

Planning Report



Community Profile and Inventory Report

for the Development of a Comprehensive Plan

Town of Milltown, Wisconsin

November 2001



Foth & Van Dyke
consultants · engineers · scientists

Forward

During October, 2000 the town of Milltown began working with the consulting firm of Foth & Van Dyke to develop the *Town of Milltown 2020 Comprehensive Plan*, which is designed to meet the requirements of Wisconsin's Smart Growth legislation, Wisconsin Statute 66.1001. This planning effort and resulting document will assist the town in making decisions relative to the conservation and development of land over the next twenty years and beyond. The planning effort is being directed by an 11 member, town approved Public Advisory Committee (PAC).

The *Town of Milltown Community Profile and Inventory Report* is part of this comprehensive planning effort. This report addresses existing conditions and characteristics concerning demographic information (population, housing and economic data); agricultural, natural and cultural resources; land use; utilities and community facilities; transportation; and growth pressures. The information contained in this report will be used by the Town Board and PAC throughout the development of the comprehensive plan.

2 Agricultural, Natural and Cultural Resources

2.1 Introduction

This section is intended to provide an inventory of the agricultural, natural and cultural resources of the town of Milltown. The elements which are analyzed in this section include climate, soils, farmland and topography, geology, mineral resources, vegetation types, watersheds and drainage, wetlands, floodplains, surface water features, groundwater, air quality, environmental corridors, threatened and endangered species, wildlife habitat, historic and archaeological sites, cultural resources and community design. These features present opportunities for conservation and development and need to be considered before making any decisions concerning future development within the town.

The town of Milltown is located in the north-central portion of Polk County. The only incorporated community within the town is the village of Milltown. The town is bounded by the town of Luck, the town of Georgetown to the east, the town and village of Balsam Lake to the south, and the town of Eureka to the west (Map 2-1). The town of Milltown consists of approximately 21,420 acres and has a population of 1,146, according to the 2000 census.

Milltown is primarily an agricultural and forestry community. Approximately 37% (7,968 acres) of its land being woodland and 36% (7,627 acres) used for agricultural purposes. Just over 20% (4,371 acres) of the town consists of surface water, trails and open space. Intensive uses such as residential, commercial, and industrial properties make up the remaining seven percent (1,455 acres) of land uses in the town.

2.2 Climate

The climate of Polk County is continental which includes cold winters and fairly warm summers. The National Climatic Data Center reported that the average year-round temperature in Wisconsin is 43 degrees, while the average daily maximum temperature is 81 degrees and the average daily minimum temperature is 14 degrees. Precipitation is distributed rather evenly throughout the year, however is highest in summer months. Annual snowfall in Polk County has ranged from 18 inches to 79 inches, while the average annual rainfall is about 28 inches. Precipitation averages are adequate for most crops, however some loss in soil moisture is normal for late summer months. The growing season averages approximately 127 days.

2.3 Soils

Soil is composed of varying proportions of sand, gravel, silt, clay and organic material. The composition of a soil affects the specific properties of that soil. These properties must be evaluated prior to any development, as varying limitations exist for each soil.

A detailed study of all the soils in Polk County was developed by the U.S. Department of Agriculture, Soil Conservation Service. As part of that study, soils were identified in terms of generalized soil associations. The following presents a list and description of the general soil associations included within the town of Milltown.

Amery-Santiago-Magnor Association

The soils in this association are mostly found in areas of cultivated crops or pastures. These soils are found throughout the township. This association is generally well drained with varying levels of slope.

This soil associations primary limitation is erosion in cultivated areas, excessive wetness also presents limitations. If adequately protected against erosion, the major soils have good potential for cultivated crops. This soil presents limitations for development and the installation of private sewage systems because limitations for septic tank absorption fields are moderate to severe. Unprotected areas are ideal for woodland.

Antigo-Rosholt Association

The soils in this association are centrally located within the town. Soils are typically found within broad outwash plains and in some more sloping areas along drainageways and in areas of depression. These soils are well drained and nearly level to sloping.

Most area containing this soil type are used for cultivated crops. This association and its related soils are ideal for crops, woodlands, and residential development.

Rosholt-Cromwell-Menahga Association

This soil association is found mostly in glacial outwash plains with short or uneven slope, along closed drainageways, and around depression and lakes. This soil association is generally well drained to somewhat excessively drained.

This soil association has poor potential for cultivated crops due to erosion, tendency to drought and blowing soil. Some areas may be adequate for woodland. Potential for residential development is good, however effluent from septic tank absorption can cause pollution to ground water.

2.4 Farmland

Approximately 7,955 acres (37%) of the land within the town of Milltown consists of agricultural uses, as either farmsteads or cropland. According to the 1997 Census of Agriculture the amount of land in farms decreased five percent from 1992 to 1997, the average size of farms decreased 3%, and the number of full-time farms decreased by 21% in Polk County.

Prime agricultural soils as described by the SCS are comprised of class I, II and III soils. Class I soils have few limitations that restrict their use. Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices, while Class III soils require limited amounts of land management practices to ensure production. The majority of the acreage of Polk County consists of Class II soils.

2.5 Topography

The topography or surface of the town can be described as generally level slightly some rolling hills and areas of steep slope mostly in the northeast portion of the town. The surface was formed by glacial erosion and deposits and is mostly comprised of glacial features, particularly outwash plains, tunnel channels, eskers and hummocks which are irregularly shaped hills formed by melting of buried, stagnant ice. The highest point in the town is approximately 1,300 feet above mean sea level and can be found in the northeast portion of the town. The lowest point is located in the southeast portion of the town, particularly around Balsam Lake, and is approximately 1,140 feet above mean sea level.

2.6 Geology

Bedrock Geology

According to the Pleistocene Geology of Polk County, Wisconsin, prepared by the Wisconsin Geological and Natural History Survey, rocks of the Cambrian, Precambrian and Ordovician age underlie all of Polk County. Pleistocene deposits cover a bedrock surface Precambrian basalt rocks and Paleozoic sedimentary rock. Outwash plains cover much of Polk County and constitute one of the most common land forms remaining there from the Wisconsin Glaciation.

Geology within the town of Milltown is primarily made up of pitted outwash plains composed of various types of sand deposited by meltwater from glaciation. Cobbles and boulders are also common. Directly east of the village of Milltown, geology consists of gently rolling to streamlined upland areas that are underlain by thick, reddish-brown, sandy loam. Large segments of Milltown, particularly around Rice Lake and Half Moon Lake, are described as marshes and wetlands composed of peat and muck.

Bedrock elevation near Milltown ranges from 325 to 350 meters and is generally 45 meters thick. Typically, bedrock has not presented any significant problems to development in the town. Examples of problems that may occur where bedrock is located at or near the surface include the potential for hindering excavation and considerably increasing the cost of construction. In addition, conventional onsite septic systems may not function properly where bedrock is near the surface, possibly resulting in wastewater passing through cracks or fissures.

2.7 Metallic and Non-Metallic Mineral Resources

The town of Milltown has four active non-metallic mines which are scattered throughout its jurisdiction. Wisconsin Administrative Code NR 135 required that all Counties adopt and enforce a Nonmetallic Mining Reclamation Ordinance that established performance standards for the reclamation of active and future nonmetallic mining sites, but not abandoned sites. It is intended that NR 135 will contribute to environmental protection, stable non-eroding sites, productive end land use and potential to enhance habitat and increase land values and tax revenues.

2.8 Vegetation Types

Map 2-3 shows the existing land cover classifications for the town.

According to the Wisconsin Department of Natural Resources (WDNR) report, Wisconsin's Biodiversity as a Management Issue, Polk County is made up of both northern and southern forest characteristics. Oak, basswood and maple (predominant to southern forests) and mixed coniferous-deciduous forests (predominant in northern forests) make up the forest features of the county.

The presence of woodlands within the town is somewhat fragmented, but the majority of woodland is located in the eastern portion of the town. The woodlands are mostly located adjacent to lakes, rivers, streams and the watersheds that have created these features.

Woodlands have both economic and ecological value. Multiple benefits can be derived from this resource under good management practices. For example, woodlands provide for an attractive rural setting by accentuating the beauty of the landscape. Woodlands also help to maintain the environmental quality of the area by contributing to clean air and water and provide habitat for a diversity of plant and animal life. Finally, woodlands contribute to opportunities for recreation such as hunting; trapping; mushroom, berry and nut collecting; wildlife viewing; and hiking.

2.9 Watersheds and Drainage

A watershed can be defined as an interconnected area of land draining from surrounding ridge tops to a common point such as a lake or stream confluence with a neighboring watershed. All lands and waterways can be found within one watershed or another. 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. River basins encompass several watersheds. There are 32 river basins in Wisconsin which range in size from 500 to over 5,000 square miles.

Wisconsin has redesigned its natural resource management approach around the concepts of ecoregions and watersheds. This shift in approach recognizes that working with the natural structure and function of resources, as opposed to strictly political or social boundaries, will provide more successful results. The town of Milltown is located in the St. Croix River Basin as designated by the Wisconsin Department of Natural Resources (WDNR).

There are three distinct watersheds contained within the town of Milltown's boundaries including the Balsam Branch watershed which dominates the majority of the town, the Trade River watershed, which is located in the far north-central portion and the Upper Apple River watershed located along the north east border of the town (Map 2-4).

According to the St. Croix River, Water Quality Management Plan, a publication from the WDNR, the Balsam Branch watershed was recommended as a high priority for possible selection as a priority watershed. Water quality within the watershed is threatened by sedimentation and nutrient runoff from agriculture, shoreline development, and road construction and maintenance.

2.10 Wetlands

According to the United States Environmental Protection Agency, wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season. Water saturation (hydrology) largely determines how the soil develops and the types of plant and animal communities living in and on the soil. Wetlands may support both aquatic and terrestrial species. The prolonged presence of water creates conditions that favor the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils.

Wetlands may be seasonal or permanent and are commonly referred to as swamps, marshes, fens or bogs. Wetland plants and soils have the capacity to store and filter pollutants ranging from pesticides to animal wastes. Wetlands can make lakes, rivers and streams cleaner, and drinking water safer. Wetlands also provide valuable habitat for fish, plants, and animals. In addition, some wetlands can also provide the replenishment of groundwater supplies. Groundwater discharge is common from wetlands and can be important in maintaining stream flows, especially during dry months.

Local, state and federal regulations place limitations on the development and use of wetlands and shorelands. The Wisconsin Department of Natural Resources (WDNR) has inventory maps for each town that identifies wetlands two acres and larger. The wetland inventory map should be consulted in conjunction with this document whenever the town reviews development proposals in order to identify wetlands and to ensure their protection from development (Map 2-4).

2.11 Floodplains

The 100-year floodplains in the town are found along Balsam Lake, and feeder streams and intermittent creeks. For planning and regulatory purposes, the floodplain is normally defined as those areas, excluding the stream channel, that are subject to inundation by the 100-year recurrence interval flood event. This event has a one percent chance of occurring in any given year. Because of this chance of flooding, development in the floodplain should be discouraged and the development of park and open space in these areas encouraged. The floodplain includes the floodway and flood fringe. The floodway is the portion of the floodplain that carries flood water or flood flows, while the flood fringe is the portion of the floodplain outside the floodway, which is covered by waters during a flood event. The flood fringe is generally associated with standing water rather than rapidly flowing water.

Wisconsin Statute 87.30 requires Counties, Cities and Villages to implement floodplain zoning. In addition, the Federal Emergency Management Agency (FEMA) has developed flood hazard data. Under the authority of the National Flood Insurance Act of 1968, FEMA conducted studies to determine the location and extent of flood lands and the monetary damage risks related to the insurance of urban development in floodland areas. The 100-year floodplain areas for the unincorporated areas of Polk County have been delineated by FEMA.

2.12 Surface Water Features

Lakes

There are number of major lakes located within the town of Milltown. Surface water makes up just over eight percent (1,745 acres) of total acreage in the town. The following are the major lakes within the township which have been studied or monitored over the years.

Half Moon Lake

Half Moon Lake located in the southeast corner of the township contains the greatest amount of surface water acreage in the town (579 acres). According to a 1994 study of the lake, commissioned by the electors of the Half Moon Lake Protection and Rehabilitation District, primary sources of water coming into the lake are from Harder Creek, Tamarack Bay and the general runoff from lands around the lake. The report also concluded that there are no identifiable sources of pollution other than non-point sources from the agricultural lands surrounding the lake.

The 1994 study recommended that efforts be made to preserve the wetlands around the lake and especially the Harder Creek area which supplies over half of the water flowing into Half Moon Lake. A 1996 water quality appraisal prepared by the WDNR recommended to reduce phosphorus loads coming into the lake and enhance fish and wildlife habitat.

Balsam Lake

Balsam Lake, also located in the southeast corner of the town, is a 2,054 acre lake of which the vast majority is located in the bordering town of Balsam Lake. The lake is highly developed with single family residences and seasonal homes.

Rice Lake

Rice Lake is located in the south central portion of the town, south of the village of Milltown. This small, 128 acre lake, has been severely affected by past discharges from the village wastewater treatment system (Ryan, 1990 & Engel & Nichols, 1991).

Antler Lake

Antler Lake is located in the northeast portion of the township with a surface area of approximately 101 acres, shoreline length of approximately three miles, a maximum depth of 27 feet and an average depth of nine feet. Antler Lake is a landlocked, non-drainage lake, therefore its water quality is determined by runoff to the lake from a relatively undeveloped watershed. Due to these features the lake is particularly sensitive to development impacts. According to the Antler Lake Management Plan, prepared for the Antler Lake Association in 1996, the general water quality is high, however the prevention of additional phosphorus loading will be necessary to protect the current quality.

Table 2-1 describes all named lakes that are found in the town of Milltown. For lakes which are partially within other jurisdictions, the figures reflect data for the entire lake.

**Table 2-1
Lake Descriptions
Town of Milltown**

Lake Name	Area	Maximum Depth	Lake Type	Fish Species
Antler Lake	101	22	SE	Northern pike, largemouth bass, panfish
Balsam Lake	2,054	37	SE	Northern pike, walleye, largemouth bass, panfish
Camp Douglas Lake	10	4	SE	NA
East Lake	15	8	SE	NA
Elkins Lake	38	15	SE	NA
Half Moon Lake	579	60	DG	Northern pike, walleye, largemouth bass, panfish
Kenny Lake	6	7	SE	NA
Little Pine Lake	61	10	SE	Northern pike, largemouth bass, panfish
Lost Lake	10	6	SE	NA
Rice Lake	128	10	DG	Northern pike, largemouth bass, panfish
Twenty-Ninth Lake	29	7	SE	NA

Source: Wisconsin Department of Natural Resources, Wisconsin Lakes Book, 2001.

Antler Lake, Balsam Lake, Half Moon Lake and Rice Lake are lakes which have a public boat launching facility available. There are two lake types found in Milltown. Seepage lakes (SE), which are lakes that do not have an inlet or outlet. They are landlocked lakes with a principal water source is precipitation or runoff, supplemented by groundwater from the immediate drainage area. Water levels in these lakes often fluctuate seasonally due to changing groundwater levels and rainfall patterns. The second type of lake found in the town is drainage lakes (DG), which have both an inlet and outlet where the main water source is stream drainage.

Rivers and Streams

Within the town of Milltown, there are several stream and creek features in addition to the many tributaries, intermittent streams, wetlands and floodplains located throughout the town. The two primary features include Harder Creek, which flows between Half Moon Lake and Balsam Lake, and Rice Creek, which flows between Rice Lake and the northern portion of Balsam Lake.

2.13 Groundwater Quality

The source of all groundwater is precipitation which percolates down through the soil until it reaches the saturated zone of an aquifer where it is then contained. Water in an aquifer travels from its source to a discharge point such as a well, wetland, spring or lake. During periods of increased precipitation or thaw, this vast resource is replenished with water moving by gravity through permeable soils which is called a water table system. In some instances, groundwater moves because of pressure created by a confining layer of impervious rock which is called an artesian system. Most groundwater in Polk County is obtained from sand and gravel aquifers or sandstone aquifers. The quality of groundwater is generally considered good, with minor limitations being hardness and dissolved solids.

Most groundwater contamination is related to poorly sited land uses such as agricultural manure, petroleum and salt storage in areas of high groundwater tables or fractured bedrock situations. Contamination of groundwater reserves can also result from such sources as percolation of water through improperly placed or maintained landfill sites, private waste disposal (septic effluent), runoff from livestock yards and urban areas, improper application of agricultural pesticide or fertilizers, excessive lawn and garden fertilizers and pesticides, leaks from sewer pipes, and seepage from mining operations into the aquifer. Runoff from leaking petroleum storage tanks and spills can also add organic and chemical contaminants in locations where the water table is near the surface. Once groundwater contamination has occurred, successful remediation can take years, or may never occur, depending upon the pollutant. Therefore, when considering specific land uses for an area, it is vital to consider the physical characteristics of the area and the relationships between the land and the proposed/actual use in order to ensure that groundwater contamination does not occur.

2.14 Air Quality

In order to evaluate the quality of the air and to protect the public health, a series of National Ambient Air Quality Standards (NAAQS) have been developed by the U.S. Environmental Protection Agency (EPA) as established in section 109 of the Clean Air Act. According to the Wisconsin Air Quality Report, as prepared by the Wisconsin Department of Natural Resources (WDNR), the air pollutants affecting Wisconsin include sulfur dioxide, suspended particular matter, carbon monoxide, ozone, oxides of nitrogen, lead, sulfates and nitrates. Polk County is considered an attainment area, which is an area that meets the NAAQS defined in the Federal Clean Air Act. Within Polk County there are no air monitoring stations.

2.15 Environmental Corridors/Sensitive Areas

The Polk County Zoning Ordinance has established a conservancy district which was established to protect and preserve the natural character of certain lands for their values to wildlife, water conservation, flood control, forestry and other public purposes.

Environmental features include wetlands, floodplains and woodlots greater than 10 acres (Map 2-5). When all of these features are mapped, a continuous corridor pattern usually results because these features often coincide or lie adjacent to each other. Environmental corridors provide scenic open space, wildlife habitat, educational and recreational opportunities. Environmental corridors also perform important functions such as controlling, moderating and storing flood waters while providing nutrient and sediment filtration. Environmental corridors can also serve as buffers between land uses while improving the aesthetics of the community.

2.16 Threatened and Endangered Species

The Wisconsin Department of Natural Resources (WDNR) lists species as “endangered” when the continued existence of that species as a viable component of the state’s wild animals or wild plants is determined to be in jeopardy on the basis of scientific evidence. “Threatened” species are listed when it appears likely based on scientific evidence that the species may become endangered within the foreseeable future. The WDNR also lists species of “special concern” of which some problem of abundance or distribution is suspected but not yet proved; the intent of this classification is to focus attention on certain species before becoming endangered or threatened.

Within Polk county there a number of endangered, threatened and special concern species including plants, birds, insects, fish and mussels. These areas are identified by section in order to keep the location general. Exact locations are not identified in order to protect areas and discourage the intentional destruction of flora and fauna. Development proposals should be forwarded to the WDNR for comment.

2.17 Wildlife Habitat and State Natural Areas

Wildlife habitat can be simply defined as the presence of enough food, cover, and water to sustain a species. Polk County and the town of Milltown landscape provides habitat for a variety of plants, birds, mammals, amphibians, reptiles and fish. Examples of various landscapes that may be found within the town include prairie, woodland, wetlands and floodplain forest. These areas are critical components of the state’s biodiversity and may provide habitat for rare, threatened and endangered species.

The WDNR also identifies State Natural Areas, which are defined as tracts of land in a natural or near natural state, which are managed to serve several purposes including scientific research, teaching of resource management, and preservation of rare native plants and ecological communities. No State Natural Areas have been identified within the township, however the following four State Natural Areas are located within the county: Sterling Barrens, Dalles of the St. Croix River, Interstate Lowland Forest, and Tula Lake.

2.18 Historic and Cultural Resources

The National Register of Historic Places recognizes properties of local, state and national significance. Properties are listed in the National Register because of their associations with significant persons or events, because they contain important information about our history or prehistory, or because of their architectural or engineering significance. The National Register also lists important groupings of properties as historic districts. In addition, the National Park Service highlights properties that have significance to the nation as a whole by conferring them the status of National Historic Landmark.

The Wisconsin State Register of Historic Places parallels the National Register. However, it is designed to enable state-level historic preservation protection and benefits. Most of the properties in Wisconsin listed in the National Register are also listed in the State Register.

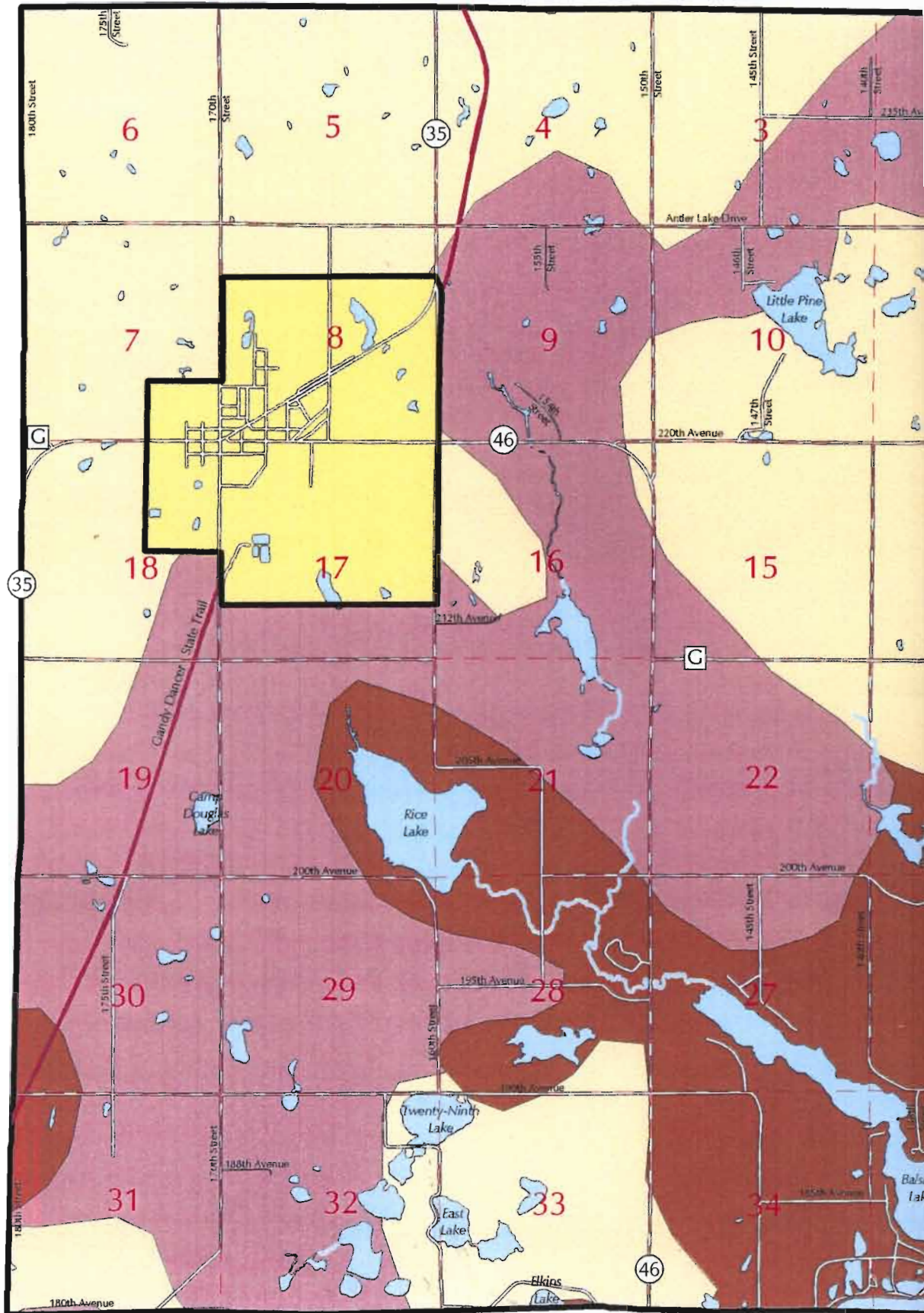
According to the National and State Register, no historic places have been identified within the town of Milltown or within the village of Milltown. There were also no sites identified within the town or the village on the Wisconsin Architecture and History Inventory (AHI) which is an inventory of historic and places that are unique to Wisconsin's history.

While no places or buildings have been listed on the National or State Registers, there are several places within the town that define the town's look and character, including:

- ◆ Historic farmhouse and outbuildings;
- ◆ Early 19000 school houses and sites; and
- ◆ Logging and railroad history.

TOWN OF LUCK, POLK COUNTY
T 36 N, R 17 W

TOWN OF EUREKA, POLK COUNTY
T 35 N, R 18 W



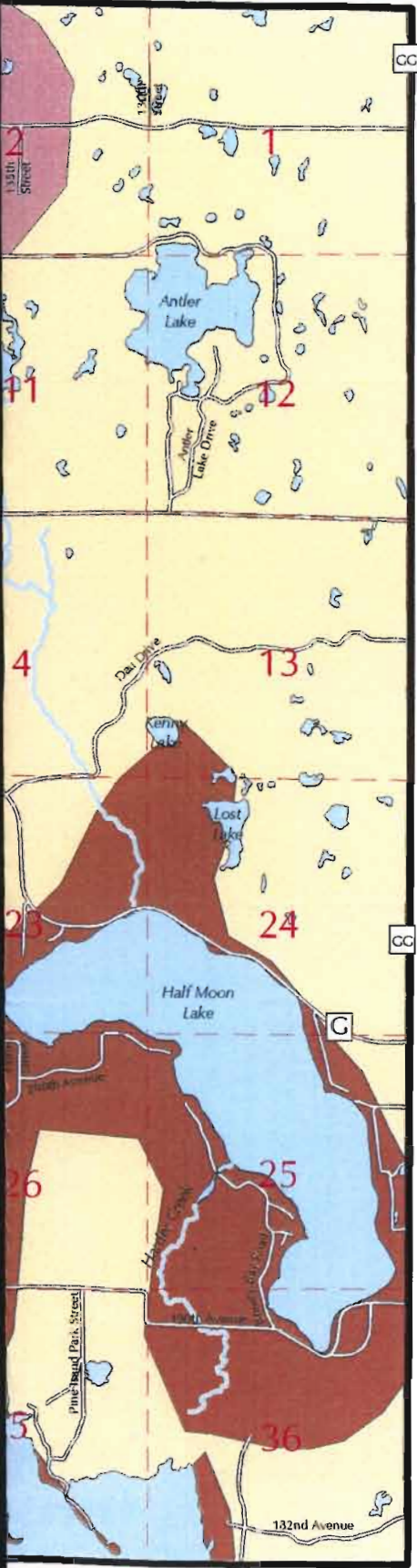
TOWN OF BALSAM LAKE, POLK COUNTY
T 34 N, R 17 W

MAP 2-2 GENERAL SOILS Town of Milltown Polk County, Wisconsin



Site Location
Town of Milltown
(Polk County)
T. 35 N., R. 17 W.

State of Wisconsin



TOWN OF GEORGETOWN, POLK COUNTY
T. 35 N., R. 16 W.

- Amery-Santiago-Magnor
Nearly level to very hilly, well drained and somewhat poorly drained loamy and silty soils on till plains.
- Antigo-Rosholt
Nearly level to sloping, well drained silty and loamy soils on outwash plains.
- Rosholt-Cromwell-Menahga
Nearly level to very hilly, well drained and somewhat excessively drained loamy and sandy soils on pitted outwash plains.

Other Features

- Town Border
- Roads
- Streams
- Section Lines
- Trail
- Surface Water
- Village of Milltown
- 36 Section Numbers

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Source: Polk County, 2000;
FVD Digital Orthophotography Interpretation, 2000 (1992 Photos).

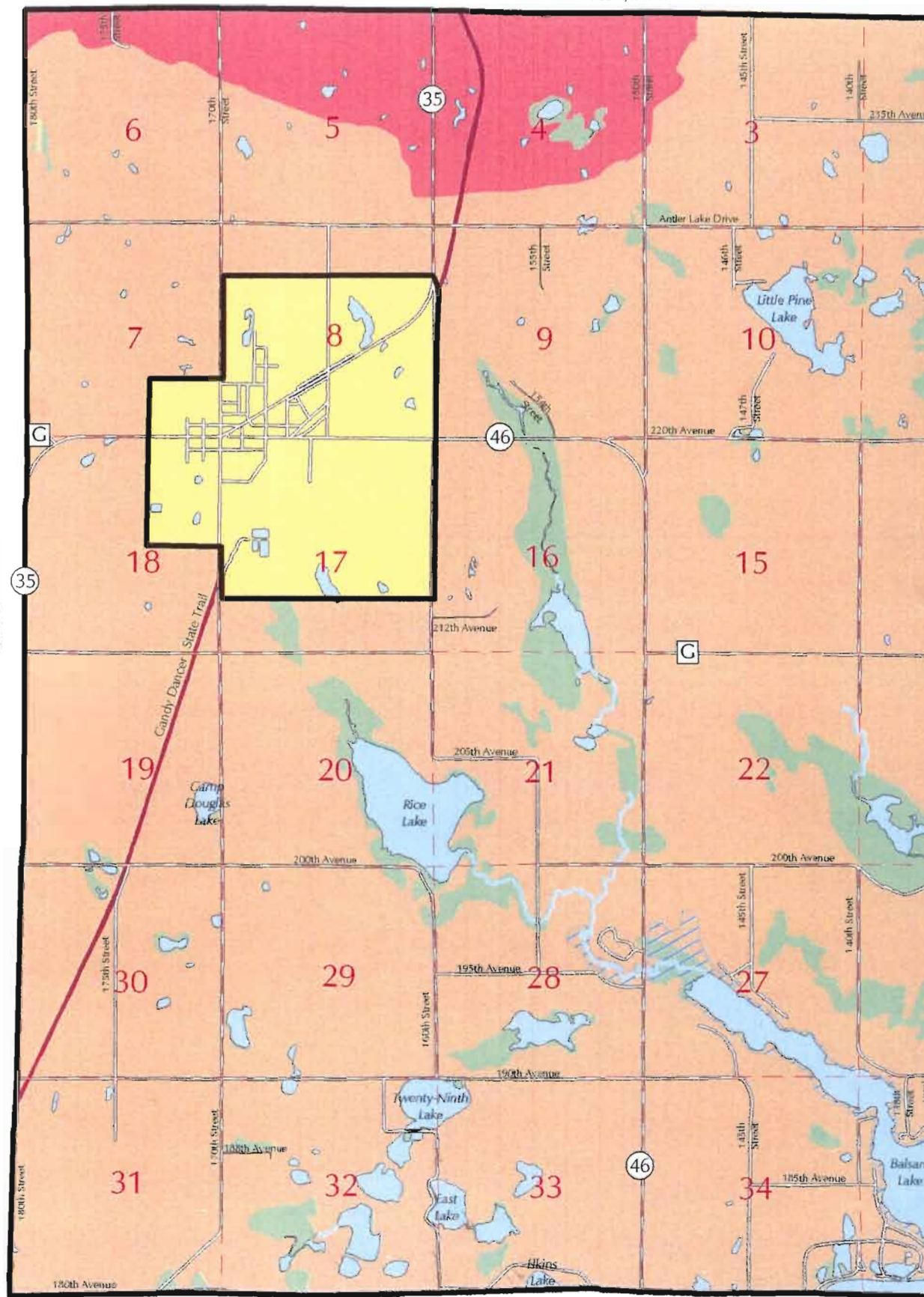
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TOWN OF LUCK, POLK COUNTY
T 36 N, R 17 W

TOWN OF EUREKA, POLK COUNTY
T 35 N, R 18 W

TOWN OF BALSAM LAKE, POLK COUNTY
T 34 N, R 17 W



MAP 2-4 WATER FEATURE DATA Town of Milltown Polk County, Wisconsin



Site Location
Town of Milltown
(Polk County)
T. 35 N., R. 17 W.

State of Wisconsin



TOWN OF GEORGETOWN, POLK COUNTY
T. 35 N., R. 16 W

- Balsam Branch Watershed
- Trade River Watershed
- Upper Apple River Watershed
- Floodplain
- WDNR Wetlands

Other Features

- Town Border
- Roads
- Streams
- Section Lines
- Trail
- Surface Water
- Village of Milltown
- Section Numbers

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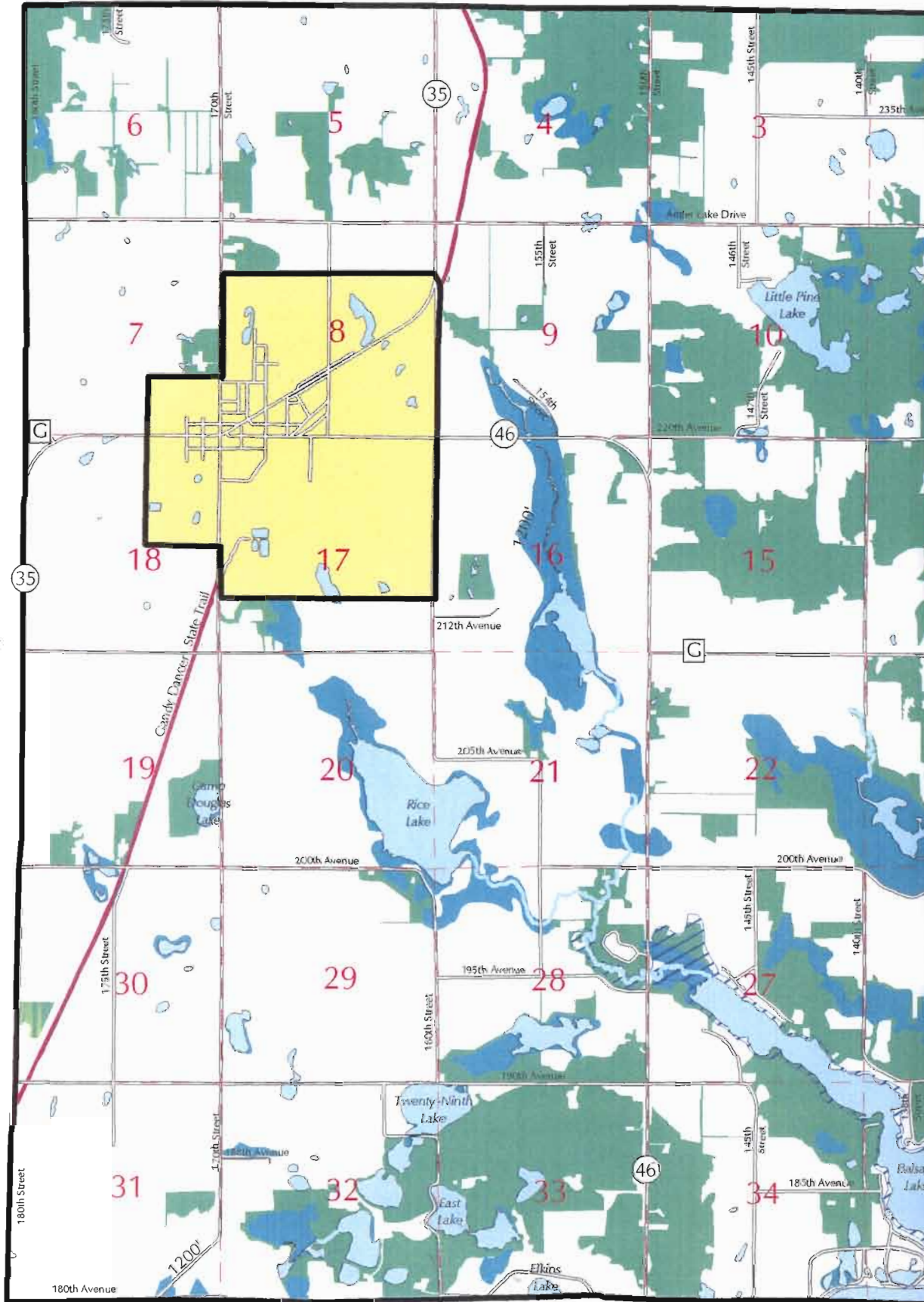
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TOWN OF LUCK, POLK COUNTY
T 36 N, R 17 W

TOWN OF EUREKA, POLK COUNTY
T 35 N, R 18 W

TOWN OF BALSAM LAKE, POLK COUNTY
T 34 N, R 17 W



MAP 2-5 ENVIRONMENTAL FEATURES Town of Milltown Polk County, Wisconsin



Site Location
Town of Milltown
(Polk County)
T. 35 N., R. 17 W.

State of Wisconsin



TOWN OF GEORGETOWN, POLK COUNTY
T. 35 N., R. 16 W.

Environmental Features

- Floodplain
- WDNR Wetlands
- Woodlots Greater Than 10 Acres

Other Features

- Town Border
- Roads
- Streams
- Section Lines
- Trail
- Surface Water
- Village of Milltown
- 36** Section Numbers

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Source: Polk County, 2000;

