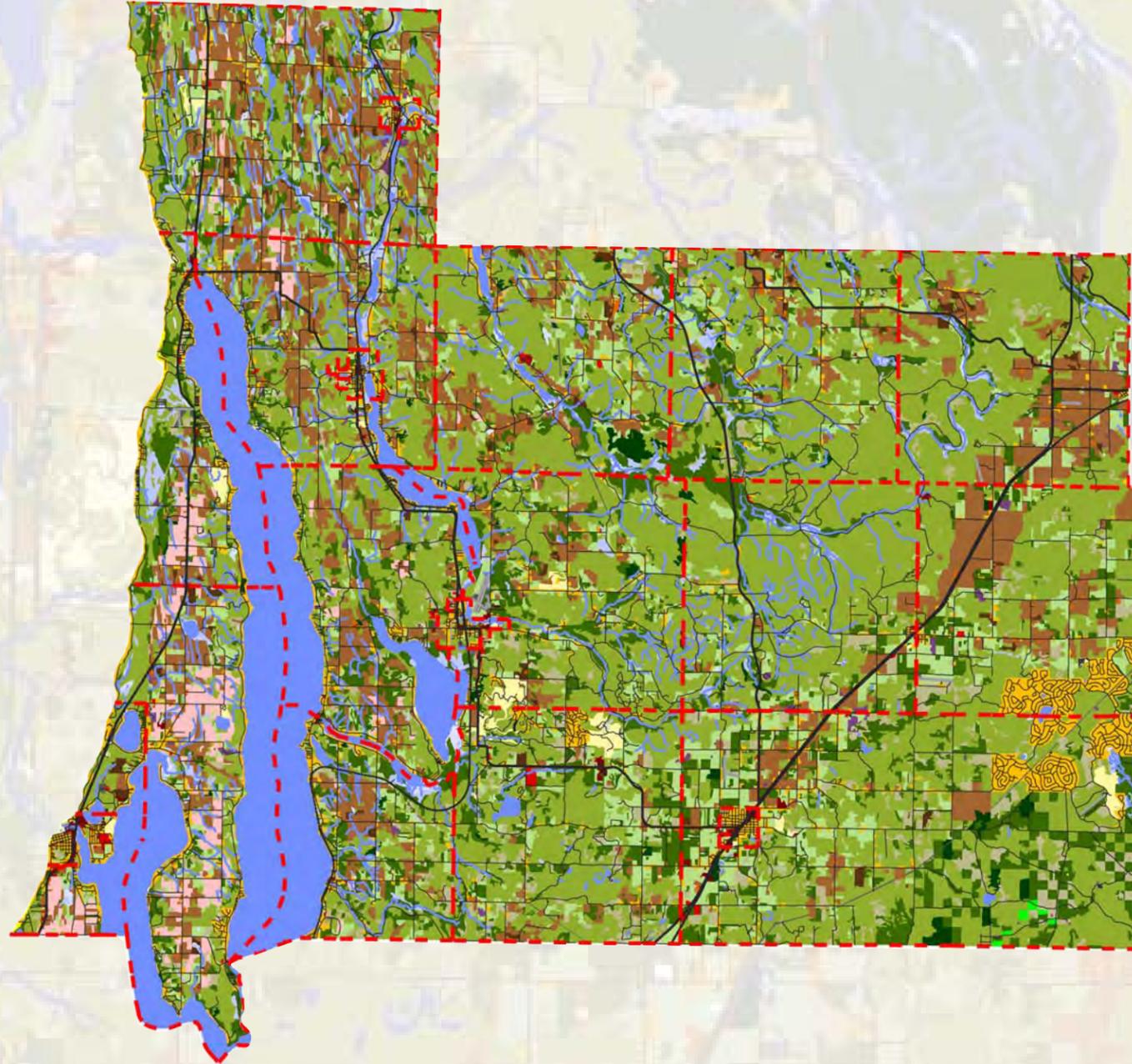


ANTRIM COUNTY LAND USE ATLAS



1998 Land Use Map Shown

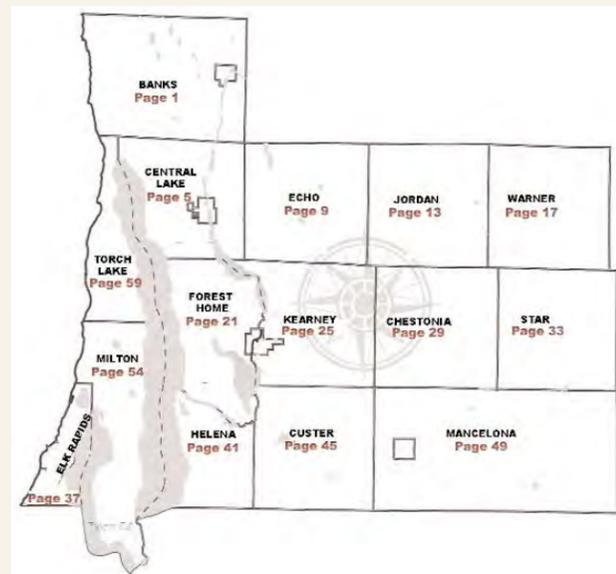
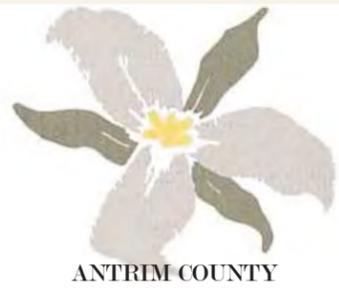
1978 - 1998

THIS ATLAS WAS DESIGNED AND PREPARED BY:



TABLE OF CONTENTS

BANKS TOWNSHIP	PG 1
CENTRAL LAKE TOWNSHIP	PG 5
ECHO TOWNSHIP	PG 9
JORDAN TOWNSHIP	PG 13
WARNER TOWNSHIP	PG 17
FOREST HOME TOWNSHIP	PG 21
KEARNEY TOWNSHIP	PG 25
CHESTONIA TOWNSHIP	PG 29
STAR TOWNSHIP	PG 33
ELK RAPIDS TOWNSHIP	PG 37
HELENA TOWNSHIP	PG 41
CUSTER TOWNSHIP	PG 45
MANCELONA TOWNSHIP	PG 49
MILTON TOWNSHIP	PG 54
TORCH LAKE TOWNSHIP	PG 59
COUNTY-WIDE SUMMARY	PG 64
APPENDIX A: TABLE OVERVIEW	PG 67
APPENDIX B: LAND USE CODES	PG 68



ACKNOWLEDGEMENTS

About the Land Use Atlas

Antrim County has embarked on the creation of a new County Master Plan. The county's most recent master plan was developed and adopted in 1964. In the 40 years since that plan was adopted, Antrim County's population has grown by 75%, and is projected to grow by another 33% by 2020. According to the Michigan Society of Planning Officials (Trend Futures Report, 1995), the northern Lower Peninsula will continue to experience gains in population with a large portion coming from immigration. These changes, coupled with changes in global trading patterns for agriculture and industry, will cause further changes in land use and land cover in the County.

Public meetings and citizen visioning sessions form an integral part of the County master plan process. The Land Use Atlas and the Township Demographic Profiles comprise the supporting data presented at these meetings. The information assists citizens in formulating concepts and ideas about the directions the County should be headed through the early decades of the 21st Century.

We hope this information will also prove useful to the various zoned townships in the County in compiling their respective township master plans and future land use maps. It will also comprise the base data for the land use updating process for the next round of master plan updates in the County, required by state statute to take place every five years.

The Land Use Atlas provides side-by-side comparisons of land use in the County and its townships as it was in 1978, and as it had changed in 1998. The differences in land use between the two periods are also summarized in the form of charts and statistical tables.

A companion volume, Demographic Profile of Antrim County and its Townships, follows population and economic changes in the County and its townships between 1970 and 2000. This information, gathered from data published by the U.S. Census Bureau, U.S. Bureau of Labor Statistics, and various Michigan state agencies, allow the reader to trace demographic and labor market changes during the same period.

The Land Information Access Association (LIAA) prepared this Atlas under contract to Antrim County. The Northwest Michigan Council of Governments (NWMCOG) prepared the Demographic Profile volume under contract to Antrim County. The Atlas was funded through a Michigan Coastal Management Program (MCMP) planning grant. Both publications, and more, can be downloaded from the Antrim County website at www.antrimcounty.org; CDs containing these publications can be requested from the Antrim County Coordinator/Planner Office for a nominal cost.

Technical Information

Using a variety of more recent digital orthophoto quadrangles (DOQ's), this project updated the Antrim County portions of the 1978 Land Use files of the Michigan Department of Natural Resources (DNR). The work required original analysis and interpretation of the 1998 MichCon imagery (DOQ's) covering the whole of Antrim County. Land use and land cover information were coded in the MIRIS 2000 system by the Land Information Access Association (LIAA) under contract to Antrim County. Data obtained from the 1978 and 1998 imagery were then compared to derive statistical summaries of the changes in land use and land cover over the 20-year period.

Antrim County staff would like to thank the following parties for their contributions, without whom this project would not have been possible:

The Michigan Coastal Management Program, Michigan Department of Environmental Quality, for community master plan grant assistance, which funded the project in full. In particular, we would like to thank Ms. Christie Fox of MCMP for her advice and assistance in the operation of this grant project;

Ms. Marie T. Strum, P.E., Detroit District, U.S. Army Corps of Engineers, for providing us with the Corps 1998 land use update files for the Lake Michigan coastal townships (ArcView shape files);

Mr. Larry Sullivan, Charlevoix County Planning Department, for providing us the land use update files from their Charlevoix watershed study (ArcView shape files);

Ms. Charlene Schlueter, for compiling the township demographics that are used in the Atlas;

Mr. Rod Denning of the Robert B. Annis Water Resources Institute, Grand Valley State University, for his valuable advice and insight in the creation of land use atlases;

GIS specialists Viet Doan (Northwest Michigan Council of Governments) and Chris Blough (Charlevoix County GIS Department) for providing advice, technical oversight, and hand-holding to the Antrim County staff;

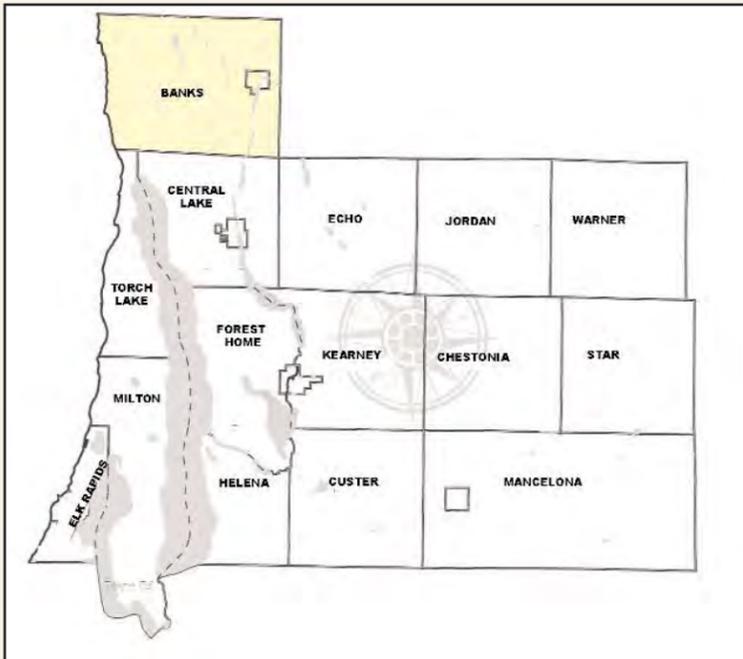
Mr. Joel Dye, a City Planner for Holland, Michigan, who in his former capacity as Antrim County Associate Planner laid the groundwork for the Land Use Atlas and provided valuable background information and insight to the staff;

and all the hard-working folks of the Land Information Access Association (LIAA), Traverse City, for spending long hours before the GIS display and then beautifully crafting the analysis into this final result.

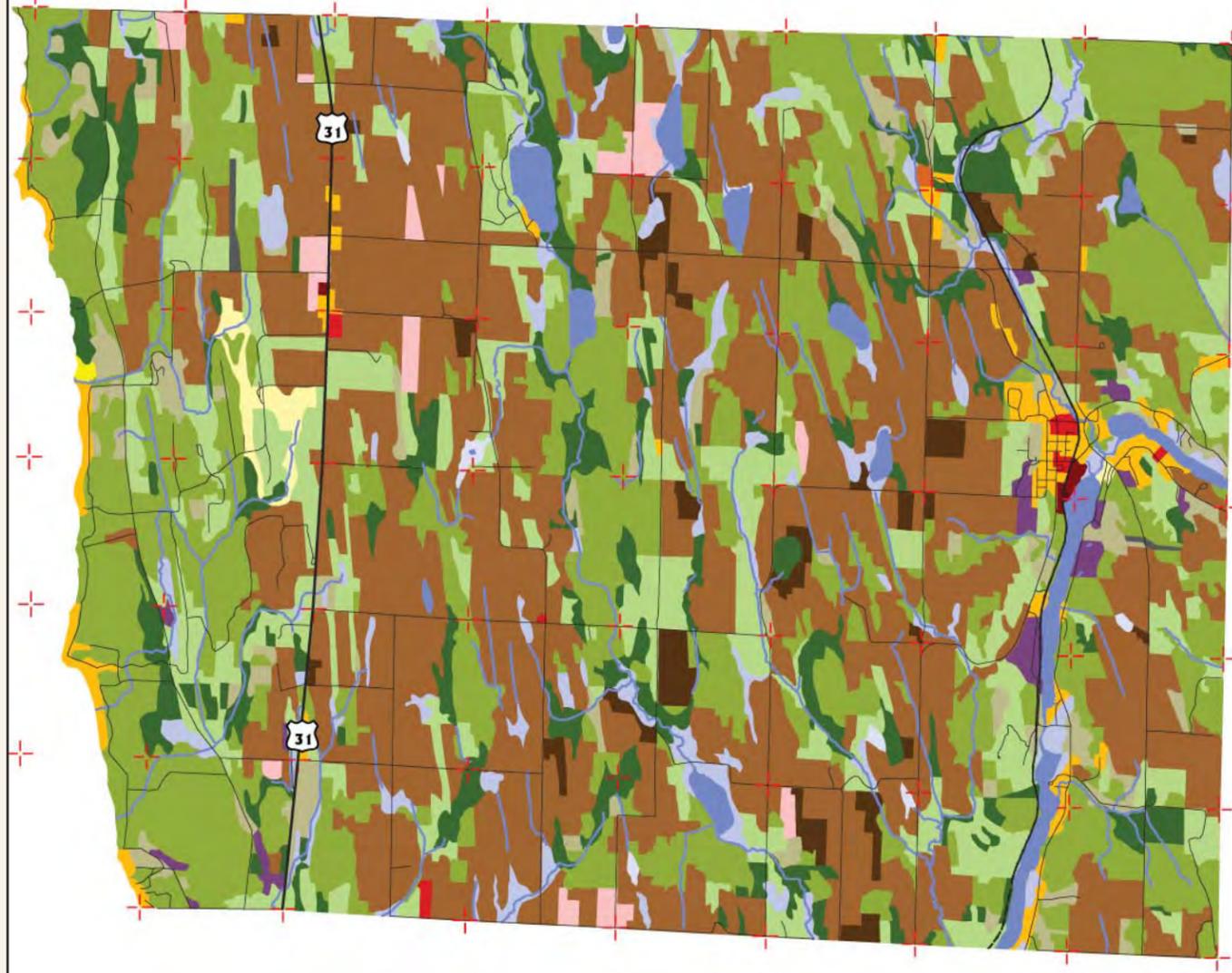
BANKS TOWNSHIP



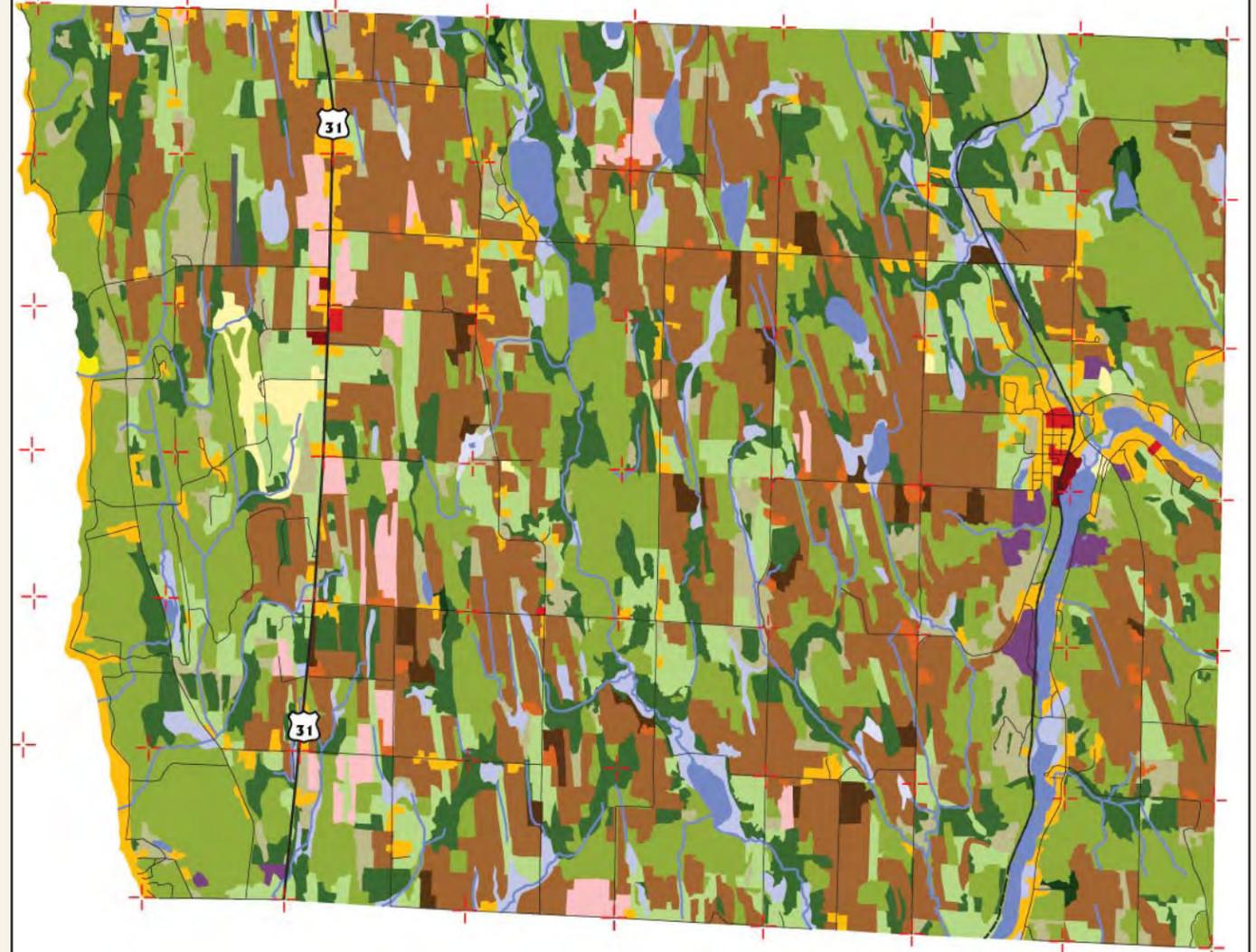
POPULATION TRENDS		
1980	1990	2000
1515	1513	1813
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	982	1723
Agricultural Land	12268	9601
Grass & Shrub Lands	4867	4588
Forest Land	9647	11819
Water	550	578
Wetlands	1015	1016
Barren	11	11



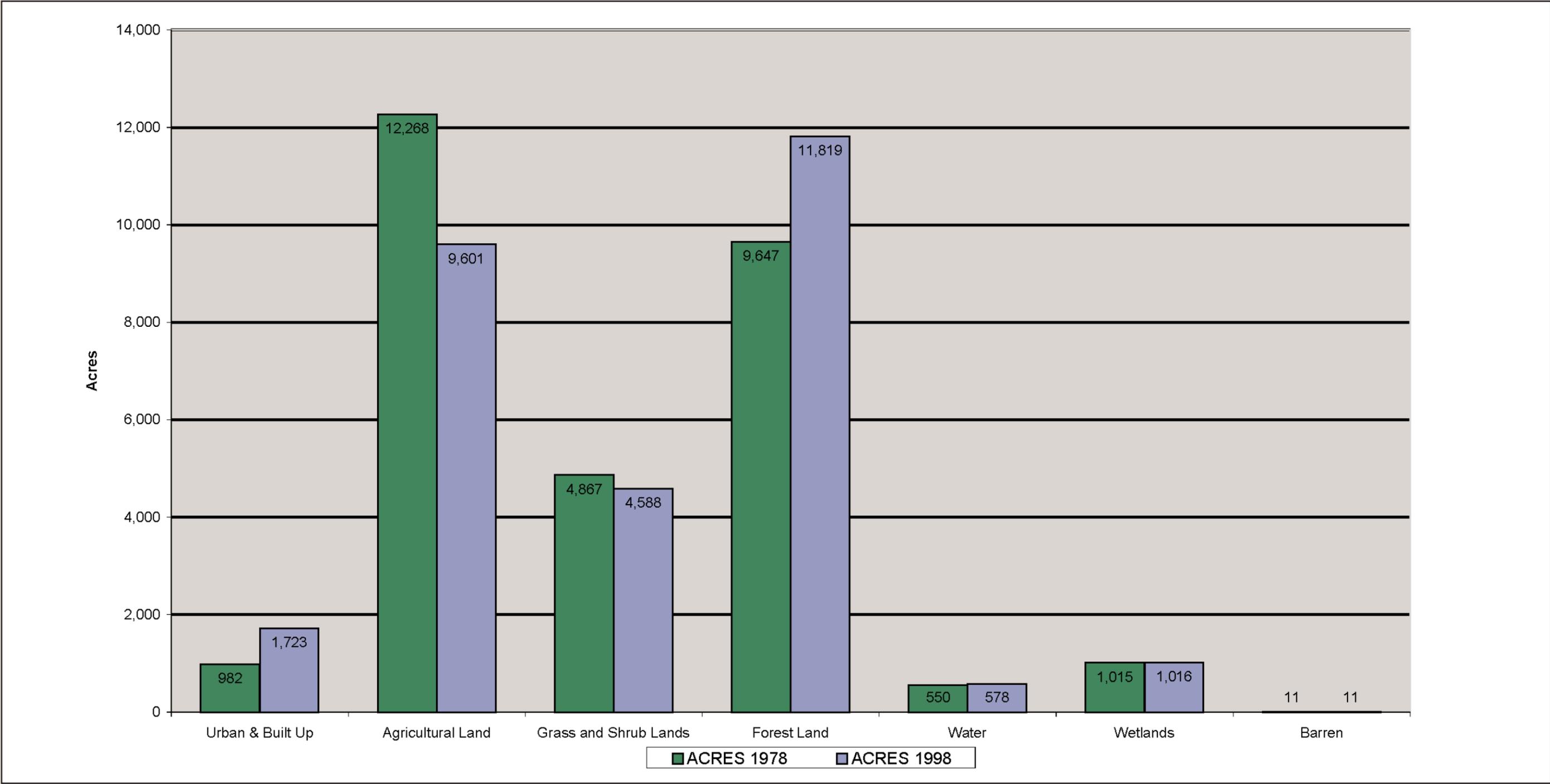
LAND USE 1978



LAND USE 1998



MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes	113	114	13	171	193	194	21	22	23	24	291	31	32	411	413	414	421	422	423	43	52	61	612	Total Acres	
12										12.37														12.37	
146														7.96											7.96
171	10.96				5.41							25.41	11.89	3.33			8.05				14.09	0.65	0.66	80.44	
21	427.37	0.88		15.21	11.39	8.16		315.51	7.05	173.77	133.11	1182.1	267.48	197.04	66.16	126.27	365.59	4.84	172.31	16.42		2.96		3493.59	
22	21.40						35.79				8.65	56.59	13.69	2.14	2.87		4.06							145.20	
24	6.89						165.97				13.30	103.03	24.07	4.14		4.85	0.22		8.45				1.06	331.97	
29												9.25												9.25	
31	153.17		7.59	19.86	4.65		369.67	6.69			14.20		1006.3	139.77	130.47	89.09	291.72		195.84		0.72	11.10	12.94	2453.75	
32	38.59	1.84		6.06			8.46	11.01		0.27		22.06		127.92	87.59	100.03	68.14		173.63	7.98		1.58	6.36	661.51	
411	52.29			10.06	3.17		9.03	6.32			2.85	37.71	0.37		30.46	584.13	52.86		138.79	26.87		1.72		956.62	
413	4.15													8.42		0.95			15.06			0.95		29.52	
414	15.43						0.59					0.48	2.81	144.05	5.52		2.04				2.56			173.48	
421	1.17	0.19		5.54	3.13		7.91					39.40	6.04	14.65	5.92	6.85			2.85					93.64	
423					0.31		5.93					8.18	10.17	0.65	3.41	7.71	0.12							36.47	
61	4.60						0.40					0.37									0.04			5.40	
612							1.99			0.64		9.42				0.69							219.52	232.27	
621																					13.33	6.99		20.31	
622							7.35															3.37		10.72	
Total Acres	736.02	2.91	7.59	56.73	28.07	8.16	613.08	339.53	7.05	187.05	172.11	1494.0	1342.8	650.06	332.40	920.56	792.78	4.84	706.97	53.82	28.13	248.83	21.01	8754.46	

* Values may not sum to shown totals due to rounding

Land Use Code Legend

11 Residential 111 Multi-Family, Medium- to High-Rise 112 Multi-Family, Low-Rise 113 Single Family / Duplex 115 Manufactured Home Park 119 Other Residential 12 Commercial, Services, & Institutional 121 Primary / Central Business District 124 Secondary / Neighborhood or Rural Businesses 126 Institutional 13 Industrial 133 Primary Wood Processing 138 Industrial Park 139 Other (miscellaneous / automotive track) 14 Transportation, Communication, Utilities 141 Air Transportation	143 Water Transportation 146 Utilities 17 Extractive 171 Open Pit 173 Wells 19 Open Land and Other 191 Outdoor Cultural 192 Outdoor Public Assembly 193 Outdoor Recreation 194 Cemeteries 21 Cropland 22 Orchards, Bush Fruits, and Vineyards 223 Ornamental Horticulture and Nurseries 23 Confined Feeding Operations 24 Permanent Pasture 29 Other Agricultural Land	291 Farmsteads 31 Grasses and Forbs 32 Shrubs 33 Pine or Oak Opening (prairie) 331 Hardwood Opening 332 Coniferous Opening 41 Broadleaved Forest 411 Northern Hardwoods 412 Central Hardwoods / Oak 413 Aspen-Birch 414 Lowland Hardwoods 42 Coniferous Forest 421 Pine 422 Other Upland Conifer 423 Lowland Conifers 429 Managed Christmas Tree Plantations	43 Mixed Conifer-Broadleaved Forest 44 Clear-Cut Forest 51 Streams and Waterways 52 Lakes 53 Reservoirs 61 Forested (Wooded) Wetlands 612 Shrub Swamps 62 Non-Forested (Non-Wooded) Wetlands 621 Aquatic Bed Wetland 622 Emergent Wetland 623 Flats 625 Open Water 629 Other Non-Forested Wetland 72 Beaches and Riverbanks 73 Sand Dunes / Exposed Bluff
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CENTRAL LAKE TOWNSHIP

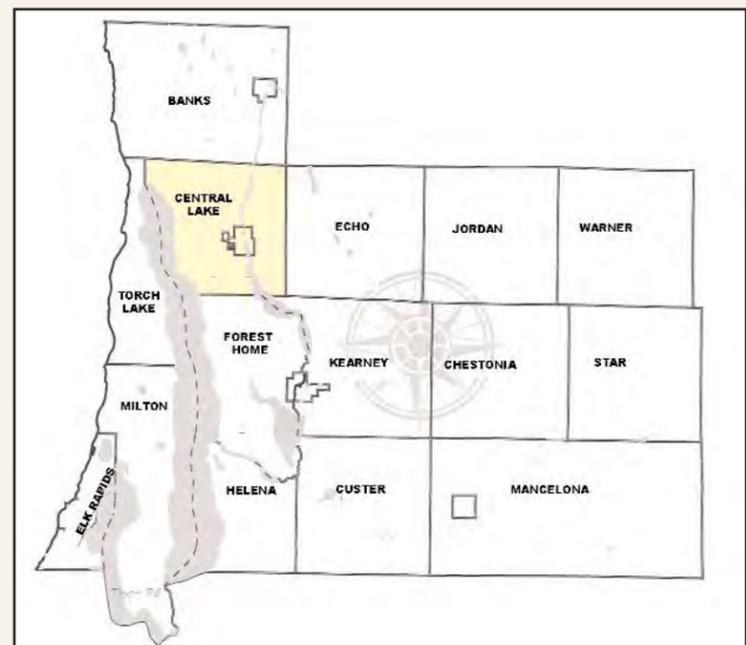


POPULATION TRENDS

1980	1990	2000
1766	1919	2254

LAND USE TRENDS (ACRES)

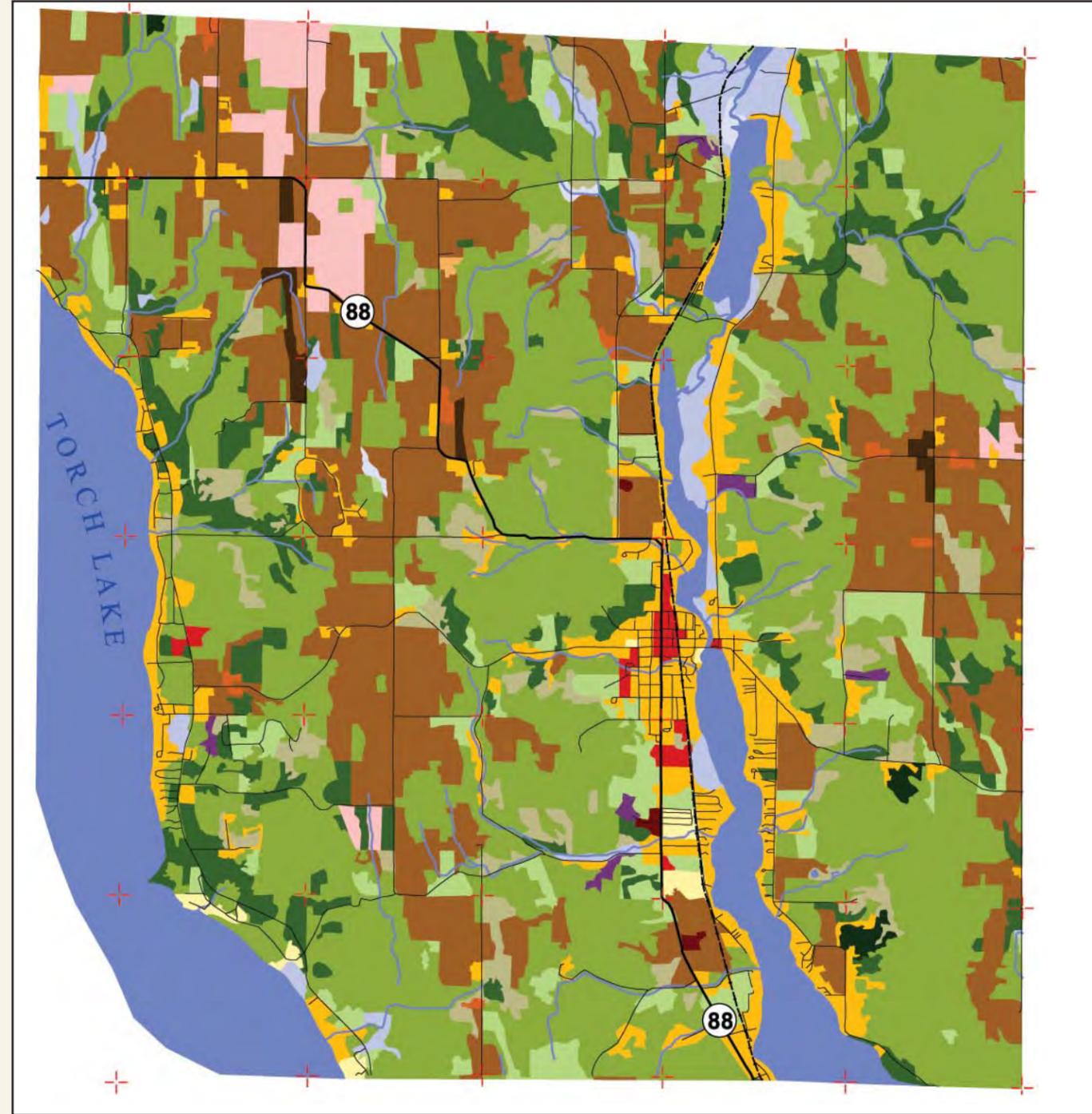
	1978	1998
Urban & Built Up	1049	1632
Agricultural Land	4913	4823
Grass & Shrub Lands	3642	1875
Forest Land	7564	8838
Water	2420	2420
Wetlands	441	442
Barren	0	0



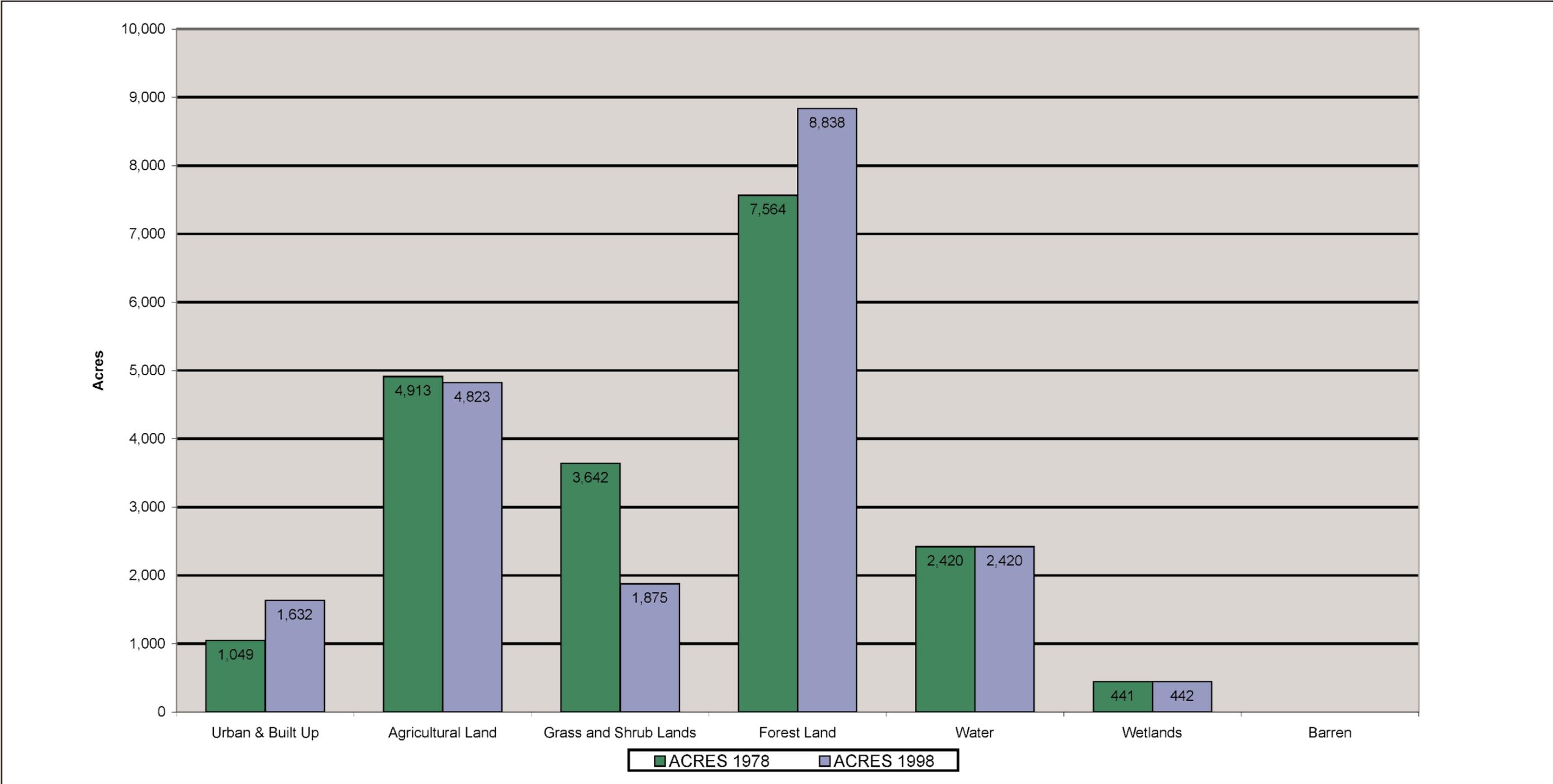
LAND USE 1978



LAND USE 1998



MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes

	112	113	124	126	13	171	193	21	22	229	23	24	29	291	31	32	411	412	413	414	42	421	423	43	52	61	612	621	Total Acres
113																										0.00			0.00
12	4.26																												4.26
171		11.22						1.79							4.94	4.63			0.54			0.46							23.58
193								8.12																					8.12
21		159.23			1.22	1.31			199.79	3.71	5.69	57.71	28.74	18.22	91.90	11.33	31.37		44.58	1.46	3.59	57.92	3.41				2.28	723.45	
22		2.08						10.37														2.28							14.72
24		4.08						141.07	2.22				4.40		101.25	21.50	14.58		0.85	4.45		32.08	10.08						336.55
31	1.87	218.93	3.11	0.89		0.54	14.05	431.57	13.57							206.49	101.17	6.95	68.87	5.64		122.39	6.90	5.82	0.01	1.79			1210.57
32		126.47	2.95			7.37		28.11					1.70		31.49		276.27	13.21	274.70	27.39		134.02	47.54	42.09		9.16	10.96		1033.42
411		16.98	1.09			0.96	1.26	3.61	6.36						3.02						21.03	33.52	36.70						124.53
412							1.64																						1.64
413		21.48													0.00						35.98	15.42	12.16						85.06
414		0.36																	1.46				89.77						91.58
421		11.41	1.00				0.94	13.42		0.01			0.07		0.05	0.68	13.01		0.10										40.67
422																						3.71							6.40
429									4.16													8.04							12.20
61		2.24																											17.88
612															0.00								6.04						14.94
62																											6.85		6.85
Total Acres	6.14	574.48	8.16	0.89	1.22	10.18	17.90	638.06	226.09	3.72	5.69	57.71	34.91	18.22	232.65	244.63	436.39	20.15	393.79	95.95	3.59	409.82	228.24	47.91	0.01	10.95	20.09	8.89	3756.41

Note: Values may not sum to shown totals due to rounding

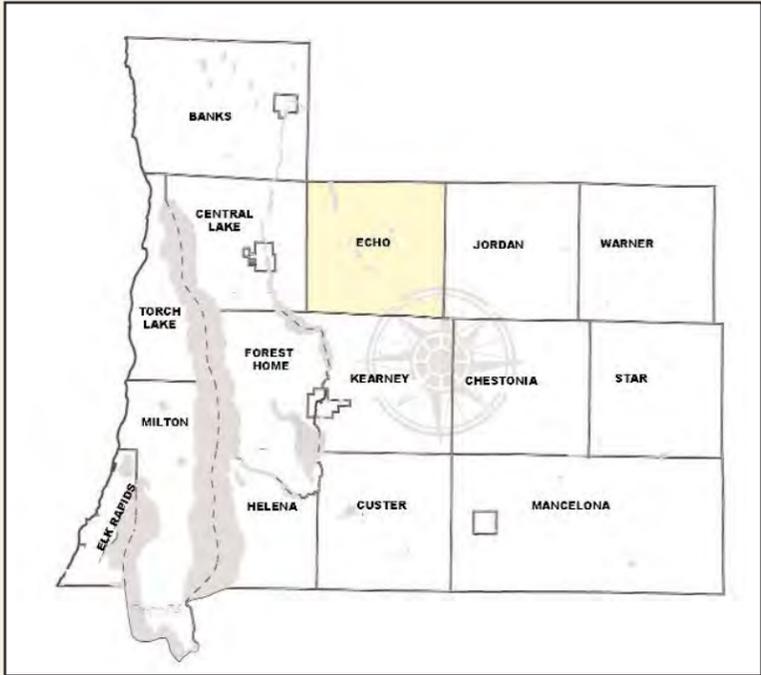
Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
| 12 Commercial, Services, & Institutional | 191 Outdoor Cultural | 41 Broadleaved Forest | 612 Shrub Swamps |
| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
| 126 Institutional | 194 Cemeteries | 413 Aspen-Birch | 622 Emergent Wetland |
| 13 Industrial | 21 Cropland | 414 Lowland Hardwoods | 623 Flats |
| 133 Primary Wood Processing | 22 Orchards, Bush Fruits, and Vineyards | 42 Coniferous Forest | 625 Open Water |
| 138 Industrial Park | 223 Ornamental Horticulture and Nurseries | 421 Pine | 629 Other Non-Forested Wetland |
| 139 Other (miscellaneous / automotive track) | 23 Confined Feeding Operations | 422 Other Upland Conifer | 72 Beaches and Riverbanks |
| 14 Transportation, Communication, Utilities | 24 Permanent Pasture | 423 Lowland Conifers | 73 Sand Dunes / Exposed Bluff |
| 141 Air Transportation | 29 Other Agricultural Land | 429 Managed Christmas Tree Plantations | |

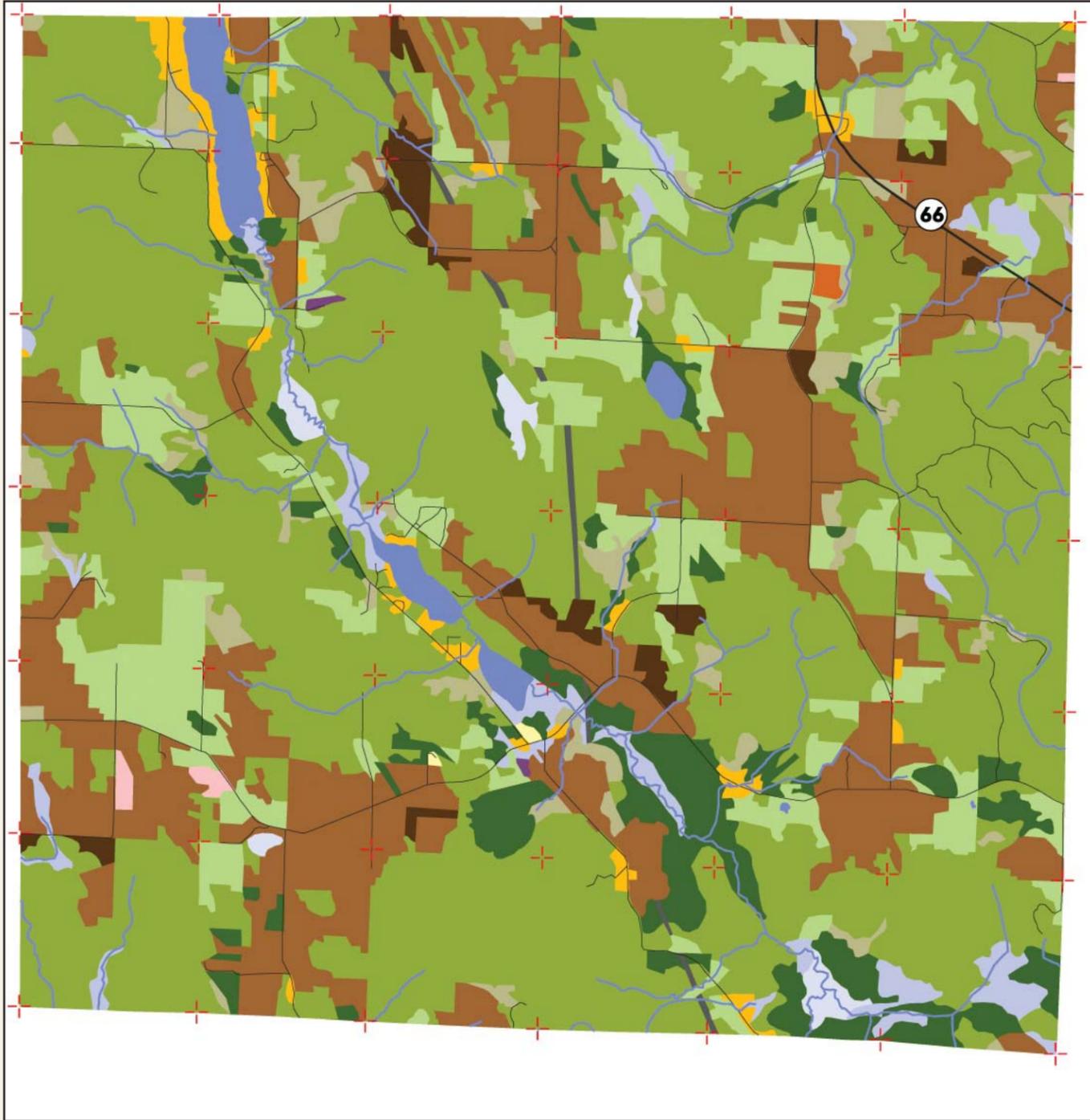
ECHO TOWNSHIP



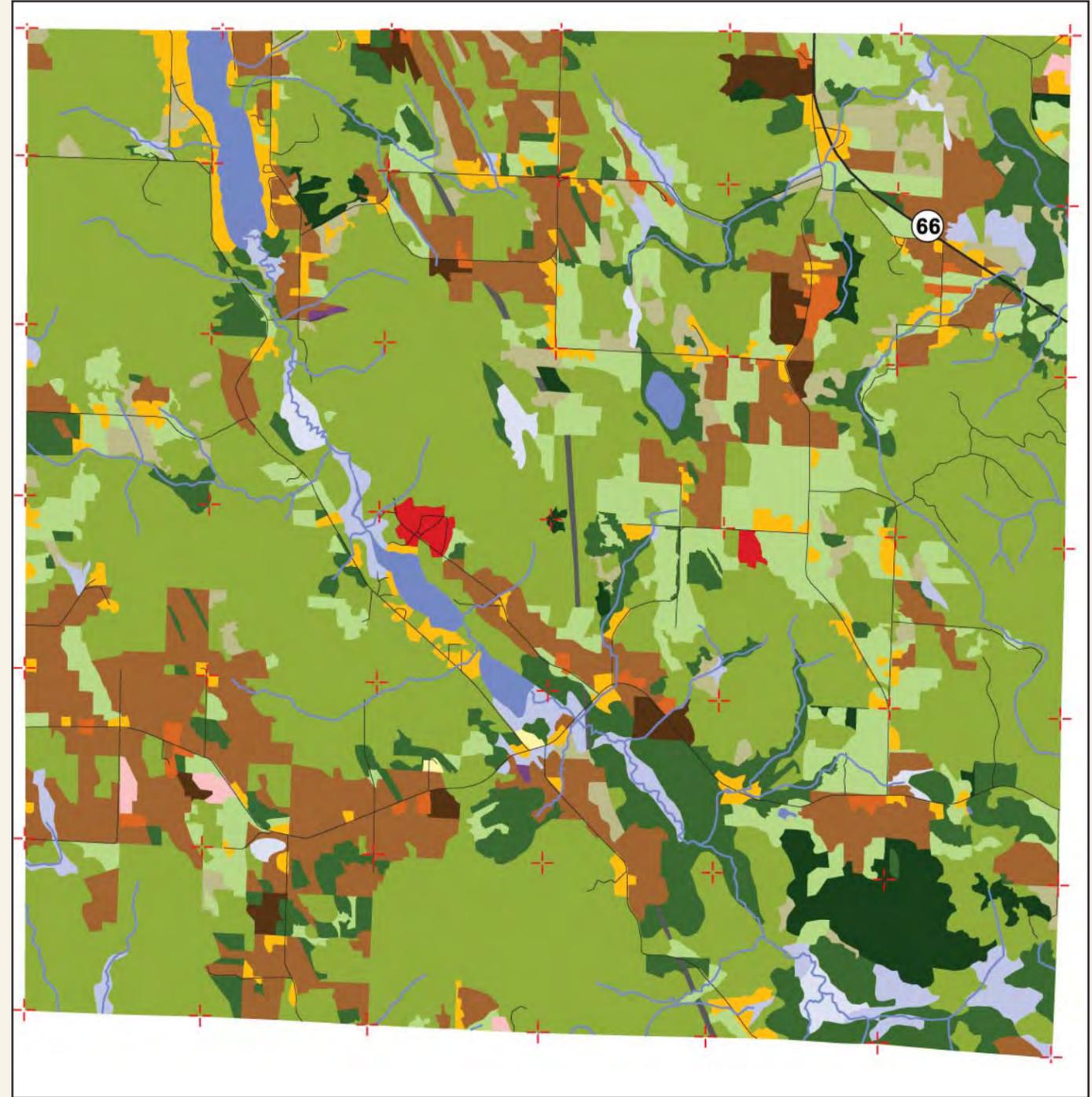
POPULATION TRENDS		
1980	1990	2000
723	766	928
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	362	880
Agricultural Land	4923	3563
Grass & Shrub Lands	3064	2893
Forest Land	13320	14277
Water	308	310
Wetlands	639	693
Barren	0	0



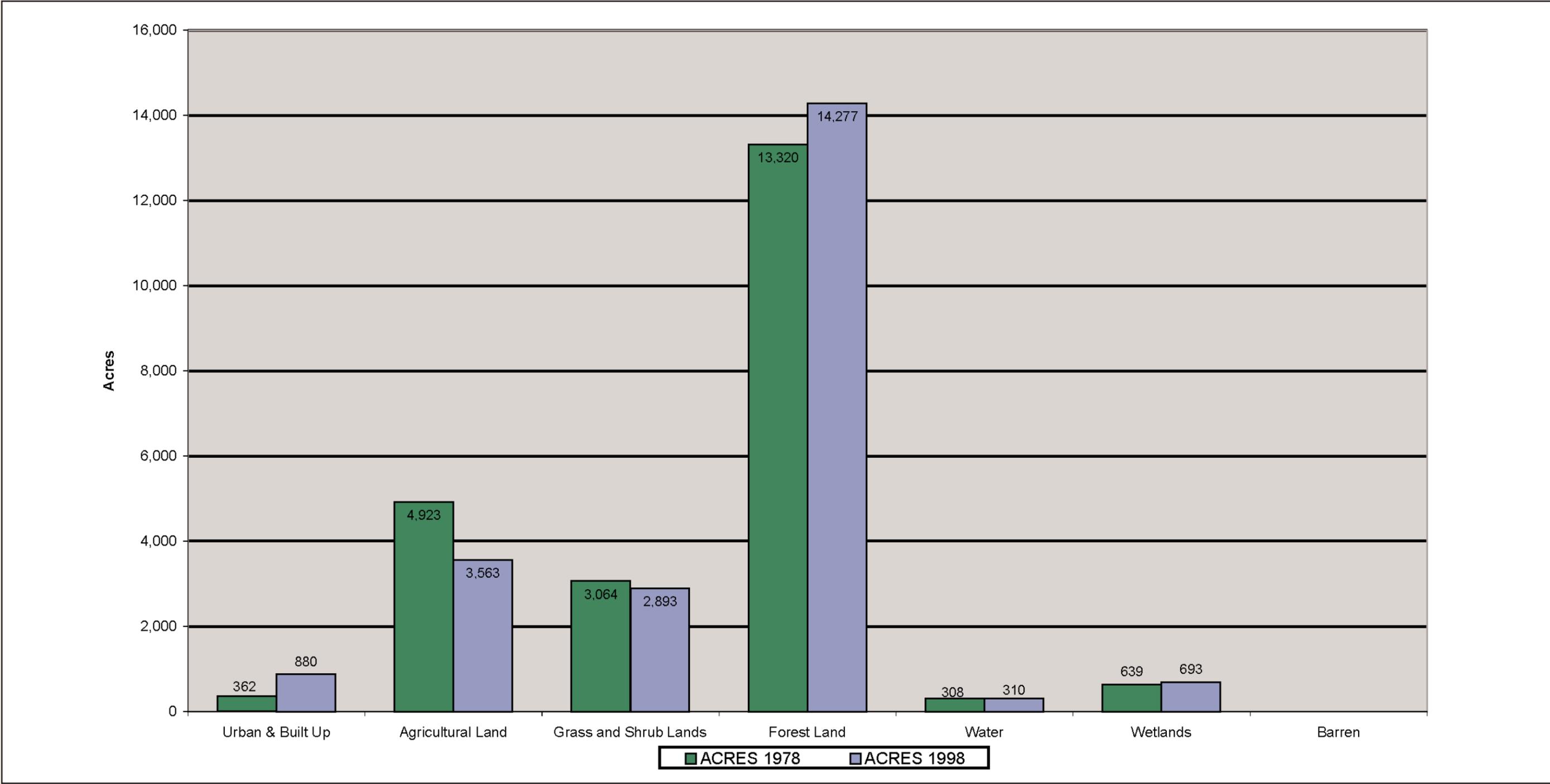
LAND USE 1978



LAND USE 1998



MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes

	113	124	126	193	194	21	22	24	29	291	31	32	411	413	414	421	423	429	43	52	61	612	62	622	Total Acres
146													3.77												3.77
171						0.41																			0.41
21	218.45	16.05	0.77				15.08	109.82	4.50	81.31	1061.8	42.43	49.04		9.94	168.81	10.24	98.90	12.42		6.98	0.02	0.73	3.76	1911.01
22	2.91					1.38				0.62									0.19						5.10
24	3.13					67.89				5.19	131.45	20.49	12.65			4.97									245.76
29	1.25									2.06															3.31
31	145.11		49.11			352.13		100.82	6.35	22.71		337.21	67.72	24.84	37.23	144.94	28.11		12.36	2.14	0.92		9.02	7.82	1348.52
32	18.85					20.54					59.81		132.09	86.07	32.52	32.85	65.05		49.44		0.41	13.46			511.09
411	47.18					4.07				2.75	0.70	0.02		5.96	32.34	38.23	121.41		321.04			3.24			576.94
413	4.08										0.49		208.74		47.52	3.92	10.72		122.42			0.01			397.89
414	10.16										2.51	7.27				5.45	195.16		5.33		7.57				233.45
421	1.24				1.36	2.87		4.16			24.39		0.97	0.89											35.87
423	2.08			0.46		0.42									3.79										6.75
612	0.12													0.01							229.67				229.81
Total Acres	454.55	16.05	49.88	0.46	1.36	449.71	15.08	214.80	10.85	114.63	1281.1	407.42	474.98	117.78	163.35	399.18	430.70	98.90	523.20	2.14	245.55	16.73	9.75	11.57	5509.69

* Values may not sum to shown totals due to rounding

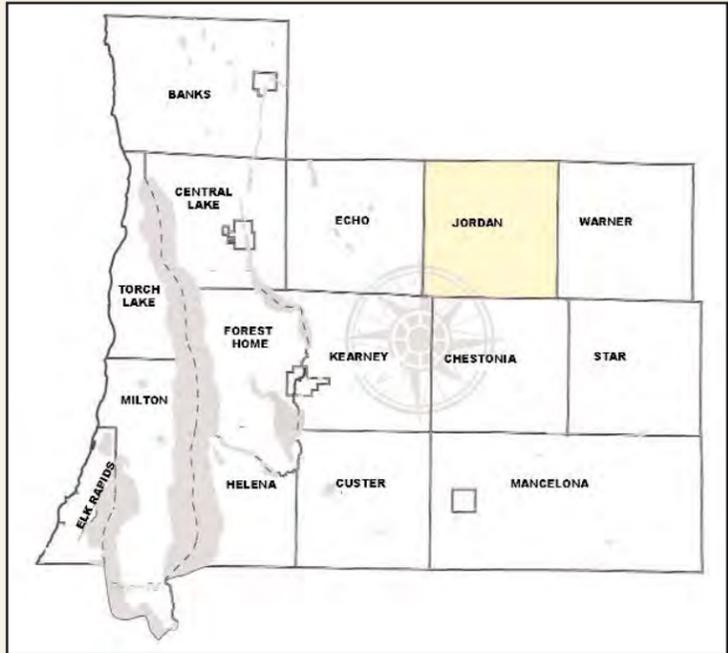
Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
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| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
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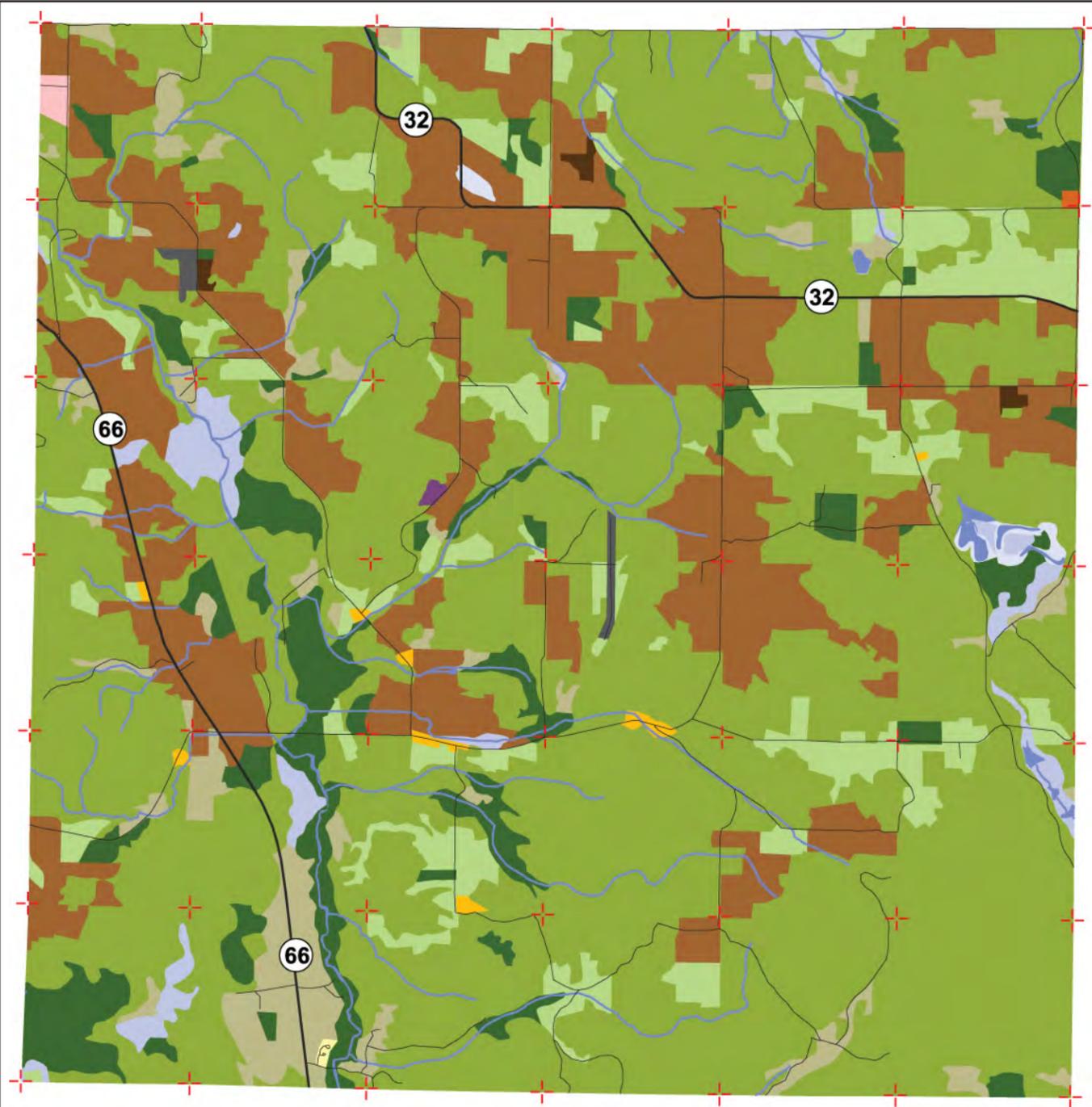
JORDAN TOWNSHIP



POPULATION TRENDS		
1980	1990	2000
410	583	875
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	118	748
Agricultural Land	4291	2167
Grass & Shrub Lands	2552	3288
Forest Land	15101	15885
Water	9	47
Wetlands	452	386
Barren	0	0



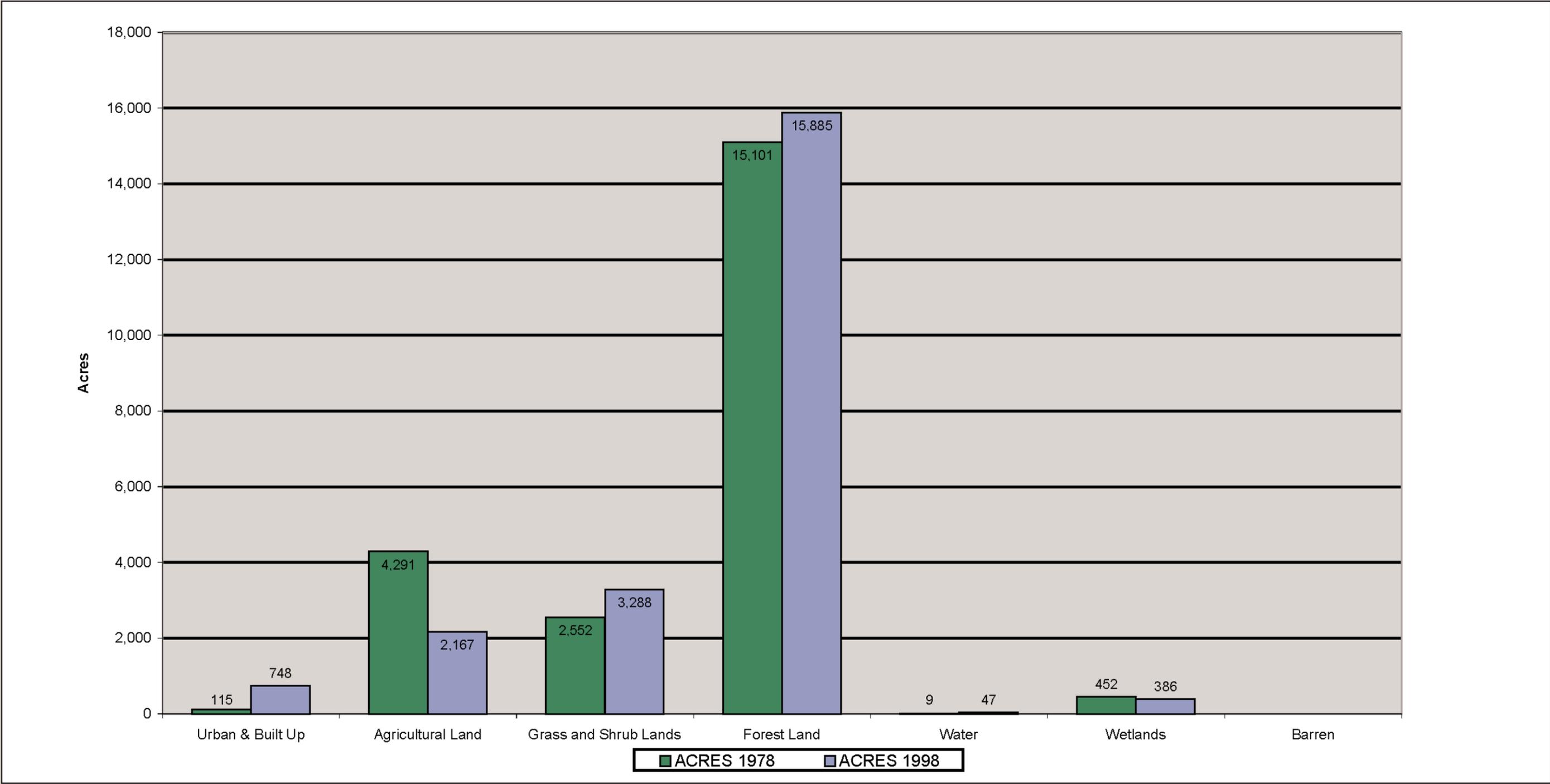
LAND USE 1978



LAND USE 1998



MAJOR LAND USES 1978-1998



ACRES CHANGED

1978 Land Use Codes

1998 Land Use Codes	113	171	173	21	22	24	29	291	31	32	411	413	414	421	422	423	429	43	52	61	612	622	Total Acres	
141									22.16															22.16
171									0.21															0.21
21	315.18	2.80			19.00	135.01		90.53	1583.8	74.17	55.51	2.89	13.99	111.94		20.11	23.17			0.87	1.43	1.28		2451.64
22	3.34			4.19																				7.53
24								0.21	8.06					1.08										9.35
31	153.91			30.97		50.17		6.24		109.58	109.28	5.87	13.48	162.76	1.79	18.16		7.98		0.19				670.38
32	44.20					1.00			13.16		151.48	237.81	43.20	23.40		26.93		18.00						559.16
411	84.18	2.31	2.10	1.32			0.83		29.69	20.07		3.36	77.72	79.55	4.99	199.98		83.05				0.44		589.58
413	16.32								1.03	75.44	433.73		72.00	12.64		110.43		74.38				0.83		796.79
414	6.68									14.76		5.30				840.77				4.16				871.66
421	18.04			3.93					9.57		1.37	0.28			2.09			8.75						44.03
422	1.77						1.37																	3.14
423	4.64								1.05	1.83			33.94											41.46
429									0.42					13.07										13.49
61				0.05					0.23		0.23													0.51
612													10.87			25.90				203.10		9.00		248.87
621																			17.66	1.35				19.01
622																			20.88	8.63				29.51
Total Acres	648.24	5.11	2.10	40.44	19.00	186.18	2.21	96.97	1669.2	295.84	751.80	255.50	265.19	404.44	8.87	1242.3	23.17	192.17	38.54	218.30	1.43	11.54		6378.46

* Values may not sum to shown totals due to rounding

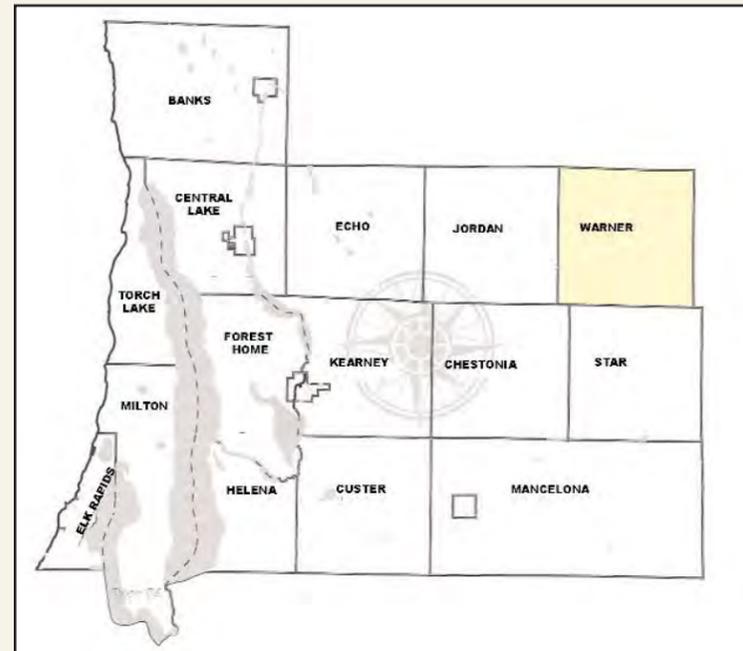
Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
| 12 Commercial, Services, & Institutional | 191 Outdoor Cultural | 41 Broadleaved Forest | 612 Shrub Swamps |
| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
| 126 Institutional | 194 Cemeteries | 413 Aspen-Birch | 622 Emergent Wetland |
| 13 Industrial | 21 Cropland | 414 Lowland Hardwoods | 623 Flats |
| 133 Primary Wood Processing | 22 Orchards, Bush Fruits, and Vineyards | 42 Coniferous Forest | 625 Open Water |
| 138 Industrial Park | 223 Ornamental Horticulture and Nurseries | 421 Pine | 629 Other Non-Forested Wetland |
| 139 Other (miscellaneous / automotive track) | 23 Confined Feeding Operations | 422 Other Upland Conifer | 72 Beaches and Riverbanks |
| 14 Transportation, Communication, Utilities | 24 Permanent Pasture | 423 Lowland Conifers | 73 Sand Dunes / Exposed Bluff |
| 141 Air Transportation | 29 Other Agricultural Land | 429 Managed Christmas Tree Plantations | |

WARNER TOWNSHIP



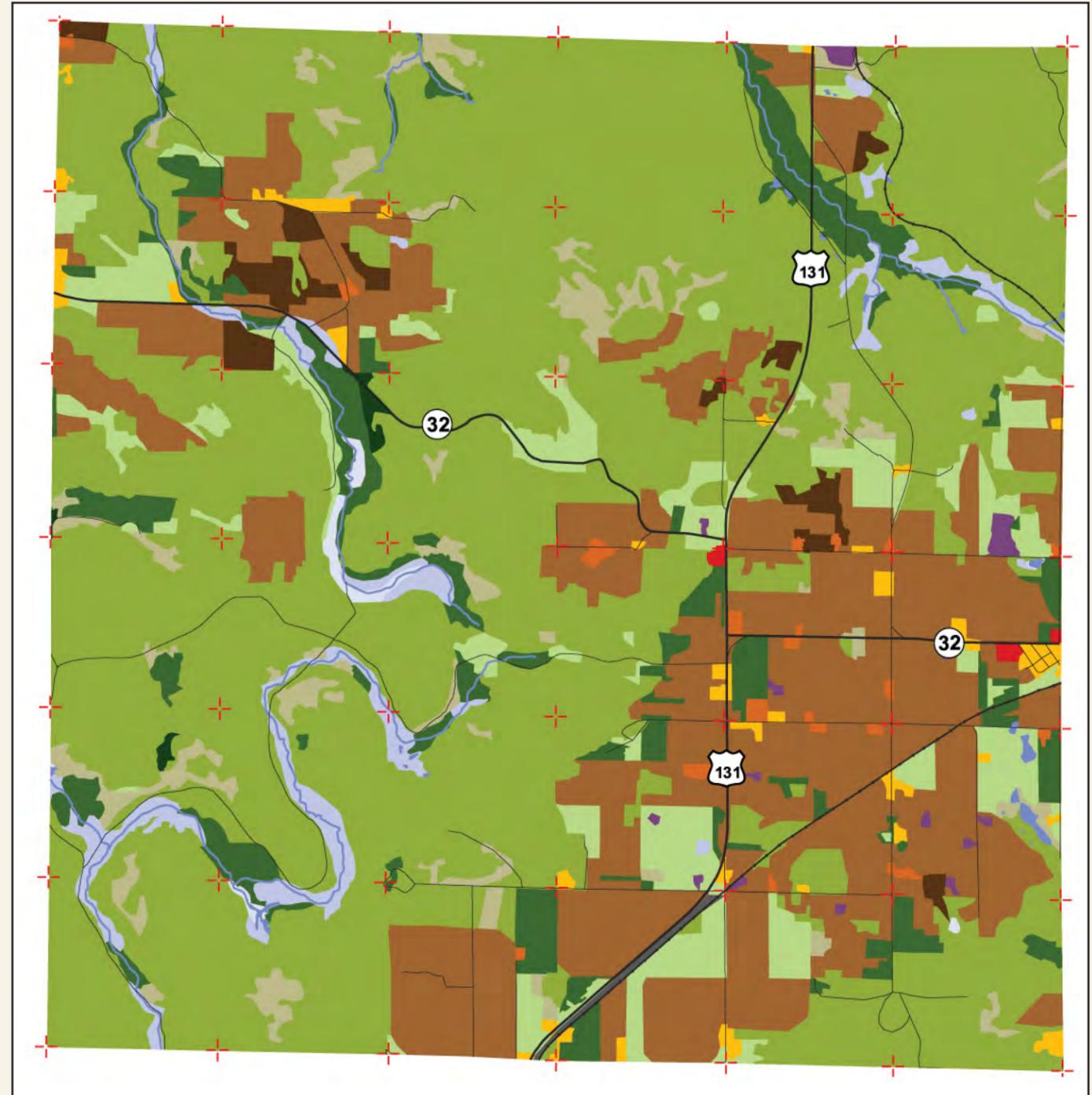
POPULATION TRENDS		
1980	1990	2000
261	287	389
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	117	354
Agricultural Land	6178	5340
Grass & Shrub Lands	1746	2110
Forest Land	14129	14348
Water	12	19
Wetlands	597	608
Barren	0	0



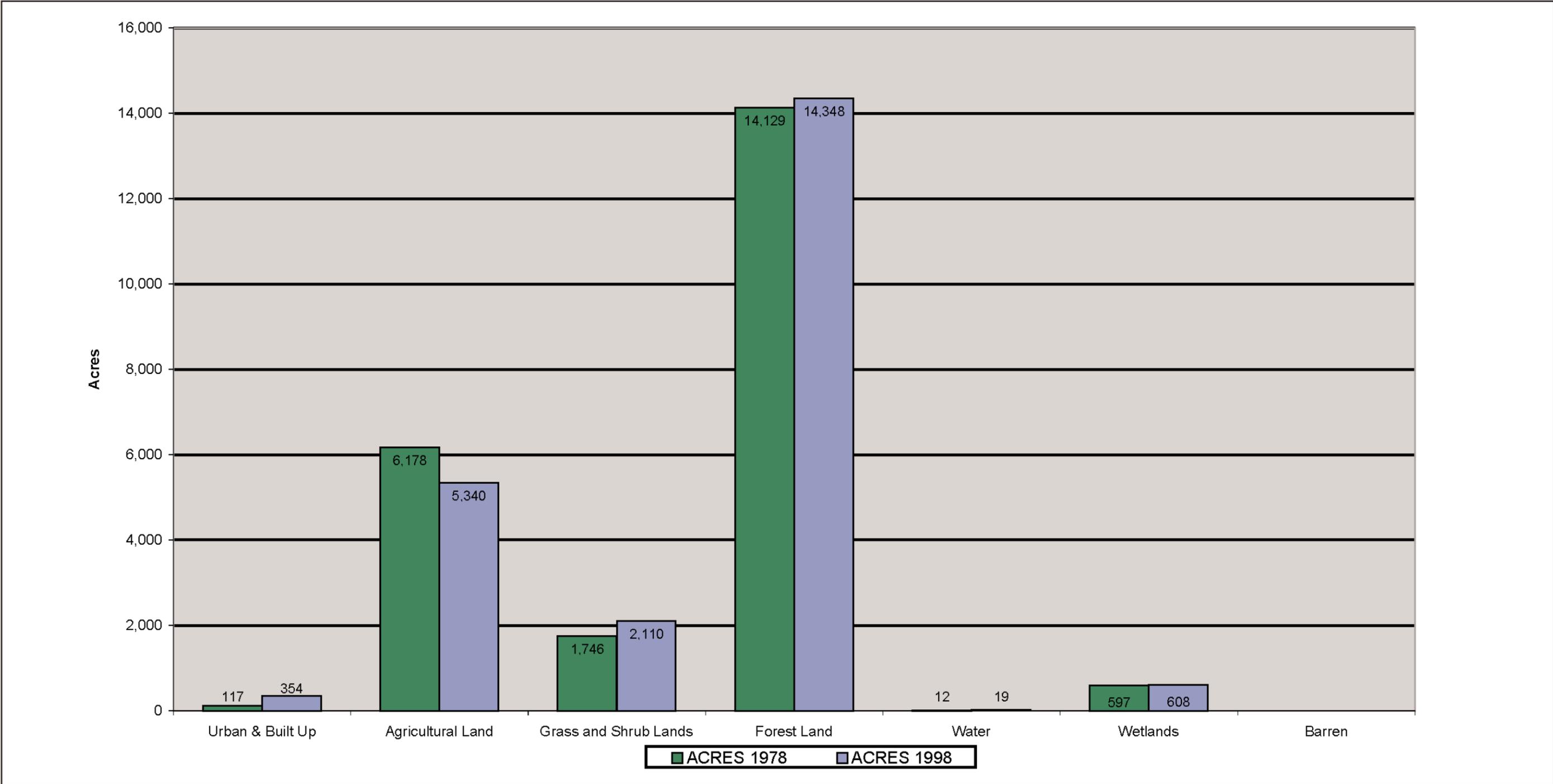
LAND USE 1978



LAND USE 1998



MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes		113	124	171	173	21	24	291	31	32	411	413	414	421	422	423	429	43	52	61	612	622	Total Acres		
1978 Land Use Codes	141					13.68																		13.68	
	171	10.24				10.93			2.14		1.55													24.85	
	21	149.21	4.55	20.59	30.89		178.21	96.11	925.30	20.23	37.98	2.65		130.54	0.02		105.03			0.07				1701.38	
	24					61.22		0.73		7.32	0.02		2.58											71.87	
	31	15.16	1.24	9.10	2.65	45.01	16.85	2.70		78.31	36.76	2.35		81.48		6.47	33.40			1.11	4.29			336.88	
	32	6.93				3.19	10.27			27.01		301.58	115.23	41.63	58.31	0.03	19.32		27.11			1.57		612.18	
	41										24.37													24.37	
	411	12.03	1.78			214.14	3.02		9.69	100.12		89.20	26.96	7.58		53.88									518.39
	413					2.41				105.57	138.13		85.96			30.29		10.14				8.97		381.46	
	414									6.54	17.45	9.31		14.48		205.91						0.57	1.00	255.26	
	421	10.16		0.93		123.81			1.50															136.40	
	423																					1.00		1.00	
	429					153.42			4.23		0.28			6.60										164.52	
	61																					8.69		8.69	
	612																					196.26	1.04	197.31	
	622																			7.28	6.23			13.51	
	Total Acres	203.72	7.56	30.62	33.54	627.80	208.34	99.54	969.87	342.45	533.74	218.75	157.13	298.99	0.05	315.87	138.43	37.25	7.28	203.68	25.09	2.05		4461.73	

* Values may not sum to shown totals due to rounding

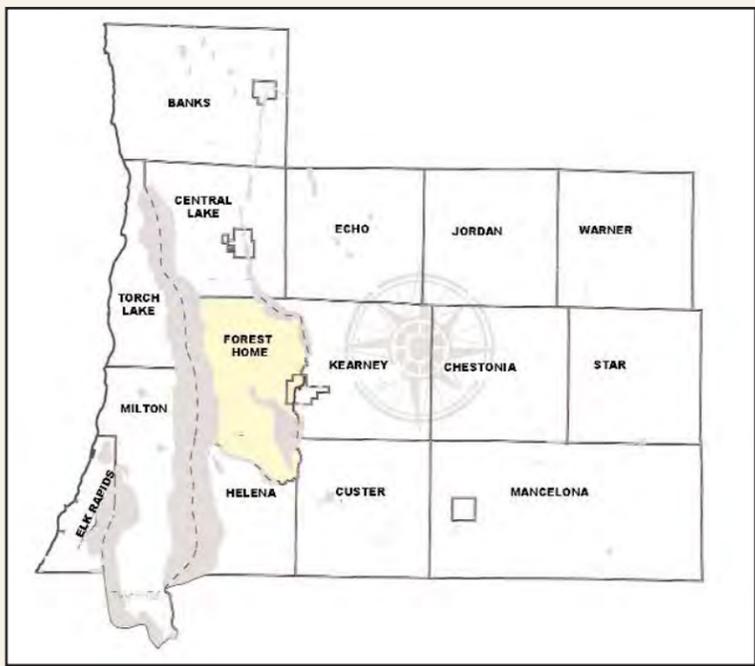
Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
| 12 Commercial, Services, & Institutional | 191 Outdoor Cultural | 41 Broadleaved Forest | 612 Shrub Swamps |
| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
| 126 Institutional | 194 Cemeteries | 413 Aspen-Birch | 622 Emergent Wetland |
| 13 Industrial | 21 Cropland | 414 Lowland Hardwoods | 623 Flats |
| 133 Primary Wood Processing | 22 Orchards, Bush Fruits, and Vineyards | 42 Coniferous Forest | 625 Open Water |
| 138 Industrial Park | 223 Ornamental Horticulture and Nurseries | 421 Pine | 629 Other Non-Forested Wetland |
| 139 Other (miscellaneous / automotive track) | 23 Confined Feeding Operations | 422 Other Upland Conifer | 72 Beaches and Riverbanks |
| 14 Transportation, Communication, Utilities | 24 Permanent Pasture | 423 Lowland Conifers | 73 Sand Dunes / Exposed Bluff |
| 141 Air Transportation | 29 Other Agricultural Land | 429 Managed Christmas Tree Plantations | |

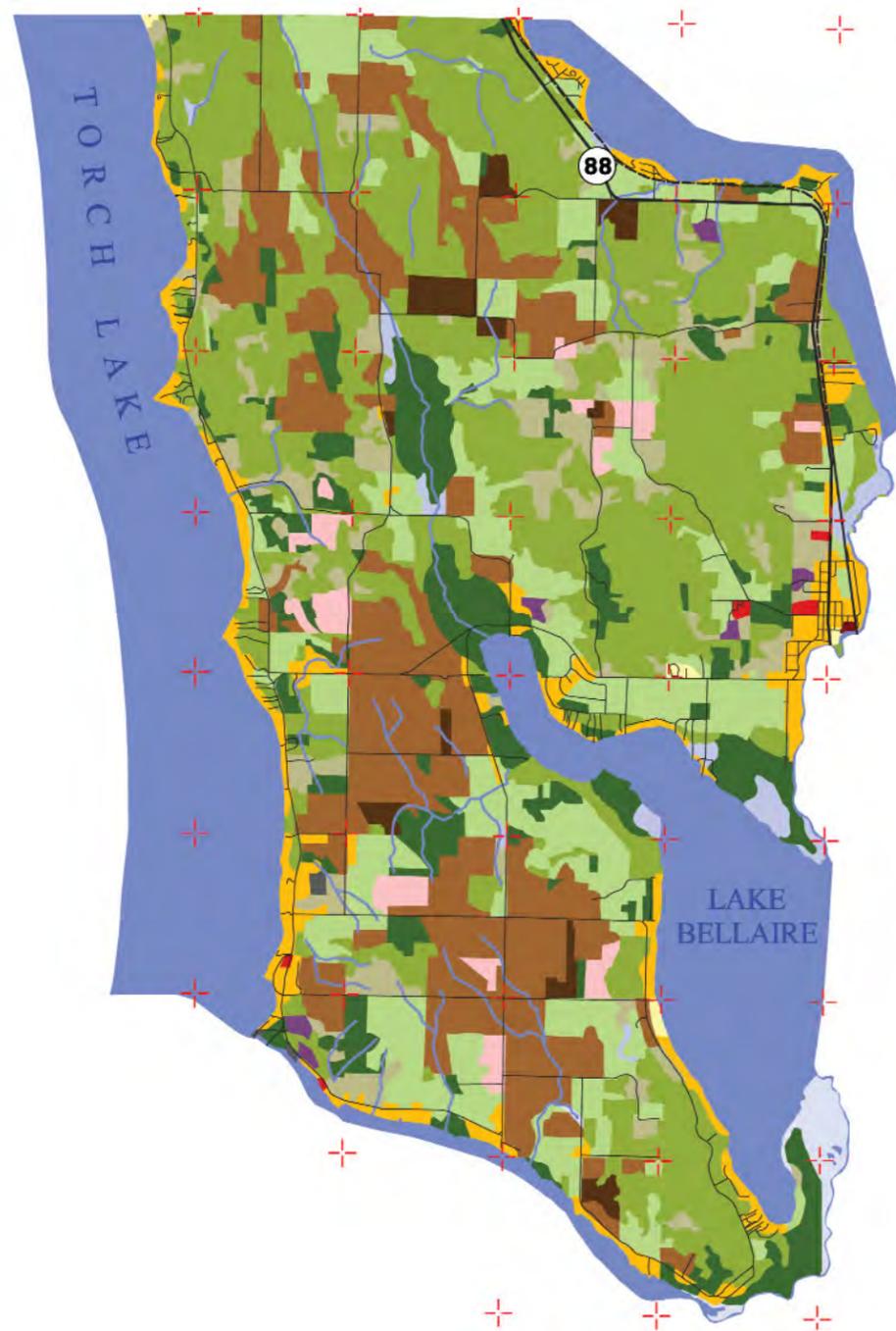
FOREST HOME TOWNSHIP



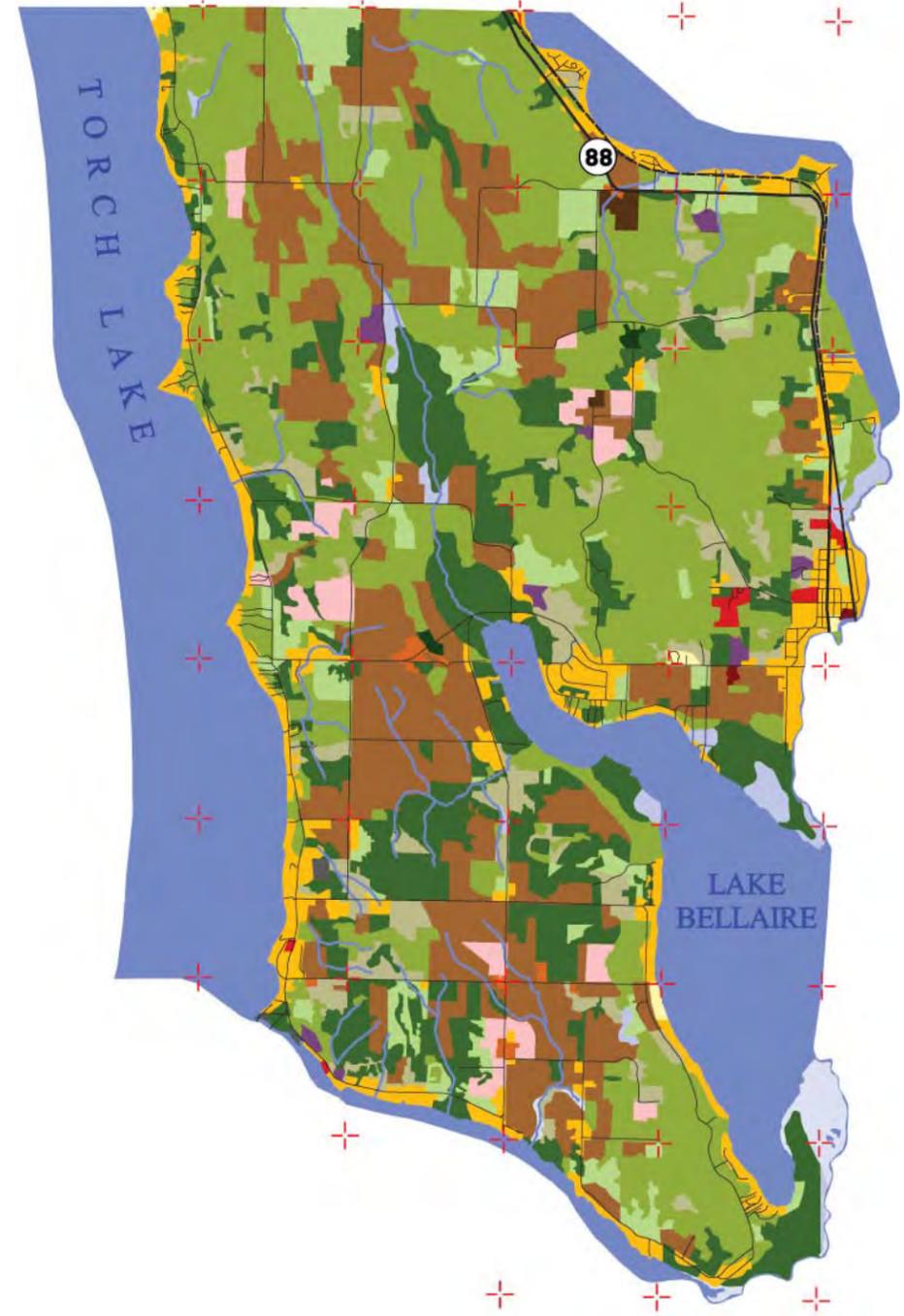
POPULATION TRENDS		
1980	1990	2000
1333	1410	1858
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	1086	1424
Agricultural Land	3353	3430
Grass & Shrub Lands	3610	1794
Forest Land	7170	8565
Water	5804	5804
Wetlands	368	375
Barren	0	0



LAND USE 1978

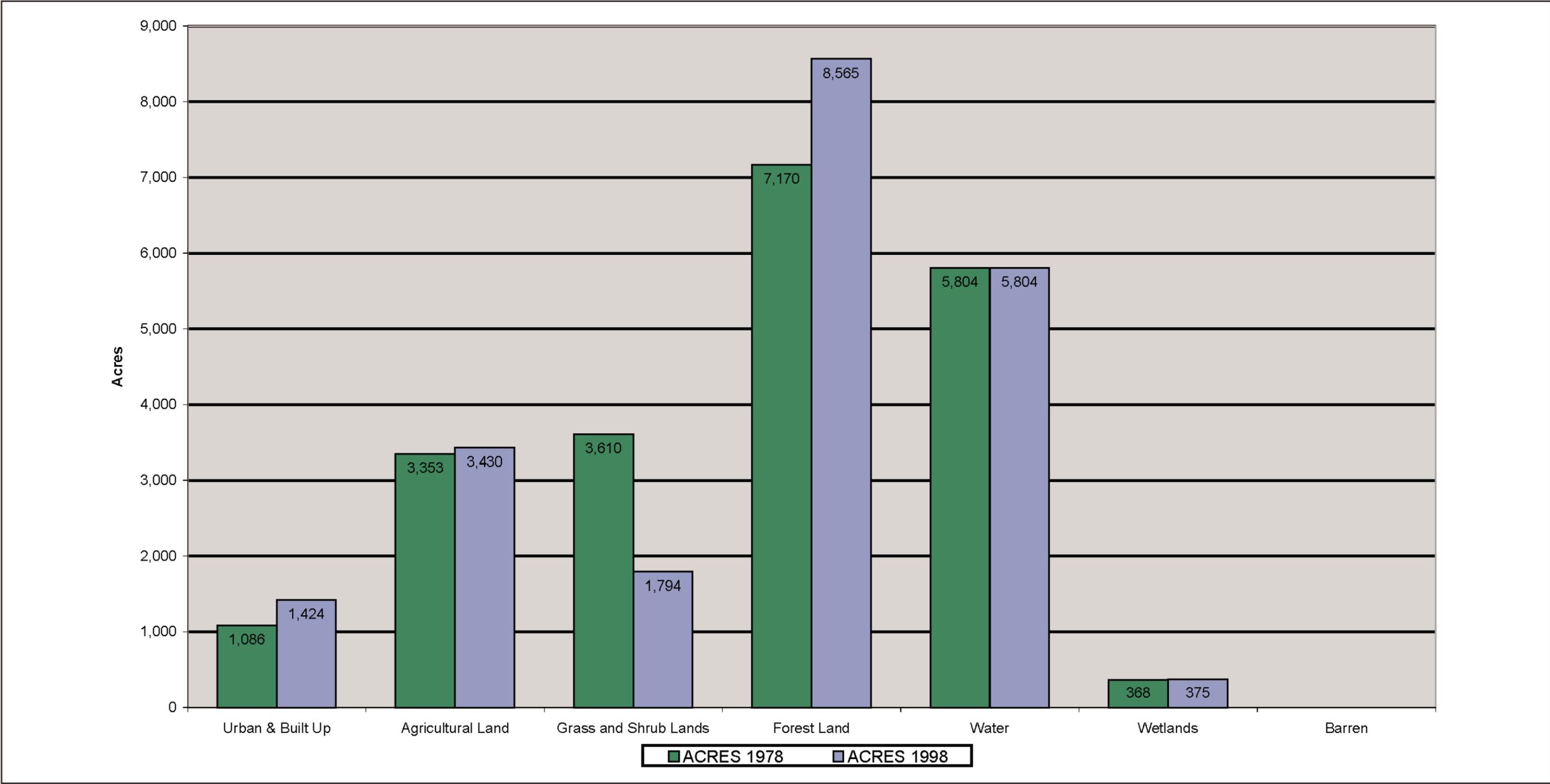


LAND USE 1998



Residential	Open Land and Other	Other Agricultural Land	Coniferous Forest	Reservoirs
Commercial, Services, & Institutional	Cropland	Grasses and Forbs	Mixed Conifer-Broadleaved Forest	Forested (Wooded) Wetlands
Industrial	Orchards, Bush Fruits, and Vineyards	Shrubs	Clear-Cut Forest	Non-Forested (Non-Wooded) Wetlands
Transportation, Communication, Utilities	Confined Feeding Operations	Pine or Oak Opening	Streams and Waterways	Beaches and Riverbanks
Extractive	Permanent Pasture	Broadleaved Forest	Lakes	Sand Dunes / Exposed Bluff

MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes	113	124	126	13	171	21	22	291	31	32	41	411	413	414	421	423	429	43	61	622	Total Acres	
12			9.95																			9.95
126		2.80																				2.80
171	0.36		7.21						9.38			1.60	0.59									19.14
21	39.30						34.86	35.55	40.80	24.03		90.44	1.70		127.07	0.66	233.69	8.49				636.59
22	0.71						13.57	5.13	3.14						32.01		37.90					92.46
24							116.62	1.90	49.93			11.69			5.16		24.23					209.52
31	157.70	6.13	7.41	4.44		662.68	31.20	4.98		333.01		68.12	7.59	12.06	383.98	18.56	48.93		2.14	9.30		1758.20
32	28.76		1.06		35.04	16.32	53.78		2.92			182.09	30.09		212.27	7.81			10.13			580.27
411	27.19				2.76		1.75		2.67		4.82		17.47		38.69	21.76						117.10
413	7.30											33.30				9.33						49.93
414	3.55														0.69							4.24
42	1.28																					1.28
421	9.93				2.18	36.11	1.38		16.65	6.51		12.72										85.47
423	9.65								1.90			0.85	0.41									12.80
429										31.10					76.24							107.34
612	5.07																		64.58			69.64
622																			8.81			8.81
Total Acres	290.78	8.93	25.63	4.44	39.98	845.29	122.96	47.56	127.40	394.65	4.82	400.80	57.86	12.06	876.09	58.12	344.74	18.62	75.53	9.30	3765.55	

* Values may not sum to shown totals due to rounding

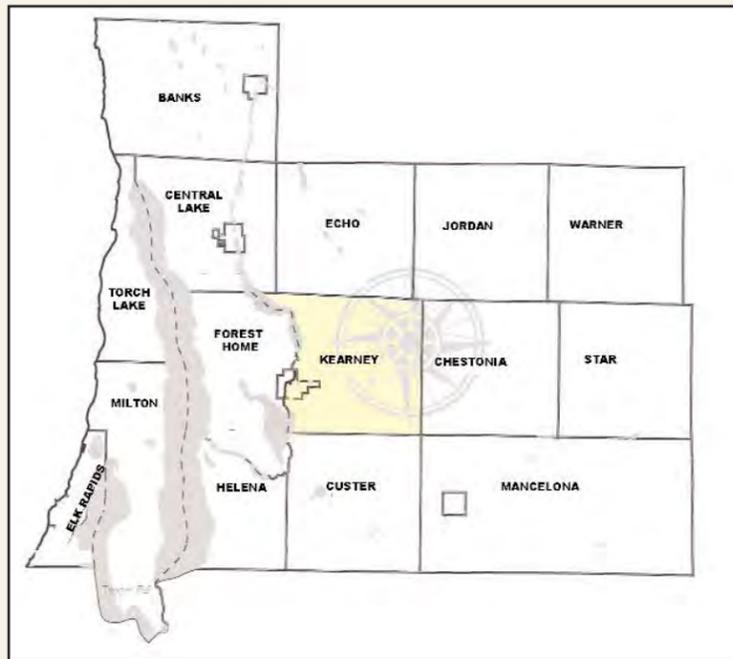
Land Use Code Legend

- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> 11 Residential 111 Multi-Family, Medium- to High-Rise 112 Multi-Family, Low-Rise 113 Single Family / Duplex 115 Manufactured Home Park 119 Other Residential 12 Commercial, Services, & Institutional 121 Primary / Central Business District 124 Secondary / Neighborhood or Rural Businesses 126 Institutional 13 Industrial 133 Primary Wood Processing 138 Industrial Park 139 Other (miscellaneous / automotive track) 14 Transportation, Communication, Utilities 141 Air Transportation | <ul style="list-style-type: none"> 143 Water Transportation 146 Utilities 17 Extractive 171 Open Pit 173 Wells 19 Open Land and Other 191 Outdoor Cultural 192 Outdoor Public Assembly 193 Outdoor Recreation 194 Cemeteries 21 Cropland 22 Orchards, Bush Fruits, and Vineyards 223 Ornamental Horticulture and Nurseries 23 Confined Feeding Operations 24 Permanent Pasture 29 Other Agricultural Land | <ul style="list-style-type: none"> 291 Farmsteads 31 Grasses and Forbs 32 Shrubs 33 Pine or Oak Opening (prairie) 331 Hardwood Opening 332 Coniferous Opening 41 Broadleaved Forest 411 Northern Hardwoods 412 Central Hardwoods / Oak 413 Aspen-Birch 414 Lowland Hardwoods 42 Coniferous Forest 421 Pine 422 Other Upland Conifer 423 Lowland Conifers 429 Managed Christmas Tree Plantations | <ul style="list-style-type: none"> 43 Mixed Conifer-Broadleaved Forest 44 Clear-Cut Forest 51 Streams and Waterways 52 Lakes 53 Reservoirs 61 Forested (Wooded) Wetlands 612 Shrub Swamps 62 Non-Forested (Non-Wooded) Wetlands 621 Aquatic Bed Wetland 622 Emergent Wetland 623 Flats 625 Open Water 629 Other Non-Forested Wetland 72 Beaches and Riverbanks 73 Sand Dunes / Exposed Bluff |
|---|---|---|---|

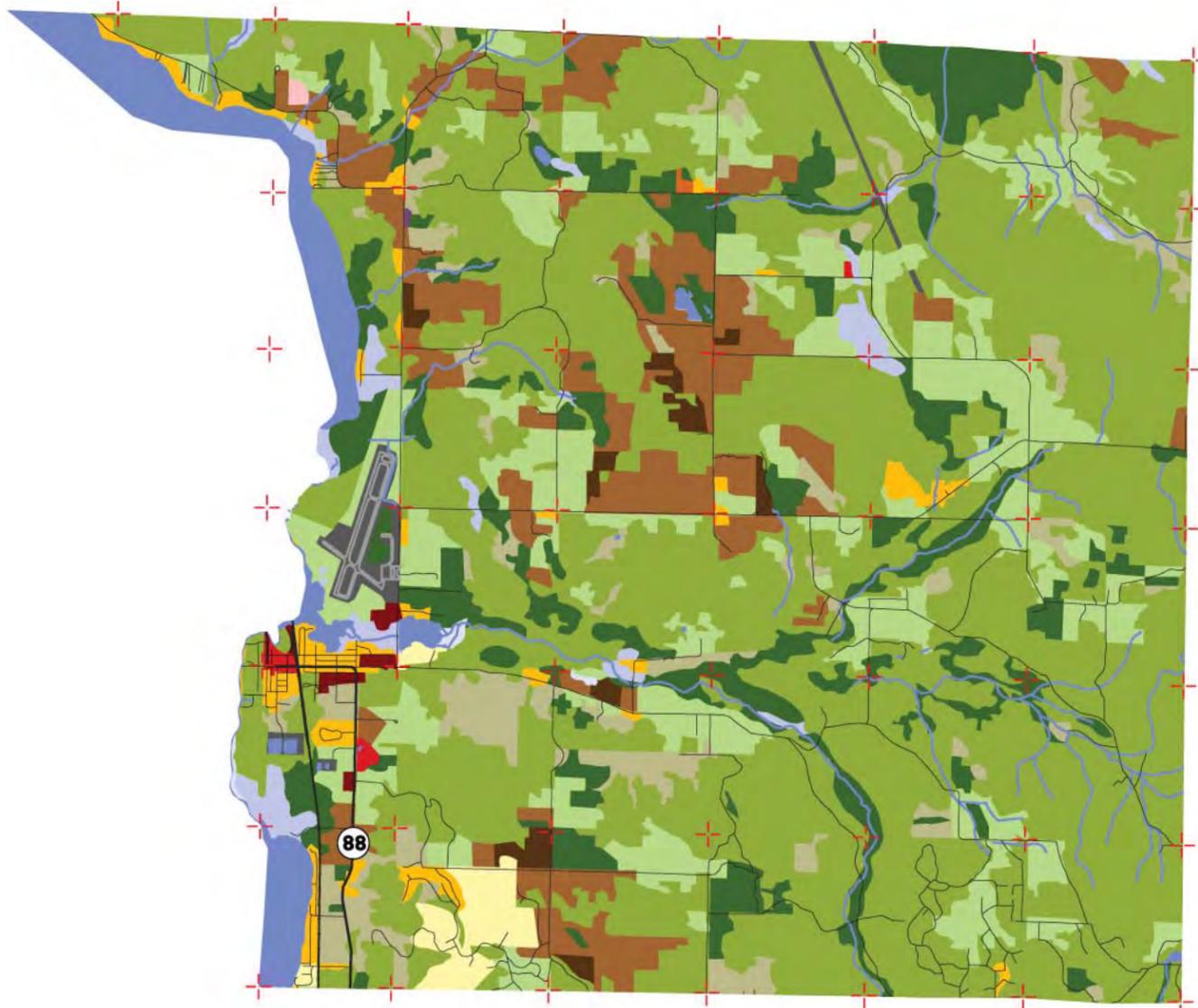
KEARNEY TOWNSHIP



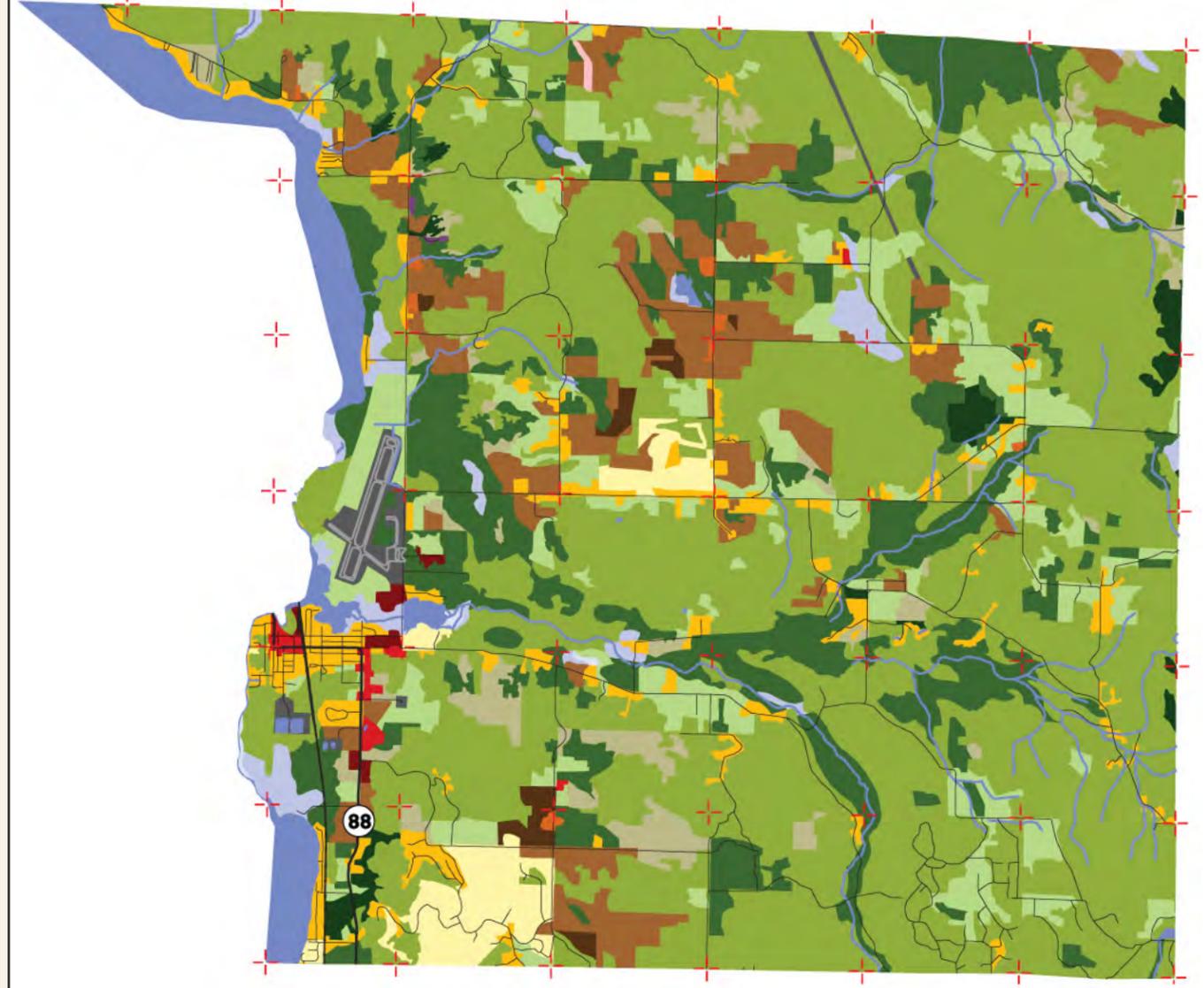
POPULATION TRENDS		
1980	1990	2000
1241	1487	1764
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	1021	1804
Agricultural Land	2020	1640
Grass & Shrub Lands	4112	2688
Forest Land	14429	15402
Water	764	764
Wetlands	373	397
Barren	0	0



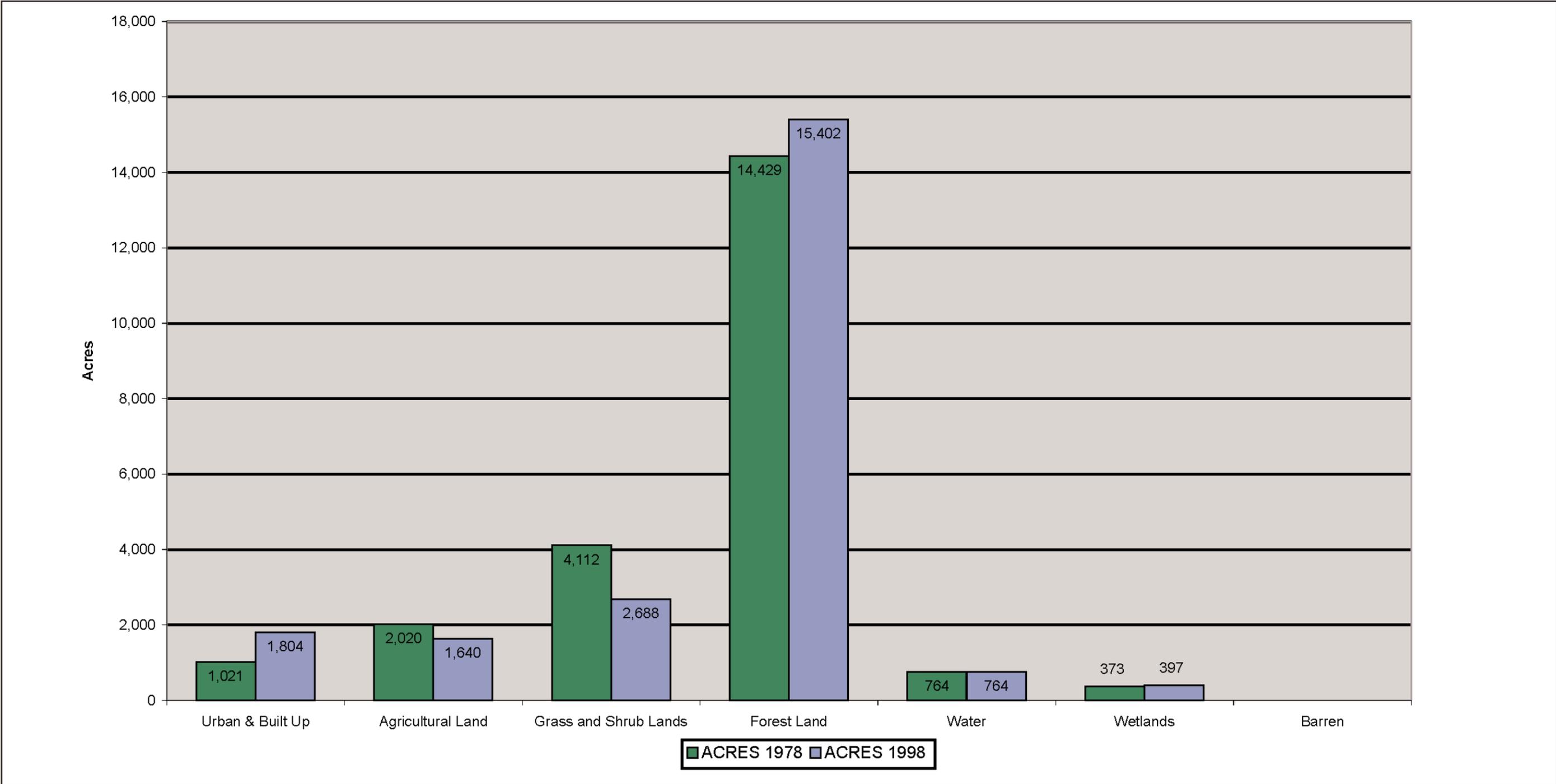
LAND USE 1978



LAND USE 1998



MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes	113	124	13	138	141	146	171	193	21	22	24	291	31	32	41	411	413	414	421	422	423	429	43	61	Total Acres
113		2.07	1.36					6.10								29.02		10.59							49.13
13	14.36	2.63																							16.99
21	97.19	3.25					3.19	134.20		10.05	37.48	20.01	125.22	15.01		31.46	14.65	4.76	94.22	1.34	12.67	15.77	4.37	10.18	635.00
22	0.22								1.59			1.09		8.69											11.58
24	2.10							1.04	21.58			13.09	53.22			5.20		0.46	10.77						107.46
29													6.31			1.15									7.47
31	205.32	3.96	5.29	7.59		3.71		19.12	252.72			2.80		301.78	15.21	112.07	94.36	51.03	127.76		21.16		17.72	9.70	1251.28
32	61.04	3.54				7.04	0.32	7.92	13.83				48.77		5.50	183.45	223.36	29.92	95.38		82.07		80.82		842.96
411	99.48							72.82	0.77				13.03	12.92	596.95		45.46	16.21	36.46	0.01	104.90		140.88	5.13	1145.03
413	22.66												0.91	5.13	117.82	22.48		29.79	5.14	16.51	176.88		10.87	3.33	411.52
414	29.63	9.16	0.01					6.41					21.90	7.53			31.14		0.81		317.74				424.32
421	9.69			0.01	3.00						4.87	1.63	16.15	2.78		10.58	32.52						1.22		82.46
422																0.61									0.61
423	1.81								0.42								1.04	16.54						0.32	46.41
429													3.70						92.76						96.46
612	2.13												2.31											205.73	210.16
622																								5.61	5.61
Total Acres	545.61	24.61	6.66	7.61	3.00	10.75	3.51	247.60	290.92	10.05	42.35	38.61	317.80	353.85	735.49	396.02	442.52	159.30	463.28	17.87	715.42	15.77	255.89	239.99	5344.44

* Values may not sum to shown totals due to rounding

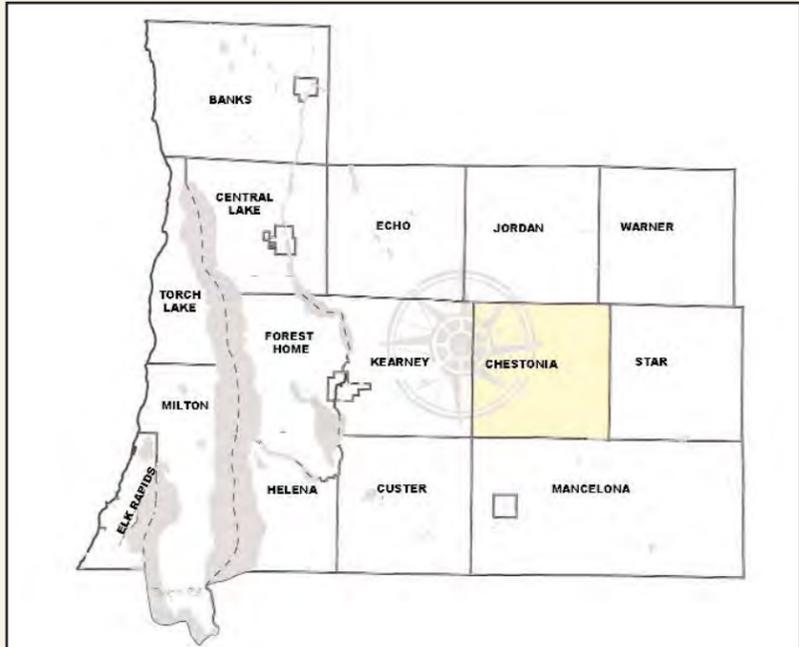
Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
| 12 Commercial, Services, & Institutional | 191 Outdoor Cultural | 41 Broadleaved Forest | 612 Shrub Swamps |
| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
| 126 Institutional | 194 Cemeteries | 413 Aspen-Birch | 622 Emergent Wetland |
| 13 Industrial | 21 Cropland | 414 Lowland Hardwoods | 623 Flats |
| 133 Primary Wood Processing | 22 Orchards, Bush Fruits, and Vineyards | 42 Coniferous Forest | 625 Open Water |
| 138 Industrial Park | 223 Ornamental Horticulture and Nurseries | 421 Pine | 629 Other Non-Forested Wetland |
| 139 Other (miscellaneous / automotive track) | 23 Confined Feeding Operations | 422 Other Upland Conifer | 72 Beaches and Riverbanks |
| 14 Transportation, Communication, Utilities | 24 Permanent Pasture | 423 Lowland Conifers | 73 Sand Dunes / Exposed Bluff |
| 141 Air Transportation | 29 Other Agricultural Land | 429 Managed Christmas Tree Plantations | |

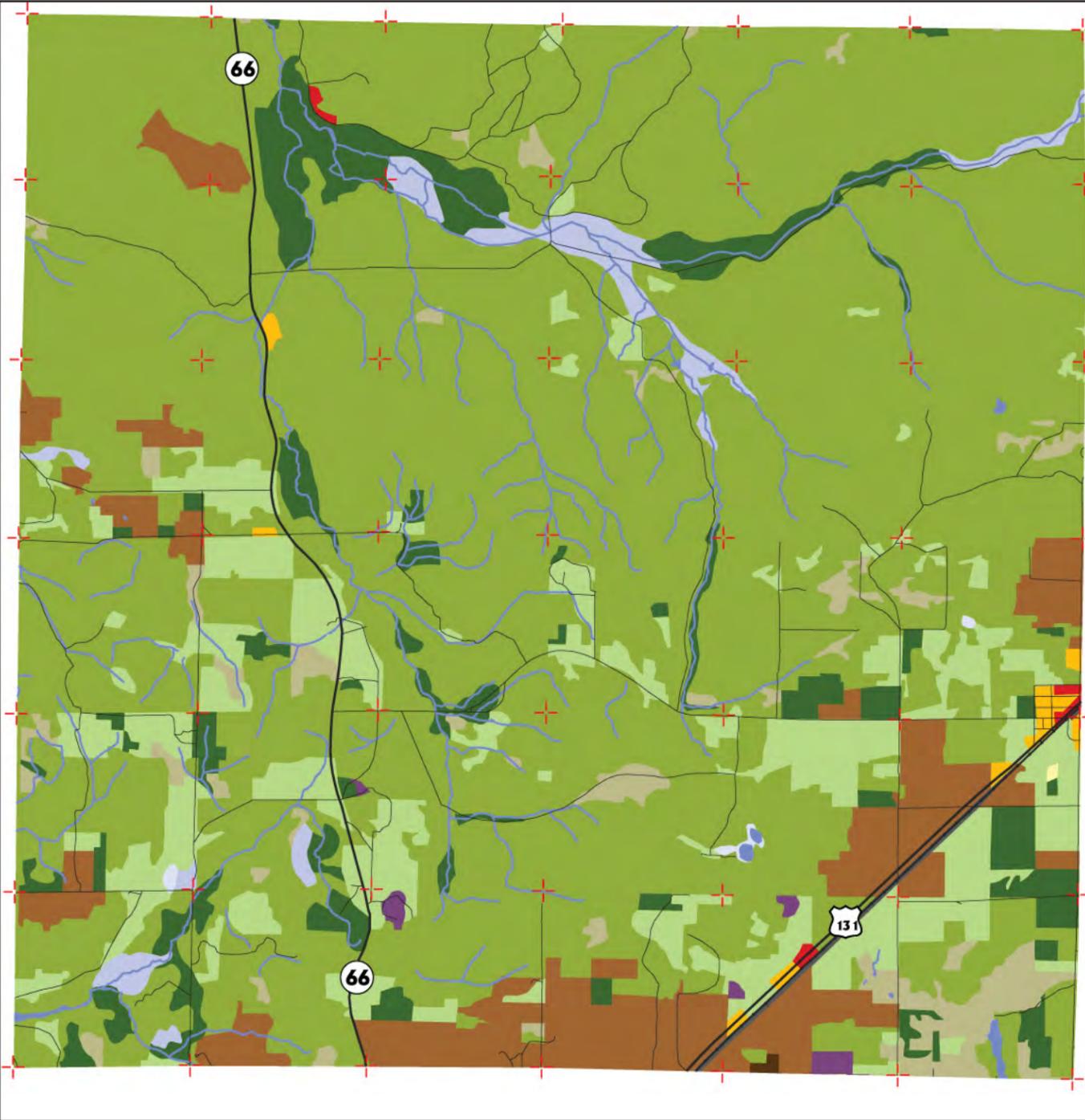
CHESTONIA TOWNSHIP



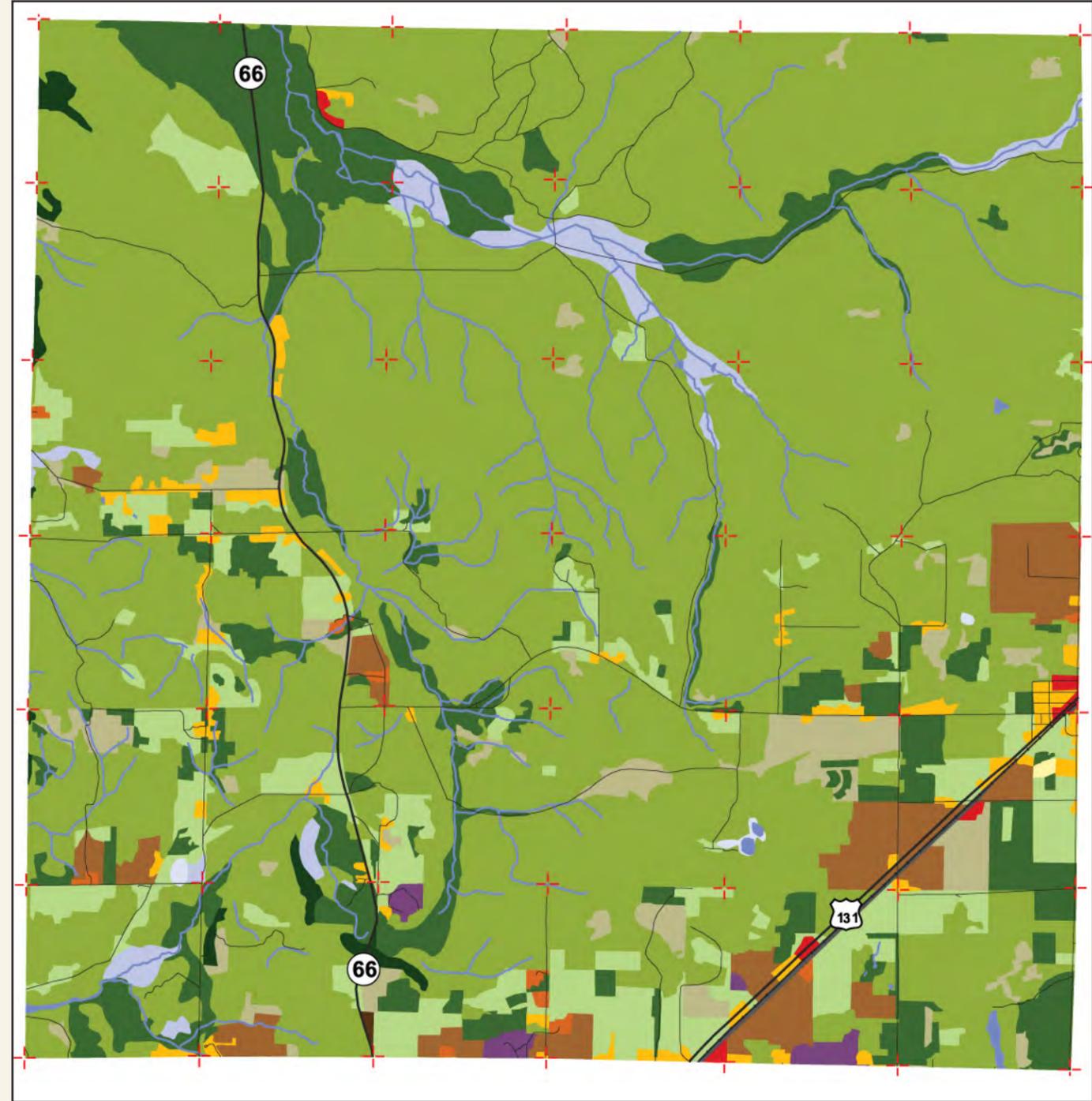
POPULATION TRENDS		
1980	1990	2000
433	401	546
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	201	530
Agricultural Land	1550	812
Grass & Shrub Lands	2904	2465
Forest Land	17721	18556
Water	26	26
Wetlands	370	383
Barren	0	0



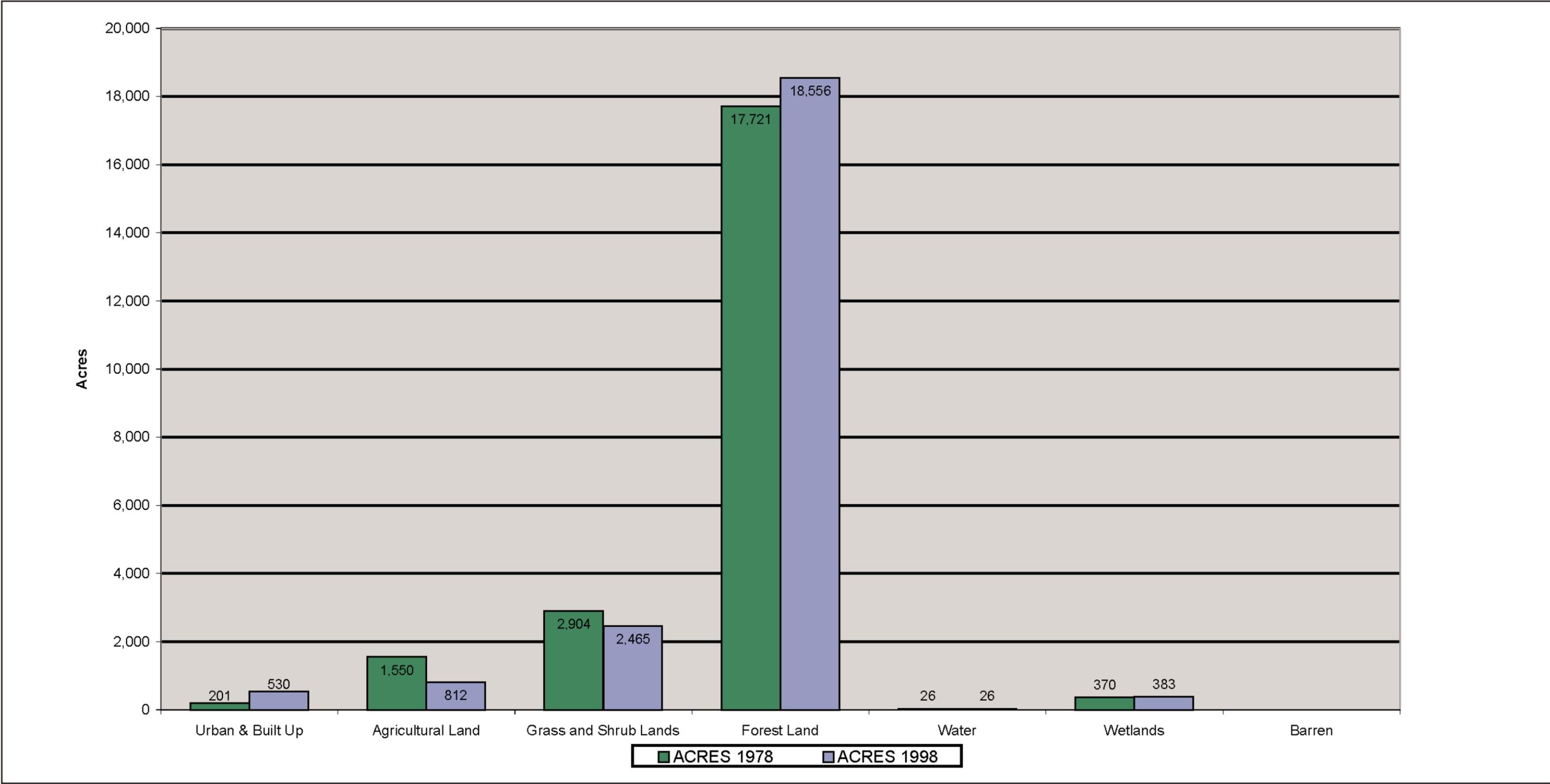
LAND USE 1978



LAND USE 1998



MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes

	113	124	171	173	193	21	24	291	31	32	411	413	414	421	423	429	43	52	61	612	622	Total Acres	
171	0.01										2.50			7.52									10.02
21	69.67	5.97	32.99	0.01			5.58	34.80	648.22	42.64	4.01			72.31	1.69	57.38							975.26
24	2.39										5.91												8.29
31	131.89	6.16	7.73		3.68	115.12		14.40		537.05	86.03	83.24	18.00	228.76	4.76	5.10	0.28					1.21	1243.40
32	12.20										62.75	269.58	24.13	95.77	6.89								471.31
411	50.13	2.06	4.61			74.98	0.13		17.67	20.09		493.65	169.31	21.53	122.38		114.97	0.34	0.92	6.03			1098.78
412														52.81									52.81
413	1.05									2.71	27.65		97.71	0.59	15.73		2.74		2.74				150.93
414	0.45										9.86			0.08	418.11				1.56		0.08		430.13
421	8.66							0.28	7.03	0.65	5.15	4.44			12.49	19.45							58.14
422														50.90									50.90
423													18.33							0.12			18.46
429														9.69									9.69
52											0.36												0.36
612																				124.86	0.89		125.75
Total Acres	276.45	14.19	45.33	0.01	3.68	190.10	5.71	49.49	672.91	603.13	204.20	850.90	327.49	539.95	582.06	81.93	117.99	0.34	130.20	6.03	2.17		4704.23

* Values may not sum to shown totals due to rounding

Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
| 12 Commercial, Services, & Institutional | 191 Outdoor Cultural | 41 Broadleaved Forest | 612 Shrub Swamps |
| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
| 126 Institutional | 194 Cemeteries | 413 Aspen-Birch | 622 Emergent Wetland |
| 13 Industrial | 21 Cropland | 414 Lowland Hardwoods | 623 Flats |
| 133 Primary Wood Processing | 22 Orchards, Bush Fruits, and Vineyards | 42 Coniferous Forest | 625 Open Water |
| 138 Industrial Park | 223 Ornamental Horticulture and Nurseries | 421 Pine | 629 Other Non-Forested Wetland |
| 139 Other (miscellaneous / automotive track) | 23 Confined Feeding Operations | 422 Other Upland Conifer | 72 Beaches and Riverbanks |
| 14 Transportation, Communication, Utilities | 24 Permanent Pasture | 423 Lowland Conifers | 73 Sand Dunes / Exposed Bluff |
| 141 Air Transportation | 29 Other Agricultural Land | 429 Managed Christmas Tree Plantations | |

STAR TOWNSHIP

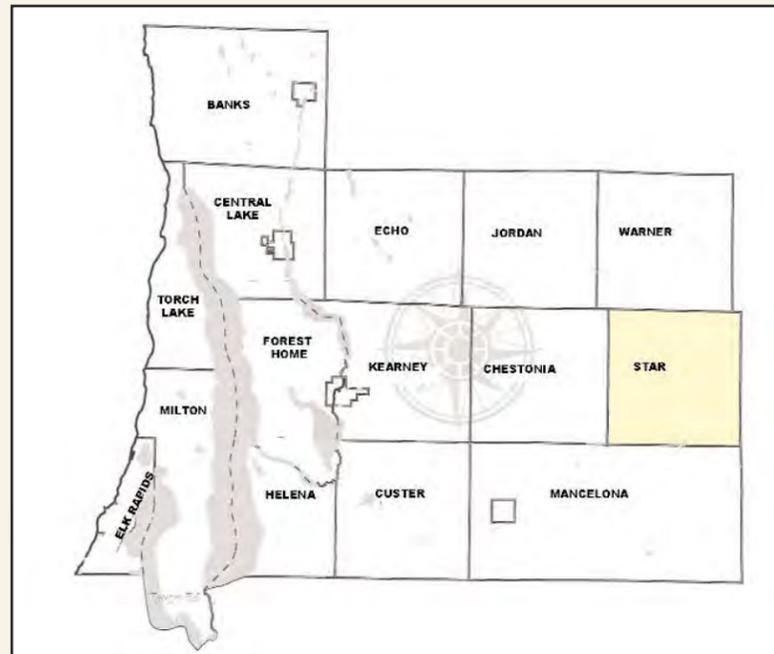


POPULATION TRENDS

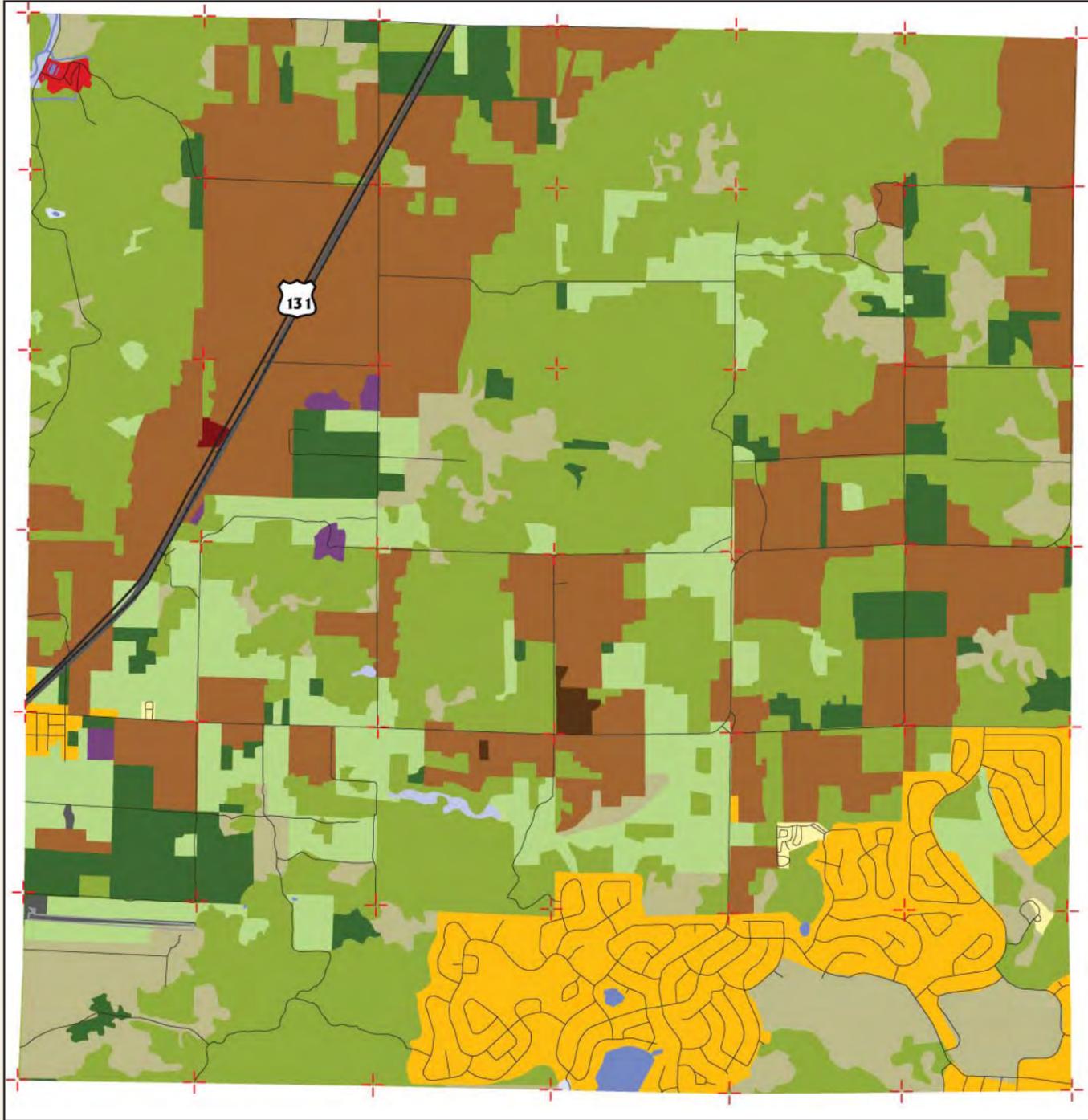
1980	1990	2000
453	575	745

LAND USE TRENDS (ACRES)

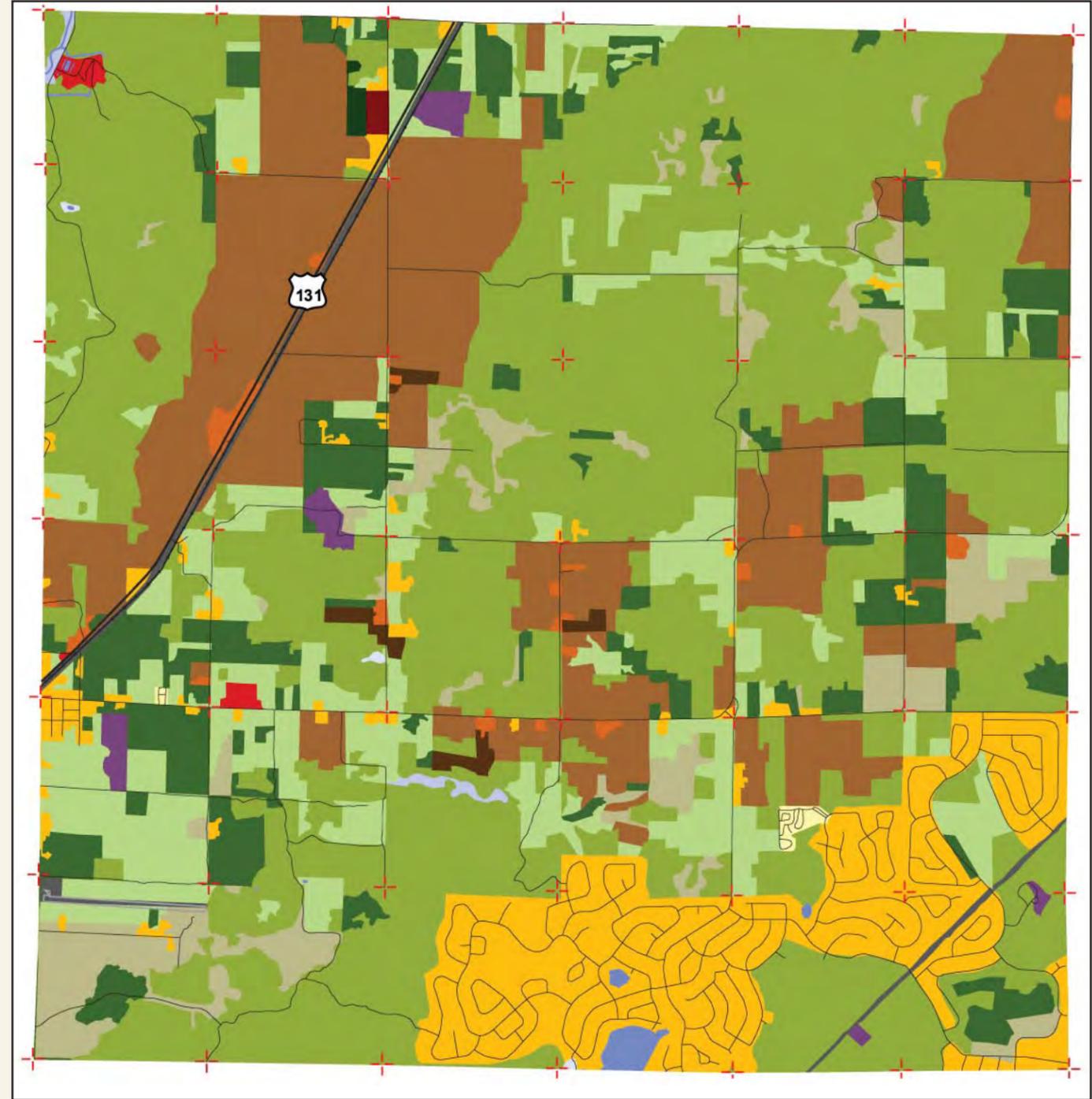
	1978	1998
Urban & Built Up	2424	2715
Agricultural Land	5051	3977
Grass & Shrub Lands	4190	3636
Forest Land	10213	11542
Water	47	48
Wetlands	44	45
Barren	0	0



LAND USE 1978

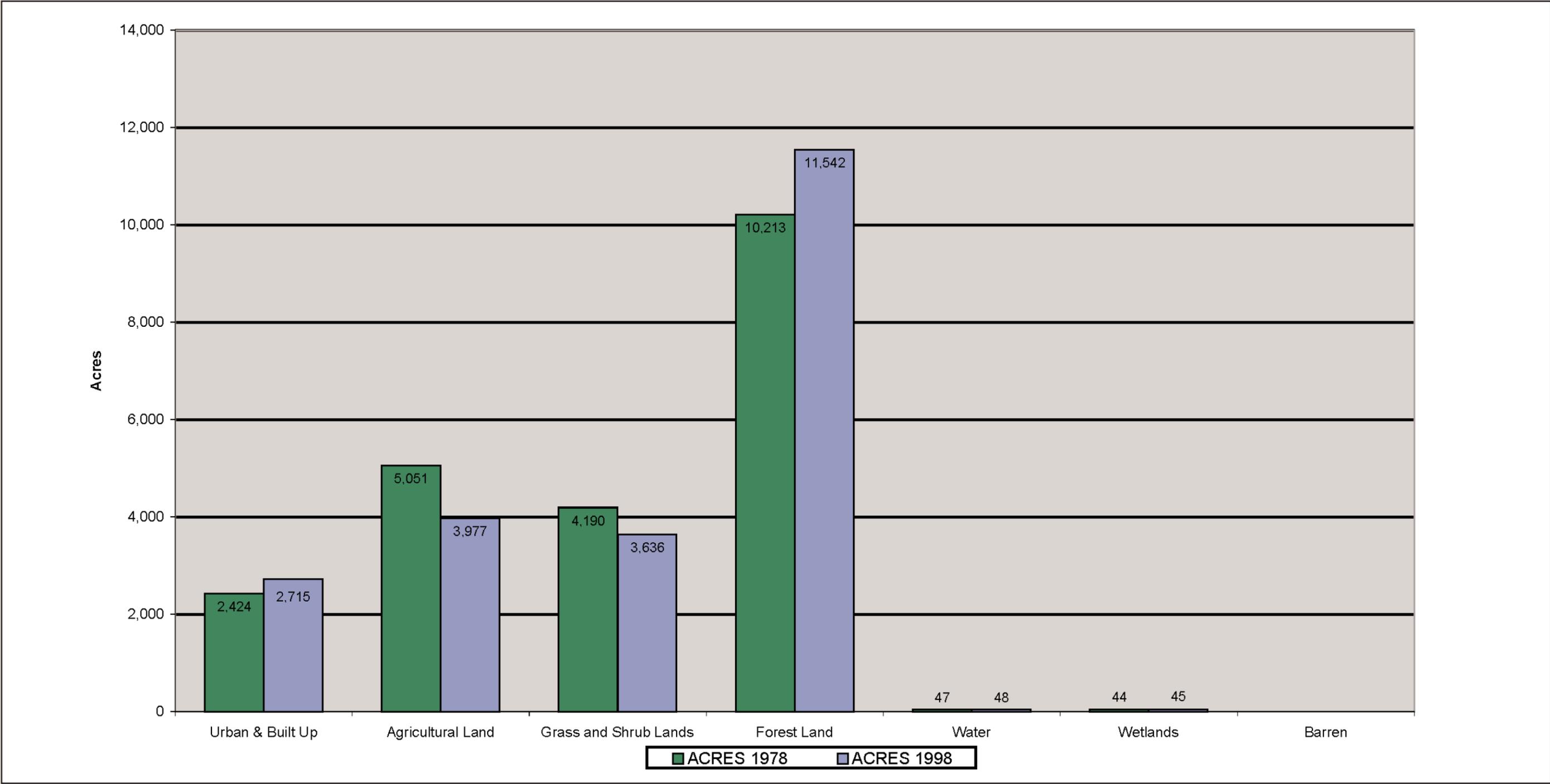


LAND USE 1998



- | | | | | |
|--|--------------------------------------|-------------------------|----------------------------------|------------------------------------|
| Residential | Open Land and Other | Other Agricultural Land | Coniferous Forest | Reservoirs |
| Commercial, Services, & Institutional | Cropland | Grasses and Forbs | Mixed Conifer-Broadleaved Forest | Forested (Wooded) Wetlands |
| Industrial | Orchards, Bush Fruits, and Vineyards | Shrubs | Clear-Cut Forest | Non-Forested (Non-Wooded) Wetlands |
| Transportation, Communication, Utilities | Confined Feeding Operations | Pine or Oak Opening | Streams and Waterways | Beaches and Riverbanks |
| Extractive | Permanent Pasture | Broadleaved Forest | Lakes | Sand Dunes / Exposed Bluff |

MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes

	113	124	13	14	171	173	193	21	24	291	31	32	411	413	414	421	422	429	43	52	61	622	Total Acres	
113				13.28												9.80				1.03			24.10	
13										12.13													12.13	
141								0.08															0.08	
146											3.83												3.83	
171								17.79			10.76	4.46											33.01	
193						8.37																	8.37	
21	56.67	18.29	20.09		38.65				84.88	96.14	663.68	194.72	32.75	0.28		200.20	2.00	245.56	2.13				1656.02	
24								38.38		1.76													40.14	
31	67.06	1.76			38.14			92.28		3.00		143.49	74.57	15.48		160.44		46.24			1.59		644.05	
32	22.29			10.94		5.84		13.60	0.07		10.71		419.28	679.75		147.15	18.41						1328.04	
411	31.49	0.01						244.57	0.00	1.85	17.32	2.65		135.66	13.44	17.73	1.52		20.79				487.02	
412																1.73							1.73	
413				10.93	1.04		1.09					77.21	143.04		0.43	2.84							236.58	
421	23.65							19.22	0.00		257.69	0.85	13.30	3.94				5.75					324.38	
422																1.10							1.10	
429	3.31							0.84			29.19	2.28	0.18	1.29		150.31							187.41	
612																					20.40	3.28	23.68	
622														0.02										0.02
Total Acres	204.47	20.06	20.09	35.15	77.84	14.22	1.09	426.76	84.95	114.88	993.16	425.65	683.11	836.42	13.86	691.31	21.93	297.54	22.92	1.03	21.99	3.28	5011.69	

* Values may not sum to shown totals due to rounding

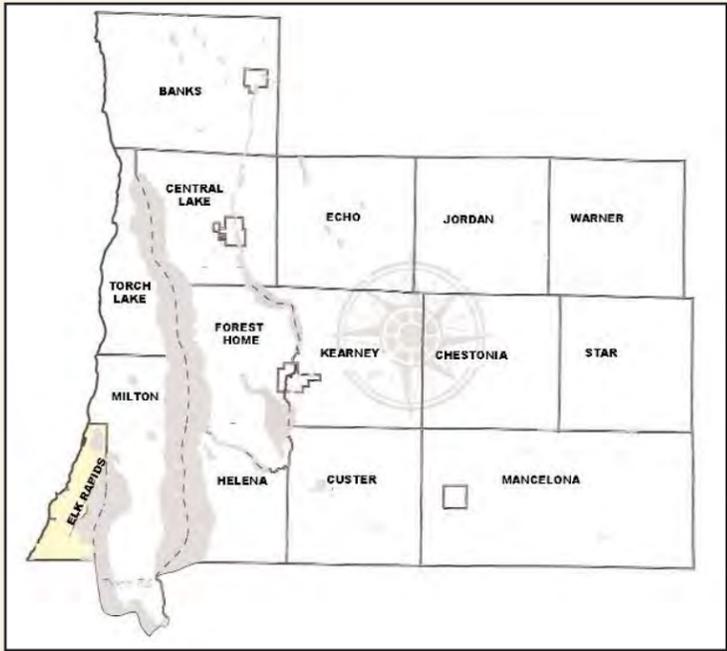
Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
| 12 Commercial, Services, & Institutional | 191 Outdoor Cultural | 41 Broadleaved Forest | 612 Shrub Swamps |
| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
| 126 Institutional | 194 Cemeteries | 413 Aspen-Birch | 622 Emergent Wetland |
| 13 Industrial | 21 Cropland | 414 Lowland Hardwoods | 623 Flats |
| 133 Primary Wood Processing | 22 Orchards, Bush Fruits, and Vineyards | 42 Coniferous Forest | 625 Open Water |
| 138 Industrial Park | 223 Ornamental Horticulture and Nurseries | 421 Pine | 629 Other Non-Forested Wetland |
| 139 Other (miscellaneous / automotive track) | 23 Confined Feeding Operations | 422 Other Upland Conifer | 72 Beaches and Riverbanks |
| 14 Transportation, Communication, Utilities | 24 Permanent Pasture | 423 Lowland Conifers | 73 Sand Dunes / Exposed Bluff |
| 141 Air Transportation | 29 Other Agricultural Land | 429 Managed Christmas Tree Plantations | |

ELK RAPIDS TOWNSHIP



POPULATION TRENDS		
1980	1990	2000
2086	2374	2741
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	1229	1540
Agricultural Land	1322	1128
Grass & Shrub Lands	508	385
Forest Land	1370	1364
Water	2451	2451
Wetlands	68	84
Barren	51	47



LAND USE 1978

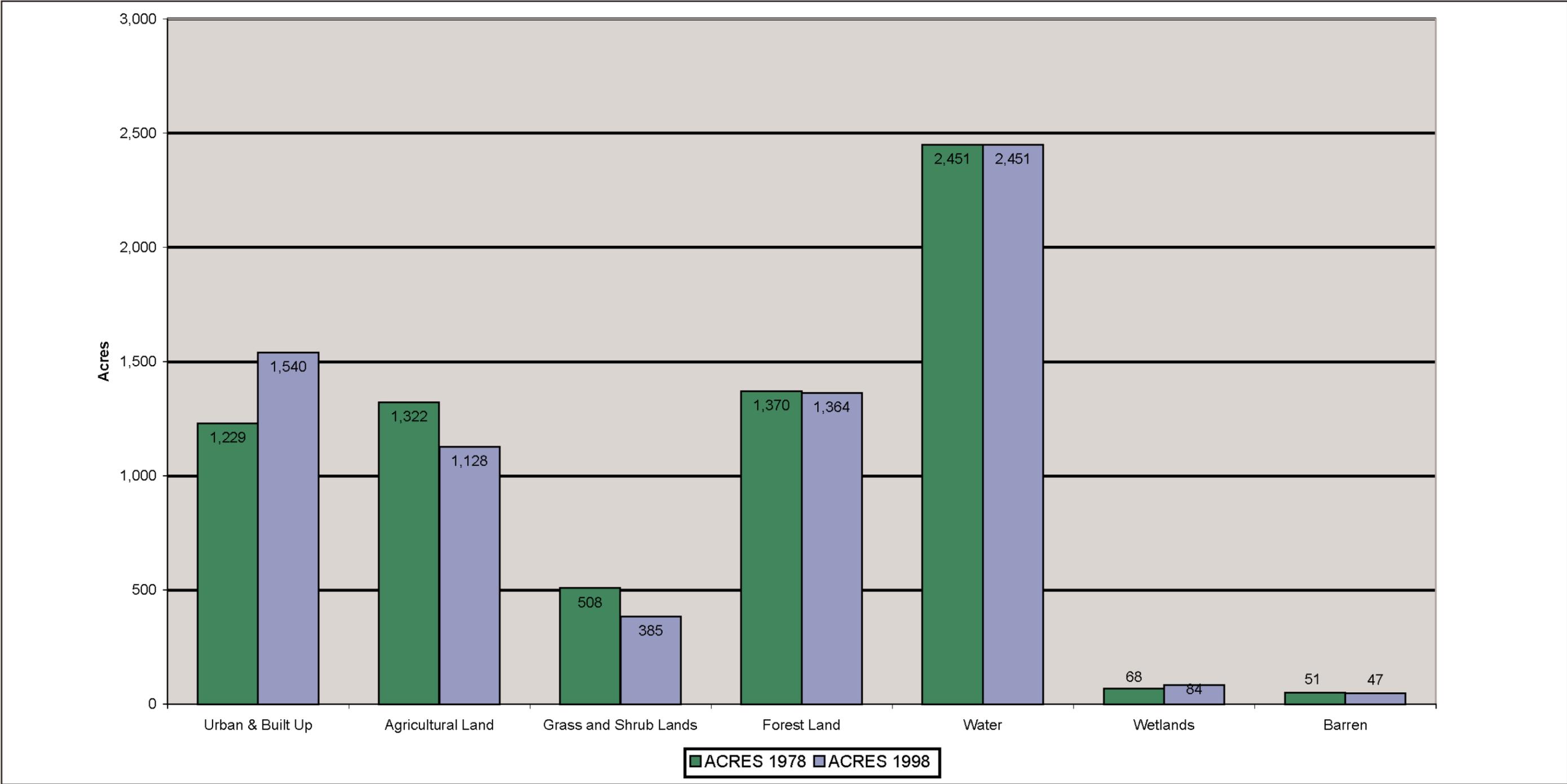


LAND USE 1998



Residential	Open Land and Other	Other Agricultural Land	Coniferous Forest	Reservoirs
Commercial, Services, & Institutional	Cropland	Grasses and Forbs	Mixed Conifer-Broadleaved Forest	Forested (Wooded) Wetlands
Industrial	Orchards, Bush Fruits, and Vineyards	Shrubs	Clear-Cut Forest	Non-Forested (Non-Wooded) Wetlands
Transportation, Communication, Utilities	Confined Feeding Operations	Pine or Oak Opening	Streams and Waterways	Beaches and Riverbanks
Extractive	Permanent Pasture	Broadleaved Forest	Lakes	Sand Dunes / Exposed Bluff

MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes	112	113	115	121	124	126	146	21	22	24	291	31	32	411	412	413	414	421	622	Total Acres	
113			4.05		8.18																12.24
12					1.96																1.96
126				3.96																	3.96
13					6.89																6.89
138					4.47																4.47
171		0.00																			0.00
193			3.68																		3.68
21		11.25			3.83				87.09	40.76		76.09	4.55			1.72		21.88	18.72		265.89
22		24.44			8.44	8.43		85.61			41.41	45.98	3.88	3.44	1.38	0.88					223.89
24								16.87				0.11		1.27							18.26
31	4.41	45.93	2.82		5.40	0.80		21.13	20.17				7.72	1.00		22.80		8.80			140.97
32	1.58	57.89	4.59		1.86			1.32						3.84	10.71	26.65	7.93	15.08			131.44
411												10.32						8.12			18.44
412	5.25	20.89																			26.15
413		21.84												7.96			57.11				86.90
414		40.26			7.08		4.07							126.41	1.81	7.26					186.89
421	2.10	21.73																			23.83
429																			4.32		4.32
612		2.55																			2.55
72		3.44																			3.44
Total Acres	13.34	250.23	15.14	3.96	48.11	9.22	4.07	124.93	107.26	40.76	41.41	132.50	16.15	143.92	13.89	59.31	73.16	50.07	18.72		1166.15

* Values may not sum to shown totals due to rounding

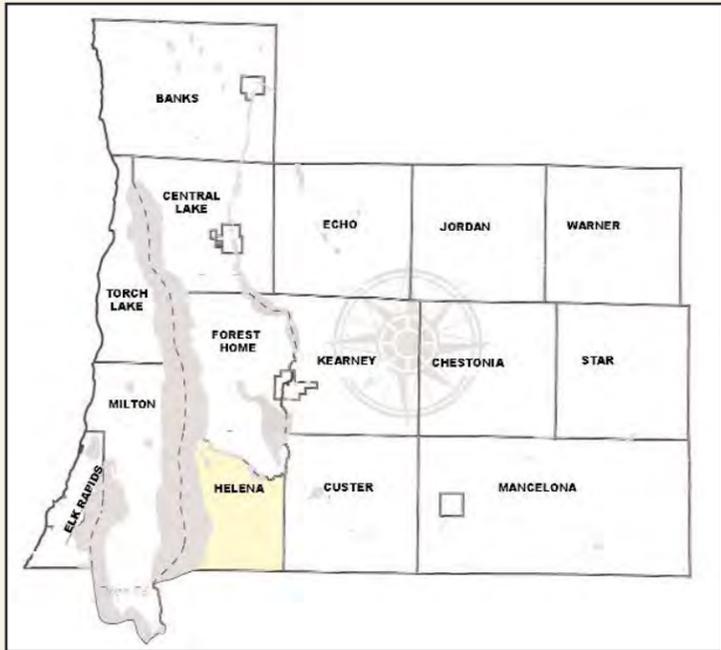
Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
| 12 Commercial, Services, & Institutional | 191 Outdoor Cultural | 41 Broadleaved Forest | 612 Shrub Swamps |
| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
| 126 Institutional | 194 Cemeteries | 413 Aspen-Birch | 622 Emergent Wetland |
| 13 Industrial | 21 Cropland | 414 Lowland Hardwoods | 623 Flats |
| 133 Primary Wood Processing | 22 Orchards, Bush Fruits, and Vineyards | 42 Coniferous Forest | 625 Open Water |
| 138 Industrial Park | 223 Ornamental Horticulture and Nurseries | 421 Pine | 629 Other Non-Forested Wetland |
| 139 Other (miscellaneous / automotive track) | 23 Confined Feeding Operations | 422 Other Upland Conifer | 72 Beaches and Riverbanks |
| 14 Transportation, Communication, Utilities | 24 Permanent Pasture | 423 Lowland Conifers | 73 Sand Dunes / Exposed Bluff |
| 141 Air Transportation | 29 Other Agricultural Land | 429 Managed Christmas Tree Plantations | |

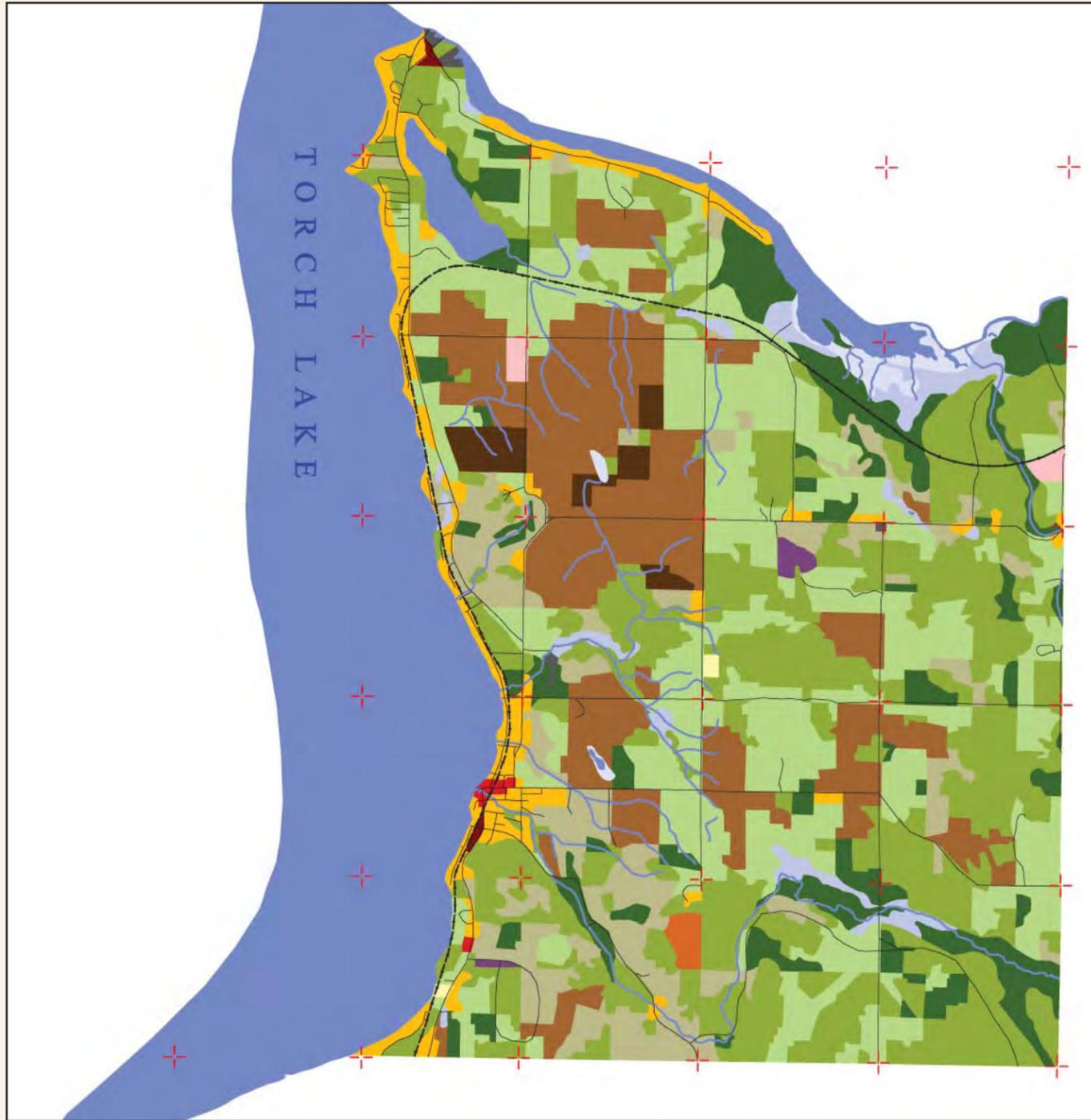
HELENA TOWNSHIP



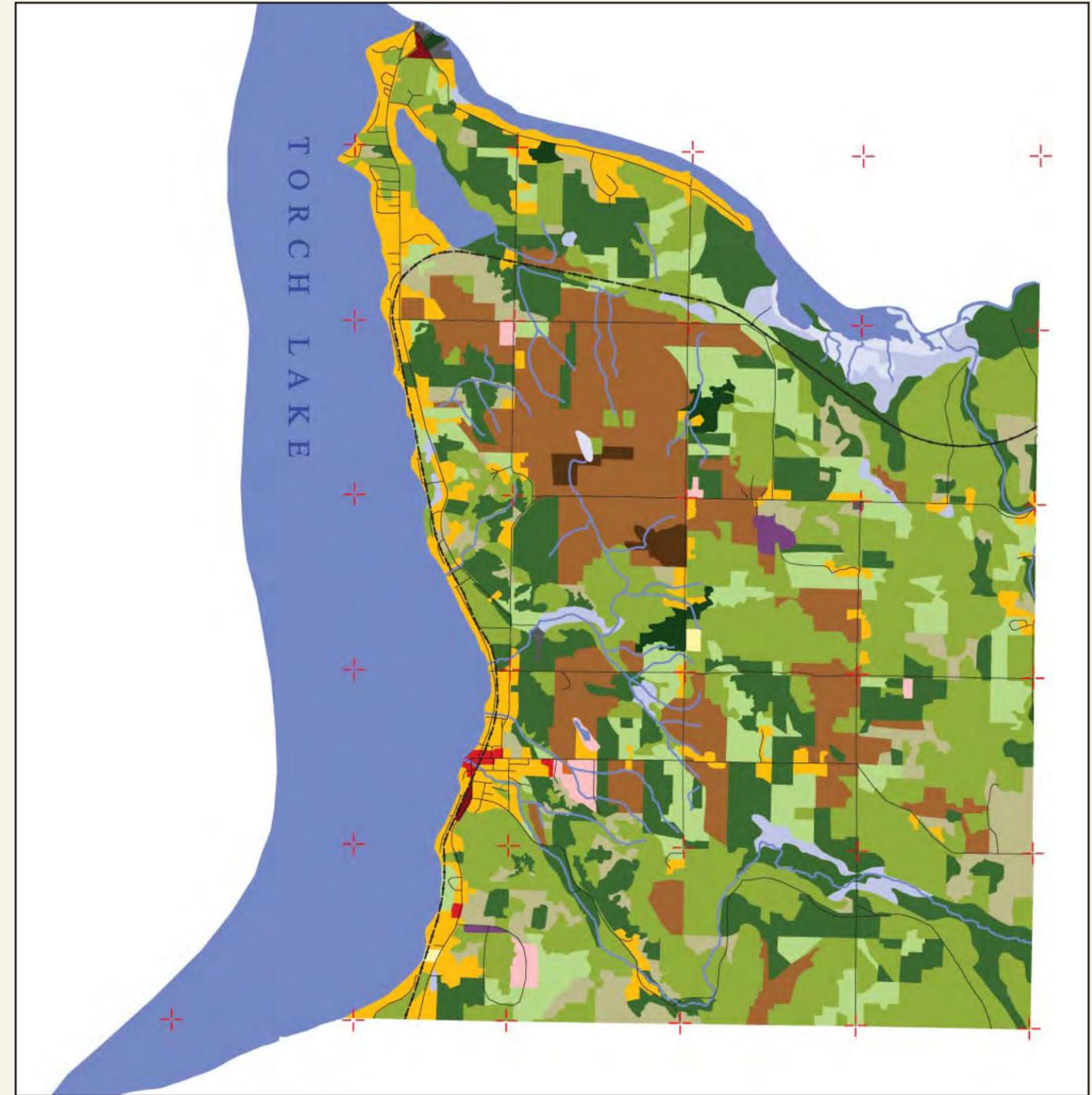
POPULATION TRENDS		
1980	1990	2000
781	837	878
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	596	943
Agricultural Land	1863	1737
Grass & Shrub Lands	3577	1734
Forest Land	4027	5644
Water	4378	4365
Wetlands	349	353
Barren	0	0



LAND USE 1978

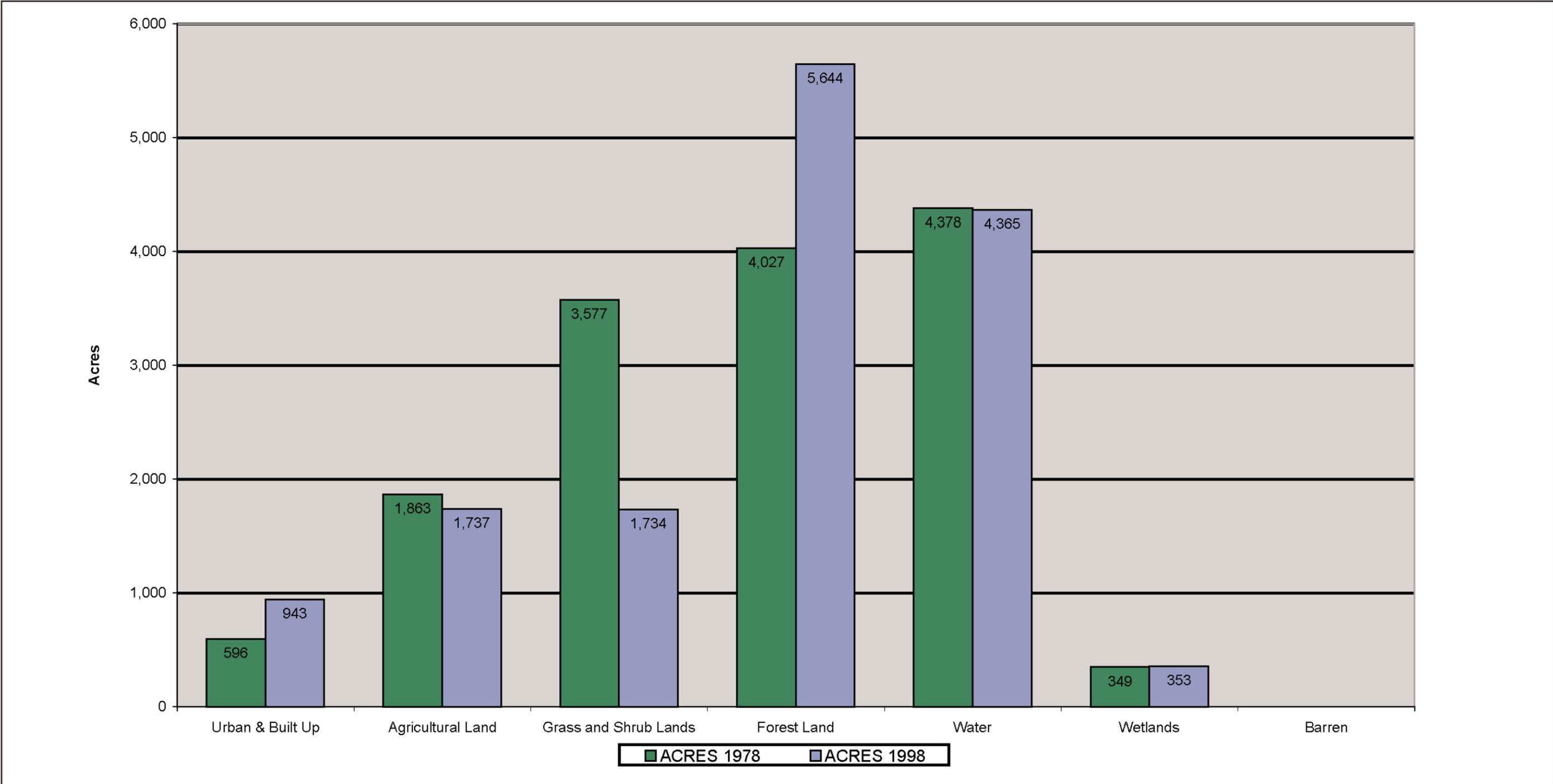


LAND USE 1998



- | | | | | |
|--|--------------------------------------|-------------------------|----------------------------------|------------------------------------|
| Residential | Open Land and Other | Other Agricultural Land | Coniferous Forest | Reservoirs |
| Commercial, Services, & Institutional | Cropland | Grasses and Forbs | Mixed Conifer-Broadleaved Forest | Forested (Wooded) Wetlands |
| Industrial | Orchards, Bush Fruits, and Vineyards | Shrubs | Clear-Cut Forest | Non-Forested (Non-Wooded) Wetlands |
| Transportation, Communication, Utilities | Confined Feeding Operations | Pine or Oak Opening | Streams and Waterways | Beaches and Riverbanks |
| Extractive | Permanent Pasture | Broadleaved Forest | Lakes | Sand Dunes / Exposed Bluff |

MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

	113	12	171	21	22	24	291	31	32	411	413	414	421	423	429	43	61	Total Acres
113		2.59																2.59
21	53.63				0.48	30.75		48.49	18.04	1.62		2.48	55.45		272.80			483.75
22				11.05					12.07				3.23	2.76				29.11
24	1.77			73.78				19.61			0.72		12.27		3.04			111.20
29				31.75						1.68								33.43
31	201.35		1.11	310.35	8.21				331.99	84.93	69.94	10.33	386.19	1.37	205.48	52.49	1.96	1665.70
32	37.23		0.67	3.94	56.07		2.40	22.18		167.23	116.28	19.27	195.07	2.45		22.55		645.33
411	39.49			0.75				15.34			5.80	6.08	7.52			4.29		79.28
413	8.35			2.24						13.48							2.55	26.62
414	1.54																	1.54
421	1.86			0.15				0.14	0.24	0.51	16.02							18.93
612																	185.72	185.72
Total Acres	345.21	2.59	1.78	434.02	64.76	30.75	2.40	105.76	362.34	269.45	208.77	38.15	659.75	6.59	481.32	79.33	190.23	3283.19

* Values may not sum to shown totals due to rounding

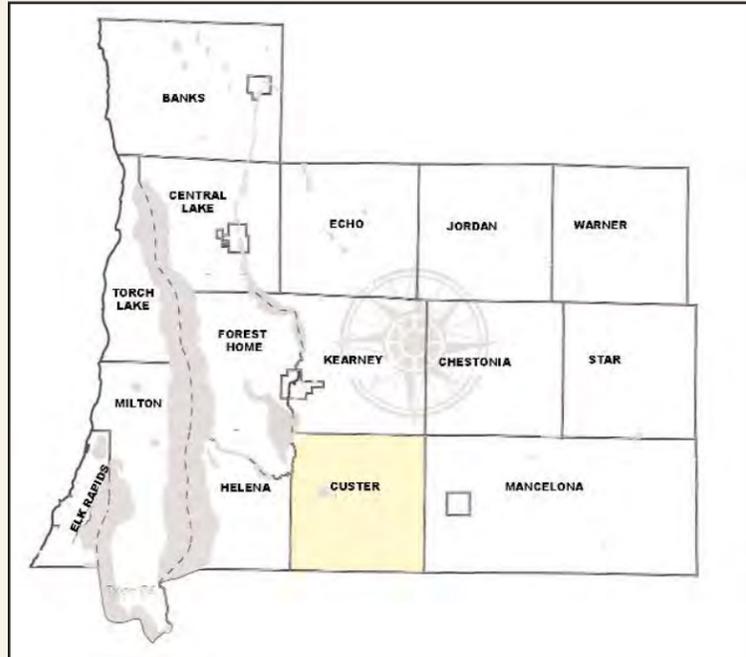
Land Use Code Legend

11 Residential	143 Water Transportation	291 Farmsteads	43 Mixed Conifer-Broadleaved Forest
111 Multi-Family, Medium- to High-Rise	146 Utilities	31 Grasses and Forbs	44 Clear-Cut Forest
112 Multi-Family, Low-Rise	17 Extractive	32 Shrubs	51 Streams and Waterways
113 Single Family / Duplex	171 Open Pit	33 Pine or Oak Opening (prairie)	52 Lakes
115 Manufactured Home Park	173 Wells	331 Hardwood Opening	53 Reservoirs
119 Other Residential	19 Open Land and Other	332 Coniferous Opening	61 Forested (Wooded) Wetlands
12 Commercial, Services, & Institutional	191 Outdoor Cultural	41 Broadleaved Forest	612 Shrub Swamps
121 Primary / Central Business District	192 Outdoor Public Assembly	411 Northern Hardwoods	62 Non-Forested (Non-Wooded) Wetlands
124 Secondary / Neighborhood or Rural Businesses	193 Outdoor Recreation	412 Central Hardwoods / Oak	621 Aquatic Bed Wetland
126 Institutional	194 Cemeteries	413 Aspen-Birch	622 Emergent Wetland
13 Industrial	21 Cropland	414 Lowland Hardwoods	623 Flats
133 Primary Wood Processing	22 Orchards, Bush Fruits, and Vineyards	42 Coniferous Forest	625 Open Water
138 Industrial Park	223 Ornamental Horticulture and Nurseries	421 Pine	629 Other Non-Forested Wetland
139 Other (miscellaneous / automotive track)	23 Confined Feeding Operations	422 Other Upland Conifer	72 Beaches and Riverbanks
14 Transportation, Communication, Utilities	24 Permanent Pasture	423 Lowland Conifers	73 Sand Dunes / Exposed Bluff
141 Air Transportation	29 Other Agricultural Land	429 Managed Christmas Tree Plantations	

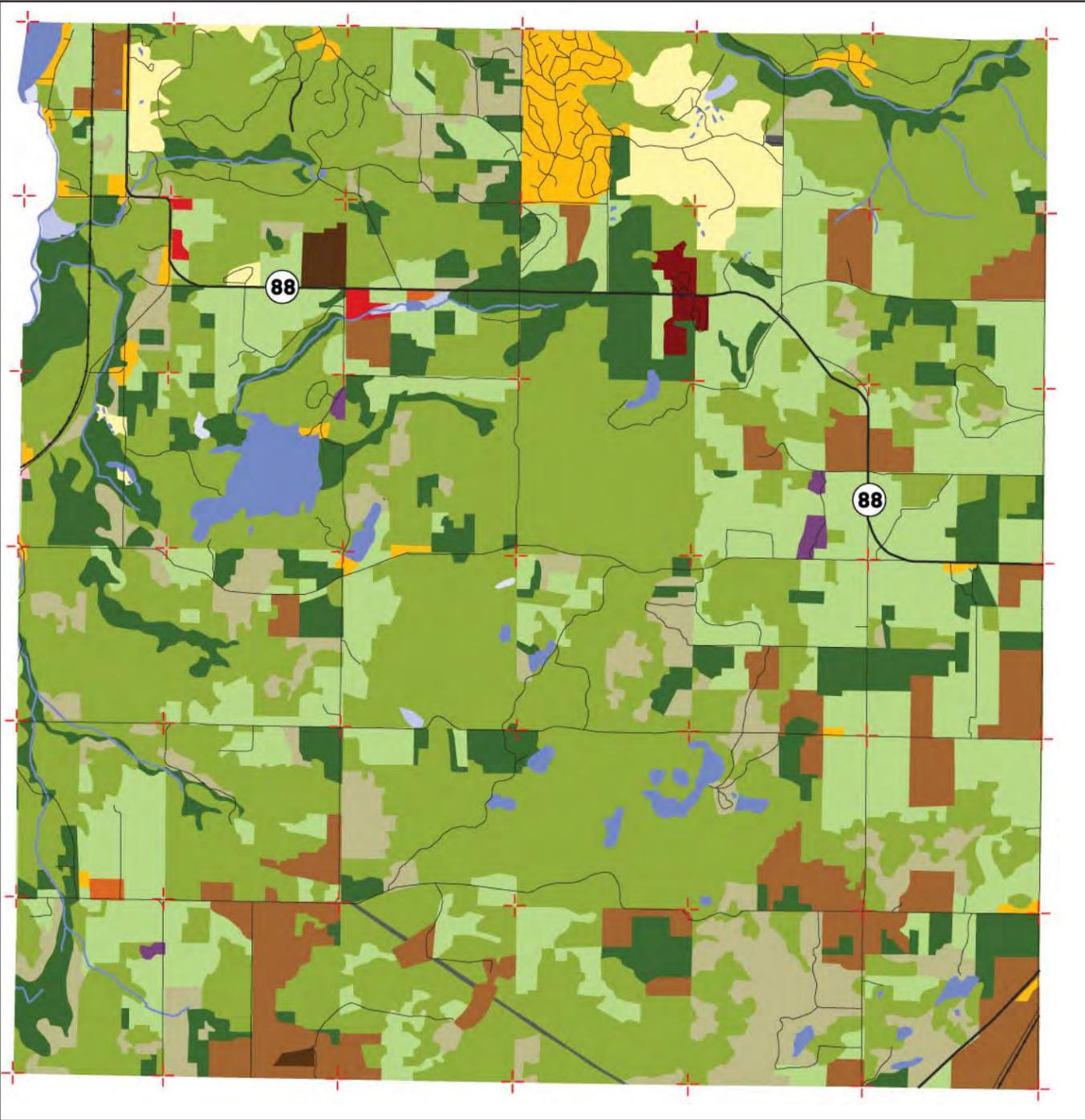
CUSTER TOWNSHIP



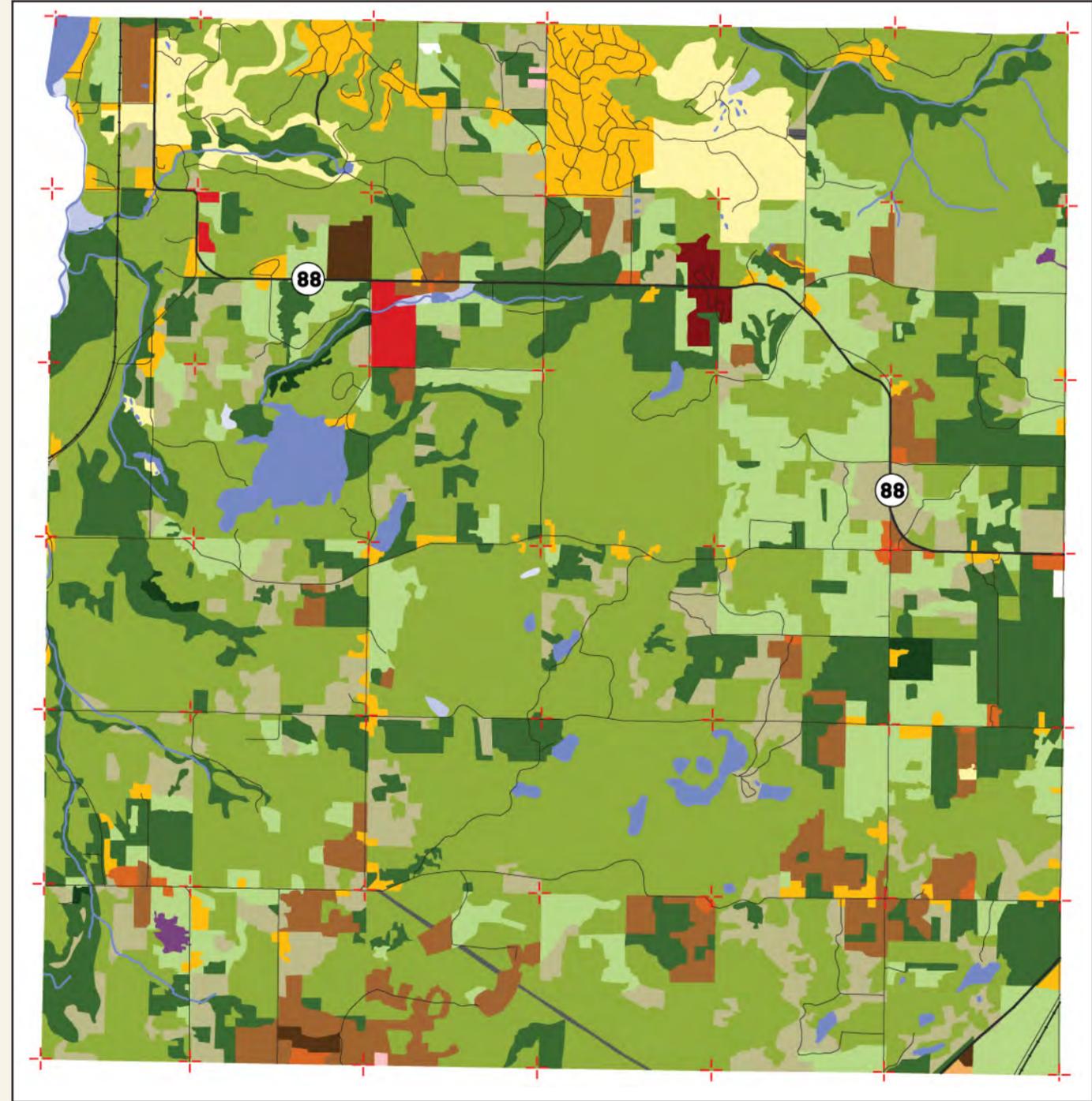
POPULATION TRENDS		
1980	1990	2000
490	630	988
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	1135	1679
Agricultural Land	1667	1170
Grass & Shrub Lands	6126	4672
Forest Land	13134	14538
Water	360	363
Wetlands	68	68
Barren	0	0



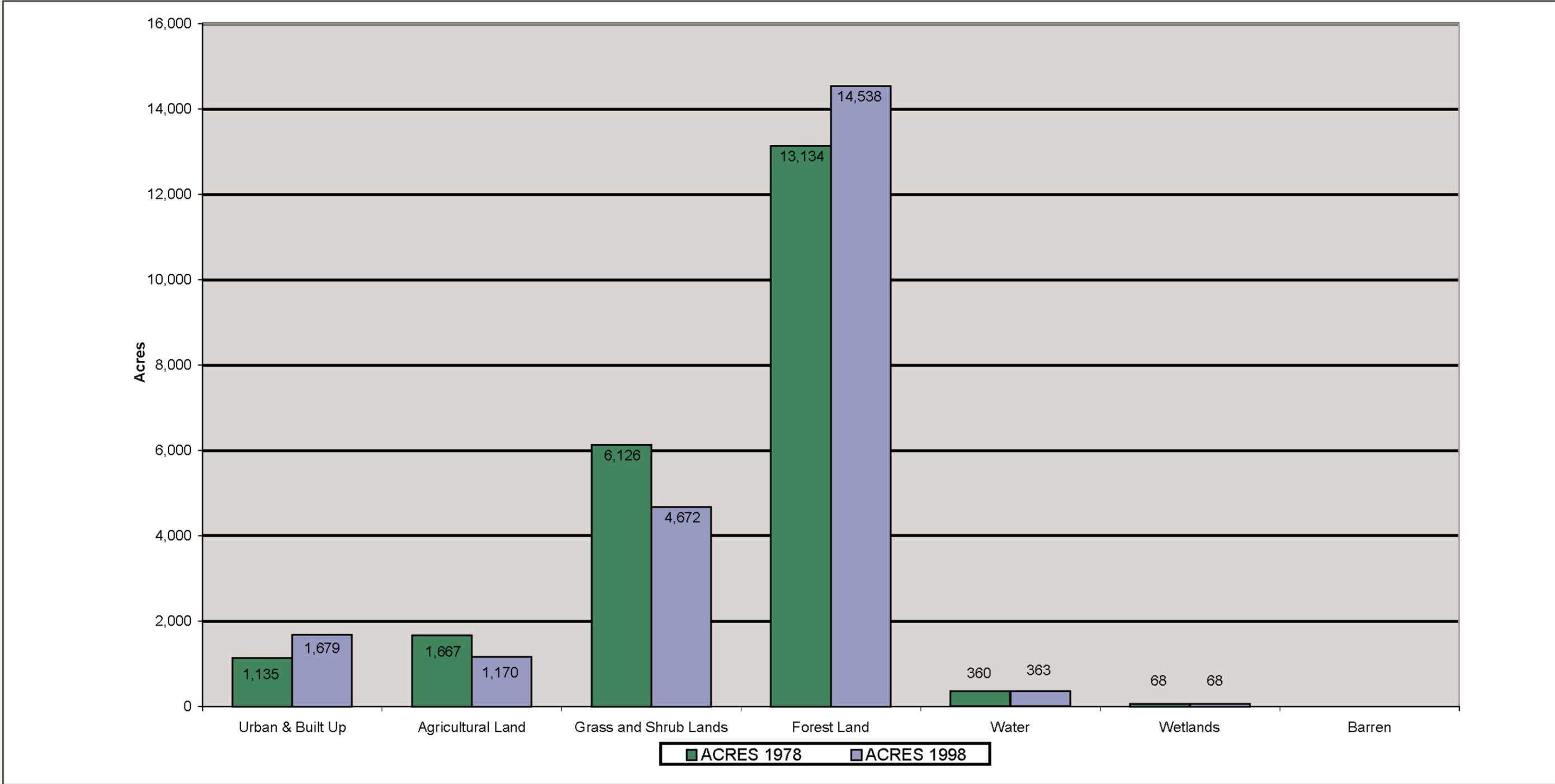
LAND USE 1978



LAND USE 1998



MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes

	112	113	115	12	124	13	171	193	21	22	24	29	291	31	32	411	412	413	414	421	422	423	429	43	53	61	Total Acres
113												1.15															1.15
171		0.00												30.01	7.11												37.12
193			13.81																								13.81
21		38.36		41.58			4.75	4.15		3.54	9.63		40.54	413.71	64.67	4.34				22.08		0.13	187.67				835.15
22															2.49					0.72							3.21
24													0.60														0.60
29									11.30				0.44														11.74
31	8.09	105.67		11.07	3.73	4.59	9.74	22.67	181.10	9.12	0.04	2.47	35.98		833.52	161.36		86.52	15.20	401.82		20.77	350.95	3.09			2267.47
32		22.62							2.60	5.96				11.17		202.94		315.53	20.51	187.59		53.37	10.85	1.13			834.27
411		107.25		0.47			3.99	94.38	17.94					0.96	1.24		0.76	39.04		15.06	2.72	68.82		21.54			374.16
412		2.81													6.16												8.96
413	3.61	3.69						27.04							18.01	68.82				0.05	5.86	2.23		14.00			143.30
414		1.81						0.81																2.65			5.27
421	17.46	16.62						1.77	28.24			0.07	2.48	142.75	69.34	9.73						5.39					293.85
423		0.64						14.30	0.06						3.08												18.09
429		9.34												19.33	23.97		5.63	3.77		159.69				35.02			256.75
612																									15.35		15.35
Total Acres	29.15	308.80	13.81	52.64	4.20	4.59	18.48	165.12	241.24	18.62	9.67	3.69	80.04	617.92	1030	447.19	6.39	444.86	35.71	787.02	8.58	150.71	549.46	74.78	2.65	15.35	5120.23

* Values may not sum to shown totals due to rounding

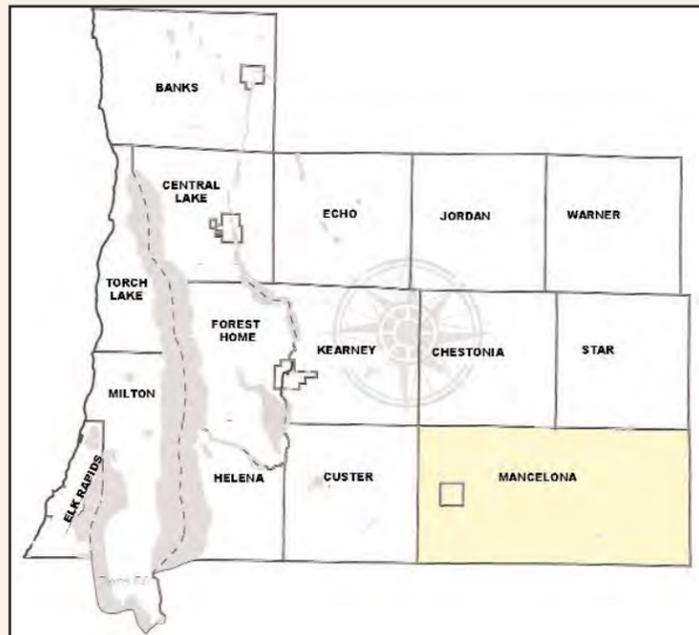
Land Use Code Legend

11 Residential	143 Water Transportation	291 Farmsteads	43 Mixed Conifer-Broadleaved Forest
111 Multi-Family, Medium- to High-Rise	146 Utilities	31 Grasses and Forbs	44 Clear-Cut Forest
112 Multi-Family, Low-Rise	17 Extractive	32 Shrubs	51 Streams and Waterways
113 Single Family / Duplex	171 Open Pit	33 Pine or Oak Opening (prairie)	52 Lakes
115 Manufactured Home Park	173 Wells	331 Hardwood Opening	53 Reservoirs
119 Other Residential	19 Open Land and Other	332 Coniferous Opening	61 Forested (Wooded) Wetlands
12 Commercial, Services, & Institutional	191 Outdoor Cultural	41 Broadleaved Forest	612 Shrub Swamps
121 Primary / Central Business District	192 Outdoor Public Assembly	411 Northern Hardwoods	62 Non-Forested (Non-Wooded) Wetlands
124 Secondary / Neighborhood or Rural Businesses	193 Outdoor Recreation	412 Central Hardwoods / Oak	621 Aquatic Bed Wetland
126 Institutional	194 Cemeteries	413 Aspen-Birch	622 Emergent Wetland
13 Industrial	21 Cropland	414 Lowland Hardwoods	623 Flats
133 Primary Wood Processing	22 Orchards, Bush Fruits, and Vineyards	42 Coniferous Forest	625 Open Water
138 Industrial Park	223 Ornamental Horticulture and Nurseries	421 Pine	629 Other Non-Forested Wetland
139 Other (miscellaneous / automotive track)	23 Confined Feeding Operations	422 Other Upland Conifer	72 Beaches and Riverbanks
14 Transportation, Communication, Utilities	24 Permanent Pasture	423 Lowland Conifers	73 Sand Dunes / Exposed Bluff
141 Air Transportation	29 Other Agricultural Land	429 Managed Christmas Tree Plantations	

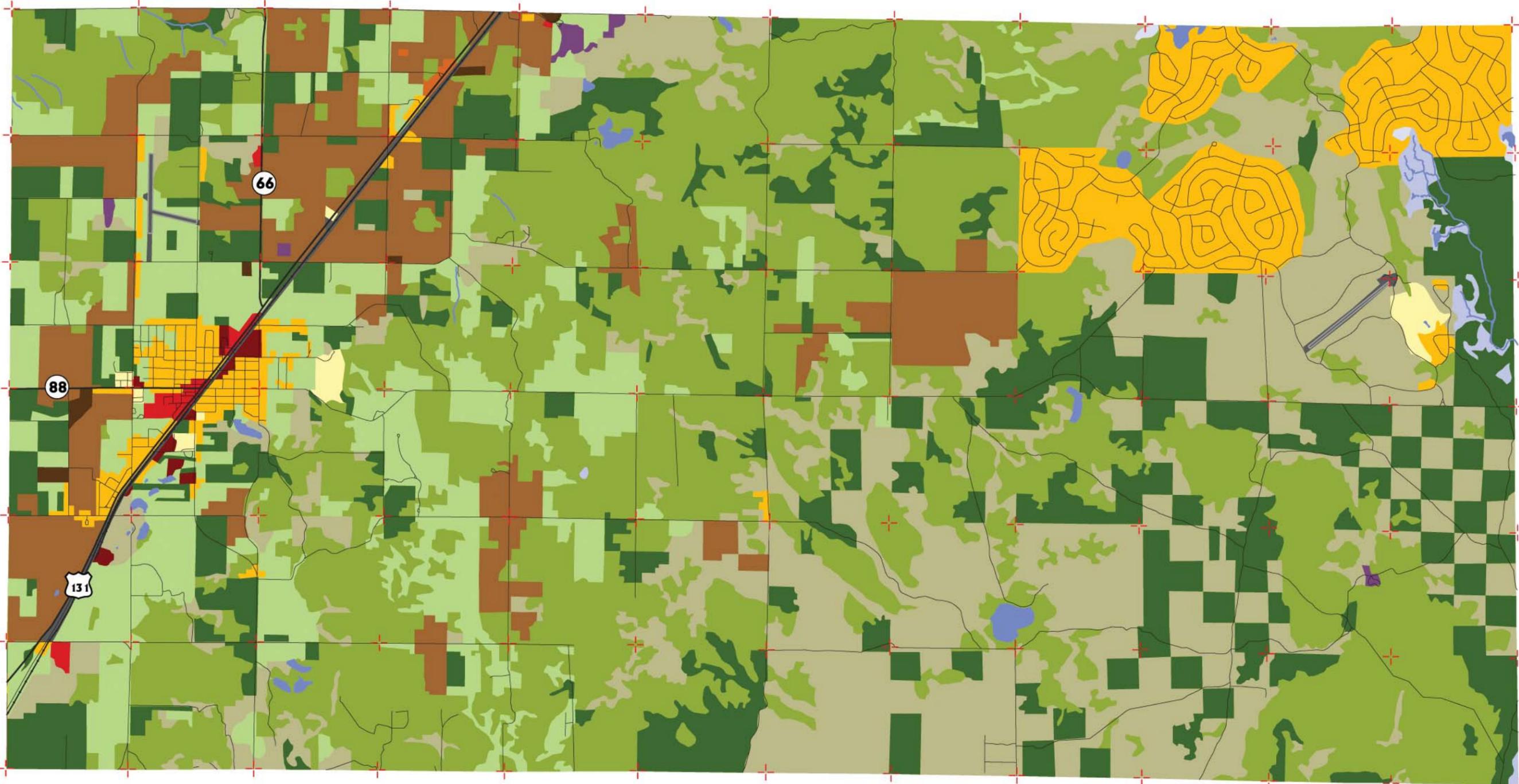
MANCELONA TOWNSHIP



POPULATION TRENDS		
1980	1990	2000
2720	3173	4100
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	3646	4986
Agricultural Land	3782	2283
Grass & Shrub Lands	14180	8370
Forest Land	23647	29593
Water	150	183
Wetlands	199	188
Barren	0	0



LAND USE 1978



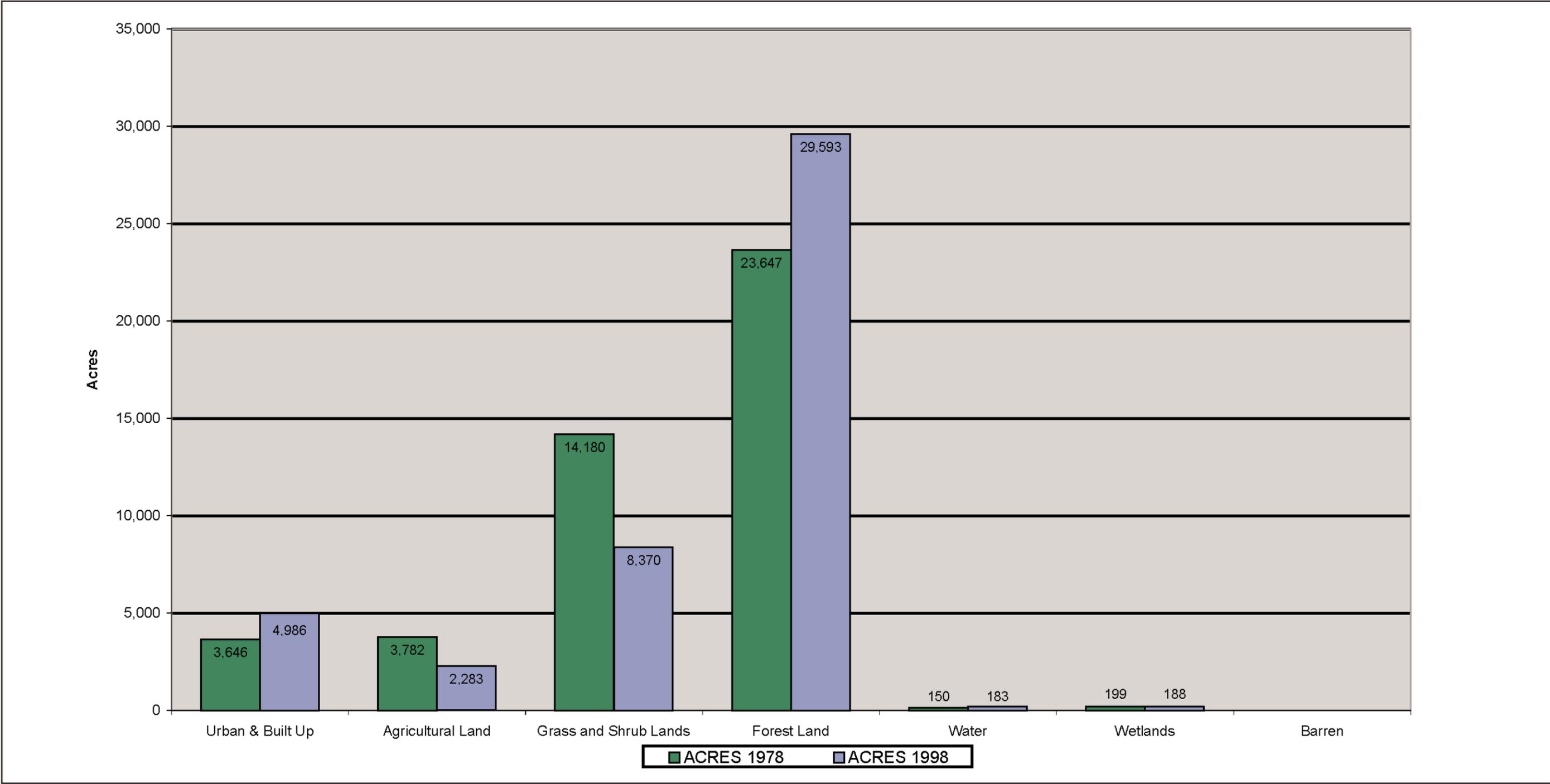
Residential	Open Land and Other	Other Agricultural Land	Coniferous Forest	Reservoirs
Commercial, Services, & Institutional	Cropland	Grasses and Forbs	Mixed Conifer-Broadleaved Forest	Forested (Wooded) Wetlands
Industrial	Orchards, Bush Fruits, and Vineyards	Shrubs	Clear-Cut Forest	Non-Forested (Non-Wooded) Wetlands
Transportation, Communication, Utilities	Confined Feeding Operations	Pine or Oak Opening	Streams and Waterways	Beaches and Riverbanks
Extractive	Permanent Pasture	Broadleaved Forest	Lakes	Sand Dunes / Exposed Bluff

LAND USE 1998



Residential	Open Land and Other	Other Agricultural Land	Coniferous Forest	Reservoirs
Commercial, Services, & Institutional	Cropland	Grasses and Forbs	Mixed Conifer-Broadleaved Forest	Forested (Wooded) Wetlands
Industrial	Orchards, Bush Fruits, and Vineyards	Shrubs	Clear-Cut Forest	Non-Forested (Non-Wooded) Wetlands
Transportation, Communication, Utilities	Confined Feeding Operations	Pine or Oak Opening	Streams and Waterways	Beaches and Riverbanks
Extractive	Permanent Pasture	Broadleaved Forest	Lakes	Sand Dunes / Exposed Bluff

MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes	112	113	12	124	126	13	139	14	141	146	17	171	173	193	194	21	22	24	291	31	32	411	413	414	421	423	429	43	44	52	53	612	622	625	Total Acres
113				12.56	2.62			14.93											2.70																32.81
13																				8.04															8.04
171		0.62																										10.97						11.59	
21	4.33	181.24	10.27	8.21			25.66				3.66	19.34	5.49					43.12	74.01	1262.6	21.41	34.32			117.62		74.99							1886.26	
24		2.12														14.11			3.48	42.15		6.12												67.98	
29																2.50																		2.50	
31	3.82	270.48	14.09	11.04	6.38	35.20		0.00	4.22			21.99	1.66	21.19	1.24	173.88		104.43	17.19		654.58	201.13	119.37		297.66	9.03	129.89	23.07		0.90	2.44			2124.86	
32		145.99	6.02			3.00		41.34					6.91	135.58		1.80			2.78	18.30		518.57	4487.5	29.09	924.71	2.71		752.49						7076.73	
411		101.04						56.42		7.23			2.64	53.75		5.48		0.72	1.76	11.17	476.54		516.97	4.47	212.01		0.22	17.44						1467.83	
413		18.86						25.15					2.08			0.06				1.66	523.89	832.93		33.69	134.67			15.20		16.45		0.06	5.17	1609.86	
421		50.37		4.44		0.99	0.36	12.03				2.37	6.93			1.13				185.98	141.24	57.72	31.26				24.99	158.85	0.24		0.69			679.56	
429		25.90														3.95	2.49		2.22		42.23	8.04	19.52		396.80								501.14		
612																				2.29		0.53							8.21					11.03	
622																							0.38												0.38
623																													5.21			0.11			5.31
Total Acres	8.15	796.61	30.38	36.25	9.00	39.18	26.02	149.86	4.22	7.23	3.66	43.70	25.71	210.51	1.24	202.90	2.49	148.27	104.13	1532.2	1859.9	1659.4	5174.9	67.25	2083.5	11.74	205.10	844.15	158.85	31.01	2.44	0.79	0.06	5.17	15485.89

* Values may not sum to shown totals due to rounding

Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
| 12 Commercial, Services, & Institutional | 191 Outdoor Cultural | 41 Broadleaved Forest | 612 Shrub Swamps |
| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
| 126 Institutional | 194 Cemeteries | 413 Aspen-Birch | 622 Emergent Wetland |
| 13 Industrial | 21 Cropland | 414 Lowland Hardwoods | 623 Flats |
| 133 Primary Wood Processing | 22 Orchards, Bush Fruits, and Vineyards | 42 Coniferous Forest | 625 Open Water |
| 138 Industrial Park | 223 Ornamental Horticulture and Nurseries | 421 Pine | 629 Other Non-Forested Wetland |
| 139 Other (miscellaneous / automotive track) | 23 Confined Feeding Operations | 422 Other Upland Conifer | 72 Beaches and Riverbanks |
| 14 Transportation, Communication, Utilities | 24 Permanent Pasture | 423 Lowland Conifers | 73 Sand Dunes / Exposed Bluff |
| 141 Air Transportation | 29 Other Agricultural Land | 429 Managed Christmas Tree Plantations | |

MILTON TOWNSHIP

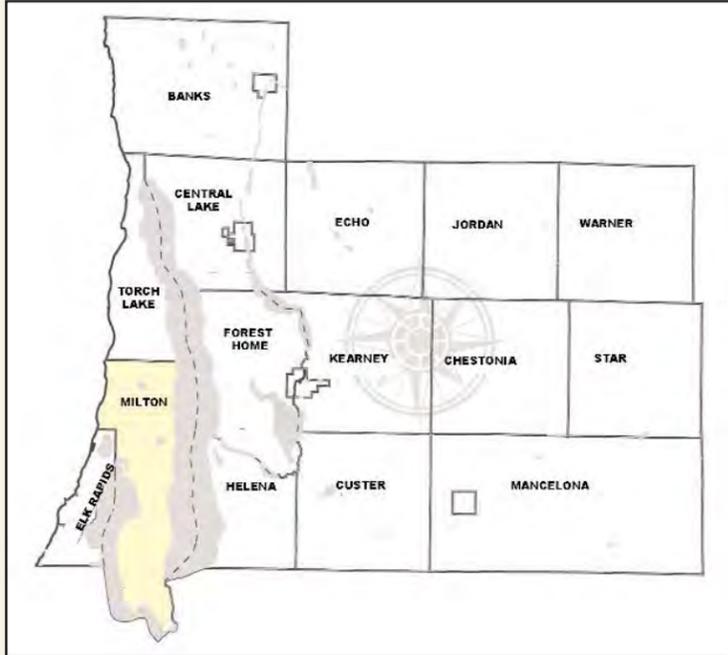


POPULATION TRENDS

1980	1990	2000
1271	1468	2072

LAND USE TRENDS (ACRES)

	1978	1998
Urban & Built Up	1077	1835
Agricultural Land	6907	5787
Grass & Shrub Lands	2741	2348
Forest Land	5115	5841
Water	9943	9938
Wetlands	546	574
Barren	0	0



MILTON TOWNSHIP NORTH

LAND USE 1978



LAND USE 1998



Residential	Open Land and Other	Other Agricultural Land	Coniferous Forest	Reservoirs
Commercial, Services, & Institutional	Cropland	Grasses and Forbs	Mixed Conifer-Broadleaved Forest	Forested (Wooded) Wetlands
Industrial	Orchards, Bush Fruits, and Vineyards	Shrubs	Clear-Cut Forest	Non-Forested (Non-Wooded) Wetlands
Transportation, Communication, Utilities	Confined Feeding Operations	Pine or Oak Opening	Streams and Waterways	Beaches and Riverbanks
Extractive	Permanent Pasture	Broadleaved Forest	Lakes	Sand Dunes / Exposed Bluff

MILTON TOWNSHIP SOUTH

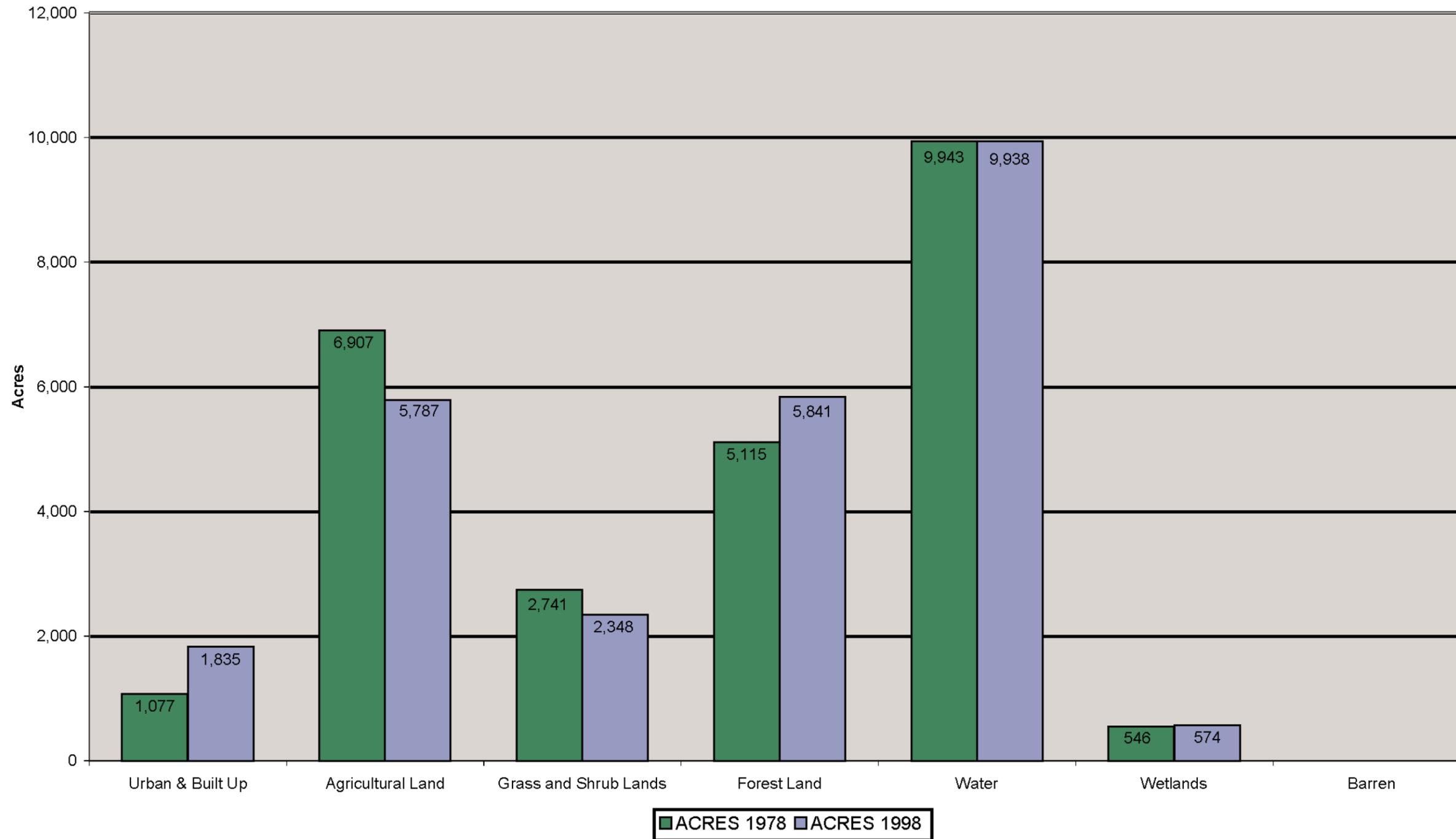
LAND USE 1978

LAND USE 1998



Residential	Open Land and Other	Other Agricultural Land	Coniferous Forest	Reservoirs
Commercial, Services, & Institutional	Cropland	Grasses and Forbs	Mixed Conifer-Broadleaved Forest	Forested (Wooded) Wetlands
Industrial	Orchards, Bush Fruits, and Vineyards	Shrubs	Clear-Cut Forest	Non-Forested (Non-Wooded) Wetlands
Transportation, Communication, Utilities	Confined Feeding Operations	Pine or Oak Opening	Streams and Waterways	Beaches and Riverbanks
Extractive	Permanent Pasture	Broadleaved Forest	Lakes	Sand Dunes / Exposed Bluff

MAJOR LAND USE 1978-1998



ACRES CHANGED

1998 Land Use Codes

1978 Land Use Codes	113	124	13	171	193	21	22	23	24	291	31	32	411	412	413	414	421	423	43	61	612	622	Total Acres	
113		4.75																						4.75
171	5.25					1.00	2.76				8.96						3.79							21.75
21	137.79			11.86			714.08	3.22	81.16	93.07	537.08	67.36	14.37		7.86	27.34	50.77			6.17		9.68		1761.78
22	114.78		14.66	5.33		455.79				28.66	207.56	70.08	11.57		0.41		55.86			0.74				965.44
23																1.44								1.44
24						60.49	6.35			8.44			10.14											85.43
29					30.66	26.36	18.89			6.99						1.06								83.96
31	151.27	3.16		2.45		156.00	56.91		11.97	2.94		436.68	36.93	6.58	62.55	18.56	62.95	21.90	9.86					1040.71
32	185.76			1.93		7.15	12.96			2.53	106.59		84.10	2.43	165.64	7.32	178.82	18.60	9.90	5.18	5.75			794.67
411	37.07	0.85		1.81		11.80	6.28			1.58		14.20		12.57	32.61	41.57	9.38	14.04	34.20					217.95
412	21.26	2.72									0.31				6.45	5.05								35.78
413	18.21												5.49			76.09	9.59	8.28						117.65
414	1.08					0.36							59.84		6.79			50.52						118.58
421	25.06						0.74				1.48		64.44		6.57			37.63	9.91					145.82
423	1.63															26.28								27.91
52															0.12									0.12
612																					49.75			49.75
622																						11.10		11.10
Total Acres	699.14	11.48	14.66	23.37	30.66	718.95	818.96	3.22	93.13	144.20	861.97	588.31	286.88	21.59	289.00	204.71	371.15	150.98	63.87	61.83	16.85	9.68		5484.58

* Values may not sum to shown totals due to rounding

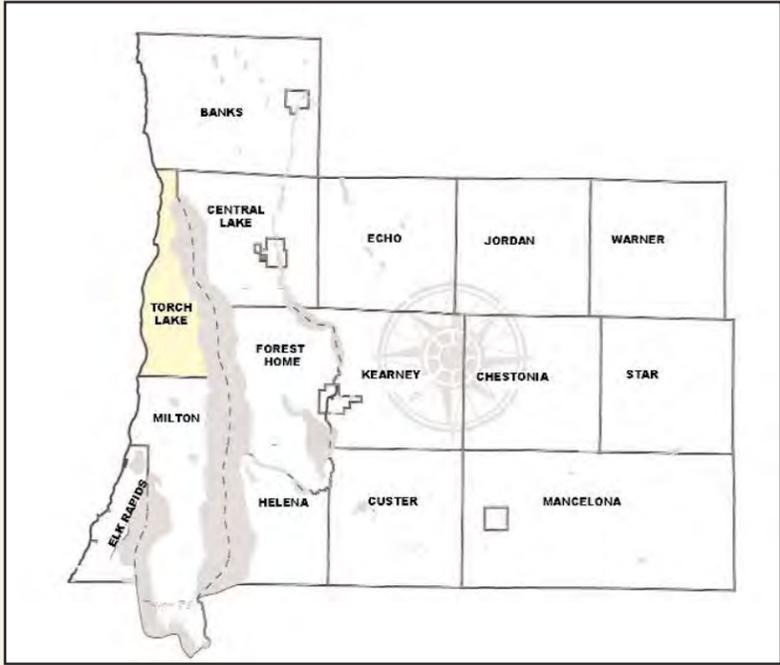
Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
| 12 Commercial, Services, & Institutional | 191 Outdoor Cultural | 41 Broadleaved Forest | 612 Shrub Swamps |
| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
| 126 Institutional | 194 Cemeteries | 413 Aspen-Birch | 622 Emergent Wetland |
| 13 Industrial | 21 Cropland | 414 Lowland Hardwoods | 623 Flats |
| 133 Primary Wood Processing | 22 Orchards, Bush Fruits, and Vineyards | 42 Coniferous Forest | 625 Open Water |
| 138 Industrial Park | 223 Ornamental Horticulture and Nurseries | 421 Pine | 629 Other Non-Forested Wetland |
| 139 Other (miscellaneous / automotive track) | 23 Confined Feeding Operations | 422 Other Upland Conifer | 72 Beaches and Riverbanks |
| 14 Transportation, Communication, Utilities | 24 Permanent Pasture | 423 Lowland Conifers | 73 Sand Dunes / Exposed Bluff |
| 141 Air Transportation | 29 Other Agricultural Land | 429 Managed Christmas Tree Plantations | |

TORCH LAKE TOWNSHIP



POPULATION TRENDS		
1980	1990	2000
711	762	1159
LAND USE TRENDS (ACRES)		
	1978	1998
Urban & Built Up	1009	1508
Agricultural Land	1841	1990
Grass & Shrub Lands	1714	705
Forest Land	4183	4506
Water	3830	3830
Wetlands	852	900
Barren	62	53



LAND USE 1978



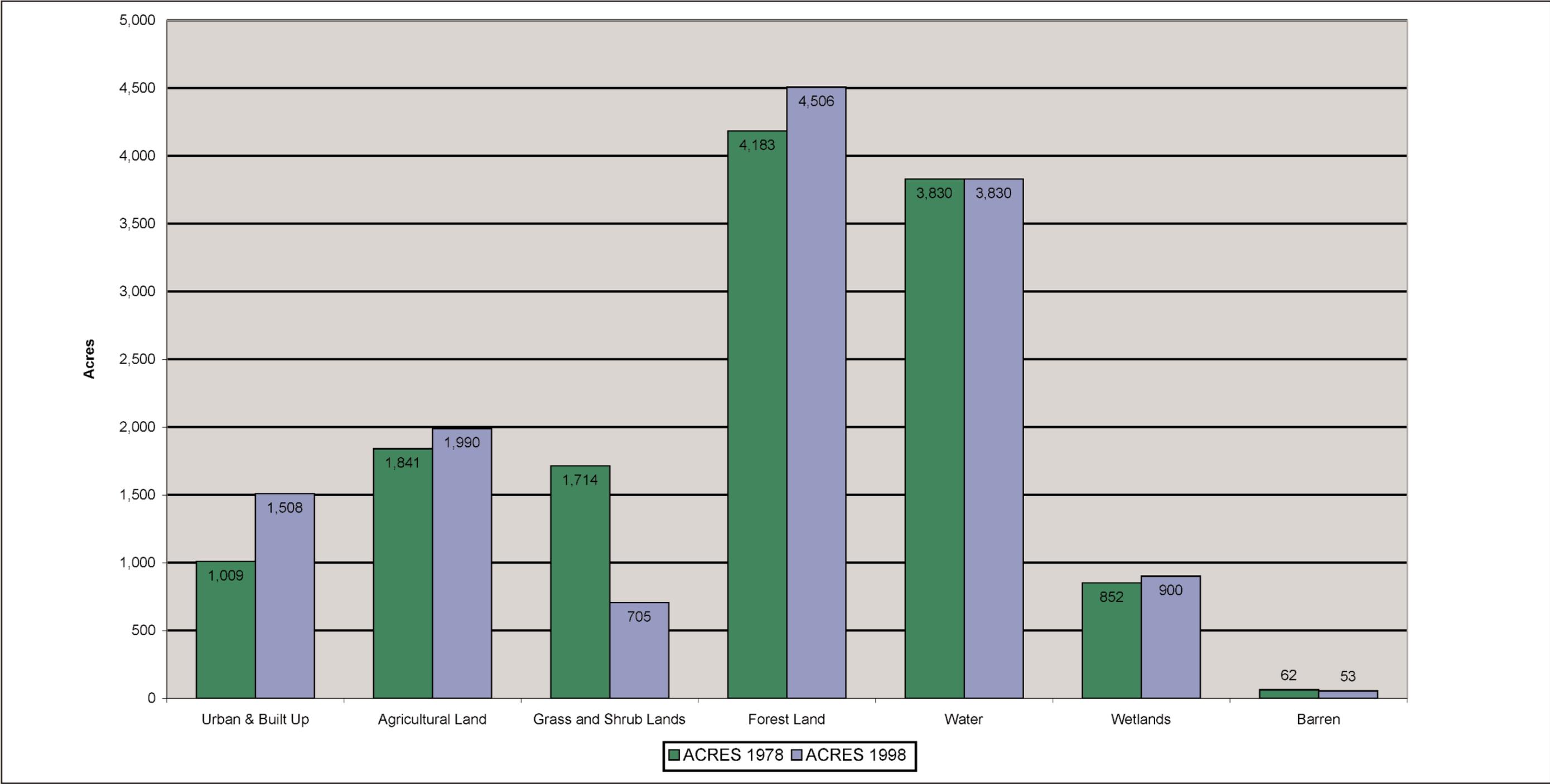
Residential	Open Land and Other	Other Agricultural Land	Coniferous Forest	Reservoirs
Commercial, Services, & Institutional	Cropland	Grasses and Forbs	Mixed Conifer-Broadleaved Forest	Forested (Wooded) Wetlands
Industrial	Orchards, Bush Fruits, and Vineyards	Shrubs	Clear-Cut Forest	Non-Forested (Non-Wooded) Wetlands
Transportation, Communication, Utilities	Confined Feeding Operations	Pine or Oak Opening	Streams and Waterways	Beaches and Riverbanks
Extractive	Permanent Pasture	Broadleaved Forest	Lakes	Sand Dunes / Exposed Bluff

LAND USE 1998



- | | | | | |
|--|--|---|--|--|
|  Residential |  Open Land and Other |  Other Agricultural Land |  Coniferous Forest |  Reservoirs |
|  Commercial, Services, & Institutional |  Cropland |  Grasses and Forbs |  Mixed Conifer-Broadleaved Forest |  Forested (Wooded) Wetlands |
|  Industrial |  Orchards, Bush Fruits, and Vineyards |  Shrubs |  Clear-Cut Forest |  Non-Forested (Non-Wooded) Wetlands |
|  Transportation, Communication, Utilities |  Confined Feeding Operations |  Pine or Oak Opening |  Streams and Waterways |  Beaches and Riverbanks |
|  Extractive |  Permanent Pasture |  Broadleaved Forest |  Lakes |  Sand Dunes / Exposed Bluff |

MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes

	113	124	13	141	171	193	21	22	24	291	31	32	411	413	414	421	423	43	61	612	Total Acres
113		19.38	0.03													4.22					23.63
13	2.77										0.17										2.94
171												0.12									0.12
21	42.75					10.67		128.09	29.29	11.78	30.32	9.41	1.43	8.61	5.17		2.33		4.61		284.46
22	5.31	5.51					167.26			30.81	34.13					4.47		1.53	1.97		250.99
24	2.48						54.43						1.05	2.55							60.50
29												6.97									6.97
31	22.11			49.02	10.89	69.57	278.46	24.71				197.94	28.78	37.50	1.49	94.04	29.41	13.45	2.50	10.75	870.63
32	54.00	1.72			3.66	33.24	7.91	1.60	1.38		14.69		57.28	66.56	62.73	89.46	23.07	17.38	1.14	3.60	439.43
411	96.02					2.30	0.59	9.71			1.27	0.62			275.02	30.36	2.70	28.13			446.71
413	13.68		3.06								0.30		4.37			8.60	16.04		6.83		52.87
414	41.33						0.72						59.86			67.80	172.77		20.76		363.24
421	20.71		0.58					5.19			0.52	1.29	6.27				24.85				59.41
423	3.61											2.04	1.10	0.19	9.44						16.38
52	0.09												0.07								0.17
612						1.91	0.48				0.49			1.58					59.43		63.90
72	8.82																				8.82
Total Acres	313.69	26.61	3.66	49.02	14.55	117.68	509.86	169.30	30.68	42.59	88.86	211.42	160.22	117.00	353.85	298.96	271.17	60.47	97.24	14.35	2951.16

Note: Values may not sum to shown totals due to rounding

Land Use Code Legend

- | | | | |
|--|---|--|---------------------------------------|
| 11 Residential | 143 Water Transportation | 291 Farmsteads | 43 Mixed Conifer-Broadleaved Forest |
| 111 Multi-Family, Medium- to High-Rise | 146 Utilities | 31 Grasses and Forbs | 44 Clear-Cut Forest |
| 112 Multi-Family, Low-Rise | 17 Extractive | 32 Shrubs | 51 Streams and Waterways |
| 113 Single Family / Duplex | 171 Open Pit | 33 Pine or Oak Opening (prairie) | 52 Lakes |
| 115 Manufactured Home Park | 173 Wells | 331 Hardwood Opening | 53 Reservoirs |
| 119 Other Residential | 19 Open Land and Other | 332 Coniferous Opening | 61 Forested (Wooded) Wetlands |
| 12 Commercial, Services, & Institutional | 191 Outdoor Cultural | 41 Broadleaved Forest | 612 Shrub Swamps |
| 121 Primary / Central Business District | 192 Outdoor Public Assembly | 411 Northern Hardwoods | 62 Non-Forested (Non-Wooded) Wetlands |
| 124 Secondary / Neighborhood or Rural Businesses | 193 Outdoor Recreation | 412 Central Hardwoods / Oak | 621 Aquatic Bed Wetland |
| 126 Institutional | 194 Cemeteries | 413 Aspen-Birch | 622 Emergent Wetland |
| 13 Industrial | 21 Cropland | 414 Lowland Hardwoods | 623 Flats |
| 133 Primary Wood Processing | 22 Orchards, Bush Fruits, and Vineyards | 42 Coniferous Forest | 625 Open Water |
| 138 Industrial Park | 223 Ornamental Horticulture and Nurseries | 421 Pine | 629 Other Non-Forested Wetland |
| 139 Other (miscellaneous / automotive track) | 23 Confined Feeding Operations | 422 Other Upland Conifer | 72 Beaches and Riverbanks |
| 14 Transportation, Communication, Utilities | 24 Permanent Pasture | 423 Lowland Conifers | 73 Sand Dunes / Exposed Bluff |
| 141 Air Transportation | 29 Other Agricultural Land | 429 Managed Christmas Tree Plantations | |

ANTRIM COUNTY



POPULATION TRENDS

1980
16,194

1990
18,185

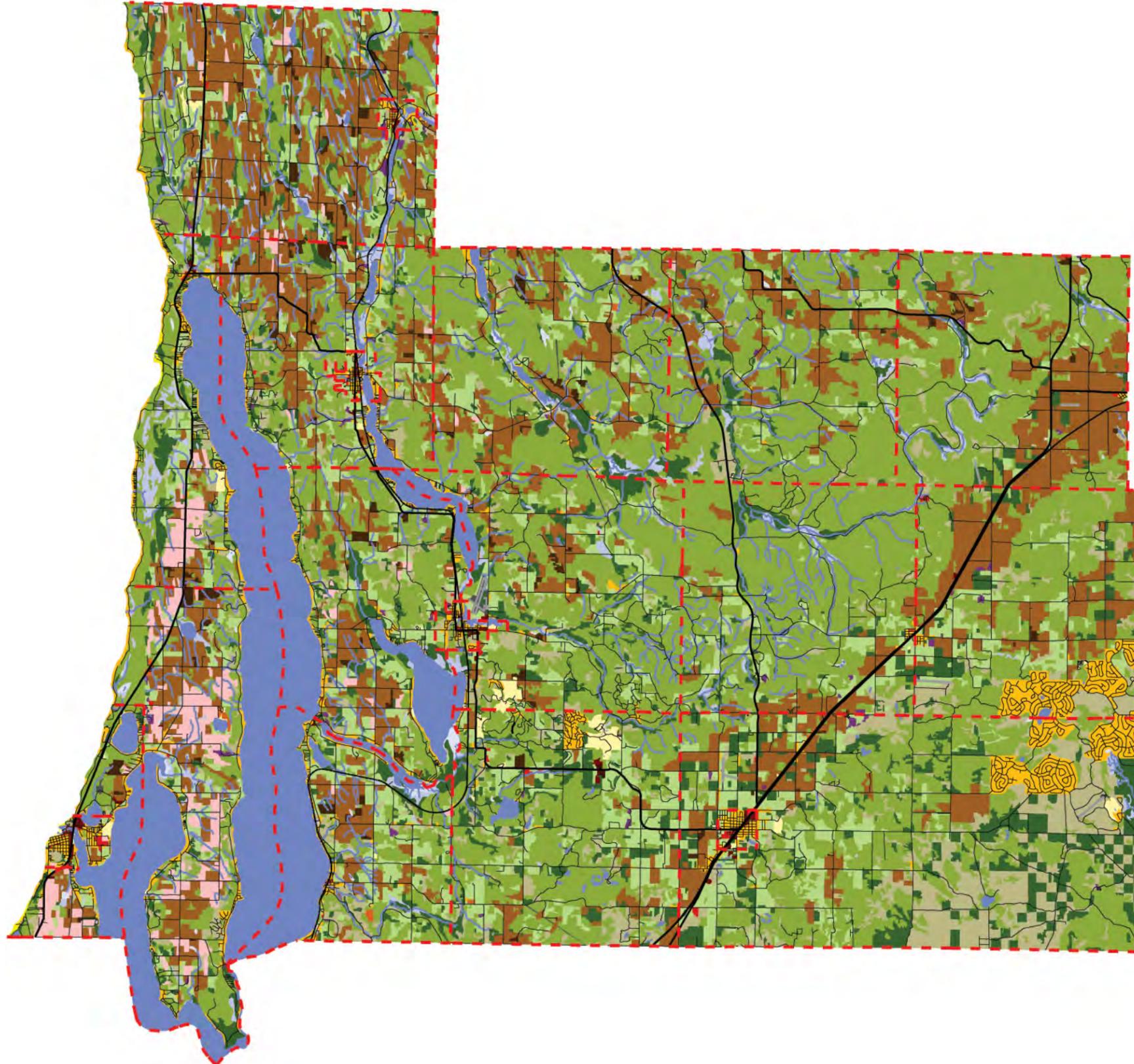
2000
23,110

LAND USE TRENDS (ACRES)

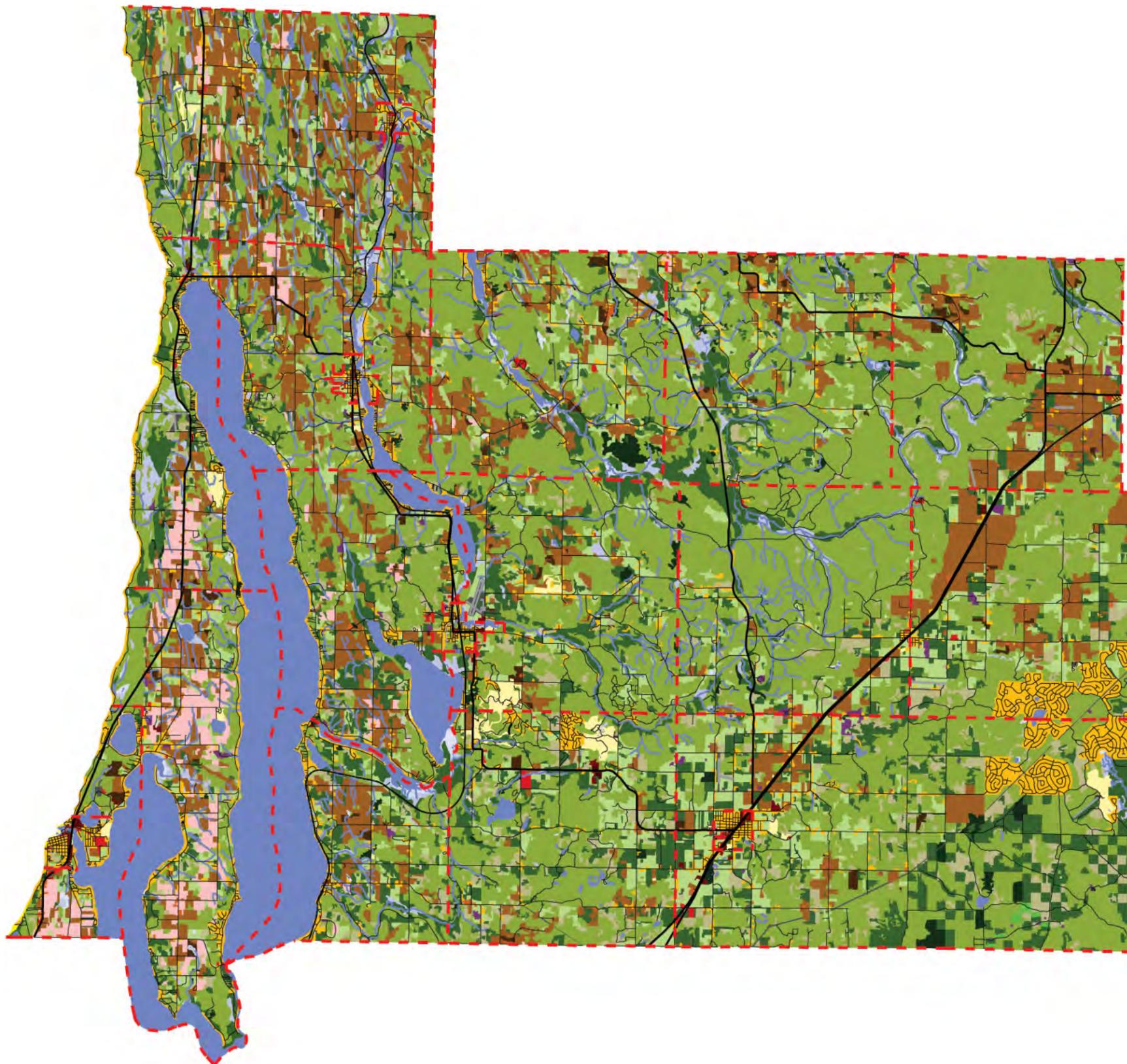
	1978	1998
Urban & Built Up	16070	24328
Agricultural Land	61947	49469
Grass & Shrub Lands	59544	43556
Forest Land	160847	180821
Water	31048	31161
Wetlands	6383	6513
Barren	125	113



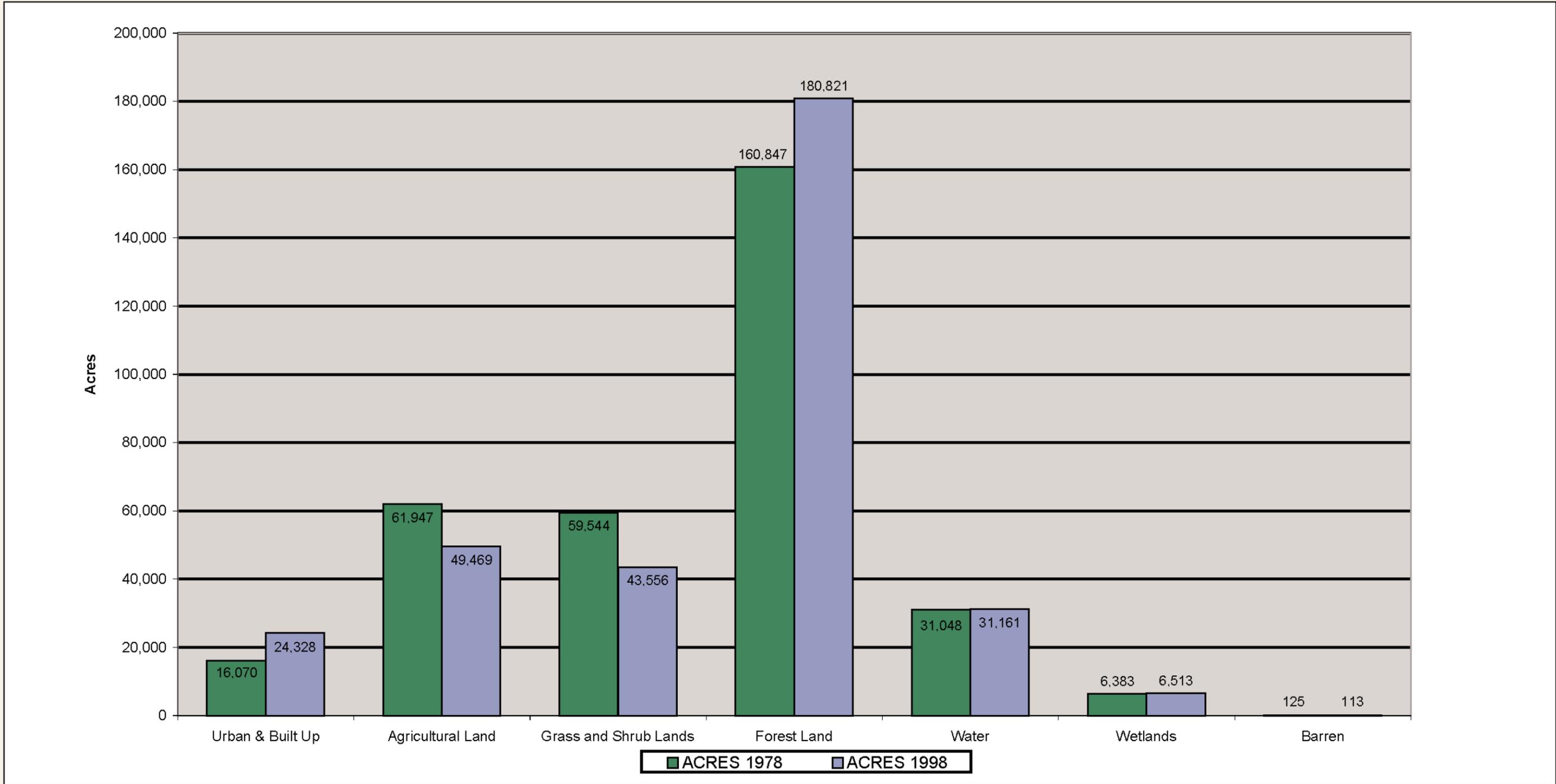
LAND USE 1978



LAND USE 1998



MAJOR LAND USES 1978-1998



ACRES CHANGED

1998 Land Use Codes		112	113	114	115	12	121	124	126	13	138	139	14	141	146	17	171	173	193	194	21	22	229	23	24	29	291	31	32	41	411	412	413	414	42	421	422	423	429	43	44	52	53	61	612	62	621	622	625	Total Acres				
113				4.1	2.6		47.0	2.6	1.4				28.2					6.1								1.1	2.7			29.0			10.6		14.0							1.0	0.0					150.40						
12	4.3						2.0	9.9													0.0				12.4		0.1																						28.59					
126							4.0	2.8																																										6.76				
13		17.1					9.5																				12.1	8.2																						46.99				
138							4.5																																											4.47				
141																					13.8								22.2																					35.91				
146																													3.8					11.7																16.56				
171		38.6					7.2												5.4		31.9	2.8							92.3	26.2		9.2		1.1			19.8					11.0	14.1	0.6	0.7					262.95				
193				17.5														8.4			8.1																													33.96				
21	4.3	2000	0.9		51.8		60.1	0.8	21.3			25.7				3.7	150.7	36.4	160.4	8.2		1528	3.7	16.0	1018	33.2	825.5	8693	877.5	586.9		151.2	191.6	3.6	1597	8.2	223.6	1316	43.9			31.8	3.7	0.7		33.4			19709.80					
22		176.2					14.0	8.4	14.7								5.3				786.9						116.4	347.4	110.9		17.2	1.4	4.2			102.6		2.8	37.9	1.7			2.7						1749.67					
23																																																			1.44			
24		24.9																	1.0		833.1	8.6					4.4	48.7	508.8	73.4		72.8		4.1	12.3		66.5		18.5	27.3				1.1							1705.62			
29		1.2																30.7		71.9	18.9						9.5	22.6			2.8																				158.62			
31	18.2	2051		2.8	25.2		45.7	64.6	57.1	7.6		0.0	53.2	3.7			122.6	4.3	154.9	1.2	3475	170.7			284.3	8.8	127.1		5517	15.2	1310	13.5	832.1	272.2		2958	1.8	382.6	820.0	146.1			3.6	2.4	33.0	28.1	9.0	16.3			19042.06			
32	1.6	862.9	1.8	4.6	6.0		10.1	1.1	3.0				52.3	7.0			55.0	12.8	176.7		128.8	141.4			13.0	1.7	7.7	368.8		5.5	2871	26.3	7186	446.1		2459	18.4	529.5	10.8	1039			17.5	41.7						16527.86				
41																													24.4																						24.37			
411		803.1					6.3						56.4	7.2			26.5	4.7	227.7		589.1	30.4			3.9	0.8	10.8	170.6	649.0	601.8		13.3	1417	1277		600.4	9.2	865.4	0.2	818.3		0.3	8.1	9.3			0.4			8227.51				
412	5.3	45.0					2.7											1.6										0.3	6.2					6.4	5.0		54.5														127.08			
413	3.6	161.8						3.1				36.2					1.0	2.1	28.1		4.7						4.4	808.8	117.8	1949				537.3		193.5	22.4	407.3		250.5		16.5	16.6	9.0			0.9	5.2			4579.14			
414		153.9					16.2	0.0							4.1			7.2		1.7								24.9	38.9		417.5	1.8	66.8			91.3		2292		7.9			2.7	34.1	0.6			1.1			3162.24			
42		1.3																																																	1.28			
421	19.6	230.3	0.2				5.4	1.6	0.0	0.4	12.0	3.0					11.0	6.9	5.8	1.4	236.8	7.3	0.0		9.0	0.1	4.4	703.3	229.6		211.2		101.9	6.8			2.1	83.2	25.2	44.9	159.0	0.2			0.7						2123.37			
422		1.8																																																		62.15		
423		24.0																	15.1		6.8								37.4	17.1		2.6		5.1	116.0			0.1						0.5	1.0						225.80			
429		38.6																			158.3	6.6							2.2	56.9	99.6		8.5	5.6	24.6			917.6								35.0						1353.55		
52		0.1																																																	0.64			
61		6.8																			0.4								0.6					0.2													15.7			8.7			32.47	
612		9.9																	1.9		2.5																																1682.32	
62																																																					8.85	
621																																																					39.32	
622																						7.4													0.4																			79.66
623																																																						5.31
72		12.3																																																				12.25
Total Acres	56.8	6660	2.9	29.0	85.6	4.0	226.2	94.6	102.1	7.6	26.0	185.1	56.2	22.0	3.7	372.2	75.6	822.8	10.8	6357	1914	3.7	16.0	1341	51.7	1167	11100	5481	740.3	7500	62.0	9805	2890	3.6	9130	62.1	4872	2237	2399	159.0	108.5	5.1	1762	122.5	9.8	8.9	68.4	5.2		81225.87				

Note: Values may not sum to shown totals due to rounding

Land Use Code Legend

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> 11 Residential 111 Multi-Family, Medium- to High-Rise 112 Multi-Family, Low-Rise 113 Single Family / Duplex 115 Manufactured Home Park 119 Other Residential 12 Commercial, Services, & Institutional 121 Primary / Central Business District 124 Secondary / Neighborhood or Rural Businesses 126 Institutional 13 Industrial 133 Primary Wood Processing 138 Industrial Park 139 Other (miscellaneous / automotive track) 14 Transportation, Communication, Utilities 141 Air Transportation | <ul style="list-style-type: none"> 143 Water Transportation 146 Utilities 17 Extractive 171 Open Pit 173 Wells 19 Open Land and Other 191 Outdoor Cultural 192 Outdoor Public Assembly 193 Outdoor Recreation 194 Cemeteries 21 Cropland 22 Orchards, Bush Fruits, and Vineyards 223 Ornamental Horticulture and Nurseries 23 Confined Feeding Operations 24 Permanent Pasture 29 Other Agricultural Land | <ul style="list-style-type: none"> 291 Farmsteads 31 Grasses and Forbs 32 Shrubs 33 Pine or Oak Opening (prairie) 331 Hardwood Opening 332 Coniferous Opening 41 Broadleaved Forest 411 Northern Hardwoods 412 Central Hardwoods / Oak 413 Aspen-Birch 414 Lowland Hardwoods 42 Coniferous Forest 421 Pine 422 Other Upland Conifer 423 Lowland Conifers 429 Managed Christmas Tree Plantations 43 Mixed Conifer-Broadleaved Forest 44 Clear-Cut Forest 51 Streams and Waterways 52 Lakes 53 Reservoirs 61 Forested (Wooded) Wetlands 612 Shrub Swamps 62 Non-Forested (Non-Wooded) Wetland 621 Aquatic Bed Wetland 622 Emergent Wetland 623 Flats 625 Open Water 629 Other Non-Forested Wetland 72 Beaches and Riverbanks 73 Sand Dunes / Exposed Bluff |
|---|---|---|