



APPENDIX A: BACKGROUND STUDIES

An inventory and analysis of background information on Waterford Township was prepared to serve as the foundation for building the Master Plan goals, objectives, and future land use designations. The background studies are intended to provide a clear understanding of the historical and current demographics of Waterford. Basic comparative analyses between Waterford, surrounding communities, and Oakland County are also included to provide a better understanding of Waterford's status within the surrounding region. Projections of likely future trends and characteristics were developed to offer insight into Waterford's progress and development as a community during the next twenty years. The background studies are analyses of the following topics:

- Population
- Housing
- Income
- Economic Conditions
- Tax Base
- Employment
- Education
- Environmental Resources
- Historic District and Preservation
- Existing Land Use & Zoning

In addition, background information on community and recreational facilities were reviewed and analyzed in Appendix O and the Township's transportation issues are addressed in Appendices L, M, and N.

POPULATION

Historical Trend

The 2000 Census population of Waterford Township is 73,150. This represents a population gain of 6,458 people since 1990, or a growth rate of 9.68 percent. The Township's population constitutes nearly six percent of the county's population of 1,194,156. Table A-1 shows that Waterford experienced its highest growth prior to 1970 and mirrored the growth and development patterns of Oakland County.

In Table A-2, the significant growth in population occurring in communities surrounding the Township in the period from 1970 to 2000 is shown. During the 1980s, population growth in Waterford began to moderate as the amount of available land for development diminished and development and population growth began to occur at an increasing rate in the communities west and north of Waterford.

**Table A-1
Population Trend Comparison
Waterford Township and Oakland County
1900 -2000**

Year	Waterford Township	Percent Change Between Decades	Oakland County	Percent Change Between Decades
1900	1,079	n/a	44,792	n/a
1910	1,065	-1.3	49,576	10.7
1920	1,354	27.1	90,050	81.6
1930	7,942	486.6	211,251	134.6
1940	12,019	51.3	254,068	20.3
1950	24,275	102.0	396,001	55.9
1960	47,008	93.7	690,259	74.3
1970	59,123	25.8	907,871	31.5
1980	64,250	8.7	1,011,793	11.5
1990	66,692	3.8	1,083,592	7.1
2000	73,150	9.7	1,194,156	10.2

Source: U.S. Census Bureau, Waterford Community Planning and Development

**Table A-2
Population Trend Comparison
Waterford Township and Surrounding Communities
1900-2000**

Year	Waterford Township	West Bloomfield Township	Independence Township	Commerce Township	White Lake Township	City of Pontiac
1900	1,079	999	831	1,124	718	9,769
1910	1,065	1,113	799	986	642	14,532
1920	1,354	1,963	662	914	632	34,273
1930	7,942	3,522	1,164	1,789	1,114	64,928
1940	12,019	5,597	1,627	2,957	1,643	66,626
1950	24,275	8,720	3,448	7,421	4,182	73,681
1960	47,008	13,867	10,121	9,608	8,381	82,233
1970	59,123	28,563	16,327	14,556	14,311	85,279
1980	64,250	41,962	20,569	18,789	21,870	76,715
1990	66,692	54,516	23,717	22,228	22,608	71,166
2000	73,150	64,860	32,581	30,349	28,219	66,337

Source: U.S. Census Bureau

Sex and Age Distribution

The distribution of age cohorts as a percentage of total population is important for long range planning in order to identify potential educational, housing, and social service needs, as well as to evaluate the availability of future labor supply. The age distribution for Waterford (as a percentage of total population) falls slightly above the county average for the age groups 0-4 and 18-34. It has a higher percentage of total population than the county average for the age groups 5-17, 35-64 and 65 and above, while the Township’s median age of 35.5 years is slightly younger than that of the County’s median age.

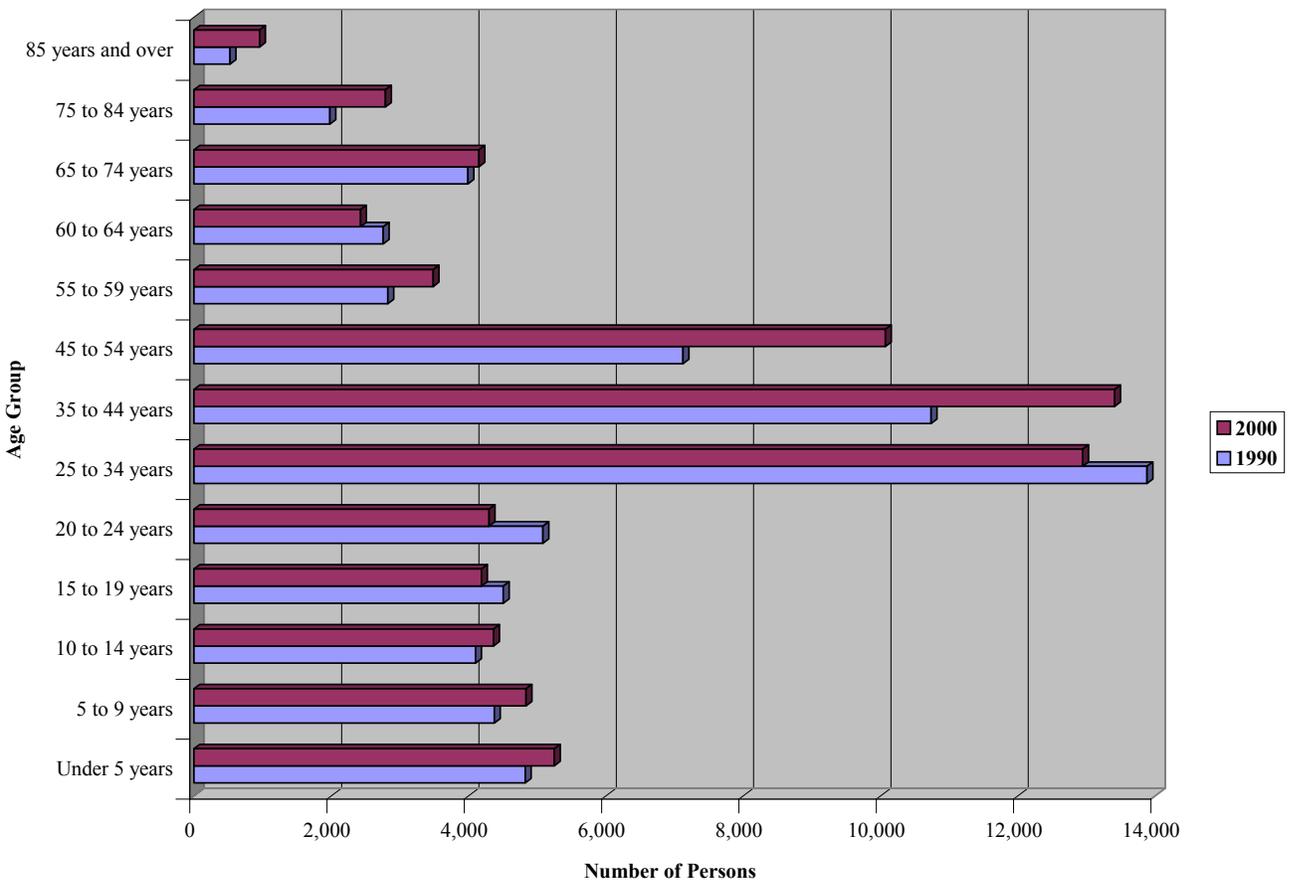
Table A-3 Age Group Distribution - Waterford Township - 1990 and 2000

Sex and Age	1990 Census		2000 Census		1990-2000
	Number	Percent	Number	Percent	Percent Change
Total Population	66 ,692	100.0	73,150	100.0	9.7
Male	32,665	49.0	36,502	49.9	11.7
Female	34,027	51.0	36,648	50.1	7.7
Under 5 years	4,823	7.2	5,249	7.2	8.8
5 to 9 years	4,376	6.6	4,836	6.6	10.5
10 to 14 years	4,100	6.1	4,363	6.0	6.4
15 to 19 years	4,504	6.8	4,186	5.7	-7.1
20 to 24 years	5,080	7.6	4,297	5.9	-15.4
25 to 34 years	13,879	20.8	12,942	17.7	-6.8
35 to 44 years	10,734	16.1	13,408	18.3	24.9
45 to 54 years	7,123	10.7	10,069	13.8	41.4
55 to 59 years	2,824	4.2	3,483	4.8	23.3
60 to 64 years	2,756	4.1	2,424	3.3	-12.0
65 to 74 years	3,989	6.0	4,149	5.7	4.0
75 to 84 years	1,980	3.0	2,790	3.8	40.9
85 years and over	524	0.8	954	1.3	82.1
Median Age	(x)	(n/a)	35.5	(n/a)	(n/a)

Source: U.S. Census Bureau

Note: (x) denotes 1990 data not available

Figure A-1
Age Group Numerical Distribution Comparison
Waterford Township
1990 and 2000

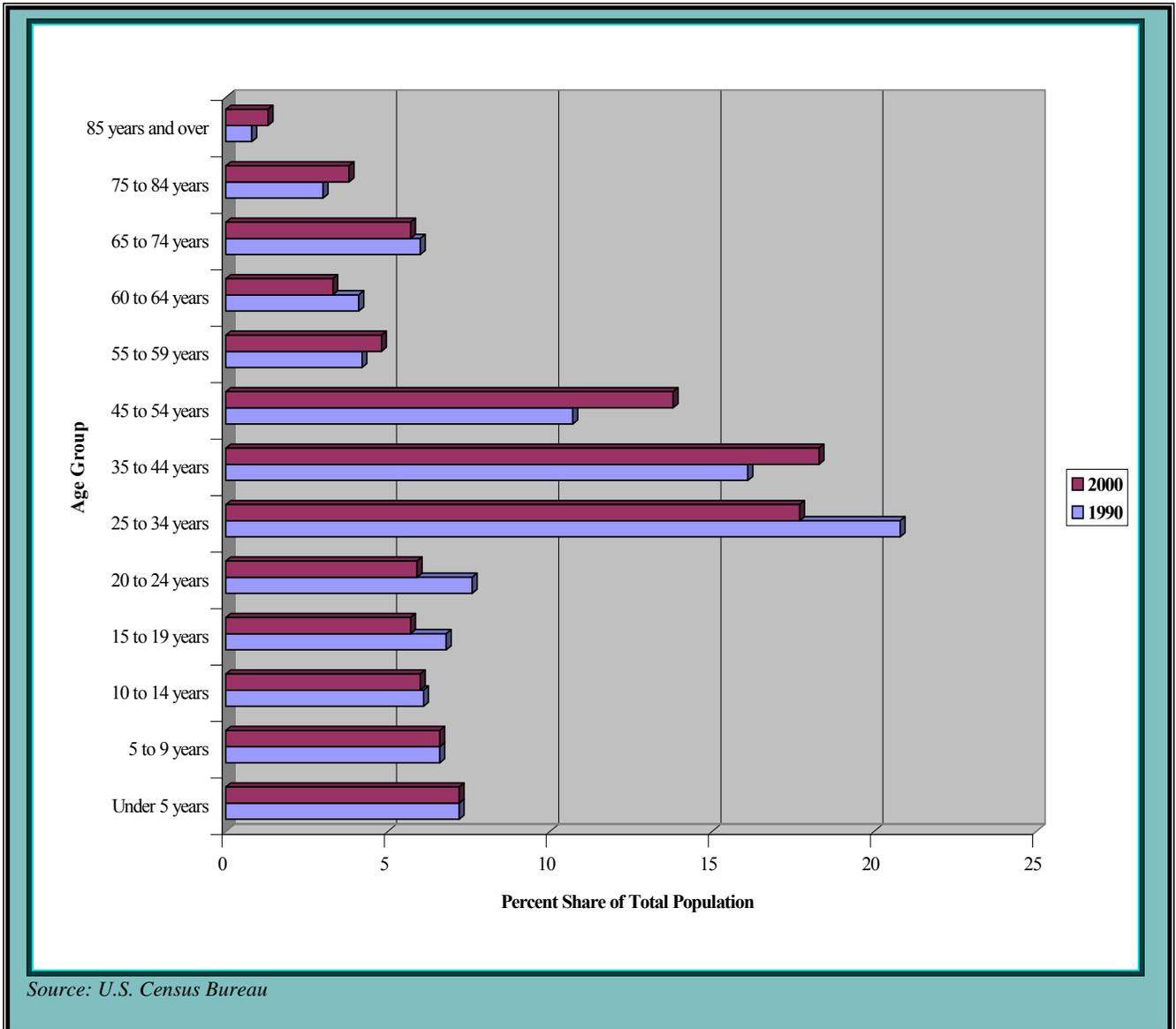


Source: U.S. Census Bureau

Waterford Township has 69.5 percent of its population in the age brackets containing persons 15 to 64 years of age. Since this is considered the labor force segment of the population, over two thirds of Waterford's population is part of the labor force segment. However, the population in the combined 15-34 years age bracket decreased by 29.3 percent between 1990 and 2000, while the 35-64 age bracket grew at a 77.6 percent rate. This trend is not unique to Waterford. As is shown in Figure A-3, Waterford's demographic patterns for the percent share of total population for each age bracket in 1990 and 2000 are almost identical to Oakland County's patterns during the same time periods. The growth rate in the 35-64 age brackets is also reflected in the median age, as shown in Tables A-3 and A-4.

These demographic patterns are probably due to the remainder of the post-World War II baby boomer generation shifting into the older age bracket, continuing a trend toward a work force growing older during the past ten years. The baby boomer generation will continue to impact the demographic patterns in the next twenty years as this group enters the traditional retirement years. Combined with the trend toward longer life spans, the age brackets for 65 years and older are expected to become a significant proportion of the total population if current demographic patterns continue unchanged. This pattern may be affected by such changes as an increased birth rate or substantial influx of younger individuals moving into the community.

Figure A-2
Age Group Percentage Distribution Comparison
Waterford Township
1990 and 2000



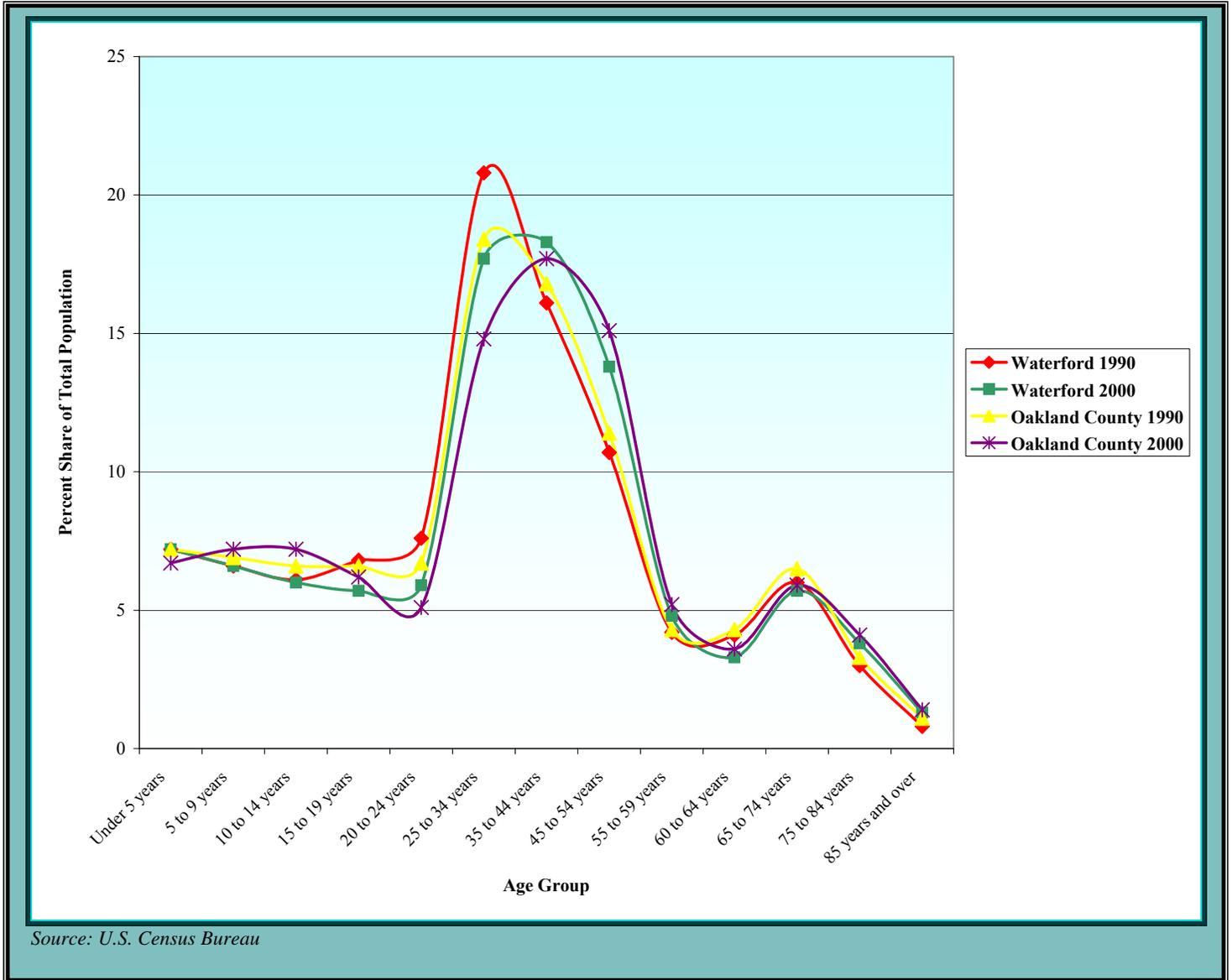
**Table A-4
Age Group Distribution
Oakland County
1990 and 2000**

Sex and Age	1990 Census		2000 Census		1990-2000
	Number	Percent	Number	Percent	Percent Change
Total Population	1,083,592	100.0	1,194,156	100.0	10.2
Male	526,927	48.6	584,660	49.0	11.0
Female	556,665	51.4	609,496	51.0	9.5
Under 5 years	78,224	7.2	80,367	6.7	2.7
5 to 9 years	75,088	6.9	86,326	7.2	15.0
10 to 14 years	71,220	6.6	85,498	7.2	20.0
15 to 19 years	71,477	6.6	74,272	6.2	3.9
20 to 24 years	72,122	6.7	60,591	5.1	-16.0
25 to 34 years	198,972	18.4	176,187	14.8	-11.5
35 to 44 years	182,240	16.8	211,055	17.7	15.8
45 to 54 years	123,344	11.4	179,816	15.1	45.8
55 to 59 years	46,597	4.3	62,410	5.2	33.9
60 to 64 years	46,420	4.3	42,675	3.6	-8.1
65 to 74 years	70,237	6.5	70,271	5.9	0.0
75 to 84 years	36,131	3.3	48,479	4.1	34.2
85 years and over	11,520	1.1	16,209	1.4	40.7
Median Age	n/a	(x)	36.7	(x)	n/a

Source: U.S. Census Bureau

Note: (x) denotes 1990 data not available

Figure A-3
Age Group Percentage Distribution Comparison
Waterford Township and Oakland County
1990 and 2000



**Table A-5
Median Age Comparison
Waterford Township and Surrounding Communities
2000**

Community	Median Age in 2000
Waterford Township	35.5
West Bloomfield Township	40.2
Independence Township	36.4
Commerce Township	36.0
White Lake Township	36.4
City of Pontiac	30.0
Oakland County	36.7

Source: U.S. Census Bureau

Racial Composition and Trends

The United States Census Bureau changed the classifications for race between the 1990 and 2000 Census, so direct comparison between 1990 and 2000 figures is generally not feasible, especially in communities where there is a high percentage of racial diversity and blending within the population. While Waterford has experienced some growth in its minority population, it is still a community with a relatively racially homogeneous population. Therefore, in Waterford’s case, the racial classification of *White* used in the 1990 Census is reasonably comparable to the *White Alone* classification used in the 2000 Census. While the total number of people in this racial category rose from 64,647 to 66,062 between 1990 and 2000, this category’s share of the total population has decreased by 6.6 percent since 1990. The corresponding population gain in the other racial categories is spread evenly, with the highest increases in the *Black or African American* category at 1.8 percent and *Mexican* category at 1.1 percent.

**Table A-6
Racial Group Distribution
Waterford Township
1990 and 2000**

Race ¹	1990 Census		2000 Census		1990-2000
	Number	Percent	Number	Percent	Percent Change
Total Population	66,692	100.0	73,150	100.0	9.7
One race	n/a	n/a	71,914	98.3	n/a
White	64,647	96.9	67,777	92.7	n/a
Black or African	701	1.1	2,114	2.9	n/a
American Indian and	391	0.6	259	0.4	n/a
Asian	484	0.7	926	1.3	n/a
Hispanic or Latino	1,538	2.3	2,863	3.9	86.2
Mexican	1,175	1.8	2,089	2.9	77.8
Puerto Rican	136	0.2	272	0.4	100.0
Cuban	13	0.0	20	0.0	53.8
Other Hispanic or	214	0.3	482	0.7	125.2
Not Hispanic or Latino	65,154	97.7	70,287	96.1	7.9
White alone	n/a	n/a	66,062	90.3	n/a

Source: U.S. Census Bureau

¹ Note: 2000 Census race data is not directly comparable to 1990 Census race data due to the first-time allowance for selecting more than one race in the 2000 Census.

Household Characteristics

Although Waterford’s household population continued to grow during the past ten years, the Township experienced a decline in the number of persons per household from 2.59 in 1990 to 2.42 in 2000, as shown in Table A-7. This decline in household size is not unique to Waterford. In fact, it is comparable to the same trend occurring in Oakland County and the nation. Oakland County experienced a decline in the number of persons per household from 2.61 in 1990 to 2.51 in 2000 and the nation experienced a decline from 2.63 in 1990 to 2.59 in 2000. Therefore, the national trend of people having smaller-size families has affected Waterford; it is not a result of any particular factors limited to Waterford.

Table A-8 shows a breakdown of household composition in 1990 and 2000. The non-family households category experienced an increase of 37.5 percent, compared with an increase of 6.2 percent for family households. While the family household category is still numerically larger than non-family households, the change in the percent of each category’s share of the total indicates that the growth in non-family households, with a 5.6 increase in the percent share, is occurring at a faster rate than the growth in family households, with a 5.6 decrease in the percent share.

**Table A-7
Population and Household Totals
Waterford Township and Oakland County
1990 and 2000**

Component	Waterford Township		Oakland County	
	1990	2000	1990	2000
Household Population	66,083	71,231	1,072,264	1,180,408
Group Quarters Population	609	1,919	11,328	13,748
Total Population	66,692	73,150	1,083,592	1,194,156
Households	25,488	29,389	410,520	471,133
Housing Units	26,509	30,404	432,677	492,006
Household Size	2.59	2.42	2.61	2.51

Source: U.S. Census Bureau

**Table A-8
Household Type Distribution
Waterford Township
1990 and 2000**

Households by Type	2000 Census		1990 Census		1990-2000 Percent Change	1990-2000 Change in Percent of Total Share
	Number	Percent	Number	Percent		
Total Households	29,387	100.00	25,476	100.00	15.4	n/a
Family Households (2 or more related)	19,127	65.1	18,013	70.7	6.2	-5.6
With own children under 18	8,935	30.4	8,793	34.5	1.6	-4.1
Non-family Households (2 or more unrelated)	10,260	34.9	7,463	29.3	37.5	5.6
One person household	8,188	27.9	5,749	22.6	42.4	5.3
Householder 65 years and older	2,374	8.1	1,821	7.1	30.4	1.0

Source: U.S. Census Bureau

As shown in Table A-9, while Waterford had a notable increase in the number of households in the decade between 1990 and 2000, the percentage change was the second lowest among those neighboring communities measured. The only community with a lower change was Pontiac, which actually realized a percentage decrease in households. Waterford’s relatively lower percent increase is more than likely attributable to the fact that Waterford possesses less land available for additional residential development. It is anticipated that Waterford’s rate of increase in its number of households will continue to decline during the next 20 years as the land available for additional residential development continues to decrease.

**Table A-9
Number of Households
Waterford Township and Surrounding Communities
1990 and 2000**

Community	1990 Households	2000 Households	1990-2000 Percent Change
Waterford	25,476	29,387	15.35
Pontiac	24,777	24,234	-2.19
White Lake	7,776	10,092	29.78
West Bloomfield	19,221	23,414	21.81
Commerce	7,700	10,708	39.06
Independence	7,977	11,765	47.48

Source: U.S. Census Bureau

Population Projections

Population projections, like weather forecasts, are often erroneous in hindsight due to the dependence upon the numerous assumptions that must be entered into the calculation. One wrong assumption can dramatically affect a projection. A projection based in part on an assumption that double-digit residential development would prove to be wrong if an unanticipated surge in interest rates makes the cost of development too high. Even with this dependence on assumptions, projecting future population is essential to analyzing future land use and public facility, recreation, and housing needs.

There is no one projection analysis method that can accurately integrate all the factors that contribute to a particular rate of growth. Perhaps the most effective means of forecasting is to prepare population projections with a number of methods, then calculate the average projection from the outcomes of the methods used.

Projection Methods

SEMCOG Population Projection

One set of population projections has already been prepared by the Southeast Michigan Council of Governments (SEMCOG) for its 2030 Regional Development Forecast. While Waterford does not endorse these projections because SEMCOG’s projections do not accurately reflect past population growth trends and the current pattern and rate of development, the SEMCOG figures are still useful as a worse case projection that can be compared and averaged with more optimistic and moderate projections.

Linear Curve Population Projection

The linear curve uses the past population growth and assumes the trend will continue into the future at previous growth rates. It is rarely appropriate to use the linear method alone to fully represent demographic trends. This is especially true in Waterford’s case, where the shrinking amount of developable land will likely limit population from climbing as quickly as it has in the past, barring an increase in such factors as household size. The linear curve analysis is most effective as an optimistic projection that can be compared and averaged with more pessimistic and moderate projections.

Modified Exponential Population Projection

The modified exponential method generally assumes that growth will eventually approach an upper limit based on the eventual physical limitations of developable land and public facility

and infrastructure capacity. The upper limit for future growth is estimated by a buildout analysis on the remaining vacant developable land in the Township. For the purposes of this analysis, a buildout population of 85,000 people is utilized.

Building Permit Analysis Population Projection

This method examines recent building permit trends for residential construction and then projects that trend to estimate future number of households and population. This method assumes that housing construction rates will remain constant.

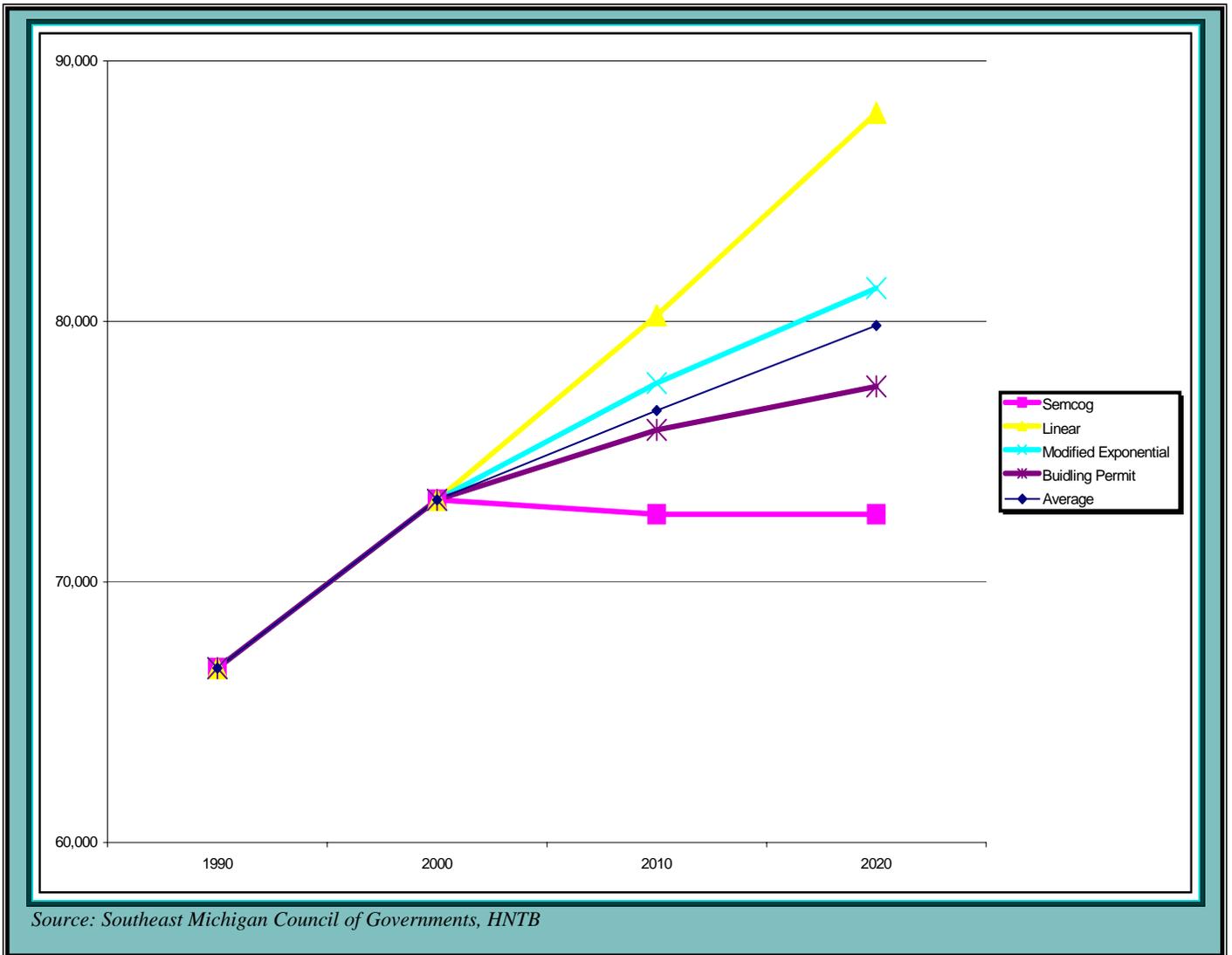
The results of the population projection analyses using the four methods described above are shown in Table A-10. The results are also graphically depicted in Figure A-4. The population projection methods produce a range of results from a nearly one percent gain to an over 20 percent increase over the twenty-year period. The average of the four projections is a 9.16 percent gain in population during the next 20 years.

**Table A-10
Population Projection Method Outcomes
Waterford Township
2000-2020**

Year	SEMCOG Method	Percent Change 2000-2020	Linear Method	Percent Change 2000-2020	Modified Exponential Method	Percent Change 2000-2020	Building Permit Method	Percent Change 2000-2020	Average Projection Method	Percent Change 2000-2020
2000	73,150		73,150		73,150		73,150		73,150	
2010	72,595	0.75	80,233	20.30	77,636	11.00	75,841	5.96	76,576	9.16
2020	72,602		88,003		81,280		77,507		79,848	

Source: Southeast Michigan Council of Governments, HNTB

**Figure A-4
Population Projections
Waterford Township
2000-2020**



HOUSING

As shown in Table A-11, nearly 74 percent of current residents own their own home, a nearly 20 percent increase during the last decade, while the percent share of renter occupied housing decreased from 25.8 percent of the total in 1990 to 22.9 percent in 2000. Nearly 78 percent of Waterford’s housing is single family housing, as shown in Table A-12. Additionally, the total demand for housing in the Township is strong, with only 3.3 percent of the units in 2000 identified as vacant, down from a 3.9 percent vacancy rate in 1990.

**Table A-11
Housing Occupancy Status
Waterford Township
1990 and 2000**

Housing Occupancy Status	1990 Census		2000 Census		1990-2000
	Number	Percent	Number	Percent	Percent
Total Households	26,509	100.0	30,404	100.0	14.69
Owner Occupied Units	18,630	70.3	22,428	73.8	20.39
Median Housing Value <i>(in 2000 dollar rate)</i>	\$100,343	n/a	\$144,400	n/a	43.91
Renter Occupied Units	6,846	25.8	6,959	22.9	1.65
Median Contract Rent <i>(in 2000 dollar rate)</i>	\$682	n/a	\$625	n/a	-8.36
Vacant Units	1,033	3.9	1,017	3.3	-1.55

Source: U.S. Census Bureau

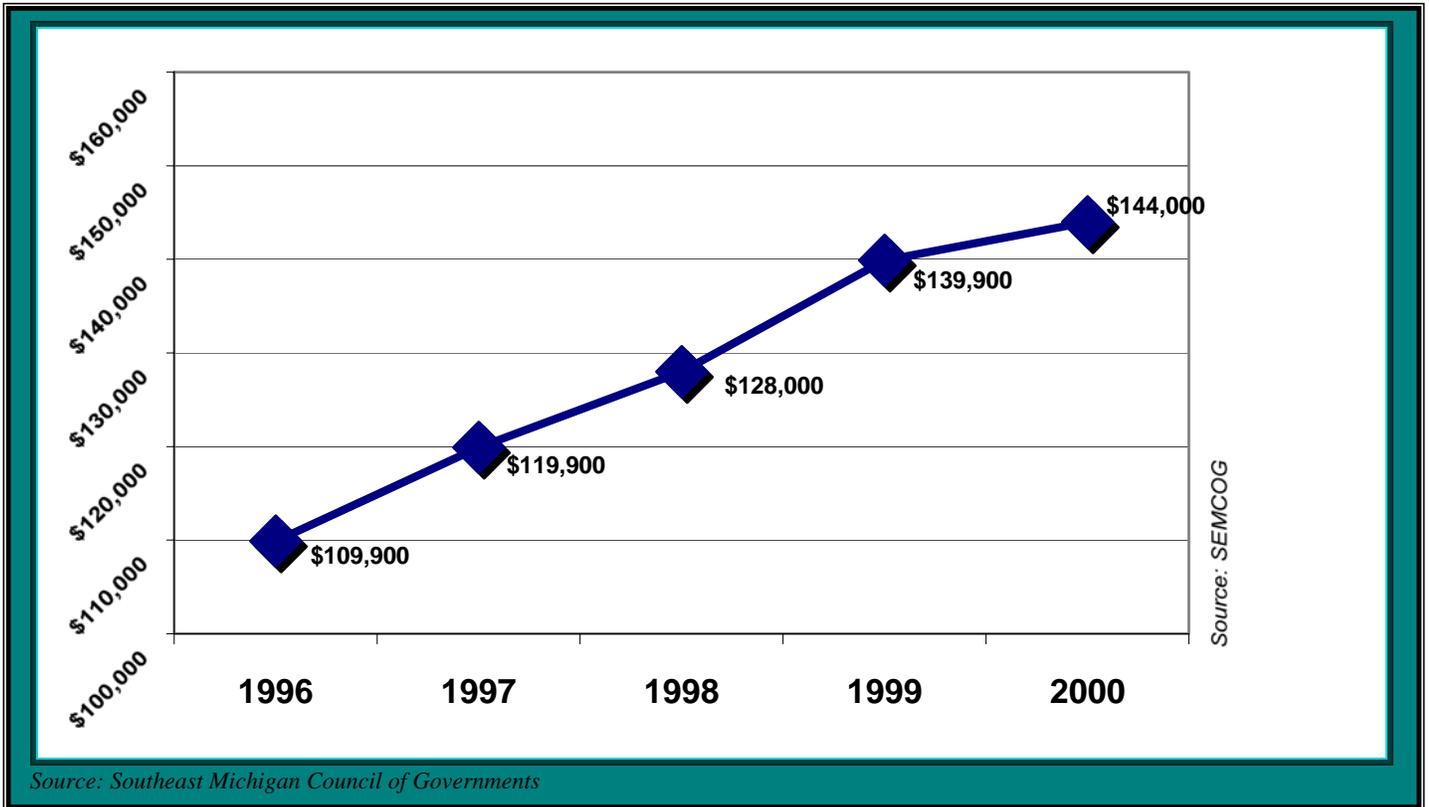
**Table A-12
Number of Housing Units by Structure Type
Waterford Township
1990 and 2000**

Structure Type	1990 Census		2000 Census		1990-2000
	Number	Percent	Number	Percent	Percent Change
Total Households	26,509	100.0	30,404	100.0	14.7
One-Family Detached	19,461	73.4	22,469	73.9	15.5
One-Family Attached	802	3.0	1,206	4.0	50.4
Two-Family / Duplex	197	0.7	222	0.7	12.7
Multi-Unit Apartments	5,709	21.5	6,289	20.7	10.2
Mobile Homes	189	0.7	191	0.6	1.1
Other Units	151	0.6	6	0.0	-96.0

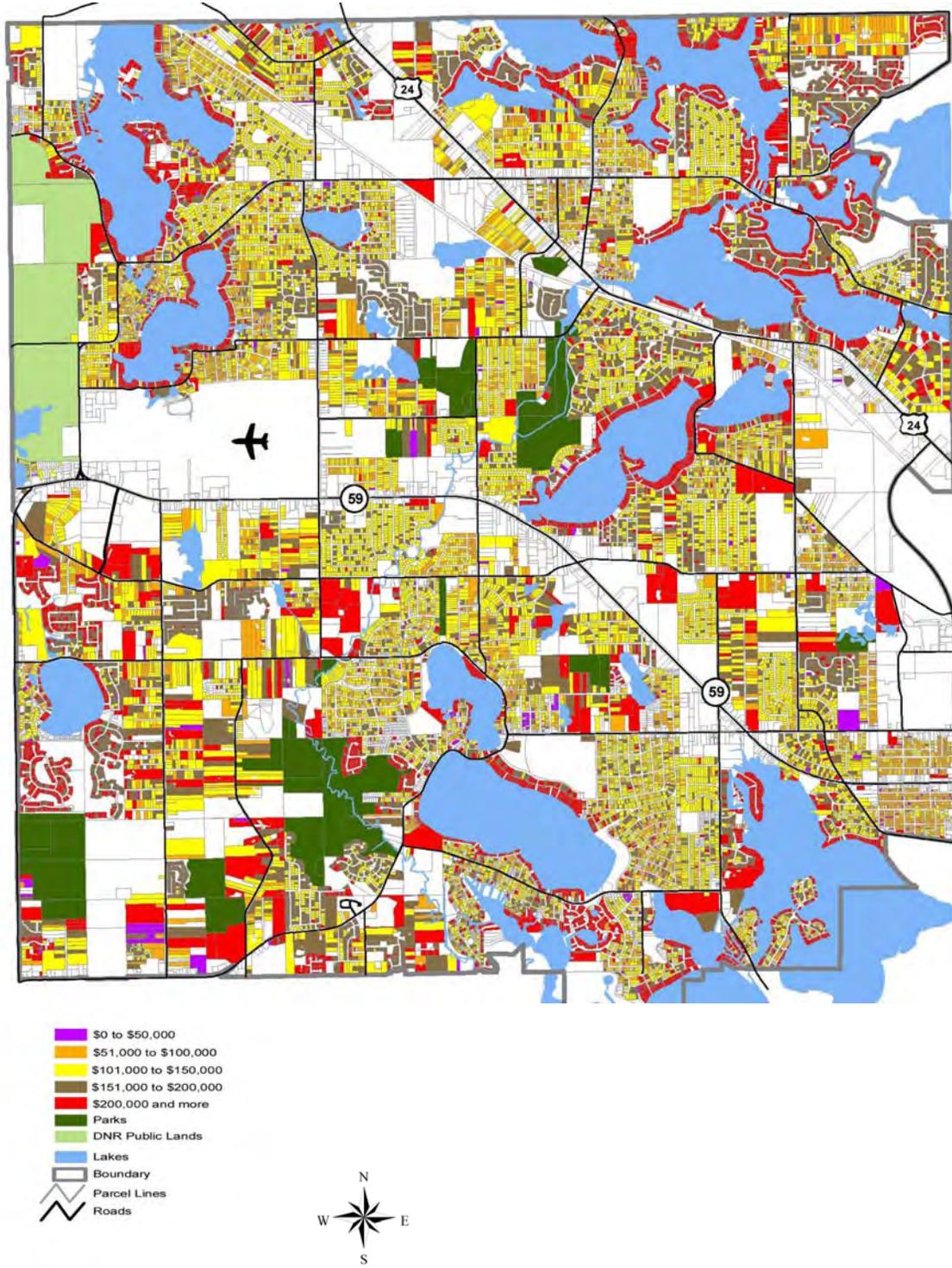
Source: U.S. Census Bureau

The growth in Waterford’s average housing values between 1996 and 2000, shown in Figure A-5, also reflects the demand for Waterford’s housing stock. During this period, average housing prices rose by \$34,100, or 31.03 percent. Map A-1 provides a graphical representation of the distribution of residential market value classifications throughout the Township.

**Figure A-5
Average Housing Value
Waterford Township
1996-2000**



**Map A-1
Residential Parcel Market Value Distribution
Waterford Township
2001**



Source: Waterford Township GIS

The strength of the Waterford housing market is reflected in the net increase of housing units each year during the past twelve years, as shown in Table A-13. While there was an average of 38 housing units per year demolished between 1990 and 2001, an average 451 housing units per year were built during the same time period. The construction of the net 4,970 housing units during this time period increased Waterford’s housing stock by 25 percent. This time period also contributed the second largest number of single family houses within a decade in Waterford’s history, as shown in Table A-14. Only the decade of the 1950s produced more houses in Waterford.

**Table A-13
Residential Building Permits
Waterford Township
1990-2001**

Year	New Units Permitted			Units Demolished			Totals		
	Single Family	Two Family	Multi Family	Single Family	Two Family	Multi Family	New Units	Demo Units	Net
1990	178	0	134	30	0	0	312	30	282
1991	206	8	20	20	0	0	234	20	214
1992	219	2	56	43	0	0	277	43	234
1993	310	8	79	29	0	0	397	29	368
1994	401	4	78	48	0	0	483	48	435
1995	361	12	26	47	0	0	399	47	352
1996	489	4	80	35	0	0	573	35	538
1997	443	0	245	26	0	0	688	26	662
1998	528	2	187	55	0	0	717	55	662
1999	457	2	112	33	0	5	571	38	533
2000	189	14	57	42	0	0	260	42	218
2001	154	12	340	34	0	0	506	34	472
Total	3,935	68	1,414	442	0	5	5,417	447	4,970

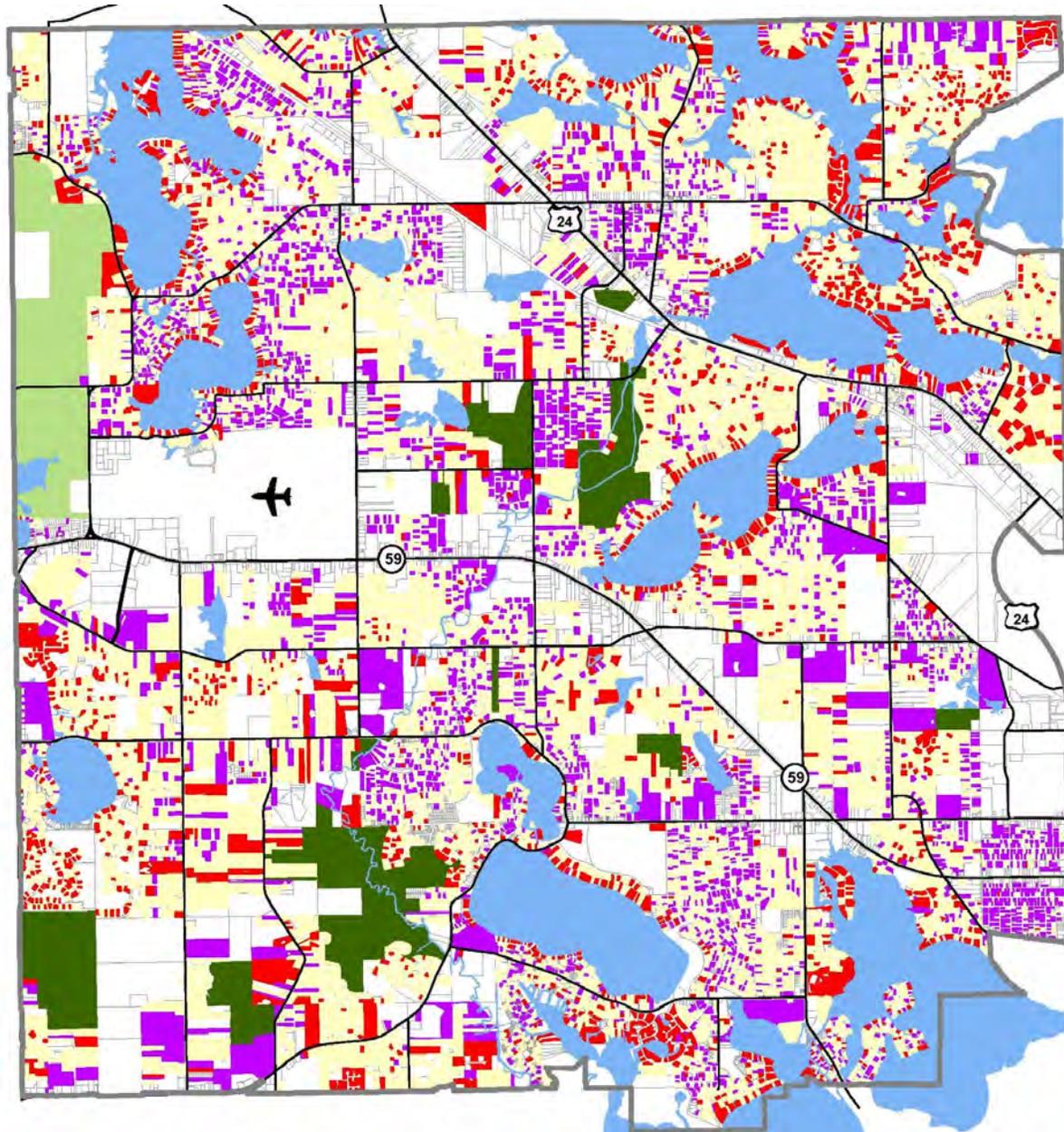
**Table A-14
Residential Construction Detail
Waterford Township
1900-2000**

Decade	Number Built	Number of Bedrooms	Number of Bathrooms	Unit Size (sq. ft.)	Lot Size (acres)
1900-1909	118	3.7	1.7	1,900	0.97
1910-19	111	3.3	1.6	1,666	0.46
1920-29	1,897	2.7	1.3	1,218	0.34
1930-39	921	2.7	1.3	1,275	0.46
1940-49	2,713	2.7	1.3	1,250	0.51
1950-59	6,204	2.9	1.3	1,245	0.39
1960-69	3,000	3.1	1.6	1,477	0.43
1970-79	2,395	3.1	1.6	1,491	0.39
1980-89	1,822	3.0	1.8	1,595	0.51
1990-99	3,243	3.1	2.3	1,821	0.34
2000	340	3.4	2.6	2,166	0.37

Source: Oakland County Planning and Economic Development Services

Based on the information found in Table A-14, the average Waterford home is approximately 1,554 square feet in size on nearly a half acre parcel, with 3 bedrooms and 1 ½ bathrooms. Map A-2 provides a graphical representation of the distribution of housing size classifications throughout the Township.

Map A-2
Residential Structure Size Distribution
Waterford Township
2001



- 2,001 Square Feet and Up
- 1 to 2,000 Square Feet
- Less Than 1000 Square Feet
- Parks
- DNR Public Lands
- Lakes
- Township Boundary
- Parcel Lines
- Roads



Source: Waterford Township GIS

Population and Housing Conclusions

Waterford Township has continued to experience growth within the past decade both in the relation to population and housing, each of which are projected to continue, but at a lower rate, during the next twenty years. The following conclusions can be derived from the analyses presented in this section:

- The Township is the fourth most populous community in Oakland County with a population of 73,150, a nearly 10 percent increase from 1990.
- Between 1990 and 2000 the number of households grew 15 percent, while the County at nearly the same rate.
- The average household size decreased from 2.59 in 1990 to 2.42 persons per occupied housing unit in 2000, while the County dropped from 2.61 to 2.51 during the same time period.
- • The median age of Waterford Township residents is 35.5 years, while the County's median age is 36.7 years.
- Approximately 10.8 percent of the Township's residents are over 65 years old, which is comparable to the County's 11.4 percent.
- The Township's population made a small gain toward racial diversification, with the minority population growing from 3.1 percent of the total population in 1990 to 7.3 percent of the total in 2000.
- Waterford Township has a high percent of owner occupied housing: 73.8 percent in 2000.
- 34.9 percent of all households in the Township are non-family, up from 29.3 percent in 1990.
- By 2020, the population is projected to be 79,848, a nine percent increase from 2000.

INCOME

There was a significant shift in Waterford’s income distribution during the 1990s as the number of households with \$49,999 or less annual income decreased by over 22 percent, while the number of households with \$50,000 or more annual income increased by 88 percent, as shown in Table A-15.

**Table A-15
Income Group Distribution
Waterford Township
1990-2000**

Household Income	1990 Census		2000 Census		1990-2000 Percent Change
	Number	Percent	Number	Percent	
Total Households	25,509	100.0	29,389	100.0	15.21
Less than \$10,000	1,901	7.5	1,198	4.1	-36.98
\$10,000 to \$14,999	1,349	5.3	991	3.4	-26.54
\$15,000 to \$24,999	3,669	14.4	2,873	9.8	-21.70
\$25,000 to \$34,999	4,005	15.7	3,379	11.5	-15.63
\$35,000 to \$49,999	5,985	23.5	4,700	16.0	-21.47
\$50,000 to \$74,999	5,938	23.3	7,226	24.6	21.69
\$75,000 to \$99,999	1,777	7.0	4,545	15.5	155.77
\$100,000 to \$149,999	737	2.9	3,292	11.2	346.68
\$150,000 or more	222	0.9	1,253	4.3	464.41
Median Household Income <i>(in 1999 dollar rate)</i>	\$52,885		\$55,008		4.01
Persons in Poverty	3,522	13.8	3,658	12.4	3.86

Source: U.S. Census Bureau

Note: Total households may not equal the sum of households in the income distribution due to revisions to total households by the U.S. Census Bureau.

ECONOMIC CONDITIONS

Waterford is the geographic center of Oakland County, located approximately an hour from downtown Detroit, ten minutes from Pontiac, and 30 minutes from Flint. Three regional highways, M-59, Dixie Highway, and Telegraph Road, provide ready accessibility to the major population and employment centers of southeastern Michigan. The Oakland County International Airport provides easy aviation access to major businesses with national and international operations, particularly those located in the Automation Alley corridor. Oakland County, as a whole, has experienced strong economic growth, job creation, and an overall healthy economy, and this trend is expected to continue.

Waterford's developed commercial land use areas have consistently remained around five to six percent of the total existing land use during the past 12 years. Consistent with the goals of the previous Master Plan, the Township's commercial land uses are concentrated along M-59, Telegraph Road, and Dixie Highway. These uses range from small, single-use storefront areas to contemporary shopping centers. The retail, office, and service uses located along Waterford's commercial corridors have served both comparison and convenience shopping needs for residents of Waterford and surrounding communities. Other commercial land uses can be found throughout the Township, particularly at main intersections. These commercial areas generally serve the surrounding neighborhoods and Township residents, while the shopping area located at Telegraph Road and Elizabeth Lake Road has a regional trade area serving a population base beyond the Township boundaries. Due to the anticipated slowing of population growth in Waterford, the achievement of virtual development buildout, and changes in the retail sector of the economy, no major commercial expansion in Waterford is anticipated during the next twenty years. Instead, an emphasis on redevelopment and changing patterns of commercial uses is anticipated during this time period.

The following overview provides a brief qualitative analysis of the Township's market area. This analysis has been conducted to provide assistance in guiding the development of the Master Plan's future land use designations. It is not intended to provide the level of statistical detail on the market area and its economic components that would be the result of an in-depth quantitative analysis. It is recommended that the Township conduct a detailed quantitative market area analysis in the near future to assist the planning staff with their efforts to accomplish the economic development goals of this Master Plan.

Market Area Overview

Waterford possesses two major focal areas that serve as regional destinations. One area is the Oakland County International Airport (OCIA). The OCIA provides ready access to general aviation service for the businesses and corporations located throughout Oakland County, and particularly along the Automation Alley corridor (Automation Alley is a cluster of technology-driven companies located in Oakland County). Currently, little to none of the properties surrounding the OCIA on the main thoroughfares have been utilized to take advantage of the airport's proximity and its use by the corporations located in Automation Alley to provide related commercial and office uses.

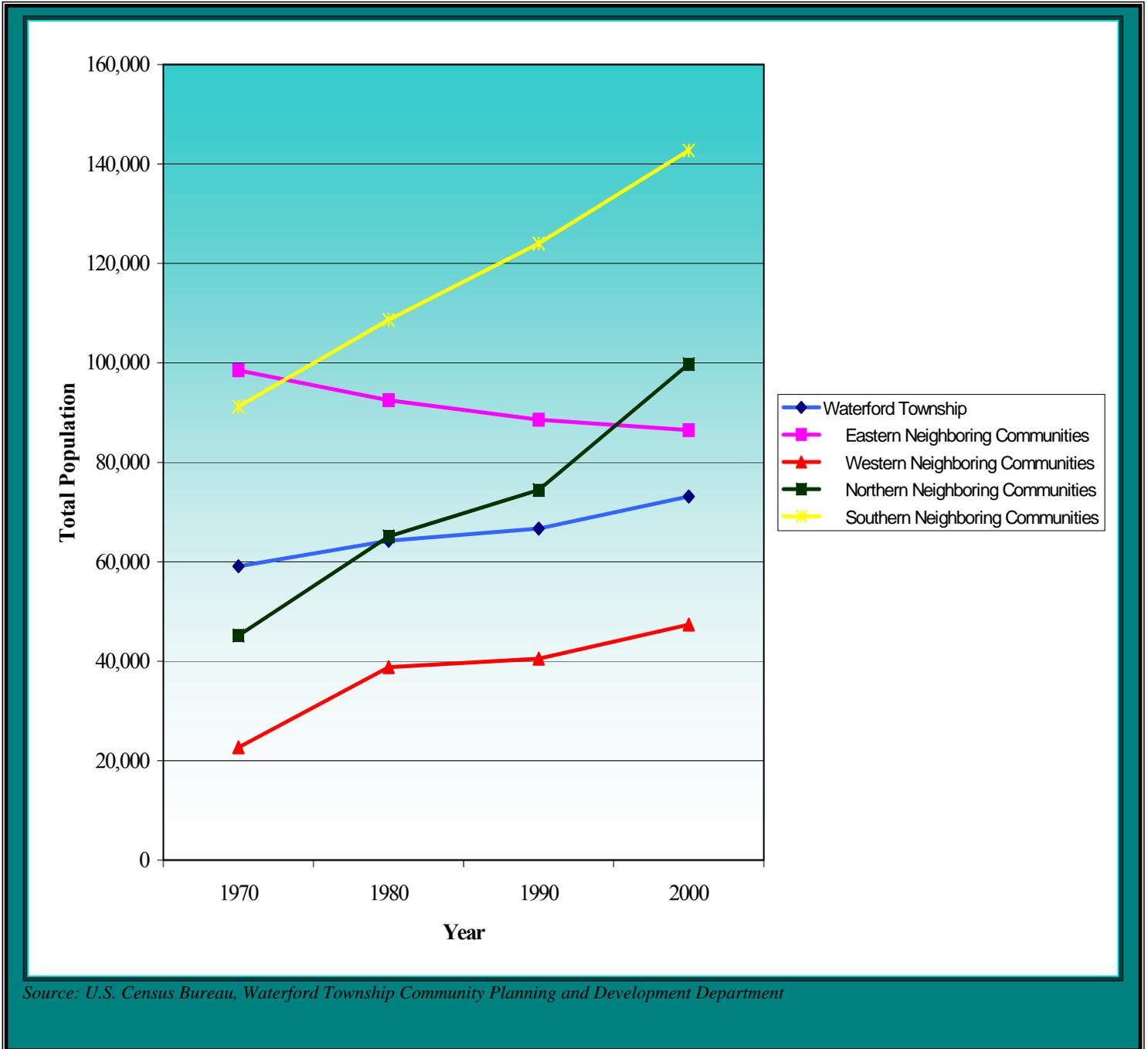
The other regional destination area is located at Telegraph Road and Elizabeth Lake Road. This area has traditionally been a regional shopping mall known as the Pontiac Mall and subsequently as the Summit Place Mall. Factors such as the construction of the Great Lakes Crossing Mall in nearby Auburn Hills and the growth of internet retail purchasing has weakened the vitality of the regional retail component of the Telegraph Road/Elizabeth Lake Road area, creating a surplus of commercial retail space.

Waterford Township's current primary market-drawing capability is for comparison oriented retail establishments as well as convenience shopping. The primary comparison market trading area is the geographic area in which 60 percent to 80 percent of comparison store clients reside. This geographic area can be qualitatively delineated on the basis of population dispersion, competitive market influences, traffic flow patterns and the location of natural barriers.

Population Distribution

The geographic distribution of population, or relative population density, becomes an important consideration in respect to the far-reaching aspects of Waterford Township's primary comparison trading area. In analyzing the potential pool of customers for the Township's primary trading area, the boundaries of other major trading areas in Oakland County were taken into consideration as well as highway access. Seventeen neighboring communities were determined to be part of the Waterford trading area. The neighboring communities were grouped into four geographic categories, east, west, north, and south. The eastern neighboring communities are comprised of the Cities of Lake Angelus, Pontiac, and Auburn Hills. The western neighboring communities are comprised of White Lake Township and Highland Township. Orion Township, the Village of Lake Orion, Independence Township, the City of the Village of Clarkston, Springfield Township, Brandon Township, and Rose Township together comprise the northern neighboring communities. Finally, the southern neighboring communities are comprised of Commerce Township, West Bloomfield Township, the City of Sylvan Lake, the City of Keego Harbor, and Bloomfield Township. There has been a substantial change in the population distribution in the Waterford trading area during the past thirty years, as is shown in Figure A-6. Thirty years ago, the greatest concentration of potential customers outside Waterford was in the eastern communities with over 66 percent more population than in Waterford alone, the southern communities with over 54 percent, and the total potential customers in the western and northern communities combined with only 15 percent more. In 2000, the southern neighboring communities increased at a high rate, now containing over 95 percent more population than in Waterford alone. The northern communities grew substantially, now containing 36 percent more population than in Waterford alone, while the western communities contain 35 percent less total population than Waterford. While the eastern communities still possess 18 percent more population than Waterford, this is a substantial drop from the population total thirty years ago. Therefore, the total number of potential customers in Waterford's primary comparison trading area increased by 42 percent over the total number of potential customers thirty years ago. The distribution of these potential customers has also shifted, from a primarily eastern-southern alignment to one that is primarily northern-southern with continuing growth in the western neighboring communities.

Figure A-6
Waterford Market Area Population Distribution
1970-2000



Competitive Influences

In 2001, the Southeast Michigan Council of Governments (SEMCOG) prepared a location map of all of the retail shopping centers in the SEMCOG region. SEMCOG classifies shopping centers by the retail classifications shown in Table A-16. Oakland County contains over 190 shopping centers containing nearly 36 million square feet of floor space. The location of Oakland County's shopping centers is shown in Map A-3. Through a visual analysis of Map A-3, there are five major trading areas that exist to serve communities on a regional basis. These five trade areas are Waterford, Auburn Hills, Novi/Farmington Hills, Southfield, and Rochester/Troy. While the existence of these regional trading areas within the County's boundaries impacts the potential customer base for Waterford Township's primary comparison trading area, each of the other four trading areas affects the Waterford area in its own way. Perhaps the trading area with the greatest potential impact to draw away customers is the Auburn Hills trading area due to its proximity and easy access to Waterford customers and to the customers in the eastern and growing western communities. The other regional trading area with a high potential to draw customers from Waterford's trading area is the Novi/Farmington Hills trading area. This trading area overlaps the southern communities in the Waterford area, probably drawing the highest number of customers away in the southernmost sections of these shared communities. The Troy/Rochester Hills trading area probably has the greatest impact on drawing away the upscale customer base, particularly to the Somerset Collection center. Perhaps the area with the least impact is the Southfield area, due to distance and traffic flow patterns. Competitive influences will continue to impact the viability of Waterford Township's primary trading area unless efforts are made by both the private and public sectors to maintain, enhance, and expand the consumer drawing capacity.

**Table A-16
Shopping Centers by Retail Classification
Southeast Michigan
2001**

Retail Classification	Floorspace Size Range <i>(square feet)</i>	Number of Centers	Total Floorspace <i>(square feet)</i>
Super-Regional Shopping Center	750,000 and above	21	25,453,787
Regional Shopping Center	300,000 to 749,999	43	17,538,039
Community Shopping Center	100,000 to 299,999	188	30,069,897
Neighborhood Shopping Center	30,000 to 99,999	219	14,670,817
Single Stand-Alone Retail Building	30,000 and above	141	16,976,611
Total		612	104,709,151

Source: Southeast Michigan Council of Governments

Traffic Flow

Retail shopping is significantly affected by location along major thoroughfares and the relative ease of access into and out of shopping centers. M-59 affords ready access into Waterford for potential consumers in both the eastern and western neighboring communities. Similarly, Dixie Highway serves to provide the same ready access for the northern communities. Telegraph Road effectively serves both the southeastern and northeastern communities. The only area where access is highly constrained is in the southwestern communities. This is especially the case for potential customers living in the southernmost sections of these communities. This constraint on traffic flow from the southwestern-most communities is also affected by existing natural barriers.

Natural Barriers

Lakes form the most prevalent barriers to consumer movement relative to Waterford Township's comparison shopping base. This is most evident to the south of Waterford where the high market potential customers of West Bloomfield and Commerce Township reside. Lakes also hinder consumer movement to Waterford Township from some sections of the Orion Township area, although the extension of Telegraph Road to Walton Boulevard will help to increase access for potential customers residing in Orion Township.

Township Shopping Areas

Because the majority of Waterford's trade area consumers reside outside of the Township, the Township's commercial base should remain along the M-59, Dixie Highway, and Telegraph Road corridors to readily serve both Waterford residents and the residents of neighboring communities. Waterford Township's existing and potential comparison shopping base has evolved around six identifiable clustered areas of development.

The primary retail draw in Waterford for potential customers is that of the Summit Place Mall and the surrounding area. This area is classified by SEMCOG as a super-regional shopping center. Another area is the commercial properties in the center of the Township along M-59. There are two community shopping centers, two neighborhood shopping centers, and one major stand-alone retail building within this area. A third major cluster of comparison uses also exists along the northwestern portion of Dixie Highway, which contains retail properties around the K-Mart shopping plaza. The area near the Oakland County International Airport contains comparison shopping capacity that creates a fourth cluster of retail properties. The fifth shopping area identified within the Township is the Union Lake/Four Towns area in the southwest section of the Township along Cooley Lake Road between Williams Lake Road and Hospital Road. The sixth area is a traditional urban-style retail center located along M-59 near the Telegraph Road and M-59 intersection.

Several minor retail centers which are convenience-oriented are located throughout the Township. These centers serve to provide the daily shopping needs of residents of the surrounding local neighborhoods. Convenience shopping uses relate to the day-to-day purchases from businesses such as grocery stores, drug stores and food/drink establishments.

Office Use Potential

The Township's office uses primarily serve medical, financial, and professional firms in small one- or two-story structures. There are no large office parks. Most notably, there are no substantial concentrations of office complexes near the Oakland County International Airport and the Oakland County Service Center, where such office complexes would complement and enhance the uses found at these locations.

Industrial Use Potential

Industrial uses in Waterford have remained relatively static over the past fourteen years, growing from 433 acres in 1989 to 492 acres in 2002. Industrial uses are not anticipated to expand beyond the current total acreage. Instead, it is anticipated that industrial redevelopment will occur during the next twenty years. A review of older industrial uses indicates a high incidence of site underutilization. Few sites provide amenities such as sufficient parking, landscaping and loading zones that would be consistent with the current zoning requirements. The Township is also concerned that older industrial uses may be contaminating sites without public knowledge. Obviously, such uses create an environment that is less than attractive and discourage more desirable development. In view of Waterford's efforts for economic development and mandatory concern for water quality, consideration should be given to the creation of a systematic program of site inspections as well as a continuation of the Township's brownfield redevelopment efforts.

Economic Conditions Conclusions

Waterford Township is a developed suburban center that has experienced a slowdown in the amount of new growth within its borders. However, redevelopment efforts can enable the Township to continue gaining economic momentum and offering a promising future as Waterford continues to mature. Since this background study is intended as a brief synopsis of the economic conditions of Waterford Township, it is not meant to replace long-range detailed study and analysis of important local economic indicators such as labor force statistics, base jobs, and major sources of employment. These complex analyses should be implemented as part of the Master Plan, as time and staffing permits. The following observations and conclusions derived from this brief background study should be incorporated into the Master Plan Goals and Objectives.

- Waterford Township is in need of a comprehensive economic development action plan.
- The Township should act proactively to promote economic development.
- Waterford is an attractive location for business activities.
- Township Boards and Commissions should be educated on the availability and value of economic development tools and efforts.
- The physical appearance and functional character of the commercial corridors should be improved and enhanced.

TAX BASE

The vitality of the local economy requires a stable existing tax base and employment sector. An understanding of these components is important in developing and implementing a long-range plan for commercial and industrial use of land that is compatible with other land uses; fosters and encourages sound employment opportunities for the local population; improves the Township tax base; and coordinates the overall physical development and redevelopment of the Township.

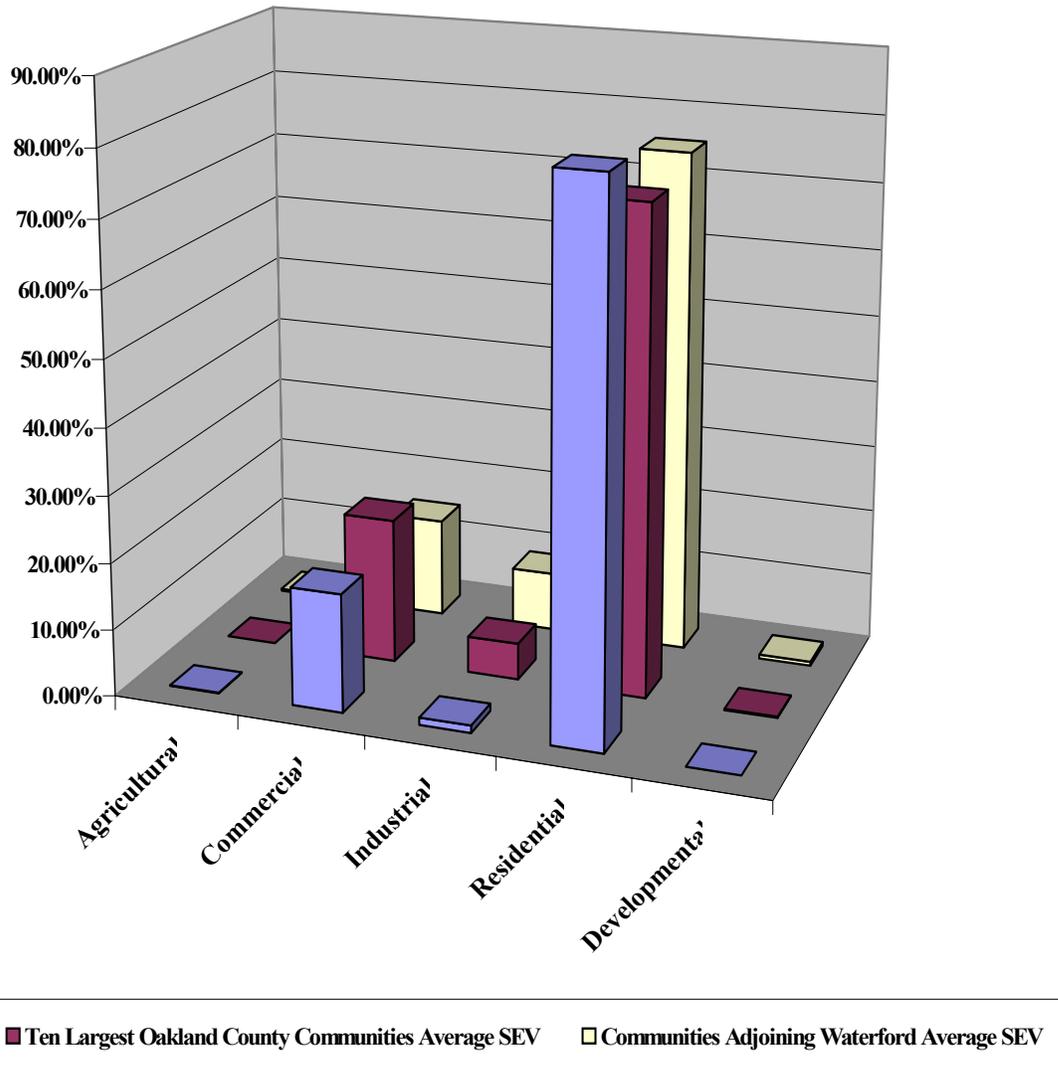
The state equalized value (SEV) for real property in Waterford Township has steadily increased during the past ten years. In Waterford, residential use of real property provides 81 percent of the total SEV, commercial use of property is nearly 18 percent, industrial use of property is a little more than one percent, and agricultural use less than one percent, as shown in Table A-17. The distribution of Waterford’s SEV among the different use classifications is comparable to the average SEV of the ten largest communities in Oakland County and to the average SEV of the communities adjoining Waterford, as is shown in Figure A-7 below. However, Waterford does rely on residential use for a larger percentage of its total SEV as its tax base than either the average for the largest or the adjoining communities. Industrial use is relied upon less in Waterford for its SEV than either of the averages for the largest and adjoining communities, whereas Waterford’s reliance on commercial use for SEV falls in between the respective average percentages shown for the largest Oakland County communities and those communities adjoining Waterford. Tables A-18 and A-19 reveal additional SEV related data.

Table A-17
Real State Equalized Value Classification Distribution
Waterford Township
1992 and 2002

Classification	Total Real SEV		Percent of Total	
	1992	2002	1992	2002
Agriculture	\$ 1,611,000	\$ 1,945,920	0.10	0.08
Commercial	\$ 272,163,500	\$ 459,392,274	24.10	17.7
Industrial	\$ 22,253,700	\$ 28,466,370	2.0	1.1
Residential	\$ 833,741,700	\$2,105,186,574	73.80	81.12
Total	\$1,129,869,900	\$2,594,991,138	100.00	100.00

Source: Oakland County Planning and Economic Development Services, Waterford Township Assessing Department

Figure A-7
Real State Equalized Value Classification Distribution Comparison
Waterford Township and Selected Oakland County Communities
2002



Source: Oakland County Planning and Economic Development Services, Waterford Township Assessing Department

Table A-18
Total Real State Equalized Value
Waterford Township
1992-2002

Year	Total Real SEV
1992	\$1,129,869,900
1993	\$1,254,519,400
1994	\$1,279,657,800
1995	\$1,380,984,680
1996	\$1,535,215,242
1997	\$1,679,241,985
1998	\$1,818,275,000
1999	\$1,997,784,495
2000	\$2,183,725,455
2001	\$2,379,338,744
2002	\$2,594,991,138

Source: Waterford Township Assessing Department

Table A-19
Total Real State Equalized Value Comparison
Waterford Township and Surrounding Communities
2002

Community	Total Real SEV	Percent Share of County Total
Waterford Township	2,594,991,138	4.5
West Bloomfield Township	3,858,431,572	6.6
Independence Township	1,524,399,400	2.6
Commerce Township	1,839,154,120	3.2
White Lake Township	1,035,482,522	1.8
City of Pontiac	1,337,911,230	2.3
Oakland County	58,197,370,454	100.0

Source: Oakland County Planning and Economic Development Services

EMPLOYMENT

The number of people within the labor force (16 years and over) increased by 10.5 percent while the number of people unemployed decreased by 28.9 percent during the 1990 to 2000 period, as seen in Table A-20. These numbers are consistent with a population that is experiencing growth in the older age brackets of its population.

**Table A-20
Employment Classification Distribution
Waterford Township
1990 and 2000**

Employment Classification	1990 Census		2000 Census		1990-2000 Percent Change
	Number	Percent	Number	Percent	
Population 16 years and over	52,512	100.0	58,020	100.0	10.5
In labor force	37,558	71.5	39,868	68.7	6.2
Employed	35,222	93.8	38,209	95.8	8.5
Occupation	n/a	n/a	12,245	32.0	n/a
Management and professional Service	n/a	n/a	5,329	13.9	n/a
Sales and office	n/a	n/a	11,152	29.2	n/a
Farming, fishing, and forestry	n/a	n/a	71	0.2	n/a
Construction and related	n/a	n/a	3,940	10.3	n/a
Unemployed	2,309	7.9	1,641	6.4	-28.9
Not in labor force	14,954	28.5	18,152	31.3	21.4

Source: U.S. Census Bureau

With a mean commuting time of 29 minutes, a 20.8 percent increase since 1990, and less than one percent walking to work, it appears that a majority of Waterford residents work outside of the Township. Significantly, nearly 90 percent of these residents drove alone, at the same time the use of carpooling has dropped nearly 15 percent since 1990, as shown in Table A-21.

**Table A-21
Means of Employment Transportation
Waterford Township
1990 and 2000**

Means of Employment Transportation	1990 Census		2000 Census		1990-2000
	Number	Percent	Number	Percent	Percent
Total Workers Age 16 or Older	34,525	100.0	37,509	100.0	8.6
Drove Alone	30,475	88.3	33,616	89.6	10.3
Carpool or Vanpool	2,846	8.2	2,422	6.5	-14.9
Public Transportation	52	0.2	57	0.2	9.6
Walked to Work	370	1.1	332	0.9	-10.3
Other Means	127	0.4	127	0.3	0.0
Worked at Home	655	1.9	955	2.5	45.8
Mean Travel Time to Work (in minutes)	24		29		20.8

Source: U.S. Census Bureau

**Table A-22
Major Sources of Employment
Waterford Township
2002**

Name Of Firm	Number Of Employees	Product Service
Waterford School District	1,660	Education
GM Parts Division	1,000	Automotive Parts
Meijer, Inc.	645	Grocery/Department Store
Marshall Field	400	Department Store
K Mart Corp.	395	Department Store
Waterford Township	385	Local Government
V.G.'s	375	Grocery Store
Sears Roebuck	310	Department Store
Oakland Intermediate School District	250	Intermediate Schools Offices
Staffing Specialists, Inc.	235	Leased Employees
J.C. Penney Co., Inc.	215	Department Store
Wal-Mart/Sam's Club	160	Grocery/Department Store
Target	140	Department Store
Tru-Val Tubing Co.	130	Pipe Fabrication
Kohl's	125	Department Store
Terry Machine Co.	115	Bolt/Nut/Screw Manufacturing
Canterbury on the Lake	115	Senior Living/Health Care

Source: Oakland County Planning and Economic Development Services

EDUCATION

The United States Census Bureau changed the classifications for school enrollment between the 1990 and 2000 Census, so direct correlation is difficult. However, there has been a 10.3 percent increase in school enrollment during the 1990 to 2000 period, as shown in Table A-23.

**Table A-23
School Enrollment
Waterford Township
1990 and 2000**

School Enrollment ¹	1990 Census		2000 Census		1990-2000 Percent Change
	Number	Percent	Number	Percent	
Population 3 years and over enrolled in school	16,299	100.0	17,984	100.0	10.3
Nursery and preschool	n/a	n/a	1,486	8.3	n/a
Kindergarten	n/a	n/a	1,056	5.9	n/a
Elementary school (grades 1-8)	n/a	n/a	7,305	40.6	n/a
High school	n/a	n/a	3,658	20.3	n/a
College or graduate school	4,557	28.0	4,479	24.9	-1.7

Source: U.S. Census Bureau

¹ Note: School enrollment data detail not available for 1990 Census

The residents of Waterford have made significant gains in educational attainment during the last decade. The number of individuals who did not graduate from high school decreased by 20 percent between 1990 and 2000 while there were double digit gains in individuals achieving some level of higher education during the same time period, as shown in Table A-24.

**Table A-24
Educational Attainment
Waterford Township
1990 and 2000**

Educational Attainment	1990 Census		2000 Census		1990-2000 Percent Change
	Number	Percent	Number	Percent	
Population 3 years and over enrolled in school	43,811	100.0	50,210	100.0	14.6
Did Not Graduate High School	8,017	18.3	6,414	12.8	-20.0
Graduated High School	15,031	34.3	15,155	30.2	0.8
Some College, No Degree	10,407	23.8	12,718	25.3	22.2
Associate Degree	3,197	7.3	3,909	7.8	22.3
Bachelor's Degree	5,348	12.2	8,684	17.3	62.4
Graduate or Professional Degree	1,811	4.1	3,330	6.6	83.9

Source: U.S. Census Bureau

ENVIRONMENTAL RESOURCES

Environmental awareness and reasonable environmental protection remain high priority goals in Waterford. Legislation at all levels of government continues to empower the Township in achieving these goals through regulation of the environmental aspects of planning and land use. While there are still those who advocate no new development to preserve a pristine environment as well as those who protest any governmental standards and restrictions, a middle ground must be continuously sought and maintained between these two positions. In order to maintain this balance and ensure that regulatory measures retain their effectiveness and relativity, existing standards must be subjected to an ongoing reevaluation process. Part of any successful reevaluation process requires increased public education and awareness as an integral component for promoting environmental awareness and protection. This environmental awareness must play a major role in Waterford’s planning process so that the community can sustain the clean, sound environment essential for the community's health, safety, and welfare, attain the widest beneficial use of resources without degrading the environment, preserve cultural, natural and historical aspects, and promote the recycling of resources where possible.

It is the intent of the Waterford Master Plan to facilitate the reevaluation process so that the community’s expressed environmental needs are coordinated and integrated into the planning and zoning processes. The foundation for both the reevaluation and environmental awareness processes is an analysis of the historical context of the Township’s environment. In addition, a review of the current condition of the major environmental components, such as watersheds, water resources, wetlands and floodplains, water quality, groundwater protection, topography, soils, woodlands, natural features, and waste disposal/processing is important to provide the understanding necessary to provide a balanced and complete reevaluation. A review of the various environmental components is presented on the following pages.

Historic Context

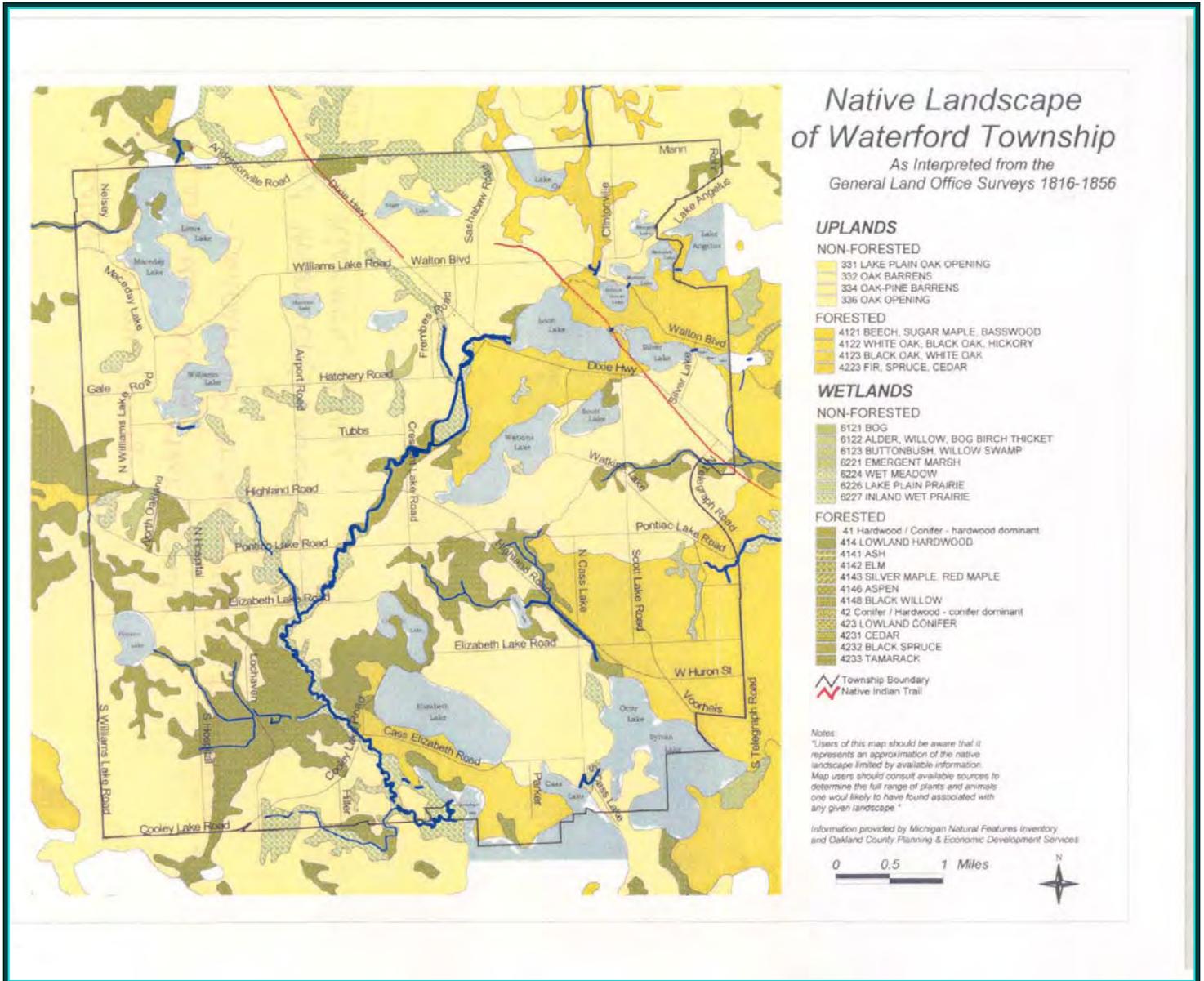
Waterford Township was primarily woody scrublands in the 1800s with substantial wetland and water cover, as well as forest cover, as is shown in Table A-25 and Map A-4. Nearly 13,000 acres, or 58 percent of Waterford’s land was covered by woody scrublands depicted as the open savannahs and barrens on Map A-4. These were areas of scattered oaks mixed with tall grass prairie. Wetlands, lakes, and rivers covered nearly 6,400 acres, or 28 percent. The remaining 3,099 acres, or 14 percent, of land was covered by broadleaf and evergreen forest. For comparison purposes, the existing land use in 2001 is developed on 55 percent of Waterford’s land, with 10,443 acres used for residential and 2,126 acres used for commercial and industrial purposes. Approximately 3,570 acres, or 16 percent, was used for public and recreational purposes in 2001. Fifteen percent, or approximately 3,283 acres, of the Township land remains as water in 2001. The transformation of Waterford’s landscape during the past 200 years had the greatest impact on the amount of oak habitats, with the majority of this land cleared for development of the Township’s residential and commercial uses. The second largest impact can be seen in the reduction of the amount of land designated as wetlands, lakes, and rivers. The greatest share of this reduction can probably be attributed to the development practices prior to the mid-1970s where wetlands were typically filled and developed.

**Table A-25
Native Land Cover Distribution
Waterford Township
1816-1856**

Land Cover	Acres	Percent
Broadleaf Forest	2,854.4	12.7
Spruce/Fir/Cedar Forest	244.5	1.1
Forested Wetlands	2,401.5	10.7
Woody Shrub/Scrub	12,992.2	57.9
Non-Forested Wetlands	1,224.1	5.5
Lake/River	2,736.2	12.2
Total	22,452.9	100.0

Source: Michigan Natural Features Inventory

Map A-4 Native Landscape of Waterford Township

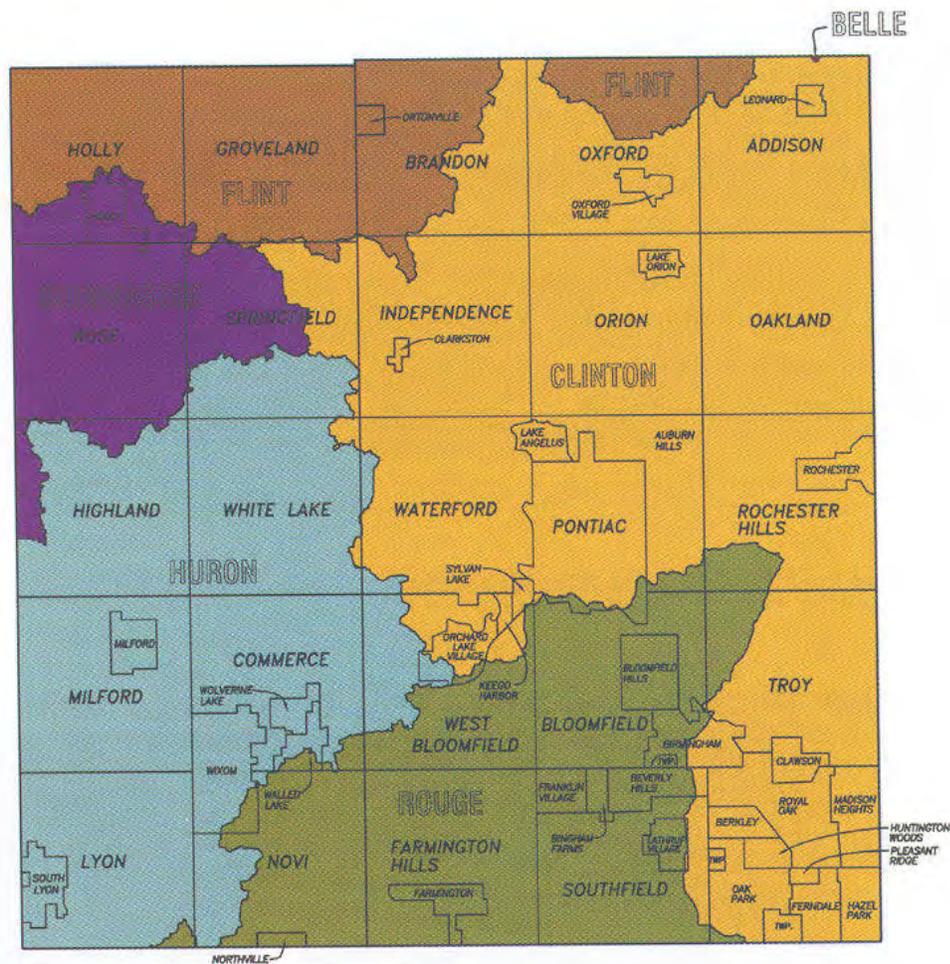


Source: Michigan Natural Features Inventory, Oakland County Planning and Economic Development Services

Watershed

A watershed is the land that catches rain or snow and drains or seeps into a common marsh, stream, river, lake, or groundwater. The headwaters of five major drainage areas begin in Oakland County, the Clinton, the Huron, the Rouge, the Flint, and the Shiawassee. The general location of each watershed in the County is shown on Map A-5. The majority of Waterford is located in the Clinton River Watershed. Waterford’s location within the Clinton River Watershed is shown on Map A-6. The entire Clinton River watershed covers approximately 768 square miles in four Southeast Michigan counties – about 40 percent of eastern Oakland County, most of Macomb County, and small portions of southern Lapeer and St. Clair Counties. The Clinton River and its tributaries flow through 60 rural, suburban, and urban communities with a total population of more than 1.6 million.

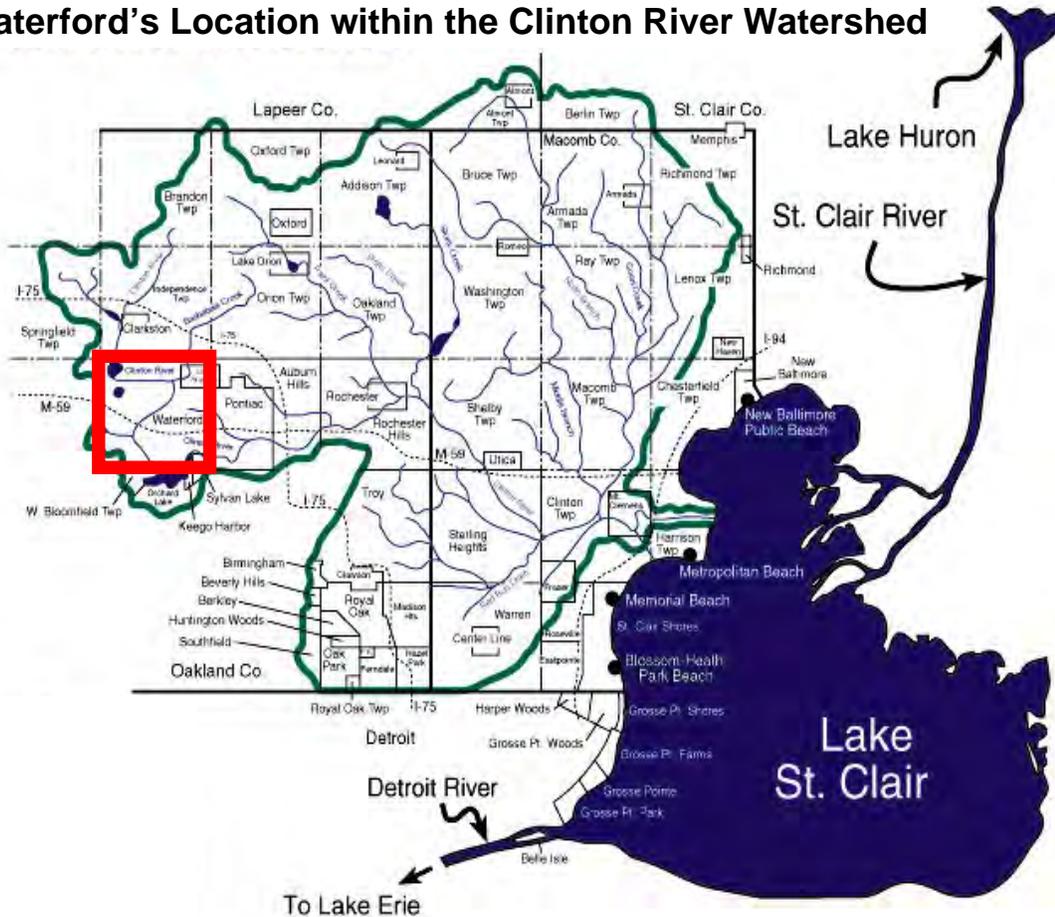
**Map A-5
Watersheds in Oakland County**



Source: Oakland County Drain Commissioner

**Map A-6
Location of Waterford Township within the Clinton River Watershed**

Waterford’s Location within the Clinton River Watershed



Source: Clinton River Watershed Council

Waterford is located near the headwaters of the Clinton River watershed in Springfield and Independence Townships. Land use in Waterford has the potential to impact the water quality within an approximate 330 square mile area. While sections of the watershed in the northern reaches of the county contains several cold water trout streams, Waterford hosts a warm-water fishery influenced by low gradient and abundant lakes (1997 Aquatic Habitat Survey of the Clinton River Watershed, Clinton River Watershed Council, 1998). The western portion of the watershed is often referred to as the lakes area in reference to the numerous inland lakes. The diverse river basin includes a number of ecosystems such as wetlands, prairies, and hardwood forests. These ecosystems contain a variety of wildlife and vegetation types.

Water Resources

Waterford's primary environmental landmark is its water resource network of lakes, the Clinton River, streams, and wetlands. The 34 lakes make up the largest component of the water resources. Historically, residential use has surrounded the lakes, first as summer cottages and then as full-time residences. Activities such as boating, fishing, and swimming are enjoyed by the lakefront residents. Certain lakes have public access, Cass Lake, Crescent Lake, Lake Oakland, Loon Lake, Maceday Lake, and Pontiac Lake. Since the Township's water resource network serves multiple functions, it is crucial to ensure its health and viability for the benefit of present and future residents of the Township.

The survey of land use indicates approximately 3,282 acres of surface area in Waterford is composed of surface water, this constitutes 15 percent of the total land area. The water resources that are located totally within the political boundaries of the Township range from ponds of several acres to one lake over 360 acres. When the lakes that extend into adjoining communities are included, the total water surface area involved approaches 5,000 acres. In addition, the Clinton River flows through the Township from north to south and is another of Waterford's environmental landmarks. Creeks and streams are another link in the water resources system, connecting lakes and wetlands with each other. Storm water run-off is conveyed from wetlands and upland areas to downstream lakes and eventually to the Clinton River.

Sources of water include rainfall, surface runoff, springs, and aquifers. Aquifers are essentially underground formations composed of water-bearing earth, sand, gravel, permeable stone or fractures in non-porous stone or clay. These aquifers are located at varying depths and each such layer may vary greatly in its depths in differing locations. Aquifers are the source of many domestic, commercial and industrial water supplies through wells of varying sizes and depths. Waterford Township derives its municipal water supplies from wells. Prudent management of surface area discharges is required to minimize any risk of contamination to our resources.

Wetlands

The protection of wetlands continues to be a priority concern for Waterford. The term "wetlands" encompasses a variety of wet environments, inland marshes, wet meadows, mudflats, ponds, bogs, bottomland hardwood forests, and wooded swamps. Wetlands perform three basic functions. First, wetlands affect the quantity of water by controlling the flow of water. During periods of heavy rainfall, wetlands act as retention basins for runoff, thereby helping to minimize the inundation of flood waters in other areas. Second, wetlands affect the quality of water. The wetlands provide a filtering area for waters entering lakes, streams, etc., and facilitate recharging of ground water supplies by filtering sediment and trapping nutrients from upland runoff, thus cleansing water before it enters adjacent water bodies and reducing stream bank erosion caused by storm water runoff. Third, wetlands contribute to environmental health and diversity by providing breeding, nesting, resting and feeding grounds for myriad forms of wildlife.

The effort to preserve and protect wetlands has been assisted through the following Township Ordinances and State statutes adopted since 1972. These regulatory measures provide protection for wetlands and related areas such as rivers, lakes and streams. Together, the controls instituted by these legislative policies are used to implement the goals of preserving the wetland natural resources of the Township.

- *Waterford Township Ordinance No. 155 – Wetlands Ordinance* was enacted in 1994 to

regulate and protect Waterford’s wetlands. This Ordinance was adopted by the Township Board because it recognized, as stated in the Ordinance,

“that wetlands conservation is a matter of township concern inasmuch as a loss of a wetland, and particularly in cumulation with other losses of wetlands, will deprive the people of the township or others of flood and/or storm control, wildlife habitat, protection of subsurface water resources and provision of valuable watersheds and recharging groundwater supplies, pollution treatment, erosion control and sources of nutrients. It is further recognized by the township board that rapid growth, the spread of development, and increasing demands upon natural resources, have resulted in the shrinkage of the critically necessary domain of wetlands and have had the effect of encroaching on, despoiling, polluting or eliminating many wetlands, and other natural resources, and the public trust therein, and that preservation of the remaining wetlands in an undisturbed and natural condition shall be and is necessary to maintain important physical, aesthetic, recreational and economic assets for existing and future residents of the township and of this state.”

This Ordinance is administered through the Township Building and Engineering Department. The Planning Commission also acts as the Wetlands Review Board and reviews applications for projects that fall under the jurisdiction of the Ordinance and grants permit approvals where they deem appropriate.

- *Waterford Township Zoning Ordinance Section 2540 - Natural Feature Setback* was enacted in 1996 and the intent of this section is to require a minimum setback from natural features, defined as wetlands in accordance with the Township Wetlands Ordinance and also watercourses such as lakes, ponds, rivers, streams, or creeks. This is to prevent physical harm, impairment and/or destruction of or to a natural feature. It had been determined by the Township that, in the absence of such a minimum setback, intrusions in or onto natural features would occur, resulting in harm, impairment and/or destruction of natural features contrary to the public health, safety and general welfare. It was also recognized that there is a special relationship, between natural features and the adjoining uplands that must be preserved and protected.
- *Michigan Public Act 451 of 1994 – Michigan Natural Resource and Environmental Protection Act*, formerly known as the Michigan Environmental Protection Act, P.A. 127 of 1970, was enacted to protect the environment and natural resources of the State by codifying, revising, consolidating, and classifying related laws. The Act also regulates the discharge of certain substances into the environment by regulating the use of certain lands, water and other natural resources through prescribed powers and duties of State and local agencies/officials which includes assessing certain charges and fees for permits and penalties.
- *Michigan Public Act 346 of 1972 - The Inland Lakes and Streams Act* regulates dredging, filling and construction, in, over, and below the ordinary high water mark of State waters. This typically includes adjacent shorelands and contiguous wetlands.
- *Michigan Public Act 203 of 1979 - The Goemaere-Anderson Wetland Protection Act* provides for the preservation and proper management of wetlands and is administered by the Department of Natural Resources. The Department receives and reviews applications for permits for alterations, typically construction projects, in wetlands that fall under the jurisdiction of the Act.

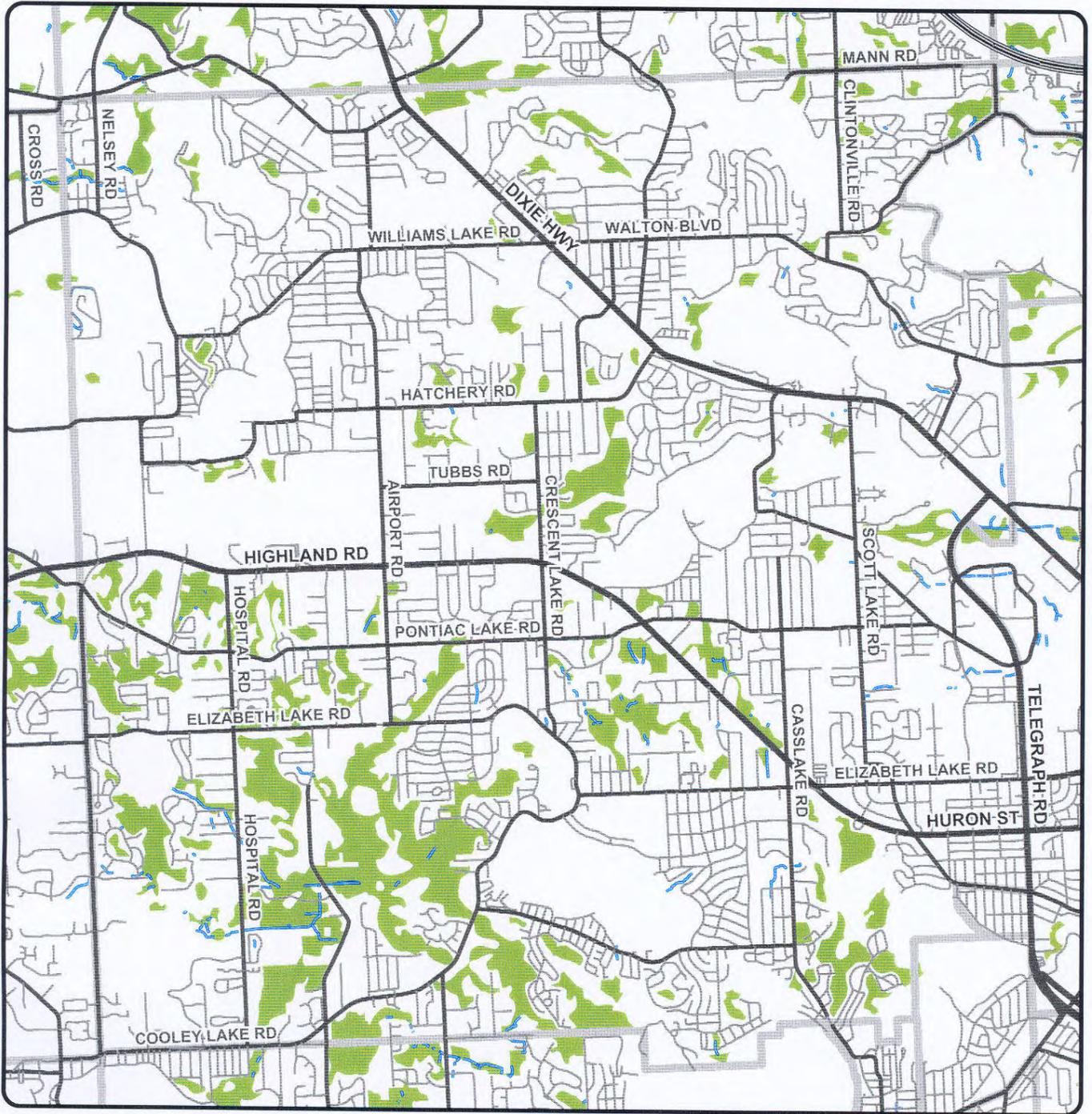
The Michigan Department of Environmental Quality (MDEQ) governs wetlands of five acres or more in counties with populations over 100,000, including Oakland County, under the Goemaere-Anderson Wetland Protection Act. Waterford Township regulates wetlands of

two acres or more in size through its Wetland Ordinance. The general location of wetland areas within the Township are shown in Map A-7. It should be noted that the wetland boundaries shown on Map A-7 are general in nature and should not be considered as actual wetland limits. As development activity is proposed on parcels with regulated wetlands, a field survey should be conducted to determine the exact boundaries and quality of such areas. Therefore, it is important to understand that the designated wetland areas, as depicted on the maps in this Master Plan are not to be considered definitive. Property owners and developers must also be aware that wetlands exist in areas not designated on the map. It is, therefore, essential that developers properly verify that no wetlands exist on a site and provide competent and experienced personnel to map wetlands that do exist.

It is also recommended that continued efforts be given to the assembly and analysis of additional basic wetland and stormwater data. Each wetland has certain unique characteristics and physical limitations. Estimating and predicting these characteristics will make it possible to more accurately determine the need for pretreatment of stormwater or other preventive measures. A better understanding of the differing elements going into wetlands under differing conditions is also needed. It would also be very useful to have a better understanding of recharge needs in an area; this would assist greatly in establishing an indication of relative priorities and design needs.

The entire process of wetland protection and mitigation requires continuing research and monitoring. The more detailed evaluations will require input from environmental specialists, geologists, botanists, engineers, planners, and also involve cooperation with the Michigan Department of Natural Resources and MDEQ.

Map A-7
Major Wetland Areas within Waterford Township



Source: Oakland County Planning and Economic Development Services

Flood Plains

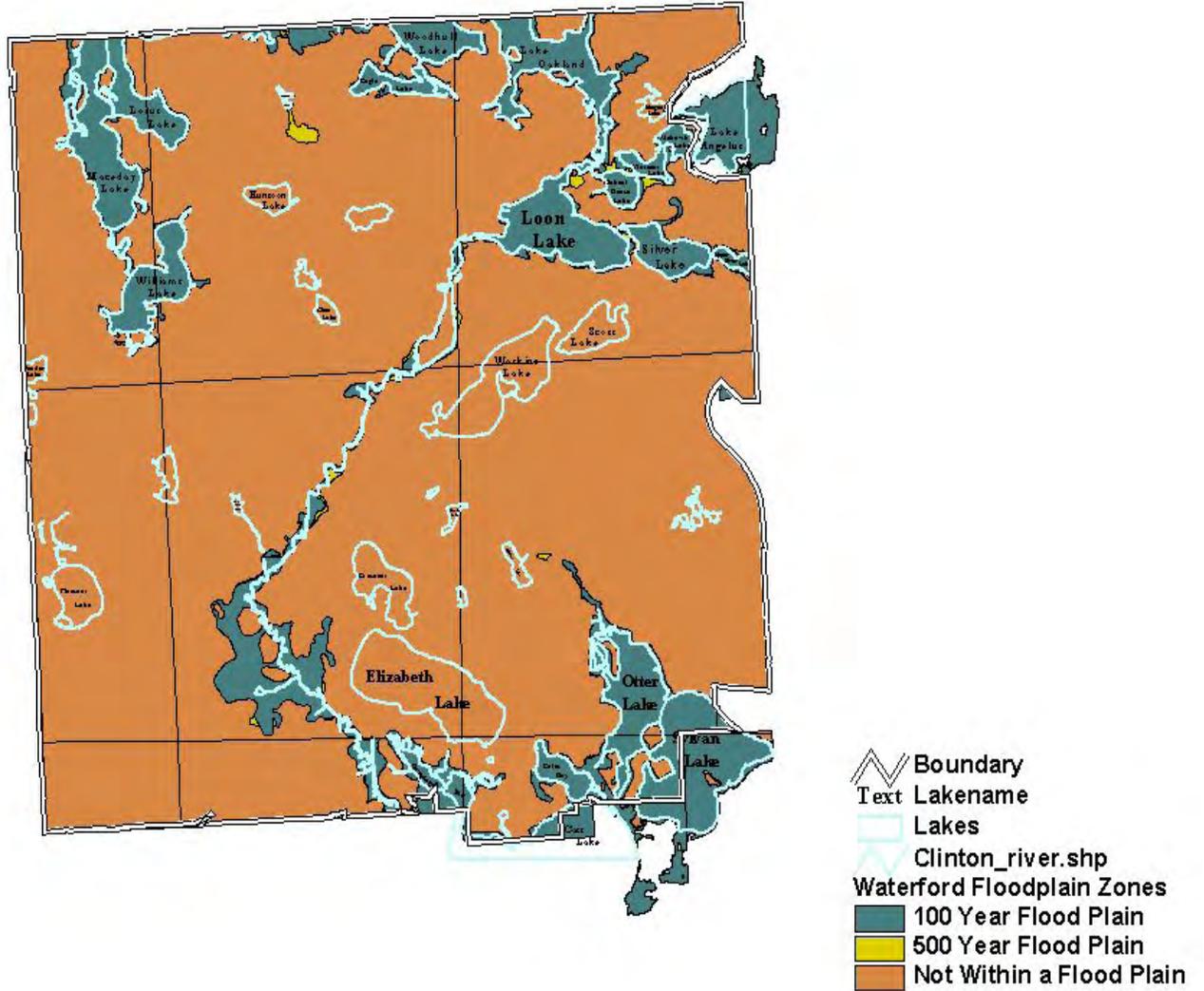
A flood plain is an area adjoining a lake, stream, river, or pond that receives excess water from occurrences such as a severe rainstorm that results in flooding conditions. A delineated flood plain is produced where flooding occurs with frequency and predictability within an area due to natural topography and proximity to a body of water. Water exceeding the normal average level is stored as a temporary lake across a flood plain. As long as the overflow remains on the flood plain, this volume is not added to the floodwater moving downstream. When flood plain storage is prevented by restricting the water flow to a channel, the volume and size of the flood may be increased downstream causing higher water levels and more damage.

Flood plain areas are delineated to indicate the chance of a flood occurring at a given location. This measuring or delineating is done regarding the probability of flooding, usually once in 50, 100, or 500 years. Flood plain delineation is required for home and business construction loans and the Federal Flood Insurance program. The Federal Flood Insurance Program accepts the 100 year flood plain as the minimum standard for protection. A 100 year flood is a flood which has a probability of reaching a given elevation once in 100 years, or a one percent chance of occurring in any given year. The delineated flood plain areas in Waterford are shown in Map A-8.

The effort to regulate development in floodplain areas has been assisted through the following Township Ordinance and State statute.

- *Waterford Township Ordinance No. 138 – Waterford Township Floodplain Management Ordinance* was enacted in 1983 to regulate development within the areas designated as floodplains. The administration of this Ordinance is the responsibility of the Township Building and Engineering Department.
- *Michigan Public Act 167 of 1968 - The Floodplain Regulatory Authority* regulates activity within the 100-year floodplain and floodways of watercourses containing a drainage area of greater than two square miles.

Map A-8 Flood Plain Areas within Waterford Township



Source: Waterford Township GIS

Groundwater Recharge Areas

Water stored in, and slowly filtered through, geologic formations is referred to as ground water. An aquifer is a geological formation that contains sufficient ground water to supply wells, lakes, springs, streams and/or wetlands. Precipitation reaches an aquifer by downward percolation from the surface. A land surface which readily permits water to move downward into an aquifer is referred to as a ground water recharge area. Underground aquifers serve three major functions:

- natural water supply reservoirs for human consumption and land irrigation
- effective groundwater filtering system where sound land use and pollution prevention practices exist in recharge areas
- Regulates and stabilizes surface water levels.

These benefits are balanced by the fact that groundwater recharge lands have limited filtering and purification capabilities. Contamination that occurs both in low levels spread over large areas and in high concentrated levels on specific sites can threaten the quality of a groundwater supply. Sources such as chemical spills and sewage system malfunctions could be responsible for contamination problems. Because of rapid to moderately rapid permeability of the underlying geology, the designated recharge areas do not completely filter contaminants from the descending water. Recharge areas and their related aquifers are therefore subject to pollution from various sources. The more rapid the percolation of water, the more susceptible the recharge area and aquifer are to pollution. Since Waterford's water supply system is dependent upon groundwater, it is imperative to protect these areas from pollutants.

Water Quality

Water resources are not indestructible. They have a limited lifespan when the health of the water body is not monitored and attended to, the same as any living organism. This statement applies to both surface water and ground water. One measure that can assist in gauging the health of a surface water body is by determining its trophic classification. The trophic classification system provides information about the level of nutrients (such as nitrogen and phosphorus) and algae that exist in a surface water body. The following are the four trophic classifications.

- Oligotrophic: lakes are clear and blue, with very low levels of nutrients and algae.
- Mesotrophic: lakes have moderate levels of nutrients and algae.
- Eutrophic: lakes are green and murky, with higher amounts of nutrients and algae.
- Hypertrophic: lakes are highly fertile and supersaturated with nutrients. There is excessive phytoplankton growth that contributes to poor water clarity, restricts the habitat for desirable fish, and reduces the viability for recreational use.

The process of aging and death of a lake based on the trophic classification system is termed "eutrophication." A U.S. Environmental Protection Agency definition which summarizes this cycle is as follows:

"The normally slow aging process by which a lake evolves into a bog or marsh and ultimately assumes a completely terrestrial state and disappears. During eutrophication, the lake becomes so rich in nutritive compounds, especially nitrogen and phosphorous, that algae and microscopic plant life become super-abundant, thereby "choking" the lake, and causing it eventually to dry up. Eutrophication may be accelerated by many human activities."

As indicated, the natural process is normally slow. However, the process is accelerated through human carelessness and ignorance. Environmental sustainability, health, and quality of life are all affected if measures are not taken to ensure a healthy trophic state in each surface water body. Further complicating the situation are the problems stemming from stormwater runoff and excessive use of fertilizers and pesticides. This concern not only relates to activities around the shorelines, but throughout entire drainage basins. It is obvious that activities within Waterford will affect others well beyond its municipal boundaries. Conversely, activities which occur in surrounding areas definitely impact the Township. As one considers these statements, the problems are far more complex and interrelated than one would think. Water pollution is most often related to industries, such as petroleum and toxic spills, which we hear about in the news. Unfortunately, significant degradation is occurring by well-meaning, but uninformed, residents and business persons who continue to pursue established procedures of past years. In many cases, these practices are promoted since the activities are not prohibited or adequately controlled due to lack of proper understanding, apathy and pressures from different interest groups. A review of major activities more frequently involved in detrimental impacts is as follows:

- Preoccupation with producing the greenest, weed-free lawn. Fertilizer chemicals are not only migrating downward to our aquifers, but running off to County drains, streams and lakes. What makes for green grass makes for green water.
- Application of pesticides represent another problem to our waters for most of the same problems noted above. In addition, application of pesticides to eliminate unwanted water-based plants and bugs disrupts the fragile ecological system involving plants, micro-organisms and oxygen which when disrupted pushes it into a less desirable trophic classification and hastens the death of the waterbody.
- Careless use of septic tanks, dry wells, and other underground drainage and/or disposal fields near surface water.
- Poorly managed and designed stormwater drainage systems which enable runoff to collect fertilizers, pesticides, petroleum products, road salts, animal wastes, and other nutrients which stimulate growth, and deposit these contaminants directly into surface water bodies.
- Unregulated recreational water activities, particularly those involving motorized vehicles. Motorized watercraft tend to incidentally discharge fuels and oil when fueling or through bilge pumps. Unfortunately, some waterfront and boat users, both private and public, are also careless in disposing of litter, garbage, cans and bottles. More intensive concentrations of people and boats simply increase the pressures on the water and the ability of the ecosystem to combat and tolerate the total usage.
- Control of excess water plant material through chemical application. Chemicals represent potential hazards to people, animals and plants.

A close interrelationship between surface water and groundwater indicates that the quality of surface waters reflects future concerns for the potability of Waterford's water supply. Discharges to ground water are not easily cleansed and filtered before entering aquifers. This potential hazard becomes even more real as the complexities and quantities of discharges increase. Soils have limited retaining capacity, especially as accumulative effects are experienced. Contaminated waterbodies and aquifers represent severe problems, which are many times not easily corrected by natural or artificial regenerative processes.

One of the most serious problems resulting from groundwater contamination is that it pollutes the Township's water supply. Presently, Waterford Township's water supply is obtained from 15 wells situated at 12 different locations throughout the Township. These sites vary from approximately one to three acres in size. Well depths are variable, but most are in the 200 to 300-foot range; however, one is only 58 feet deep. This places well intake screens below most private wells and below various confining clay and rock stratum, which assists in insulating and protecting the aquifers. Hazardous materials must not be introduced within 200 feet of a wellhead area, and that distance may be increased depending upon more specific site area conditions. During the evaluation of any hazardous material use, its particular characteristics must be considered in terms of its relative risks, topographic, soil, nature of surrounding development, and preventive measures necessary if an accidental spill occurs.

In order for Waterford's water quality to be maintained and improved, measures must be relentlessly pursued to ensure that all threats to both surface water and groundwater are drastically reduced, if not eliminated. Water quality protection requires the active use of a much broader array of measures than might be envisioned. These measures range from the general to the specific. In terms of general measures, citizen awareness programs are vitally important. Information dissemination and education programs can assist citizens in understanding the critical importance to overall water quality by reducing the quantity and nature of materials disposed of or applied to our lands. Citizen awareness can also promote a better understanding of the total effects of fertilizing and pesticide programs through an ongoing series of news releases, cable and web page announcements, tax and water bill inserts, and school education programs. Efforts could also be undertaken to inform and educate citizens on the ways to manage shoreline properties to protect water quality. It is also essential to maintain and improve an identification system to recognize materials posing potential threats to our ground water if accidental spills occur. Effective site planning, zoning, building, and engineering requirements provide the most efficient method for obtaining listings of materials to be stored and/or utilized on a property. This listing must then be checked against indices of dangerous materials. Any hazardous elements identified must then be evaluated to ensure that the quantity to be utilized or stored will not present an environmental hazard.

Another measure that involves both citizen awareness and participation is the establishment and use of lake improvement boards to monitor lake water quality. These boards are authorized under the Lake Improvement Act (Part 309 of Act 451 of 1994) and consist of residents of property on the lake governed by the lake board, local community members, a representative from the Township Board, a representative from the Oakland County Drain Commissioner's Office, a representative from the Michigan Department of Environmental Quality (MDEQ), and the County Commissioner representing the county commission district in which the lake is located. The function of the lake board is to address relevant lake improvement issues, including the oversight of aquatic weed control programs, nuisance control, and other educational activities. Currently there are seven lake improvement boards

established in Waterford Township to monitor events on Huntoon Lake, Pontiac Lake, Rainbow Lake, Schoolhouse Lake, Scott Lake, Watkins Lake, and Lake Oakland.

Measures to protect the areas surrounding the wells that serve the Township’s water supply must remain an implementation priority. The Township through its Department of Public Works (DPW) has actively maintained wellhead protection as a top priority. The Township currently has an MDEQ-approved Well Head Protection Plan (WHPP). The WHPP currently contains 10 MDEQ-approved Well Head Protection Areas (WHPA). These areas define the boundaries of the 10-year zone of capture for a specific wellhead. The WHPAs are identical to the 10-year well capture zones. If there were a contaminant released at the edge of the boundary, it would take approximately 10 years for it to reach the wellhead, if untreated. As a result of the WHPAs, if contamination is discovered, an action plan can be developed to resolve the problem before the wellhead becomes contaminated.

The Environmental Protection Agency (EPA) and the MDEQ require all municipalities to report the quality of drinking water for evidence of copper, lead, arsenic, coliform, barium, selenium, nitrate, chloride, fluoride and trihalomethanes contaminants to determine if the Maximum Contaminant Level (MCL) level is exceeded. If a particular MCL, or Action Level (AL), is exceeded, additional treatment or other action may be required. The DPW conducts an aggressive monitoring program. As a result, Waterford Township’s water quality is exceptional, and complies with all parameters monitored by the MDEQ.

Additionally, all lakes in the United States are monitored for water quality issues in accordance with the U.S. Clean Water Act. Therefore, the MDEQ conducts an annual review and submits a report to the U.S. Environmental Protection Agency (USEPA) for review and approval. The purpose of the USEPA reporting requirement is to identify water bodies that are not attaining the established water quality standards as well as to detect threatened water bodies, which are those presently meeting the standards but expected to exceed acceptable contaminant levels and related health risks in the near future. In addition, the USEPA reporting requirement is intended to establish a priority ranking for cleanup efforts of water bodies that do not meet the water quality standards so that all water bodies meet the standards within the next 13 years. Currently, there are only two water bodies in Waterford that are included in the MDEQ annual report, Cass Lake and Maceday Lake, which exceed the acceptable contaminant levels. While these two lakes show evidence of exceeding the minimum standard for mercury in each lake’s bottom, the State has concluded that the issue is a lower priority, targeting State attainment of the standards in 2011.

Efforts to control and manage stormwater runoff and drainage must be included as measures for an effective water quality control program. Since surface water runoff involves both local and watershed-wide considerations, the most effective measures will be those that incorporate an area-wide, intergovernmental approach. The Township has been an active participant, along with some of its neighboring communities that lay within the same Clinton River subwatershed, in preparing all of the documents necessary to apply for the storm water permit required under the USEPA Phase II Storm Water Rule, which is administered by the MDEQ. The Township anticipates submitting its permit application before the 2003 deadline and working to implement the components of the permit once approved by MDEQ, including a comprehensive study of the Township’s stormwater drainage network and capacity.

Local efforts would also need to focus on maintaining requirements for the establishment of green space setback adjacent to shorelines as another measure to manage stormwater runoff. Another effective measure is to continue enforcing requirements for stormwater discharge through settling basins, as opposed to direct discharge. The size and design requirements would be contingent upon the volume and character of the

runoff involved. Hazardous materials would require greater safeguards. Standards would involve both zoning and engineering requirements. It is also imperative that County Drain Commission facilities and roadway drains of the County and State roads be involved in revised design criteria. This would commence with new projects and eventually undertake corrective actions on existing drains in a prioritized order. Property owners need to get involved in managing runoff to minimize general runoff of dirt, yard cuttings, and animal wastes from lots.

A comprehensive analysis of the short and long-term effects of chemical applications to water should be undertaken by the Township as a water quality measure. The analysis should measure dilution, dispersion, and distribution of chemicals due to drifting and current flows, as well as the effect on the untreated portions of water bodies and connecting waterways. Water and bottom samples should be taken from waterbodies known to be treated over the years and compared with samples taken from comparable untreated bodies. The requirements for chemical treatments should be tightened up and the requirements for public notification expanded. Under the Michigan doctrine of "polluters pay," any person, agency or organization creating a detrimental residual effect due to the chemical treatment of water should be held financially responsible for its neutralization.

Continued monitoring of the remaining septic tank and field disposal systems in the Township is another effective water quality measure. It is important that these systems avoid leaching out to the ground surface and subsequently run off to surface drainageways. Monitoring can also assist in determining special problems, troublesome wastes, establish reasonable and desirable disposal field conditions and requirements, enforce reserve or backup field requirements, as well as setback and isolation requirements.

An educational program informing residents on ways to participate in water activities from boating to swimming in ways that minimize negative impacts on water quality. Competing forces for such activities as power boating, fishing, sailing, and canoeing may ultimately require specific limits on boat operation, hours of operation to ensure water quality. Such regulations should assist in reducing pressures on the lake ecosystem. Coordinated efforts between local, county, and state agencies must be undertaken to measure and assess the needs of various users versus environmental considerations.

The creation of new shallow water lakes, ponds or canals should be prohibited since they only foster weed growth, requests for chemical applications, and potential adverse impacts to a wider area.

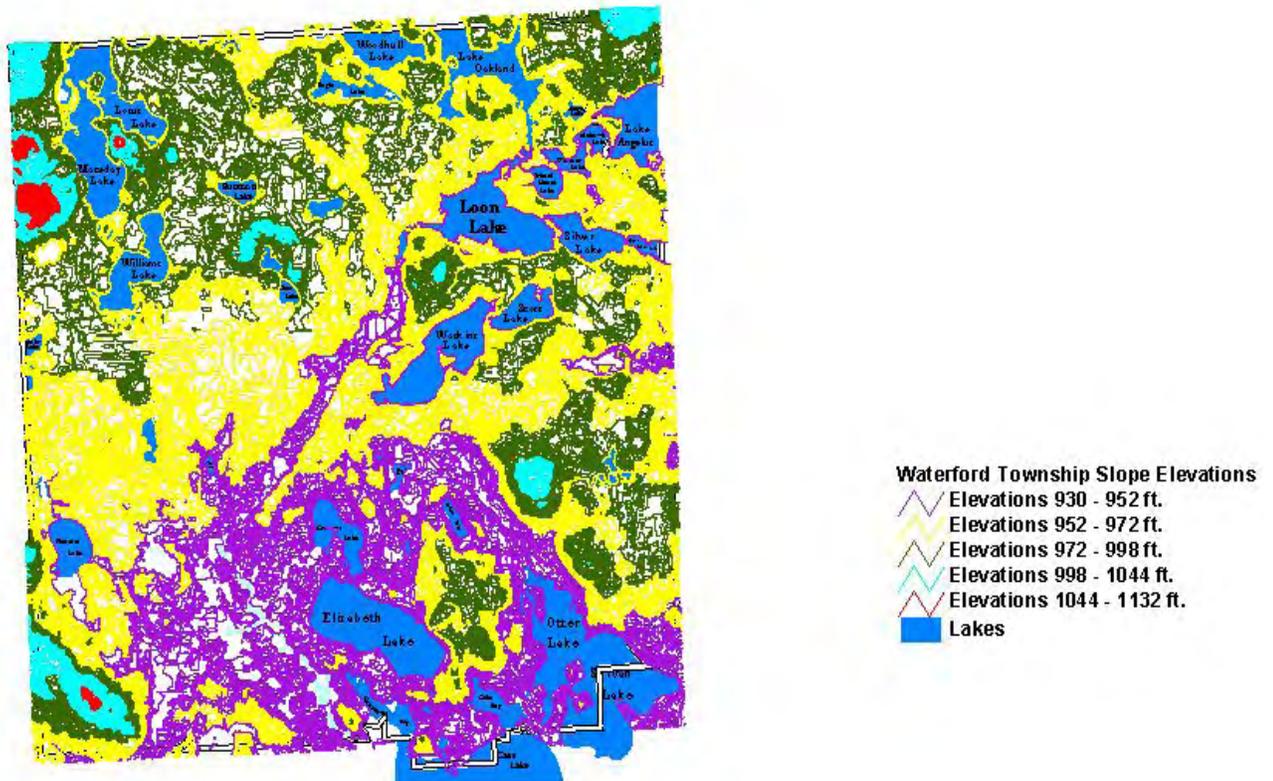
In short, a multi-faceted approach to water quality protection is needed, which will incorporate such measures as wellhead protection, groundwater protection, surface water protection, planning and zoning restrictions and regulations, building and engineering requirements, and a comprehensive public education program. For these efforts to be effective, active cooperation among the various Township departments and between other governmental entities and independent agencies must continue and remain a top priority.

Topography

Waterford Township is located in the Jackson Interlobate physiographic region of southeastern Michigan. The Jackson Interlobate region was created as a result of glacial activity 10,000 to 12,000 years ago, and is made up of coarse-textured end moraine, outwash and ice contact topography. The Interlobate region contains broad expanses of outwash sands that surround sandy and gravely end moraines and ground moraines. The topography of Waterford Township is generally low rolling hills with variations on a minor scale, consistent with outwash channels and ground moraine ridge formations of zero to six percent slopes, which are portrayed in Map A-10. Drainage conditions on the outwash areas in this region are highly variable from excessively drained to very poorly drained. Most of this district was surveyed by State land surveyors between 1816 and 1825. Most of the land was cleared for agriculture by the mid-nineteenth century. (Michigan's Native Landscape, Michigan Natural Features Inventory, 1995).

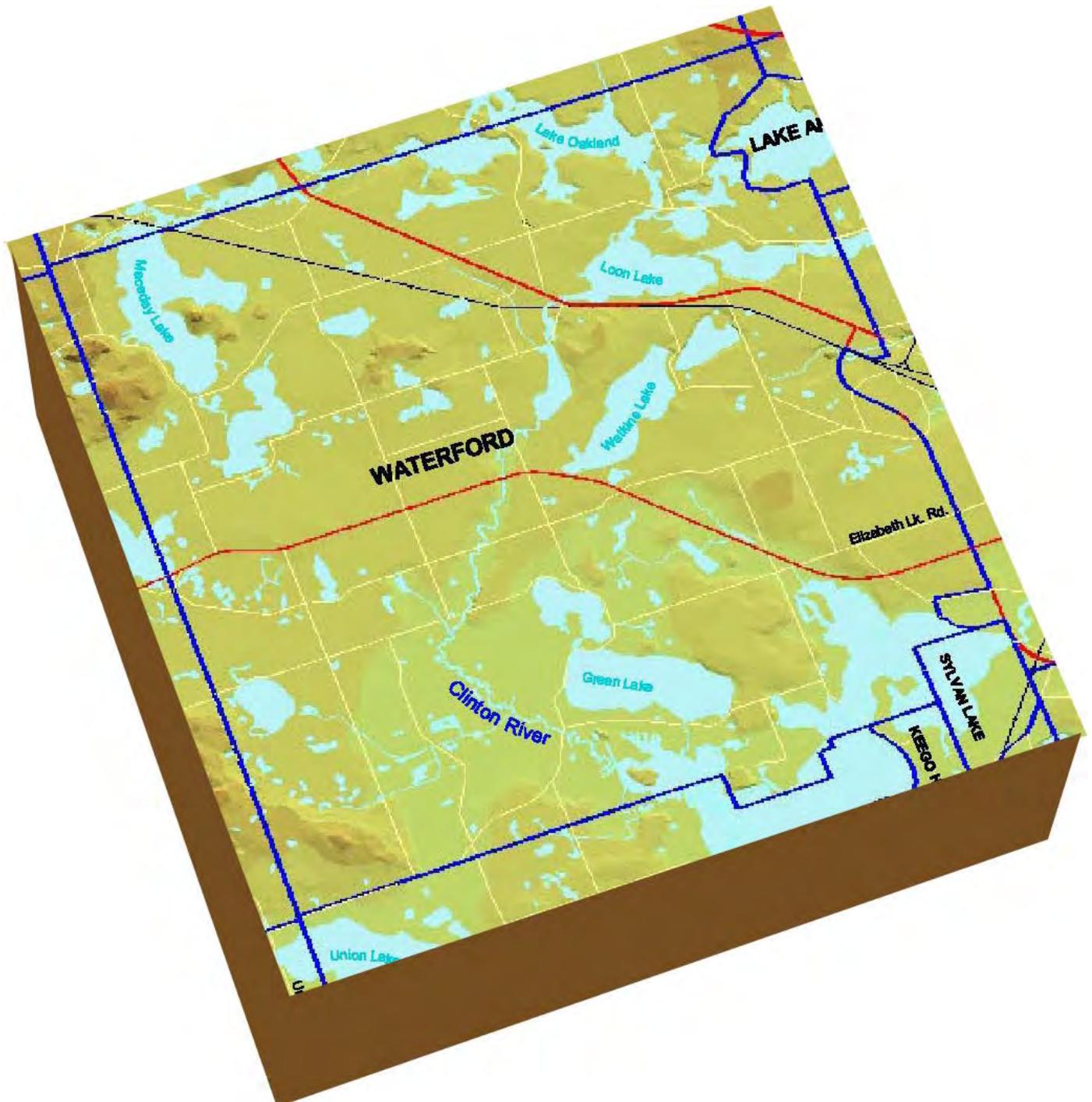
Waterford's natural land elevations range between 930 feet and 1,122 feet above sea level, which are depicted on Map A-9. One man-made feature, a former landfill in the northwest quarter section of the Township, is the highest elevation point at 1,132 feet above sea level. Elevation changes are generally gradual, with the direction of flow from the northwest to the central south and southeast.

Map A-9 Slope Elevations in Waterford Township



Source: Waterford Township GIS

**Map A-10
Topographical View of Waterford Township**



Source: Oakland County Planning and Economic Development Services

Soils

An understanding of soil characteristics is essential to the development of a community in a manner that minimizes construction costs, risks to public health, and environmental impact. There are four soil associations, or groups of soils, in Waterford Township. The following soils information, taken from the Soil Survey of Oakland County, Michigan describes the broad characteristics of the Township's soils. The general soil map shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, a map unit consists of one or more major soils and some minor soils. It is named for the major soils. The soils making up one unit can occur in other units but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

Fox-Oshtemo-Houghton

Nearly level to hilly, well drained and very poorly drained loamy, sandy, and mucky soils - on outwash plains, moraines, and beach ridges and in bogs.

This map unit makes up about 10 percent of the county. It is about 50 percent Fox soils, 30 percent Oshtemo soils, 12 percent Houghton soils, and 8 percent soils of minor extent.

The Fox and Oshtemo soils are on knolls, ridges, and side slopes along drainage ways, streams, lakes, and depressions. The Houghton soils are in depressions and drainage ways.

The Fox soils are nearly level to hilly and are well drained. The surface layer is very dark grayish brown sandy loam about 9 inches thick. The subsurface layer is brown gravelly sandy loam about 7 inches thick. The subsoil is cars brown, firm gravelly sandy clay loam about 14 inches thick. The substratum to a depth of 60 inches is brown, calcareous gravelly sand.

The Oshtemo soils are nearly level to hilly and are well drained. The surface layer is dark brown loamy sand about 7 inches thick. The subsurface layer is yellowish brown loamy sand about 11 inches thick. The subsoil is about 37 inches thick. In the upper part it is reddish brown, friable sandy loam, and in the lower part it is yellowish brown, very friable loamy sand. The substratum to a depth of about 60 inches is pale brown, calcareous stratified sand and gravelly sand.

The Houghton soils are nearly level and are very poorly drained. The surface layer is black muck about 8 inches thick. The underlying layers to a depth of 60 inches are black muck.

Oshtemo-Spinks-Houghton

Nearly level to steep, well drained and very poorly drained sandy and mucky soils; on outwash plains, beach ridges, and moraines and in bogs.

This map unit makes up about 12 percent of the county. It is about 40 percent Oshtemo soils, 30 percent Spinks soils, 14 percent Houghton soils, and 16 percent soils of minor extent.

The Oshtemo and Spinks soils are on plains, knolls, and ridges and on side slopes along drainage ways, lakes, and swamps. The Houghton soils are in depressions and drainage ways.

The Oshtemo soils are nearly level to steep and are well drained. They have a surface layer of dark brown loamy sand about 7 inches thick. The subsurface layer is yellowish brown loamy sand about 11 inches thick. The subsoil is about 37 inches thick. In the upper part it is reddish brown, friable sandy loam; and in the lower part it is yellowish, brown, very friable loamy sand. The substratum to a depth of 60 inches is pale brown, calcareous, stratified sand and gravelly sand.

The Spinks soils are nearly level to steep and well drained. They have a surface layer of dark brown loamy sand about 9 inches thick. The subsurface layer is pale brown sand about 17 inches thick. The next layer to a depth of about 60 inches consists of brown, loose sand and thin strata of reddish brown, very friable loamy sand.

The Houghton soils are nearly level and are very poorly drained. They have a surface layer of black muck about 8 inches thick. The underlying layers to a depth of 60 inches are black muck.

Urban Land-Marlette-Capac

Urban land and nearly level to hilly, well drained to somewhat poorly drained loamy soils, on till plains and moraines.

This map unit makes up about 18 percent of the county. It is about 60 percent Urban Land soils, 20 percent Marlette soils, 12 percent Capac soils, and 8 percent soils of minor extent.

Urban Land generally is nearly level, but in some places it is gently sloping to sloping. It is covered by streets, sidewalks, driveways, parking lots, houses, and other structures that so obscure or alter the soils that identification of the soils is not possible.

The Marlette soils are on plains, knolls, ridges, and side slopes and are nearly level to hilly. These soils are well drained or moderately well drained. The surface layer is dark grayish brown sandy loam about 8 inches thick. The firm subsoil, which is about 23 inches thick, is dark yellowish brown clay loam in the upper part and yellowish brown, mottled clay loam in the lower part. The substratum to a depth of about 60 inches is yellowish brown and pale brown, mottled, calcareous loam.

The Capac soils are in broad areas that have some low knolls and ridges. They are nearly level or gently sloping. These soils are somewhat poorly drained. The surface layer is very dark grayish brown sandy loam about 8 inches thick. The firm subsoil, which is about 24 inches thick, is brown and grayish brown, mottled clay loam. The substratum to a depth of about 60 inches is pale brown, mottled, calcareous loam.

Urban Land-Spinks-Oshtemo

Urban land and nearly level to rolling, well drained sandy soils, on outwash plains, beach ridges, and moraines.

This map unit makes up about 13 percent of the county. It is about 60 percent Urban Land, 20 percent Spinks soils, 10 percent Oshtemo soils, and 10 percent soils of minor extent.

The Oshtemo and Spinks soils are on broad plains, on knolls and ridges, and on side slopes along drainage ways, lakes, and swamps.

Urban land is covered by streets, sidewalks, driveways, parking lots, houses, and other structures that so obscure or alter the soils that identification of the soils is not feasible. Urban land is nearly level to sloping.

The well drained Spinks soils are nearly level to rolling. The surface layer is dark brown loamy sand about 9 inches thick. The subsurface layer is pale brown.

Woodlands

Citizen interest and concern for the preservation of the Township's tree and woodland resources has been a core component of the Township's environmental protection priorities. As Waterford developed into a more densely populated and urbanized community, there was a growing appreciation of the contribution made by trees and woodlands to the overall quality of life in the Township. The following quality of life values are secured or enhanced through the preservation and care of trees and woodlands.

Energy Conservation

Trees moderate climatic extremes by providing shade and transpiring water, assisting in cooling nearby homes, buildings, parking areas, roads, and walkways in the summer months, while protecting against harsh winds, snow and ice in winter.

Environmental Quality

Trees are an integral part of achieving air quality by using carbon dioxide and emitting oxygen in their own growth process. They filter the air by absorbing pollutants. They absorb sound and act as buffers between land uses. They help recharge groundwater by holding precipitation, giving it time to percolate into the ground. The woodland floor also helps to filter the percolating water.

Erosion Control

Preserving trees and woodland areas stabilizes and holds soils in place, protecting watersheds from erosion and excessive sedimentation by reducing the impact of rain and other sources of water runoff on soil.

Economic

Trees are a source of the timber necessary for building materials as well as a source of agricultural products.

Wildlife Habitat

Trees create a varied and rich habitat for plant and animal life. Many trees provide food for woodland life. Trees also offer protection against predators. When connected with other woodlands or fence rows, they provide wildlife corridors for animals and birds, which make a significant contribution toward natural insect control.

Aesthetic Values

The natural beauty and utility of trees has sparked citizen desire to insist that their quality of life and property values depends in part on the number and variety of trees on their property, in their neighborhood, and throughout their community. They are a source of aesthetic

enjoyment and provide areas for recreation.

Trees come in a variety of evergreen and deciduous species. In addition to general environmental assets, some trees also have commercial value. However, there are some trees which have undesirable characteristics such as brittleness, exceptionally messy droppings and/or leaves, and roots which penetrate sewers, foundations, roadways, and sidewalks.

A balanced forestry program in any community deals with preservation, maintenance and planting. Trees, as with other living elements, have varying life spans; those spans can be shortened or prolonged with human intervention. In some instances, the cutting of trees can actually make a wooded area more viable and extend its life cycle. Trees growing in an unmanaged environment are fighting a constant battle for survival. It is not uncommon for trees in such situations to be punky and hollow on the inside and they continue standing due to the protection afforded by other trees. Selective cutting improves the vitality of individual trees as well as the balance of species within a woods.

It must also be recognized that Waterford is located within a more urbanized ring of development in the metropolitan area. Land uses are primarily serviced by public sewer and water services. Lot sizes are of an intermediate density. In combination, these characteristics mean trees and vegetation will be lost in any development, even with the utmost of care. Additionally, the growth in Waterford's population and development densities have resulted in a smaller number of fragmented woodland areas, as shown in Map A-11. This map identifies significant tree stands, consisting predominantly of hardwoods, evergreens, or lowland brush. Many of the significant tree stands are found in conjunction with other natural features such as wetlands and the Clinton River. The Pontiac Lake State Recreation Area and the Township's Elizabeth Lake Woods Park contain a number of acres of heavily wooded land.

The preservation and promotion of trees within the Township should follow a balanced and reasonable approach. Basic preservation requirements that are reasonable and take into consideration both the stage of Waterford's existing development and the environmental sensitivity of specific undeveloped sites, should continue to be set forth within a Township woodlands ordinance. While it will continue to be necessary to remove most trees within utility and roadway rights-of-way, the Township plan review requirements should strongly encourage design arrangements protective of sensitive environmental features. The forthcoming update of Zoning Ordinance standards should include evaluations of existing provisions which promote flexibility in design techniques and the preservation of sensitive areas. New and innovative approaches must also be considered and refinements prepared which accomplish the basic goal of environmental enhancement. Ordinance revisions should not be structured to prevent development, but rather to permit development while protecting trees that might otherwise have been removed, and through careful review of site plans emphasizing the replacement of trees that are removed. Improvement standards should also be refined to require and promote increased green space under site plan improvement proposals. Trees and landscaping should be located on sites to break up larger expanses of paving, soften building lines, assist in breaking up noises, and removing carbons from the air. Trees and plantings will also afford shade and wind protection to structures, thereby improving energy considerations. Expanded tree planting requirements should be considered for all forms of residential structures. This would include single-family homes. These provisions would relate to zoning, building, engineering, and residential development requirements.

Street tree planting programs should be encouraged as part of an overall commercial corridor plan. These programs require coordination with applicable county and state

agencies. Improvements in the visual impressions created by these plantings is important to the Township and the pride of its residents. Funding sources should be sought which include governmental, non-profit, and private sources in addition to Township sources. The establishment of a tree fund to finance tree plantings through developer contributions should also be considered.

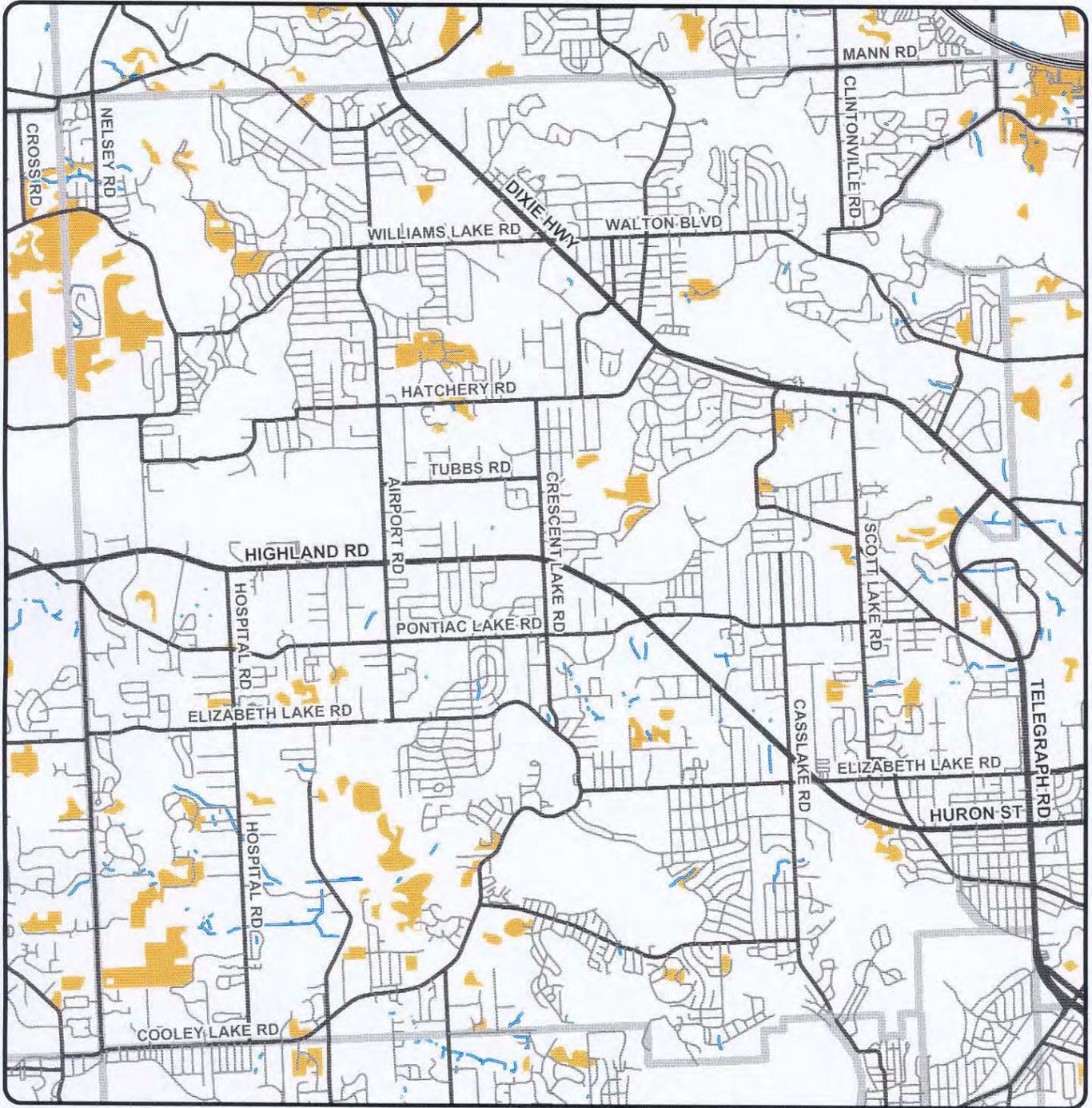
Natural Features

The identification of natural features that exist in a community is an important component of the existing conditions analysis. With such information, the Township can make informed decisions regarding the preservation and protection of the community's natural resources.

The Michigan Natural Features Inventory (MNFI) was contracted by Oakland County to survey areas of important natural features. MNFI maintains a continuously updated information base, the only comprehensive, single source of data on Michigan's endangered, threatened, or special concern plant and animal species, natural communities, and other natural features. MNFI has responsibility for inventorying and tracking the State's rarest species and exceptional examples of the whole array of natural communities. MNFI also provides information to resource managers for many types of permit applications regarding these elements of diversity. The areas identified by MNFI are shown in Map A-12.

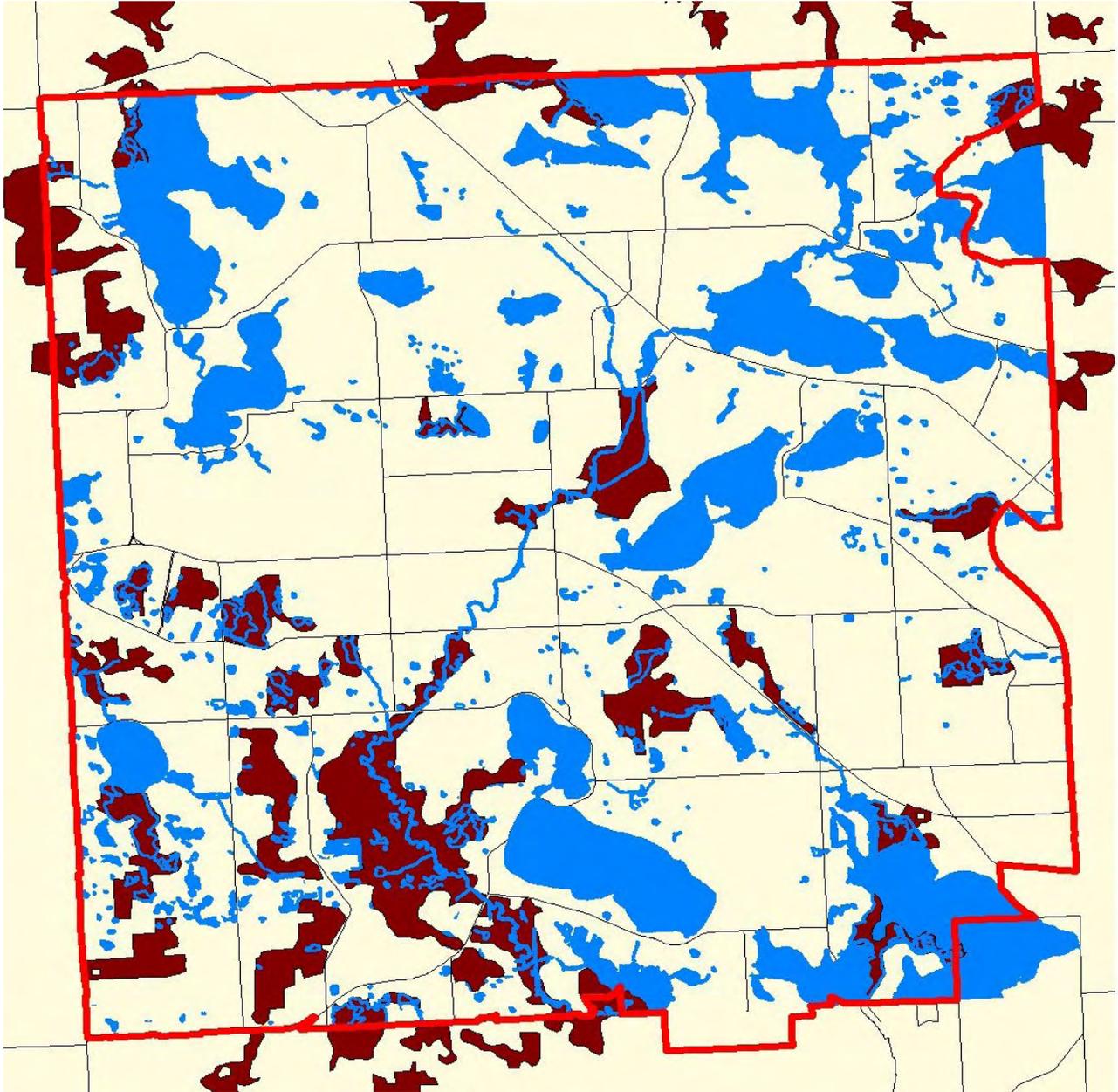
Natural features must be taken into account before development takes place. Besides cutting costs in the long run, utilizing existing environmental conditions offers many advantages to the Township in terms of aesthetic beauty. To begin with, planning residential developments that conform to existing topography results in more individualized and attractive neighborhoods. Conversely, leveling land merely to facilitate construction leads to sterile, identical and dull living areas. Furthermore, by preserving the original topography, natural drainage lines may be utilized, thereby lessening utility expenses and slowing stormwater runoff. As mentioned earlier, the Township would also profit by protecting existing trees during development, rather than planting new ones later. However, saving money is not the only reason for preserving vegetation whenever possible. Natural foliage helps purify the air, can act as a buffer between incompatible land uses, nullifies noise, and adds beauty to the community.

Map A-11
Major Woodland Areas in Waterford Township



Source: Oakland County Planning and Economic Development Services

Map A-12
Natural Features Areas in Waterford Township



-  Township Boundary
-  Natural Features Areas
-  Hydrology

Source: Michigan Natural Features Inventory, Oakland County Planning and Economic Development Services

Waste Processing

Another vitally important and complex environmental issue is that of waste collection and disposal. The high standard of living enjoyed by most Americans today is contributing to a monumental task in terms of waste disposal. Problems become even more complex when you factor in the volume of non-returnable and nonbiodegradable containers. Further complications are created by the indiscriminate disposal of various chemical compounds, aerosol propellant cans, paints, batteries, pesticides, lawn clippings, disposable diapers, newspapers, along with the normal food scraps. Since much of the waste will not degrade or rot, disposal in the normal landfill requires such large land areas in convenient locations that space is becoming a serious problem. An even more critical problem is that of potential pollution to the ground water and area by leaking chemicals and wastes and unpredictable combinations thereof.

All government entities are faced with a very serious dilemma regarding waste disposal. In combination, events have documented the laxity in standards, procedures, and attitudes on the part of numerous federal, state, and county agencies. It is a situation which, in part, reflects the lack of public awareness and the need for resource separation. Some people continue to resent the bottle return bill since they believe it inconveniences them, but the cost of an unsightly littered landscape was probably not included in their opinion-making process. Resource separation is an extension and expansion of the bottle bill concept, requiring the separation of paper, glass, plastic, and hazardous products from garbage. While this too could be considered an inconvenience, the land use implications of ever expanding landfills near one's backyard needs to be seriously contemplated before assuming an inconvenience. Another form of resource separation is that of yard waste. State of Michigan restrictions prohibit dumping yard waste in landfills and Leaf-burning is prohibited unless a community passes a specific exemption from this requirement.

Even with recycling, composting and resource separation, the problems with landfills and incinerators will not be eliminated. Increased attention must be focused upon the adoption of more comprehensive siting criteria for all refuse processing facilities, with individual attention given to each site and its specific hydrogeological conditions, development patterns, and potentials in the area. Proper and adequate surface and subsurface monitoring devices must be provided and maintained, together with governmental or third-party sampling and analyses. Prior testing should establish a base of appropriate ambient measurements for subsequent comparisons. More attention must be focused upon the airborne transport of particulates from any disposal operation. The drifting of airborne contaminants becomes an even greater concern in Waterford where so much water may be adversely affected.

Over the years, Waterford has taken a leadership role in providing recycling and composting facilities services. Continuation of local educational efforts must continue. Currently, the Township does not provide township-wide waste or recycling collection services. The Township had proposed such a service in 1998 but the proposal was voted down in 1998. Township citizens may wish to reconsider this proposal to minimize environmental impact through the reduction of garbage truck traffic in neighborhoods and to strengthen Township recycling efforts. The Township should also consider stronger efforts to reduce the accumulation of household hazardous wastes to reduce the risk of household fires, accidental poisonings, and groundwater contamination. The Township may want to consider establishing hazardous waste drop-off days and contract with a qualified waste removal firm to safely dispose of such materials.

Environmental Resources Summary

Because of Waterford's many environmental assets, the discussion of environmental issues requires a great deal of ongoing public education to provide a more factual understanding of the environment and the Township's ecosystems. Many of the past assumptions regarding invincibility of "mother nature" and our earth have been faulty and must be discarded if a high quality, safe, and healthy environment is to be maintained.

Change is necessary in our lifestyles, which may not be quite as convenient as in the past. The same holds true for business and industry. There will also be some increase in the cost of living to provide for environmental health and safety. Concerns for fertilizers, and hazardous materials must continue to be reflected in the Township's land use requirements since these materials are by-products of permitted land uses and densities and, thereby, may impact adjoining land and water areas. The site plan review process must continue to be modified to reflect and coordinate the broader range of issues and concerns being raised.

It is far from easy to establish all of the necessary standards and procedures which will be involved in an effective environmental protection program. Additional and new research and analysis will be necessary in all fields related to the environment. Awareness that environmental issues intersect and affect private property rights must be continuously maintained. Property owners cannot arbitrarily be denied reasonable use of their property to achieve excessive and/or unrealistic environmental protection goals. Developing and maintaining a current environmental database will aid in the assessment of properties and provide for more definitive regulations that reflect and promote the public health, safety, and welfare.

As a result of continued development and population growth within the Township, there are continuing pressures on the natural environment. The following conclusions can be derived from the analyses in this section:

- The Township has a vast natural resource system of lakes, the Clinton River, wetlands, woodlands, rolling topography, and natural features, that must be preserved, maintained, and improved.
- Water quality of the Township's many water resources must be preserved, maintained, and improved.
- The Township contains hundreds of acres of wetlands, mostly adjacent to lakes or streams, all of which play an important role in stormwater management, the control of water quality, and the provision for critical wildlife habitat. Therefore, the type of land use in proximity to these ecosystems is critical to their preservation.
- Ground water recharge areas should be maintained in their natural state as much as possible. They are natural reservoirs for groundwater. Anything that could potentially pollute these areas should be avoided.
- Drainage ways are common in the Township. They often link various types of natural resources such as wetlands, wooded areas, and organic soils. These drainage ways should be thoroughly studied, preserved, maintained, and improved.

HISTORIC DISTRICT AND PRESERVATION

A community's historic sites and buildings are irreplaceable resources that serve to provide a tangible link to the past. These sites and buildings also provide an educational resource on the evolution of a community's early development. They are critically important as key visual elements of a community's unique character. While many sites and buildings might represent a specific architectural style or historical period, they might also have their own distinct individual characteristics and settings. Their continued use and preservation can play a major role in promoting community character and identity. These local historic sites and buildings can be seriously threatened, or lost, if there is no effective planning or protection from development and redevelopment efforts.

There are federal and state legal tools that can assist communities with efforts to preserve and protect their heritage. The National Historic Preservation Act requires each state to prepare and implement a comprehensive statewide historic preservation plan. Michigan's historic preservation plan (Local Historic Districts Act, P.A. 169) was first prepared in 1970 and then updated in 1985 and 1992 to reflect the new directions in historic preservation policy. The Michigan Register, the State Register of Historic Sites, was established under P.A. 10 of 1955, MCL 399.151. The Michigan Historical Commission, a lay body appointed by the Governor, reviews applications for the State Register and Historic Marker programs. These programs are honorary, placing no restrictions on property owners, and designation offers no tangible benefits. The Act does provide for State grants to preserve and restore certain State Register properties, but no money has been allocated for this purpose since 1980. Educating the public about federal and state historic preservation programs, and assisting local governments with developing local historic preservation programs, are other responsibilities of the State. The State also directs and conducts a statewide survey of historic properties and maintains an inventory of these properties. Through the survey program, the State coordinator provides technical assistance to communities who wish to perform a local historic survey. This inventory of historic properties is the first step towards enacting an historic preservation program.

In the mid-1970s, the Township Board appointed an Historic District Study Committee to conduct an inventory study and research into establishing an Historic District in Waterford Township. The Committee focused their attention on the Waterford Village area since it still retained much of its 19th Century character and its original boundaries, shown in Map A-13. The Committee prepared a report on their findings as well as a map with proposed historic district boundaries, shown in Map A-14, and submitted the documents to the Waterford Planning Commission and the State of Michigan Historical Commission in 1976. Due to the Committee's efforts, the Michigan Historical Commission placed the Waterford Village area on the State Register of Historical Districts. After reviewing the Committee's findings, the Planning Commission indicated that they wanted district boundaries more compact than what the Committee proposed shown in Map A-14. The recommendations of both the Committee and the Planning Commission were submitted to the Township Board for review. The Board provided each property owner within the Committee's proposed boundaries the opportunity to decide whether they wanted their property to be included in a new historic district. During early 1977, while many property owners signed in favor of being included in the district, the support was scattered, as shown by the properties highlighted in red on Map A-14. The final Waterford Village Historic District boundaries established by the Township Board in June 1977 are shown in Map A-15.

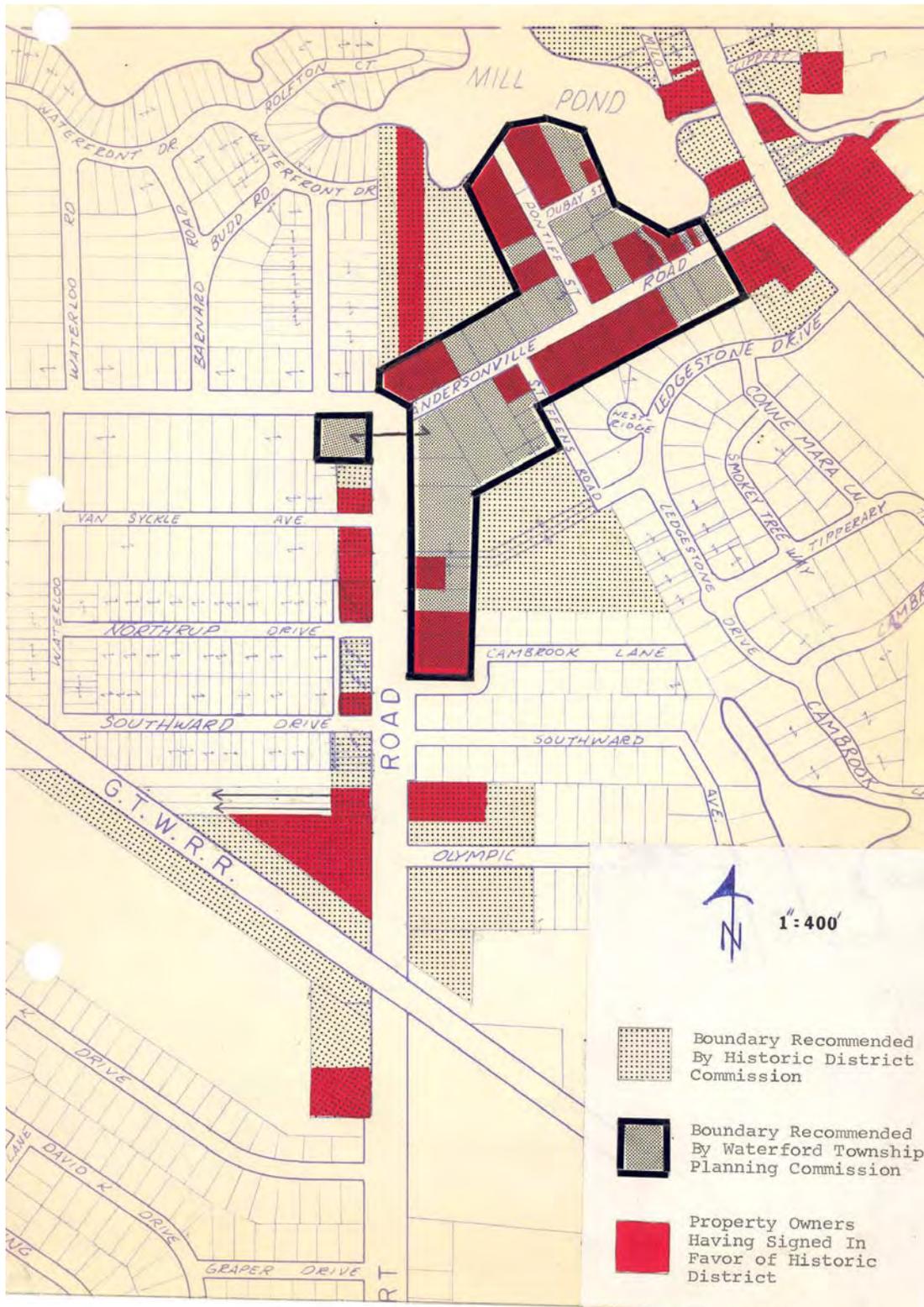
As part of the establishment of the Waterford Village Historic District, the Township Board adopted an Ordinance intended to manage and preserve the character of the District. The Ordinance also established a Historic Commission. While the Commission was active for the first few years of its existence, it was not utilized during the years 1980 and 1990. Since then some efforts have been undertaken, although with little to no funds at the Commission's disposal. Some members of the Commission during the past decade have sought to acquire funds to install an improved sidewalk network and antique decorative street lighting. The Commission has been unsuccessful in finding such funding. Neither the Ordinance that established the Historic Commission or the organization and powers of the Commission have been reviewed or revised since its inception.

There have been a few successful efforts at preserving Waterford's history. During the late 1970s, the Township used some of its federal Community Development Block Grant (CDBG) funds to purchase and restore a historic church building in the Waterford Village Historic District. For a time during the 1980s and early 1990s the building housed the offices of Waterford's Parks and Recreation Department. After the Parks and Recreation staff moved to new offices, the building has been the home of the Waterford Cultural Council. CDBG funds were also used in the late 1980s to restore an historic hatchery building located at the Drayton Plains Nature Center and used prior to the mid-1960s by the forerunner of the Michigan Department of Natural Resources. The Township's Community Planning and Development Department recently undertook a project to inventory the Township's first cemetery, where some of the Township's first non-Native American settlers are buried.

The Township also has an active Historical Society, whose headquarters are in an historic house that used to be the offices of a local Michigan Department of Natural Resources hatchery. The Historical Society's offices are now part of the Township's Hatchery Park. At this park, the Society has also relocated and restored an historic log cabin that used to be located on Dixie Highway near Andersonville Road and also an historic caboose that was acquired and donated to the Society. The Society is also beginning the construction phases of a planned historic village, which will include replicas of a general store, train depot, and several other small shops.

The Township has a limited few remaining culturally significant historical and architectural sites and buildings. Since these are irreplaceable resources, continuing efforts must be made to preserve and protect them so that future generations of citizens can obtain information about their community's past. Such efforts will also contribute toward providing a distinct sense of place and community identity. Local coordination and cooperation between preservation advocates, citizens, the Historical Society, the Township government, other levels of government, and non-profit agencies will be necessary to continue and expand upon these efforts.

Map A-14
Development of Waterford Village Historic District Boundaries
1976



Source: Waterford Township Community Planning and Development Department

Map A-15 Existing Waterford Village Historic District Boundaries 2003



Source: Waterford Township GIS

EXISTING LAND USE & ZONING

The Township has experienced significant growth over the past 70 years, evolving from a farming/summer cottage community to the most populous Township in Oakland County and the third most populous Township in the State of Michigan. The growth pattern of land use distribution in the Township has remained relatively stable during the past 27 years, continuing primarily as a single-family residential community with a substantial amount of area covered by water bodies. The most significant changes have been the increase in the Single Family Residential category and the decrease in the Vacant/Agricultural category, as is shown in Table A-26 and Figure A-8. The comparative distribution of the Township's total acreage between existing land use categories during 2001 is also shown in Figure A-9. Another comparative view of land use distribution, by number of parcels used by each category, is found in Table A-27 and Figure A-10. The share of Single Family Residential use is even more pronounced when measured by the number of parcels, with 81 percent of the total parcels used for this category.

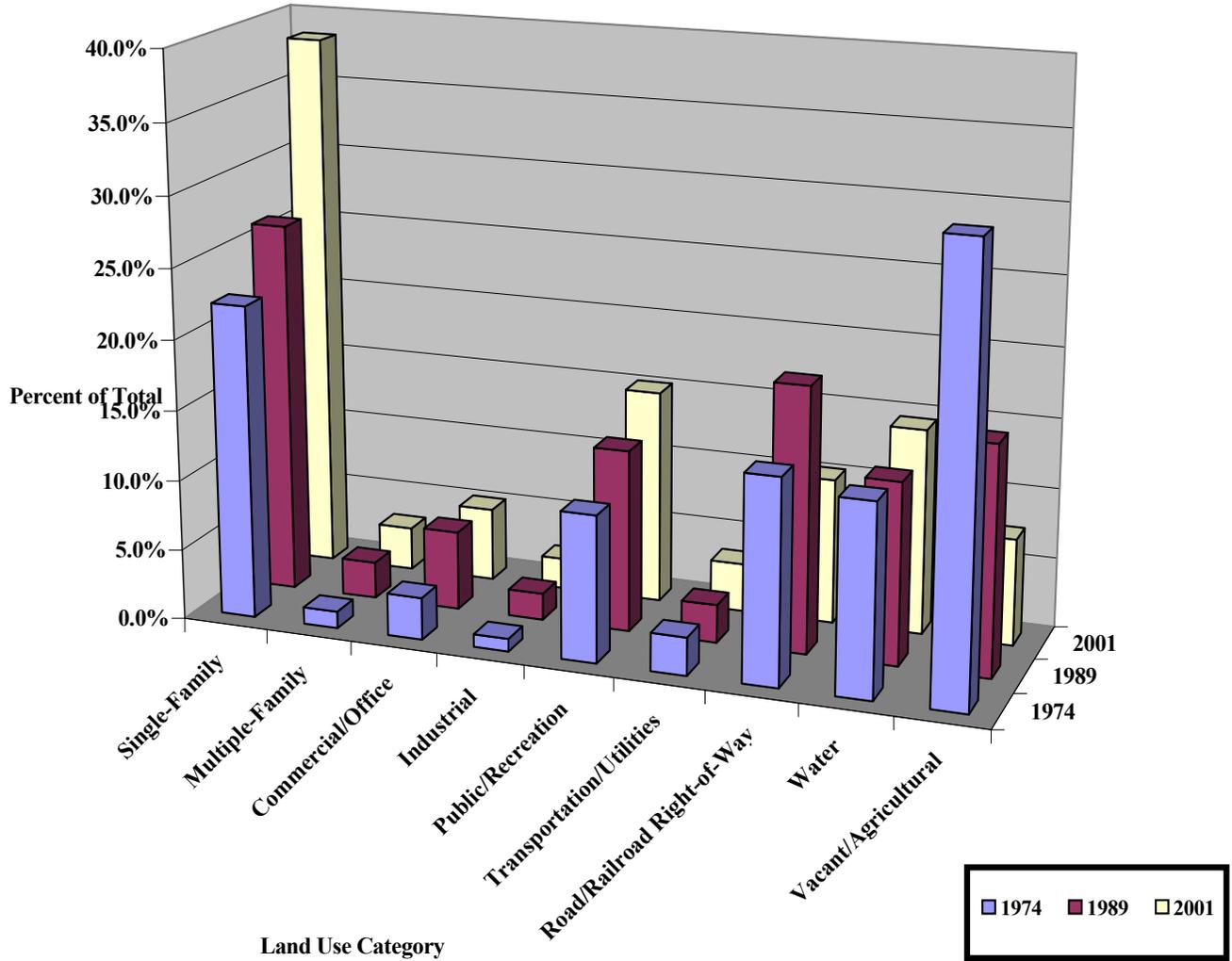
Regarding the land use type categories shown in Tables A-26 and A-27 and Figures A-8 through A-10, some categories presented in Oakland County's 2001 analysis had to be combined for a more consistent comparison with the 1974 and 1989 information taken from the 1991 Master Plan. In the 2001 analysis, there were separate categories for Multiple Family and for Mobile Home Park, while the 1974 and 1989 figures used in the 1991 Master Plan, there was only a Multiple Family category. Since the two mobile home parks in Waterford predate the 1974 figures, it can be assumed that the data reflecting the mobile home parks was included in the Multiple Family category. Therefore, the Multiple Family and Mobile Home Park categories were combined into one Multiple Family category for the purpose of this analysis. The 1974-1989 land use comparison had one category, Public/Quasi-public Conservancy, that included all public, institutional, recreation, and conservation uses. Therefore, the two categories used in the 2001 analysis, Public/Institutional and Recreation & Conservation, were merged into one category called Public/Recreation for comparisons with the 1974 and 1989 numbers. The 2001 analysis also had two separate right-of-way (ROW) categories, one for road ROW and one for railroad ROW. These were merged into one category for comparison with the one 1974-1989 category for ROW. The separate 2001 categories for Vacant and Agriculture were merged into one category to compare with the 1974-1989 Vacant/Agricultural category. The 1974-1989 category of Airport is considered the same as the 2001 category of Transportation/Utility/Communication. Finally, the comparison between the 1974, 1989, and 2001 analyses does reveal a slight difference in the gross land area measured for each of these years. In 1974 it was measured at 22,590 acres, in 1989 at 22,343 acres, and in 2001 at 22,524 acres. The difference between these numbers is less than one percent and is likely a reflection of the different methodologies used in analyzing the land use during the three time periods studied. Because the difference is statistically insignificant and does not appear to affect the general historical land use patterns, it was determined that the conclusions made from this comparison also were not affected.

**Table A-26
Existing Land Use Acreage Distribution Comparison
Waterford Township
1974-2001**

Land Use Type	1974		1989		2001		Percent Change 1974-2001
	Acres	Percent	Acres	Percent	Acres	Percent	
Single-Family Residential	5,030	22.3	5,890	26.4	8,652	38.4	16.1
Multi-Family Residential	262	1.2	576	2.6	682	3.1	1.9
Commercial/Office	670	3.0	1,238	5.6	1,177	5.2	2.2
Industrial	205	0.9	433	1.9	492	2.2	1.3
Public/Recreation	2,354	10.4	2,890	12.9	3,424	15.2	4.8
Transportation/Utility/ Communication	600	2.7	610	2.7	777	3.5	0.8
Road/Railroad ROW	3,287	14.5	4,200	18.8	2,325	10.3	-4.2
Water	3,080	13.6	2,890	12.9	3,283	14.6	1.0
Vacant/Agricultural	7,094	31.4	3,608	16.2	1,704	7.6	-23.8
Total Acres	22,590	100.0	22,343	100.0	22,524	100.0	

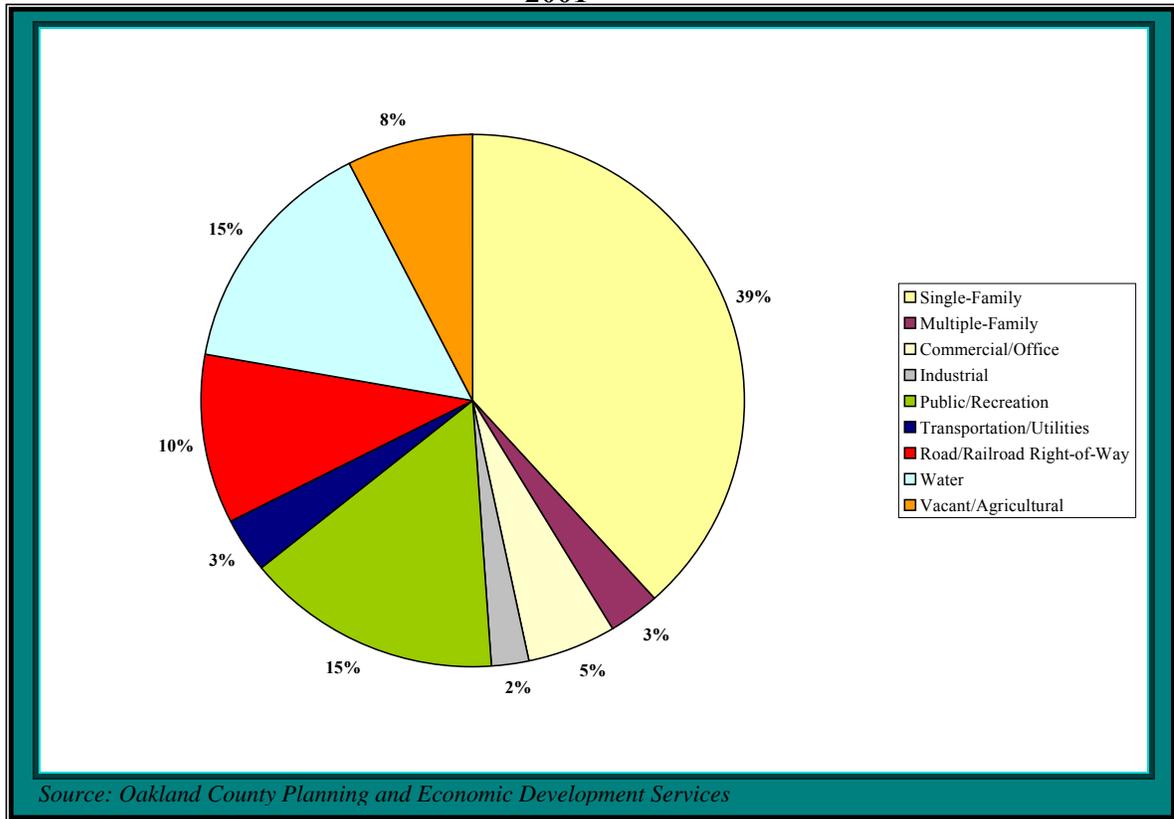
Source: Oakland County Planning and Economic Development Services

Figure A-8
Existing Land Use Acreage Percent Distribution Comparison
Waterford Township
1974-2001



Source: Oakland County Planning and Economic Development Services

**Figure A-9
Existing Land Use Area Percent Distribution
Waterford Township
2001**

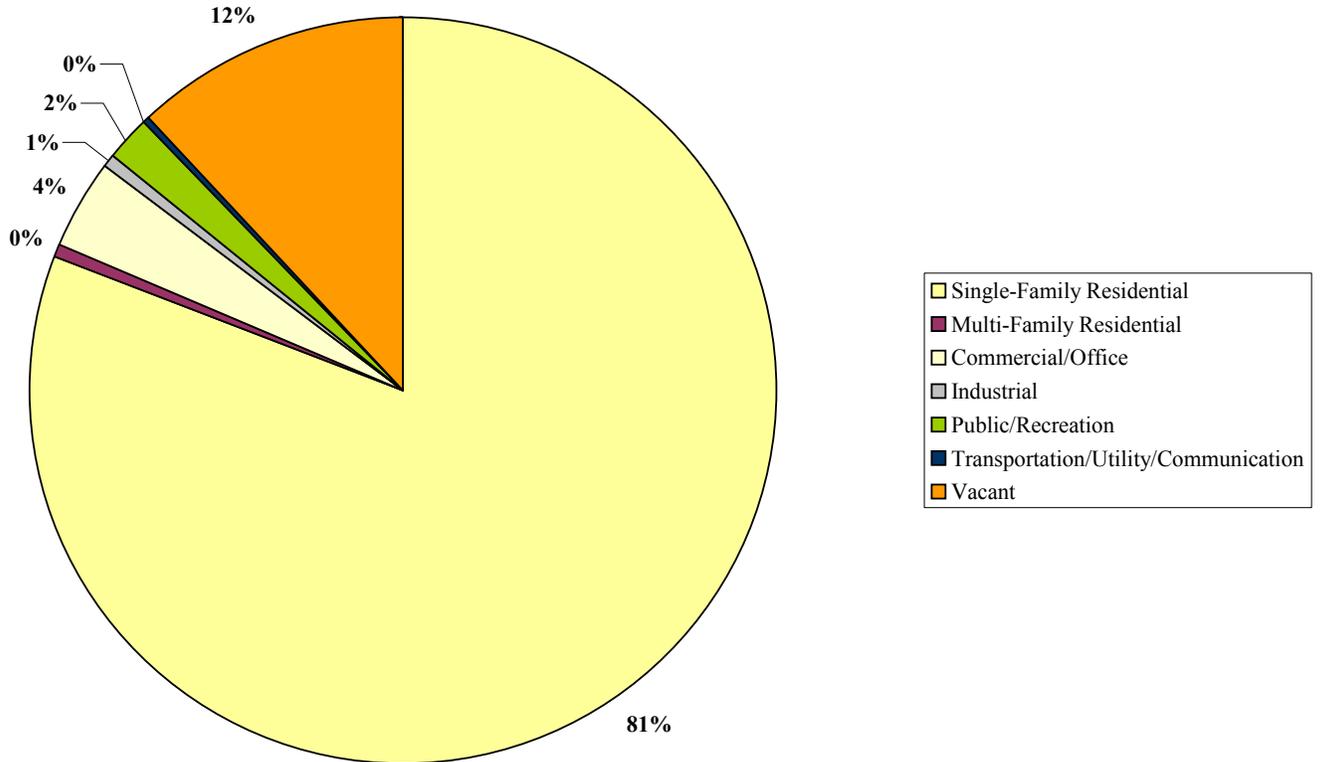


**Table A-27
Existing Land Use Parcel Distribution
Waterford Township
2001**

Land Use Type	2001	
	Parcels	Percent
Single-Family Residential	22,994	80.9
Multi-Family Residential	110	0.4
Commercial/Office	1,094	3.9
Industrial	132	0.5
Public/Recreation	578	2.0
Transportation/Utility/Communication	121	0.4
Road/Railroad ROW	n/a	n/a
Water	n/a	n/a
Vacant	3,385	11.9
Total Parcels	28,414	100.0

*Source: Oakland County Planning and Economic Development Services
Note: Acres may not equal total due to rounding errors*

Figure A-10
Existing Land Use Parcel Percent Distribution
Waterford Township
2001



Source: Oakland County Planning and Economic Development Services

While Waterford’s land use is predominantly Single Family Residential, it is not uniform regarding the size or number of parcels, as shown in Figure A-11. For instance, only 11 percent of the total area used for Single Family Residential is used for parcels 2.5 acres or greater in size. Another 13 percent is used for parcels that are 1 to 2.5 acres in size. The majority of parcels, 67 percent, are moderately-sized parcels between 8,000 and 43,559 square feet in size. The predominance of these moderately-sized parcels is also reflected in the 77 percent share of the total number of parcels, as shown in Figure A-12.

Figure A-11
Existing Single Family Category Area Coverage Percent Distribution
Waterford Township
2001

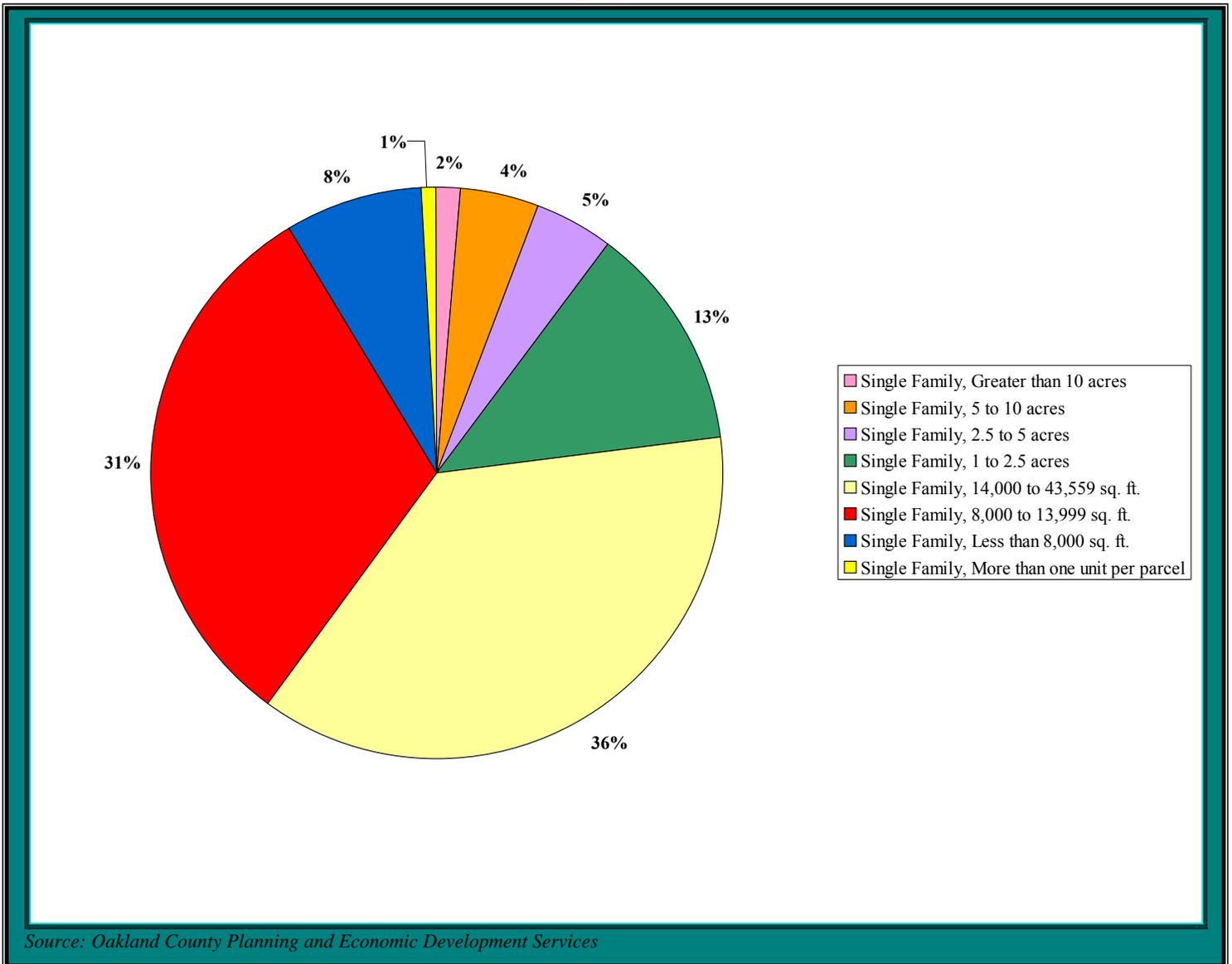
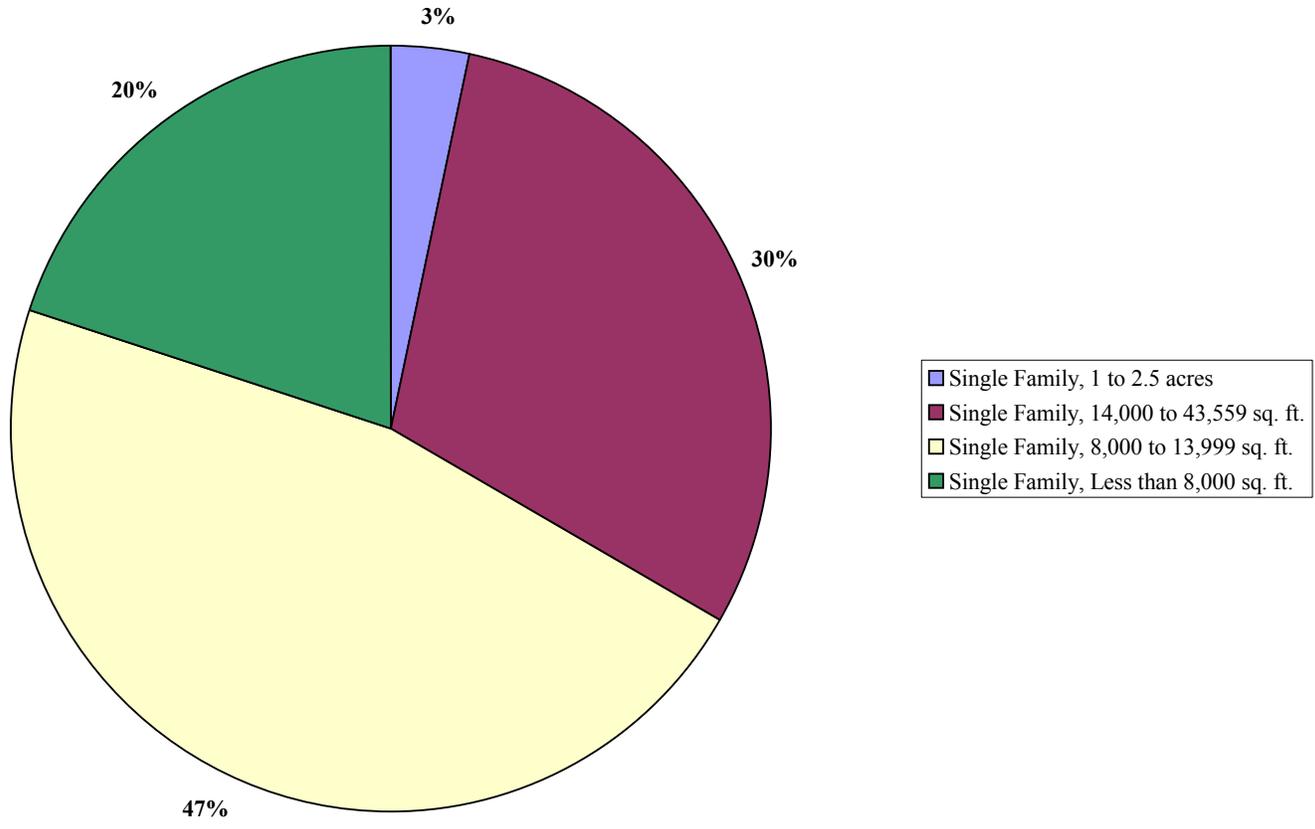


Figure A-12
Existing Single Family Summary by Parcel
Waterford Township
2001



Source: Oakland County Planning and Economic Development Services

Consistent with the predominance of Single Family Residential among existing land uses, single-family residential zoning covers 54 percent of the Township, as shown in Table A-28. By comparing coverages between the 2001 Existing Land Use Map and the Zoning map, it is determined that of the 1,704 vacant acres left in Waterford, 1,157 or 67.9 percent are in residential categories. Because of the methodology used by Oakland County to determine land use during its 2001 analysis, many of these parcels are not necessarily vacant in the sense of being buildable. Many of the vacant parcels are owned in common with an adjacent improved residential property, with the owner enjoying the parcel classified as vacant as part of a larger yard area. In addition, many of the parcels are also likely to be unbuildable due to environmental characteristics, such as wetlands. Therefore, the actual amount of truly buildable vacant residential property is likely to be substantially lower, with the Township near its buildout capacity. Before a final determination can be made on an estimated final buildout based on remaining vacant land, an in-depth analysis of each vacant parcel identified by the County must be undertaken. Regarding development of vacant commercial property, with only 268 acres available for commercial development, redevelopment is likely to become the primary focus.

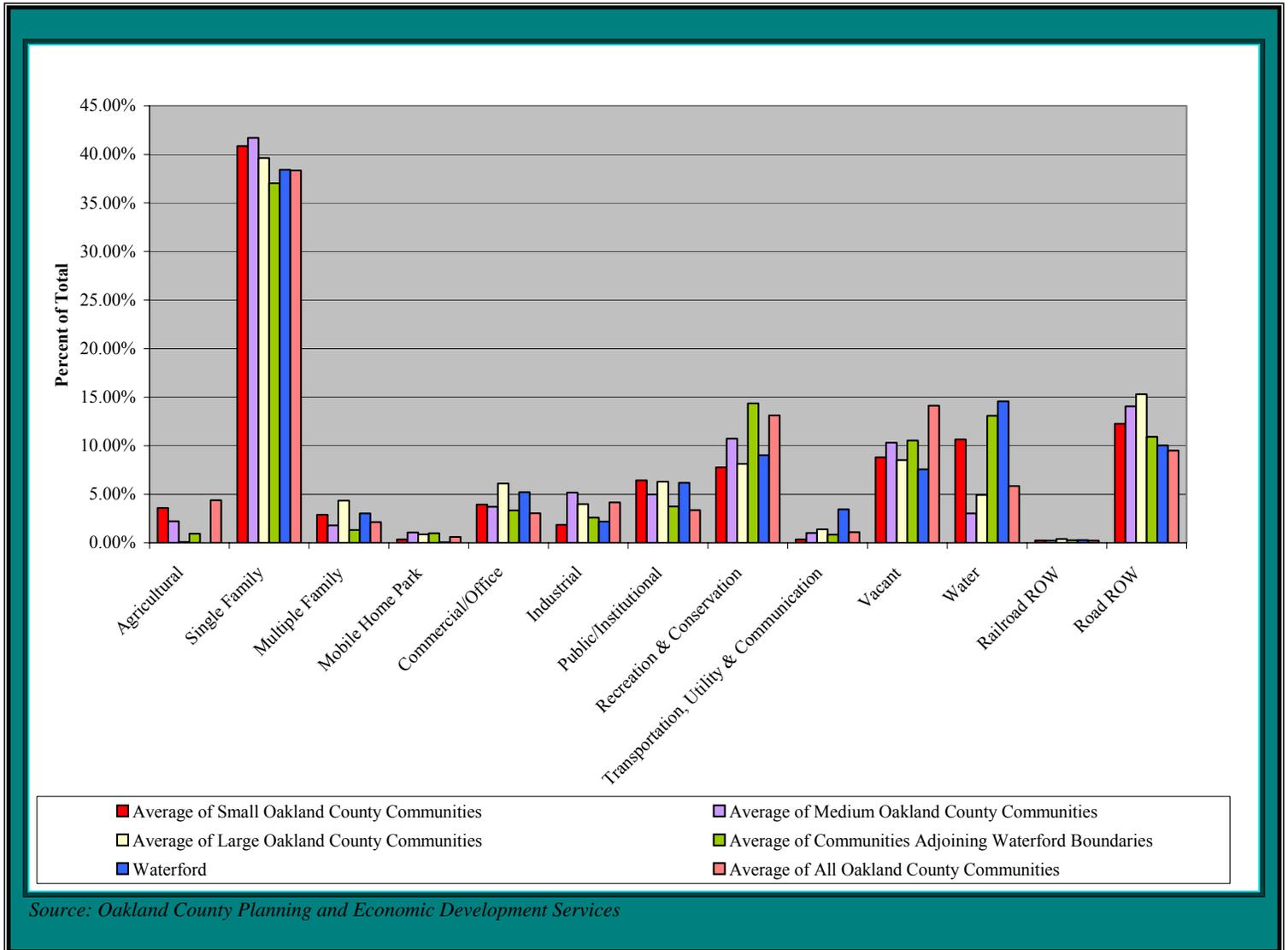
The distribution of Waterford's existing land use was also compared with the existing land use distribution throughout all of Oakland County, the average distribution for the communities adjoining Waterford's borders, as well as with the average distributions for groupings of Oakland County's communities with the smallest, medium-sized, and largest populations. Overall, as is shown in Figure A-13 below, Waterford's distribution of existing land uses is not out of character with its neighboring communities or with the County as a whole.

**Table A-28
Existing Zoning Acreage Distribution
Waterford Township
2001**

Zoning District Name	Classification	Total Acres	Percent of Total	Vacant (2001)	Percent Vacant
<i>Residential</i>					
<i>Single Family</i>					
Single Family Residential	R1-A	9,376.0	42.0	724.0	8.0
Single Family Residential	R1-B	1,636.0	7.0	170.0	10.0
Duplex	R1-C	6.0	0.0	0.0	7.0
Single Family Attached (3 bedrooms)	R1-D	78.0	0.0	35.0	45.0
Suburban Farm	S-F	1,077.0	5.0	228.0	21.0
<i>Multiple Family</i>					
Multiple Family	R-2	824.0	4.0	91.0	11.0
Low Density Multiple Family (4 bedroom)	R-3	132.0	1.0	1.0	0.0
<i>Mobile Home Park</i>					
	R-4	12.0	0.0	0.0	0.0
<i>Commercial</i>					
Local Business	C-1	82.0	0.0	7.0	9.0
General Business	C-2	994.0	4.0	169.0	17.0
Extensive Business	C-3	284.0	1.0	45.0	15.0
Union Lake Business District	C-UL	53.0	0.0	8.0	16.0
Restricted Office	R-O1	179.0	1.0	42.0	24.0
<i>Industrial</i>					
Airport	A-1	669.0	3.0	0.0	0.0
Light Industrial	M-1	588.0	3.0	74.0	13.0
General Industrial	M-2	348.0	2.0	85.0	24.0
Technical, Industrial Services & Office	TISO	31.0	0.0	21.0	67.0
<i>Recreation</i>					
Public Recreation	RA-1	14.0	0.0	3.0	23.0
Commercial Recreation	RA-2	36.0	0.0	1.0	3.0
<i>Road System</i>					
Parking	P-1	7.0	0.0	0.0	4.0
<i>Environmentally Sensitive Areas</i>					
Water Body	n/a	2,915.0	13.0	0.0	0.0
Wetlands	n/a	3,179.0	14.0	0.0	0.0
Total	n/a	22,519.0	100.0	1,704.0	8.0

Source: Waterford Township Community Planning and Development Department, HNTB

Figure A-13
Comparative Land Use Development
Waterford and Oakland County Communities
2001





APPENDIX B: CAPITAL IMPROVEMENTS, PUBLIC SAFETY, AND MUNICIPAL SERVICES SUBCOMMITTEE MEETING MINUTES

APRIL 30, 2001 MEETING MINUTES	----- PAGES B-2 THROUGH B-3
MAY 7, 2001 MEETING MINUTES	-----PAGES B-4 THROUGH B-17
MAY 21, 2001 MEETING MINUTES	----- PAGES B-18 THROUGH B-19
JUNE 11, 2001 MEETING MINUTES	----- PAGES B-20 THROUGH B-22
JUNE 25, 2001 MEETING MINUTES	----- PAGES B-23 THROUGH B-25
JULY 9, 2001 MEETING MINUTES	----- PAGES B-26 THROUGH B-27
JULY 23, 2001 MEETING MINUTES	----- PAGES B-28 THROUGH B-29
AUGUST 13, 2001 MEETING MINUTES	----- PAGES B-30 THROUGH B-31
AUGUST 27, 2001 MEETING MINUTES	----- PAGES B-32 THROUGH B-33

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
CAPITAL IMPROVEMENTS, PUBLIC SAFETY, AND MUNICIPAL SERVICES
SUBCOMMITTEE
MEETING MINUTES

Date: 30 April 2001
Time: 6:30 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Jay Shah, Chairman

Bob Vallina, Community Planning and Development Director

Doug Bradley, Building and Engineering Director

Joe Franz

Bill Harris

Dino Hernandez

Ralph Woznick

Chuck Zamek

Steve Adamczyk

I Welcome

- ◆ Chairman Shah opened the meeting and asked everyone present to introduce themselves.

II. Presentations

- ◆ Bob Vallina, Township Community Planning and Development Director, provided the subcommittee members with a draft mission statement. He asked that the subcommittee members consider the draft between now and the next meeting and make any revisions they might like to see to the draft. Chairman Shah then stated that the subcommittee could consider the approval of the final mission statement as one of the first orders of business at the next subcommittee meeting.

Mr. Vallina then handed out a list of prospective topics for discussion at future subcommittee meetings (copy attached for the record). The subcommittee briefly discussed some of these issues in connection with some of their personal experiences. Mr. Vallina stated that if there were any other topics that members would like to add, please send them to him and he would add to future meeting agendas.

Mr. Vallina explained to the subcommittee that the meeting time, date, and frequency were up to them to decide. He asked that the members consider what meeting schedule they would like to follow. Chairman Shah then stated that the subcommittee would consider these meeting issues and make a final decision at the next meeting.

III. New Business

- ◆ Next Meeting—May 7, 2001, 6:30 p.m. in the Township Hall Conference Room 3-1.

**CAPITAL IMPROVEMENTS AND MUNICIPAL SERVICES
MASTER PLAN SUBCOMMITTEE
TOPICS FOR FUTURE MEETINGS**

CAPITAL INFRASTRUCTURE

WATER
SEWER
STORM WATER
ROADS
SIDEWALKS
MUNICIPAL BUILDINGS
EXISTING UTILITIES
FUTURE UTILITIES
COMMUNICATIONS

MUNICIPAL SERVICES

POLICE
FIRE/EMS
WATER & SEWER
FACILITIES & OPERATIONS
LIBRARY
PARKS & RECREATION
ADMINISTRATIVE
BUILDING & ENGINEERING
COMMUNITY PLANNING & DEVELOPMENT
INFORMATION SYSTEMS

ESTIMATING FUTURE MAINTENANCE AND STAFFING COSTS FOR INCLUSION
IN CAPITAL IMPROVEMENTS PLAN

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
CAPITAL IMPROVEMENTS, PUBLIC SAFETY, AND MUNICIPAL SERVICES
SUBCOMMITTEE
MEETING MINUTES

Date: 7 May 2001
Time: 6:30 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Jay Shah, Chairman
Doug Bradley, Building and Engineering Director
Joe Franz
Bill Harris
Dino Hernandez
Ralph Woznick

I Welcome

- ◆ Chairman Shah opened the meeting and introduced two guests: Sally Tato (Detroit Free Press Reporter); William Archie (Detroit Free Press Photographer)

II. Review of Mission Statement

- ◆ Review/Approval of Mission Statement for Capital Improvements and Subcommittees Master Plan Subcommittee
The committee reviewed the draft mission statement passed out at the last meeting and approved it. A copy of the subcommittee's mission statement as approved is attached.

III. Presentations

- ◆ Doug Bradley, Township Building and Engineering Director gave the subcommittee members an overview of the existing storm drainage, water delivery, sewerage, utility, non-motorized path, and road systems in the Township. Mr. Bradley handed out a fact sheet and the following listed nine maps (copies of which are attached to these minutes) to highlight the existing Township infrastructure.
 - Township Improved/Unimproved Streets Map
 - Township RCOC/Private Streets Map
 - Township Nonmotorized Pathways Map
 - Township Sewer Infrastructure Map
 - Township Water Infrastructure Map
 - Township-Owned Buildings and Property Location Map
 - Township Streetlight Location Map
 - Township Cellular Communication Towers Location Map
 - Township School Facilities Location Map

Mr. Bradley then discussed some of the problems experienced by the Township in addressing storm drainage because of under capacity. Mr. Bradley also discussed the status of non-motorized pathways through the Township. The subcommittee members then participated in a Q & A session with Mr. Bradley to clarify and expand on the information that he provided.

IV. Old Business

- ◆ Confirm Future Meeting Schedule/Location
The subcommittee agreed to meet on the second and fourth Mondays of each month, at 6:30 p.m. in the Township Hall Conference Room 3-1.

V. New Business

- ◆ Next Meeting–May 21, 2001, 6:30 p.m. in the Township Hall Conference Room 3-1.

CAPITAL IMPROVEMENTS AND MUNICIPAL SERVICES MASTER PLAN SUBCOMMITTEE MISSION STATEMENT

The Capital Improvements and Municipal Services Master Plan Subcommittee will review and explore the existing status of the Township's capital infrastructure and municipal services, investigate and discuss the capital infrastructure improvement and expansion needs of the next ten year period, investigate and discuss the municipal services needed during the next ten years, discuss the need to incorporate maintenance and staffing costs in any capital improvements plan adopted by the Township, prepare a report on the subcommittee's findings, and develop a draft capital improvements plan for review by the Master Plan Citizens Committee of the Whole.

CAPITAL IMPROVEMENTS, PUBLIC SAFETY AND MUNICIPAL SERVICES REQUESTED DATA FOR MAY 7, 2001

Total Length of all Township Roads:	1,885,513.10 lf	357.10 miles
RCOC Jurisdiction	1,565,524.00 lf	296.50 miles
MDOT Jurisdiction	76,711.99 lf	14.53 miles
Total Public Roads	1,642,235.90 lf	311.03 miles
Total Private Roads	243,277.20 lf	46.07 miles
Improved Roads	1,793,648.90 lf	17.40 miles
Unimproved Roads	91,864.20 lf	339.70 miles

Length of Sidewalks and Bikepaths: Note that areas marked “Unknown” have not yet been mapped. However, these areas may include sidewalks. Also, when relating these figures to the road figures, remember that sidewalk/bikepath figures may include lengths for improvements on both sides of the road.

Sidewalks:	583,082.26 lf	110.43 miles
Bikepaths:	224,512.47 lf	45.52 miles

Length of Sanitary Sewer Mains: 1,847,414.7 lf 349.89 miles

Length of Storm Drains: Information unavailable at this time

Length of Water Mains: 1,866,032.5 lf 353.42 miles

Length of Cable Lines (per Comcast):

Aerial Lines	1,540,387.20 lf	291.74 miles
Underground lines:	210,988.80 lf	39.96 miles
Total Cable:	1,751,376.00 lf	331.70 miles

Length of Natural Gas Lines: Information unavailable at this time

Length of Electrical Lines: Information unavailable at this time

Length of Telephone Lines: Information unavailable at this time

Schools, School Support and Related Facilities:

Elementary Schools:	15	
Middle Schools:	3	
High Schools	4 (including 2 alternative high schools)	
Private Schools	6	
Colleges:	1	
Other	17	

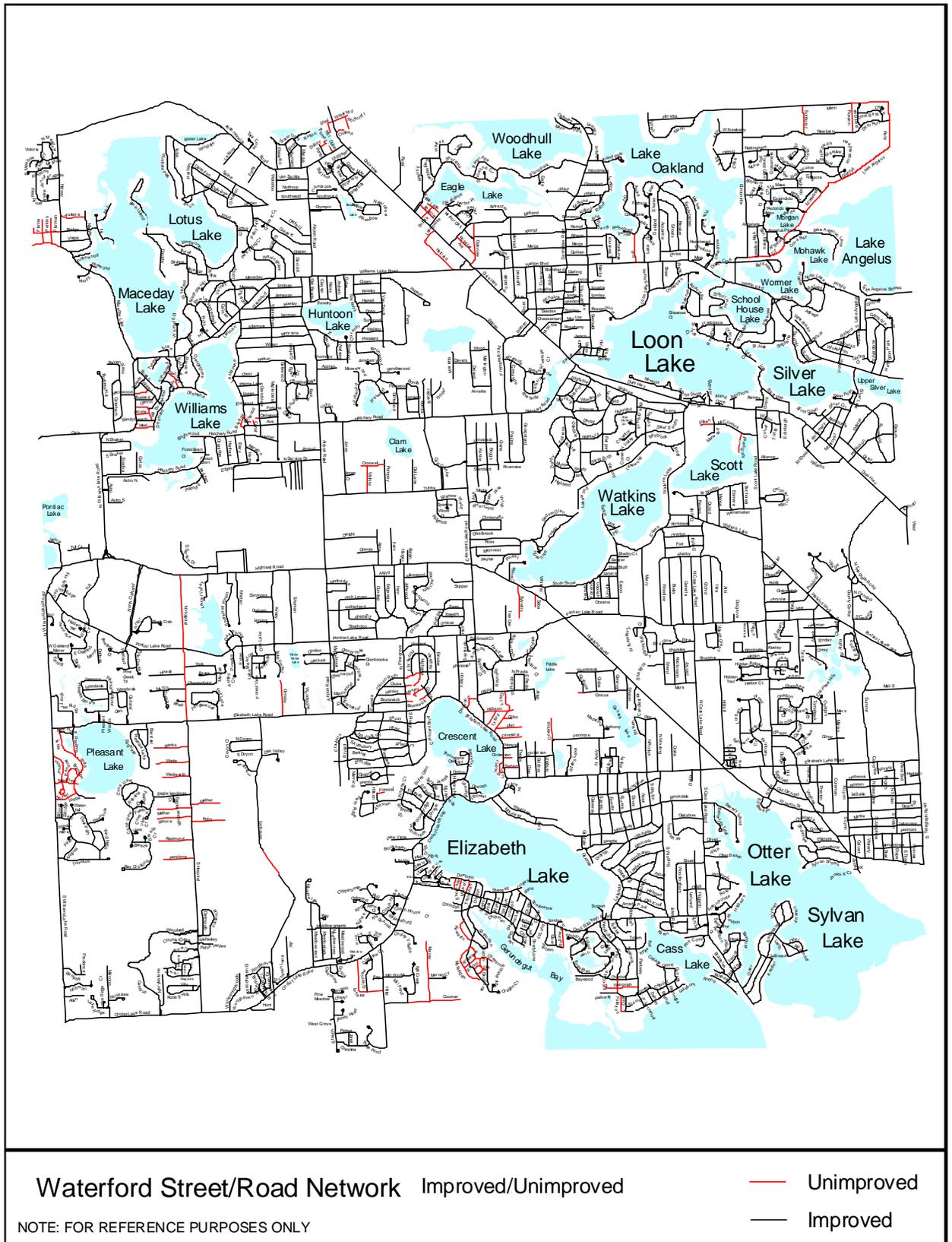
**TOTAL NUMBER OF CELLULAR COMMUNICATION TOWERS:-----
 ----- 18 TOWERS**

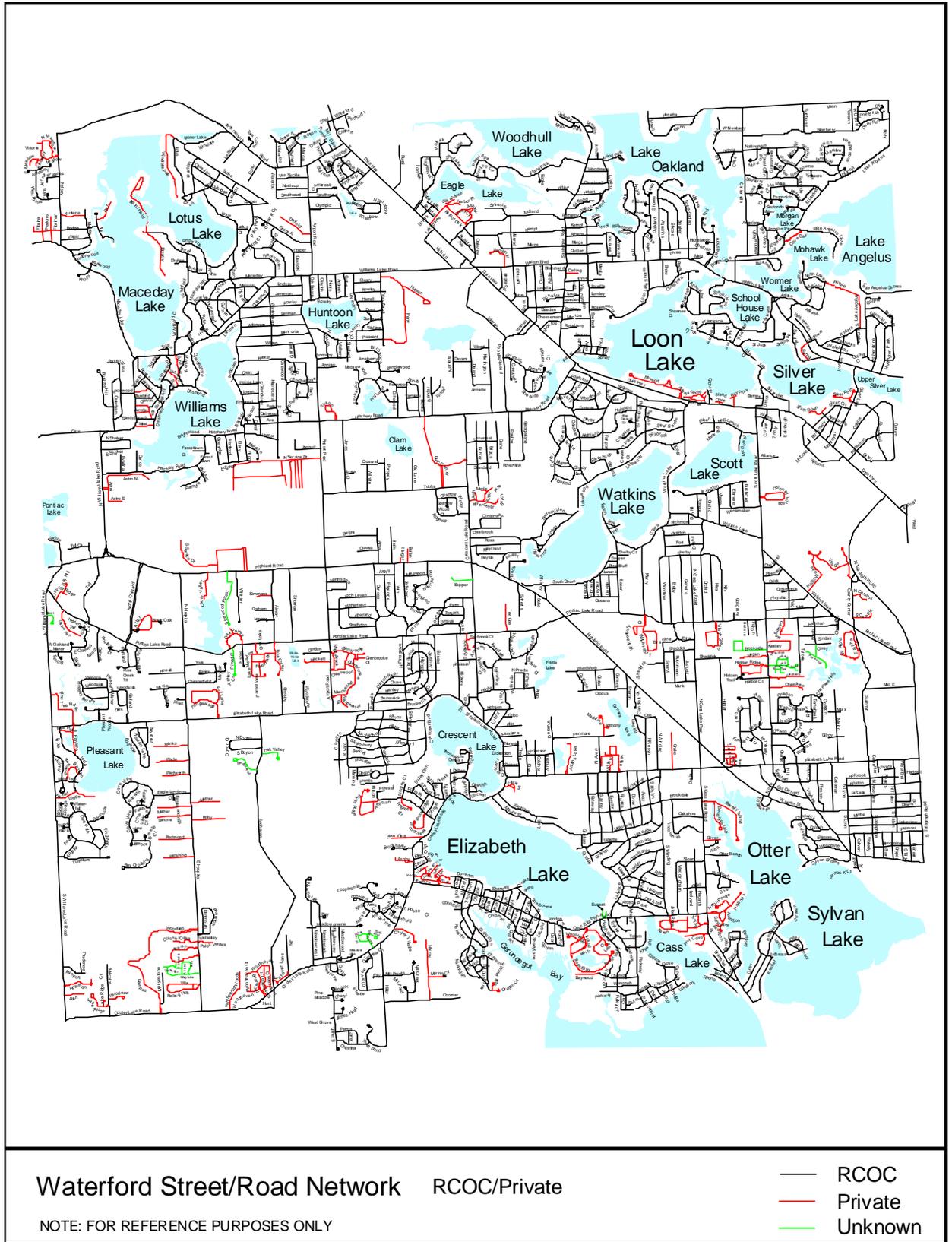
(Note that collocations sites are not reflected in this total)

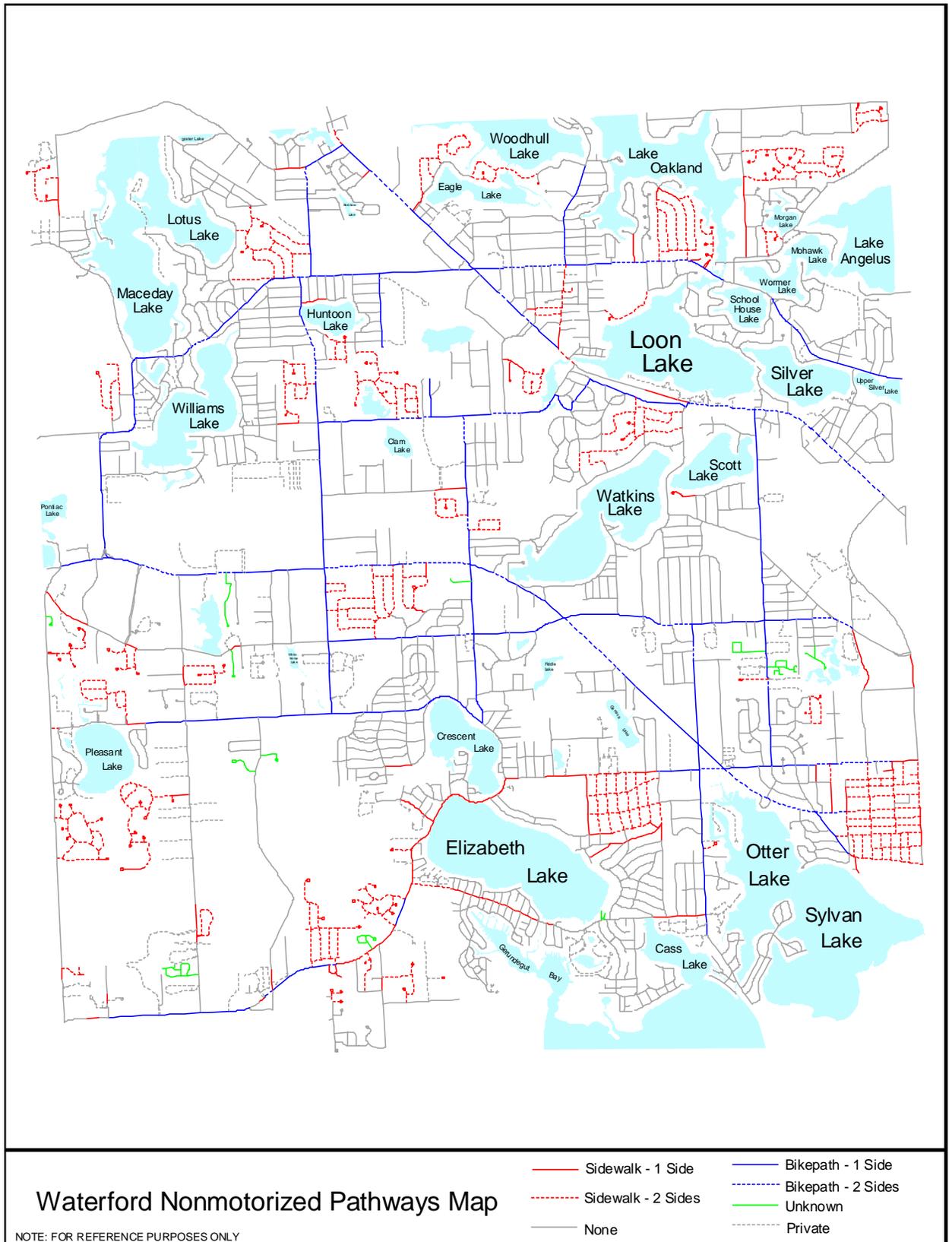
CHARTER TOWNSHIP OF WATERFORD MASTER PLAN _____ APPENDIX B
CAPITAL IMPROVEMENTS, PUBLIC SAFETY, AND MUNICIPAL SERVICES SUBCOMMITTEE MEETING
MINUTES

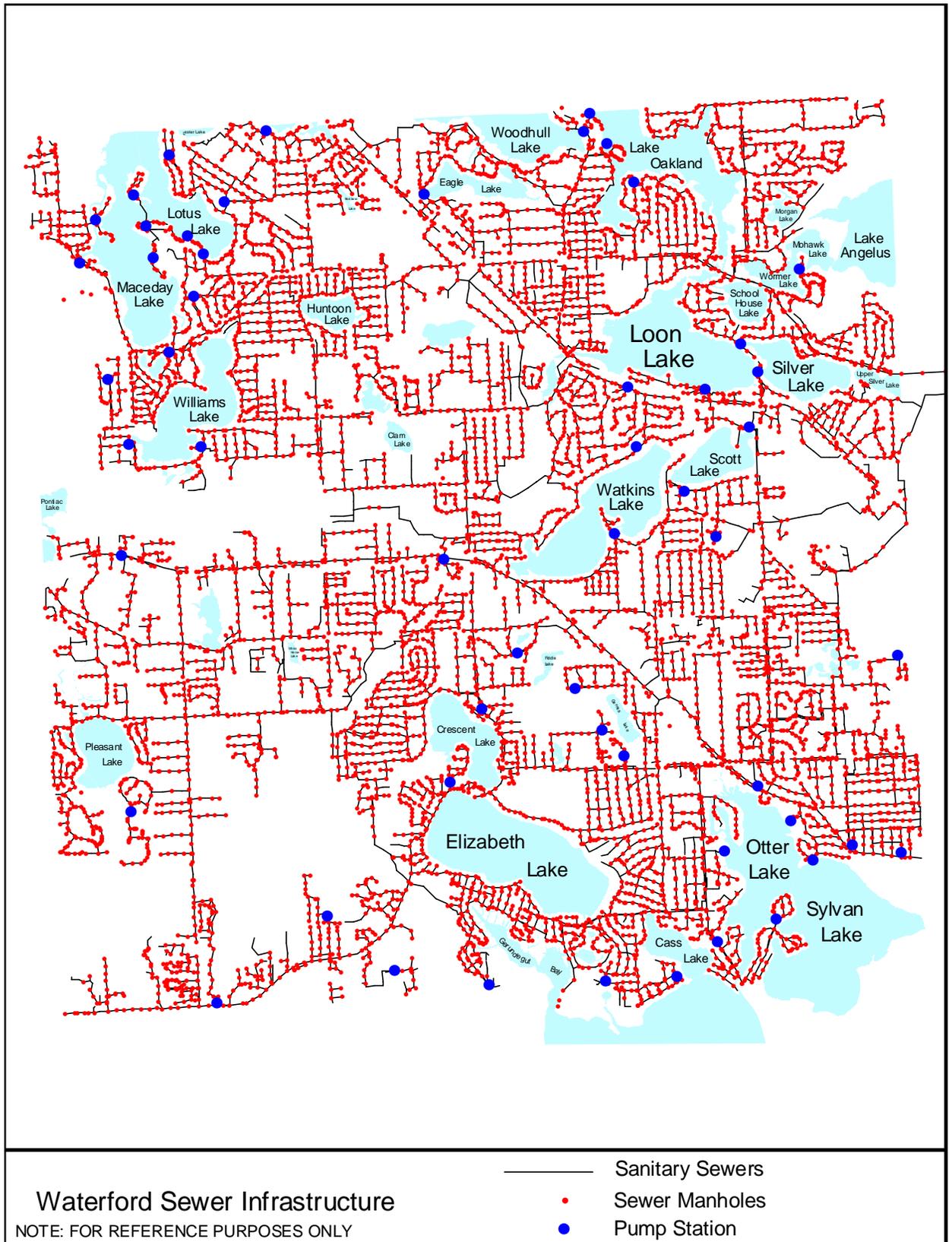
TOTAL NUMBER OF STREETLIGHTS (PER DETROIT EDISON): -----
-----4,845

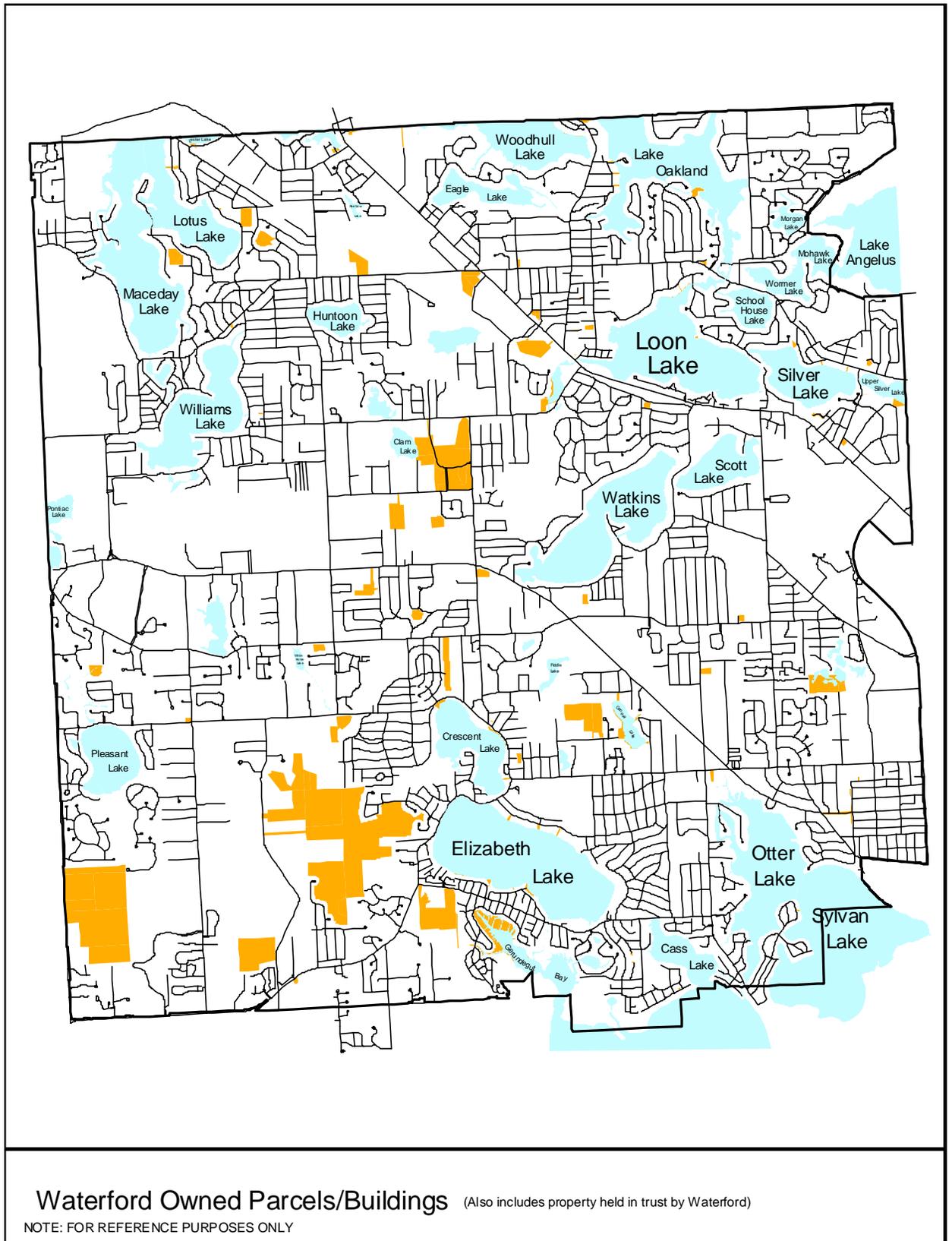
Total Acreage of Township Owned Property: 914.77 acres
(Note: This total includes subdivision property held in trust)

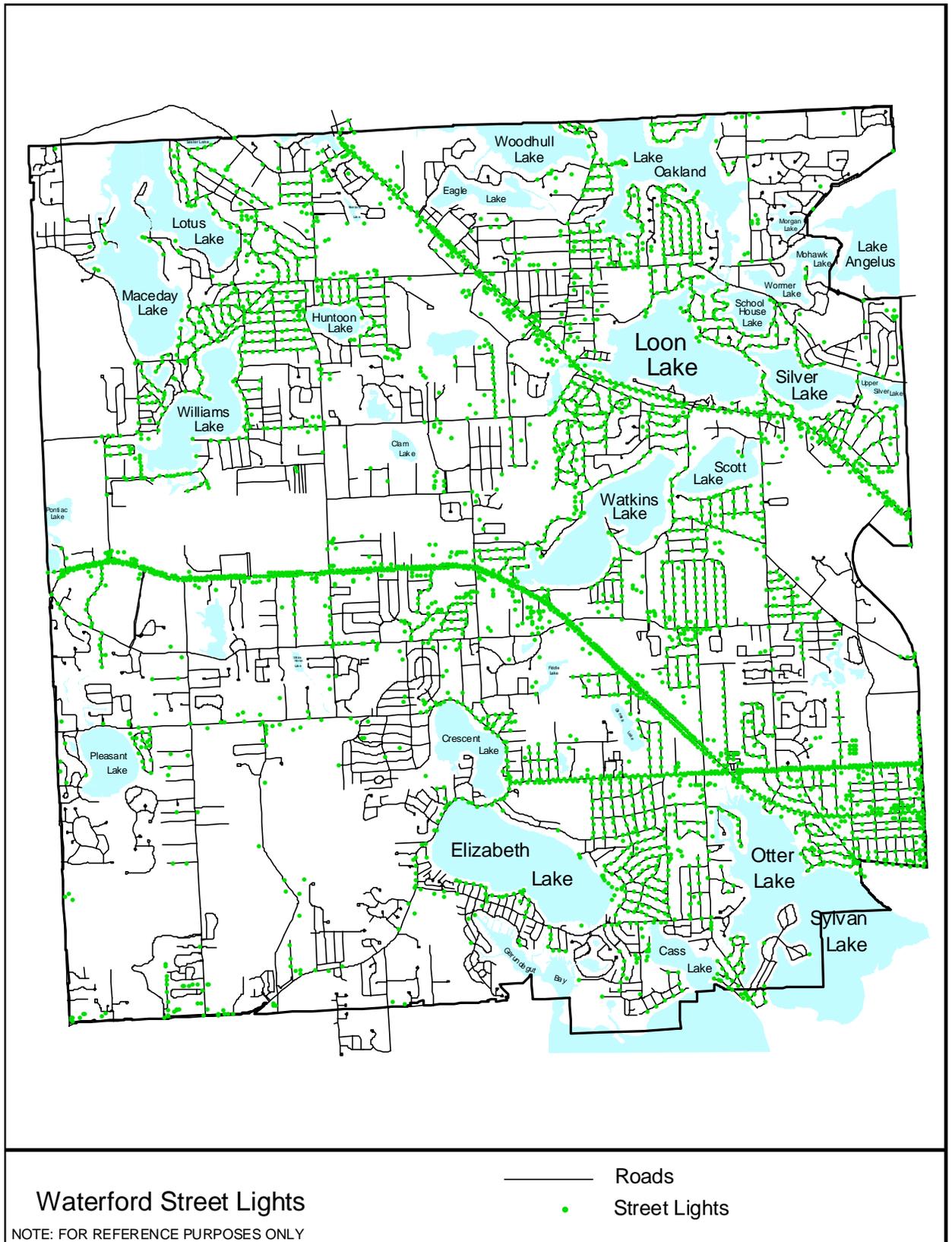


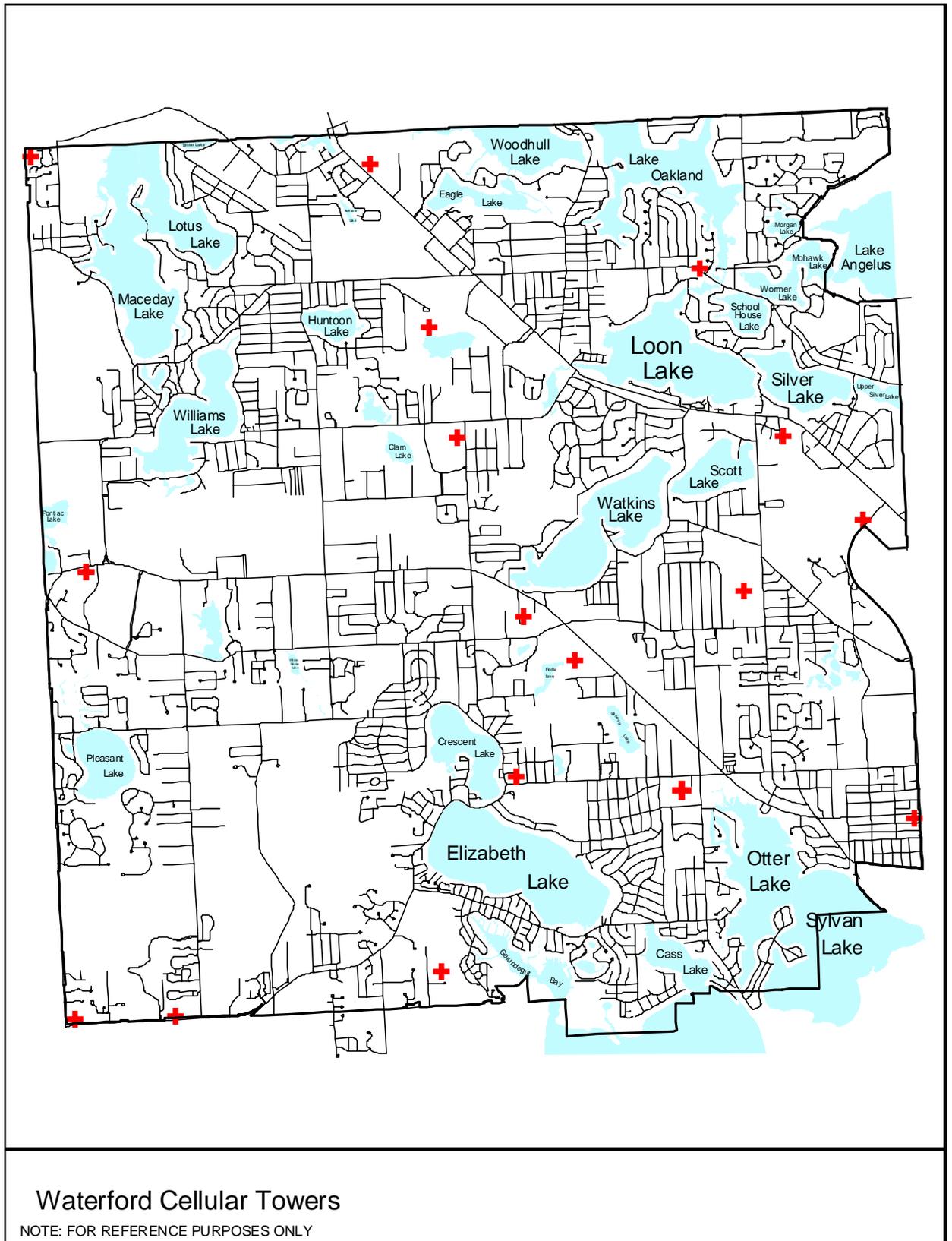


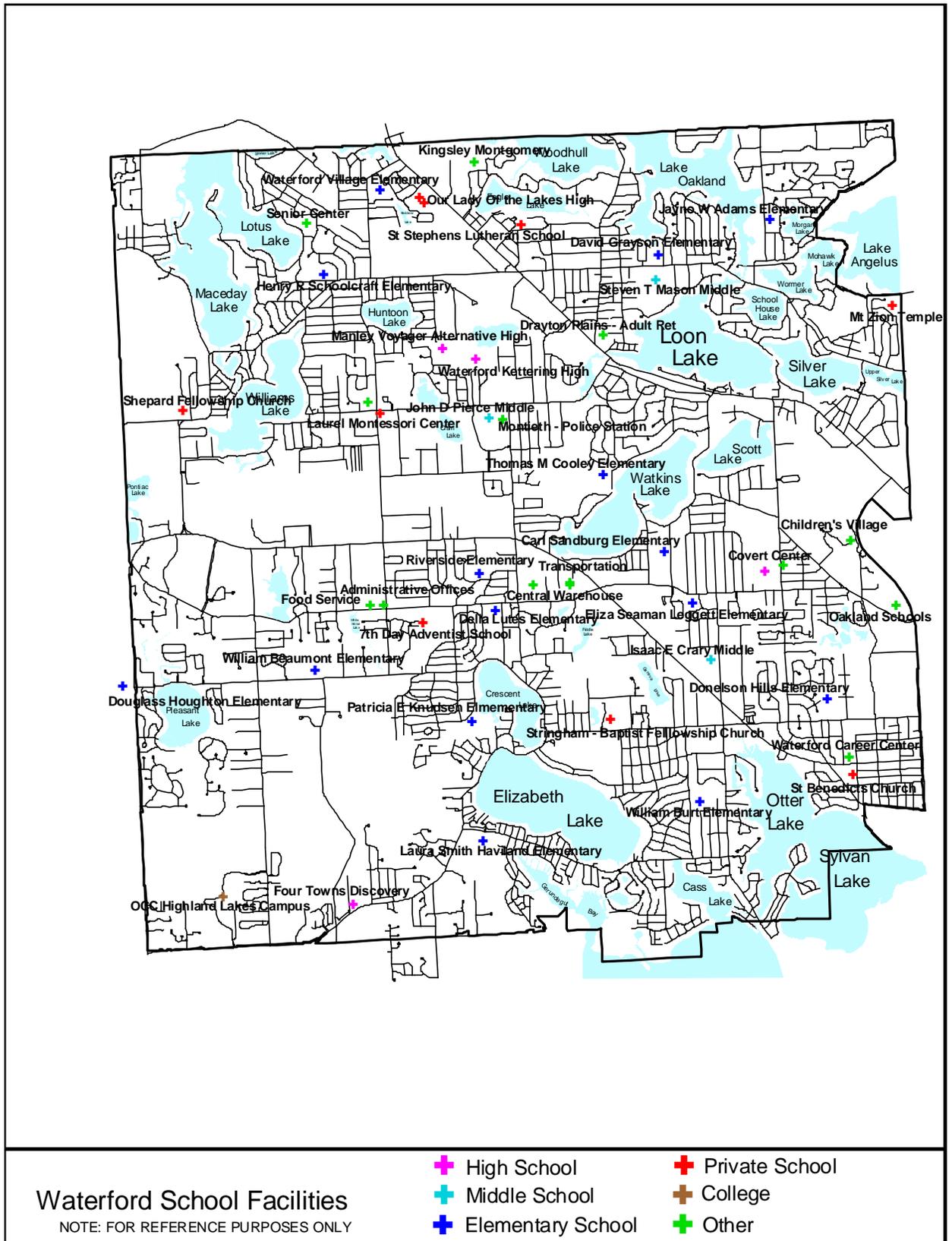












CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

CAPITAL IMPROVEMENTS, PUBLIC SAFETY, AND MUNICIPAL SERVICES SUBCOMMITTEE MEETING MINUTES

Date: 21 May 2001

Time: 6:30 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present: Jay Shah, Chairman

Bob Vallina, Community Planning and Development Director

Doug Bradley, Building and Engineering Director

Bill Harris

Tom McKinstry

Ralph Woznick

Chuck Zamek

I. Call to Order.

Chairman Shah called the meeting to order at 6:35 p.m.

II. Discussions.

Mr. Vallina informed the subcommittee that with a capital improvements plan, many long-term capital improvement needs and wants are developed and identified by several of the Township departments. In particular, Mr. Vallina said that DPW, Parks & Recreation, Library, Police, and Fire are the main departments involved in identifying capital improvement needs. A capital improvements wish list will be developed with the assistance of these Township departments.

Mr. Bradley discussed the importance of identifying these capital improvement needs and ensuring that these needs are prioritized so that as many of these needs are met before any given infrastructure fails and costs many times more than what it would have cost if repairs or improvements were made in a timely manner. Subcommittee members discussed some of the capital improvements undertaken by the Township recently, such as the Library, Fire Department building, Police Department building, and DPW building.

Mr. Bradley explained to the subcommittee how the Township meets every couple of years with the Road Commission for Oakland County (RCOC) to review the Township's road needs and wants. Prioritization of these needs is also discussed at these meetings. Chairman Shah requested that staff make copies of this RCOC information and provide it to the subcommittee at their next meeting. Mr. Vallina and Mr. Bradley stated that they would do so.

Mr. Vallina then discussed the master plan visioning report that was produced during the summer of 2000 and how it related to the Township's future capital improvement needs and maintaining and improving municipal services. Discussion ensued among members on each of the goals listed in the report.

Mr. Vallina then explained to the subcommittee that the Township's Economic Development Corporation (EDC) had funded a study of the Township's walkability. This study has been completed and was presented to the EDC last Thursday, May 17, 2001 at a public meeting in the Township Auditorium. Mr. Vallina explained that once the report is formally presented to the Township Board, he would have copies made for the Planning Commission and Master Plan committee members. In the meantime, Mr. Vallina discussed the importance of improving the Township's commercial corridors and completing the Township's non-motorized path system if the goal of improving walkability throughout the Township is to be accomplished.

Mr. Vallina informed the subcommittee that at the next Planning Commission meeting on June 12, 2001 the Master Plan Committee of the Whole will meet. One of the items of business will be for each subcommittee chair to provide a brief report from their subcommittee to the whole committee.

III. Tasks (Assigned to CPD Staff)

Chairman Shah then requested that Mr. Vallina discuss with other Township Department heads the capital improvement needs that they foresee for each respective department. Chairman Shah said that this information could be reviewed by the subcommittee at future meetings.

Chairman Shah also requested data on current Township facilities. Mr. Vallina stated that he would contact Township Facilities & Operations Superintendent Keith Wheeler and invite him to attend a future meeting and discuss this data with the subcommittee.

IV. Next Meetings.

The next meetings have been established as follows:

- 11 June 2001, 6:30 p.m. as a joint meeting of the Capital Improvements subcommittee and Transportation subcommittee. The topic will be the road system in the Township.
- 12 June 2001, 7:30 p.m. for Committee of the Whole
- 25 June 2001, 6:30 p.m.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
JOINT
CAPITAL IMPROVEMENTS, PUBLIC SAFETY, & MUNICIPAL SERVICES
AND
TRANSPORTATION & COMMERCIAL CORRIDOR IMPROVEMENTS
SUBCOMMITTEES
MEETING MINUTES

Date: 11 June 2001

Time: 6:30 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present:

Capital Improvements Subcommittee Members

Jay Shah, Chairman

Joe Franz

Dino Hernandez

Bill Harris

Tom McKinstry

Ralph Woznick

Chuck Zamek

Transportation Subcommittee Members

Debbie Harris

Christine Dion

Charlotte Burckhardt

Warren Runyan

Bob Smith

Bob Sharrard

Staff

Bob Vallina, Community Planning and Development Director

Doug Bradley, Building and Engineering Director

V. Call to Order.

Chairman Shah called the meeting to order at 6:35 p.m.

II. Presentations/Handout.

- ◆ Chairman Shah informed the subcommittee members that a representative of the Road Commission for Oakland County was invited to this meeting. Mr. Vallina stated that he had a confirmation from the Road Commission that a representative would be in attendance. Since no representative had shown up, Chairman Shah asked Mr. Bradley for a presentation.

Mr. Bradley discussed how the Road Commission for Oakland County held biannual strategic planning meetings with each community. Mr. Bradley reviewed the most recent outcomes of Waterford's planning meeting with the Road Commission.

- ◆ The following information regarding the most recent Waterford-RCOC strategic planning meeting was provided:
 - All long-range RCOC strategic priorities are in a 25-year plan.
 - Widening of Hatchery Road from Crescent Lk. Road. to Frembes was discussed. Tri-party funding is needed. Waterford must agree to increase funding.
 - The realigning of Williams Lk. Road at Airport Road. is included in the long-range strategic priorities.
 - Current information on the Williams Lake Road/M-59 intersection was given. This intersection will be straightened out. The one year preliminary engineering is complete. The process should be complete within a year and a half to two years.
 - Telegraph Road is in the process of being extended to Walton Boulevard.
 - A new bridge on Silver Lake Road has been approved.

III. Discussions.

- ◆ Flooding on Cass Lake Road between Elizabeth Lake Road and M-59 was discussed. This is the Drain Commission's problem.
- ◆ The pavement of Hospital Road was discussed due to safety issues. It is important that our emergency vehicles have access.
- ◆ The widening of Pontiac Lake Road was discussed.
- ◆ Under the "Strategic Planning Meeting", numbers 1, 3, and 9 are already completed. Numbers 2, 4, 5, and 8 are currently in the process of being completed. The remaining items are the roads that need to be prioritized. A meeting will be scheduled in two weeks to go over this.
- ◆ Many of the committee members expressed a desire to see a long-term goal of constructing an extension of Williams Lake Road from where the newly realigned section of Williams Lake Road will end at Gale Road north through the property formerly used as the landfill, connecting with Nelsey Road. This would give motorists a straight shot from the south of the Township to the north. Discussion ensued on the practical and financial difficulties that exist in trying to extend a road through DNR land and over land where the former landfill now sits. However, it was again stressed that nothing will ever be done if we don't express our long-term goals.
- ◆ The desirability of creating two dead-end roads out of the current Warren Drive was discussed. It was explained that the northern section of Warren Drive that connects with Dixie Highway is zoned industrial and used for that purpose. The southern section that connects with Frembes Road is zoned residential and is a long-standing close-knit neighborhood. However, in past master plans, the property along the whole road was planned for industrial because of its proximity to the railroad tracks. The neighbors in the residential section have expressed their desire to remain a residential neighborhood and eliminate or reduce the amount of industrial vehicles that travel through their neighborhood to get to the northern section of Warren Drive. Mr. Vallina explained that he has talked with the Road Commission and it is feasible to create two separate roads, one industrial with access off of Dixie Highway and the other residential with access off of Frembes. Cul de sacs for each new road would be created along the dividing line of the current industrial and residential zones. Subcommittee members expressed support

for this road improvement concept. They also supported that this area be looked at during the future land use phase of the master plan process.

IV. Tasks.

Discuss prioritization of remaining road issues with the joint committee. A committee meeting will be scheduled in two weeks to go over this.

V. Next Meeting.

The next meeting will again be a joint meeting and has been established for 25 June 2001, 6:00 p.m., in the Third Floor Conference Room, Township Hall. Staff will again contact RCOC and MDOT and request that they send representatives to this meeting.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
JOINT
CAPITAL IMPROVEMENTS, PUBLIC SAFETY, & MUNICIPAL SERVICES
AND
TRANSPORTATION & COMMERCIAL CORRIDOR IMPROVEMENTS
SUBCOMMITTEES
MEETING MINUTES

Date: 25 June 2001
Time: 6:30 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present:

Capital Improvements Subcommittee Members

Joe Franz
Bill Harris
Ralph Woznick

Transportation Subcommittee Members

Debbie Harris
Christine Dion
Charlotte Burckhardt
Warren Runyan
Andy Andre

Staff

Bob Vallina, Community Planning and Development Director
Doug Bradley, Building and Engineering Director

Consultants

Steven Hayward, HNTB
Allen Proctor, HNTB

Guests

Mathew Gaberty, Transportation Planner, Road Commission for Oakland County
Bob DeCourt, Traffic Improvement Association
Iris Carey, citizen

I. Discussions.

Mathew Gaberty, Transportation Planner for Oakland County Road Commission, opened the meeting by accepting questions regarding road conditions in Waterford Township. He emphasized the fact that we need to consider the long term outcome of road improvements. Decisions should be made based on the Township's immediate needs and

also the needs ten and twenty years from now. Mr. Gaberty stated that estimated County road needs is approximately \$1.7 billion dollars. He also indicated that many of Waterford's roads are included in the Road Commission's Master Future Right-of-Way Plan, which plans for 120 feet of road right-of-way. The minimum right-of-way width is 66 feet. Waterford has adopted the RCOC Master Future Right-of-Way Plan and works to ensure that setbacks for new developments are taken from the future right-of-way line. The widening of roads will be easier due to Waterford's good judgment in the past and planning for the maximum width of 120 feet of roadway.

The possible extension of Williams Lake Road north to Nelsey Road and diverting it from Gale Road was brought up by Deborah Harris. She suggested a route along the left edge of the Waterford map from Gale Road to Nelsey Road. Mr. Gaberty stated that the problem is, there is currently a landfill and state land in this area, causing new road construction to be difficult financially.

The possibility of adding right hand turn lanes where they were needed instead of widening the entire road to minimize the expense of road improvements, was suggested by Christine Dion. Mr. Gaberty stated that the problem with this is the possible future need of widened roads and that he would personally prefer widening versus adding right-hand turn lanes.

Paving the remaining unpaved section of Lochaven Road was discussed. The subcommittee members stated that they believe this should be a priority. Mr. Gaberty stated that paving this section would cost as much as paving the entire rest of the road because of the existing unstable soil conditions in the unpaved section.

Mr. Gaberty also pointed out these issues:

- "NIMBY" Stands for Not In My Back Yard. We will run into problems with homeowners because of this attitude.
- Mass Transit is not cost effective for Waterford. It does not pay for itself and Mr. Gaberty believes that it will not be utilized.
- We should use the planner's approach when presenting priorities to the Road Commission by using markers and listing potential problems.

Mr. Bob DeCorte of the Transportation Improvement Association recommended:

- Look at the "big picture" instead of individual intersections.
- Work with surrounding townships to see their traffic flows and new developments and how it affects us.
- Require traffic impact statements from developers.
- Look at where the traffic problem is and what is causing the problem.
- Create a traffic safety committee, dedicated to looking at street signs, lights, turn lanes, etc.
- Work on a 2-year plan as well as a 10-30 year plan. The 2 year will coincide with the RCOC update when they come to the township.

- Close curb cuts. Curb cut permits should be required.

The Road Commission has the jurisdiction but the township has the power. The Road Commission will not do anything unless the township supports it.

Steve Hayward (HNTB) suggested we identify our goals by listing them. Then try to find links between them to make our plan come together.

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II. Next Meeting.

The next Capital Improvements meeting is scheduled for July 9, 2001 at 6:30 p.m. in the Township Hall Conference Room 3-1.

The next Transportation meeting is scheduled for July 16, 2001 at 6:30 p.m. in the Township Hall Conference Room 3-1.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
CAPITAL IMPROVEMENTS, PUBLIC SAFETY, AND MUNICIPAL SERVICES
SUBCOMMITTEE
MEETING MINUTES**

Date: 9 July 2001

Time: 6:30 p.m.

Place: Waterford Township Hall Conference Room 3-1

**Present: Bob Vallina, Community Planning and Development Director
Doug Bradley, Building and Engineering Director
Bill Harris
Tom McKinstry
Ralph Woznick
Chuck Zamek
Leslie Kettren, HNTB**

I. Call to Order.

The meeting was called to order at 6:30 p.m.

II. Discussions.

Mr. Bradley discussed the history of the construction of the Township's existing bikepath system. Mr. Bradley provided the bikepath master plan map to the members and explained how the Township once had a millage for the construction of the bikepath system. That millage was allowed to expire by the Township in the mid-1980s. Mr. Bradley also discussed the development of the sidewalk systems in the Township and the disparity in age and condition. Mr. Bradley explained that there are some very old sidewalk in the Township, much of which is beyond its useful life. In particular, he used the sidewalk in Elizabeth Lake Estates as an example. Both Mr. Bradley and Mr. Vallina discussed the current requirements in the zoning ordinance for developers to install sidewalk as part of any new development. Mr. Bradley stated that the primary problem for completing the bikepath system, expanding sidewalk in existing neighborhoods, and improving existing sidewalk is that of funding. Mr. Bradley stated that he provided the Township Board with a recommendation for resolving the funding issue back in 1999. The Township Board did not act at that time. Mr. Bradley also explained the 1996 Michigan Supreme Court (Sidewalk) Township responsibility ruling and the difficulties the Township faces in trying to avoid legal liability with the repair and maintenance of existing bikepath and sidewalk. Mr. Vallina explained the role that the Township's CDBG funding has played in funding construction of qualified neighborhood sidewalks. Both Mr. Bradley and Mr. Vallina stressed the importance of finding a suitable and stable funding source for sidewalk/bikepath improvements and maintenance.

The subcommittee members discussed the information provided by Mr. Bradley. It was decided that:

- The Township should explore using volunteers to create a sidewalk/bikepath inventory.
- Supported the establishment of a sidewalk/bikepath funding mechanism, such as a millage or special assessment district, as a goal of the master plan.
- Emphasized strong support for establishing an ongoing sidewalk/bikepath maintenance program.
- Suggested using non-motorized pathways in the master plan to describe the Township's sidewalks and bikepaths.
- Supports continuing the existing zoning ordinance language for requiring installation of non-motorized pathways as part of new developments.

III. Next Meeting.

July 23, 2001 in the Township Hall Conference Room 3-1. Guest Speaker will be Township Facilities and Operations Superintendent Keith Wheeler.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
CAPITAL IMPROVEMENTS, PUBLIC SAFETY, AND MUNICIPAL SERVICES
SUBCOMMITTEE
MEETING MINUTES

Date: 23 July 2001
Time: 6:30 p.m.
Place: Waterford Township Hall First Floor Lounge

Present: Bob Vallina, Community Planning and Development Director
Doug Bradley, Building and Engineering Director
Joe Franz
Bill Harris
Tom McKinstry
John Pritchard
Ralph Woznick
Chuck Zamek

Guests

Keith Wheeler, Facilities and Operations Supervisor
Rob Seeterlin, Fiscal and Human Resources Director

I. Welcome.

New member John Pritchard was introduced to the committee.

II. Presentations.

Keith Wheeler, Township Facilities and Operations (F & O) Superintendent, explained the functions of his department and the status of Township facilities. Twenty-six years ago, F & O had a total of 12 full time employees plus 20 CETA employees. Now there are 12 full time employees plus eight part-time summer employees. The staff level has stayed the same, while the number of buildings and facilities has increased. Twenty-six years ago, the Township government operated out of four buildings, the old town hall, the old water & sewer building, the F & O building, and the original library building. This has now grown to ten buildings, the current town hall, the 51st district courthouse, the main library, the new fire department building, the new police department building under construction, the new DPW building, the current police department building, the F & O building, the Andersonville church building, and the CAI building. The maintenance of the last two buildings are done by the Parks & Rec department. There are five cemeteries that handle approximately 75 to 100 burials per year. The F & O staff are also responsible for vehicle fleet maintenance.

Mr. Wheeler stated that the main focus of the Township's capital needs in the next ten to twenty years is maintenance. For instance, the Township compost site has a \$50,000 wood chipper that is expensive to maintain. Before the current police department building can be used for the parks & recreation department, the building needs a new roof; the estimated cost is \$2,000 to \$3,000. It also needs new windows. The old boiler should be adequate, but funds should be set aside in the event that it fails. Mr. Wheeler stated his opinion that the two most important capital improvement goals during the next 20 years is to increase storage facilities for Township records and equipment, and to ensure that enough funding is provided to perform preventative maintenance on all Township buildings and roofs, as well as the heating/cooling/plumbing/electrical systems, ensuring that no department suffers any loss of capacity for serving Waterford citizens.

Subcommittee members then went into detailed discussion with Mr. Wheeler on specific facilities of the Township. They asked about if a Community Center is built; Mr. Wheeler stated that would be an additional facility to maintain if it is built.

The subcommittee members discussed the information provided by Mr. Wheeler. It was decided that:

- Supported the focus on maintaining the existing Township facilities and services as a goal of the master plan.
- Emphasized strong support for long-term preventative maintenance program.
- Emphasized strong support for adequate Township staffing to provide preventative maintenance services.

III. Next Meetings.

The next meeting was set for August 13, 2001 at 6:30 p.m. in the new Fire Department building conference room. The topic will be storm drainage and a guest speaker from the Oakland County Drain Commissioner's office will be in attendance.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
CAPITAL IMPROVEMENTS, PUBLIC SAFETY, AND MUNICIPAL SERVICES
SUBCOMMITTEE
MEETING MINUTES

Date: 13 August 2001

Time: 6:30 p.m.

Place: Waterford Township Fire Department Conference Room

Present: Jay Shah, Chairman

Bob Vallina, Community Planning and Development Director

Doug Bradley, Building and Engineering Director

Bill Harris

Dino Hernandez

Ralph Woznick

Chuck Zamek

Mike Howell, HNTB

Guests

Joe Kozma, Oakland County Drain Commissioner's Office

Dave Potter, Spalding DeDecker and Associates

Terry Broemer, Johnson and Anderson, Inc.

Ole Anderson, Johnson and Anderson, Inc.

I. Welcome.

Chairman Shah called the meeting to order at 6:30 p.m. and introduced tonight's guest speaker, Mr. Joe Kozma from the Oakland County Drain Commissioner's Office. Chairman Shah also introduced Dave Potter from Spalding DeDecker and Terry Broemer & Ole Anderson from Johnson and Anderson. Both firms are consulting engineering firms.

II. Presentations.

Mr. Kozma reviewed the storm drainage systems that exist in Waterford. He explained that the Drain Commissioner's office does not oversee all drainage systems in the Township. The Road Commission for Oakland County oversees the drainage systems that are related to the road network. In addition, there are private drains. It is difficult to assess the effectiveness of Township-wide storm drainage capacity when there is such a fragmented system. There is not enough funding under the current Drain Commissioner system to create a unified Township-wide storm drain system.

The subcommittee members discussed the information provided by Mr. Kozma. It was decided that:

- Supported the funding and development of a Township-wide master storm drainage study as a goal of the new master plan.
- Supported the investigation of the feasibility of creating and funding a unified township drain authority.
- Emphasized that the maintenance and control of road drainage is included in such a drain authority.
- Emphasized that storm drainage impact be thoroughly analyzed during property development and redevelopment.

III. Next Meetings.

The next meeting was set for August 27, 2001 at 6:30 p.m. in the Township Hall second floor conference room. This will be the final subcommittee meeting. HNTB will conduct an exercise with the subcommittee members to determine the goals and objectives that the subcommittee members want to forward to the Master Plan Committee of the Whole for consideration as master plan goals.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
CAPITAL IMPROVEMENTS, PUBLIC SAFETY, AND MUNICIPAL SERVICES
SUBCOMMITTEE
MEETING MINUTES

Date: 27 August 2001

Time: 6:30 p.m.

Place: Waterford Township Hall Second Floor Conference Room

Present: Jay Shah, Chairman

Bob Vallina, Community Planning and Development Director

Joe Franz

Bill Harris

Ralph Woznick

Mike Howell, HNTB

I. Welcome.

Chairman Shah called the meeting to order at 6:30 p.m.

II. Development of Goals and Objectives

Mr. Howell explained that he would facilitate tonight's subcommittee brainstorming session. The goal of the exercise is to come up with a list of capital improvement and municipal service goals and objectives that everyone in attendance is comfortable in sending to the Committee of the Whole. Mr. Howell conducted the exercise, with the following goals and objectives recommended by the subcommittee to be included in the Township's new master plan as the result of its research and findings.

GOAL: Maintain Existing Level of Service for Fire Protection

- Continue the maintenance and update of Township fire hydrants
- Ensure effective fire-fighting coverage of Township fire hydrants
- Maintain existing level of EMS service for Township citizens
- Plan for future expansion of EMS needs

GOAL: Maintain and Improve Existing Level of Water Service Lines

- Continue the maintenance and update of water lines
- Ensure and enforce the installation of water line loop systems
- Continue to ensure proper water pressure to hydrants
- Develop a preventative water line maintenance and replacement schedule to be incorporated into the Township capital improvement plan

GOAL: Improve the Storm Drainage System

- Fund and conduct a master storm drainage plan
- Investigate the feasibility of creating and funding a unified township drain authority
- Ensure the inclusion of maintenance and control of road drainage
- Ensure that the impact of all new development and redevelopment on the township's storm drainage system is properly evaluated and minimized

GOAL: Improve the Township Roads

- Investigate stronger Township involvement and participation in the maintenance and improvements of the County road system in Waterford Township
- Ensure that the level of funding for DPW staffing, equipment, and resources is sufficient to properly handle any additional duties related to an expanded Township role in the maintenance and improvement of the Township road system
- Develop an annual Township roads capital needs review process

GOAL: Expand and Improve Non-Motorized Paths (Sidewalks, Bike Paths, and Nature Trails)

- Fund and connect a master non-motorized path construction and maintenance plan
- Construct connections between existing segments of non-motorized paths
- Maintain and improve existing segments of non-motorized paths

GOAL: Improve and Enhance the Township's Utility Infrastructure

- Install all overhead utility wires underground
- Ensure that utility companies possess the capacity to provide full and uninterrupted service for proposed land uses
- Plan for Township use of future utility technology and installation of the necessary infrastructure systems

GOAL: Provide a Preventative Maintenance Schedule for All Township Buildings and Service Systems

- Ensure that all Township buildings are capable of safely and effectively providing the necessary surroundings for Township staff to provide services to Township citizens
- Develop a preventative maintenance schedule for Township buildings to be incorporated into the Township capital improvement plan
- Develop an annual Township buildings capital and maintenance needs review process

GOAL: Maintain Existing Level of Service for All Current Township Services

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APPENDIX C: ECONOMIC DEVELOPMENT SUBCOMMITTEE MEETING MINUTES

MAY 3, 2001 MEETING MINUTES-----PAGES C-2 THROUGH C-4
MAY 17, 2001 MEETING MINUTES ----- PAGE C-5
JUNE 7, 2001 MEETING MINUTES ----- PAGE C-6
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**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
ECONOMIC DEVELOPMENT SUBCOMMITTEE
MEETING MINUTES**

Date: 3 May 2001
Time: 6:30 p.m.
Place: Waterford Township Hall Conference Room 2-1

Present: Chairman Scott Hudson
Judy Kennedy
Scott Dougherty
Ted Taylor
Shawn David
Perry Bowman
Mark Kellenberger, Planner II

I. Call to Order.

Chairman Hudson opened the meeting and asked everyone present to introduce themselves. The members of the group introduced themselves and revealed their interest in the Economic Development Sub-committee. Mr. Kellenberger passed out the meeting agenda, a draft mission statement, and a list of discussion topics for consideration.

II. Discussions.

The draft mission statement was read and there was a consensus that the statement adequately covered the goals of the committee. The subcommittee members discussed the mission statement and that was also accepted. Discussion took place regarding what economic development is and what it means to Waterford Township. Economic development can be defined as tools and resources that make it attractive for businesses to locate and/or remain in Waterford Township. The group presented concerns over the amount of vacant store fronts, abandoned building and underutilized properties. Also, discussed was the appearance of Waterford Township and the connotation that is connected to it for the thousands of people who drive through the Township everyday. Finally, the group started a discussion of tools that are commonly use to spur economic development. Staff presented a number of different economic development tools such as, brownfield redevelopment authorities, downtown development authorities, empowerment zones, smart zones, tax abatements, and business incubators. This is not an exhaustive list by any means

III. Next Meeting.

The next meeting will be May 17, 2001, at 6:30 p.m. in the second floor conference room.

ECONOMIC DEVELOPMENT MASTER PLAN SUB-COMMITTEE MISSION STATEMENT

The Economic Development Master Plan Subcommittee will conduct an assessment of current economic conditions in Waterford Township, investigate strategies for stimulating economic development, examine concepts geared toward attracting new businesses while retaining the existing commercial base, and creating an environment that is conducive to sustaining desirable business activities. These efforts will result in the culmination of ideas that are assembled into a report on the subcommittee's findings and presented to the Committee of the Whole.

ECONOMIC DEVELOPMENT MASTER PLAN SUB-COMMITTEE TOPICS FOR DISCUSSION

- **Economic Development – Defined (General)**
- **Economic Development – Defined (Waterford Township)**
- **Discuss the existing economic climate in Waterford Township.**
- **What is the desired business climate?**
- **Discuss various economic development tools.**
- **Investigate innovative business retention and attraction techniques.**
- **How can Waterford Township aid existing businesses?**
- **How can Waterford Township stimulate economic growth and development?**
- **How can Waterford Township sustain existing and future business activities?**

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
ECONOMIC DEVELOPMENT SUBCOMMITTEE
MEETING MINUTES**

Date: 17 May 2001

Time: 5:30 p.m.

Place: Waterford Township Hall Auditorium and Conference Room 2-1

Present: Chairman Scott Hudson
Judy Kennedy
Scott Dougherty
Ted Taylor
Shawn David
Perry Bowman
Mark Kellenberger, Planner II

I. Call to Order.

The group attended the public presentation of the Waterford Township Walk-ability Study by Beckett and Raeder to the Waterford Township Economic Development Corporation.

II. Discussions.

The group then adjourned to the second floor conference room and began to discuss brownfields. Brownfields are dilapidated properties that contain contaminants and are unattractive for new business to use or redevelop. The Brownfield Redevelopment Financing Act of 1996 gave governments the ability to establish redevelopment authorities to address these problems and to utilize economic development tools such as tax incentives, grant monies that can be used for clean-up activities, and tax capture (when structured as tax increment financing). Staff presented the group with some reference material for the group to familiarize themselves with the idea of Brownfield Redevelopment Authorities. Chairman Hudson stated that the City of Pontiac was holding a public hearing regarding two brownfield sites this evening and that it may be beneficial for members of the group to attend.

III. Next Meeting.

The next meeting will be June 7, 2001. The meeting was adjourned and some members of the group attended the Pontiac City Council meeting.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

ECONOMIC DEVELOPMENT SUBCOMMITTEE MEETING MINUTES

Date: 7 June 2001

Time: 6:30 p.m.

Place: Waterford Township Hall Conference Room 2-1

Present: Chairman Scott Hudson
Judy Kennedy
Scott Dougherty
Ted Taylor
Shawn David
Perry Bowman
Mark Kellenberger, Planner II

I. Call to Order.

Chairman Hudson opened the meeting.

II. Discussions.

Staff informed the group that HNTB (planning consultants) was going to be conducting a public survey and wanted seven (7) questions from each sub-committee to choose from and include into the survey. The group developed seven (7) questions for the public survey to be conducted in conjunction with the Master Plan Study. The questions are as follows:

- Should Waterford Township be involved in economic development activities in Waterford Township (i.e. assisting business)?
- If so, in what ways would you like to see the Township assist business?
- What type of development would you like to see more of in Waterford Township?
Residential/commercial/office/industrial
- How would you describe the economic conditions in Waterford Township?
- What type of businesses are lacking in Waterford Township?
- What type of businesses should Waterford attempt to attract?
- Should Waterford Township start a business registration program?

The group then discussed what the focus of the final product of the sub-committee should be and what type of tools should be investigated and included as part of the final report. Staff indicated that the final product that will explain the issues that we have discussed and will reveal goals and objectives that will be developed as the group continues to meet. The tools that should be investigated are limitless. Staff indicated that we will be talking about various tools, however, the job of this sub-committee is not to determine what tools the Township should incorporate, rather the group should identify whether economic development concerns exist and what the Township can do to resolve these issues

III. Next Meeting.

Chairman Hudson announced that he had arranged for Maureen Kraus, Senior Business Development Representative, to attend the groups next meeting, on June 27, 2001, give a brief presentation, and answer questions from the group. The meeting adjourned.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

ECONOMIC DEVELOPMENT SUBCOMMITTEE MEETING MINUTES

Date: 27 June 2001

Time: 6:30 p.m.

Place: Waterford Township Hall Conference Room 2-1

Present: Chairman Scott Hudson
Judy Kennedy
Scott Dougherty
Ted Taylor
Shawn David
Perry Bowman
Mark Kellenberger, Planner II

Guests

Maureen Donohue Krauss (Oakland County)

I. Call to Order.

Chairman Hudson called the meeting to order and introduced Maureen Donohue Krauss, Senior Business Development Representative for Oakland County Planning and Economic Development.

II. Discussions.

Mrs. Krauss discussed the economic development activities at the County level and provided some background of what her job entails. She travels the world marketing Oakland County as an attractive area for businesses to locate. There are several other aspects of economic development, Mrs. Krauss explained, and the County has a staff that is dedicated to making Oakland County the best it can be. The group then had a discussion, led by Mrs. Krauss, of tools offered by Oakland County (business attraction, business retention, small business program, financing, and export assistance) and tools that Waterford Township could establish without duplicating the efforts of the County (tax abatements, brownfield authorities, downtown development authorities, business registration, and marketing assistance). Mrs. Krauss discussed the importance of being involved in economic development groups and events and the need for the consistent application of streamlined policies and procedures that makes the community attractive to business location and expansion. The meeting concluded by Chairman Hudson asking the group to identify basic concepts that the Township should investigate. This included the development of streamlined policies and procedures, development of a business registration, creation of a Township point person, and further investigation of economic tools (listed above).

III. Next Meeting.

Chairman Hudson indicated that the next meeting of the economic development sub-committee will be at the Economic Development Corporation's (EDC) meeting on July 12, 2001 in the third floor conference room. Staff was asked to develop five (5) questions that could be directed toward the EDC. The meeting was adjourned.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

ECONOMIC DEVELOPMENT SUBCOMMITTEE MEETING MINUTES

Date: 12 July 2001

Time: 5:30 p.m.

Place: Waterford Township Hall Conference Room 3-1 and 2-1

Present: Chairman Scott Hudson
Scott Dougherty
Ted Taylor
Mark Kellenberger, Planner II

I. Call to Order.

The group attended the Economic Development Corporation meeting. The meeting was called to order by Dennis Ritter, Chairman of the Economic Development Corporation.

II. Discussions.

Staff presented the subcommittee with the list of five (5) questions. The meeting began with the EDC explaining their function. The EDC acts as a conduit for the business community. The can issue Industrial Revenue Bonds, however, the 1986 tax reform restricted the ability to issue bonds. The focal area study (located on the walls around the conference room) was a project that was funded by the EDC. Recently, Grunewald Technologies made a presentation to the EDC for consideration of a tax abatement. The EDC made a favorable recommendation to the Township Board and the Township Board granted the abatement. When asked where the biggest focus of redevelopment should be there was much discussion including M-59, Telegraph Road, and Dixie Highway, however, the consensus focused on the area immediately around Dixie Highway and Telegraph Road because of the recent road improvements in this area. The EDC and the subcommittee engaged in some conversation regarding the appropriateness of rezoning certain properties to guide or spur economic development. Both groups thought this was a good thing. When asked if the EDC should have a more active role in the economic development of the Township the answer was yes. The sub-committee asked about the rules and regulations of the EDC and when is someone available for a tax abatement or a revenue bond. The EDC indicated that there are not formal rules of the EDC regarding tax abatements because the Township Board is actually the body that approves the abatement. As far as revenue bond there are some controls defined by law. The sub-committee indicated that it has been discussed that Waterford needs to establish policies and procedures for all processes and administer them consistently. The EDC agreed that consistent policies and procedures are definitely beneficial, but was not aware that they were not currently, being enforced consistently. When asked about the formation of a Downtown Development Authority (DDA), the EDC indicated that they had not really been involved in the any discussion regarding the establishment of one in Waterford, however, they did believe it would be a good thing for Waterford

III. Next Meeting.

The group thanked the EDC for their time and reconvened to the second floor to discuss the next meeting of the sub-committee. The next meeting will be held on July 26, 2001.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

ECONOMIC DEVELOPMENT SUBCOMMITTEE MEETING MINUTES

Date: 26 July 2001

Time: 6:30 p.m.

Place: Waterford Township Hall Conference Room 2-1

Present: Scott Dougherty
Ted Taylor
Shawn David
Mark Kellenberger, Planner II

I. Call to Order.

Staff called the meeting to order.

II. Discussions.

The group was given maps of the Township and instructed to identify areas of the Township that, in their opinion, should be focused on for economic development activities and identify any economic development tools that could be used in those areas. They were instructed to look at the Township as a whole and identify large areas of concern but also to consider development of things such as road improvements, sidewalks, etc, that could spur or aid future development

III. Next Meeting.

The group set the next meeting date for August 9, 2001, and then adjourned.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

ECONOMIC DEVELOPMENT SUBCOMMITTEE MEETING MINUTES

Date: 9 August 2001

Time: 6:30 p.m.

Place: Waterford Township Hall Conference Room 2-1

Present: Chairman Scott Hudson
Judy Kennedy
Scott Dougherty
Ted Taylor
Shawn David
Mark Kellenberger, Planner II

I. Call to Order.

II. Discussions.

The group discussed the maps that they had identified areas in need of economic development and items that would help promote economic development. While there were many areas of interest the following areas and items were consistently identified by members of the group:

- The areas at the entrances into the community (Union Lake/Cooley Lake/Williams Lake, M-59/Williams Lake, M-59/ Telegraph, Telegraph/Dixie, Walton/Silver Lake, Dixie Highway/Andersonville)
- The area around the Airport (not just abutting properties)
- Allow mixed use developments (commercial and residential)
- Summit Place Mall
- Individual areas of redevelopment (Andersonville/ Airport area, Elizabeth Lake Road east and west of M-59, Union Lake Area)
- Strip redevelopment along M-59, Telegraph Road and Dixie Highway.
- Williams Lake Road Industrial Properties
- Industrial zoning imposing on residential property
- Lack of buffer between commercial and residential property
- Under-utilized industrial properties (industrially zoned property being used for commercial or office uses)

Other items were discussed and staff took note of them and indicated that they would be compiled into goals and objectives that would be discussed at the next meeting

III. Next Meeting.

The next meeting will be August 23, 2001, in the second floor conference room. This will be the groups last meeting.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

ECONOMIC DEVELOPMENT SUBCOMMITTEE MEETING MINUTES

Date: 23 August 2001

Time: 6:30 p.m.

Place: Waterford Township Hall Conference Room 2-1

Present: Chairman Scott Hudson
Judy Kennedy
Scott Dougherty
Ted Taylor
Shawn David
Mark Kellenberger, Planner II

I. Call to Order.

Staff called the meeting to order. Mike Howell was present from HNTB to observe the sub-committee's finalized goals and objectives. The following is the final narrative and goals and objectives of the economic development sub-committee's meetings.

II. Discussions.

What does economic development have to do with the master plan process? Everything! In developing a master plan, a community must investigate issues regarding land use, zoning, infrastructure, economics, demographics, education, recreation, environment, and various other aspects of the community's makeup. Each aspect must be looked at individually but related to the others to obtain the overall goal of a community that is sustainable and attractive. As part of the Waterford Township Master Plan process, we have been charged with the responsibility of examining the economic development potential of Waterford Township. In discussing the various issues relating to the master plan, we have discovered that all aspects of the community contribute to the overall economic development of the Township. Proper zoning and land use determine what businesses are attracted to Waterford Township and where they can locate. The quality of life issues (recreation, open space, environment, etc...) can attract potential members of the workforce and businesses to live and conduct business within the Township. Therefore, we set out to discuss issues that affect business and the overall community and to identify tools that will assist Waterford Township in providing an attractive environment for businesses and citizens alike.

Through our discussions, we have found that one thing that all communities must embrace is the concept of consistent policies and procedures. When business representatives approach Waterford Township they must be assured of the procedures that they must follow and that they will be consistently applied. When inconsistencies appear within the procedural steps, it is no longer attractive for business to work with the community and it becomes an adversarial relationship between the business community and the Township.

Several economic tools exist that should be investigated by the Township to spur smart, sustainable economic development within Waterford Township. One very popular economic development tool is the Brownfield Redevelopment Authority. This tool provides incentives to developers for redevelopment efforts on properties that are unattractive due to contamination levels. This has proven to be a very effective tool in many Michigan communities.

Another tool that has been widely used is the Downtown Development Authorities (DDA). Some of the functions of a DDA include additional taxes to be levied, bonds to be issued, and tax dollars to be captured and used for improvements within the DDA boundary. This is a tool that must be coordinated with and approved by both state and county agencies prior to its development and must also be coordinated with any taxing authority within the DDA boundary. The communities that have used them have been able to do extensive redevelopment projects for traditional downtown and strip development.

Tax Increment Financing (TIF) is an economic development tool that allows a local government to freeze the tax base within a specific development area then uses the revenues generated by reassessment or new development to finance improvements within the district.

Last but definitely not least, probably the most important tool for Waterford Township to consider before getting involved in actively pursuing any economic development efforts, is to consider creating an economic development coordinator. This can be done in several ways to accommodate the resources of the community. One way is to create a new position that would be responsible for all economic development activities. This has its advantages and disadvantages. It is good because that one person can devote all of their time to economic development activities. The negative, if you want to perceive it that way, is that it involves the creation of a new position, which results in the expenditure of money. An alternative to creating a new position would be to create new duties for an existing position and steer the economic development projects through one channel to promote consistency with the department.

Many other things influence economic development such as communication facilities that will allow business to send and receive information safely and efficiently and transportation system to allow the members of the workforce to acquire jobs that they may not otherwise be able to consider. Other tools that could be investigated and utilized by Waterford Township include:

- Business registry

- Empowerment zones
- Tax abatements
- Business incubators
- Chamber of Commerce
- Smart zones
- Automation Alley

GOAL: Create to an environment that is conducive to the attraction, retention and expansion of businesses.

- Create an economic development coordinator
- OR
- Create duties assigned to existing position to facilitate economic development activities
 - Develop consistent and friendly policies and procedures
 - Provide safe, high speed internet access and communication systems
 - Inventory and analyze the existing economic conditions in Waterford Township
 - Identify areas within the Township to concentrate economic development efforts
 - Ensure consistent zoning and land use

GOAL: Market Waterford Township as a destination for business activities.

- Create an economic development coordinator
- OR
- Create duties assigned to existing position to facilitate economic development activities
 - Create a business registration program
 - Develop a video that showcases the resources of Waterford Township
 - Investigate all economic development tools available to Waterford Township
 - Work with Oakland County Economic Development and the State of Michigan Economic Development
 - Work with the Oakland County International Airport
 - Identify areas within the Township to concentrate economic development efforts
 - Ensure consistent zoning and land use

GOAL: Identify partnership (public/private public/public) possibilities within the scope of economic development

- Adjacent communities
- Oakland County
- Waterford Business Association
- Lakes Area Chamber of Commerce
- Summit Place Mall
- Oakland County International Airport
- State of Michigan

- Various private industry

GOAL: Educate and inform all Township Boards, Commissions, Committees and Authorities on economic development tools and efforts.

- Provide detailed information sheets for the various economic tools available to Waterford Township.
- Attend seminars and conferences to gain information regarding economic development
- Create or assemble an economic development point person to address the economic development strategies for Waterford Township.

III. Next Meeting.

Since this is the last official meeting of the sub-committee there was no meeting date set other than the next meeting of the committee as a whole. All the members of the sub-committee were thanked for their time and effort



APPENDIX D: EDUCATION AND PUBLIC SERVICES SUBCOMMITTEE MEETING MINUTES

MAY 9, 2001 MEETING MINUTES	-----PAGES D-2 THROUGH D-4
MAY 23, 2001 MEETING MINUTES	----- PAGE D-5
JUNE 6, 2001 MEETING MINUTES	----- PAGE D-6
JUNE 20, 2001 MEETING MINUTES	----- PAGE D-7
JULY 11, 2001 MEETING MINUTES	----- PAGE D-8
JULY 25, 2001 MEETING MINUTES	----- PAGES D-9 THROUGH D-10
AUGUST 8, 2001 MEETING MINUTES	----- PAGES D-11 THROUGH D-12
AUGUST 22, 2001 MEETING MINUTES	----- PAGES D-13 THROUGH D-15

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

EDUCATION AND PUBLIC SERVICES SUBCOMMITTEE MEETING MINUTES

Date: 9 May 2001

Time: 6:30 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present: Chairperson Ellie Pinner

Nancy Leipold

Linda Bellehumeur

Mark Kellenberger, Planner II

I. Call to Order.

Chairperson Pinner called the meeting to order and asked the members of the group to introduce themselves and give a brief background of their interest in the Master Plan process.

II. Discussions.

Staff presented copies of the agenda, discussion topics and a draft mission statement to the members of the group. The group discussed the mission statement and then began identifying major stakeholders in the areas of education and public services. These groups included the school district, historic district, park and recreation, various service clubs, library, cultural council, youth coalition, various churches, media network, ministerial, M.A.D.D., police, fire, and lakeland players. The group recognized that this was not an exhaustive list, however, it would provide a good basis for discussion. Some members of the group indicated that they have some contacts and would discuss the topic of the subcommittee with the different groups.

The group discussed creating a survey to send to various groups. The group then devised four preliminary questions that could be asked of all major groups to identify their role within the community. These included:

- What services does your organization provide?
- What aid do you need?
- What are your future plans?
- What deficiencies exist in public services?

The group discussed these questions briefly and determined that they would discuss them more at future meetings.

III. Next Meeting.

It was decided that the next meeting would be May 23, 2001 at 5:30 in the third floor conference room. The sub-committee decided that meetings at 5:30 are easier for people to attend and could be more productive. Therefore, it was decided that 5:30 would be the normal meeting time of the group.

EDUCATION AND PUBLIC SERVICE MASTER PLAN SUBCOMMITTEE MISSION STATEMENT

The Education and Public Service Master Plan Subcommittee will identify, inventory and assess the existing educational resources and public services available within Waterford Township; focus on the prominent services and features within the system; identify any deficiencies or shortcomings that may exist; provide an analysis of the existing systems; offer recommendations to eliminate any identified deficiencies and provide new and expanded services and educational opportunities; and prepare a report on the subcommittee's findings for review by the Master Plan Citizens Committee of the Whole.

EDUCATION AND PUBLIC SERVICE SUB-COMMITTEE TOPICS FOR DISCUSSION

Identify existing educational facilities

Inventory and assess existing educational programs

- special education
- adult education
- specialized education and job training

Identify prominent features within the educational system

Identify deficiencies within the educational system

Identify and evaluate existing public services

- library
- recreational facilities
- hospitals
- churches

Identify prominent public services

Identify shortcomings of the public service system

Provide recommendations to alleviate any deficiencies or shortcomings within the educational and public service system

**CHARTER TOWNSHIP OF WATERFORD MASTER
PLAN UPDATE
EDUCATION AND PUBLIC SERVICES SUBCOMMITTEE
MEETING MINUTES**

Date: 23 May 2001

Time: 5:30 p.m.

Place: Waterford Township Hall Conference Room 3-2

Present: Chairperson Ellie Pinner

Nancy Leipold

Linda Bellehumeur

Mark Kellenberger, Planner II

Chris Shoemaker

Pat Birchfield

Guests

Richard Cartmill (Director of Parks and Recreation)

I. Call to Order.

Chairperson Pinner called the meeting to order and introduced Richard Cartmill, Director of the Waterford Township Parks and Recreation Department.

II. Discussions.

Mr. Cartmill, Director of the Parks and Recreation Department for Waterford Township, gave a presentation to the group. The topics of discussion included the need for a community recreation center, providing services to Waterford's senior population, the quality of life in Waterford, other organizations involved in service activities, the state of Waterford's parks, and the connection with the Waterford School District. The group identified greatly with the need for a community center and the need to provide services to our seniors.

III. Next Meeting.

The group set the next meeting date for June 6, 2001, and staff announced that the speaker for that meeting would be Mr. Tom Wiseman, Director of Business Services for the Waterford School District.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

EDUCATION AND PUBLIC SERVICES SUBCOMMITTEE MEETING MINUTES

Date: 6 June, 2001

Time: 5:30 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present: Chairperson Ellie Pinner

Nancy Leipold

Linda Bellehumeur

Mark Kellenberger, Planner II

Bette Hartmann

I. Call to Order.

Chairperson Pinner called the meeting to order and suggested that we wait for Mr. Wiseman to arrive.

II. Discussions.

The group was prepared to have Mr. Tom Wiseman (Waterford School District) give a brief presentation regarding the current school and education system and future plans, however, Mr. Wiseman was not in attendance. The group discussed various issues relating to the public services of the Township and the how they relate to the school district. Staff indicated that he would continue to try and reach Mr. Wiseman.

III. Next Meeting.

The next meeting is scheduled for June 20, 2001.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

EDUCATION AND PUBLIC SERVICES SUBCOMMITTEE MEETING MINUTES

Date: 20 June 2001

Time: 5:30 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present: Chairperson Ellie Pinner

Nancy Leipold

Linda Bellehumeur

Bob Vallina, Community Planning and Development Director

Dennis Pittman

Chris Shoemaker

I. Call to Order.

Chairperson Pinner called the meeting to order and introduced Mr. Robert W. Vallina, Director of Community Planning and Development. Mr. Vallina explained that Mr. Kellenberger was unable to attend due to some personal matters, however, he would be back for the next meeting.

II. Discussions.

Mr. Wiseman from the Waterford Township was scheduled to be in attendance to discuss items relating to the School District, however, Mr. Wiseman was not in attendance. The group discussed several issues relating to the school including the relationship between school and township and the school's community role beyond student education.

Linda Bellehumeur indicated that she had met with Deputy Chief Jehle and discussed some of the master plan topics with him. Deputy Chief Jehle had indicated to Ms. Bellehumeur that traffic safety is obviously very important to the Police Department. He would like to see a reduction in the speed limit on M-59.

The group concluded the meeting with some discussion about the survey Mr. Kellenberger was preparing.

III. Next Meeting.

The next meeting will be July 11, 2001.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

EDUCATION AND PUBLIC SERVICES SUBCOMMITTEE MEETING MINUTES

Date: 11 July 2001
Time: 5:30 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Chairperson Ellie Pinner
Nancy Leipold
Linda Bellehumeur
Mark Kellenberger, Planner II
Dennis Pittman
Chris Shoemaker
Pat Birchfield

I. Call to Order.

The meeting was called to order by Chairperson Pinner and she introduced Nancy Smith, Director of the Waterford Township Library.

II. Discussions.

Nancy Smith, the Director of the Waterford Township Library, gave an excellent presentation to the group. Nancy had indicated that the school has six mini-branches including the Inn at Cass Lake, Canterbury, Fox Manor, Whispering Woods, Lakeland Place, and the Senior Center. These branches are all staff by residents not by Township Employees. These mini-branches are in addition to the main library (next to Town Hall) and the branch at the CAI (Williams Lake Road). Nancy had indicated that much assistance is provided to the library by the Friends of the Library. She had also indicated the desire to have to part-time people dedicated to operating a bookmobile.

The Township Board of Trustees also serves as the Library Board. In 1992, the Township approved one (1) mil for library improvements. That bond will be up for renewal in August of 2002. The library would like to expand with an 8,000 to 10,000 sq. ft. addition. The existing building is approximately 25,000 sq. ft. Twenty-one thousand (21,000) square feet is occupied by the library and 4,000 sq. ft. is occupied by the Parks and Rec. Department. In addition to the public library, Nancy and her staff also operate the school library system. There are no libraries at Manley and Fourtowns and Mott High School is in need of a new library.

The group was very appreciative of the information that Nancy provided and thanked her for her time.

III. Next Meeting.

The date and time for the next meeting was discussed. It will be the 25th and the Boy Scouts will give a presentation.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

EDUCATION AND PUBLIC SERVICES SUBCOMMITTEE MEETING MINUTES

Date: 25 July 2001

Time: 5:30 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present: Chairperson Ellie Pinner

Nancy Leipold

Linda Bellehumeur

Mark Kellenberger, Planner II

Dennis Pittman

Chris Shoemaker

Pat Birchfield

I. Call to Order.

Chairperson Ellie Pinner called the meeting to order and indicated that representatives from the Boy Scouts were present and would give a presentation to the group.

II. Discussions.

Three representatives from the Boy Scout organization were present. Jessica Lindsey is the District Executive and she was accompanied by Brian Brooks, and Dave Eyl. The three of them gave a tremendous amount of information regarding the Boy Scouts. The organization is divided into three groups:

- 6-11 year olds Cub Scouts
- 11-18 year olds Boy Scouts
- 14-21 year olds Venturing

The Venturing group is co-ed and is not as structured as the other two groups. Venturing is organized as more of a specialization and often involves more adventurous activities, such as, rock climbing. The organization also has a program called Explorer Posts. This provides career exploration through job shadowing and mentoring. This program often involves police, fire and medical fields. They have also involved the Cultural Council for music and dance, and the airport for aeronautics.

As with most community groups, funding is a major concern of the Boy Scout organization. Approximately 20% of the Boy Scout funding comes from the United Way, other sources include popcorn sales, Friends of Scouting, corporate support, local businesses, service clubs, government and administrators.

Two majors problems that the organization faces is a lack of commitment of people to volunteer time and the lack of vocational training. The organization indicated that it is often.

difficult to reach the 14-21 year olds. They also identified that the two biggest areas that the township could assist is marketing and recognition.

The group asked many questions, clarifying some of the issues that were discussed. A suggestion was made that to get some of the 14-21 year olds involved the venturing activities could be marketed as a latch key type program.

III. Next Meeting.

The next meeting was set for August 8th and then the meeting was adjourned.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

EDUCATION AND PUBLIC SERVICES SUBCOMMITTEE MEETING MINUTES

Date: 8 August 2001

Time: 5:30 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present: Chairperson Ellie Pinner

Nancy Leipold

Linda Bellehumeur

Mark Kellenberger, Planner II

Dennis Pittman

Chris Shoemaker

Pat Birchfield

Guests

Honorable Judge Phyllis McMillen

Tom Wiseman, Waterford School District

I. Call to Order.

The meeting was called to order.

II. Discussions.

We had two guests at this meeting. The Honorable Judge Phyllis McMillan of the 51st District Court and Tom Wiseman from the School District. Judge McMillen gave a brief description of the Court related community activities such as treatment resolution, dispute resolution, and criminal prosecution. Within Waterford Township, alcohol is the drug of choice. The Court is involved with the Perfect Solutions program which deals with alcohol, drug and substance abuse. The Coalition for Youth organization has two programs (Project for Success and In-Step) that provide valuable services to the Waterford area.

Judge McMillen identified a major shortcoming within Waterford as the lack of recreational activities and a teen safe house. Activities and resources such as dances, a pool, skate park, and some type of transportation to allow non-driving youth opportunities are desperately needed. Facilities for plays, concerts, and dances are severely lacking. Waterford Township should investigate career and job training for area youth, the number of liquor establishments (102 in Waterford), and aesthetics of the community for reducing the activities that are detrimental to a healthy, vibrant community.

The group had many questions for Judge McMillen and a small discussion took place, however, in an effort to give time to Mr. Wiseman, the discussion was cut short.

Mr. Wiseman started his discussion where Judge McMillen had left off, talking about aesthetics. He stated that community government should create standards for architecture and design. He also indicated that partnerships are extremely important. Mr. Wiseman stated that the schools are the center of the community and they provide many of the recreational activities for area youth. In addition to the traditional educational provisions, the school district also provides latchkey and senior services. He continued that the programs of the Parks and Rac. Department rely heavily on the school system. He also stated that the need for a pool is evident and that the school district is investigating their options. When asked how long it would be before pools were in the schools, Mr. Wiseman did not have a specific time frame but did indicate that it would be sometime before that goal could be realized. A brief discussion period followed Mr. Wiseman's presentation.

III. Next Meeting.

Before the meeting adjourned the next meeting date was set for August 22, 2001. This will be our final meeting.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

EDUCATION AND PUBLIC SERVICES SUBCOMMITTEE MEETING MINUTES

Date: 22 August 2001

Time: 5:30 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present: Chairperson Ellie Pinner

Nancy Leipold

Linda Bellehumeur

Mark Kellenberger, Planner II

Dennis Pittman

Chris Shoemaker

Pat Birchfield

I. Call to Order.

The meeting was called to order and it was stated that this was the final meeting of the sub-committee.

II. Discussions.

The sub-committee members discussed much of what we had learned throughout the past few weeks and come up with this final narrative and goals and objectives.

The topic of Education and Public Services is very expansive and must account for the public and private education system and facilities, the services (or lack of services) that are provided to the residents of Waterford Township. As a group we had several meetings and were fortunate to have several members of the educational system and service sector of the Township make presentations and discuss issues and concerns relating to the Township as a whole. Overall, Waterford Township is served quite well by the existing school system and service organizations. There are, however, deficiencies do exist within this facet of the Township. As a group, we offer the following as an analysis of what we have discovered as part of our research.

College opportunities within Waterford Township are provided for by the Highland Lakes Campus of Oakland Community College. The existing public school system is served by 17 elementary schools, 3 middle schools plus 1 alternative middle school, 2 high schools and 3 alternative high schools. The school district also provides many other support services (career, family, senior, etc...) in addition to the educational programs. There are nine private schools within the Waterford Township boundary which include elementary, middle and high school opportunities.

The public service segment of Waterford Township is less documented than that of the school systems. There is not a registry for or complete list of service organizations within Waterford Township. A partial list of service organizations was obtained and a brief survey was completed to identify characteristics and issues pertaining to the different organizations (a copy of the survey is attached). Among the responses to the survey and the issues identified in the presentations to the group, the following were frequently identified as deficiencies or needs of the different groups and organizations.

- A community recreation center
- An indoor community pool
- Senior transportation
- Mass transportation
- Assistance with marketing, publicity and public relations
- More staffing/volunteers
- Expanded social programs
- Public service education
- Better cooperation, communication and collaboration between Township programs and community groups and between the community groups themselves
- Lack of space for service organizations and events
- Funding

The group identified that in addition to the different service organizations, churches provide many services to the community and should also be recognized. Surveys were sent to the Waterford Ministerial Association and twelve area churches and none were returned. Based on the information collected by the Township, there are 48 churches within Waterford Township of various denominations.

GOAL:

Assist service organizations to expand and market their current list of services.

OBJECTIVES:

- Compile an accurate, updated list of service organizations.
- Solicit materials from service organizations and incorporate them into the new resident packets.
- Actively pursue new residents to provide with the new resident packets.
- Eliminate deficiencies within the area public services

GOAL:

Provide more recreational opportunities to the citizens of Waterford Township.

OBJECTIVES:

- Create a township based recreational center
- Construct an indoor pool facility
- Install pedestrian pathways

- Preserve the area currently occupied by the Drayton Plains Nature Center
- Accommodate community groups need for space

GOAL:

Continue and strengthen the communication and relationship between the service organizations, Waterford School District, private school system and the Township.

OBJECTIVE:

- Explore existing models through the Michigan Township Association.
- Coordinate with the public relations department of the different groups

III. Next Meeting.

Since this is the last official meeting of the sub-committee there was no meeting date set other than the next meeting of the committee as a whole. All the members of the sub-committee were thanked for their time and effort.

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APPENDIX E: ENVIRONMENT SUBCOMMITTEE MEETING MINUTES

APRIL 27, 2001 MEETING MINUTES----- PAGES E-2 THROUGH E-3
MAY 23, 2001 MEETING MINUTES ----- PAGES E-4 THROUGH E-5
JUNE 20, 2001 MEETING MINUTES ----- PAGE E-6
JULY 18, 2001 MEETING MINUTES ----- PAGE E-7
AUGUST 8, 2001 MEETING MINUTES-----PAGES E-8 THROUGH E-11

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
ENVIRONMENT SUBCOMMITTEE
MEETING MINUTES

Date: 27 April 2001
Time: 6:00 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Bette O'Shea, Chair
Bob Vallina, Community Planning and Development Director
Mary Ellen Krakauer
Bob Chase
Frederick Poehlman
Joyce Lemond

Absent: Amy Noel, Planner I

I Welcome

- ◆ Chairperson O'Shea opened the meeting and asked everyone present to introduce themselves. Mr. Vallina explained to the subcommittee that he was filling in for Ms. Amy Noel, Planner I. Ms. Noel is the staff person assigned to this subcommittee but was unable to make it tonight because she got married last Saturday and is currently on her honeymoon. Mr. Vallina passed out the meeting agenda, a draft mission statement, and a list of discussion topics for consideration.

II. Presentations

- ◆ The draft mission statement was read and there was a consensus that the statement adequately covered the goals of the committee. The subcommittee members discussed the mission statement. It was moved and supported to adopt the proposed mission statement. Motion carried unanimously. (Approved mission statement attached for the record).

Mr. Vallina then asked the subcommittee members to think about discussion topics for upcoming meetings. Mr. Vallina suggested topics such as Lakes, the Clinton River, Wetlands, Woodlands, and the Drayton Plains Nature Center. Chairperson O'Shea suggested such topics as greenways and groundwater protection. Chairperson O'Shea asked that each member think of some pertinent topics and a list will be assembled at the next meeting. Mr. Vallina said that he would provide the information to Ms. Noel and she would prepare for the next meeting.

7:30 Meeting adjourned.

ENVIRONMENT MASTER PLAN SUBCOMMITTEE MISSION STATEMENT

The Environment Master Plan Subcommittee will review and inventory the Township's natural environment, investigate means of preserving and enhancing the environment, discuss and determine the most effective tools for protecting the environment, and prepare a report on the subcommittee's findings, environmental priorities, and proposed action items for review by the Master Plan Citizens Committee of the Whole.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
ENVIRONMENT SUBCOMMITTEE
MEETING MINUTES**

Date: 23 May 2001
Time: 6:30 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Bette O'Shea, Chair
Amy Noel, Planner I
Mary Ellen Krakauer
Bob Chase
Frederick Poehlman
Joyce Lemond

Also Present: Scott Hudson, Planning Commissioner

Meeting Summary

This was the second meeting of the Environmental Subcommittee, held at Township Hall, in the 3rd floor conference room.

Introductions were made by those present, including which area of the township they lived. Mr. Hudson stated that he was not officially a member of this committee, but he thought that it was a very important committee and was invited by Ms. O' Shea to attend tonight's meeting. Ms. Noel passed out copies of the current Township zoning map and a document titled *Resource Conservation Through Community Planning*.

Ms. O' Shea went over the topics of discussion that the group discussed during the first meeting, and those topics that had been added to the original list (Copy attached for the record). Those topics were then broken down into like categories, such as water, preservation areas, and economic development. The topics list will be broken down into categories by Ms. Noel for the next meeting. Discussion took place regarding how the environment covers many areas, including housing and the impact it is having on our utilities, tax base and infrastructure. Mr. Poehlman stated that he was particularly concerned about the amount of multi-family housing within the Township and what we can do to curb future developments. Multi-family developments are a burden on our tax base and infrastructure and cause the Township to score low on number of students graduated from public schools. Mr. Poehlman stated that families in apartment and condo developments tend to move out, those students are counted as "not graduated" from the public school system and therefore lowers the figures for children graduated. There was discussion as to whether curbing multi-family housing should be a goal of the Township.

The members decided to choose topic areas that they would research. It was decided that Ms. Noel would give each member a contact for the topic they chose and some suggested questions. It was also decided that Ms. Noel would work on getting a speaker for the next meeting and dates were discussed. Members suggested each person write a brief statement about the topics stating our concerns. Ms. Noel will notify the committee when the next meeting is scheduled.

8:10 Meeting adjourned.

ENVIRONMENT
MASTER PLAN SUBCOMMITTEE
MEETING TOPIC
DISCUSSION ITEMS

Lakes

Clinton River

Wetlands

Woodlands

Groundwater Protection

Wellhead Protection

Contaminated Sites

Open Space

Environment/Economic Balance

Conservation

Drayton Plains Nature Center

Nature Preserves

Greenways

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
ENVIRONMENT SUBCOMMITTEE
MEETING MINUTES**

Date: 20 June 2001
Time: 6:30 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Bette O'Shea, Chair
Amy Noel, Planner I
Bob Chase
Frederick Poehlman
Joyce Lemond
JoAnn Salfi

Absent: Mary Ellen Krakauer

Guests: Bill Fritz, Department of Public Works
Stacy Keith, Building and Engineering Department

Meeting Summary

This was the third meeting of the Environmental Subcommittee, held at Township Hall, in the 3rd floor conference room.

Bill Fritz discussed groundwater and drinking water protection projects, including a Wellhead Protection Plan, being conducted by the Department of Public Works. Mr. Fritz explained where our drinking water comes from and what steps his department would like to see taken to help protect our drinking source.

The committee discussed education programs for residents on what role they play and how they can improve water quality. It was also noted that information should be made available on the township's web page.

Ms. Lemond made a presentation of her chosen topic from the previous meeting, the Clinton River and its watershed. Ms. Lemond visited the Clinton River Watershed Council and talked with the educator about water quality issues, its relation to stormwater runoff, and what residents can do to improve the water quality.

Mr. Poehlman's topic of choice, groundwater and drinking water, including infrastructure, was covered by Mr. Fritz's presentation. Mr. Chase chose wetlands and he and Ms. Noel attended a one-day workshop on wetland types and their purpose and function. Mr. Chase discussed some of the things he learned at the workshop.

Amy Noel will schedule the next meeting depending on the availability of the next guest speaker.

9:10 Meeting adjourned.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
ENVIRONMENT SUBCOMMITTEE
MEETING MINUTES**

Date: 18 July 2001
Time: 6:30 p.m.
Place: Waterford Township Hall Auditorium

Present: Bette O'Shea, Chair
Amy Noel, Planner I
Mary Ellen Krakauer
Bob Chase
Frederick Poehlman
Joyce Lemond

Guests: Jessica Pitelka Opfer, Watershed Planner, Clinton River Watershed Council

Meeting Summary

This was the fourth meeting of the Environmental Subcommittee, held at Township Hall, in the first floor auditorium.

Introductions were made and Jessica Pitelka Opfer of the Clinton River Watershed Council was introduced as the guest speaker for the meeting.

Jessica covered wetlands and the different categories and functions of wetland systems. The Watershed Council has worked on a project in the Stony Creek watershed identifying wetland areas and collecting some basic information about their characteristics to determine how they function and are a part of the larger creek system. Along with the physical information collected and processed in GIS, the Council reviewed each of the local communities' ordinances that related to natural areas and made recommendations for changes or updates. Mrs. Opfer answered questions about her organization, the Stony Creek project, and gave the committee ideas and suggestions about items we could look into for the updating of Waterford Township's Master Plan.

Ms. Noel presented copies of the Township's Natural Features, Wetlands, and Woodlands ordinances, along with suggested items of change or clarification, as prepared by the Township Environmental Coordinator, Stacy Keith.

It was decided that the next meeting would be on August 8th at 6:30. Ms. Noel will bring a draft list of the committees goals as discussed thus far.

8:30 Meeting adjourned.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
ENVIRONMENT SUBCOMMITTEE
MEETING MINUTES**

Date: 08 August 2001
Time: 6:30 p.m.
Place: Waterford Township Hall Auditorium

Present: Bette O'Shea, Chair
Amy Noel, Planner I
Mary Ellen Krakauer
Bob Chase
Frederick Poehlman
Joyce Lemond

Meeting Summary

This was the fifth and final meeting of the Environmental Subcommittee, held at Township Hall, in the first floor auditorium.

Ms. Noel brought copies of draft committee goals and some sample policies from surrounding communities. Committee members read each goal and related policies. Comments were made for some word revisions and items that should be added. The committee discussed an open space ordinance or other provisions the Township should implement to raise funds for the purchase of land to be set aside as open space. It was suggested that the Township investigate a money donation/collection program similar to the wildlife fund check box on State tax forms. Chairperson O'Shea suggested we bring the idea to Mr. Vallina for discussion. The subcommittee then decided on the final goals and objectives for the environment subcommittee (Copy attached for the record).

Chairperson O'Shea thanked the group for their participation and all the good work and ideas that have come out of the discussions and guest presenters. This concludes the meetings of the Environment Subcommittee.

9:00 p.m. Meeting adjourned.

ENVIRONMENT MASTER PLAN SUBCOMMITTEE GOALS

Master Plan as the Basis

Goals

Goals are the general statements that define the direction and character of future development.

- GOAL: To the maximum extent possible, maintain the abundance and quality of existing natural resources with Waterford Township, so that these ecosystems can continue to perform their vital functions, as well as aesthetics and recreation.
- GOAL: Enhance and restore existing natural resources that have suffered degradation.
- GOAL: Retain the unique character and the desirability of Waterford Township as a "livable community"; a place to live, work, and play, maintaining and promoting the abundance of recreation opportunities.
- GOAL: Recognize the natural capacity and limitation of land to support development. Allow for a range of housing choices within the limitations in the community. Maintain a primarily low density residential community in areas where there are restrictions due to natural features, limiting soil conditions, lack of sewer and water and other urban services, and the capacity of the existing road network.

How can the Township fulfill the stated goals?

POLICIES

Policies set the framework for action and form the basis upon which more detailed development decisions are made.

1. Land Use Intensity

Guidelines governing the intensity of land use should be dependent on the natural capability of the land and existing infrastructure to support various degrees of development.

- Low intensity land uses should be located where natural resource conditions are least capable of supporting development, existing roads are inadequate, and existing low density land use patterns currently exist. The use of septic and wells is appropriate for low intensity land uses. Compatible land uses would generally consist of low density residential, open and agricultural land, and recreation/conservation land.
- Medium intensity uses should be located where natural resource conditions are moderately capable of supporting development, adequate roads are accessible, and existing medium density land use patterns exist. The availability of water and sewer service should determine level of intensity. Suitable land uses would consist of medium density residential with complementary local commercial, office, public, and quasi-public uses.
- High intensity uses require access to major thoroughfares and state highways, sanitary sewer and water service, existing medium to high density land use patterns, and natural resource conditions most capable of supporting development. High density residential, office, industrial, and general commercial land uses would be consistent for this category.

2. Natural Resource Capability

All development shall respect the following natural characteristics and constraints:

Wetlands

- The protection of wetlands is essential in order to preserve water quality, stabilize stormwater runoff, recharge groundwater, and provide fish and wildlife habitat. The highest priority is for the preservation of wetlands in their natural state.

- While the actual boundaries and the significance of specific wetland areas must be determined at the time of development review, three aspects of wetland protection should be recognized in reviewing proposed development within and in the vicinity of wetland areas.
 - ✓ Wetland area boundary.
 - ✓ The adjacent buffer and fringe area.
 - ✓ The remainder of the watersheds which drains into and out of the wetland area beyond the buffer area.

Woodlands

- The conservation of woodlands is imperative to protect water and soil quality, increase air quality, buffer noise pollution, moderate local climate and storm hazards, preserve wildlife habitats, and preserve aesthetic values and community beauty.

- Development which is permitted in and around wooded areas should be planned, constructed, and maintained so that existing, healthy trees and native vegetation are preserved. The objective should be to preserve native trees rather than rely on removal and subsequent replanting. The diversity of woodland areas should be protected to ensure long-term stability, and the variety of species preserved.

Slopes

- The existing landform should be made a part of the land use planning and design. The primary objective should be preservation of the natural contours rather than alteration through mass grading

- Careful planning of slopes is necessary in order to reduce erosion, maintain stability, and control amounts and velocities of runoff.

Groundwater Protection and Recharge

- Groundwater recharge areas restore water levels in underground storage areas and supply water to lakes, rivers, and streams. Due to the reliance on wells, retention and protection of groundwater resources is important to Waterford Township and our neighbors. Since recharge areas extend beyond Waterford's boundaries, county and regional cooperation will be needed to effectively manage and protect groundwater.

- Recharge areas are best kept as open space, or low density uses, to retain as much of the permeable surface as possible. Land grading should be controlled to retain the water holding characteristics of the land. Native vegetation essential to the water holding characteristics should be preserved, or where necessary, enhanced as part of a development program.

- Recharge areas should be protected from pollution by controlling all uses that discharge wastes into the hydrogeological cycle. Especially critical to monitor are uses which handle hazardous materials that might leak or spill.

Stormwater Management and Drainage

- Protection of slopes, woodlands, and wetlands within the watershed and proper management of land use and development are essential to maintaining the quantity of storm drainage.

- Natural vegetation and topographical features along stream corridors and waterways should be preserved. Uses should be restricted to those which offer no danger of topographical disturbance to the corridor, degradation of water quality, increased runoff, sedimentation, or stream channel alteration.

- Natural vegetation and topographical features along stream corridors and waterways should be restored and/or enhanced in appropriate areas.
- Surface water runoff should not exceed the rate that occurs under existing, undeveloped conditions. Control of runoff prevents overloading of streams and long-term erosion from uncontrolled, high velocity discharges.
 - Agricultural practices should respect stream corridors and waterways and the natural drainage and runoff pattern associated with them, in concurrence with the development constraints listed above.

Natural areas

- Natural areas should be inventoried assessed for quality, location, and health, and should include species surveys by the Michigan Natural Features Inventory.
- The preservation of natural areas is essential to maintaining Waterford Township's unique heritage and character and for providing high-quality and diverse wildlife habitat.
- Restoration and enhancement of natural areas should be encouraged and carried out in order to increase environmental quality.
- Protection and management of the identified natural areas and related natural systems should be consistent with the recommendations of any reports or studies generated from resource inventories, and is best achieved through a public-private partnership.

Additional policies

- To the extent possible, provide for hazardous waste recycling and drop off points for households to prevent improper discarding of such materials.
- Abandoned wells can become carriers of pollutants into the drinking water aquifers. An effort should be made to adopt procedures to ensure abandoned wells are discovered and properly capped or removed to prevent groundwater contamination.
- The airport is a constant source of contention with township residents. Greater efforts to forge a relationship between the Township and the FAA and Oakland International should be made to address conflicts. The Township should take a more proactive role in determining items that can be enforced, such as hours of operation, and implementation of the recommendations of the noise studies.
- Provide funding to those organizations that can provide technical and educational assistance to the Township staff and residents in the areas of natural resource preservation.
- Create environmental educational opportunities for residents by providing greater access to natural areas that will incorporate interpretation centers or activities.
- Purchase open space. Use models adopted by other communities for passing a small millage that will create a fund for the purchase of open space in to be targeted to those areas identified in natural resource inventories as high priority preservation areas.

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APPENDIX F: RECREATION AND OPEN SPACE SUBCOMMITTEE MEETING MINUTES

MAY 16, 2001 MEETING MINUTES	----- PAGES F-2 THROUGH F-3
JUNE 11, 2001 MEETING MINUTES	----- PAGES F-4 THROUGH F-16
JULY 12, 2001 MEETING MINUTES	----- PAGES F-17 THROUGH F-18
AUGUST 1, 2001 MEETING MINUTES	----- PAGES F-19 THROUGH F-20
SEPTEMBER 5, 2001 MEETING MINUTES	----- PAGES F-21 THROUGH F-27

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
RECREATION AND OPEN SPACE SUBCOMMITTEE
MEETING MINUTES**

Date: 16 May 2001
Time: 6:30 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Sandra Werth, Chair
Amy Noel, Planner I
Dennis Griffin
Leo Landry
Jan Eathorne

Absent: Donald Ukrainec
Donald Stone
Donald Andrews

I Welcome

- ◆ Chairperson Werth opened the meeting and asked everyone present to introduce themselves. Ms. Noel passed out the meeting agenda, a draft mission statement, and a list of discussion topics for consideration.

II. Presentations

- ◆ The draft mission statement was read and there was a consensus that the statement adequately covered the goals of the committee. It was decided that members would review it and the subcommittee would consider adopting a final mission statement at the next meeting.
- ◆ Ms. Noel then handed out a list of prospective topics for discussion at future subcommittee meetings (copy attached for the record). There was discussion as to whether state and county owned recreation areas should be included on the map provided depicting recreation areas within the township. Ms. Noel explained that these areas were not limited to Township-owned properties because recreation areas include places where citizens go for recreation purposes, that also includes bowling alleys and sports facilities. Ms. Jan Eathorne expressed her concern that the Township does not meet a quota set by the State for acres of parkland per capita. Ms. Eathorne proposed that the committee do an inventory of the existing parks.
- ◆ There was some discussion of the Drayton Plains Nature Center and their financial problems. A couple committee members stated that the township should look into purchasing the park in order to make it viable. There was further discussion of the lack of pocket parks in the township and whether there were Township or County properties that could be converted into neighborhood parks. Ms. Noel stated she would look into where Township and Road Commission properties are located. Chairperson Werth also suggested that school properties be included in the discussion of open space as many people use them for recreational purposes.
- ◆ Ms. Noel announced that she would invite Parks and Recreation Director Richard Cartmill to the next subcommittee meeting.
- ◆ 8:30 Meeting adjourned.

Recreation And Open Space Master Plan Subcommittee Meeting Topic Discussion Items

- Township Parks
- Community Recreation Center
- Lakes
- Public/Private Access
- Clinton River Trail/Pathway
- Nature Centers/Preserves
- Pontiac Lake State Recreation Area
- Greenways
- Neighborhood Parks
- Pocket Parks
- School Properties
- Bike Paths
- Sports Facilities
 - Bowling, tennis, golf, gym, etc.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
RECREATION AND OPEN SPACE SUBCOMMITTEE
MEETING MINUTES**

Date: 11 June 2001
Time: 6:00 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Sandra Werth, Chair
Amy Noel, Planner I
Dennis Griffin
Leo Landry
Jan Eathorne
Donald Ukrainec

Also Present: Richard Cartmill, Director Parks and Recreation

Absent: Donald Stone
Donald Andrews

I. Presentations

The meeting was called to order and introductions of Richard Cartmill, Director Parks and Recreation were made as Mr. Cartmill was attending the meeting as a guest speaker. The draft mission statement was adopted unanimously by the committee. It was moved and supported to adopt the proposed mission statement. Motion carried unanimously. (Approved mission statement attached for the record).

Mr. Cartmill discussed the status of existing recreation areas in the Township and what types of facilities the township is currently lacking. Parks and Recreation conducted a survey two years ago and gave each committee member a copy of the results of that survey (Copy attached for the record). This document will serve as a good guideline for what recreation items the residents of Waterford Township are interested in supporting. The committee will review the survey and discuss the results at the next meeting. The lack of a community recreation facility in the Township was discussed, including whom the facility would serve and how an item such as an indoor pool would be used by schools for sports purposes. The residents defeated funding for such a facility in the past.

Ms. Eathorne suggested that each park be visited so that we have a better idea of what park amenities are currently offered. Mr. Ukrainec and Ms. Werth said they would try to visit a couple of parks before the next meeting date. Ms. Noel stated that the goal of the committee is to produce a compiled list, or action items, that the committee would like included in the Master Plan as a 20-year plan. Ms. Noel stated that there needed to be long term goals, such as including in the master plan a goal to fully budget the Parks and Recreation department to adequately serve and maintain the facilities and programs that are currently in place. Mr. Ukrainec agreed that it was a valid and important goal of the township and should be included in our list of goals. For the next meeting, the committee will discuss the current language in the Township's master plan under the Recreation section and discuss what changes need to be made.

8:30 Meeting adjourned.

RECREATION AND OPEN SPACE MASTER PLAN SUBCOMMITTEE MISSION STATEMENT

The Recreation and Open Space Master Plan Subcommittee will review the Township's dedicated recreational areas and the current Recreation Plan, investigate means of preserving and enhancing the township's open space, discuss and determine the most effective tools for protecting these resources, and prepare a report on the subcommittee's findings, recreational priorities, and proposed action items for review by the Master Plan Citizens Committee of the Whole.

**WATERFORD PARKS & RECREATION 1992 SURVEY
 INSTRUMENT AND RESULTS**

Dear Waterford Voter,

On behalf of The Waterford Recreation Committee, would you take a few minutes to answer the following questions? Just circle the answer. Thank you for giving us your views.

Sincerely,
 Waterford Recreation Committee

- | | | | |
|----|--|-----|----|
| 1. | Do you believe that there is a need for a Recreation Center to be used by Waterford residents of all ages? | Yes | No |
| 2. | Would you support a millage to build and operate the recreation center? | Yes | No |
| 3. | What facilities and activities should be in the Community Recreation Center? | | |
| | - a swimming pool | Yes | No |
| | - two gymnasiums | Yes | No |
| | - weight room | Yes | No |
| | - programs for pre-schoolers | Yes | No |
| | - programs for young adults | Yes | No |
| | - programs for elementary children | Yes | No |
| | - programs for seniors | Yes | No |
| | - meeting rooms | | |
| 4. | If the Recreation Center is built, as residents of Waterford, would you be willing to pay a small fee (\$1.00-2.00) each time you use the swimming pool to help pay the operating costs? | Yes | No |
| 5. | Are you a Senior Citizen over 60? | Yes | No |
| 6. | Do you have children of school age? | Yes | No |
| 7. | Have you lived in Waterford more than three years? | Yes | No |

Thank you for completing this survey which is being conducted for the Waterford Community Recreation Committee by The Department of Sociology/Anthropology, Oakland University.

Please return the survey in the enclosed postage—paid envelope

Executive Summary: Waterford Recreation Survey

This survey is based upon 257 completed surveys mailed between January 22 and March 5, 1992 by the Department of Sociology, Oakland University, Rochester, Michigan to registered voters in Waterford Township.

In all, 120 persons or 46.7% agreed that a recreation center was needed; 51% disagreed that a recreation center was needed and 2.3% were not sure.

Although the differences between support and non-support voters was close, it is significant that only 15.6% of voters over 60 supported the recreation center whereas double that number (31.1%) did not agree. In contrast, 25.7% of the voters who were under 60 thought a recreation center was needed, whereas 24.1% of the voters under 60 were not in favor of the proposal.

In the sample, 84 respondents had children in school. Of this group, 56% favored a recreation center and 43.2% did not.

When asked if they would support a millage to build the center, 70.6% of the voters over 60 years of age said no, and 53.8% of those under 60 said no as well. Those groups who would support a millage consisted of 22.8% of citizens over sixty and 44.4% of those under sixty years of age.

There was strong agreement, however, that if a recreation center was to be built, an indoor swimming pool was important. Over 46% supported a pool and 52.9% were willing to pay a small fee for maintenance.

The least desirable part of a recreation center was a weight room, only 29.5% favored this. Two gymnasiums received support from 36.6% of the voters. Support for programs for young adults received support from 49%; programs for elementary children by 44.7%; programs for senior citizens received support from 45.9%. The least support for programs was for pre-schoolers: 38.1%

Slightly more than 40%~ supported the need for meeting rooms.

Of the sample, 32.7% had school age children and almost 90% lived in Waterford more than three years.

Senior citizens comprised 42.4% of the sample.

Jacqueline Scherer, PhD.
Sociology/Anthropology Department
Oakland University

March 1992

WATERFORD TOWNSHIP
 SURVEY QUESTIONS

	SURVEY QUESTIONS	YES	NO	BLANK	TOTAL
1	NEED FOR A REC. CTR.	120 46.70%	131 51.00%	6 2.30%	247 100.00%
2	WOULD YOU SUPPORT A MILLAGE	91 35.40%	157 61.10%	9 3.50%	257 100.00%
3—A	A SWIMMING POOL	120 46.70%	78 30.40%	59 23.00%	257 100.00%
3—B	TWO GYMNASIUMS	94 36.60%	94 36.60%	69 26.80%	257 100.00%
3-C	WEIGHT ROOM	75 29.20%	102 39.70%	80 31.10%	257 100.00%
3-D	PROGRAM FOR PRE-SCHOOLERS	98 38.10%	85 33.10%	74 28.80%	257 100.00%
3-E	PROGRAMS FOR YOUNG ADULTS	126 49.00%	68 26.50%	63 24.50%	257 100.00%
3—F	PROGRAMS FOR ELEMENTARY CHILDREN	115 44.70%	72 28.00%	70 27.20%	257 100.00%
3-G	PROGRAMS FOR SENIORS	118 45.90%	77 30.00%	62 24.10%	257 100.00%
3—H	MEETING ROOMS -	103 40.10%	84 32.70%	70 27.20%	257 100.00%
4	WILLING TO PAY SMALL FEE FOR POOL	136 52.90%	95 37.00%	26 10.10%	257 100.00%
5	ARE YOU A SENIOR	109 42.40%	144 56.00%	4 1.60%	257 100%
6	DO YOU HAVE CHILDREN OF SCHOOL AGE	84 32.70%	169 65.80%	4 1.60%	257 100.00%
7	HAVE YOU LIVED IN WATERFORD MORE THAN 3 YEARS -	230 89.50%	6 2.30%	21 8.20%	257 100.00%

Final Report: Waterford Recreation Survey

Between January 22, 1992 and March 5, 1992 a total of 600 surveys were mailed to registered voters in Waterford Township. The names were randomly selected from the voter lists. A total of 257 were returned and are reported in this analysis. Additional surveys have been received but did not arrive before the final analysis was completed.

In all, 120 persons or 46.7% agreed that a recreation center was needed and 51% or 131 persons disagreed. There were 2.3% or 6 persons who left the answer blank.

Although nearly half agreed that a recreation center was needed, only slightly more than one third would vote for millage to support or build the center (35.4%). Over half, 61.1%, definitely said no to a millage. More persons over 60 said no (60.6%) to the center than people under 60 (43.1%). Senior citizens overwhelmingly said no to a millage (70.6%), and younger voters said no by 52.2%.

There was support for programs for young adults (49%), elementary children (44.7%), and for seniors (45.9%) but in no case did the support pass the half-way point.

The facilities most desired were the swimming pool (46.7%) and meeting rooms (40.1%). Least desired were two gymnasiums (36.6%) and a weight room (29.2%).

Almost 90% of the respondents lived in Waterford more than three years.

Senior Citizen Responses

Since 109 of the respondents were over 60, their answers are significant. As expected, only 7.3% of this group had children in school. Among the seniors, 60.6% did not see the need for a center, 70.6% would not support a millage. Few (37.6%) saw a need for a swimming pool or senior citizen programs (33.9%). Moreover, their voluntary comments were particularly negative, reflecting a keen desire to prevent any increase in taxes.

Under Sixty Responses

The 144 respondents under sixty saw more need for a recreation center (55.6%) but still rejected a millage increase (53.8%). They did want a swimming pool (56.9%) and were willing to pay a small fee for the pool (63.9%). Perhaps this indicates that a private contractor might be able to meet this need, or that Waterford citizens might be able to persuade Oakland County to build such a facility.

Conclusion

A campaign to build a center might stimulate more interest in a recreation center. However, the 61.1% of voters who oppose a millage to build the center represent a significant negative vote. It would be important to persuade senior citizen voters that the recreation center would benefit them. There is considerable interest in a pool and specialized programming for young adults, elementary children, and seniors. However, in no case did this interest exceed 50% of the respondents.

Jacqueline Scherer, PhD.
Department Sociology/Anthropology
Oakland University

WATERFORD TOWNSHIP SURVEY QUESTIONS
PERSONS OVER (O) OR UNDER (U) 60 YEARS OF AGE

		TOTAL SURVEYS					OF TOTAL				
SURVEY QUESTIONS		YES	NO	BLANK	TOTAL	YES	NO	BLANK	TOTAL		
1	NEED FOR A REC. CTR.	O 60	40	66	3	109	O 60	15.6%	25.7%	1.2%	42.4%
		U 60	80	62	2	144	U 60	31.1%	24.1%	0.8%	56.0%
		BLANK	<u>0</u>	<u>3</u>	<u>1</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>1.2%</u>	<u>0.4%</u>	<u>1.6%</u>
		TOTAL	120	131	6	257	TOTAL	46.7%	51.0%	2.3%	100.0%
2	WOULD YOU SUPPORT A MILLAGE	O 60	27	77	5	109	O 60	10.5%	30.0%	1.9%	42.4%
		U 60	64	76	4	144	U 60	24.9%	29.6%	1.6%	56.0%
		BLANK	<u>0</u>	<u>4</u>	<u>0</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>1.6%</u>	<u>0.0%</u>	<u>1.6%</u>
		TOTAL	91	157	9	257	TOTAL	35.4%	61.1%	3.5%	100.0%
3A	A SWIMMING POOL	O 60	37	41	31	109	O 60	14.4%	16.0%	12.1%	42.4%
		U 60	82	37	25	144	U 60	31.9%	14.4%	9.7%	56.0%
		BLANK	<u>1</u>	<u>0</u>	<u>3</u>	<u>4</u>	BLANK	<u>0.4%</u>	<u>0.0%</u>	<u>1.2%</u>	<u>1.6%</u>
		TOTAL	120	78	59	257	TOTAL	46.7%	30.4%	23.0%	100.0%
3B	TWO GYMNASIUMS	O 60	31	45	33	109	O 60	12.1%	17.5%	12.8%	42.4%
		U 60	62	49	33	144	U 60	24.1%	19.1%	12.8%	56.0%
		BLANK	<u>1</u>	<u>0</u>	<u>3</u>	<u>4</u>	BLANK	<u>0.4%</u>	<u>0.0%</u>	<u>1.2%</u>	<u>1.6%</u>
		TOTAL	94	94	69	257	TOTAL	36.6%	36.6%	26.8%	100.0%
3C	WEIGHT ROOM	O 60	22	50	37	109	O 60	8.6%	19.5%	14.4%	42.4%
		U 60	53	52	39	144	U 60	20.6%	20.2%	15.2%	56.0%
		BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>0.0%</u>	<u>1.6%</u>	<u>1.6%</u>
		TOTAL	75	102	80	257	TOTAL	29.2%	39.7%	31.1%	100.0%
3D	PROGRAM FOR PRE-SCHOOLERS	O 60	36	39	34	109	O 60	14.0%	15.2%	13.2%	42.4%
		U 60	62	46	36	144	U 60	24.1%	17.9%	14.0%	56.0%
		BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>0.0%</u>	<u>1.6%</u>	<u>1.6%</u>
		TOTAL	98	85	74	257	TOTAL	38.1%	33.1%	28.8%	100.0%
3E	PROGRAMS FOR YOUNG ADULTS	O 60	43	33	33	109	O 60	16.7%	12.8%	12.8%	42.4%
		U 60	83	35	26	144	U 60	32.3%	13.6%	10.1%	56.0%
		BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>0.0%</u>	<u>1.6%</u>	<u>1.6%</u>

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN _____ APPENDIX F
 RECREATION AND OPEN SPACE SUBCOMMITTEE MEETING MINUTES

		TOTAL	126	68	63	257	TOTAL	49.0%	26.5%	24.5%	100.0%
3F	PROGRAMS FOR	O 60	42	34	33	109	O 60	16.3%	13.2%	12.8%	42.4%
	ELEMENTARY	U 60	73	38	33	144	U 60	28.4%	14.8%	12.8%	56.0%
	CHILDREN	BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>0.0%</u>	<u>1.6%</u>	<u>1.6%</u>
		TOTAL	115	72	70	257	TOTAL	44.7%	28.0%	27.2%	100.0%

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN APPENDIX F
RECREATION AND OPEN SPACE SUBCOMMITTEE MEETING MINUTES

WATERFORD TOWNSHIP SURVEY QUESTIONS
PERSONS OVER (O) OR UNDER (U) 60 YEARS OF AGE (cont.)

	SURVEY QUESTIONS		TOTAL SURVEYS				PERCENTAGE OF TOTAL				
			YES	NO	BLANK	TOTAL	YES	NO	BLANK	TOTAL	
3G	PROGRAMS FOR SENIORS	O 60	41	37	31	109	O 60	16.0%	14.4%	12.1%	42.4%
		U 60	77	40	27	144	U 60	30.0%	15.6%	10.5%	56.0%
		BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>1.2%</u>	<u>1.6%</u>	<u>1.6%</u>
		TOTAL	118	77	62	257	TOTAL	45.9%	30.0%	24.1%	100.0%
3H	MEETING ROOMS	O 60	35	40	34	109	O 60	13.6%	15.6%	13.2%	42.4%
		U 60	67	44	33	144	U 60	26.1%	17.1%	12.8%	56.0%
		BLANK	<u>1</u>	<u>0</u>	<u>3</u>	<u>4</u>	BLANK	<u>0.4%</u>	<u>0.0%</u>	<u>1.2%</u>	<u>1.6%</u>
		TOTAL	103	84	70	257	TOTAL	40.1%	32.7%	27.2%	100.0%
4	WILLING TO PAY SMALL FEE FOR POOL	O 60	43	51	15	109	O 60	16.7%	19.8%	5.8%	42.4%
		U 60	92	43	9	144	U 60	35.8%	16.7%	3.5%	56.0%
		BLANK	<u>1</u>	<u>1</u>	<u>2</u>	<u>4</u>	BLANK	<u>0.4%</u>	<u>0.4%</u>	<u>0.8%</u>	<u>1.6%</u>
		TOTAL	103	84	70	257	TOTAL	40.1%	32.7%	27.2%	100.0%
5	ARE YOU A SENIOR	O 60	109	0	0	109	O 60	42.4%	0.0%	0.0%	42.4%
		U 60	0	144	0	144	U 60	0.0%	56.0%	0.0%	56.0%
		BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>0.0%</u>	<u>1.6%</u>	<u>1.6%</u>
		TOTAL	109	144	4	257	TOTAL	42.4%	56.0%	1.6%	100.0%
6	DO YOU HAVE CHILDREN OF SCHOOL AGE	O 60	8	99	2	109	O 60	3.1%	38.5%	0.8%	42.4%
		U 60	74	70	0	144	U 60	28.8%	27.2%	0.0%	56.0%
		BLANK	<u>2</u>	<u>0</u>	<u>2</u>	<u>4</u>	BLANK	<u>0.8%</u>	<u>0.0%</u>	<u>0.8%</u>	<u>1.6%</u>
		TOTAL	84	169	4	257	TOTAL	32.7%	65.8%	1.6%	100.0%
7	HAVE YOU LIVED IN WATERFORD MORE THAN 3 YEARS	O 60	97	1	11	109	O 60	37.7%	0.4%	4.3%	42.4%
		U 60	130	5	9	144	U 60	50.6%	1.9%	3.5%	56.0%
		BLANK	<u>3</u>	<u>0</u>	<u>1</u>	<u>4</u>	BLANK	<u>1.2%</u>	<u>0.0%</u>	<u>0.4%</u>	<u>1.6%</u>
		TOTAL	230	6	21	257	TOTAL	89.5%	2.3%	8.2%	100.0%

WATERFORD TOWNSHIP SURVEY QUESTIONS
 PERSONS WITH (YES) OR WITHOUT (NO) SCHOOL AGE CHILDREN

		TOTAL SURVEYS				PERCENTAGE				TOTAL	
SURVEY QUESTIONS		YES	NO	BLANK	TOTAL	YES	NO	BLANK	TOTAL		
1	NEED FOR A REC. CTR	YES	47	35	2	84	YES	56.0%	41.7%	2.4%	100.0%
		NO	73	93	3	169	NO	43.20%	55.00%	1.80%	100.0%
		BLANK	<u>0</u>	<u>3</u>	<u>1</u>	<u>4</u>	BLANK	<u>0.00%</u>	<u>75.00%</u>	<u>25.00%</u>	<u>100.0%</u>
		TOTAL	120	131	6	257	TOTAL	46.70%	51.00%	2.30%	100.0%
2	WOULD YOU SUPPORT A MILLAGE	YES	38	44	2	84	YES	45.20%	52.40%	2.40%	100.0%
		NO	53	109	7	169	NO	31.40%	64.50%	4.10%	100.0%
		BLANK	<u>0</u>	<u>4</u>	<u>0</u>	<u>4</u>	BLANK	<u>0.00%</u>	<u>100.00%</u>	<u>0.00%</u>	<u>100.0%</u>
		TOTAL	91	157	9	257	TOTAL	35.40%	61.10%	3.50%	100.0%
3-A	A SWIMMING POOL	YES	51	22	11	84	YES	60.70%	26.20%	13.10%	100.0%
		NO	68	56	45	169	NO	40.20%	33.10%	26.60%	100.0%
		BLANK	<u>1</u>	<u>0</u>	<u>3</u>	<u>4</u>	BLANK	<u>25.00%</u>	<u>0.00%</u>	<u>75.00%</u>	<u>100.0%</u>
		TOTAL	120	78	59	257	TOTAL	46.70%	30.40%	23.00%	100.0%
3-B	TWO GYMNASIUMS	YES	38	32	14	84	YES	45.20%	38.10%	16.70%	100.0%
		NO	56	62	51	169	NO	33.10%	36.70%	30.20%	100.0%
		BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.00%</u>	<u>0.00%</u>	<u>100.00%</u>	<u>100.0%</u>
		TOTAL	94	94	69	257	TOTAL	36.60%	36.60%	26.80%	100.0%
3-C	WEIGHT ROOM	YES	33	33	18	84	YES	39.30%	39.30%	21.40%	100.0%
		NO	42	69	58	169	NO	24.90%	40.80%	34.30%	100.0%
		BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.00%</u>	<u>0.00%</u>	<u>100.00%</u>	<u>100.0%</u>
		TOTAL	75	102	80	257	TOTAL	29.20%	39.70%	31.10%	100.0%
3-D	PROGRAM FOR PRE-SCHOOLERS	YES	36	27	21	84	YES	42.90%	32.10%	25.00%	100.0%
		NO	62	58	49	169	NO	36.70%	34.30%	29.00%	100.0%
		BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.00%</u>	<u>0.00%</u>	<u>100.00%</u>	<u>100.00%</u>
		TOTAL	98	85	74	257	TOTAL	38.10%	33.10%	28.80%	100.0%
3-E	PROGRAMS FOR YOUNG ADULTS	YES	49	22	13	84	YES	58.30%	26.20%	15.50%	100.0%
		NO	77	46	46	169	NO	42.60%	27.20%	27.20%	100.0%
		BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.00%</u>	<u>0.00%</u>	<u>100.00%</u>	<u>100.0%</u>
		TOTAL	126	68	63	257	TOTAL	49.00%	26.50%	24.50%	100.0%
3F	PROGRAMS FOR ELEMENTARY	YES	46	21	17	84	YES	54.80%	25.00%	20.20%	100.0%
		NO	69	51	49	169	NO	40.80%	30.20%	29.00%	100.0%

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN _____ APPENDIX F
 RECREATION AND OPEN SPACE SUBCOMMITTEE MEETING MINUTES

CHILDREN	BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.00%</u>	<u>0.00%</u>	<u>100.00%</u>	<u>100.0%</u>
	TOTAL	115	72	70	257	TOTAL	44.70%	28.00%	27.20%	100.0%

WATERFORD TOWNSHIP SURVEY QUESTIONS
 PERSONS WITH (YES) OR WITHOUT (NO) SCHOOL AGE CHILDREN (cont.)

SURVEY QUESTIONS	TOTAL SURVEYS				PERCENT AGE OF TOTAL					
	YES	NO	BLANK	TOTAL	YES	NO	BLANK	TOTAL		
3-G PROGRAMS FOR SENIORS	YES	44	25	15	84	YES	52.4%	29.8%	17.9%	100.00%
	NO	73	52	44	169	NO	43.2%	30.8%	26.0%	100.00%
	BLANK	<u>1</u>	<u>0</u>	<u>3</u>	<u>4</u>	BLANK	<u>25.0%</u>	<u>0.0%</u>	<u>75.0%</u>	<u>100.00%</u>
	TOTAL	118	77	62	257	TOTAL	45.9%	30.0%	24.1%	100.00%
3-H MEETING ROOMS	YES	39	27	18	84	YES	46.4%	32.1%	21.4%	100.00%
	NO	64	57	48	169	NO	37.9%	33.7%	28.4%	100.00%
	BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>0.0%</u>	<u>100.0%</u>	<u>100.00%</u>
	TOTAL	103	84	70	257	TOTAL	40.1%	32.7%	27.2%	100.00%
4 WILLING TO PAY SMALL FEE FOR POOL	YES	54	25	5	84	YES	64.3%	29.8%	6.0%	100.00%
	NO	82	70	17	169	NO	48.5%	41.4%	10.1%	100.00%
	BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>0.0%</u>	<u>100.0%</u>	<u>100.00%</u>
	TOTAL	136	95	26	257	TOTAL	52.9%	37.0%	10.1%	100.00%
5 ARE YOU A SENIOR	YES	8	74	2	84	YES	9.5%	88.1%	2.4%	100.00%
	NO	99	70	0	169	NO	58.6%	41.4%	0.0%	100.00%
	BLANK	<u>2</u>	<u>0</u>	<u>2</u>	<u>4</u>	BLANK	<u>50.0%</u>	<u>0.0%</u>	<u>50.0%</u>	<u>100.00%</u>
	TOTAL	109	144	4	257	TOTAL	42.4%	56.0%	1.6%	100.00%
6 DO YOU HAVE CHILDREN OF SCHOOL AGE	YES	84	0	0	84	YES	100.0%	0.0%	0.0%	100.00%
	NO	0	169	0	169	NO	0.0%	100.0%	0.0%	100.00%
	BLANK	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	BLANK	<u>0.0%</u>	<u>0.0%</u>	<u>100.0%</u>	<u>100.00%</u>
	TOTAL	84	169	4	257	TOTAL	32.7%	65.8%	1.6%	100.00%
7 HAVE YOU LIVED IN WATERFORD MORE THAN 3 YEARS	YES	69	3	12	84	YES	82.1%	3.6%	14.3%	100.00%
	NO	158	3	8	169	NO	93.5%	1.8%	4.7%	100.00%
	BLANK	<u>3</u>	<u>0</u>	<u>1</u>	<u>4</u>	BLANK	<u>75.0%</u>	<u>0.0%</u>	<u>25.0%</u>	<u>100.00%</u>
	TOTAL	230	6	21	257	TOTAL	89.5%	2.3%	8.2%	100.00%

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
RECREATION AND OPEN SPACE SUBCOMMITTEE
MEETING MINUTES

Date: 12 July 2001
Time: 6:00 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Sandra Werth, Chair
Amy Noel, Planner I
Dennis Griffin
Leo Landry
Donald Ukrainec
Leslie Kettren, HNTB
John Andrews

Also present: Brian, Oakland County Parks and Recreation

I. Presentations

The meeting was called to order at 6:00 p.m.

Ms. Kettren discussed the remaining time frame of the subcommittee phase of the master plan process and reviewed the duties of the subcommittee. Ms. Kettren said that the subcommittees should work toward completing their work by Labor Day, with the subcommittee establishing draft goals and objectives, with a white paper on these to follow. A representative of Oakland County Parks and Recreation, discussed County parks and public facilities and presented a list of suggestions for the committee to consider. Areas in which the County can not keep up with demand is banquet, convention and swimming facilities, as they are in high demand. Brian also suggested keeping the elderly in mind for recreation as that age group is growing rapidly.

II. Key Findings of Past Master Plan

- Total Publicly-owned recreation lands = 600 acres (Township & School District)
- Total State and County owned recreation lands = 675 acres
- Relationship with schools is integral to the recreation needs of the township and provides gym and classroom activities on a regular basis (*the gym and classrooms at the old Waterford High School have been lost as the property has been redeveloped privately*)
- Schools play an important role as neighborhood park facilities. Duplicating these facilities in neighborhoods would be highly inefficient and too expensive.
- The need for a community recreation center will grow with the growing and aging population.
- There will be increased pressure to provide for seniors
- Township should provide increased limited natural open space areas for activities such as nature study

Population trends for the future

- Family size continues to decrease (current household size is 2.45)
- Family size expected to drop to 2.3 by 2020
- Households with children expected to **decrease 8%**
- Households without children expected to **increase 22%**

- Population in the age group of 55 to 64 expected to **increase** by 80% (County)
- All age groups under 30 expected to decrease in next 20 years.

III. Open Space Tools for Consideration

Ms. Noel discussed the establishment of protection districts and the overlay zoning tools that have been successfully used in other communities. These tools provide for rational flexibility while working to strengthen a community's zoning enforcement.

IV. Draft Goals

Ms. Noel asked each subcommittee member to begin thinking about the goals and objectives that they would like to see incorporated into the new master plan. Ms. Noel stated that at the next meeting, the subcommittee would begin developing their list of desired goals and objectives.

- ◆ 8:30 Meeting adjourned.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
RECREATION AND OPEN SPACE SUBCOMMITTEE
MEETING MINUTES

Date: 1 August 2001
Time: 6:00 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Sandra Werth, Chair
Amy Noel, Planner I
Dennis Griffin
John Andrews

I. Presentations

The meeting was called to order at 6:00 p.m.

Ms. Noel explained that she would facilitate tonight's subcommittee brainstorming session. The goal of the exercise is to come up with a list of recreation and open space goals and objectives that everyone in attendance is comfortable in sending to the Committee of the Whole. Ms. Noel conducted the exercise, with the following goals and objectives recommended by the subcommittee to be included in the Township's new master plan as the result of its research and findings.

Goals that are pertinent to open space and resource preservation:

- GOAL: Maintain the abundance and quality of existing natural resources with Waterford Township, and acknowledge the resulting limitations to development.
- GOAL: Enhance and restore existing natural resources that have suffered degradation.
- GOAL: Retain the unique character and the desirability of Waterford Township as a "livable community"; a place to live, work, and play, maintaining and promoting the abundance of recreation opportunities.
- GOAL: Allow for a range of housing choices within the limitations in the community. Maintain a primarily low density residential community in areas where there are restrictions due to natural features, limiting soil conditions, lack of sewer and water and other urban services, and the capacity of the existing road network,.

How can the Township fulfill the stated goals?

- **Full funding to fulfill the needs of current recreation areas and programs**
 - **Community-wide accessible pedestrian pathway**
 - Riverwalk, bike paths, sidewalk improvements
 - **Funding for a Community Recreation Center**
 - To include swimming, auditorium, classrooms, etc.
 - **Increased passive recreation in nature areas**
 - Better access to places such as Elizabeth Lake Woods Nature Preserve through foot trails and observation sites
 - **Better Utilization of the Clinton River**
 - increased opportunities for active and passive recreation that involves the use of or the resources of the communities streams
 - **Increased walkability and access to existing parks**
 - **Preservation of Open Space**
 - Close the loop holes in cluster building options to include upland areas in open space design (as most developers want to leave wetlands as the only open space).
 - Explore new tools for open space preservation and analyze areas in our current Ordinance that can be improved. (including innovative site developments that allow for the protection of natural areas)
 - Include areas for play, public gardens and trails in residential site developments
 - Encourage the private preservation of open space through scenic easements and dedications
 - Encourage and preserve links of natural and open areas to natural resource areas, schools, parks and recreation areas.
 - **Inventory natural resource areas**
 - wetland, and associated upland inventories to catalog high quality natural resource areas that could be designated as areas that need protection. (analysis of wetlands, natural resource complexes by the County, and species inventories by the Michigan Natural Features Inventory)
 - Educate community on the function and importance of wetlands and open space areas.
 - Incorporate interpretation points or signage along wetland or high quality natural areas to point out to the public what is going on, or what they are encountering.
 - Township needs a better wetland identification map, and needs to make it visible to the public (displayed at Township Hall).
 - Look at ways to strengthen our natural feature buffer Ordinance.
- ◆ 8:30 Meeting adjourned.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
RECREATION AND OPEN SPACE SUBCOMMITTEE
MEETING MINUTES

Date: 5 September 2001
Time: 6:00 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Sandra Werth, Chair
Amy Noel, Planner I
Dennis Griffin
Leo Landry
Donald Ukraineec
John Andrews

I. Presentations

The final meeting of the subcommittee was called to order at 6:00 p.m.

Ms. Noel explained that she has taken the subcommittee's discussions and draft goals and objectives to create a draft white paper report for the subcommittee. The subcommittee reviewed Ms. Noel's work and moved to adopt the report as presented. Motion carried unanimously. (Approved white paper attached for the record).

8:30 Meeting adjourned.

CHARTER TOWNSHIP OF WATERFORD

Master Plan Project 2001

RECREATION AND OPEN SPACE SUBCOMMITTEE

Final Subcommittee Report

5200 Civic Center Drive
Waterford, Michigan 48329-3773
248-674-6255
Fax: 248-674-4097
<http://www.twp.waterford.mi.us/>

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I. INTRODUCTION

The Charter Township of Waterford is a community of over 73,000 people, located in the center of Oakland County, and covers approximately 36 square miles. Waterford has an abundance of water resources, including 34 lakes and the Clinton River. Due to the numerous lakes, Waterford was developed in several different stages with vacation and cottage-style homes first occupying the lakefronts and adjacent neighborhoods from about the 1920's until the 1950's. The next wave of development, in the 1970's and 1980's, was primarily commercial and industrial and occurred along two state trunk highways, which run approximately east to west. This phase of development coincides with the establishment of most of the existing Township parks. This community is entering a third phase of development with the creation of new subdivisions and condominium complexes on what is left of the undeveloped lands. Along with the resurgence of building residential homes come new issues with regard to available recreation lands, as well as the loss of valuable open space. The Recreation and Open Space Master Plan Subcommittee was organized to discuss and research this area which is important to the overall health of every community.

Like many communities in Oakland County, Waterford Township is striving to balance the development needs of the community with the preservation of open and recreational spaces. While the Township has numerous parks offering a variety of interests, many areas need to be improved to fulfill the needs of this growing and changing community. The citizens of Waterford understand that all communities go through life cycles, and as such, policies and program services must also change so that we are better able to service the residents and protect our existing natural resources for future generations.

This committee of volunteers looked at Waterford's existing park network, distribution, and activities offered. Information has been gathered about existing conditions, population, demographic changes, visioning workshops, land use exercises, residential surveys and interviews with key community persons. Over the last year, many of the committee members also participated in a walkability study of the Township. Two major areas of thought were explored and ideas expanded as a result of the subcommittee meetings: Greater diversity and distribution of park recreation areas, and preservation of natural open space areas.

II. RECREATIONAL ACTIVITIES

Waterford Township is home to numerous and varied public and private recreational opportunities. There are currently fourteen Township-owned parks, covering approximately 640 acres, as well as State and County owned recreational facilities. A Recreation Master Plan was completed in 1997, which documented the park and recreational facilities available to township residents. The Park Plan identified a list of goals that summarized many of the issues that were identified in the public participation workshops to fulfill the growing recreational needs of the community. The Master Plan Recreation and Open Space Subcommittee identified many of the same concerns and goals for the recreational needs of the community, as well as ideas on open space preservation. The recreational goals and projects are as follows:

Goal 1: Retain and Enhance Waterford's Unique Character

- ◆ Make Waterford Township a "livable community"; a place to work, live, and play while maintaining and promoting the abundance of recreation opportunities.

Goal 2: Community Recreation Center

A full-scale recreation center to service all age levels utilizing one central campus.

- ◆ Provide indoor swimming for purposes of recreation/fitness, therapeutics, and school district swim teams.
- ◆ Auditorium/theater stage for cultural events and conferences
- ◆ Gymnasium to include fitness center.
- ◆ Meeting and classrooms for enrichment and community programming
- ◆ Banquet facilities.
- ◆ Outdoor walking track or nature interpretive trail (possibly around Clam Lake).
- ◆ Playground for younger children.
- ◆ Propose a phased plan of development to provide the necessary funding to build a facility with all the amenities required to create a center that will serve the community for the foreseeable future.

Goal 3: Riverwalk Pedestrian Pathway

- ◆ Complete the path to the greatest extent possible from Dixie Highway south to Cooley Lake Road.
- ◆ Seek alternative funding sources from grants and foundations whenever possible to complete project.
- ◆ Explore opportunities to link Riverwalk with other trails in adjacent communities: West Bloomfield Rail-Trail, Independence Township.
- ◆ Work with Oakland County to get Riverwalk included in county map of trails and greenways network.

Goal 4: Increase opportunities for passive recreation and access to natural areas

- ◆ Better access and utilization of Elizabeth Lake Woods.
- ◆ Nature and interpretive footpaths and observation decks or boardwalks.
- ◆ Signage to identify natural features and areas such as the numerous river and stream crossings, watershed boundaries.
- ◆ Improve pedestrian access to Nature Center by way of Riverwalk path.

Goal 5: Utilization of the Clinton River

- ◆ Educate community about the presence, importance and threats to the Clinton River.
- ◆ Sponsor annual River Day projects, such as cleanups, bank restoration, re-vegetating eroded areas with native plants, canoe trips.

Goal 6: Increased Access/Use of Existing Parks.

- ◆ Provide better walkable access to existing parks.

- ◆ Upgrade playground equipment
- ◆ Explore opportunity for dog parks, or using a portion of an existing park for purpose of pet run areas.
- ◆ Study the use and utilization of existing parks to determine whether there are opportunities for change of use. For example, could any of the parks be converted to specialized parks for pets, gardens, lighted ball fields, etc.

Goal 7: Playgrounds in Neighborhoods

- ◆ Investigate opportunities for small playground or picnic areas within or adjacent to neighborhoods.
- ◆ Provide assistance to neighborhood associations in order to organize and control parks to serve their neighborhood.
- ◆ Research feasibility of making changes to the appropriate sections of the Ordinance to regulate park areas in new developments.

III. OPEN SPACE PRESERVATION

Waterford Township is the largest township in Oakland County by population size. Estimates of built area put Waterford in the ninetieth percentile range, and consequently, there is little natural area left to protect. However, Waterford is fortunate to have beautiful and rare natural areas that should be given priority in establishing conservation areas. One such example currently protected by the Township is Elizabeth Lake Woods Nature Preserve, located between Elizabeth Lake Road and Cooley Lake Road. The Clinton River flows through this nature preserve, which is home to rare and endangered species, important riparian wetlands, and forested uplands. Studies continue to support the need for open and natural spaces to the overall health and vitality of a community. Parks, open space and nature preserves positively impact surrounding property values, have great economic benefits by attracting and retaining businesses and residents, and help protect our water quality and quantity of runoff.

Waterford Township has a small window of opportunity to take steps to insure that our remaining high quality natural areas are protected. Results of surveys and workshops continually express the residents' interest in protecting our natural areas and making Waterford a place where people want to live and take pride in their community. As Waterford works to plan for the next twenty years, this subcommittee has identified goals and projects that will sustain Waterford Township as a livable community.

Goal 1: Protect Existing Natural Areas

- ◆ Maintain the abundance and quality of existing natural resources and acknowledge the resulting limitations to development.

Goal 2: Enhance and Restore Natural Areas

- ◆ Restore those places that have suffered degradation.
- ◆ Promote the use of native plant species to preserve the integrity of our natural history and combat the influx of exotics that threaten our community.

Goal 3: Restrict Development Intensity Based on Land Carrying Capacity

- ◆ Allow for a range of housing choices within the limitations of the land. Maintain a primarily low-density residential community in areas where there are restrictions due to natural features, limiting soil conditions, lack of sewer, water and other urban services, and the capacity of the existing road network.

Goal 4: Promote Open Space Developments

- ◆ Research current Ordinance requirements and correct or improve areas that need clarification.
- ◆ Make open space developments more desirable to developers.
- ◆ Make the preservation of uplands a requirement in open space and cluster developments.
- ◆ Include areas for play and community gatherings in new residential developments.
- ◆ Explore new and innovative tools and site design standards for open space preservation.
- ◆ Encourage private preservation of open space through conservation easements, dedications and stewardship programs.
- ◆ Encourage and preserve links of natural areas to other parklands, schools, and recreation areas (natural resource corridors).

Goal 5: Inventory All Natural Resource Areas

- ◆ Analyze natural areas to catalog high quality natural resource areas that should be designated as priority areas for protection. (Involve local wetland consultant, Oakland County Environmental Stewardship Program, Michigan Natural Features Inventory).
- ◆ Survey and map wetland areas in the Township for the purposes of compiling inventory data of the wetland type and function, and create a more comprehensive wetland map.
- ◆ Educate the community and Township staff on the importance and function of wetlands. Make wetland information and maps more readily available and displayed in township offices.
- ◆ Research strengthening the language of the natural feature buffer ordinance and woodland ordinance to preserve natural vegetation.

IV. VISION STATEMENT

Waterford Township has numerous recreational and natural area amenities that are greatly enhanced by the availability of several State, County and School District owned land and park facilities. While there are great opportunities available to Township residents, the Recreation and Open Space Subcommittee identified a variety of issues to address the changing needs of the community. Through discussions and research, the Subcommittee has developed an extensive list of goals and implementation projects to address areas where the Township is in need of improvements. These goals represent the desires of the community to provide its residents with adequate recreation facilities and activities while preserving our rapidly disappearing natural areas. Not only do these places provide areas of recreation for residents and habitat for wildlife, open and natural spaces increase our

quality of life by providing retention of stormwater and easing flooding concerns, filter our water and air, buffer noise and light pollution, and provide the aesthetics needed for a healthy economy. In order to make Waterford Township truly a place of destination, to retain our residents and business owners, and maintain a high standard of living, recreation and open space must become an integral part of the planning process.

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**CHARTER TOWNSHIP
OF
WATERFORD
OAKLAND COUNTY
MICHIGAN**



**MASTER PLAN
2003 – 2023
APPENDICES
G THROUGH W**

Moving Forward Together



APPENDIX G: TRANSPORTATION AND COMMERCIAL CORRIDORS SUBCOMMITTEE MEETING MINUTES

MAY 3, 2001 MEETING MINUTES----- PAGES G-2 THROUGH G-4
MAY 14, 2001 MEETING MINUTES ----- PAGES G-5 THROUGH G-6
MAY 29, 2001 MEETING MINUTES ----- PAGES G-7 THROUGH G-9
JULY 16, 2001 MEETING MINUTES ----- PAGES G-10 THROUGH G-20
AUGUST 6, 2001 MEETING MINUTES----- PAGES G-21 THROUGH G-22
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**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
TRANSPORTATION AND COMMERCIAL CORRIDORS SUBCOMMITTEE
MEETING MINUTES**

Date: 3 May 2001
Time: 6:30 p.m.
Place: Waterford Township Warming House

Present: Larry Mitchell, Chairman, (no email available)
Bob Vallina, Community Planning and Development Director
Debbie Harris
Charlotte Burckhardt
Christine Dion
Bob Sharrard
Warren Runyan

I Welcome

- ◆ Chairman Mitchell opened the meeting and asked everyone present to introduce themselves.

II. Presentations

- ◆ Bob Vallina, Township Community Planning and Development Director, provided the subcommittee members with a draft mission statement. He asked that the subcommittee members consider the draft and make any revisions they might like to see to the draft. The subcommittee members discussed the mission statement. It was moved and supported to adopt the proposed mission statement. Motion carried unanimously. (Approved mission statement attached for the record).
- ◆ Mr. Vallina then handed out a list of prospective topics for discussion at future subcommittee meetings (copy attached for the record). The subcommittee briefly discussed some of these issues in connection with some of their personal experiences. Mr. Vallina stated that if there were any other topics that members would like to add, please send them to him and he would add to future meeting agendas.
- ◆ Mr. Vallina explained to the subcommittee that the meeting time, date, and frequency were up to them to decide. He asked that the members consider what meeting schedule they would like to follow. Chairman Mitchell then asked subcommittee members what they thought. The members agreed that the day and location for today's meeting works for them. It was suggested that 6:00 p.m. would be preferable to 6:30 p.m. Therefore, it was moved and supported to hold subcommittee meetings on Mondays, preferably the first and third Mondays, at 6:00 p.m. in the Warming House.

III. New Business

- ◆ Next Meeting—May 14, 2001, 6:00 p.m. in the Waterford Warming House.

TRANSPORTATION AND COMMERCIAL CORRIDOR IMPROVEMENTS MASTER PLAN SUBCOMMITTEE MISSION STATEMENT

The Transportation and Commercial Corridor Improvements Master Plan Subcommittee will review and inventory the Township's transportation infrastructure, investigate means of improving and enhancing the transportation network, discuss and determine the most effective tools for integrating the Township's transportation needs with citizens' quality of life needs, discuss and develop concepts and tools for improving and enhancing the aesthetic and functional qualities of the Township's commercial corridors, and prepare a report on the subcommittee's findings, transportation and commercial corridor improvement priorities, and proposed action items for review by the Master Plan Citizens Committee of the Whole.

**TRANSPORTATION AND COMMERCIAL
CORRIDOR IMPROVEMENTS
MASTER PLAN SUBCOMMITTEE
MEETING TOPIC
DISCUSSION ITEMS**

Roads
Sidewalks
Railroad
Airport
Mass Transit
Commercial Corridor Development Tools
Vacant and Underutilized Property
Aesthetic Improvements

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
TRANSPORTATION AND COMMERCIAL CORRIDORS SUBCOMMITTEE
MEETING MINUTES**

Date: 14 May 2001
Time: 6:00 p.m.
Place: Waterford Township Warming House

Present: Bob Vallina, Community Planning and Development Director
Debbie Harris
Charlotte Burckhardt
Christine Dion
Bob Sharrard

CALL TO ORDER

The meeting was called to order by Bob Vallina. Mr. Vallina explained that Mr. Mitchell has moved out of the community and resigned from the Planning Commission, so we will be without a chair until the Township Board appoints a replacement for Mr. Mitchell.

DISCUSSIONS

It was decided to meet with the Oakland County Road Commission on the second Monday of June, which is the 6th. Mr. Vallina stated that he will check with the Capital Improvements subcommittee and find out if they will be willing to meet jointly on this topic.

The subcommittee members then discussed at length some of the problem areas that they have observed during their travels throughout the Township. The following areas were identified:

1. Telegraph at Dixie Highway is very narrow under the railroad tracks. The problem of widening this road due to the railroad tracks was discussed.
2. Subdivision roads should be addressed in the future plan for a thorough and ongoing preventative maintenance program.
3. Hospital Road between Pontiac Lake Road and M-59 and a small section of Lochaven Road are not paved. Paving these roads may be an alternative to alleviating traffic congestion on nearby roads. The possibility of a traffic light at Hospital Road and M-59 was discussed.

4. M-59, Dixie Highway, and Telegraph were discussed and the possibility of replacing the left turn lanes with a boulevard-style improvement to eliminate accidents in the left turn lanes.
5. Solutions for subdivision cut-throughs were discussed. Cut-throughs would be discouraged by improving the main roads and developing alternative configurations of existing roads. As an example, Warren Drive was discussed. One section of this road is zoned industrial and the other section is zoned residential. There is a lot of truck traffic that drives through the residential area. This road should be made two so there is a residential road off of Frembes and an industrial road off of Dixie Highway.
6. Williams Lake Road straightening at Airport Road was discussed. The possible solution of Williams Lake Road replacing the KinderCare and Credit Union was brought up. The difficulty will be in finding the funds to acquire this land and possibly relocate the businesses.

Other areas of discussion included the current condition of Williams Lake Road at M-59 and the proposed changes, and the problems with mass-transit in Waterford.

Homework Assignment!: Pinpoint current problem areas!

NEXT MEETING

The next meeting will be held Tuesday, May 29, 2001 at 6:00 p.m. at the Warming House. Debbie has volunteered to bring healthy munchies!

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
TRANSPORTATION AND COMMERCIAL CORRIDORS SUBCOMMITTEE
MEETING MINUTES**

Date: 29 May 2001
Time: 6:00 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Bob Vallina, Community Planning and Development Director
Debbie Harris
Charlotte Burckhardt
Christine Dion
Bob Sharrard
Warren Runyan
Bob Smith

I. Welcome

The meeting was called to order at 6:00 p.m.

II. Discussions

- ◆ An extensive discussion continued from the last meeting pinpointing the subcommittee's suggested top road problem areas and suggested improvement priorities in Waterford Township. In addition to the six areas listed in the last meeting minutes, the subcommittee also came up with the following road problem areas:
- ◆ Sashabaw/Dixie Highway Intersection is controlled by a three-way traffic signal, although a driveway to Burke's Lumber is aligned with the intersection. The drive should be closed or a four-way traffic signal installed to reduce the risk of accidents at the intersection.
- ◆ The future realignment of the M59/Williams Lake Road intersection was discussed and the question was raised whether installing a new section of four-lane Williams Lake Road between two sections of two-lane Williams Lake Road would create congestion problems.
- ◆ The subcommittee raised the question of extending Williams Lake Road north from Gale Road up through the state land and connecting it with Nelsey Road to create a north-south corridor from M59 to Dixie Highway.
- ◆ Widen Hatchery Road between Dixie Highway and Airport Road.
- ◆ Straighten Frembes Road near the intersection of Frembes and Dixie Highway.
- ◆ Pave the unpaved section of Lochaven Road.
- ◆ Slow and reduce traffic along Voorheis Road between M59 and Telegraph Road through the installation of traffic calming measures.
- ◆ Encourage the reduction of traffic on Silver Lake Road after the Telegraph Road extension is completed by removing the left turn green arrow from the traffic signal at the Silver Lake Road/Dixie Highway intersection.
- ◆ Install a bypass connection street between the Telegraph Road extension and Kennett Road.
- ◆ Widen North Cass Lake Road between M59 and Pontiac Lake Road.
- ◆ Improve the traffic flow through the Cass Lake Road/Elizabeth Lake Road/M59 triangle.

- ◆ The subcommittee also asked that the goal of improving and beautifying the railroad right-of-way be included as one of the goals of the Master Plan and that staff submit written correspondence to Canadian National requesting their approval and assistance in achieving this goal.
- ◆ Another suggestion was made to create a driver's education video to be used and shown frequently on the community cable station.

III. Tasks

Staff to submit written correspondence to Canadian National requesting their approval and assistance in improving and beautifying the railroad right-of-way as part of the committee's goals.

IV. Next Meeting

The next meeting will be held jointly with the Capital Improvements Subcommittee, Monday, June 11, 2001, at 6:30 p.m., in the Third Floor Conference Room of Township Hall. The focus will again be on Waterford's roads, with a representative from the Road Commission for Oakland County present to answer questions from members.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

TRANSPORTATION AND COMMERCIAL CORRIDORS SUBCOMMITTEE MEETING MINUTES

Date: 16 July 2001

Time: 6:00 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present: Steve Reno, Chair (no email available)

Bob Vallina, Community Planning and Development Director

Charlotte Burckhardt

Christine Dion

Bob Sharrard

Warren Runyan

Bob Smith

I. Welcome

The meeting was called to order at 6:00 p.m.

II. Discussions

- ◆ An extensive discussion was conducted on the topic of sidewalks and bikepaths in Waterford. Ms. Dion explained her family's personal experience with the dangers of not having pathways for bikes and pedestrians. Her uncle was killed while riding his bike on the road because there were no bikepaths. Ms. Dion's family was instrumental in going to the Township Board and getting funding to begin the bikepath project.
- ◆ Mr. Vallina discussed the history of the construction of the Township's existing bikepath system. Mr. Vallina explained how the Township once had a millage for the construction of the bikepath system. That millage was allowed to expire by the Township in the mid-1980s. Mr. Vallina also briefly discussed the development of the sidewalk systems in the Township and the disparity in age and condition. Mr. Vallina discussed the current requirements in the zoning ordinance for developers to install sidewalk as part of any new development. Mr. Vallina stated that the primary problem for completing the bikepath system, expanding sidewalk in existing neighborhoods, and improving existing sidewalk is that of funding. Mr. Vallina gave the subcommittee a copy of a memo that Building and Engineering Director Doug Bradley provided to the Township Board (copy attached) with recommendations for resolving the funding issue. The Township Board did not act at that time. Mr. Vallina explained that the Michigan Supreme Court has ruled that Townships are responsible for maintaining bikepath and sidewalk in road right of way, even though they have no jurisdiction over that right-of-way.
- ◆ The subcommittee suggested the creation of a map that shows all sidewalks, bikepaths, the location of all schools, and the location of all parks and recreation areas.
- ◆ Mat Gaberty from the Road Commission should be contacted for traffic volume and accident information.

- ◆ A suggestion was made to initiate a program where citizens could purchase decorative park benches at a reduced price. The objective would be to place these near sidewalks for pedestrians to stop and rest, thereby encouraging walkability.
- ◆ The subcommittee wholeheartedly supports all efforts to make Waterford more walkable.
- ◆ The subcommittee also asked that the goal of improving and beautifying the railroad right-of-way be included as one of the goals of the Master Plan and that staff submit written correspondence to Canadian National requesting their approval and assistance in achieving this goal.
- ◆ Another suggestion was made to create a driver's education video to be used and shown frequently on the community cable station.
- ◆ Mr. Sharrard went out and reviewed many of the roads in Waterford. He prepared a written report on his recommendations (copy attached for the record).

III. Next Meeting

The next meeting will be held Monday, August 6, 2001, at 6:00 p.m., in the Third Floor Conference Room of Township Hall. The topic will be commercial corridor improvements. Mr. Vallina will ask Steve Hayward of HNTB to attend and provide information on this topic.

Katherine G. Innes, Supervisor
Betty Fortino, Clerk
Dee A. Minton, Treasurer
Todd T. Birkle, Trustee
Paul E. Deni, Trustee
Bette O'Shea, Trustee
Jean A. Scott, Trustee

WATERFORD

A CHARTER TOWNSHIP

5200 Civic Center Drive
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DEPARTMENT OF BUILDING & ENGINEERING

Douglas W. Bradley, P.E.
DIRECTOR

Brent A. Gibson
Ass't. Director of Building

Robert A. Merinsky
Ass't. Director of Engineering

MEMORANDUM

January 28, 1999

To: Sidewalk Committee

From: Douglas Bradley - Building and Engineering Director

Re: Existing Sidewalk Repair Funding

Using the aerial photographs and street mapping information available through the GIS system the Engineering staff has determined that approximately 500,000 linear feet of sidewalk currently exists within the public rights-of-way in Waterford Township. The condition of this existing sidewalk varies from new to completely non-functional. Of this total length of sidewalk we estimate that between 15% and 20% (75,000 to 100,000 linear feet) of this sidewalk is deteriorated or damaged to the point that it presents a hazard to persons using the sidewalk.

The courts have ruled that the local municipalities are liable for injuries resulting from use of sidewalks, therefore to protect the Township's exposure it is necessary that we take action to repair the deteriorated and damaged sidewalks. Assuming a repair cost of \$15 per linear foot, the cost to repair the currently deteriorated and damaged sidewalks is estimated between \$1,200,000 and \$1,500,000.

Currently the Township has no funds set aside for sidewalk repair or construction. A mechanism must be developed to provide the necessary funds to repair the sidewalks. This could take the form of a Township wide special assessment or an increase in the millage assessed on properties. Whatever form it takes I would suggest that an aggressive and proactive approach is taken so that all deteriorated and damaged sidewalk can be repaired within 5 to 7 years. This will require that approximately \$250,000 be made available for sidewalk repairs each year.

To accomplish the necessary repairs I proposed that a survey be conducted of all the existing sidewalk within the Township. All sidewalk would be rated for deterioration, damage, safety and serviceability. This survey would then be used to prioritize the areas.

Existing Sidewalk Repair Funding
January 28, 1999
Page 2

for repair, thus insuring that the worst sections are repaired first. The cost to perform the suggested survey of the existing sidewalk and prioritize the repairs is estimated at \$8,000.

I would also recommend that the funding system be setup to allow for the expansion of the sidewalk system. This will provide the Township with funds to construct new walks to provide for safe pedestrian travel throughout the Township.

To plan for the expansion of the sidewalk system I recommend that all public rights-of-way be surveyed and rated for their sidewalk constructability. Factors effecting the constructability of sidewalk include topography, available right-of-way, trees, ditches, wetlands and drainage. This rating would be done on a street by street, block by block basis. This constructability rating would then be used along with other considerations such as proximity to schools, businesses and existing sidewalk systems to develop a sidewalk master plan for the Township. The areas with the greatest benefit and lowest cost would be the first constructed. The cost to perform this survey and establish the constructability rating for all non-sidewalked public rights-of-way is estimated at \$12,000.

WATERFORD ROADS AND TRANSPORTATION

By

Robert C. Sharrard,

Transportation & Commercial Corridor Improvements Subcommittee Member

Andersonville Road (Historic District): Presently two lanes; concrete
No suggestions or recommendations

DIXIE HIGHWAY

Presently five lanes, blacktop

Suggestions: Widen and lighten by installing center boulevard areas with lights and left turn stacking lanes
Service drive full length with limited ingress/egress. Service drive to be minimum of ten feet from travel lanes (traffic lanes)

Long Range Goal: Mass rapid transit system (monorail or vacuumatic system) from Southfield along Telegraph Rd. to Flint (Saginaw Street then up to Saginaw, Bay City to Midland, etc.).

AIRPORT ROAD

Presently two lane concrete

Suggestions: Widen to four lanes plus center boulevard greenbelt with left turn stacking lane; service drive on both sides or to restrict all business off Airport Road. Widen Airport Rd. from Williams Lake Rd. to Elizabeth Lake Rd.

WILLIAMS LAKE ROAD

Suggestions: Widen this road to four lanes (two lanes in each direction) with center boulevard area and left turn lanes.

Long Range Goal: Mass rapid transit system (monorail or vacuumatic system) spur from Dixie Highway to Highland Road/Airport Road.

FREMBES ROAD

Presently two lane (concrete and blacktop)
Road from Walton Boulevard to Hatchery Road

Suggestions: Repave road, widening to thirty feet but having roadway a two-lane road. Improve intersection at Dixie Highway but removing commercial buildings at corner to provide better vision of approaching traffic on Dixie Highway with right turn lanes and right turn arrows; right turns only at intersections.

TRANSPORTATION

Roads – Starting in the North

Andersonville Road

A two lane concrete road; should be and will need to be widened out from Airport Road to Waterford-Springfield Township line. It should be two lanes in each direction with a boulevard area and left turn stack up lanes. This approach should eventually be carried out

to Davisburg. The roadway (Andersonville) from Dixie Highway to Airport Road, being within the Waterford Historical area should be left as a two road with the possibility of Airport Road being rerouted around the historical area.

Airport Road

This two lane road should be widened to four lanes, two in each direction, with a center boulevard and left turn stack lanes from Andersonville Road south to Elizabeth Lake Road, with no left turns permitted at any intersection. It should be rerouted from the railroad tracks westerly to join up at the intersection at Williams Lake Road, at the point where the Credit Union office now stands (2000/2001)

Walton Boulevard/Williams Lake Roads

These two roadways running generally east-west and turning generally south, should be two lanes in each direction with a center boulevard area with left turn stack up lanes or turn around lanes. "No Left Turns" directly at major intersections to be allowed, only right turns. The widening of these roads should be carried out from Pontiac/Waterford city line to Highland Road then south off Highland Road to Cooley Lake Road with no direct left turns permitted.

Sashabaw Road

This road is a two-lane blacktop road with a strong challenge because of curves and lakes. It could be widened out to four lanes with very limited left turns and these should be turn around lanes.

Dixie Highway from Oakland/Telegraph Road intersection north

This roadway presently is a five-lane road, two lanes in each direction with a left turn lane and is a blacktop surface.

This roadway should be redesigned to have a boulevard area with left turn stack up lanes with a service drive on both sides so that direct entry to all business is eliminated. The service route should be considered for the future, but the boulevard area and limited left turn stack up lanes should be considered to be built within the next five to seven years at the intersection of Sashabaw Road. This intersection should be redesigned and possibly relocated for better safety.

The intersection s of Williams Lake Road, Walton Boulevard, Frembes, Hatchery, Watkins Lake Road, Scott Lake Road, and Silver Lake Road should all be redesigned for right turns only then left turn stack up lanes (turn around lanes). The same should apply at the Telegraph Road/Dixie Highway/Oakland Avenue intersection "no left turns" directly.

Telegraph Road

This road is a four-lane road from Elizabeth Lake Road to Dixie Highway and five-lane south of Elizabeth Road to just south of Voorheis Road.

The northern portion of the roadway, Elizabeth Lake Road north, should be widened to four wider lanes with a center boulevard area with a left turn around lane near Dixie Highway and right turn circle for northbound traffic at County Center Drive.

The railroad viaduct on Telegraph Road just South of Dixie Highway should be replaced with wide highway lanes and razed to a 15-ft. to 18-ft. height from road surface to lower bridge surface.

Hatchery Road

Hatchery Road is a two lane blacktop road from Dixie Highway to Williams Lake Road, with some turns between Airport Road and Williams Lake Road.

This road should be a “one way” street from Frembes Road to Dixie Highway with the area from Frembes to Crescent Lake Road being widened out to four lanes, with the area from Crescent Lake Road to Airport Road being widened to five lanes. At the intersection of Frembes Road, there should be a “right turn only”, possibly with a green arrow replacing the present left turn arrow.

The intersection of Crescent Lake Road should continue to have a left turn lane with a turn signal also. There should be a right turn lane from Hatchery to Crescent Lake Road with control devices within the headquarters (Fire) built to control signals at this intersection.

Watkins Lake Road

Watkins Lake Road is a two-lane blacktop road running from Pontiac Lake Road to Dixie Highway, with an offset intersection at Scott Lake Road and a 90° turn at Covert Road. This is a blacktop surface that should be made a “one way” road from Pontiac Lake Road to Dixie Highway.

Scott Lake Road

Scott Lake Road is a two-lane concrete road running from Elizabeth Lake Road to Dixie Highway. This road needs all concrete redone. The pavement is severely cracked its full length. It should be widened out to two lanes in each direction with a boulevard and left turn lanes.

Silver Lake Road

This road is a two lane blacktop road which has beautiful oak trees providing a beautiful shady drive on hot summer days and should remain “as is” – there is a narrow bridge near Walton Boulevard which is programmed for replacement in 2002.

Pontiac Lake Road

Pontiac Lake road is a two lane blacktop road running from Telegraph Road to Williams Lake road with a gravel section from Williams Lake Road to Highland Road (M-59) within White Lake Township. This section should be closed.

Pontiac Lake Road should be widened to four lanes, two in each direction with a center boulevard and left stack up lanes for its entire length.

Elizabeth Lake Road

This is a five lane concrete surface with two lanes in each direction and a left turn lane.

This road should be widened ten feet and include a center boulevard section with left turn stack up lanes (turn around) to Cooley Lake Road. From Cooley Lake Road to Williams Lake Road, this road is a blacktop surface that should be widened to four lanes (possibly five lanes).

Huron – M-59 – Highland Road

This road is presently a five-lane road, two lanes in each direction with a center left turn lane. This road should be widened to four feet on both sides and a boulevard area in the center with left turn stack up lanes. Limitations of all direct left turns at all intersections all the way to the Waterford/White Lake Township lines.

Voorheis Road

This road is a two lane concrete road from West Huron Road (M-59) to Telegraph Road on the Township's southeast corner. This road needs a complete rebuilding. Part of this road near Telegraph Road lies within the City of Pontiac.

This road should be turned into a "one way" road from Huron Street to Telegraph Road.

Cass Lake Road

North Cass Lake Road runs from Highland Road to an area within subdivision. This two lane road, presently, I believe, does not have enough traffic to justify any action at this time.

South Cass Lake Road, from Highland Road to Keego Harbor City limits should be widened to four lanes, two in each direction with a center boulevard area with left stack up turn around lanes. The bridge near the south Township line should be replaced with a wider bridge.

Crescent Lake Road

This roadway is a two-lane road running from Elizabeth Lake Road to Hatchery Road with a left turn lane at M-59 (Highland Road). Right and left turn lanes at Hatchery Road.

This road must be widened out promptly from Highland Road to Hatchery Road.

This road should be reconstructed to four lanes, two in each direction with a boulevard area with left stack up turn around lanes.

From Highland Road to Elizabeth Lake Road, this area of road should have a traffic study done to ascertain the amount of traffic on this road. Present traffic may not justify widening at this time. Eventually, this road will require widening.

Hospital Road

Hospital Road from Pontiac Lake Road to Highland Road needs to be paved with future foresight being that at some point in time, this road may need to be widened; therefore, the road right-of-way width should be considered to that end and planned for when paving project is done.

Lochaven Road

This two-lane road needs paving in an area not paved at this time (2201). This has not been done up to this date because of the unstable base. This area has a high water table with low surrounding land. A traffic study should be done to see if the amount of the traffic on this road could justify expense.

Cooley Lake Road

This road runs from Elizabeth Lake Road to Cooley Lake Road south. This road needs widening to two lanes in each direction with a boulevard section with left turn around stack up lanes in all boulevard areas, proper trees, shrubs and flower planting should be required with underground sprinkler systems being installed to maintain beautification of the Township.

Transportation

In this area, the short-term solution would be bus service on major arteries. The long-term solution would be a monorail system that would be the same as Disney World and Seattle, Washington, has. This system should provide service from the Airport to the bus/train terminal in Pontiac, all G.M. and D.C.A.G plants and offices in Auburn Hills and Lake Orion.

It is further recommended that such a system (monorail or vacuumatic) should be a statewide operation, covering all major cities as well as many smaller communities.

Feeder lines by bus in areas that the monorail/vacuumatic system would not be economically feasible to build. The major routes for the monorail/vacuumatic system could be over the present interstate system such as I-75, I-94, I-96, etc., connecting Detroit, Pontiac, Flint, Saginaw, Bay City to Mackinaw from Pontiac along M-59 to Mt. Clemens (east) to I-96 at Howell. A line from Detroit to Lansing to Grand Rapids/Muskegon.

Detroit to Chicago along I-94, Detroit to Port Huron, etc.

Such a system could be built when the economy is extremely low (recession or depression) when people need work paid for through all government bodies.

This plan has been offered by Robert C. Sharrard, June 6, 2001, age 75.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
TRANSPORTATION AND COMMERCIAL CORRIDORS SUBCOMMITTEE
MEETING MINUTES

Date: 6 August 2001

Time: 6:00 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present: Steve Reno, Chair

Bob Vallina, Community Planning and Development Director

Charlotte Burckhardt

Christine Dion

Bob Sharrard

Warren Runyan

Bob Smith

Steve Hayward, HNTB

Mike Howell, HNTB

I. Welcome

The meeting was called to order at 6:00 p.m. Mr. Vallina introduced Steve Reno, new Planning Commissioner and Road Commission employee. Mr. Reno will be the chair of this subcommittee for the brief remainder of this process.

II. Discussions

◆ Mr. Vallina passed out a copy of a short publication put out by the Urban Land Institute, Ten Principles for Reinventing America's Suburban Strips. Mr. Hayward briefly went through the ten principles outlined:

- ◆ Ignite Leadership and Nurture Partnership
- ◆ Anticipate Evolution
- ◆ Know the Market
- ◆ Prune Back Retail-Zoned Land
- ◆ Establish Pulse Nodes of Development
- ◆ Tame the Traffic
- ◆ Create the Place
- ◆ Diversify the Character
- ◆ Eradicate the Ugliness
- ◆ Put Your Money (and Regulations) Where Your Policy is

Mr. Hayward then focused more specifically on establishing pulse, or neighborhood, nodes and taming the traffic. Mr. Hayward described these as critical to Waterford if their goal is to improve their commercial corridors. Destinations that would not be a burden on traffic capacity can be created throughout the community with the concept of neighborhood nodes. Traffic can be slowed down with the traffic calming methods that are now being explored and implemented in the planning and engineering fields. Mr. Hayward also discussed the concept of access management and how important it is to reduce the number of driveways that enter and exit onto the main thoroughfares.

- ◆ The subcommittee discussed the potential of creating boulevard-like commercial corridors on M-59, Dixie Highway, and Telegraph with underground utilities, less driveways, and removal of all nonconforming signage. The members expressed support for this concept. Some concerns about boulevards creating more traffic problems than benefits were stated. Mr. Vallina explained to the subcommittee that this concept is a goal. There is extensive traffic engineering that would have to be undertaken to determine the feasibility of implementing this concept. It might be found that only sections of our main thoroughfares could handle a new configuration. The important step is to find out if the concept itself is worth exploring. The subcommittee agreed that the concept of commercial corridor improvements is a goal that needs to be part of the master plan.
- ◆ The next meeting will be devoted to developing goals and objectives for this subcommittee. Mr. Vallina asked each subcommittee member to think about what they want to see as the subcommittee's goals and objectives.

III. Next Meeting

The next meeting was set for Monday, August 13, 2001 at 6:00 p.m. in the Township Hall third floor conference room. This will be the final subcommittee meeting. HNTB will conduct an exercise with the subcommittee members to determine the goals and objectives that the subcommittee members want to forward to the Master Plan Committee of the Whole for consideration as master plan goals.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
TRANSPORTATION AND COMMERCIAL CORRIDORS SUBCOMMITTEE
MEETING MINUTES**

Date: 13 August 2001

Time: 6:00 p.m.

Place: Waterford Township Hall Conference Room 3-1

Present: Steve Reno, Chair (no email available)

Mark Kellenberger, Planner II

Charlotte Burckhardt

Christine Dion

Bob Sharrard

Warren Runyan

Bob Smith

Steve Hayward, HNTB

I. Welcome

The meeting was called to order at 6:00 p.m.

II. Discussions

Mr. Hayward explained that he would facilitate tonight's subcommittee brainstorming session. The goal of the exercise is to come up with a list of transportation and commercial corridor goals and objectives that everyone in attendance is comfortable in sending to the Committee of the Whole. Ms. Burckhardt submitted the following list for consideration as the starting point for proposed subcommittee goals and objectives:

1. Improve north-south mobility in Waterford Township.
 - A. Investigate the extension of Williams Lake Road north to Nelsey Road.
 - B. Pave Hospital Road.
2. Improve the physical appearance and functional character of the major corridors in the township, especially Dixie Highway and M-59.
 - A. Develop an overlay district for Dixie Highway and M-59 to address signage, lighting, and landscaping.
 - B. Develop an Access Management program to reduce the number of curb cuts along Dixie Highway and M-59 and implement using site plan review and other tools.
 - C. Require Traffic Impact Studies for major traffic generating uses over a specific size (either acreage, square footage, or number of units).
 - D. Work with MDOT to investigate the possibility of boulevarding Dixie Highway and M-59 and implement if feasible.
 - E. Work with Oakland County Planning & Economic Development Services to aggressively market vacant and underutilized parcels, with special attention given to Dixie Highway from Silver Lake Road to Telegraph.
 - F. Create a Traffic Safety Committee that is responsible for identifying intersection improvements and other smaller scale road projects. The Traffic Safety Committee can assist the Township Board of Trustees in prioritizing the road improvement projects that are undertaken each year.

- G. Contact Grand Trunk Railroad to determine if the railroad right-of-way along Dixie Highway from Watkins Lake Road to Hatchery Road can be landscaped and made into an aesthetic feature for the township.
 - H. Landscape key gateway locations into Waterford Township and pursue sponsorship for the purchase and maintenance of the landscape materials.
3. Enhance the walkability of Waterford Township.
- A. Implement a sidewalk connection program that connects existing sidewalks in the Township. The first priority should be given to connect sidewalks that lead to schools and parks.
 - B. Develop a bike path master plan and implement it.
4. Improve transit options, especially for the elderly.
- A. Develop a community sponsored van program aimed at destination users.
 - B. Investigate the need for fixed route bus service in the Township.

The rest of the subcommittee approved of all of the points that Ms. Burckhardt has listed. In addition, the committee added the following item:

5. Improve Traffic Safety
- A. Work with the Road Commission for Oakland County to improve the timing of traffic signals.
 - B. Identify locations of pedestrian/vehicle/bicycle conflict and make improvements.



APPENDIX H: HISTORIC PRESERVATION AND NEIGHBORHOOD NODES SUBCOMMITTEE MEETING MINUTES

APRIL 26, 2001 MEETING MINUTES----- PAGE H-2
MAY 21, 2001 MEETING MINUTES ----- PAGES H-3 THROUGH H-4
JUNE 4, 2001 MEETING MINUTES ----- PAGES H-5 THROUGH H-8
JUNE 18, 2001 MEETING MINUTES ----- PAGE H-9
JULY 16, 2001 MEETING MINUTES ----- PAGES H-10 THROUGH H-11
JULY 30, 2001 MEETING MINUTES ----- PAGES H-12 THROUGH H-13
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CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

HISTORIC DISTRICT AND NEIGHBORHOOD NODES SUBCOMMITTEE MEETING MINUTES

Date: 26 April 2001
Time: 6:00 p.m.
Place: Andersonville Historic Church Meeting Room

Present:

Dean Fisher, Chairman
Larry Lockwood
Michael Franz
Dr. John Richardson
Evangeline Chase
Allan Motzny
Richard Lohff

This was the first meeting for the subcommittee, which was held at the historic church on Andersonville Road. The meeting started at 6:00 p.m.

Mr. Fisher called the meeting to order at approximately 6:10 p.m.. Mr. Fisher passed out the agenda and a "Draft" Mission Statement, which had been prepared by staff, for discussion purposes. After reviewing the mission statement, there was some discussion regarding the concept of neighborhood nodes. Staff explained the basic principles regarding this concept. Discussion continued regarding the time to be spent on the historic district vs. neighborhood nodes...

The committee requested that staff make the necessary arrangements to invite the Historic District Commission members to the next subcommittee meeting to learn more about the historic district. The committee requested that staff provide the following information to be mailed prior to the next meeting:

- Map of Historic District
- Township Street Map
- Sample Master Plans from other communities
- Information on other historic sites within Waterford Township
- List of Historic District Commission members

Discussion occurred regarding the best day, time and how often the committee would meet. It was resolved that Monday was the best day and that a combined meeting with the Historic District Commission would be beneficial to the committee for the next session.

It was further resolved that the next meeting will be, Monday, May 21, 2001 at 7:00p.m. at the church. Staff stated that arrangements would be made to invite the Historic District Commission.

Meeting Adjourned: 7:45 p.m.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

HISTORIC DISTRICT AND NEIGHBORHOOD NODES SUBCOMMITTEE MEETING MINUTES

Date: 21 May 2001

Time: 7:00 p.m.

Place: Andersonville Historic Church Meeting Room

Present:

Dean Fisher, Chairman

Larry Lockwood

Michael Franz

Allan Motzny

Richard Lohff

Guests:

Dorothy White, Waterford Historic District Commission Chairperson

Joy Smith, Waterford Historic District Commission Member

**Dick Cartmill, Waterford Township Parks and Recreation Director,
Waterford Historic District Commission Secretary**

The second meeting for this subcommittee was again held at the historic church on Andersonville Road. The meeting started at 7:00 p.m.

Mr. Fisher called the meeting to order. The minutes of the 4-26-01 meeting as prepared by Mr. Lockwood were distributed among the members for review. The committee moved to accept the meeting minutes for the record.

Mr. Fisher went on to introduce the committee members to the Historic District members in attendance and welcomed them to the meeting.

Mr. Lockwood explained the reason the Historic District and Neighborhood Nodes Subcommittee was formed and gave a brief overview of the Master Plan process and how it will relate to Waterford's Historic District.

Mr. Motzny passed out an article on Historic preservation to the group. Mr. Lohff requested that a copy of the recent Walkability Study prepared by Beckett and Raeder, Inc., Planning consultants to the Township, be made available for review.

Discussion then occurred regarding the Historic District. Specific recommendations were made by the Historic District board members in attendance.

Ms. White stated that "cut- thru" traffic along Andersonville Road is a serious problem with heavy truck traffic being the worst. She suggested that signage be installed in appropriate locations along Williams Lake Rd., Andersonville Rd. and Dixie Hwy. to deter this. Mr. Lockwood will contact the R.C.O.C. to investigate this possibility.

Mr. Cartmill suggested that if sufficient R.O.W. were available along Andersonville Rd. that a boulevard would help to improve traffic flow and reduce speeds in the area. Ms. White expressed a concern over parking in the R.O.W. and that sidewalks are continuously being blocked in some areas of the District. There are also numerous locations where sidewalks are in various stages of disrepair and present a safety problem for pedestrians. This should be addressed through the Walkability Study and in combination with the Master Plan update.

Mr. Lohff suggested that the speed limit in the district should be lowered to 15 MPH. This would also help in deterring traffic to alternate routes.

Mr. Cartmill and Ms. White recommended that Historic District Signage be provide at multiple locations along the roadways leading in the the district. This would serve to identify the area and further promote this important district.

Mr. Cartmill suggested that decorative antique style street lights be installed along the major streets of the district. This would include Andersonville Rd., Airport Rd. and Dixie Hwy. Ms. White presented a concept plan for this type of lighting.

Discussion continued and Mr. Franz suggested that “traffic calming” concepts be explored for this area as identified in the Walkability Study.

Ms. Smith and Ms. White were concerned that the Township does not have an accurate record of those properties currently included in the Historic District. Mr. Lockwood will contact them in the next several weeks to compare records and prepare an accurate data base for the district.

Discussion continued over “walkability” and “accessability” in and to this area. Mr. Cartmill suggested that concrete sidewalks stamped with a brick pattern would better fit the image of the district and this should be explored. Mr. Lohff suggested that sidewalks must be barrier free and to take this into consideration when deciding on the type of walkway system to be installed. Mr. Franz will check into barrier free requirements and report back to the subcommittee. The Historic District Board members present agreed that 5ft. wide walkways located on both sides of the streets within the district would best fit the character of this historic area.

Discussion concluded and Mr. Fisher thanked the Historic District board members for coming to the meeting.

The committee resolved to table the review and ultimate adoption of the “Draft” Mission statement until it can be discussed with a full compliment of committee members. The subcommittee further agreed to set the next meeting date for Monday, June 4th at 7:00 p.m. at the church.

Meeting adjourned: 8:15 p.m.

CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE

HISTORIC DISTRICT AND NEIGHBORHOOD NODES SUBCOMMITTEE MEETING MINUTES

Date: 4 June 2001
Time: 7:00 p.m.
Place: Andersonville Historic Church Meeting Room

Present:

Dean Fisher, Chairman
Larry Lockwood
Michael Franz
Dr. John Richardson
Evangeline Chase
Allan Motzny
Richard Lohff

Guests: **Dorothy White, Waterford Historic District Commission Chairperson**
Joy Smith, Waterford Historic District Commission Member

The third meeting for this subcommittee was again held at the Historic Church on Andersonville Road. The meeting started at 7:00p.m.

Mr. Fisher called the meeting to order. The meeting minutes from the 5-21-01 meeting as prepared by Mr. Lockwood were distributed to the members for review and approval. The committee moved to accept the meeting minutes for the record.

Mr. Richardson requested that the minutes for tonight's meeting and any future meetings along with upcoming agendas be forwarded to the committee in advance for review prior to the next scheduled meeting. Mr. Lockwood stated that this would be done.

Mr. Fisher passed out the agenda for this evening's meeting and inquired as to whether there was any further discussion on the proposed "Draft Mission Statement" that had been previously tabled. It was then, moved by Mr. Richardson, supported by Ms. Chase to adopt the Mission Statement as drafted. The motion carried unanimously. (Copy attached for the record).

Discussion then shifted to the next item on the agenda, "Questions for Community Survey". Mr. Lockwood gave a brief explanation of the subcommittee's charge as it relates to identifying topics for questions.

Discussion continued with regard to the Historic District and whether or not it would be legally possible to expand the district. Mr. Motzny, having a legal background and specializing in municipal law explained that without a property owner's consent, the Township must have identified a "public purpose" for this action and that this could be considered a "taking" of private property otherwise. The subcommittee as a whole expressed a strong interest to promote the expansion of the Historic District for those properties that would qualify.

Ms. White and Ms. Smith displayed historic maps of the district that indicated discrepancies in the district boundary. Mr. Lohff requested that copies of the maps be made available for the subcommittee to review and study. Discussion continued with regard to the differences in the maps. Ms. Smith stated that the Historic District Commission was active from 1976 – 1980, with a lapse occurring from 1980 – 1990. The Commission was revived again in 1990 and has continued to present.

Initially, a survey was conducted to determine who and what properties were interested in being a part of the Historic District. Responses were received and tabulated which identified those property owners who wanted to be included into the district and those who did not. A significant number of property owners did not respond and those properties were not included in the district. The subcommittee strongly supported the development of a new survey for the entire historic area to determine the eligibility of those properties who had failed to respond previously and to determine if there is interest from other property owners in the area that may qualify for inclusion into the district.

Mr. Motzny stated that the Historic District Ordinance could in fact be amended to require additional architectural standards necessary to maintain the historic “look” of the area.

Mr. Lohff stated that the district should have appropriate identification signage. He went on to explain that by installing signage along the major roadways that lead into the district, people would become more aware of the area and its significance. Mr. Lohff suggested that by color coding pavement at various points entering the district and installing appropriate roadside signage, would be very beneficial to this area.

Mr. Richardson suggested that staff contact Waterford Police Chief Dean about lowering the speed limit on Andersonville Road between Dixie Hwy. and Airport Road. The subcommittee concurred that this would be a necessary “first step” in making the district more pedestrian friendly.

Discussion continued regarding sidewalks or pedestrian pathways. Mr. Lohff questioned whether or not the Township was liable for sidewalks in disrepair. Mr. Lockwood and Mr. Motzny confirmed that this was in fact the case. However, State Representative Kowall is currently working on a bill that would make public sidewalks and their maintenance the responsibility of the property owner which abut the public walkway.

Mr. Franz stated that stamped concrete or even brick pavers may not be acceptable for use as a public walkway. Disabled or handicapped individuals may not find this type of walkway treatment sensitive to their needs. Mr. Lockwood stated that staff would check into the issue with the A.D.A. and report back to the subcommittee. Mr. Franz went on to state that more information on the subject of “Traffic Calming” would be helpful in studying the concept of “Neighborhood Nodes”.

Ms. Chase stated that many commercial strip centers are currently vacant or not completely occupied. This is a concern that should not be overlooked. She went on to question whether or not the neighborhood nodes concept will promote more strip center development? Mr. Lockwood stated that a representative from the Township’s Master Plan Consultant, HNTB, would be invited to the next meeting to discuss the neighborhood nodes concept in greater detail.

As discussion concluded, Mr. Lohff requested that staff investigate the status of the single family home located at the corner of Andersonville Road and Steffens. The house has not been occupied for many years and is currently used only for storage purposes. Mr. Lockwood stated that staff would research the status of this property and report back to the subcommittee.

The subcommittee concluded the meeting by identifying a number of questions that would be passed on to HNTB for inclusion in their upcoming community survey. Mr. Lockwood will prepare the questions and forward them on to HNTB.

It was resolved to schedule the next meeting for Monday, June 18, 2001 at 7:00 p.m. The primary topic for discussion at that meeting will be Neighborhood Nodes.

Meeting Adjourned: 8:55 p.m.

HISTORIC DISTRICT AND NEIGHBORHOOD NODES MASTER PLAN SUBCOMMITTEE MISSION STATEMENT

The Historic District and Neighborhood Nodes Subcommittee will work to review and critique related general ordinances of the Charter Township of Waterford, relative to Waterford's Historic District, explore existing and potential planning and zoning tools to promote the protection, preservation, rehabilitation, restoration and reconstruction of sites, buildings and or structures within this district.

Furthermore, this subcommittee will identify potential areas within the Township to promote the development of community neighborhood nodes that enhance and strengthen Waterford as an accessible and pedestrian friendly community. Upon completion of these findings and recommendations, a report will be prepared and presented to the Master Plan Citizens Advisory Committee of the Whole.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
HISTORIC DISTRICT AND NEIGHBORHOOD NODES SUBCOMMITTEE
MEETING MINUTES**

Date: 18 June 2001
Time: 7:00 p.m.
Place: Andersonville Historic Church Meeting Room

Present:

Dean Fisher, Chairman
Larry Lockwood
Michael Franz
Dr. John Richardson
Evangeline Chase
Allan Motzny
Richard Lohff
Carla Spradlin
Leslie Kettren, HNTB
Kathleen Fitzpatrick, HNTB

Guests: Joy Smith, Waterford Historic District Commission Member
Jennifer Radcliff, Michigan Historic Preservation Network

The fourth meeting for this subcommittee was once a gain held at the Historic Church on Andersonville Rd. The meeting started at 7:00pm

Mr. Fisher called the meeting to order and distributed the evening's agenda. Mr. Lockwood introduced Ms. Kettren and Ms. Fitzpatrick and gave a brief overview on the subject of Neighborhood Nodes. Ms. Kettren defined the meaning of a Node as it pertains community development. "A Neighborhood Node is a focal point, a building or area of interest within the community".

Discussion continued as Ms. Kettren asked the committee members to identify Waterford "Neighborhood Nodes". Staff provided a base map for the group who then started to mark and I.D. these types of areas and or landmarks. As many of the existing subdivisions surround the lakes of our community, The "Lake" itself in many instances can be considered a node or focal point for a particular area. As this exercise continued, committee members were asked to conduct a field visit of a selected area to photograph those features that they would consider prominent or a focal point. This fieldwork would take place between now and the committee's next meeting.

Ms. Radcliff stated that the World War II era constitutes a 50-year period for potential historic sites. She suggested that the group be aware of these "Heritage Sites" as we travel the Township. As discussion concluded, it was resolved to set the next meeting date for Monday, July 16, 2001. The meeting would again be held at the Church.

Meeting Adjourned: 8:40 p.m.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
HISTORIC DISTRICT AND NEIGHBORHOOD NODES SUBCOMMITTEE
MEETING MINUTES**

Date: 16 July 2001
Time: 7:00 p.m.
Place: Andersonville Historic Church Meeting Room

Present:

Dean Fisher, Chairman
Larry Lockwood
Michael Franz
Dr. John Richardson
Evangeline Chase
Allan Motzny
Richard Lohff
Carla Spradlin

Guests: Dorothy White, Waterford Historic District Commission Chairperson
Joy Smith, Waterford Historic District Commission Member

The fifth meeting for this subcommittee was once again held at the Historic Church on Andersonville Road. The meeting started at 7:00 p.m.

Mr. Fisher called the meeting to order and passed out the evenings' agenda. The group had originally planned on discussing the results of the Photo Survey on Neighborhood Nodes in our community. Six (6) committee members volunteered to cover areas of the Township with the task of photographing "community centers", focal points of the Township and areas that attract people or are gathering spots. As the results have not been finalized for this project, it was agreed to postpone the discussion to a future meeting.

Mr. Lockwood suggested that the group discuss in greater depth the concept of Heritage Site Preservation. Several of the members began to identify unique Heritage sites throughout the community. A few of the sites mentioned were, Bill Moore's home located at the intersection of Scott Lake Rd. and Watkins Lake Rd., The heritage farm house at the corner of Grayton and Grixdale streets, The Blain Island Log Cabin, Robert Snow's historic farm house on Scott Lake Road, Mark Reis's historic home on Maceday Lake Road, the historic farm house on Williams Lake Road near Whitfield Road, the Bradley home on Scott Lake Road (southeast corner of the lake) and the several historic homes on Silver Lake Road. It was recognized that there were many more sites throughout the Township that should also be added to this list.

Discussion continued with regard to how these sites could be identified and it was suggested that the Township Assessing Department would have these records. The group as a whole felt that the idea of identifying our Heritage Sites in Waterford Township was important and tied directly to our community makeup.

Ms. Spradlin suggested that local businesses could be approached for donations to help sponsor, protect and preserve these types of heritage sites. In addition, appropriate signage could be designed/developed that would help to better identify these properties.

Mr. Richardson suggested that once the Historic District boundary has been reevaluated (for the immediate Historic District area) that the residents be notified that they will be included in this area and subject to the standards that govern and protect the structures found in the district.

It was recommended that the Historic District be included as a District within the Zoning Ordinance in order to provide more regulation and strength to the existing guidelines already in place.

As discussion concluded, it was resolved to set the next meeting date for Monday, July 30, 2001 @ 7:00 p.m. The meeting would again be held at the church.

Meeting Adjourned: 8:40 p.m.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
HISTORIC DISTRICT AND NEIGHBORHOOD NODES SUBCOMMITTEE
MEETING MINUTES**

Date: 30 July 2001
Time: 7:00 p.m.
Place: Andersonville Historic Church Meeting Room

Present:

Dean Fisher, Chairman
Larry Lockwood
Michael Franz
Dr. John Richardson
Evangeline Chase
Allan Motzny
Richard Lohff
Carla Spradlin

The sixth meeting for this subcommittee was held at the Historic Church on Andersonville Road. The meeting was called to order by Mr. Fisher at approximately 7:05 p.m.

Mr. Fisher passed out the evenings' agenda and recognized that representatives from HNTB had not yet arrived. The meeting minutes from 7-16-01 were passed out to the group for their review and approval. The minutes were subsequently approved.

Ms. Spradlin distributed information obtained from Michigan's Historic Sites website which confirmed that Waterford's Historic District is recognized at the State level having first been settled in 1819. Discussion continued and Mr. Richardson passed out a sample Historic Tour booklet produced by the City of Farmington, which depicts historic sites throughout their community and narrative information on each. The group agreed that this type of effort is very helpful in promoting and informing the citizens of these types of community landmarks.

Ms. Spradlin also provided a copy of Oakland Counties, Historical and Cultural Resource Inventory Map. This map identifies sites throughout the county that are of historic and cultural significance. It was suggested that a similar map for Waterford could also be produced. The group proceeded to discuss various points of interest that were identified on the map relative to Waterford Township. There was further discussion on the Historic Ordinance for the City of Farmington. Ms. Spradlin questioned whether there were design guidelines within the ordinance. Mr. Richardson stated that it did have a more comprehensive approach to historic preservation and the group agreed that Waterford should take the necessary steps to strengthen our current ordinances.

Mr. Lohff suggested that the Historic District Commission develop a list of their desired goals and objectives for the district so that the subcommittee can incorporate it with the Master Plan for this area

Discussion continued on a variety of other topics. Mr. Fisher then summarized by requesting that the group start to develop the final list of goals, objectives and recommendations for the final report. It was agreed that each member would review the materials and meeting minutes to finalize these recommendations at the next meeting.

Goals and objectives will be prioritized for both the Historic District (including Heritage Sites) and Neighborhood Nodes.

It was then resolved to set the next meeting date for Monday, August 20th @ 7:00 p.m. Again, the meeting will be held at the Historic Church on Andersonville Road.

Meeting Adjourned: 8:20 p.m.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
HISTORIC DISTRICT AND NEIGHBORHOOD NODES SUBCOMMITTEE
MEETING MINUTES**

Date: 20 August 2001

Time: 7:00 p.m.

Place: Andersonville Historic Church Meeting Room

PRESENT:

**DEAN FISHER, CHAIRMAN
LARRY LOCKWOOD
MICHAEL FRANZ
DR. JOHN RICHARDSON
EVANGELINE CHASE
ALLAN MOTZNY
RICHARD LOHFF
CARLA SPRADLIN
LESLIE KETTREN, HNTB
KATHLEEN FITZPATRICK, HNTB**

The seventh and final meeting for this subcommittee was once again held at the Historic Church on Andersonville Rd. The meeting started at 7:00pm

Ms. Kettren explained that she would facilitate tonight's subcommittee brainstorming session. The goal of the exercise is to come up with a list of historic district and neighborhood node goals and objectives that everyone in attendance is comfortable in sending to the Committee of the Whole. Ms. Kettren conducted the exercise, with the following goals and objectives recommended by the subcommittee to be included in the Township's new master plan as the result of its research and findings:

HISTORICAL DISTRICT PRESERVATION

1. Investigate traffic calming.
2. Old fashioned/decorative lighting in historical districts.
3. Signing for historical districts (wayfinding signs).
4. Signing on individual historical sites/homes.
5. Adaptive reuse of historical buildings.
6. Re-route large trucks (i.e. trucks going through the Andersonville Road Historical District).
7. Ordinance exploration to regulate viability of historical districts.
8. Explore administrative structure of the historical commission.
9. Add single properties to the historical district.
10. Tax abatements for businesses in historical buildings.
11. Obtain grants for restoration of historical buildings.

12. Pay attention to proposed vacant land usage.
13. Include properties around historical districts (re-evaluate boundaries established in 1977).
14. Improve/Infill walkways in historical districts – safety is an issue.
15. Brick paver sidewalks (Note: For barrier-free access we should look at an alternative like colored stamped concrete with a brick paver border).
16. Explore millage for historical districts – conduct a follow-up survey.
17. Investigate allocation of CDBG funds.
18. Re-evaluate zoning (i.e. Commercial) in Neighborhoods and Future Land Use
19. Better Communication with homeowners to inform them of expectations for homes within historical districts
20. Less signage on commercial buildings
21. Improved identification for school crossings in the historical district (Waterford Village Elementary School is located off Andersonville Rd. and Steffans Ct.)

NEIGHBORHOOD NODES

1. Promoting and revitalizing specific test or target areas in the Township that have the potential to become viable neighborhood nodes.
2. Increase accessibility between Neighborhood Nodes by pedestrian pathways, sidewalks and bike paths.
3. Promote the CAI building as a Community Center and provide the necessary streetscape, sidewalks/bike path links for improved pedestrian access from adjacent residential neighborhoods.
4. Promote the area of Airport Rd. and Hatchery Rd. as a Neighborhood Node (Some decorative Lighting is already present in this area. By continuing this theme, providing a small pocket park, instituting traffic calming measures, adding to the streetscape and providing the necessary sidewalk links, this area has great potential for a Neighborhood Node. Also, through our Walkability Study, we have targeted the area approximately 1.2 miles East on Hatchery Rd. to do specific improvements. This would tie in nicely to the Neighborhood Node concept for Airport and Hatchery Roads).
5. Research adaptive reuses of properties within Neighborhood Node area and market these areas by promoting Waterford. Further promote Waterford and our Quality of Life opportunities (i.e., cultural activities, schools, parks, riverwalk program, etc.)

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APPENDIX I: HOUSING AND DEMOGRAPHICS SUBCOMMITTEE MEETING MINUTES

MAY 3, 2001 MEETING MINUTES----- PAGE I-2
MAY 15, 2001 MEETING MINUTES -----PAGES I-3 THROUGH I-4
JUNE 5, 2001 MEETING MINUTES -----PAGES I-5 THROUGH I-7
JUNE 19, 2001 MEETING MINUTES -----PAGES I-8 THROUGH I-9
JULY 17, 2001 MEETING MINUTES -----PAGES I-10 THROUGH I-11
JULY 31, 2001 MEETING MINUTES -----PAGES I-12 THROUGH I-13
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**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
DEMOGRAPHICS AND HOUSING SUBCOMMITTEE
MEETING MINUTES**

Date: 3 May 2001
Time: 7:00 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: **Larry Lockwood**
 Ingrid Bowman
 Andrea Deering
 Kendra Klein
 Scott Krakauer
 Joanna Ljovshin

This was the first meeting for the subcommittee, which was held at Town Hall in the 3rd floor conference room of Community Planning and Development. The meeting started at approximately 7:00p.m.

Mr. Lockwood gave a brief explanation of the subject and distributed an agenda, a draft mission statement, base census data from the recent 2000-01 census for Waterford Township, current master plan text addressing Demographics and Housing and a list of potential topics for future meetings. There was a short introduction as all committee members spoke about their interest in the topic and about Waterford Township in general.

Discussion continued regarding concerns about the Township as a whole and how housing patterns have developed in our community over the last 50 years.

Mrs. Bowman suggested that the Township is severely lacking in the area of transportation for seniors. Mrs. Deering and Mr. Krakauer voiced concerns over a need for larger lot sizes in the community. There was further discussion with regard to affordable housing and whether or not The Township has too much of this type of housing. Ms. Ljovshin indicated that she is in favor of affordable housing. Mr. Lockwood stated that this was a topic that should be discussed in more detail as the committee moves forward.

Mr. Lockwood stated that more information would be provided at the next meeting showing the committee current regulations and requirements for developing residential land within the Township.

Discussion continued with regard to the best day and time to continue to meet. It was resolved that the first and or third Tuesdays of the month after 7:30p.m. would be convenient for those in attendance. It was further resolved that the next meeting will be, Tuesday, May 15, 2001 at 7:30p.m. in conference room 3-1 of Township Hall (same as last time).

Meeting Adjourned: 8:00 p.m.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
DEMOGRAPHICS AND HOUSING SUBCOMMITTEE
MEETING MINUTES**

Date: 15 May 2001
Time: 7:00 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Denise Alexander-Pyle, Chair
Larry Lockwood
Ingrid Bowman
Andrea Deering
Kendra Klein
Scott Krakauer
Joanna Ljovshin

This was the second meeting for the subcommittee and was held again at Town Hall in the 3rd floor conference room of Community Planning and Development. The meeting was called to order by Chairperson Denise Alexander at 7:05 p.m.

Mr. Lockwood stated that Louise Braun had submitted a letter of resignation for this subcommittee. Ms. Alexander confirmed that she also had been notified of this by Ms. Braun. Apparently Ms. Braun has sold her home in the Township and will be moving to another community.

The first item on the agenda for discussion was the "Draft" Mission Statement. Ms. Alexander and Ms. Ljovshin made some suggestions to be incorporated into the text. Mr. Lockwood stated that he would make the necessary changes and bring it back to the subcommittee for final review and adoption at the next meeting.

Discussion continued with respect to housing trends and characteristics in Waterford Township. Ms. Alexander questioned what we want our community to be? Ms. Alexander asked Mr. Lockwood to provide the subcommittee with a map of Waterford Township that would show all existing residential areas and current average housing values for each. Staff explained that this will be investigated and the results presented as soon as available.

Ms. Ljovshin stated that there should be more emphasis placed on planning for the redevelopment of the Township. The discussion shifted to rental housing and Mr. Krakauer stated that the Township should create policy and procedure to allow the inspection of rental properties upon vacancy or tenant change to insure that these properties are kept up to current code requirements. Ms. Alexander added that CDBG Block Grant funds could help in this area. Ms. Alexander requested that Staff obtain a copy of the City of Dearborn's ordinance requiring inspection before or after a change of occupancy.

Discussion continued and Ms. Klein stated that Waterford Township is seriously lacking in higher quality homes.

Staff distributed the current “schedule of regulations” pertaining to residential development as found in the Waterford Township Zoning Ordinance. Discussion continued over minimum square footage for residential housing and minimum lot area requirements. Ms. Alexander suggested that in specific areas of concern, the Township must take the initiative to redevelop a single house or storefront to set the example of the communities interest in improving and upgrading the community.

The conversation then shifted to the need for improved neighborhood watch programs. Ms. Alexander questioned how extensive our current programs are and that this concept should be broadened. As the discussion concluded there were strong feelings among the group that substandard housing within the community should be identified and eliminated.

The subcommittee then resolved to set the next meeting date for Tues. June 5th, 2001 at 7:30 p.m. in conference room 3-1 of Township Hall. Staff stated that they would request the same conference room and make the necessary arrangements.

Meeting adjourned: 8:10 p.m.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
DEMOGRAPHICS AND HOUSING SUBCOMMITTEE
MEETING MINUTES**

Date: 5 June 2001
Time: 7:00 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Denise Alexander-Pyle, Chair
Larry Lockwood
Ingrid Bowman
Kendra Klein
Scott Krakauer
Joanna Ljovshin

The 3rd meeting for the D&H subcommittee was again held in the third floor conference room of Town Hall. Ms. Alexander called the meeting to order at 7:10 p.m. After the roll call, Mr. Lockwood explained that Mr. Al Ruckey, a new member had been added to the group. He is expected to start attending meetings immediately.

Mr. Lockwood passed out the meeting minutes from 5-15-01 along with an agenda for tonight's meeting. Ms. Alexander pointed out that the minutes should reflect the correct starting time for tonight's meeting as 7:00 p.m. Subject to that change, it was moved by Ms. Klein and supported by Ms. Bowman to approve the 5-15-01 minutes as corrected.

Mr. Lockwood distributed the draft Mission Statement to the group. This had been tabled at the last meeting in order to incorporate suggested changes made by the group. It was then moved by Ms. Ljovshin and supported by Mr. Krakauer to adopt the Mission Statement as revised. (Copy attached for the record).

Ms. Alexander questioned Mr. Lockwood as to whether or not Staff had received the City of Dearborn's ordinance pertaining to Rental Housing inspections. Mr. Lockwood responded that Staff had not yet received this information but will check on the status and hope to be able to provide this ordinance for review by the subcommittee at their next meeting.

The next item on the agenda involved formulating questions on the D&H topic for HNTB, the Townships Master Plan consultant. These questions would then be passed on to HNTB, to be used in conjunction with a community survey that would be sent out to approximately 300 households. Ms. Alexander suggested that the group as individuals take some time to develop two "draft" questions of their own followed by a review from the entire subcommittee. Discussion then continued with the whole group as each group member went over their particular questions. This resulted in 10 possible questions that could potentially be used for the survey. Mr. Lockwood stated that he would prepare a clean draft of the questions and forward them on to Steve Hayward at HNTB.

The discussion then shifted to upcoming meeting schedules. Mr. Lockwood explained that the goal for all of the subcommittee's, is to have their reports and recommendations completed by early September. These reports will then be brought before the Planning Commission and Citizen Advisory Committee of the Whole to be reviewed in a "Town Forum" meeting.

Ms. Alexander stated that due to her evening meeting schedule, she may be running a few minutes late for the next meeting or two. She suggested that the group appoint a deputy chairperson in case of this event. The group agreed and Ms. Alexander then nominated Ms. Ljovshin for this appointment. The group then unanimously approved this appointment.

Ms. Ljovshin then questioned the status of the Walkability Study. Mr. Lockwood explained that the study, prepared by Beckett and Raeder, Planning Consultants, was presented and received by the Waterford Township Economic Development Corporation on May 17, 2001 and has been forwarded on to the Township Board for review. Mr. Krakauer also was interested in this study and Mr. Lockwood stated that when the study is accepted by the Township Board, staff will provide a copy for the subcommittee to review.

The discussion then shifted back to housing. Ms. Alexander requested that staff ask HNTB to provide information on what other comparable communities around the country are doing to address similar situations and problems that are happening with housing here in Waterford. Mr. Lockwood stated that he would contact Steve Hayward at HNTB and invite him to the groups next meeting to discuss this topic. It was determined by the group that the best time and date to meet next would be in two weeks. Therefore, it was resolved to set the next meeting date for Tuesday, June 19, 2001 at 7:30 p.m. in the 3rd floor conference room of Township Hall. This concluded the group's general discussion.

Meeting Adjourned: 8:20 p.m.

DEMOGRAPHICS AND HOUSING MASTER PLAN SUBCOMMITTEE MISSION STATEMENT

The Demographics and Housing Subcommittee will work to study and evaluate the 2001 Census Data for Waterford Township and review existing zoning and housing patterns within the community. Upon completion of this review, the subcommittee will make findings and recommendations and prepare a written report to be presented to the Master Plan Citizens Advisory Committee of the Whole.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
DEMOGRAPHICS AND HOUSING SUBCOMMITTEE
MEETING MINUTES**

Date: 19 June 2001

Time: 7:00 p.m.

Place: Waterford Township Hall Conference Room 3-1

**Present: Larry Lockwood
Andrea Deering
Kendra Klein
Scott Krakauer
Joanna Ljovshin
Steve Hayward, HNTB**

Guests: Jan Eathorne, Recreation subcommittee member

The 4th meeting of the D&H subcommittee was held once again in the third floor conference room of Town Hall. After brief introductions were made, Mr. Lockwood passed out the evenings' agenda to the group. Mr. Hayward from the Townships consulting firm, HNTB began the discussion by asking the group to focus on past and present trends with regard to the communities housing stock. It was pointed out that certain homes in the community could be considered Heritage sites and should therefore be identified and preserved if possible. Many of these historical home sites or cottages may be found around the lakes of the Township. Mr. Hayward mentioned that the City of Monroe has a good example of an ordinance protecting these types of sites. It was suggested that this should be an objective of the Township to determine how many of the Heritage sites are left in the community and what can be done to insure that they can be preserved.

Discussion continued with regard to what the recent building permit trends have been over the past five (5) years for Waterford Township. Mr. Lockwood stated that the Township had reached a peak several years ago and that a downward trend, with regard to the number of permits issued, had started. The group questioned how Waterford compares with surrounding communities, such as White Lake Township and Independence Township. Mr. Lockwood stated that the Townships' GIS Division was in the process of developing a base map for all single family residentially zoned properties to determine parcel values by the current SEV value. This information will be available by the groups next regularly scheduled meeting. The Township currently has approximately 30,404 single family households. Ms. Eithorn stated that taxes are a problem for the elderly who have lived all their lives on lakefront property as property values have dramatically increased in recent times.

Mr. Hayward stated that the final report from this committee should focus on past housing trends and recommendations that are then boiled down to goals and objectives for the future. Mr. Hayward stated that HNTB would develop a series of questions to be answered by a local real estate expert. Ms. Deering volunteered to forward these questions on to a realtor that is familiar with the Township. Ms. Klein suggested that each committee member speak with friends or acquaintances who have moved away from the Township and ask them the reason why.

Mr. Hayward stated that crime doesn't go with or where there is a sense of community. Random discussion continued on a variety of topics. It was resolved to set the next meeting date for Tuesday, July 17, 2001 at 7:30 p.m. to be held again in the 3rd floor conference room at Township Hall.

Meeting adjourned: 9:30 p.m.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
DEMOGRAPHICS AND HOUSING SUBCOMMITTEE
MEETING MINUTES**

Date: 17 July 2001
Time: 7:30 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: **Larry Lockwood**
 Ingrid Bowman
 Andrea Deering
 Kendra Klein
 Scott Krakauer
 Joanna Ljovshin
 Leslie Kettren, HNTB

The 5th meeting of the D&H subcommittee was again held at Town Hall in the 3rd floor conference room. The meeting got underway promptly at 7:30 p.m.

Mr. Lockwood explained that Chairperson Denise Alexander had not been re-appointed to the Planning Commission as her term had expired in June. He further stated that new Planning Commissioner, Dennis Griffin has been asked to participate on this subcommittee.

Mr. Lockwood displayed a revised map created by the Townships GIS department. This map represented a clearer picture of current SEV values for single family residential homes in the community. It was evident by reviewing the map that the higher home values were largely found to be located around the many lakes in Waterford Township. This of course, was not a surprise to any of the committee members. However, it was interesting to see how home values dropped off substantially by not being on the water.

Leslie Kettren gave a brief overview of affordable housing. Mr. Krakauer stated that the Township has many areas that offer entry level or affordable housing. Ms. Klein supported this statement, as did many of the group members. Ms. Ljovshin stated that the word “affordable” should not be used when describing this type of housing. The group questioned how the community would go about raising our housing stock. Ms. Kettren stated that “Quality of Life” issues were key to this question. She went on to state that municipal services, better schools, libraries, and cultural activities create an environment that will increase property values. Accessibility in and around the community is also a key ingredient to this end.

Ms. Kettren went on to state that through a concerted effort promoted through economic development strategies, change can happen. The group agreed that the Township should take a proactive approach to promote Waterford Township.

The group continued discussion on business and income trends of the community.

Ms. Deering stated that she had been working recently with a realtor, trying to identify available housing within Waterford. She went on to state that information was available that would show home sales over the past year or so. Ms. Deering volunteered to study this information and report back to the subcommittee.

This concluded the evenings' discussion. It was resolved to set the next meeting date for Tuesday, July 31, 2001. The meeting will be held at 7:30 p.m. in the 3rd floor conference room of Township Hall.

Meeting Adjourned: 9:15 p.m.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
DEMOGRAPHICS AND HOUSING SUBCOMMITTEE
MEETING MINUTES**

Date: 31 July 2001
Time: 7:30 p.m.
Place: Waterford Township Hall Conference Room 3-1

Present: Dennis Griffin, Chair
Larry Lockwood
Ingrid Bowman
Andrea Deering
Kendra Klein
Scott Krakauer
Joanna Ljovshin

The 6th meeting of the subcommittee was again held in the 3rd floor conference room at Township Hall. The meeting was called to order at 7:30 p.m.

Mr. Lockwood introduced Mr. Griffin to the group as the new chair of the subcommittee. Mr. Griffin was recently appointed to the Planning Commission. Mr. Griffin had previously served as Planning Commission Chairman for the City of Auburn Hills and is currently very active with various organizations in Waterford Township.

Mr. Lockwood explained that the meeting minutes for the July 17, 2001 D&H subcommittee meeting had not been finalized and that they would be available at the next regularly scheduled meeting for review.

The next item on the agenda was a report by Andrea Deering. Ms. Deering gave a presentation on her findings on housing comparables in Waterford. Ms. Deering's study focused on home sales of three (3) bedroom ranches with one bath that have sold within the past year. She stated that by using the parcel SEV map that had been created by the Townships GIS Department, she had divided the Township into nine (9) sections and had broken down the housing sales accordingly. Comparison data was also provided for each home. Over the past year, a total of 227 homes in this category were sold in Waterford. There have been 44 sales near the center of the Township (M59 & Crescent Lake Rd. area), 49 sales in and around the south center of the Township (Elizabeth Lake and Crescent Lake areas) and 35 sales in the southeast portion of the community (south of Elizabeth Lake Rd. and east of Cass Lake Rd.). This represented the largest numbers of sales respectively throughout the nine (9) sections. The number of sales in the remaining six (6) sections were considerably less.

The average selling price for this entire group of homes in this category was \$135,161.00.

The group then discussed the findings in more detail.

Discussion then shifted as to the reasons why people are moving out of the community. Is Waterford becoming a “Transient Community”? Ms. Deering explained that in her family’s search for a new home in Waterford Township, it had been very difficult to find a quality home with the features that are desirable for a growing family. Mr. Griffin stated that higher income families most often choose to send their children to private schools. The group agreed that Waterford Schools still do not have a great reputation. Mr. Krakauer suggested that Waterford would benefit from neighborhood community centers to provide more areas for children to socialize. It was further discussed that less than ten years ago the voters of Waterford had not supported the development of a community recreation center. The group strongly agreed that this type of facility, that would also allow for cultural activities is a vital component to any community.

Mr. Krakauer stated that the “Neighborhood Node” concept is something the Township should explore as it would allow for existing commercial structures to be reevaluated and possibly utilized in combination with residential units above. This approach would help to stimulate some of the local and general business areas of the community and provide alternative housing choices. Ms. Ljovshin agreed stating that this concept would provide opportunity for business people to live and work out of the same building and help to improve downtrodden areas in our business districts.

As discussion concluded, Mr. Lockwood suggested that the group start to develop a list of goals and recommendations for the subcommittees’ final report. This will be discussed and finalized at the next meeting.

The group resolved to set the next meeting date for Tuesday, August 21, 2001 @ 7:30 p.m. The meeting will be held once again in the 3rd floor conference room of Township Hall.

Meeting Adjourned: 9:10 p.m.

**CHARTER TOWNSHIP OF WATERFORD MASTER PLAN UPDATE
DEMOGRAPHICS AND HOUSING SUBCOMMITTEE
MEETING MINUTES**

Date: 21 August 2001

Time: 7:30 p.m.

Place: Waterford Township Hall Conference Room 3-1

**Present: Dennis Griffin, Chair
Larry Lockwood
Ingrid Bowman,
Andrea Deering
Kendra Klein
Scott Krakauer
Joanna Ljovshin
Steve Hayward, HNTB**

The seventh and final meeting for this subcommittee was again held in the 3rd floor conference room at Township Hall. The meeting was called to order at 7:30 p.m.

Mr. Hayward explained that he would facilitate tonight's subcommittee brainstorming session. The goal of the exercise is to come up with a list of demographic and housing goals and objectives that everyone in attendance is comfortable in sending to the Committee of the Whole. Mr. Hayward conducted the exercise, with the following goals and objectives recommended by the subcommittee to be included in the Township's new master plan as the result of its research and findings:

- Develop a Community Identity
- Promote Waterford as a destination for shoppers, diners and entertainment seekers.
- Develop Housing Stock with sufficient range to accommodate upper income housing i.e. non-lakefront homes in the \$300K + range.
- Increase occupied commercial strip properties i.e. office space.
- Eliminate substandard rental housing stock.
- Require inspections to insure that rental properties are adequately and safely maintained per current code requirements.
- Continue to eliminate blighted areas through code enforcement.
- Actively promote Waterford through marketing strategies to encourage new business and technology based companies to locate here.
- Create/ develop land use regulations to encourage the development of mid priced range housing.
- Develop ordinances that promote the improvement of properties prior to the sale or re-leasing.

- Require more open space to be preserved for new housing developments.
- Establish a Redevelopment District as part of the Zoning Ordinance.
- Promote the Neighborhood Node Concept.
- Continue to develop and implement the Gateway concept for our entryways into the community.
- Further develop the Civic Center to include a Community Center with a wide range of recreational programs for all ages.
- Designate Summit Place Mall as an area for potential redevelopment to enhance the Telegraph Rd. corridor. Multiple family housing may be introduced into this area in an attempt to develop the “Node” concept.
- Explore the “Live / Work” concept for specific Neighborhood Node areas (Living areas or loft apartments above retail or office uses).

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APPENDIX J: ZONING ORDINANCE AND LANDSCAPE AESTHETICS SUBCOMMITTEE MEETING MINUTES

NOTE: The primary work of this Subcommittee will be undertaken after the Master Plan is adopted. Once the Subcommittee's has prepared a draft report on recommendations for a new Zoning Ordinance, the minutes of those meetings will be inserted into this Appendix.

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