield rates for groundwater generally range from 500-1,000 gallons per minute or greater, except for the very far northeast corner of the Town, where potential pumping rates are 10-500 gallons per minute. This rate is high when compared to areas west of the Wisconsin River where rates rarely exceed 50 gallons per minute.

The Town is situated east of the County's groundwater divide and, as such, is part of a larger watershed that drains into Lake Michigan and eventually the Atlantic Ocean. Groundwater flows generally in an easterly direction throughout the Town (Map 5.6). Data collection for groundwater monitoring remains an on-going process. Knowing groundwater flow can be a helpful piece of information when determining proper siting of well and on-site waste systems. More specific information and recommendations regarding groundwater can be found in the ***Portage County Groundwater Management Plan***, adopted by the County Board, March, 2004. The Town has a representative on the County's Groundwater Citizen Advisory Committee.

##### 1. Atrazine Prohibition Areas

The US Environmental Protection Agency (EPA) is researching the health effects of atrazine in water. Drinking water that contains atrazine will not cause immediate sickness or health problems (acute toxicity). However, consuming low levels of atrazine over time may cause health problems (chronic toxicity). The EPA is also concerned that atrazine may be an endocrine disruptor which can cause unintentional hormone-like activity in the body.

The Wisconsin Department of Agriculture, Trade and Consumer Protection is responsible for protecting Wisconsin's groundwater from contamination by pesticides and fertilizers. Their authority to restrict the use of a pesticide that is contaminating groundwater at levels above health-based standards is found in the Wisconsin Groundwater Law, [Chapter 160 of the Wisconsin Statutes](#), and by department rule in [ATCP 31, Groundwater Protection Program](#).

The rules for restricting the use of atrazine and other pesticides in Wisconsin are part of [ATCP 30 - Pesticide Product Restrictions](#) and the county maps showing the location of the prohibition areas can also be found in the rule in [ATCP 30](#). Atrazine has been detected above the enforcement standard in some wells within the Town of Amherst and because of this, prohibition areas have been defined within the community (Map 5.7, Atrazine Prohibition Areas). Approximately 3,520 acres of land, found in the north central portion of the Town, are designated as a prohibition area.

#### E. Wildlife Habitat and Forested Areas

When people think about wildlife, birds, fish, and mammals most likely come to mind. It is important, however, to consider all organisms that make up an ecosystem in order for that system to continue providing the maximum benefit to humans and the environment. Town residents recognize the fact that human beings play a role in protecting or restoring, as well as, degrading or destroying wildlife and its habitat. They also recognize that while it will be very difficult to

preserve all ecosystems in the Town from human encroachment or interaction, it is the desire of residents to protect wildlife habitat where practicable.

The biggest threats to wildlife are loss of habitat quality and quantity. These threats can be attributed primarily to fragmentation, invasive species, and pollution. **Fragmentation** refers to the loss of large, contiguous sections of land through subdivision into smaller parts, which can lead to an alteration and possible degradation of the native plant and animal communities on these properties. **Invasive species** (both plant and animal) tend to out-compete or prey on native species, altering the native ecosystem. **Pollution** can lead to habitat degradation, and cause birth defects and increased mortality rates in animal species. Habitat areas are important for providing food and cover for nesting, brooding, and sheltering. Farmland is one type of habitat that also provides food, as well as travel corridors between wetlands and woodlands.

Woodlands or forested lands account for 34% of the land area in Amherst (Map 5.8), while wetlands make up 6%. According to 2001 County survey data, 82% of respondents felt that an effort should be made to identify and protect woodlands, and 76% felt the same about wetlands and flood plains. Woodlands are present in the Town primarily due to an inability to sustain successful agricultural practices in those areas. Loss of these habitat types can threaten the viability of certain species.

One option open to all private landowners owning ten or more acres of woodlands is the Managed Forest Law Program (MFL). The MFL program is intended to foster timber production on private forests while promoting other benefits that forested lands provide. Participants in this program have the option to choose a 25 or 50 year contract period and pay property taxes at a reduced rate on enrolled lands. A portion of the difference in property taxes is recouped by the State at the time of a timber harvest when a yield tax is imposed based on the volume of timber removed. For more information regarding specific requirements and how to enroll in this program, contact the Wisconsin Department of Natural Resources (WisDNR).

#### F. Air Quality

The following information comes from the WisDNR and the Environmental Protection Agency: A few common air pollutants are found all over the United States. These pollutants can injure health, harm the environment and cause property damage. The Environmental Protection Agency calls these pollutants **criteria air pollutants** because the agency has regulated them by first developing health-based **criteria** (science-based guidelines) as the basis for setting permissible levels. These pollutants include: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter, and lead. One set of limits (**primary standard**) is designed to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly; another set of limits (**secondary standard**) is intended to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. A geographic area that meets or does better than the primary standard is called an **attainment area**; areas that don't meet the primary standard are called **nonattainment areas**.

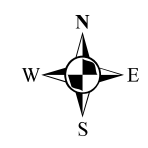
All of Portage County, including Town of Amherst, is listed as an attainment area by the DNR.

# Map 5.6 Goundwater Flow

## Groundwater Elevation (Ft)

- 980
- 990
- 1000
- 1010
- 1020
- 1030
- 1040
- 1050
- 1060
- 1070
- 1080
- 1090
- 1100
- 1110

Flow Direction

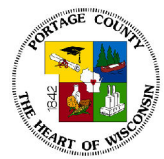


0 0.25 0.5 1 Miles

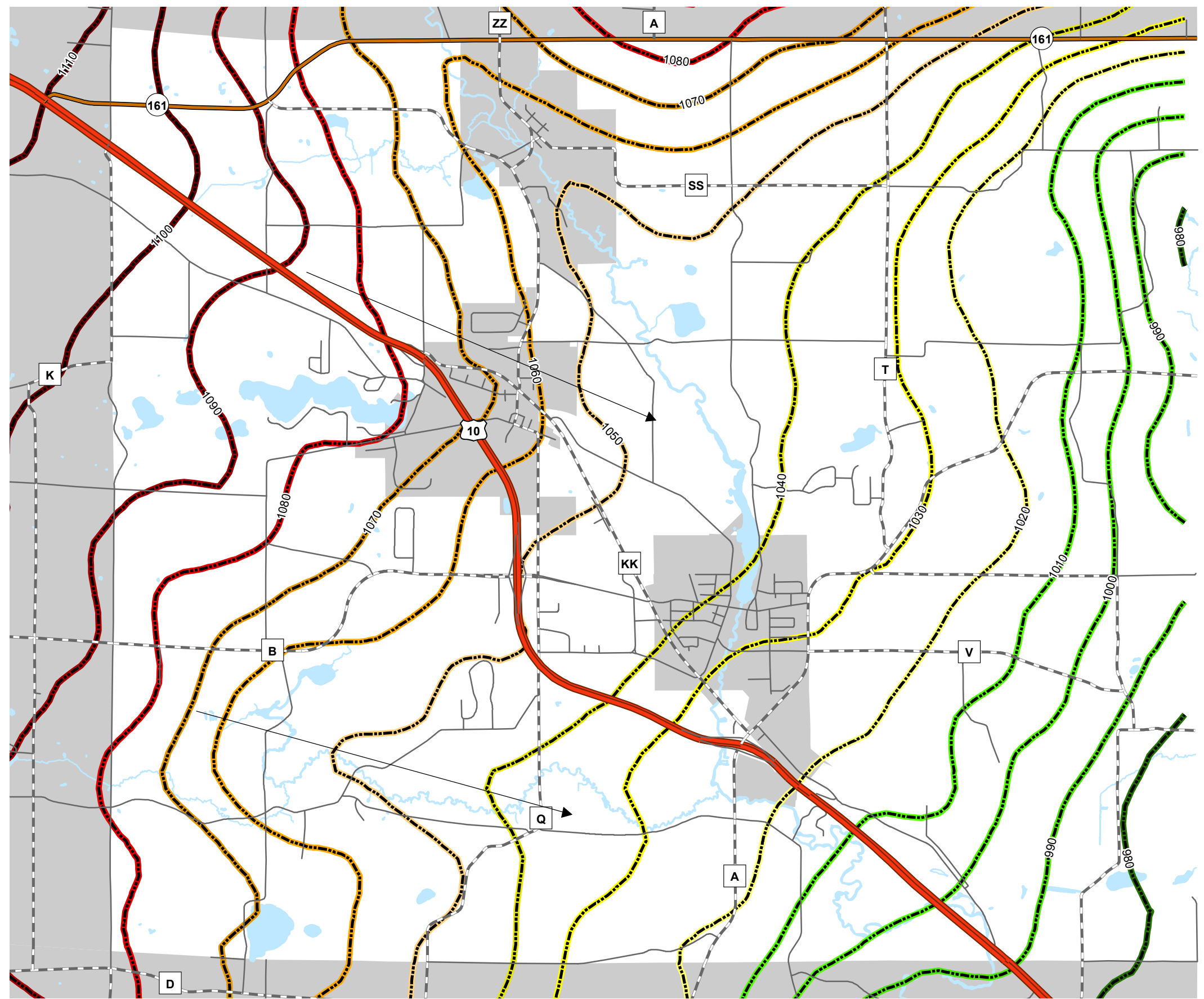
Source: Portage County Planning & Zoning (2004)

Adopted: August 13, 2015

## Town of Amherst Comprehensive Plan

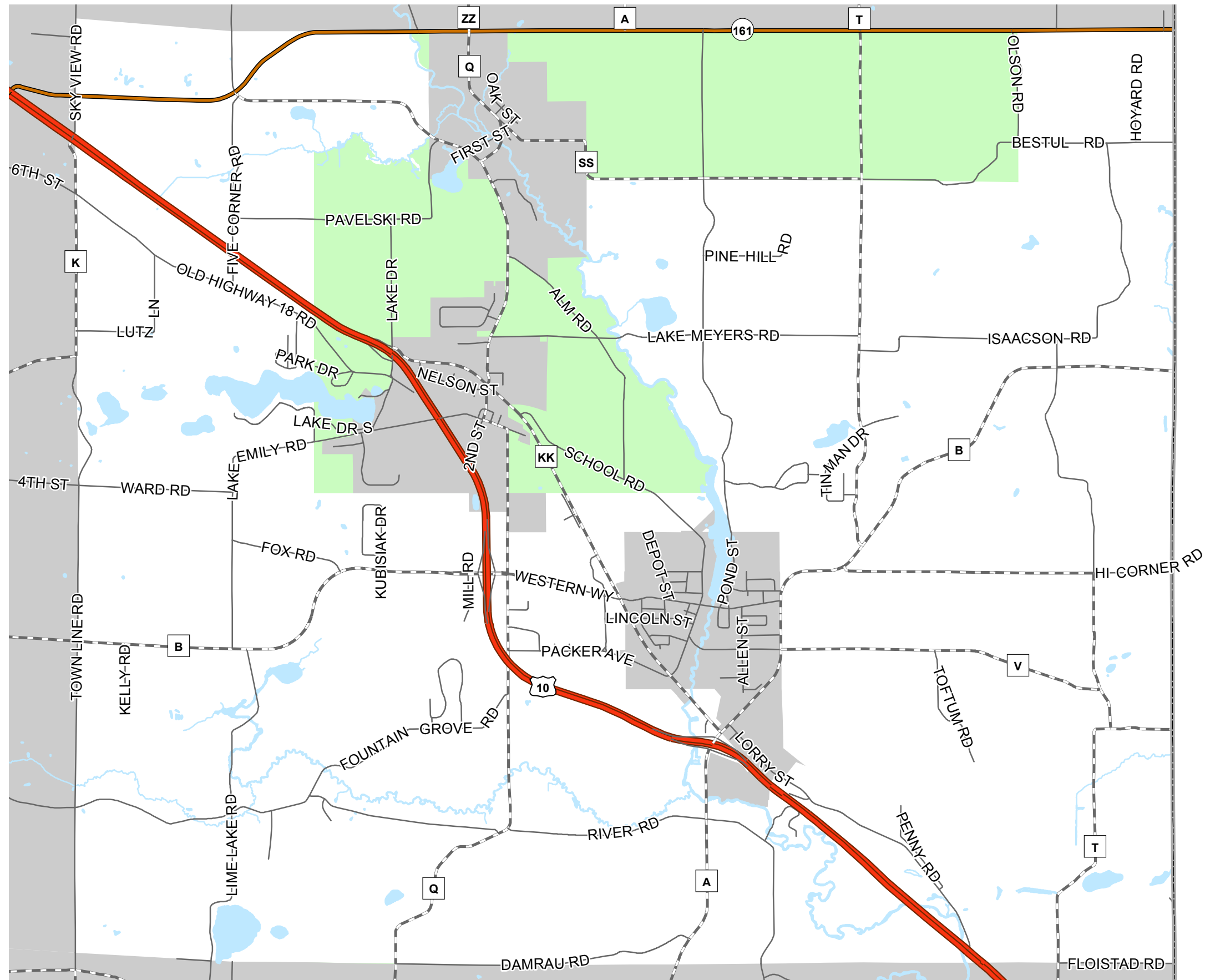


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# Map 5.7 Atrazine Prohibition Areas

 Atrazine Prohibition Areas



0 0.25 0.5 1 Miles

Source: Portage County Planning & Zoning (2015)

Adopted: August 13, 2015

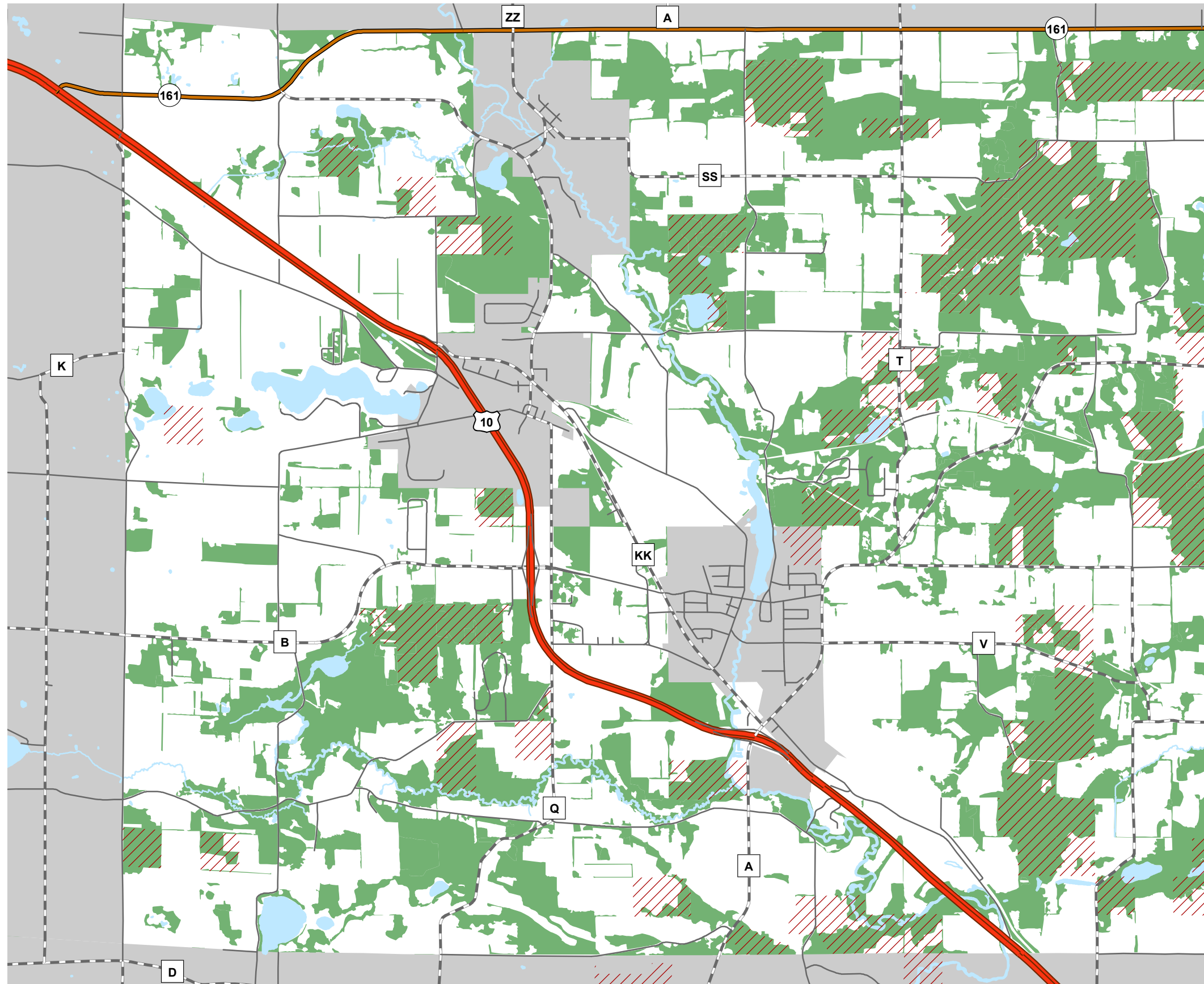
## Town of Amherst Comprehensive Plan





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## Map 5.8 Forested Land

-  Managed Forest Land\*
-  Forested Land

\*The entire parcel is shown, however, only the wooded portion of each parcel is included in the MFL program

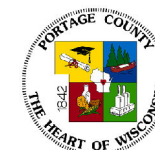


0 0.25 0.5 1 Miles

Source: Portage County Planning & Zoning (2015)

Adopted: August 13, 2015

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## G. Non metallic mining

The glacial and geologic history of Portage County has made conditions suitable for certain types of non-metallic mining. Along the moraines in the eastern third of the County, glacial deposits have resulted in some lands that are desirable for gravel and aggregate extraction. This is in contrast with lands west of the Wisconsin River where soils are heavier and have a higher clay content. With the significance of sand and gravel deposits in the Town of Amherst, there are some active sand and gravel pits.

### **Section 5.6 Natural Resources Issues**

- How can we protect our rivers, lakes and streams?
- How can we protect our groundwater quality?
- How can we protect open spaces, wetlands and forests?

### **Section 5.7 Natural Resources Goals, Objectives and Policies**

**Goal 1:** Manage and enhance the Town's natural resources.

Objective 1.1: Residential and Agricultural Best Management Practices should be used to maintain or improve groundwater quality.

#### Policies:

1. Work with the Wis. DNR and County Land Conservation Department to identify practices that potentially harm groundwater quality.
2. Communicate to citizens the importance of using Best Management Practices and individual well testing to protect drinking water.
3. Work with the County and other research organizations to maintain the most current information possible regarding groundwater quality and quantity.
4. Cooperate with the County and the Village of Amherst in protecting that portion of the Village's wellhead recharge area which lies within the Town.

Objective 1.2: Promote the preservation of sensitive environmental areas.

#### Policies:

1. Conserve the Town's major environmental resources/corridors through implementation of the Conservancy Zoning District. Such resources include shorelands, wetlands, and publicly owned lands used for recreation and wildlife management.
2. Encourage the location and siting of residential development at densities that promote the protection of open space and enhance rural character.

Objective 1.3: Maintain and protect the quality of surface waters throughout the Amherst area.

#### Policies:

1. Work with neighboring villages to promote uniform development standards for protecting rivers, lakes and streams, especially Lake Emily and the Tomorrow River.

2. Work with the Friends of the Tomorrow/Waupaca River organization to promote the maintenance of natural vegetation along shorelines.
3. Work with research organizations to identify environmentally sensitive lakes and streams and strive to protect their ecosystems.

## **Section 5.8 Cultural Resources**

Cultural and historic resources often help link the past with the present and can give a community a sense of place or identity. These resources can include historic buildings and structures along with ancient and archeological sites.

Burial sites are one example of a resource that can add to a community's sense of history as well as provide a great deal of genealogical information. Formally catalogued burial sites are protected from disturbance in Wisconsin and are given tax treatment equal to that of operating cemeteries.

Information regarding cultural and historic resources in the Town is constrained by limited financial and human resources. This section will provide goals and policies that promote the effective management of historic and cultural resources.

### **A. Cultural and Historic Resources Inventory**

A wide range of historic properties have been documented that help create Wisconsin's distinct cultural landscape. Descriptions of existing locations are identified on the list of historic places by the Wisconsin Historical Society. Keep in mind many of the properties included in this inventory are privately owned and not necessarily open to the public. At this time, there are 18 listings in the Portage County, which include several houses and a railroad bridge. One of the sites listed is:

- Green Bay and Western Railroad Bridge: a concrete railroad bridge built in 1915, located just west of County Highway A, 1/3 of a mile north of the Village of Amherst.

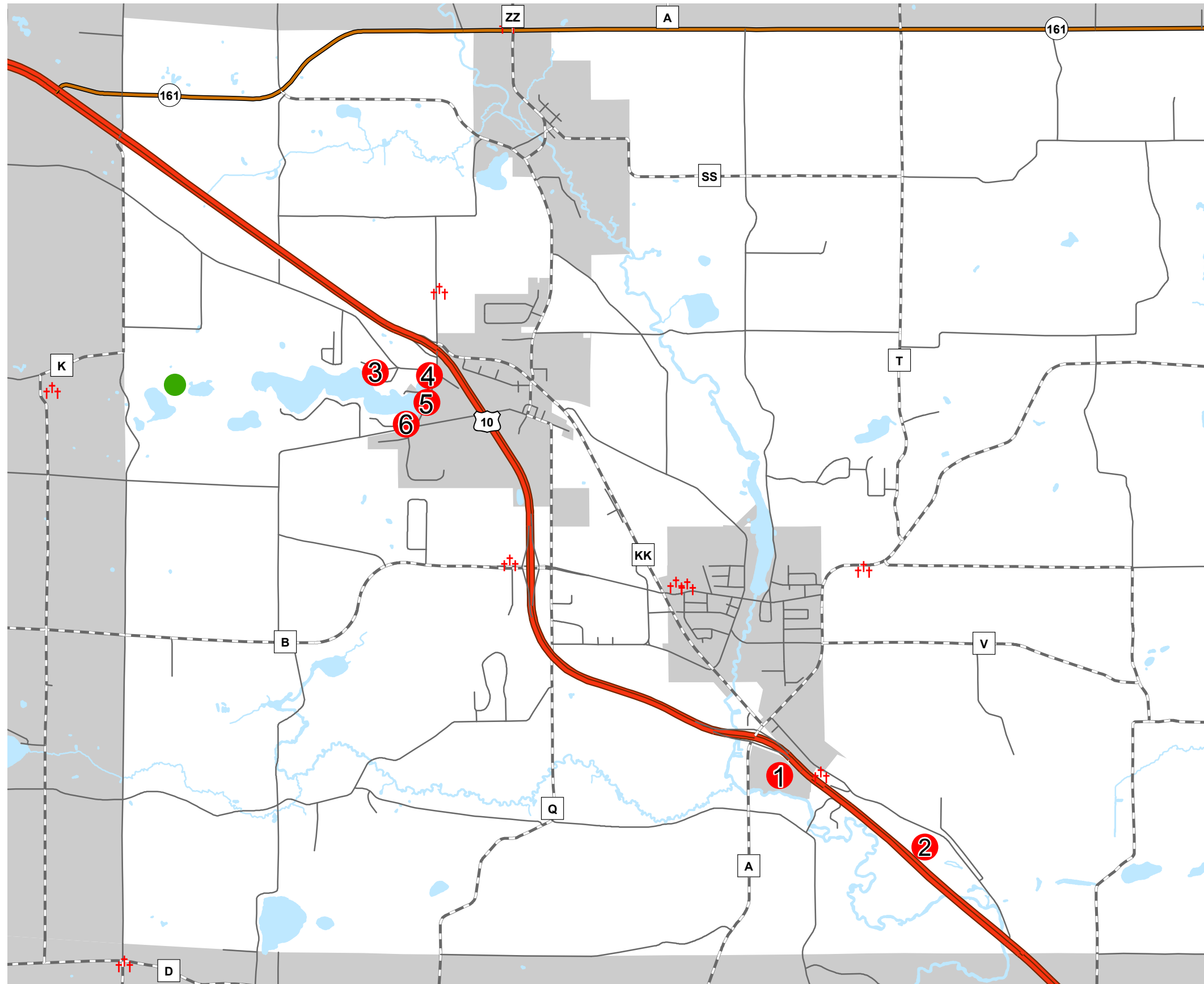
There are four cemeteries located in the Town, as identified in the Utilities and Community Facilities chapter of this Comprehensive Plan. In addition, Native American burial sites within the Town have been identified by the Wisconsin Historical Society (Map 5.9). State statutes require that burial sites, together with sufficient contiguous land necessary to protect the burial site from disturbance, be identified and catalogued; and that no person may intentionally disturb a catalogued burial site without a permit from the Director of the Wisconsin Historical Society.

### **B. Cultural Resource Programs**

At the state level, the Wisconsin Historical Records Advisory Board (WHRAB) works in association with the Wisconsin Historical Society. The Board's activity falls primarily into three areas: 1) it provides guidance and assistance to archives and records management programs in Wisconsin, 2) promotes the value of historical records as keys to our cultural heritage and works through partnerships with statewide organizations whose purpose and goals support that end, and 3) to bring federal grant funds to Wisconsin for improving access and preservation of historical records.

## **Section 5.9 Cultural Resource Issues**

The Town of Amherst Plan Commission did not identify any issues pertaining to cultural or historic resources.



## Map 5.9 Cultural Sites

++ Cemeteries

● Burial Sites

1. Burley Brew Sites 1, 2, 3
2. Dambroski Site
3. Green Space Mound Group
4. Amherst Junction Mounds
5. Lake Emily Group
6. Seymour Mounds

● Ceremonial Ground

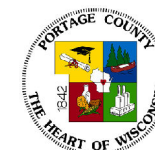


0 0.25 0.5 1 Miles

Source: Portage County Planning & Zoning (2015)  
Wisconsin Historical Society (2005)

Adopted: August 13, 2015

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## **Section 5.10 Cultural Resource Goals, Objectives and Policies**

**Goal 1:** Residents become more aware of cultural resources.

Objective 1.1: Work with the Portage County Historical Society and Central Wisconsin Archaeology Center to help identify cultural and historic resources in the Town.

Policy: Protect identified burial sites from development.

