

APPENDIX



LAND USE INVENTORY METHODOLOGY

APPENDIX C

Land Use Inventory Methodology • 1973 & 2000

Land Use Inventory Methodology • 1973

The data used in the 1973 land use analysis was the result of a detailed land use survey conducted by the West Central Wisconsin Regional Planning Commission. All land uses were interpreted and transferred from the most current aerial photography available. As it was appropriate or necessary, reliable existing data such as, U.S. Geological Survey (USGS) topographic maps, plat books and Department of Transportation aerial photography was used to supplement the field survey. The field survey entailed actually driving all town, city, village, county, state and federal roads and highways and recording land use not obtainable from the air photo transfer. After the existing land use was recorded, area measurements were made.

To unify and simplify the task of land use measurement several assumptions were

made in 1973. These assumptions resulted in procedures that were used only when it was impossible to make actual measurements from air photos or survey data. Residential lands in the rural areas were calculated by applying a 3 acre average development standard to each residential and farmstead dwelling counted in the data transfer or survey. All commercial, industrial, government, institutional, communication and utilities, and agricultural, forested and vacant lands were actually measured unless there was reliable existing data. The transportation system was calculated using the following factors provided by the Department of Transportation; State highways 13.33 acres per mile; Federal highways 42.42 acres per mile; County highways 9.69 acres per mile; Local roads 7.78 acres per mile; and Railroads 12.12 acres per mile.

Land Use Inventory Methodology • 2000

The goal of the 2000 land use inventory methodology was to achieve a reasonable level of comparability with the 1973 land use data. The methodology described in this section was used in order to duplicated, as closely as possible, the 1973 data given the differences in source information and the tools used for data capture. The data used in the 2000 land use analysis was the result of a land use inventory conducted by the Polk County Land Information Department and WISCLAND satellite imagery.

In 1997, Polk County hired Ayres Associates to take aerial photographs of Polk County. These photos were digitally reproduced and

used by Ayres to digitize all water bodies (lakes, rivers and streams), wetlands and transportation features. The complete set of digital photography and digitized products were provided to Polk County. Polk County then used the digital photography to develop the residential, commercial, industrial, recreational, and government and institutional land use layers to be used in Arc/Info for planning purposes. The county Land Information Department digitized each of these land uses as points. All of the digital information was then provided to the West Central Wisconsin Regional Planning Commission for analysis. In 2000, the Regional Planning

Commission completed a land use inventory update. The purpose of this process was to verify the existence and type of certain residential land uses, and enhance the government & institutional and transportation, communication & utilities land use categories.

In order to calculate the acreage of each of the land uses, standards needed to be established for the land use points and for the transportation system land use. All other polygon (area) land use acreage could be calculated directly by the computer. Similar to the 1973 land use inventory (except for residential land use points), each land use point was assigned a standard area of three acres. However, based on a review of property assessment data between the

years of 1973 and 2000, it was noted that the average size of residential parcels has been increasing. Consequently, a standard area of 3.5 acres was assigned for residential land use points. Using these standards, all points located in the unincorporated area of each of the towns were then counted. The total points for each of the land uses were then multiplied by the corresponding area standard to calculate the total land use acreage. To calculate the acreage for the 2000 transportation system the 1973 acreage per mile standards were used, along with a U.S. Highway standard of 18.18 acres per mile.

The following is a description of the identified land uses.

DESCRIPTION OF USES - LAND USE CLASSIFICATION SYSTEM

Residential

All lands used for residential purposes.

Commercial

All lands used for commercial purposes, including wholesale and general retail, financial institutions, indoor recreation and entertainment.

Industrial

All lands occupied for industrial land uses, including light and heavy manufacturing and extractive industries.

Transportation, Communication, and Utilities

All lands occupied by transportation, communication or utilities, including state, federal, county and local highways, railroads, telephone facilities and electrical facilities.

Parks and Recreation

All lands used for recreation, including public and private recreational lands, and lands for active recreational pursuits such as, golf, parks and campgrounds.

Government and Institutional

This category includes many types of community facilities including schools, medical facilities, churches, cemeteries, town halls, police and fire stations, and community buildings.

Agricultural and Vacant

All lands used for farming, such as dairy farming, truck farming, orchards and pastures. This category also includes marginal and fallow agricultural land and vacant or unused land.

Comparison of the 1973 and 2000 land use information

Changes in the 1973 and 2000 land use acres for each of the towns is shown in the following tables. It is important to remember that this information was collected and compiled using different methodologies and technologies.

Consequently, some of the change that occurred from 1973 to 2000 may be due to the differences in manual versus digital techniques used in mapping, the various sources of information that were used, and differences in interpretation. However, the data collected for this section is intended to be used solely for planning purposes. It is intended to reflect general trends that are occurring on a county-wide basis. Overall, the 1973 and 2000 land use information provide a reasonable comparison for twenty-seven years of land use change in the unincorporated areas of Polk County.

**AGRICULTURAL AND RESIDENTIAL
LAND USE ACREAGE AND PERCENT CHANGE BY TOWN • 1973 AND 2000
POLK COUNTY**

Municipality	Agricultural & Vacant			Residential		
	1973	2000	Percent Change	1973	2000	Percent Change
Alden	24,614	20,358	-17.3	1,399	2,631	88.1
Apple River	9,836	8,508	-13.5	764	1,457	90.7
Balsam Lake	9,879	8,953	-9.4	913	1,781	95.1
Beaver	11,975	9,199	-23.2	663	1,025	54.6
Black Brook	15,139	12,934	-14.6	756	1,122	48.4
Bone Lake	9,332	8,037	-13.9	559	980	75.3
Clam Falls	7,695	7,413	-3.7	502	734	46.2
Clayton	14,423	11,562	-19.8	753	897	19.1
Clear Lake	17,605	15,607	-11.3	678	807	19.0
Eureka	20,094	18,797	-6.5	1,041	1,546	48.5
Farmington	19,413	17,730	-8.7	736	1,385	88.2
Garfield	14,345	12,611	-12.1	839	1,527	82.0
Georgetown	8,832	7,857	-11.0	952	1,640	72.3
Johnstown	6,236	5,519	-11.5	501	767	53.1
Laketown	12,230	11,643	-4.8	823	1,131	37.4
Lincoln	14,821	12,401	-16.3	1,028	2,311	124.8
Lorain	7,723	7,817	1.2	387	513	32.6
Luck	8,480	7,070	-16.6	795	1,046	31.6
McKinley	7,424	6,462	-13.0	367	560	52.6
Milltown	10,461	9,825	-6.1	1,003	1,334	33.0
Osceola	12,665	10,705	-15.5	792	1,718	116.9
St. Croix Falls	11,682	10,994	-5.9	819	1,273	55.4
Sterling	8,060	17,607	118.4	753	1,176	56.2
West Sweden	9,524	8,236	-13.5	733	970	32.3
TOTAL	292,488	267,845	-8.4	18,556	30,331	63.5

**COMMERCIAL AND INDUSTRIAL
LAND USE ACREAGE AND PERCENT CHANGE BY TOWN • 1973 AND 2000
POLK COUNTY**

Municipality	Commercial			Industrial		
	1973	2000	Percent Change	1973	2000	Percent Change
Alden	12	12	0.0	49	25	-49.0
Apple River	19	20	5.3	18	184	922.2
Balsam Lake	7	34	385.7	16	21	31.3
Beaver	18	18	0.0	28	18	-35.7
Black Brook	3	12	300.0	62	24	-61.3
Bone Lake	2	3	50.0	0	21	0.0
Clam Falls	12	15	25.0	16	35	118.8
Clayton	5	3	-40.0	18	15	-16.7
Clear Lake	4	0	-100.0	3	43	1333.3
Eureka	11	18	63.6	21	76	261.9
Farmington	8	27	237.5	26	6	-76.9
Garfield	8	12	50.0	33	27	-18.2
Georgetown	61	22	-63.9	6	48	700.0
Johnstown	5	6	20.0	43	27	-37.2
Laketown	9	9	0.0	24	18	-25.0
Lincoln	22	44	100.0	15	32	113.3
Lorain	7	6	-14.3	22	18	-18.2
Luck	18	18	0.0	22	24	9.1
McKinley	4	0	-100.0	0	0	0.0
Milltown	8	21	162.5	9	66	633.3
Osceola	7	43	514.3	30	89	196.7
St. Croix Falls	45	175	288.9	19	73	284.2
Sterling	11	7	-36.4	12	9	-25.0
West Sweden	5	12	140.0	9	84	833.3
TOTAL	311	537	72.7	501	983	96.2

**GOVERNMENT & INSTITUTIONAL AND PARK & RECREATION
 LAND USE ACREAGE AND PERCENT CHANGE BY TOWN • 1973 AND 2000
 POLK COUNTY**

Municipality	Government & Institutional			Park & Recreation		
	1973	2000	Percent Change	1973	2000	Percent Change
Alden	13	23	76.9	0	0	0.0
Apple River	13	21	61.5	18	16	-11.1
Balsam Lake	10	9	-10.0	17	3	-82.4
Beaver	5	6	20.0	3	0	-100.0
Black Brook	4	6	50.0	7	0	-100.0
Bone Lake	3	9	200.0	3	3	0.0
Clam Falls	5	15	200.0	4	0	-100.0
Clayton	8	18	125.0	44	0	-100.0
Clear Lake	8	12	50.0	0	0	0.0
Eureka	17	25	47.1	27	3	-88.9
Farmington	108	19	-82.4	0	0	0.0
Garfield	12	18	50.0	18	9	-50.0
Georgetown	40	33	-17.5	7	0	-100.0
Johnstown	4	9	125.0	0	0	0.0
Laketown	10	19	90.0	2	8	300.0
Lincoln	12	24	100.0	6	0	-100.0
Lorain	6	8	33.3	18	0	-100.0
Luck	13	18	38.5	5	3	-40.0
McKinley	8	15	87.5	9	3	-66.7
Milltown	36	53	47.2	0	6	0.0
Osceola	9	15	66.7	156	1,062	580.8
St. Croix Falls	11	0	-100.0	33	1,038	3,045.5
Sterling	12	9	-25.0	24	0	-100.0
West Sweden	11	3	-72.7	0	0	0.0
TOTAL	378	387	2.4	401	2,154	437.2

**TRANSPORTATION & UTILITIES
 LAND USE ACREAGE AND PERCENT CHANGE BY TOWN • 1973 AND 2000
 POLK COUNTY**

Municipality	Transportation & Utilities		
	1973	2000	Percent Change
Alden	1,051	1,075	2.3
Apple River	584	707	21.1
Balsam Lake	563	673	19.5
Beaver	577	658	14.0
Black Brook	687	687	0.0
Bone Lake	551	629	14.2
Clam Falls	579	517	-10.7
Clayton	710	707	-0.4
Clear Lake	659	658	-0.2
Eureka	848	900	6.1
Farmington	724	733	1.2
Garfield	702	728	3.7
Georgetown	532	676	27.1
Johnstown	395	474	20.0
Laketown	564	621	10.1
Lincoln	769	855	11.2
Lorain	434	422	-2.8
Luck	641	676	5.5
McKinley	444	479	7.9
Milltown	681	771	13.2
Osceola	730	801	9.7
St. Croix Falls	672	777	15.6
Sterling	813	903	11.1
West Sweden	640	577	-9.8
TOTAL	15,550	16,704	7.4