SEWRPC Community Assistance Planning Report No. 295
A COMPREHENSIVE PLAN FOR THE TOWN OF POLK: 2035

Chapter V

AGRICULTURAL, NATURAL, AND CULTURAL RESOURCES ELEMENT

INTRODUCTION

The agricultural, natural, and cultural resources element is one of the nine elements of a comprehensive plan required by Section 66.1001 of the *Wisconsin Statutes*. Section 66.1001(2)(e) of the *Statutes* requires this element to compile goals, objectives, policies, and programs for the conservation and effective management of the following natural resources:

- Groundwater
- Forests
- Productive agricultural areas
- Environmentally sensitive areas
- Threatened and endangered species
- Stream corridors
- Surface water
- Floodplains
- Wetlands
- Metallic and nonmetallic mineral resources
- Parks, open spaces, and recreational resources
- Historical and cultural resources
- Community design

In addition, the following comprehensive planning goals related to the agricultural, natural, and cultural resources element are set forth in Section 16.965 of the *Statutes* and must be addressed as part of the planning process:[1]

- Promotion of the redevelopment of lands with existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial, and industrial structures.
- Protection of natural areas, including wetlands, wildlife habitats, lakes, woodlands, open spaces, and groundwater resources.
- Protection of economically productive areas, including farmland and forests.
- Encouragement of land uses, densities, and regulations that promote efficient development patterns and relatively low municipal, state government, and utility costs.
- Preservation of cultural, historic, and archaeological sites.
- Building of community identity by revitalizing main streets and enforcing design standards.
- Planning and development of land uses that create or preserve varied and unique urban and rural communities.

This chapter provides inventory information on soils, existing farmland, farming operations, topography and geology, nonmetallic mining resources, water resources, woodland resources, natural areas and critical species habitats, environmental corridors, park and open space sites, and cultural (historical and archaeological) resources. This chapter consists of four parts: Part 1, Inventory of Soils and Agricultural Resources; Part 2,

[1] *Chapter I lists all 14 of the comprehensive planning goals included in Section 16.965 of* the Statutes.

Inventory of Natural Resources; Part 3, Inventory of Cultural Resources; and Part 4, Agricultural, Natural, and Cultural Resources Goals, Objectives, Policies, and Programs.

The conservation and wise use of agricultural and natural resources and the preservation of cultural resources are fundamental to achieving strong and stable physical and economic development as well as maintaining community identity. This comprehensive plan recognizes that agricultural, natural, and cultural resources are limited and may be very difficult or impossible to replace if damaged or destroyed. Information on the characteristics and location of agricultural, natural, and cultural resources in the Town of Polk will assist in properly locating future land uses to help avoid serious environmental problems and to protect existing natural resources.

The base years for the various inventory data presented in this chapter range from 1994 to 2005. Much of the inventory data have been collected through regional land use and natural area planning activities conducted by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). Additional inventory data have been collected from and by Washington County; the Town of Polk; and State and Federal agencies, including the Wisconsin Department of Natural Resources (DNR), the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP), the State Historical Society of Wisconsin, and the U.S. Department of Agriculture (USDA).

PART 1 – INVENTORY OF SOILS AND AGRICULTURAL RESOURCES

Soil Survey

The USDA Soil Conservation Service, now the Natural Resources Conservation Service (NRCS), issued a soil survey for Washington County in 1971.[2] Soils were identified, organized, and mapped by soil association, soil series, and soil type. The soil survey results, including the attributes of each soil type, are now available on the NRCS website as part of the Soil Survey Geographic (SSURGO) database. Unless otherwise noted, the soil information presented in this chapter was obtained from the SSURGO database.

The soil survey can play an important role in land use decisions. The information contained in the soil survey can help identify which areas of the Town are suitable for agricultural use; which areas may have limitations for development due to wet soils or bedrock near the surface; and which areas may have marketable nonmetallic mineral resources present.

Soil Associations

A soil association is a landscape that has a distinctive pattern of soils. It normally consists of one or more major soils and at least one minor soil, and is named for the major soil or soils present. The following soil associations are found in the Town of Polk:

The ***Brookston-Pella-Lamartine association*** consists of generally poorly-drained soils that have a subsoil of clay loam or silty clay loam, formed in loess and underlying loam to sandy loam glacial till. This association, encompassing about 5 percent of the Town, is located along stream beds in the southwestern portion of the Town.

The ***Casco-Fox-Rodman association*** consists of well-drained soils that have a subsoil of gravelly sandy loam to clay loam, very shallow to moderately deep over gravel and sand, on glacial outwash terraces. This association encompasses about 22 percent of the Town and is found in several locations trending generally southwest to northeast, generally on lower elevations within the Kettle Moraine.

The ***Hochheim-Theresa association*** contains well-drained soils that have a subsoil of clay loam, formed in loess with underlying sandy loam to loamy glacial till on uplands. This association, encompassing about 48 percent of the Town, is the predominant soil association present in the Town of Polk.

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[2]*Documented in the* Soil Survey, Washington County, Wisconsin, *published by the USDA Soil Conservation Service in June 1971.*

The ***Houghton-Palms-Adrian association*** contains very poorly drained organic soils located along drainage ways, in depressions, and in old glacial lakebeds. This association, encompassing about 6 percent of the Town, is found exclusively along the southern margins of the Town.

The ***Ozaukee-Martinton-Saylesville association*** contains generally well-drained soils that have a subsoil of silty clay loam to clay over silty clay loam glacial till or lake-laid silt and clay on ground moraines and lacustrine basins. This association is found in several locations along the eastern margins of the Town and encompasses about 19 percent of the Town.

Saturated Soils

Soils that are saturated with water, or that have a water table at or near the surface, are known as hydric soils. These soils pose significant limitations for most types of development. High water tables often cause wet basements and poorly-functioning absorption fields for private onsite waste treatment systems (POWTS). The excess wetness may also restrict the growth of landscaping plants and trees. Wet soils also restrict or prevent the use of land for crops, unless the land is artificially drained. Approximately 24 percent of the Town of Polk is covered by hydric soils (about 4,884 acres), generally associated with stream beds and wetland areas. Although hydric soils are generally unsuitable for development, they may serve as important locations for the restoration of wetlands, as wildlife habitat, and for stormwater detention.

Soil Suitability for Agricultural Production

The NRCS has classified the agricultural capability of soils based on their general suitability for most kinds of farming. These groupings are based on the limitations of the soils, the risk of damage when used, and the manner in which the soils respond to treatment. Generally, lands with Class I and II soils are considered "National Prime Farmlands" and lands with Class III soils are considered "Farmlands of Statewide Significance." Class I soils have few limitations, the widest range of uses, and the least risk of damage when used. The soils in the other classes have progressively greater natural limitations. Class II soils have some limitations that reduce the choice of plants that can be grown, or require moderate conservation practices to reduce the risk of damage when used. Class III soils have more stringent limitations that will likely reduce the choice of plants, require special conservation practices, or both; and Class IV soils have severe limitations. Class V, VI, and VII soils are considered suitable for pasture but not for crops, and Class VIII soils are so rough, shallow, or otherwise limited that they do not produce economically worthwhile yields of crops, forage, or wood products.

The location and quantity of Class I, II, and III soils were an important consideration when farmland preservation areas were identified in the existing County farmland preservation plan (adopted in 1981) and in existing town land use and master plans. The County Farmland Preservation Plan[3] used the following criteria to designate Primary Farmlands: farms with at least 50 percent of soils classified as Class I, II, or III; located within a farming block of at least 640 acres; and having a minimum farm size of 35 acres. Farms less than 35 acres were included if used for the production of specialty crops or livestock, provided that the soil criterion and minimum farming block criterion were met. The number of acres contained in, and the relative proportion of, these various soil classes in the Town of Polk are set forth in Table V-1.

Land Evaluation and Site Assessment (LESA) Analysis

A land evaluation and site assessment (LESA) analysis of agricultural land in Washington County was conducted as part of the multi-jurisdictional planning process. The LESA process was developed in 1981 by the USDA – Soil Conservation Service (now the Natural Resources Conservation Service (NRCS)) and is an analytical tool designed to provide a systematic and objective procedure for rating and ranking the agricultural importance of a parcel. A LESA subcommittee was formed by the Agricultural, Natural, and Cultural Resources Workgroup for the Washington County Multi-Jurisdictional Comprehensive Plan to oversee the LESA analysis for the County.

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[3]Farmland Preservation Plan, Washington County, Wisconsin; *prepared by the firm Stockham & Vandewalle, Madison, Wisconsin.*

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Table V-1

AGRICULTURAL SOIL CAPABILITY IN THE TOWN OF POLK AND WASHINGTON COUNTY

Agricultural Soil Capability Class	Town of Polk		Washington County	
	Acres	Percent of Total Area	Acres	Percent of Total Area
Class I Soils	135	0.7	4,971	1.8
Class II Soils	10,801	53.6	144,392	51.8
Class III Soils	4,181	20.7	76,277	27.4
Class IV, V, VI, VII, and VIII Soils and Unclassified Areas	4,763	23.7	48,609	17.4
Surface Water	264	1.3	4,507	1.6
Total Area	20,144	100.0	278,756	100.0

Source: USDA- Natural Resources Conservation Service (NRCS) and SEWRPC.

The Washington County LESA analysis identified parcels that are best suited for long-term agricultural use. The results of the analysis are intended to help the County and Town identify areas for farmland protection. The County intends to use the results of the analysis to update the Washington County Farmland Preservation Plan, which is expected to be updated following adoption of the County comprehensive plan.

The LESA analysis included a ***"land evaluation"*** component and a ***"site assessment"*** component. The land evaluation (LE) component of the LESA analysis was determined by the NRCS, which rated each soil in Washington County based on soil type, slope, agricultural capability class, and soil productivity for producing corn and soybeans. The resulting ratings were then placed into groups ranging from the best to worst suited for cropland production. The site assessment (SA) component rates non-soil factors affecting a parcel's relative importance for agricultural use and is separated into three classifications. The LESA subcommittee selected the following nine SA factors to be used in the Washington County LESA analysis:

SA-1 Factors (agricultural productivity)
- Size of farm in contiguous management by one farm operator
- Compatibility of surrounding land uses within one-half mile
- Percent of farm in agricultural use

SA-2 Factors (development pressures impacting a site's continued agricultural use)
- Distance from adopted sewer service area
- Distance from selected hamlets
- Distance from interchanges along USH 41 and 45

SA-3 Factors (other public values of a site supporting retention in agriculture)
- Primary environmental corridors, secondary environmental corridors, isolated natural resource areas, natural areas, or critical species habitat outside environmental corridor areas present on farm
- Floodplains present on farm
- Proximity to permanently protected land 20 acres or more in size

Each parcel included in the County LESA analysis received a final score ranging from 0 to 10, with 10 being the best parcels for long-term agricultural protection. The County identified parcels with a LESA score of 6.8 or higher as "Tier 1" farmlands which are best suited for long-term protection. Lands scoring below 6.8 were defined as Tier II farmlands, which are areas that should be considered for long-term protection by Town officials on a case-by-case basis.

The LESA scores for agricultural parcels in the Town, grouped into categories, are shown on Map V-1. Table V-2 sets forth the number of parcels and number of acres in each category. The average LESA score for agricultural parcels in the Town was 6.7. The median LESA score was 6.8. The LESA analysis included some parcels that have other uses on them, which may include natural resource features such as woodlands, wetlands, or surface water, or fallow lands. In some cases, parcels developed partially for residential use, with a portion of the parcel used for agriculture, were included in the analysis (provided at least 2 percent of the parcel was in agricultural use). A hatch pattern is included on Map V-1 to show areas that were in agricultural use in 2006.

Existing Farmland

Agricultural lands were identified by SEWRPC as part of the 2000 regional land use inventory conducted as part of the regional planning program (see Map V-2). The land use inventory identified croplands, pasture lands, orchards, nurseries, specialized farming, and non-residential farm buildings. Farm residences, together with a 20,000 square foot dwelling site, are classified as single-family residential land uses in the 2000 inventory.[4] Based upon the 2000 land use inventory, about 141,755 acres, or about 222 square miles, representing almost 51 percent of Washington County, and approximately 10,386 acres, or about 51 percent of the Town, were in

[4]*See Chapter VI for more information about the SEWRPC 2000 land use inventory.*

Table V-2

LESA SCORES FOR AGRICULTURAL PARCELS IN THE TOWN OF POLK: 2007

LESA Score	Parcels in Category		Total Acres in Category[a]		Agricultural Acres in Category[b]	
	Number	Percent	Acres	Percent	Acres	Percent
Less than 6	198	24.4	2,405	19.0	964	10.5
6-6.9	275	33.8	3,817	30.2	2,858	31.0
7-7.9	259	31.9	4,505	35.6	3,715	40.3
8-8.9	80	9.8	1,888	14.9	1,646	17.9
9-10	1	0.1	31	0.3	29	0.3
Total	813	100.0	12,646	100.0	9,212	100.0

[a]*Includes entire area of parcels analyzed, including areas not being used for farming, such as woodlands, wetlands, and surface water.*

[b]*Includes only those portions of parcels in agricultural use in 2006.*

Source: SEWRPC.

agricultural use in 2000. This figure includes lands actually used for agriculture—primarily cultivated lands and lands used for pasture—and excludes the wetland and woodland portions of farm fields. The number of acres occupied by farmland in the Town in 2000 is set forth in Table V-3 and is categorized as follows:

- Cultivated Lands, which includes lands used for the cultivation of crops including row crops, grain crops, vegetable crops, and hay.
- Pasture Land and Unused Agricultural Lands, which includes lands used as pasture, or lands which were formerly cultivated or used for pasture and which have not yet succeeded to a wetland or woodland plant community.
- Orchards, Nurseries, and Specialty Crops, which includes lands used for orchards, nurseries, sod farms, and specialty crops such as mint, ginseng, and berries.
- Farm Buildings, which includes barns, silos, and other buildings used to store farm equipment or supplies or house farm animals.

The amount of land in agricultural use in the Town was updated to 2006 as part of the LESA analysis. Land uses were also generalized to include farmhouses on agricultural parcels of 20 acres or larger in the "agricultural" land use category. There were 9,604 acres, or about 48 percent of the Town, in agricultural use in 2006.

Farm Production and Revenue

Farm production and revenue inventory data[5,6] are useful in determining the major types of agricultural products produced and the economic impact of agriculture in Washington County. Agricultural sectors identified in the County and State in 2002, and the amount and percentage of sales associated with each sector, are set forth in Table V-4. Dairy products were the predominant source of agricultural sales in the County in 2002, accounting for about 45 percent of all agricultural sales. A similar percentage, about 47 percent, of agricultural sales Statewide was received from dairy products. Of the 844 farms in the County in 2002, 174 farms, or about 21 percent of all farms, were dairy farms.

Horticulture was the second-largest source of agricultural sales in Washington County in 2002, accounting for just over 19 percent of all sales. Statewide, horticulture accounted for just 3.5 percent of sales. The relative importance of the horticultural industry in the County compared to the State is likely a response to the demand for landscaping material for urban development in the County and in the Milwaukee metropolitan area.

Farms categorized by the total value of all 2002 agricultural sales in the County and the State are set forth in Table V-5. Almost one-third (263 farms, or about 31 percent) of all farms in Washington County had a total value of sales of less than $2,500, compared to about 39 percent of farms Statewide with a total value of sales of less than $2,500. There were 174 farms, or about 21 percent of farms in the County, with a total value of sales of $100,000 or more, compared to about 18 percent of State farms with a total value of sales of $100,000 or more.

Average net income from farm operations in the County in 2002 was $24,654, which was about 37 percent higher than the State average of $17,946. In Washington County, farming was the principal occupation of the farm operator on 552 farms, or almost 65 percent, and was not the primary occupation of the farm operator on the remaining 292 farms, or about 35 percent. Statewide, farming was the principal occupation of the farm operator on about 59 percent of farms and was not the principal occupation of the farm operator on the remaining 41 percent of farms.

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[5]*Data included in this section are 2002 data for Washington County from the USDA National Agricultural Statistics Service unless otherwise noted. Data is reported at the County level, and is not available for the Town of Polk. Additional information on County agriculture is available in the report* Farmland and Open Space Preservation Tools, *prepared by the Washington County Planning and Parks Department, June 2005.*

[6]*The USDA defines a farm as any place from which $1,000 or more of agricultural products (crops and livestock) were sold or normally would have been sold during the year under consideration.*

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Table V-3

AGRICULTURAL LANDS IN THE TOWN OF POLK AND WASHINGTON COUNTY: 2000

Agricultural Lands Category	Town of Polk		Washington County	
	Acres	Percent of Total Area	Acres	Percent of Total Area
Cultivated Lands	9,072	87.3	115,662	81.6
Pasture Land and Unused Agricultural Land	1,043	10.0	22,408	15.8
Orchards, Nurseries, and Specialty Crops	35	0.3	932	0.6
Farm Buildings	236	2.3	2,753	2.0
Total	10,386	100.0	141,755	100.0

Source: SEWRPC.

Table V-4

AGRICULTURAL SECTORS IN WASHINGTON COUNTY AND WISCONSIN: 2002

Sector	Washington County		State of Wisconsin	
	2002 Sales (in thousands)	Percent of Total Agricultural Revenues	2002 Sales (in thousands)	Percent of Total Agricultural Revenues
Dairy	$33,100	45.4	$2,651,000	47.1
Horticulture	14,000	19.2	197,400	3.5
Grains (Crops)	10,600	14.5	893,300	15.9
Cattle and Calves	8,100	11.1	834,900	14.9
Vegetables	1,600	2.3	341,600	6.1
Other	5,500	7.5	705,100	12.5
Total	$72,900	100.0	$5,623,300	100.0

Source: USDA-National Agricultural Statistics Service, 2002 Census of Agriculture.

Table V-5

FARMS IN WASHINGTON COUNTY AND WISCONSIN BY VALUE OF SALES: 2002

Value of Sales	Washington County		State of Wisconsin	
	Number	Percent	Number	Percent
Less than $2,500	263	31.2	30,491	39.5
$2,500 to $4,999	66	7.8	5,389	7.0
$5,000 to $9,999	75	8.9	5,788	7.5
$10,000 to $24,999	133	15.7	8,362	10.8
$25,000 to $49,999	59	7.0	5,929	7.7
$50,000 to $99,999	74	8.8	7,242	9.4
$100,000 or more	174	20.6	13,930	18.1
Total	844	100.0	77,131	100.0

Source: USDA National Agricultural Statistics Service, 2002 Census of Agriculture.

Number and Size of Farms

The number of farms by size category[7] in Washington County and Wisconsin in 2002 is set forth in Table V-6. As previously noted, there were 844 farms in the County in 2002. The average County farm size was 154 acres, and the median farm size was 86 acres. This compares to 204 acres and 140 acres, respectively, for farms in the State. Of the 844 farms in the County in 2002, 314 farms, or about 37 percent of all farms, were between 50 and 179 acres in size, and an additional 268 farms, or about 32 percent of all farms, were between 10 and 49 acres in size. Only 52 County farms, or about 6 percent of all County farms, were more than 500 acres in size in 2002.

Farms Enrolled in State and Federal Preservation Programs

There are a number of State and Federal conservation programs that have been created to help protect farmland and related rural land. These programs include the Wisconsin Farmland Preservation Program, Conservation Reserve Enhancement Program (CREP), Soil and Water Resource Management Program (SWRM), Conservation Reserve Program (CRP), and the Wetland Reserve Program (WRP).

Wisconsin Farmland Preservation Program

The Wisconsin Farmland Preservation Program provides income tax credits to eligible farmland owners. The program is administered by County and local governments, but the Wisconsin Land and Water Conservation Board (LWCB) must first certify that the county farmland preservation plan meets the standards specified in Chapter 91 of the *Wisconsin Statutes*. Of the 72 counties in Wisconsin, 70 have certified farmland preservation plans. Washington County's farmland preservation plan was certified in 1981. To be eligible to enroll in the program, farmland must be designated as such in the County Farmland Preservation Plan, must be a minimum of 35 contiguous acres, and must produce a minimum of $6,000 in gross farm receipts in the previous year or $18,000 in the previous three years. Farmland owners may participate in one of two ways: through exclusive agricultural zoning (in towns that have adopted an exclusive agricultural district in their zoning ordinance) or through Farmland Preservation Agreements.

Because the Town of Polk has not adopted exclusive agricultural zoning, landowners must enter into a Farmland Preservation Agreement with DATCP. Contracts are for 10- or 25-year periods. In 2005, there was one Wisconsin Farmland Preservation Agreement encompassing 164 acres of farmland in the Town. Under State regulations, no *new* Farmland Preservation Agreements may be made for farmland in Washington County or in any other county with a population density of 100 or more persons per square mile unless the local unit of government has adopted an exclusive agricultural zoning district.

Conservation Reserve Enhancement Program

The Conservation Reserve Enhancement Program (CREP) is a Federal-State-Local partnership between the USDA Farm Services Agency (FSA), the NRCS, the DNR, DATCP, and participating County Land Conservation Departments (LCD) throughout Wisconsin. The goal of CREP in Washington County is to establish riparian buffers and/or restore wetlands along navigable streams in order to reduce upland sediment (erosion) and pollution from entering surface waters. Agricultural lands that are currently being farmed are eligible for this program through 15-year contracts or through permanent conservation easements. In 2005, there were no CREP agreements in place with any Town landowners.

Soil and Water Resource Management Program

In 2004 the Washington County Land and Water Conservation Division elected to no longer participate in the CREP program; however, through annual grants from the DATCP Soil and Water Resource Management (SWRM) Program, the Land and Water Conservation Division has continued to promote the installation of riparian buffers. Landowners agreeing to the same restrictions required by CREP receive the same financial incentives that were offered through the CREP as CREP Equivalent Payments. Similar to CREP, agricultural lands that are currently being farmed are eligible for this program through 15-year contracts or through permanent conservation easements. In 2005, one SWRM conservation easement covering 19 acres was in force in the Town.

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[7]*Data included in this section includes lands owned by the farmer, not lands the farmer may rent.*

Table V-6

FARM SIZE IN WASHINGTON COUNTY AND WISCONSIN: 2002

	Washington County		State of Wisconsin	
Size (acres)	Number	Percent	Number	Percent
Less than 10 acres	67	7.9	4,141	5.4
10 to 49 acres	268	31.8	17,152	22.2
50 to 179 acres	314	37.2	29,458	38.2
180 to 499 acres	143	16.9	20,021	25.9
500 to 999 acres	33	3.9	4,465	5.8
1,000 acres or more	19	2.3	1,894	2.5
Total	844	100.0	77,131	100.0

Source: USDA-National Agricultural Statistics Service, 2002 Census of Agriculture.

Conservation Reserve Program
The USDA administers the Conservation Reserve Program (CRP) to help provide water quality protection, erosion control, and wildlife habitat in agricultural areas. Under the CRP, the landowner enters into an agreement to restore or protect lands for a 10-year or longer period in return for cash payments or assistance in making conservation improvements. In 2005, there were 197 CRP contracts in Washington County, encompassing 2,756 acres. The USDA adopted a policy in 2005 that prohibits the agency from releasing specific data regarding parcels enrolled in the CRP, so this information cannot be mapped. This policy effectively prevents the identification of the number of CRP agreements, if any, in effect in the Town. The County has appealed the decision to the Washington office of the Farm Services Administration.

Wetland Reserve Program
The Wetland Reserve Program (WRP) is a program aimed at protecting wetlands on private property. This is typically done by providing a financial incentive to landowners to restore wetlands that have been drained for agricultural use. Landowners who choose to participate in the program may sell a conservation easement to the USDA or enter into a cost-share restoration agreement with the USDA to restore wetlands. The landowner retains private ownership of the wetland area but limits future uses. In 2005, there were two WRP agreements encompassing about 11 acres of land in Washington County. The USDA adopted a policy in 2005 that prohibits the agency from releasing specific data regarding parcels enrolled in the WRP, so this information cannot be mapped. This policy effectively prevents the identification of the number of WRP agreements, if any, in effect in the Town. The County has appealed the decision to the Washington office of the Farm Services Administration.

PART 2 – INVENTORY OF NATURAL RESOURCES

Topography and Geology
The dominant landform in Washington County is the Kettle Moraine, an interlobate moraine, or glacial deposit, formed between the Green Bay and Lake Michigan lobes of the continental glacier that moved across the Great Lakes area approximately 11,000 years ago. The Kettle Moraine is oriented in a general northeast-southwest direction across the County. Some of its features include kames, or conical hills; kettles, which are depressions that mark the site of buried glacial ice blocks which became separated from the retreating main ice mass and which subsequently melted to form depressions; eskers, or long, narrow ridges of glacial drift deposited in meltwater tunnels within the ice; and abandoned drainageways. It forms some of the most attractive and interesting landscapes within the County. The Kettle Moraine area is the location of the highest elevation in the County and the location of the greatest local elevation differences, or relief.

The remainder of the County is covered by a variety of glacial landforms and features, including rolling landscapes of material deposited beneath the glacial ice; terminal moraines, consisting of material deposited at the forward edges of the ice sheet; lacustrine basins, which are former glacial lakes; outwash plains formed by the action of flowing glacial meltwater; drumlins, which are elongated teardrop-shaped mounds of glacial deposits that formed parallel to the flow of the glacier; and eskers. Except for a few isolated spots where dolomite bedrock is exposed at the surface, the entire County is covered with glacial deposits ranging from large boulders to fine grain clays.

The western portion of the Town of Polk is located in the Kettle Moraine, which includes small portions of Big Cedar Lake and Little Cedar Lake, and also contains extensive woodland areas within the Town. The remainder of the Town is glacial till and outwash plain and includes Cedar Creek.

Topographical features, particularly slopes, have a direct bearing on the potential for soil erosion and the sedimentation of surface waters. Slope steepness affects the velocity of and, accordingly, the erosive potential of runoff. As a result, steep slopes place moderate to severe limitations on urban development and agricultural activities, especially in areas with highly erodible soil types such as in the Kettle Moraine. About 1,595 acres, or about 8 percent of the Town, have slopes of 20 percent or greater; while about 1,703 acres, or about 9 percent of the Town, have slopes ranging from 12 to 20 percent.

Poorly planned hillside development in areas of steep slopes can lead to high costs for public infrastructure development and maintenance and construction and post-construction erosion problems. Steeply sloped agricultural land may make the operation of agricultural equipment difficult or even hazardous. Development or cultivation of steeply sloped lands is also likely to negatively impact surface water quality through related erosion and sedimentation.

A total of 11 sites of geological importance -- seven glacial sites (including the Kettle Moraine) and four bedrock geology sites -- were identified in the County in 1994 as part of the regional natural areas plan. The geological sites included in the inventory were selected on the basis of scientific importance, significance in industrial history, natural aesthetics, ecological qualities, educational value, and public access potential. Two of the 11 sites were considered to be of statewide significance; and one of these two, the Kettle Moraine Interlobate Moraine, traverses the Town in a general north-south direction in the western portion of the Town.

Nonmetallic Mineral Resources[8]

Nonmetallic minerals include, but are not limited to, sand, gravel, crushed stone, building or dimension stone, peat, and clay. Extractive sites for nonmetallic minerals in Southeastern Wisconsin provide sand, gravel, and crushed limestone or dolomite for structural concrete and road building; peat for gardening and horticulture; and dimension stone for use in buildings, landscaping, and monuments. Nonmetallic mineral resources are important economic resources that should be taken into careful consideration whenever land is being considered for development. Mineral resources, like other natural resources, occur where nature put them, which is not always convenient or desirable. Wise management of nonmetallic mineral resources is important to ensure an adequate supply of aggregate at a reasonable cost for new construction and for maintenance of existing infrastructure in the future.

According to the U. S. Geological Survey, each person in the United States uses an average of 9.5 tons of construction aggregate per year (construction aggregate includes sand, gravel, crushed stone, and recycled crushed concrete). Construction of one lane-mile of Interstate Highway uses 20,000 tons of aggregate. Aggregate is heavy and bulky, and is therefore expensive to transport. Having sources of aggregate relatively close (within 25 miles) of a construction project lessens the overall cost of construction. The cost of a ton of aggregate can more than double when it has to be hauled 25 miles or more.

Potential Sources of Sand, Gravel, Clay, and Peat

The location of potential commercially workable sources of sand, gravel, clay, and peat in the Town of Polk have been identified by the Wisconsin Geological and Natural History Survey (WGNHS) using a variety of sources, including geologic studies,[9] data from Road Material Survey records collected by WGNHS for the Wisconsin Department of Transportation (WisDOT), information on existing extractive sites, and information on closed extractive sites that were recently active. The sand and gravel potential is categorized as high, medium, and low by the WGNHS based on the glacial geology (Mickelson and Syverson, 1997[10]).

Approximately 9,355 acres in the Town of Polk, or about 46 percent of the Town's total area, have been identified as having a relatively high potential for the location of commercially viable deposits of gravel and coarse- to medium-grained sand. An additional 2,245 acres, or, again, about 11 percent of the Town, have been identified as having a potential for commercially viable deposits of fine-grained sand. The balance of the Town contains an abundance of commercially viable sand and/or gravel deposits, especially viable deposits of gravel and coarse- to medium-grained sand. Overall, the potential for sand and gravel production within the Town is considered to be

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[8] *There are no marketable metallic mining resources in Washington County.*

[9] Bedrock geology from Preliminary Bedrock Maps of Washington County (WOFR 2004-17) *by T. Evans, K. Massie-Ferch, and R. Peters, WGNHS.*

[10] *Mickelson, D. M. and K. M. Syverson,* Quaternary Geology of Ozaukee and Washington Counties, Wisconsin, *WGNHS Bulletin 91, 1997.*

relatively high. Some areas that may contain commercially viable deposits of clay and peat have also been identified in the Town.

Potential Sources of Crushed and Building Stone
The location of potential commercially workable sources of stone suitable for crushed or building stone in the Town of Polk have been identified by the WGNHS based principally upon locating and mapping areas underlain by Silurian dolomite within 50 feet of the land surface. No areas within the Town have been identified as having the potential for the development of commercially viable sources of crushed stone or building stone.

Existing Nonmetallic Mining Sites
There were three active nonmetallic mining sites located in the southern portion of the Town in 2007. In that same year, there were no identified inactive nonmetallic mining sites and one site used as a stockpiling site in the Town. Table V-7 lists the mine operator or current owner and the acreage of areas within existing mining sites that are operational, planned to be mined in the future (and which have an approved reclamation plan), and portions of the sites that have been reclaimed. The site owned and operated by the Wissota Sand & Gravel Co. was the largest nonmetallic mining site in Washington County in 2007, encompassing a total of 555 acres. All of the mines in the Town are used for sand and/or gravel extraction. The data was provided by Washington County, based on reclamation permits issued or reviewed by the County.

Registered Nonmetallic Mining Sites
Chapter NR 135 of the *Wisconsin Administrative Code* establishes a procedure for landowners to register marketable nonmetallic mineral deposits in order to preserve these resources. The Lannon Stone/Dawson site in the Town of Jackson was registered in 2001. Six parcels in the Town of Polk were registered in June 2008 by Wissota Sand and Gravel. All six of the parcels are owned by Wissota and are in the Quarrying (Q-1) zoning district. As of 2008, these two sites were the only registered nonmetallic mineral sites in Washington County.

NR 135 defines a marketable nonmetallic mineral deposit as one which can be or is reasonably anticipated to be commercially feasible to mine and which has significant economic or strategic value. The significant economic or strategic value must be demonstrable using geologic, mineralogical or other scientific data based upon the deposit's quality, scarcity, location, quantity or proximity to a known user. Only the owner of the land (as opposed to the owner of the mineral rights or other partial rights) can register a marketable nonmetallic mineral deposit. The registration must include a legal description of the land and certification and delineation by a registered professional geologist or a registered professional engineer. In making this certification, the geologist or engineer must describe the type and quality of the nonmetallic mineral deposit; the areal extent and depth of the deposit; the manner whereby the deposit's quality, extent, location, and accessibility contribute to its marketability; and the quality of the deposit in relation to current and anticipated standards and specifications for the type of material concerned.

A person wishing to register land pursuant to NR 135 must provide evidence that nonmetallic mining is a permitted or conditional use of the land under zoning in effect on the day notice is provided by the owner to government authorities. A copy of the proposed registration and supporting information must be provided to the applicable zoning authority (the Town of Polk), the County, and the DNR at least 120 days prior to filing the registration. The registration must include a certification by the landowner, which is binding on the landowner and his or her successors in interest, that the landowner will not undertake any action that would permanently interfere with present or future extraction of nonmetallic materials for the duration of the registration.

Notification Requirements
Section 66.1001(4) of the *Statutes* requires any unit of government that prepares and adopts a comprehensive plan to prepare and adopt written procedures to foster public participation. These written procedures must describe the methods the local government will use to distribute proposed elements of a comprehensive plan to owners or persons with a leasehold interest in property to extract nonmetallic mineral resources in or on property, in which the allowable use or intensity of use of the property is proposed to be changed by the comprehensive plan. All such parties were notified of the public hearing held prior to the adoption of this plan and offered an opportunity to submit comments to the Town Plan Commission and Town Board.

#125803 v1 - POLK CP TBL V-7
RLR/CDP
10/11/07; 02/26/07

Table V-7

NONMETALLIC MINING SITES IN THE TOWN OF POLK: 2007

Operator/Owner of Mine	Operational Sites (acres)	Planned Sites (acres)	Reclaimed Sites (acres)	Stockpiling Sites (acres)	Not Active – No Plan on File (acres)
Payne & Dolan, Inc.	13	16	- -	--	- -
Washington County (Heritage Trails)	16	15	5	--	- -
Wissota Sand & Gravel Co.	166	331	58	--	- -
SRM Richfield	--	--	--	4	--
Total – Four Sites	195	362	63	4	0

Source: Washington County and SEWRPC.

Water Resources

Surface water resources, consisting of lakes and streams and their associated wetlands, floodplains, and shorelands, form important elements of the natural resource base of the Town. Their contribution to economic development, recreational activity, and scenic beauty is immeasurable. In 2000, there were 264 acres of surface water, 2,227 acres of floodplains, and 1,840 acres of wetlands in the Town.

Both surface water and groundwater are interrelated components of a single hydrologic system. The groundwater resources are hydraulically connected to the surface water resources inasmuch as the former provide the base flow of streams and contribute to inland lake levels. The groundwater resources constitute the major source of supply for domestic, municipal, and industrial water users in Washington County.

Watersheds and Subwatersheds

A subcontinental divide that separates the Mississippi River and the Great Lakes – St. Lawrence River drainage basins crosses Washington County from the Town of Wayne on the north to the Village of Richfield on the south. About 164,684 acres, or 59 percent of the County, are located east of the divide and drain to the Great Lakes-St. Lawrence River system; the remaining 114,072 acres, or 41 percent of the County, drain west to the Mississippi River.

The subcontinental divide not only exerts a major physical influence on the overall drainage pattern of the County, but also carries with it legal constraints that, in effect, prohibit the diversion of any substantial quantities of Lake Michigan water across the divide. Areas east of the divide can utilize Lake Michigan as a source of water supply, with the spent water typically returned to the lake via the sanitary sewerage system. Areas west of the divide must use the groundwater reservoir as the supply source. A recent accord—the Great Lakes Charter Annex--signed by the governors of the eight States bordering the Great Lakes[11] and the premiers of the Canadian provinces of Ontario and Quebec bans most diversions of Great Lakes water outside the drainage basin, but makes limited exceptions for communities and counties that straddle the watershed boundary. The accord was approved by the Legislature of each of the eight States and by the U. S. Congress, and signed by then-President Bush in October 2008. The DNR is developing regulations to carry out the accord in Wisconsin.

Within the Town of Polk, the Milwaukee River watershed in the Great Lakes – St. Lawrence River drainage basin encompasses 14,862 acres, or about 74 percent of the Town. The Rock River watershed, located primarily in the southwestern portion of the Town, encompasses 5,282 acres, or about 26 percent of the Town.

Lakes and Streams

Major streams are defined as those which maintain, at a minimum, a small continuous flow throughout the year except under unusual drought conditions. Major streams in the Town include Cedar Creek, Coney River, and a portion of Evergreen Creek. Major lakes are defined as those lakes which have a surface area of 50 or more acres. A 104-acre portion of Big Cedar Lake and a 36-acre portion of Little Cedar Lake are located within the Town.

Lakes and streams are readily susceptible to degradation through improper land use development and management. Water quality can be degraded by excessive pollutant loads, including nutrient loads, which enter from malfunctioning and improperly located onsite waste treatment systems, from sanitary sewer overflows, from construction and other urban runoff, and from careless agricultural practices. The water quality of lakes and streams may also be adversely affected by the excessive development of riparian areas and by the filling of peripheral wetlands, which remove valuable nutrient and sediment traps while adding nutrient and sediment sources. It is important that existing and future development in riparian areas be managed carefully to avoid further water quality degradation and to enhance the recreational and aesthetic values of surface water resources.

Lake Protection and Rehabilitation Districts have been formed under Chapter 33 of the *Wisconsin Statutes.* Portions of Big Cedar Lake and Little Cedar Lake Protection and Rehabilitation Districts are located in the northern portion of the Town of Polk. Lake districts are a special-purpose unit of government formed to maintain,

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[11] *Includes the States of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin.*

protect, and improve the quality of a lake and its watershed. The Big Cedar Lake Protection and Rehabilitation District, in collaboration with State and local governments and the Cedar Lakes Conservation Foundation, has implemented numerous lake and land management practices within the Lake and tributary drainage area. These measures have included the installation of manure management systems on farms within the drainage basin, the alteration of cropping practices to minimize soil loss within the watershed, the construction of stormwater detention and conveyance systems, the restoration of woodland, wetland and prairie ecosystems, and the acquisition of conservation lands.

Both lake districts have completed lake management plans, or components of such plans. Volume 1 of the water quality protection and stormwater management plan for Big Cedar Lake[12] recommends the preparation of stormwater management plans for all 20 subbasins within the lake watershed, protection of ecologically important areas, continued maintenance and inspection programs for on-site waste treatment systems, aquatic plant management, and education regarding proper pesticide and fertilizer use within the watershed. Volume 2 of the plan consists of stormwater management plans for three subbasins within the lake watershed, all located in the Town of West Bend. The aquatic plant management plan for Little Cedar Lake[13] sets forth recommendations for the management of aquatic plants, protection of primary environmental corridors and other natural resource areas, and education regarding proper pesticide and fertilizer use within the watershed.

Wetlands

Wetlands generally occur in depressions and near the bottom of slopes, particularly along lakeshores and stream banks, and on large land areas that are poorly drained.[14] Wetlands may, however, under certain conditions, occur on slopes and even on hilltops. Wetlands perform an important set of natural functions which include support of a wide variety of desirable, and sometimes unique, forms of plant and animal life; water quality protection; stabilization of lake levels and streamflows; reduction in stormwater runoff by providing areas for floodwater impoundment and storage; and protection of shorelines from erosion.

Wetlands identified in SEWRPC's regional land use inventory encompassed about 1,840 acres, or about 9 percent of the Town, in 2000 (see Map V-2). The identification of wetlands is based on the Wisconsin Wetlands Inventory completed in 1982, updated to the year 2000 as part of the regional land use inventory. In addition to the wetlands identified by the Wisconsin Wetlands Inventory, certain other areas have been identified by the NRCS as farmed wetlands, which are subject to Federal wetland regulations. An updated wetland inventory for Washington County was released in 2008. The updated inventory was conducted by SEWRPC under contract to the DNR. The new wetland inventory is shown on Map XII-1 in the Implementation Element (Chapter XII). Larger scale maps are available for review at the offices of the Washington County Planning and Parks

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[12] *Documented in SEWRPC Memorandum Report No. 137,* A Water Quality Protection and Stormwater Management Plan for Big Cedar Lake, Volume 1- Inventory Findings, Water Quality Analyses, and Recommended Management Measures; and Volume 2- Stormwater Management Plans for Three Pilot Subbasins, *August 2001.*

[13] *Documented in SEWRPC Memorandum Report No. 146,* An Aquatic Plant Management Plan for Little Cedar Lake, *May 2004.*

[14] *The definition of "wetlands" used by SEWRPC is the same as that of the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency. Under this definition, wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency, and with a duration sufficient to support, and that under normal circumstance do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. This definition differs somewhat from the definition used by the DNR. Under the DNR definition, wetlands are areas 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. As a practical matter, application of either the DNR definition or the EPA-Army Corps of Engineers-SEWRPC definition has been found to produce relatively consistent wetland identification and delineations in the majority of the situations in southeastern Wisconsin.*

Department and SEWRPC. The inventory can also be viewed on the DNR's Surface Water Data Viewer website at http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=SurfaceWaterViewer.

Wetlands and their boundaries are continuously changing in response to changes in drainage patterns and climatic conditions. While wetland inventory maps provide a basis for areawide planning, detailed field investigations are necessary to precisely identify wetland boundaries on individual parcels. Field investigations are generally conducted at the time a parcel is proposed to be developed or subdivided.

Floodplains

The floodplains of a river are the wide, gently sloping areas usually lying on both sides of a river or stream channel. The occasional flow of a river onto its floodplain is a normal phenomenon and, in the absence of flood control works, can be expected to occur periodically. For planning and regulatory purposes, floodplains are defined as those areas subject to inundation by the 100-year recurrence interval flood event. This event has a 1 percent chance of being equaled or exceeded in any given year. Floodplains are generally not well suited for urban development because of the flood hazard, the presence of high water tables, and/or the presence of wet soils.

Floodplains in Washington County for which floodplain elevations have been determined through detailed engineering studies were delineated by SEWRPC on large scale topographic maps as part of an update to the Washington County shoreland and floodplain zoning maps completed in 2001. Detailed studies and 100-year flood profiles are available for Cedar Creek, Coney River, Hasmer Creek, Putter Creek, Springside Creek, Unnamed Tributaries No. 1 and No. 2 to the Coney River, and Unnamed Tributary No. 1 to the Coney River Overflow. Where flood elevations were not available, approximate floodplain delineations from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps were mapped on the orthophotos as part of the update to the shoreland and floodplain zoning maps. "Approximate" floodplains are those mapped by FEMA without the support of detailed engineering studies. Floodplains within the Town identified as part of the shoreland and floodplain zoning map update for Washington County encompass 2,227 acres, or about 11 percent of the Town.

FEMA is currently conducting a Map Modernization Program for Washington County which will result in updated FEMA floodplain maps for both incorporated (city and village) and unincorporated (town) areas. Preliminary maps were released in August 2007. Release of the final maps is pending. The map modernization project will result in new floodplain delineations in some areas and new floodplain maps for the entire County.

Shorelands

Shorelands are defined by the *Wisconsin Statutes* as lands within the following distances from the ordinary high water mark of navigable waters: 1,000 feet from a lake, pond, or flowage; and 300 feet from a river or stream, or to the landward side of the floodplain, whichever distance is greater. In accordance with the requirements set forth in Chapters NR 115 (shoreland regulations) and NR 116 (floodplain regulations) of the *Wisconsin Administrative Code*, the Washington County shoreland and floodplain zoning ordinance restricts uses in wetlands located in the shorelands, and limits the uses allowed in the 100-year floodplain to prevent damage to structures and property, to protect floodwater conveyance areas, and to maintain the storage capacity of floodplains. The ordinance also includes restrictions on the removal of vegetation and filling, grading, and excavating within the shoreland area. Most structures must be set back a minimum of 75 feet from the ordinary high-water mark if adjacent to a Class 3 waterbody, 100 feet if adjacent to a Class 2 waterbody, and 125 feet if adjacent to a Class 1 waterbody, although the setbacks along Class 1 and 2 waterbodies may be reduced to 100 feet and 75 feet, respectively, subject to approval of mitigation measures. Shorelands within the Town identified as part of the shoreland and floodplain zoning map update for Washington County encompass 4,808 acres, or about 24 percent of the town.

Surface water resources of the Washington County lake and stream classification project[15] established a system that classifies lakes and streams into three groups. The classifications are as follows: Class I waters are those lakes and streams that are relatively pristine or undeveloped and should be protected or preserved as high-quality resource waters. These waters are generally small, shallow lakes and streams with a high-quality fishery and are the most susceptible to water pollution problems. Class II waters are those lakes and streams that currently have limited development and should be maintained in their current good quality. Class III waters, which are comprised of those waterbodies that have been historically more intensively developed for residential and recreational use, are those lakes and streams in need of restoration and active management. These are generally large, deep waterbodies. A fourth class was added that accommodates all waterbodies not included in the other three classes. Waterbodies within Class IV can be developed utilizing Class II criteria or the applicant can utilize the criteria established within the County shoreland, wetland, and floodplain zoning ordinance (Chapter 23) to determine an accurate classification for the waterbody.

The surface water classifications were incorporated into the County's shoreland, wetland, and floodplain zoning ordinance, which includes certain types of regulations, such as development with increased setbacks from lakes and streams, based on the classification of the adjacent lake or stream. The regulations are designed to offer a higher level of protection to higher-quality lakes and streams. Lake and stream classifications are listed on Table V-8.

Under Chapter NR 117 of the *Administrative Code*, cities and villages are required to restrict uses in wetlands located in the shoreland area. The provisions of NR 115, which regulate uses in unincorporated portions of the shoreland, apply in cities and villages only in shoreland areas annexed to a city or village after May 7, 1982. The same floodplain regulations set forth in NR 116 for unincorporated areas also apply within cities and villages. Each city and village administers the floodplain regulations within its corporate limits.

Groundwater Resources

Groundwater resources constitute another key element of the natural resource base of the Town and County. Groundwater not only sustains lake levels and wetlands and provides the base flow of streams, but also provides the water supply for domestic, municipal, and industrial water users in Washington County.

Groundwater occurs within three major aquifers that underlie the County and the remainder of southeastern Wisconsin. From the land's surface downward, they are: 1) the sand and gravel deposits in the glacial drift; 2) the shallow dolomite strata in the underlying bedrock; and 3) the deeper sandstone, dolomite, siltstone, and shale strata. Because of their proximity to the land's surface and hydraulic interconnection, the first two aquifers are commonly referred to collectively as the "shallow aquifer," while the latter is referred to as the deep aquifer. Within the County, the shallow and deep aquifers are separated by the Maquoketa shale, which forms a relatively impermeable barrier between the two aquifers.

Recharge to groundwater is derived almost entirely from precipitation. Much of the groundwater in shallow aquifers originates from precipitation that has fallen and infiltrated within a radius of about 20 or less miles from where it is found. The deeper sandstone aquifers are recharged by downward leakage of water through the Maquoketa Formation from the overlying aquifers or by infiltration of precipitation beyond the western boundary of the County where the sandstone aquifer is not overlain by the Maquoketa Formation and is unconfined.

On the average, precipitation annually brings about 32 inches of water to the surface of Washington County. For the area of the County that would translate into about 660 million gallons per day (mgd) of water averaged over the year (a total of 240,900 million gallons a year). It is estimated that approximately 80 percent of that total is lost by evapotranspiration. Of the remaining water, part runs off in streams and part becomes groundwater. The average annual groundwater recharge to shallow aquifers varies from about 5 to 15 percent of annual precipitation. To document the utilization of the shallow aquifers in the Region, it may be assumed, for example,

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[15] *Documented in SEWRPC Memorandum Report No. 139*, Surface Water Resources of Washington County, Wisconsin, Lake and Stream Classification Project: 2000, *September 2001.*

#138420 v2 - POLK CP TBL V-8
02/23/09; 7/25/08
NMA/lgh

Table V-8

LAKE AND STREAM CLASSIFICATIONS UNDER THE WASHINGTON COUNTY SHORELAND ZONING ORDINANCE: 2006

Lake or Stream	Classification		
	Class1	Class 2	Class 3
Lakes:			
Allis	--	2	--
Amy Belle	--	--	3
Bark	--	--	3
Beck	1	--	--
Big Cedar	--	--	3
Boltonville Pond	--	2	--
Brickyard	--	2	--
Druid	--	--	3
Ehne (Ehny)	--	2	--
Erler	--	2	--
Five	--	--	3
Friess	--	--	3
Gilbert	1	--	--
Green	--	--	3
Hackbarth/L. Silver	--	2	--
Hartford Millpond	1	--	--
Hasmer	--	2	--
Hawthorn	1	--	--
Hickey	--	2	--
Keown	--	2	--
Kewaskum Millpond	1	--	--
Kohlsville Millpond	--	2	--
Lehner	1	--	--
Lent	--	2	--
Lenwood	--	--	3
Little Cedar	--	--	3
Little Drickens	--	2	--
Little Friess (Bony)	--	2	--
Lohr Pond	--	2	--
Lowe (Loews)	--	2	--
Lucas	--	2	--
Malloy	1	--	--
Mayer Millpond	1	--	--
Mayfield Pond	1	--	--
McConville	1	--	--
Miller	--	2	--
Mud[a]	1	--	--
Mud[b]	--	2	--
Mueller	--	2	--
Murphy	--	2	--
Newburg Pond	1	--	--
Pike	--	--	3
Proschinger	--	2	--
Quaas	--	2	--

Table V-8
(continued)

Lake or Stream	Classification		
	Class1	Class 2	Class 3
Lakes (cont'd):			
Radtke	--	2	--
Rockfield Quarry Pond	--	2	--
Silver	--	--	3
Smith (Drickens)	--	2	--
Tily (Tilly)	--	2	--
Twelve	--	--	3
Wallace	--	--	3
Werner Pond	1	--	--
Streams:			
Allenton Creek	1	--	--
Ashippun River	--	2	--
Bark River	--	2	--
Cedar Creek	--	--	3
Cedarburg Creek	--	2	--
Coney River	1	--	--
East Branch Milwaukee River	--	--	3
East Branch Rock River	--	--	3
Engmon Creek	1	--	--
Erler Outlet	--	2	--
Evergreen Creek	1	--	--
Flynn Creek	--	2	--
Goldendale Creek	1	--	--
Junk Creek	1	--	--
Kewaskum Creek	--	2	--
Kohlsville River	--	2	--
Kressin Branch	--	--	3
Lehner Outlet	1	--	--
Limestone Creek	--	2	--
Little Cedar Creek	--	2	--
Little Oconomowoc River	--	2	--
Mason Creek	1	--	--
Meadow Brook Creek	--	--	3
Menomonee River	--	--	3
Milwaukee River	--	--	3
Myra Creek	1	--	--
Nolan Creek	--	2	--
North Branch Cedar Creek	--	2	--
North Branch Milwaukee River	--	--	3
Oconomowoc River	--	2	--
Polk Springs Creek	--	2	--
Quaas Creek	--	2	--
Rubicon River	--	2	--
Silver Creek	1	--	--
Stoney Creek	1	--	--
Wallace Creek	--	2	--

Table V-8
(continued)

Lake or Stream	Classification		
	Class 1	Class 2	Class 3
Streams (cont'd):			
Wayne Creek	--	2	--
West Branch Milwaukee River ..	1	--	--
Willow Creek	--	2	--

Note: This table should not be used to determine regulations that may apply in shoreland areas. Refer to Chapter 23 of the *Washington County Code of Ordinances* for current lake and stream classifications and related requirements.

[a] *The Mud Lake classified as a Class 1 waterbody is located in the Village of Richfield.*

[b] *The Mud Lake classified as a Class 2 waterbody is located in the Town of Polk.*

Source: Washington County and SEWRPC.

that, on the average, 10 percent of the annual precipitation reaches groundwater. Then, the average groundwater recharge in Washington County would be estimated to be 66 mgd. This precipitation will be returned to the shallow aquifer within days or months, depending on the soil. The estimated daily use of groundwater in 2000 was 13 mgd, which is about 20 percent of the total amount of groundwater assumed to be recharged in that year. This indicates that there is an adequate annual groundwater recharge to satisfy water demands on the shallow aquifer system in Washington County for years to come on an areawide basis. However, the availability on a localized area basis will vary depending upon usage, pumping system configuration, and groundwater flow patterns. Groundwater modeling[16] indicates small areas of drawdown of five feet or less in the shallow aquifer.

The situation is different for the deep aquifers, where withdrawals of groundwater cause supply/demand imbalance in areas of concentrated use of groundwater, which has resulted in the "mining" of groundwater, and where recharge of the aquifer may take years or even decades, depending on the depth and geology of the aquifer. The deep aquifer levels have decreased from 50 to 150 feet within the County. Most of this decline is due to pumping beyond the County boundaries.

To satisfy future water demands in the Southeastern Wisconsin Region, including Washington County, coordinated regional water resource management is needed, which would optimize the use of ground and surface water. The regional water supply planning program[17] currently being conducted by SEWRPC will provide guidance in this regard and is scheduled to be completed in 2009. At the time this comprehensive plan was prepared, areas within Washington County and the remainder of the Region had been analyzed and classified based on their potential for water recharge. The analysis was based on a combination of topography, soil hydrologic groups, soil water storage, and land use. An "average" weather year of 1997 was selected for the analysis, since the amount of precipitation received also affects the amount of water that reaches (and recharges) the groundwater. Areas were placed into the following classifications: very high (more than six inches of recharge per year), high (four to six inches of recharge per year), moderate (three to four inches of recharge per year), and low (less than three inches of recharge per year). Areas for which no soil survey data was available (shown as "undetermined" on Map V-3) were not classified. Areas shown as "undetermined" are largely made up of wetlands. Groundwater typically serves as a source of water for a wetland, making them groundwater discharge areas rather than groundwater recharge areas.

Areas within each of the recharge classifications in the Town are shown on Map V-3, and the acreage within each category is listed on Table V-9. About 2 percent of the Town is rated "very high" for recharge potential, and about 35 percent is rated "high" for recharge potential. Most of the high and very high recharge potential areas are located in a band that crosses the Town from the northeast to the southwest corner, which generally corresponds to the Kettle Moraine area. Primary environmental corridors and floodplains were overlaid on Map V-3 to indicate the correlation between such areas and groundwater recharge potential. About 70 percent of high and very high recharge potential areas outside of wetlands are located within primary environmental corridors and floodplains in the Town.

Development at rural densities, agricultural uses, and preservation of natural resources will preserve groundwater recharge capabilities. In addition, the use of subdivision design and stormwater management measures that maintain natural water flow and drainage can help preserve the groundwater recharge potential in areas developed for suburban-density residential uses and other urban uses.

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[16]*Documented in SEWRPC Technical Report No. 41,* A Regional Aquifer Simulation Model for Southeastern Wisconsin, *June 2005.*

[17]*Documented in SEWRPC Planning Report No. 52,* A Regional Water Supply Plan for Southeastern Wisconsin *(underway). The plan is expected to be completed in 2009.*

Table V-9

CLASSIFICATION OF POTENTIAL WATER RECHARGE AREAS IN THE TOWN OF POLK: 2007

Water Recharge Classification	Area Within Each Classification		Portion Within Primary Environmental Corridor or Floodplain	
	Acres	Percent[a]	Acres	Percent[b]
Very High	449	2.2	181	4.2
High	7,054	35.0	1,706	39.3
Moderate	9,986	49.6	818	18.9
Low	331	1.7	2	--[c]
Urban Development and Undetermined[d]	2,324	11.5	1,632	37.6
Total	20,144	100.0	4,339	21.5[e]

[a]*Percent of Town within each classification.*

[b]*Percent of each classification included in a primary environmental corridor or floodplain.*

[c]*Less than 0.05 percent.*

[d]*Areas for which the recharge potential is undetermined are primarily wetlands.*

[e]*Percent of Town located in primary environmental corridor or floodplain.*

Source: Wisconsin Geological and Natural History Survey and SEWRPC.

Forest Resources

Woodlands

With sound management, woodlands can serve a variety of beneficial functions. In addition to contributing to clean air and water and regulating surface water runoff, woodlands help maintain a diversity of plant and animal life. The destruction of woodlands, particularly on hillsides, can contribute to excessive stormwater runoff, siltation of lakes and streams, and loss of wildlife habitat. Woodlands are defined as upland areas of one acre or more in area, having 17 or more trees per acre, each deciduous tree measuring at least four inches in diameter 4.5 feet above the ground, and having canopy coverage of 50 percent or greater. Coniferous tree plantations and reforestation projects are also classified as woodlands. As shown on Map V-2, woodlands encompassed 2,134 acres, or about 11 percent of the Town,[18] in 2000.

Managed Forest Lands

The Managed Forest Law (MFL) is an incentive program intended to encourage sustainable forestry on private woodlands in Wisconsin with a primary focus on timber production. The MFL offers private owners of woodlands a reduced property tax rate as an incentive to participate. All Wisconsin private woodland owners with at least 10 acres of contiguous forestland in the same city, village, or town are eligible to apply provided the lands meet the following criteria: 1) a minimum of 80 percent of the land must be wooded, 2) the land must be used primarily for growing forest products (agricultural uses such as cropland, pasture, or orchards are not eligible), and 3) there are no recreational uses that interfere with forest management.

Participants enter into a 25 or 50 year contract. A penalty is assessed if an agreement is terminated before its end. Starting with 2008 entries, applications must include a management plan prepared by a person certified by the DNR. If the enrolled property is sold before the agreement period has expired, the new owner can choose one of three options: 1) complete the agreement period with the approved plan, 2) adjust the plan to meet new goals and objectives, or 3) withdraw the land and pay the penalty. Lands can be open or closed to the public, but the tax benefit is substantially greater for enrolled acreage that is open to the public. In 2005, 315 acres of woodlands in the Town were enrolled in the program, but all of the woodlands were closed to the public.

Natural Areas and Critical Species Habitat Sites

A comprehensive inventory of natural resources and important plant and animal habitats was conducted by SEWRPC in 1994 as part of the regional natural areas and critical species habitat protection and management plan. The inventory systematically identified all remaining high-quality natural areas, critical species habitat, and sites having geological significance within the Region. Ownership of identified natural areas and critical species habitat sites in the County were reviewed and updated in 2005.

Natural Areas

Natural areas are tracts of land or water so little modified by human activity, or sufficiently recovered from the effects of such activity, that they contain intact native plant and animal communities believed to be representative of the landscape before European settlement. Natural areas are classified into one of three categories: natural areas of statewide or greater significance (NA-1), natural areas of countywide or regional significance (NA-2), and natural areas of local significance (NA-3). Classification of an area into one of these three categories is based on consideration of the diversity of plant and animal species and community type present, the structure and integrity of the native plant or animal community, the uniqueness of the natural features, the size of the site, and the educational value.

A total of seven natural areas, encompassing about 649 acres, have been identified in the Town of Polk. The Big Cedar Lake Bog, a 26-acre portion of Mud Lake Meadow, a 105-acre portion of Mud Lake Swamp, and Mud Lake Upland Woods are classified as a NA-2 sites, and together encompass about 274 acres in the Town. The

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[18]*This data includes upland woods only, not lowland woods classified as wetlands, such as tamarack swamps. Lowland woods may be enrolled in the Managed Forest Law program as discussed in the following section.*

Heritage Trails Bog, Mueller Woods, and Slinger Upland Woods are classified as a NA-3 sites, and together encompass about 375 acres in the Town. These seven natural areas are more fully described in Table V-10 and are shown on Map VI-2 in Chapter VI. The regional natural areas plan[19] recommends the preservation of all natural areas owned or located in the Town through protective acquisition. The natural areas plan recommends that Washington County acquire those portions of the Big Cedar Lake Bog, Mud Lake Upland Woods, Mud Lake Meadow, Mud Lake Swamp, and Heritage Trails Bog natural areas which are not currently owned by the County. The plan also recommends that a nonprofit conservation organization acquire the Mueller Woods natural area and that the DNR acquire those portions of the Slinger Upland Woods that are not currently owned by the DNR.

Critical Species Habitat and Aquatic Sites

Critical species habitat sites consist of areas outside natural areas that are important for their ability to support rare, threatened, or endangered plant or animal species. Such areas constitute "critical" habitat considered to be important to the survival of a particular species or group of species of special concern. There were no upland critical species habitat sites identified in the Town of Polk; however, six aquatic sites supporting threatened or rare fish and mussel species were identified in the Town. The six sites contain about five miles of rivers and streams and about 175 acres of lakes, including a 104-acre portion Big Cedar Lake, which is identified as an aquatic area of statewide or greater significance, and a 36-acre portion of Little Cedar Lake. Aquatic habitat sites are more fully described in Table V-11. Aquatic habitat sites are protected under DNR regulations and County shoreland regulations.

Reestablishment of Forest Interior

In addition to setting forth recommendations for the protection of existing areas with important biological resources, the regional natural areas plan also recommends that efforts be made to reestablish relatively large tracts of grasslands and forest interiors in the Region. Reestablishment of such tracts would serve to provide additional habitat for bird populations, which have been adversely affected by loss of habitat due to development in the Region. Two sites in Washington County, one in the Town of Addison and one in the Town of Trenton, were identified for reestablishment of forest interior.

Environmental Corridors and Isolated Natural Resource Areas

One of the most important tasks completed under the regional planning program for Southeastern Wisconsin has been the identification and delineation of those areas in which concentrations of the best remaining elements of the natural resource base occur. It has been recognized that preservation of these areas is essential to both the maintenance of the overall environmental quality of the Region and to the continued provision of the amenities required to maintain a high quality of life for residents.

Seven elements of the natural resource base are considered essential to the maintenance of the ecological balance and the overall quality of life in the Region, and served as the basis for identifying the environmental corridor network. These seven elements are: 1) lakes, rivers, and streams and associated shorelands and floodplains; 2) wetlands; 3) woodlands; 4) prairies; 5) wildlife habitat areas; 6) wet, poorly-drained, and organic soils; and 7) rugged terrain and high relief topography. In addition, there are certain other features which, although not a part of the natural resource base, are closely related to the natural resource base and were used to identify areas with recreational, aesthetic, ecological, and natural value. These features include existing park and open space sites, potential park and open space sites, historic sites, scenic areas and vistas, and natural areas.

The mapping of these 12 natural resource and resource-related elements results in a concentration of such elements in an essentially linear pattern of relatively narrow, elongated areas that have been termed "environmental corridors" by SEWRPC. Primary environmental corridors include a wide variety of the most important natural resources and are at least 400 acres in size, two miles long, and 200 feet wide. Secondary environmental corridors serve to link primary environmental corridors, or encompass areas containing concentrations of natural resources between 100 and 400 acres in size. Where secondary environmental corridors

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[19]*Documented in SEWRPC Planning Report No. 42,* A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin, *September 1997.*

Table V-10

NATURAL AREAS IN THE TOWN OF POLK: 2005[a]

No. on Map VI-2	Area Name	Classification Code[b]	Location	Ownership	Size (acres)	Description and Comments
1	Mud Lake Swamp	NA-2 (RSH)	T10N, R19E Section 1 Town of Polk T11N, R19E Section 35 Town of West Bend	Wisconsin Department of Transportation and private	105[c]	Good-quality, undeveloped calcareous head-water lake surrounded by lowland hardwoods and tamarack swamp. Fen and bog floral elements are present. Adversely affected by construction of USH 45
2	Big Cedar Lake Bog	NA-2	T10N, R19E Section 6 Town of Polk	Private	89	Good-quality, relatively large sphagnum bog, surrounded by a tamarack fringe. Regionally uncommon species are present. Some past attempts at ditching
3	Mud Lake Upland Woods	NA-2	T10N, R19E Section 19 Town of Polk	Private	54	Relatively undisturbed southern dry-mesic woods on rolling moraine topography. Dominated by red and white oaks, with a mixture of red maple, sugar maple, basswood, and white ash. Few exotics present. Threatened by encroaching residential development. A good example of this forest type
4	Mud Lake Meadow	NA-2 (RSH)	T10N, R19E Section 19 Village of Slinger T10N, R19E Section 19 Town of Polk	Private	26[d]	Good-quality open meadow to the east and north of a small, shallow, alkaline seepage lake. Dominated by wire-grass sedges. Fen elements are present, as well as a few scattered patches of tamaracks. A site of unusual species composition
5	Mueller Woods	NA-3	T10N, R19E Section 6 Town of Polk	Private	90	Relatively large dry-mesic woods of moderate quality, located on rolling moraine with some deep kettle holes. Evidence of past grazing and selective logging. Site has recently been disturbed by road and residence in interior, and highway construction along western border
6	Slinger Upland Woods	NA-3	T10N, R19E Sections 8 and 9 Town of Polk	Department of Natural Resources, Cedar Lakes Conservation Foundation, and other private	191	Relatively large area of disturbed southern mesic and dry-mesic hardwoods on kettle and kame topography
7	Heritage Trails Bog	NA-3	T10N, R19E Sections 20 and 29 Town of Polk	Washington County and private	94	Relatively undisturbed tamarack bog within an interlobate moraine depression. Other associated communities include lowland hardwoods and shrub-carr

[a] *Inventory conducted in 1994; ownership information updated in 2005.*

[b] *NA-2 identifies Natural Area sites of countywide or regional significance. NA-3 identifies Natural Area sites of local significance. RSH, or Rare Species Habitat, identifies those sites which support rare, threatened, or endangered animal or plant species officially designated by the Wisconsin Department of Natural Resources.*

[c] *The site totals 186 acres, with 105 acres located in the Town and the remaining 81 acres located in the Town of West Bend.*

[d] *The site totals 59 acres, with 26 acres located in the Town and the remaining 33 acres located in the Village of Slinger.*

Source: Wisconsin Department of Natural Resources, Wisconsin Geological and Natural History Survey, and SEWRPC. Sites were identified as part of the regional natural areas plan, documented in SEWRPC Planning Report No. 42, A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin, *September 1997.*

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NMA/RLR/TDP
04/25/08; 02/19/07

Table V-11

AQUATIC HABITAT AREAS IN THE TOWN OF POLK: 2005[a]

River, Stream, or Lake	Size[b]	Rank[c]	Description[d] and Comments
Cedar Creek downstream from Little Cedar Lake to Little Cedar Creek inflow	4.6 miles	AQ-2 (RSH)	Contains critical mussel and fish species habitat
Big Cedar Lake	104 acres	AQ-1 (RSH)	A deep spring-drainage lake at the headwaters of Cedar Creek; critical fish and herptile species present; good water quality
Little Cedar Lake	36 acres	AQ-2 (RSH)	A drainage lake with adjacent wetlands which support good habitat for critical herptile species such as the bullfrog
Mud Lake	7 acres	AQ-3	An undeveloped seepage lake encompassed by a Natural Area, Mud Lake Meadow
Mueller Lake	14 acres	AQ-3 (RSH)	A spring lake with an adjacent Natural Area, Big Cedar Lake Bog; critical herptile habitat
Tilly Lake	14 acres	AQ-3 (RSH)	A spring lake with critical fish species present

[a] *Inventory conducted in 1994; ownership information updated in 2005.*

[b] *Size is listed as stream miles for rivers and streams and lake surface area (in acres) for lakes. Includes the length of a river or stream and the area of a lake located within the Town.*

[c] *AQ-1 identifies Aquatic Area sites of statewide or greater significance.*
AQ-2 identifies Aquatic Area sites of countywide or regional significance.
AQ-3 identifies Aquatic Area sites of local significance.
RSH, or Rare Species Habitat, identifies those aquatic areas which support rare, endangered, threatened, or "special concern" species officially designated by the Wisconsin Department of Natural Resources.

[d] *"Seepage lakes" are lakes which have no inlet or outlet and whose main source of water is direct precipitation and runoff supplemented by groundwater. "Spring lakes" are lakes which have no inlet but do have an outlet and whose main source of water is groundwater flowing directly into the basin and from the immediate drainage area. "Drainage lakes" are lakes that have both an inlet and an outlet and whose main water source is a river or stream.*

Source: Wisconsin Department of Natural Resources, Wisconsin Geological and Natural History Survey, and SEWRPC. Sites were identified as part of the regional natural areas plan, documented in SEWRPC Planning Report No. 42, A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin, *September 1997.*

serve to link primary corridors, no minimum area or length criteria apply. Secondary environmental corridors that do not connect primary corridors must be at least 100 acres in size and one mile long. An isolated concentration of natural resource features, encompassing at least five acres but not large enough to meet the size or length criteria for primary or secondary environmental corridors, is referred to as an isolated natural resource area.

The preservation of environmental corridors and isolated natural resource areas are essential. Open uses can help reduce flood flows, reduce noise pollution, and maintain air and water quality. Corridor preservation is important to the movement of wildlife and for the movement and dispersal of seeds for a variety of plant species. In addition, because of the many interacting relationships between living organisms and their environment, the destruction and deterioration of any one element of the natural resource base may lead to a chain reaction of deterioration and destruction. For example, the destruction of woodland cover may result in soil erosion and stream siltation, more rapid stormwater runoff and attendant increased flood flows and stages, as well as destruction of wildlife habitat. Although the effects of any single environmental change may not be overwhelming, the combined effects will eventually create serious environmental and developmental problems. These problems include flooding, water pollution, deterioration and destruction of wildlife habitat, reduction in groundwater recharge, as well as a decline in the scenic beauty of the County. The importance of maintaining the integrity of the remaining environmental corridors and isolated natural resource areas thus becomes apparent.

Primary and secondary environmental corridors and isolated natural resource areas are shown on Map VI-2 in Chapter VI. Primary environmental corridors in the Town of Polk are located primarily along Cedar Creek, within the Kettle Moraine, and within an extensive area of wetlands in the southeast portion of the Town. In 2000, 2,956 acres, comprising about 15 percent of the Town, were located within primary environmental corridors. Secondary environmental corridors, located along reaches of Cedar Creek, Coney River, and smaller streams, and in scattered wetlands and woodlands encompassed 1,167 acres, or about 6 percent of the Town. Isolated natural resource areas within the Town, generally consisting of smaller wooded areas and smaller wetlands, accounted for 589 acres, or about 3 percent of the Town.

Park and Open Space Sites

A comprehensive region wide inventory of park and open space sites was conducted in 1973 under the initial regional park and open space planning program conducted by SEWRPC. The inventory is updated periodically, and was updated in 2008 for Washington County and 2009 for the Town of Polk. The inventory identified all park and open space sites owned by a public agency, including Federal, State, County, and local units of government and school districts. The inventory also included privately owned outdoor recreation sites such as golf courses, campgrounds, boating access sites, hunting clubs, group camps, and special use outdoor recreation sites. Sites owned by nonprofit conservation organizations, such as the Ozaukee Washington Land Trust (OWLT) and the Cedar Lakes Conservation Foundation, were also identified. As of 2008, there were 26,329 acres of park and open space land encompassing about 9 percent of Washington County in fee simple ownership. An additional 1,674 acres in the County were under conservation or other easements intended to protect the natural resources of a site.

Information on park and open space sites in the Town of Polk in 2009 is provided in Table V-12 and the following sections. There were a total of six publicly-owned park and open space sites in the Town, encompassing 731 acres, and 13 privately owned park and open space sites in the Town, encompassing 669 acres.

County and State-Owned Park and Open Space Sites

Washington County

A 64-acre portion of the 75-acre Ackerman's Grove Park and the 233-acre Heritage Trails Park are located in the Town of Polk. Ackerman's Grove Park is located in the north central portion of the Town along the eastern shoreline of Little Cedar Lake and Heritage Trails Park is located in the southwestern portion of the Town adjacent to CTH E and west of STH 164. The 129-acre Washington County Fair Park is also located in the Town, and is located in the northeastern corner of the Town adjacent to USH 45. These three sites encompass a total of 426 acres. The Washington County park and open space plan recommends that the County acquire an additional 90 acres in the Town as an expansion of Heritage Trails Park.

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07/16/09; 03/03/09; 7/28/08; 02/19/07

Table V-12

PUBLIC AND PRIVATE PARK, RECREATION, AND OPEN SPACE SITES IN THE TOWN OF POLK: 2009

Public Sites	Size (acres)
Town of Polk Site	
Town Hall Park	21
Washington County Sites	
Ackerman's Grove Park	64
Heritage Trails Park	233
Washington County Fair Park	129
Subtotal – Washington County Sites (3)	426
State of Wisconsin Sites	
Ice Age Trail Corridor/Polk Kames	267
Schweitzer Dam/Cedar Creek site[a]	17
Subtotal –State of Wisconsin Sites (2)	284
Subtotal – Public Sites (6)	731
Private Sites	**Size (acres)**
Cedar Lakes Conservation Foundation (8 sites)	404
Cedar Lake Hills Subdivision Park	4
Country Sport	23
Friends of Nature Association	14
Scenic View Country Club	182
Sleeping Dragon Ranch	42
Subtotal – Private Sites (13)	669
Total – 19 Sites	1,400

[a]*The Schweitzer Dam Cedar Creek site is not accessible to the public.*

Source: Town of Polk and SEWRPC.

Wisconsin Department of Natural Resources
The DNR has acquired large areas of park and open space lands in Washington County for a variety of resource protection and recreational purposes. The DNR owns two sites in the Town of Polk, a 267-acre site encompassing a portion of the Polk Kames and a segment of the Ice Age Trail, located in the northwestern portion of the Town adjacent to the Village of Slinger and USH 41; and a 17-acre open space site along Cedar Creek, also known as the Schweitzer Dam site[20], located northeast of the Town Hall. These two sites encompass a total of 284 acres of park and open space.

The Kettle Moraine and Cedar Creek are two natural resource features in the Town of Polk identified by the DNR as areas in need of protection and special focus. A Mid-Kettle Moraine study area has been identified by the Mid-Kettle Moraine Partners Group, a coalition of public and private organizations and agencies, including the DNR. The goal of the Partners Group is to protect the best remaining natural and scenic areas of the Kettle Moraine in Washington and Waukesha Counties. The Polk Kames area was acquired by the DNR as part of the Mid-Kettle Moraine focus area.

The DNR also established a stream bank program for Cedar Creek to protect the scenic, fishery, and water quality of waterways in Washington County, which are primarily funded through the State Stewardship Program. The Cedar Creek Stream Bank Protection program allows the DNR to acquire, by fee simple title or easement, lands along Cedar Creek and its major tributary from CTH M upstream to the outlet of Little Cedar Lake. These acquisition efforts may or may not include public fishing access opportunities and are obtained only on a "willing seller-willing buyer" basis. A portion of Cedar Creek is located in the Town.

Private and Public-Interest Resource Oriented Park and Open Space Sites
There are a number of conservation organizations active in Washington County, including OWLT, the Cedar Lakes Conservation Foundation, The Nature Conservancy, and other non-profit conservation organizations. These organizations acquire lands for resource protection purposes. As of 2009, the Cedar Lakes Conservation Foundation and the Friends of Nature Association owned sites in the Town of Polk. The Cedar Lakes Conservation Foundation owned eight sites totaling 404 acres and the Friends of Nature Association owned a 14-acre site along Cedar Creek. The following paragraph describes conservation easements held by conservation organizations.

Lands Under Protective Easements
Several open space and environmentally sensitive sites in Washington County are protected under conservation easements. These easements are typically voluntary contracts between a private landowner and a land trust or government agency that limit, or in some cases prohibit, future development of the parcel. With the establishment of a conservation easement, the property owner sells or donates the development rights for the property to a land trust or government agency, but retains ownership. The owner is not prohibited from selling the property, but future owners must also abide by the terms of the conservation easement. The purchaser of the easement is responsible for monitoring and enforcing the easement agreement for the property. Conservation easements do not require public access to the property, although public access is generally required if Wisconsin stewardship funds or other DNR grant funds are used to acquire the property. As of 2009, there was a conservation easement on one site in the Town of Polk; OWLT held a 49-acre conservation easement along Cedar Creek in Section 10 of the Town.

Town of Polk Park and Open Space Site
The Town of Polk owns one site, the Town Hall Park. Town Hall Park is located adjacent to the Town Hall along STH 60 and encompasses 21 acres. The Town-owned site is shown on Table V-12.

Commercial and Organizational Park and Open Space Sites
There are four private commercial and organizational park and open space sites located in the Town of Polk, also set forth in Table V-12. Cedar Lake Hills Subdivision Park, Country Sport, Scenic View Country Club, and

[20] *The Schweitzer Dam/Cedar Creek site is not accessible to the public.*

Sleeping Dragon Ranch total 251 acres within the Town. The 182-acre Scenic View Country Club accounts for the majority of the commercial park and open space sites acreage.

PART 3 - INVENTORY OF CULTURAL RESOURCES

The term cultural resource encompasses historic buildings, structures and sites; archaeological sites; and museums. Cultural resources in Washington County have important recreational and educational value. Cultural resources help to provide the County and each of its distinct communities with a sense of heritage, identity, and civic pride. Resources such as historical and archaeological sites and historic districts can also provide economic opportunities through tourism.

Historical Resources
In 2008, the Town of Polk did not have any historic sites listed on the National Register of Historic Places or the State Register of Historical Places. Sites and districts listed on the National and State Registers of Historic Places have an increased measure of protection against degradation and destruction. Listing on the National or State Register requires government agencies to consider the impact of their activities, such as the construction or reconstruction of a highway, or a permit which they issue, on the designated property. If the property would be adversely affected, the agency must work with the State Historic Preservation Officer to attempt to avoid or reduce adverse effects.

The 25 historic places and districts in Washington County listed on the National and State registers of historic places are only a small fraction of the buildings, structures, and districts listed in the Wisconsin Architecture and History Inventory. The Wisconsin Architecture and History Inventory is a database administered by the State Historical Society of Wisconsin of sites that have architectural or historical characteristics that may make them eligible for listing on the National and State registers of historic places. The inventory can be accessed through the State of Wisconsin Historical Society website at www.wisconsinhistory.org/ahi.

County and local governments may designate landmarks once a landmarks commission or historic preservation commission has been established by ordinance and certified by the State Historical Society. Procedures for designating local landmarks can and do vary depending on the local government. The Washington County Landmarks Commission has developed a simple, yet effective set of landmark designation procedures. First, an application is filed with the County Clerk by the owner of the proposed landmark. The County Landmarks Commission – composed of nine individuals appointed by the County Board Chairperson – then votes on whether to approve or deny the application based on a set of criteria established by the Commission. These criteria aim to protect, enhance, and perpetuate archaeological sites, geological formations, and structures of special historical value or interest. The Landmarks Commission in Washington County is given full authority by the County Board to designate and remove landmarks.

The Washington County Landmarks Commission has designated 34 sites, several of which are also listed on the National and State Registers of Historic Places, as County Landmarks. The Town of Polk contains two County Landmarks, the Winter Farm, located on Cedar Creek Road and the Schubert Cheese Factory located in Diefenbach Corners.

Archaeological Resources
Preservation of archaeological resources is also important in preserving the cultural heritage of Washington County. Like historical sites and districts, significant prehistoric and historic archaeological sites provide the County and each of its communities with a sense of heritage and identity, which can provide for economic opportunities through tourism if properly identified and preserved. Archaeological sites found in Washington County fall under two categories: prehistoric sites and historic sites. Prehistoric sites are defined as those sites which date from before written history. Historic sites are sites established after history began to be recorded in written form (the State Historical Society of Wisconsin defines this date as A.D. 1650).

As of 2005, there were 425 known prehistoric and historic archaeological sites in Washington County listed in the State Historical Society's Archaeological Sites Inventory, including prehistoric and historic camp sites, villages, and farmsteads; marked and unmarked burial sites; and Native American mounds. There are three mound groups in the Town of Farmington listed on the National Register of Historic Places: the Lizard Mound group, located in and adjacent to Lizard Mound County Park, the Glass mound group, and the Susen-Backhaus mound group. These three mound groups together are classified as the "Island" Effigy mound district listed on the National Register.

An additional mound group in the County was recently acquired by the City of West Bend and incorporated into Quaas Creek Park. This group, known as the Joedike Mound group, is located near the confluence of Quaas Creek and the Milwaukee River on the east side of the City of West Bend.

Local Historical Societies and Museums
The Town of Polk does not have a local historical society; however, the resources of the Washington County Historical Society, itself affiliated with the State Historical Society of Wisconsin, are available to Town residents. The County Society operates several historic sites within the County, including the Old Courthouse and the Old Jailhouse Museums in the City of West Bend. The museums include interactive and interpretive galleries and a research center. The Washington County Historical Society is also working to convert the St. Agnes Convent in the Town of Barton to a museum over the next few years. This site consists of three buildings constructed in the mid-19th century. Other museums in Washington County include the Wisconsin Automotive Museum in the City of Hartford and the Museum of Wisconsin Art in the City of West Bend.

Cultural Venues, Events, and Organizations
Cultural performances, events, and organizations that showcase the arts and the heritage of Washington County and its cities, towns, and villages contribute to the quality of life and economy of the County. There are several venues at which cultural performances are regularly held. Many of these venues are not historic themselves, but serve as a cultural resource because they facilitate culturally significant performances and exhibits. They are listed in Table V-13.

PART 4 – AGRICULTURAL, NATURAL, AND CULTURAL RESOURCES GOALS, OBJECTIVES, POLICIES, AND PROGRAMS

Goals:
- Preserve rural character and support country living by retaining viable farmland.
- Preserve natural vegetation and cover and promote the natural beauty of the Town.
- Attain a proper adjustment of land use and development to the supporting and sustaining natural resource base.
- Restrict building on poor soils or in other areas poorly suited for development.
- Through policy, prevent damage from flooding, water pollution, disease, and other hazards to persons or properties.
- Encourage preservation of historic or cultural structures and archaeological sites.

Objectives:
- Develop methods to protect and enhance natural resource areas, including wetlands, woodlands, wildlife habitats, lakes, streams, groundwater resources, and floodplains.
- Reduce human health hazards and health nuisances.
- Nonmetallic mining sites will not negatively impact environmental features in the Town of Polk or its existing developments.

Policies:
- Provide zoning that supports local family farm operations, small specialty farms, and hobby farms to maintain agriculture as a part of the rural landscape.

Table V-13

CULTURAL ORGANIZATIONS AND VENUES IN WASHINGTON COUNTY: 2007

Cultural Organizations	Cultural Venues
Broken Valley Saddle Club	Cedar Lake Campus Theatre
Deutschatadt Heritage Foundation, Inc.	Chandelier Ballroom
Discalced Carmelite Friars, Holy Hill	Christ Church Museum
Downtown West Bend Association	Dheinsville Settlement
Friends of Kewaskum	Holy Hill
Friends of LacLawrann Conservancy	Lac Lawrann
Germantown Junior Women's Club	Museum of Wisconsin Art
Hartford Area Chamber of Commerce	Old Courthouse Square Museum
Hartford City Band	Richfield Historical Park
Hartford Community Choir	Riveredge Nature Center
Hartford Downtown Business Improvement District	Schauer Arts and Activities Center
	Shalom Wildlife Sanctuary
It's a Stitch Quilt Guild	Sila Lydia Bast Bell Museum
Kettle Moraine Fine Arts Guild	UW-Washington County
Kettle Moraine Symphony	Washington County Fair Park
Kewaskum Junior Women's Club	Washington County UW Theatre
Kiwanis Noon Club	West Bend Community Memorial Library
Lighthouse Ministry, Inc.	Wisconsin Automotive Museum
Moraine Symphonic Band	
Museum of Wisconsin Art Friends	
Richfield Historical Society	
Richfield Lioness Club	
Riveredge Bird Club	
Slinger Advancement Association	
Slinger Area Women's Association	
Tri-County Pork Producers	
Washington County Farm Bureau Women	
Washington County Historical Society	
Washington County Humane Society	
West Bend Wisconsin Chapter Model A Ford Club	
Ziegler Kettle Moraine Jazz Festival	

Note: This table is not intended to be an exhaustive list of all cultural organizations and venues in Washington County, but rather to provide examples of cultural resources that are available.

Source: Washington County Convention and Visitors Bureau and SEWRPC.

- The Town of Polk does not support the use of regulatory tools to preserve farmland. The Town believes that farmland preservation should be on a volunteer basis. If the agricultural landowner chooses to be a working land enterprise area or participate in a purchase of development rights program, the Town would encourage such programs, provided they are funded by Federal, State, or County funds.
- Use the guidelines set forth in Table V-14 to discourage incompatible land uses in primary and secondary environmental corridors and isolated natural resource areas (shown on Map VI-2 in Chapter VI).
- Wetland and floodplain areas should not be altered in any way, including, but not limited to, filling or draining, unless such alteration would result in the enhancement of the natural resource being disturbed.
- Encourage the protection of high-quality agricultural lands and natural resource areas through public and non-profit conservation organization (NCO) fee simple purchase and purchase of conservation easements.
- Cooperate with the DNR its efforts to protect Cedar Creek and the Mid-Kettle Moraine.
- Encourage eligible Town residents to utilize the DNR's Managed Forest Law program.
- Support implementation of the Washington County Park and Open Space Plan.
- Encourage nonpoint source pollution controls to reduce soil loss and contaminant loadings through preparation of farm conservation plans and implementation of integrated nutrient and pest management practices in accordance with the Washington County land and water resource management plan.
- Encourage construction practices that will protect surface water quality from siltation and pollution by minimizing soil erosion both during and after construction.
- Work with the Big and Little Cedar Lake Protection and Rehabilitation Districts on request to help implement the recommendations of the lake management plan for each lake.
- Continuation of agricultural uses, preservation of natural resources, or residential development at an average density of at least five acres per home are recommended in areas identified as having very high or high groundwater recharge potential (shown on Map V-3), in order to preserve groundwater recharge capabilities. If urban-density development is allowed, land development and stormwater management practices such as the use of permeable pavement, set-aside open space, rain gardens, landscaping with drought-tolerant plants (i.e. native plants) and landscape mulch versus turf or grass should be integrated into the site design and development to help preserve groundwater recharge capability.
- Support County efforts to continue enforcement of County Code Chapter 8: Human Health Hazards in compliance with Section 254.55 of the *Wisconsin Statutes*. Section 254.04(2) defines a "human health hazard" as a substance, activity or condition that is known to have the potential to cause acute or chronic illness or death if exposure to the substance, activity or condition is not abated.
- Nonmetallic mining sites will comply with existing ordinances and carry out reclamation plans.
- Support the efforts of cultural organizations to organize and promote cultural venues and events in the Town and County. Existing cultural organizations and venues in the County are listed in Table V-13.

Programs:

- Continue to allow a wide variety of agricultural uses in the Town in accordance with the requirements of the A-1 (General Agricultural) district in the Town zoning ordinance.
- Work with OWLT and other Nonprofit Conservation Organizations to protect primary and secondary environmental corridors, natural areas, critical species habitat sites, and other endangered species habitat areas.
- Continue to work with Washington County to regulate nonmetallic mineral extraction in accordance with the County's nonmetallic mining reclamation ordinance; and continue to enforce requirements of the Q-1 (Quarrying) district in the Town zoning ordinance.
- Continue to work with Washington County to administer and enforce the requirements of the Town's erosion control and stormwater management ordinances. Particular care should be taken

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NMA/RLR
04/25/08

Table V-14

GUIDELINES FOR DEVELOPMENT CONSIDERED COMPATIBLE WITH ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS

Component Natural Resource and Related Features within Environmental Corridors[a]	Permitted Development																
	Transportation and Utility Facilities (see General Development Guidelines below)				Recreational Facilities (see General Development Guidelines below)											Rural Density Residential Development (see General Development Guidelines below)	Other Development (See General Development Guidelines below)
	Streets and Highways	Utility Lines and Related Facilities	Engineered Stormwater Management Facilities	Engineered Flood Control Facilities[b]	Trails[c]	Picnic Areas	Family Camping[d]	Swimming Beaches	Boat Access	Ski Hills	Golf	Playfields	Hard-Surface Courts	Parking	Buildings		
Lakes, Rivers, and Streams	--[e]	--[f,g]	--	--[h]	--[i]	--	--	X	X	--	--	--	--	--	--	--	--
Shoreland[j]	X	X	X	X	X	X	--	X	X	--	X	--	--	X	X	--	--
Floodplain[k]	--[l]	X	X	X	X	X	--	X	X	--	X	X	--	X	X	--	--
Wetland[m]	--[l]	X	--	--	X[n]	--	--	--	X	--	--[o]	--	--	--	--	--	--
Wet Soils	X	X	X	X	X	--	--	X	X	--	X	--	--	X	--	--	--
Woodland	X	X	X[p]	--	X	X	X	--	X	X	X	X	X	X	X[q]	X	X
Wildlife Habitat	X	X	X	--	X	X	X	--	X	X	X	X	X	X	X	X	X
Steep Slope	X	X	--	--	--[r]	--	--	--	--	X[s]	X	--	--	--	--	--	--
Prairie	--	--[g]	--	--	--[r]	--	--	--	--	--	--	--	--	--	--	--	--
Park	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	--	--
Historic Site	--	--[g]	--	--	--[r]	--	--	--	--	--	--	--	--	X	--	--	--
Scenic Viewpoint	X	X	--	--	X	X	X	--	X	X	X	--	--	X	X	X	X
Natural Area or Critical Species Habitat Site	--	--	--	--	--[q]	--	--	--	--	--	--	--	--	--	--	--	--

NOTE: An "X" indicates that facility development is permitted within the specified natural resource feature. In those portions of the environmental corridors having more than one of the listed natural resource features, the natural resource feature with the most restrictive development limitation should take precedence.

APPLICABILITY

These guidelines indicate the types of development that can be accommodated within primary and secondary environmental corridors and isolated natural resource areas while maintaining the basic integrity of those areas. Throughout this table, the term "environmental corridors" refers to primary and secondary environmental corridors and isolated natural resource areas.

Under the regional plan:

- As regionally significant resource areas, primary environmental corridors should be preserved in essentially natural, open use—in accordance with the guidelines in this table.
- Secondary environmental corridors and isolated natural resource areas warrant consideration for preservation in essentially natural open use, as determined in county and local plans and in a manner consistent with State and Federal regulations. County and local units of government may choose to apply the guidelines in this table to secondary environmental corridors and isolated natural resource areas.

GENERAL DEVELOPMENT GUIDELINES

- Transportation and Utility Facilities: All transportation and utility facilities proposed to be located within the important natural resources should be evaluated on a case-by-case basis to consider alternative locations for such facilities. If it is determined that such facilities should be located within natural resources, development activities should be sensitive to, and minimize disturbance of, these resources, and, to the extent possible following construction, such resources should be restored to preconstruction conditions.

  The above table presents development guidelines for major transportation and utility facilities. These guidelines may be extended to other similar facilities not specifically listed in the table.

- Recreational Facilities: In general, no more than 20 percent of the total environmental corridor area should be developed for recreational facilities. Furthermore, no more than 20 percent of the environmental corridor area consisting of upland wildlife habitat and woodlands should be developed for recreational facilities. It is recognized, however, that in certain cases these percentages may be exceeded in efforts to accommodate needed public recreational and game and fish management facilities within appropriate natural settings. In all cases however, the proposed recreational development should not threaten the integrity of the remaining corridor lands nor destroy particularly significant resource elements in that corridor. Each such proposal should be reviewed on a site-by-site basis.

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The above table presents development guidelines for major recreational facilities. These guidelines may be extended to other similar facilities not specifically listed in the table.

- Rural Density Residential Development: Rural density residential development may be accommodated in upland environmental corridors, provided that buildings are kept off steep slopes. The maximum number of housing units accommodated at a proposed development site within the environmental corridor should be limited to the number determined by dividing the total corridor acreage within the site, less the acreage covered by surface water and wetlands, by five. The permitted housing units may be in single-family or multi-family structures. When rural residential development is accommodated, conservation subdivision designs are strongly encouraged.
- Other Development: In lieu of recreational or rural density residential development, up to 10 percent of the upland corridor area in a parcel may be disturbed in order to accommodate urban residential, commercial, or other urban development under the following conditions: 1) the area to be disturbed is compact rather than scattered in nature; 2) the disturbance area is located on the edge of a corridor or on marginal resources within a corridor; 3) the development does not threaten the integrity of the remaining corridor; 4) the development does not result in significant adverse water quality impacts; and 5) development of the remaining corridor lands is prohibited by a conservation easement or deed restriction. Each such proposal must be reviewed on a site-by-site basis.

  Under this arrangement, while the developed area would no longer be part of the environmental corridor, the entirety of the remaining corridor would be permanently preserved from disturbance. From a resource protection point of view, preserving a minimum of 90 percent of the environmental corridor in this manner may be preferable to accommodating scattered homesites and attendant access roads at an overall density of one dwelling unit per five acres throughout the upland corridor areas.
- Pre-Existing Lots: Single-family development on existing lots of record should be permitted as provided for under county or local zoning at the time of adoption of the land use plan.
- All permitted development presumes that sound land and water management practices are utilized.

FOOTNOTES

[a] *The natural resource and related features are defined as follows:*

Lakes, Rivers, and Streams: Includes all lakes greater than five acres in area and all perennial and intermittent streams as shown on U. S. Geological Survey quadrangle maps.
Shoreland: Includes a band 50 feet in depth along both sides of intermittent streams; a band 75 feet in depth along both sides of perennial streams; a band 75 feet in depth around lakes; and a band 200 feet in depth along the Lake Michigan shoreline.
Floodplain: Includes areas, excluding stream channels and lake beds, subject to inundation by the 100-year recurrence interval flood event.
Wetlands: Includes areas that are inundated or saturated by surface water or groundwater at a frequency, and with a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.
Wet Soils: Includes areas covered by wet, poorly drained, and organic soils.
Woodlands: Includes areas one acre or more in size having 17 or more deciduous trees per acre with at least a 50 percent canopy cover as well as coniferous tree plantations and reforestation projects; excludes lowland woodlands, such as tamarack swamps, which are classified as wetlands.
Wildlife Habitat: Includes areas devoted to natural open uses of a size and with a vegetative cover capable of supporting a balanced diversity of wildlife.
Steep Slope: Includes areas with land slopes of 12 percent or greater.
Prairies: Includes open, generally treeless areas which are dominated by native grasses; also includes savannas.
Park: Includes public and nonpublic park and open space sites.
Historic Site: Includes sites listed on the National Register of Historic Places. Most historic sites located within environmental corridors are archaeological features such as American Indian settlements and effigy mounds and cultural features such as small, old cemeteries. On a limited basis, small historic buildings may also be encompassed within delineated corridors.
Scenic Viewpoint: Includes vantage points from which a diversity of natural features such as surface waters, wetlands, woodlands, and agricultural lands can be observed.
Natural Area and Critical Species Habitat Sites: Includes natural areas and critical species habitat sites as identified in the regional natural areas and critical species habitat protection and management plan.

[b] *Includes such improvements as stream channel modifications and such facilities as dams.*

[c] *Includes trails for such activities as hiking, bicycling, cross-country skiing, nature study, and horseback riding, and excludes all motorized trail activities. It should be recognized that trails for motorized activities such as snowmobiling that are located outside the environmental corridors may of necessity have to cross environmental corridor lands. Proposals for such crossings should be evaluated on a case-by-case basis, and if it is determined that they are necessary, such trail crossings should be designed to ensure minimum disturbance of the natural resources.*

[d] *Includes areas intended to accommodate camping in tents, trailers, or recreational vehicles which remain at the site for short periods of time, typically ranging from an overnight stay to a two-week stay.*

[e] *Certain transportation facilities such as bridges may be constructed over such resources.*

[f] *Utility facilities such as sanitary sewers may be located in or under such resources.*

[g] *Electric power transmission lines and similar lines may be suspended over such resources.*

[h] *Certain flood control facilities such as dams and channel modifications may need to be provided in such resources to reduce or eliminate flood damage to existing development.*

[i] *Bridges for trail facilities may be constructed over such resources.*

[j] *Consistent with Chapter NR 115 of the* Wisconsin Administrative Code.

[k] *Consistent with Chapter NR 116 of the* Wisconsin Administrative Code.

[l] *Streets and highways may cross such resources. Where this occurs, there should be no net loss of flood storage capacity or wetlands. Guidelines for mitigation of impacts on wetlands by Wisconsin Department of Transportation facility projects are set forth in Chapter Trans 400 of the* Wisconsin Administrative Code.

[m] *Any development affecting wetlands must adhere to the water quality standards for wetlands established under Chapter NR 103 of the* Wisconsin Administrative Code.

[n] *Only an appropriately designed boardwalk/trail should be permitted.*

[o] *Wetlands may be incorporated as part of a golf course, provided there is no disturbance of the wetlands.*

[p] *Generally excludes detention, retention, and infiltration basins. Such facilities should be permitted only if no reasonable alternative is available.*

[q] *Only if no alternative is available.*

[r] *Only appropriately designed and located hiking and cross-country ski trails should be permitted.*

[s] *Only an appropriately designed, vegetated, and maintained ski hill should be permitted.*

Source: SEWRPC 2035 Regional Land Use Plan.

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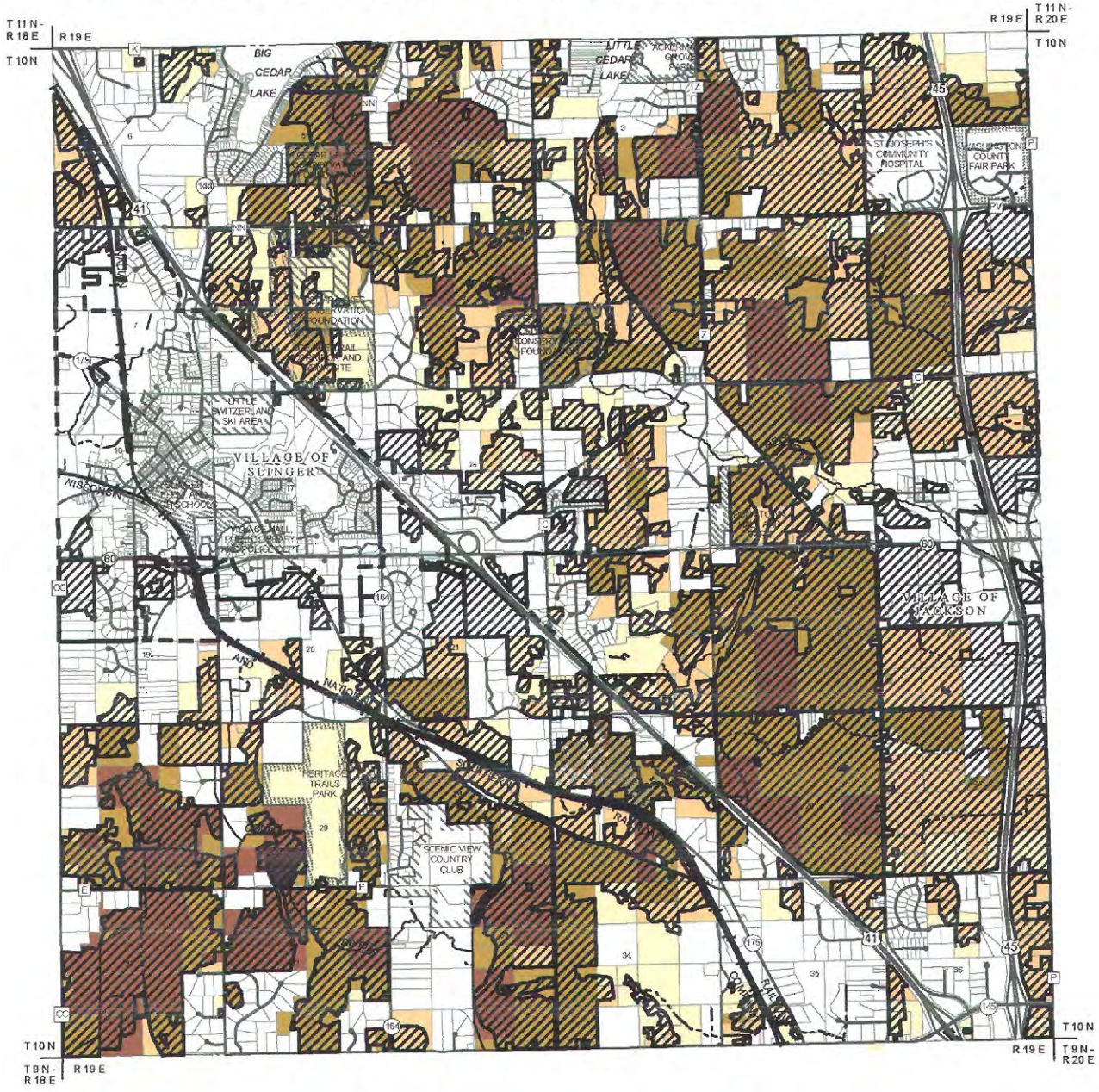
where development is proposed on slopes of 20 percent or greater (shown on Map VI-3 in Chapter VI).

- Continue to maintain the Town park adjacent to the Town Hall.
- Cooperate with the State Historical Society of Wisconsin and the Washington County Landmarks Commission as those agencies conduct historical surveys to identify historically significant structures and districts in the Town and methods to protect them.

Map V-1
LESA SCORES FOR AGRICULTURAL PARCELS IN THE TOWN OF POLK: 2007



PARCEL BOUNDARY

LESA SCORE

- 9.0 OR MORE
- 8 - 8.9
- 7 - 7.9
- 6 - 6.9
- LESS THAN 6
- LANDS IN AGRICULTURAL USE IN 2006

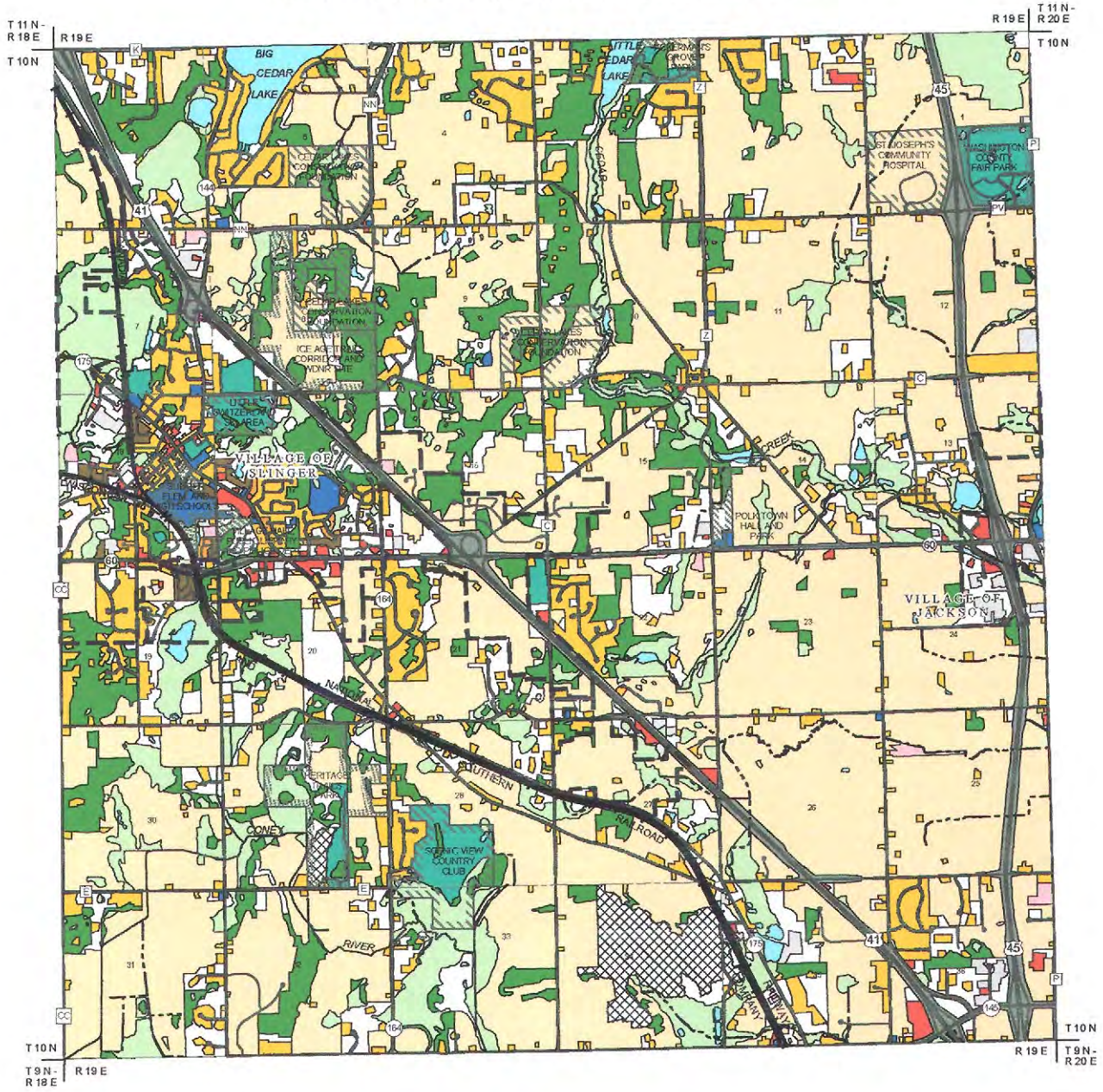
SOURCE: WASHINGTON COUNTY AND SEWRPC.

N

0 0.25 0.5 1 MILE

Map V-2

LAND USES IN THE TOWN OF POLK AND ENVIRONS: SPRING 2000



- SINGLE - FAMILY RESIDENTIAL
- TWO - FAMILY RESIDENTIAL
- MULTI - FAMILY RESIDENTIAL AND MOBILE HOMES
- COMMERCIAL
- INDUSTRIAL
- STREETS AND HIGHWAYS
- RAILWAY
- COMMUNICATIONS, UTILITIES, AND OTHER TRANSPORTATION
- TOWN / VILLAGE BOUNDARY
- GOVERNMENTAL AND INSTITUTIONAL
- RECREATIONAL
- WOODLANDS
- WETLANDS
- SURFACE WATER (OPEN WATER)
- AGRICULTURAL
- QUARRY
- OPEN LANDS

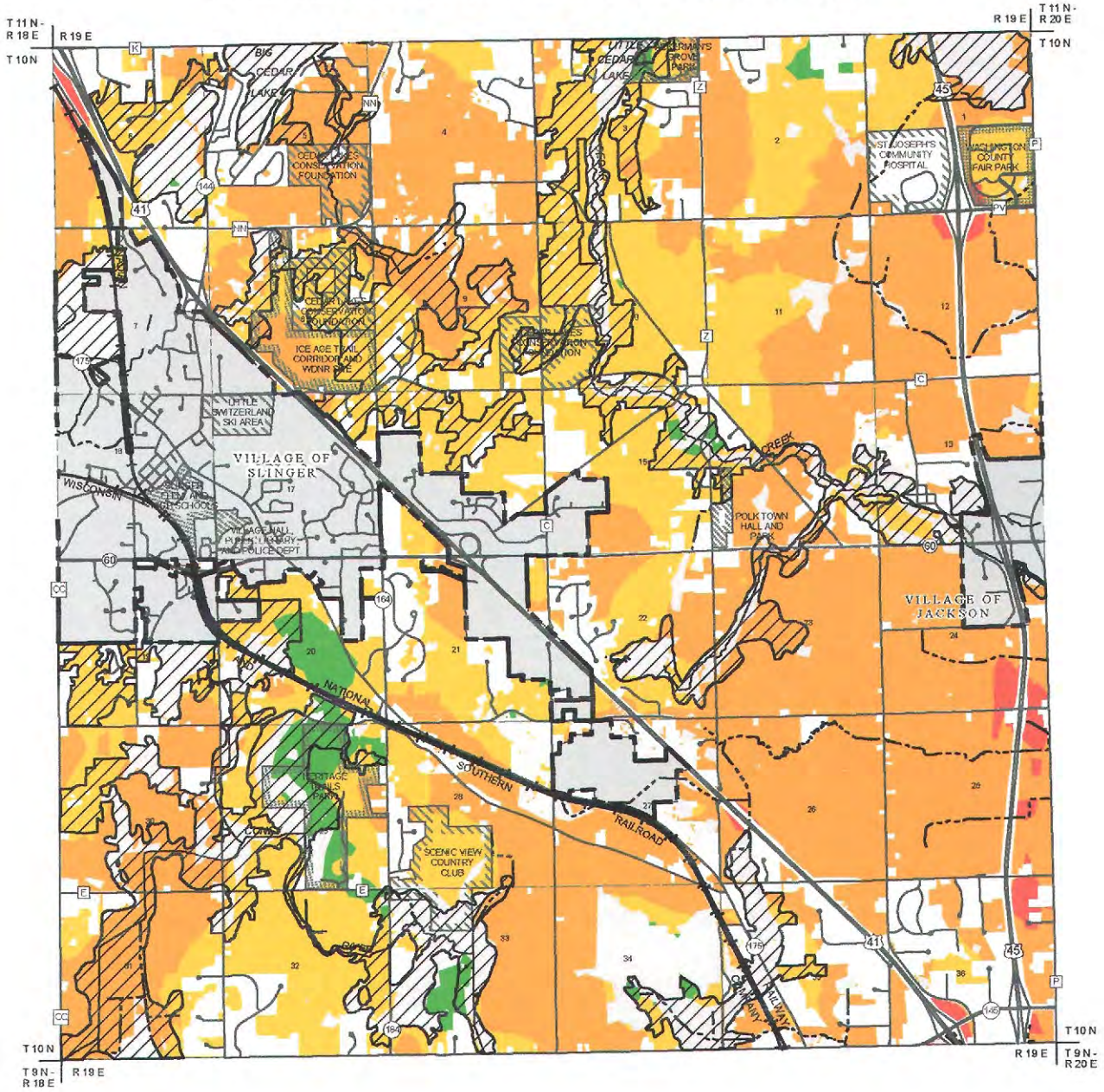
N

0 0.25 0.5 1 MILE

SOURCE: SEWRPC.

NOTE: PUBLIC AND QUASI - PUBLIC OWNERSHIP ARE CURRENT AS OF JANUARY 1, 2006. VILLAGE BOUNDARIES ARE CURRENT AS OF JANUARY 1, 2007.

Map V-3
WATER RECHARGE POTENTIAL IN THE TOWN OF POLK



- LOW
- MODERATE
- HIGH
- VERY HIGH
- UNDETERMINED
- EXISTING URBAN DEVELOPMENT (2006)
- PRIMARY ENVIRONMENTAL CORRIDORS (2000) AND 100 - YEAR FLOODPLAINS (1981)
- SURFACE WATER

SOURCE: WISCONSIN GEOLOGICAL AND HISTORICAL SURVEY AND SEWRPC.

N

0 0.25 0.5 1 MILE