

Introduction

The Appendix includes:

- The Public Participation Plan
- The Community Survey and Tabulated Results
- The Adoption Ordinance

Public Participation Plan

The Public Participation Plan was adopted at the outset of the planning process. The document, required by Wisconsin Act 9, outlines the level of effort Mukwa placed upon public participation and community involvement in the planning process.

PUBLIC PARTICIPATION PROCEDURES AND PLAN ADOPTION

Introduction

In order for the public to be kept informed throughout the process of developing the *Town of Mukwa Comprehensive Plan*, and to meet the requirements of Wisconsin's "Smart Growth Law" (Ch. 66.1001(4)(a) Wis. Stats.), the Town of Mukwa has prepared the following public participation plan.

Smart Growth Law Requirements – Ch. 66.1001(4)(a) Wis. Stats.

"The governing body of a local government unit shall adopt written procedures that are designed to foster public participation, including open discussion, communication programs, information services, and public meetings for which advance notice has been provided, in every stage of the preparation of a comprehensive plan. The written procedures shall provide for wide distribution of proposed, alternative or amended elements of a comprehensive plan and shall provide an opportunity for written comments on the plan to be submitted by members of the public to the governing body and for the governing body to respond to such written comments."

Intent

The Town of Mukwa, in its comprehensive planning process, desires to make the opportunity for public participation, input and contribution available to its residents and to all interested and/or potentially affected parties, public and private, within and surrounding the Town of Mukwa. The Town will develop a fair, consensus-based plan that balances private and community interests in order to achieve the desired future for the town.

Public Participation Procedures

The Town of Mukwa, Waupaca County, Wisconsin, in order to provide the greatest amount of public involvement possible, and to meet the provisions of Ch. 66.1001(4) (a) Wis. Stats., has adopted the following Public Participation Procedures. It is the intent of these procedures to provide opportunities for the public to be meaningfully involved in the planning process throughout the development of the *Town of Mukwa Comprehensive Plan*.

The Town Board designated the Town of Mukwa 'Citizen Advisory Committee on Land Use/ Comprehensive Planning (the Planning Committee) as the appropriate representative body to initiate this public involvement effort. The Planning committee in accordance, with the requirements of Ch. 66.1001(4)(a) Wis. Stats., through its consultant and other designated parties, will:

- Make available to the public, information about the planning process and copies of plan documents. This information shall be made available in the most suitable variety of media possible, including newsletters, public meetings, workshops, and online at www.omnni.com;
- Prepare meeting summaries that shall be made available to interested individuals upon written request to the Town Clerk at the cost of \$0.25 per page. Requests should be submitted to Ms. Jeanette Zielinski, Clerk, Town of Mukwa, E8514 Weyauwega Street, New London, WI. 54961. Copies of meeting summaries will also be posted online at www.omnni.com;
- Record meeting attendance through sign-in sheets as part of the record for all meetings. Each person attending plan process meetings, including Town Board members, Planning Committee members, Plan Commissioners, consultants, and the general public shall be requested to sign in;
- Recommend to the Town of Mukwa Board the adoption of the Public Participation Procedures;
- Actively solicit comments and suggestions from the residents and property owners of the town, neighboring towns, City of New London, School District, Waupaca County, East Central Wisconsin Regional Planning Commission, Wisconsin Department of Natural Resources, Wisconsin Department of Transportation, Wisconsin Department of Administration, Wisconsin Land Council, the general public and all other interested parties;
- Accept written comments from residents, landowners, and other interested parties throughout the planning process;
- Conduct the required public hearing on the plan; and,
- Work closely with the consultant hired by the town to prepare the comprehensive plan.

All meetings related to the comprehensive plan shall be open to the public and duly posted pursuant to Ch. 985.02(2) Wis. Stats. The public notice announcing the required public hearing on the plan shall be published as a Class 1 notice, pursuant to Ch. 985.02(1) Wis. Stats., at least 30 days prior to the hearing. The Class 1 notice shall include the following: (1) date, time and place of the hearing, (2) a summary of the *Recommended Town of Mukwa Comprehensive Plan*, (3) the name of the town representative who may provide additional information regarding the plan, and (4) where and when a copy of the proposed comprehensive plan may be viewed prior to the hearing, and how a copy of the plan may be obtained.

Copies of the Recommended Town of Mukwa Comprehensive Plan shall be made available for viewing by the general public at the same time as the hearing notice is published. Copies of the proposed plan shall be available at the office of the Town Clerk, at the City of New London Public Library, 406 South Pearl Street, New London, WI 54961, and at www.omnni.com. Written requests to the Town Clerk for copies of the Recommended Town of Mukwa

Comprehensive Plan will require payment of duplication costs. Duplication costs shall be charged at a rate of \$.25 per black and white page, \$1.00 per color page, and \$2.00 per 11" x 17" color map. After the notice of the public hearing has been published, persons wishing to submit written comments on the plan may do so until one week prior to the public hearing. Written comments on the plan should be submitted to the Town Clerk. Written comments received prior to the public hearing will be addressed at the hearing and will be given the same weight as oral testimony. A review of all proposed revisions to the *Recommended Town of Mukwa Comprehensive Plan* will be completed at the public hearing. All approved revisions will be posted on the inter-net (www.omnni.com) in a meeting summary and included in the official minutes of the public hearing.

Plan Adoption

Town Board –

In 2003, the Town Board established a Town Planning committee in accordance with the requirements of Ch. 66.1001(4)(a) Wis. Stats. This Planning committee will be responsible for the completion of the Town of Mukwa Comprehensive Plan and a recommendation to the Town Board for its approval and adoption.

Based on the recommendation of the Town Planning committee and comments received from persons in attendance, the Town Board, by majority vote, shall enact an ordinance adopting the *Town of Mukwa Comprehensive Plan*. A copy of the ordinance and adopted plan shall be sent to neighboring units of government, local school districts, special purpose districts serving residents of the town, Waupaca County, East Central Regional Planning Commission, Wisconsin Department of Natural Resources, Wisconsin Department of Transportation, Wisconsin Department of Administration and the Wisconsin Land Council. A copy of the adoption ordinance shall be available with the plan for inspection at the office of the Town Clerk. Copies of the *Town of Mukwa Comprehensive Plan* may be purchased from the Town Clerk at a cost of \$30.00 each.

Planning Committee –

The Town of Mukwa Planning committee shall assist the Town Board in implementing the provisions of the *Town of Mukwa Comprehensive Plan*.

From time to time, but not less than once every five (5) years, the Planning committee shall review the comprehensive plan for potential changes, additions, amendments, or corrections. The Planning committee shall also be responsible for recommending comprehensive plan amendments to the Town Board on a majority vote of its entire membership.

Community Survey

The Community Survey was mailed to every household in Mukwa in July of 2006.

Comprehensive Plan Survey Recap - 2004 FINAL TALLY IN BOLD

1 How long have you been a resident of the Town of Mukwa?					
Less than 1 year	9	2	0		11
1-5 years	40	1	4	2	47
6-10 years	34	1	2	2	39
11-15 years	24		8	0	32
16-20 years	29		4	2	35
21-25 years	27		4	1	32
More than 25 years	80	14	3		97
I am not a resident	2	0	0		2
2 Which of the following best describe your current residence?					
Single-family house	194	2	29	7	232
Duplex/Two-family house	3		0	0	3
Mobile/manufactured home	22		2	1	25
Apartment	0		0	0	0
Farm	20		4	2	26
Other: Hobby Farm/Farmette	7		2	0	9
3 Do you own or rent your current residence?					
Own	240	2	37	10	289
Rent	4		0	0	4
4 Which of the following best describes your homes location?					
On a Farm	34	1	6	3	44
Single Rural Lot (non-farm)	106		18	5	129
Single Non-rural Lot	14		2	1	17
Subdivision (fewer than 10 lots)	17		0	1	18
Subdivision (10 or more lots)	36		10	0	46
Other: (1)Rural on River/ (1)Waterfront			(3) Mobile home park (1)Waterfront		
5 How many total acres of land, including your residence, do you own in Mukwa?					
None	18		0	0	18
Less than 1 acre	28		2	2	32
1-5 acres	123		20	5	148
6-20 acres	41		4	2	47
21-40 acres	9	1	2	0	12
41 -100 acres	13	1	4	0	18
More than 100 acres	6		2	1	9
6 How often do you vote?					
Every election	117	1	18	6	142
Sometimes	93	1	16	4	114
Rarely	21		1		22
Never	13		2		15
7 How far do you travel to work?					
I do not work (i.e. retired, unemployed)	74		11	3	88
Work at home	8		3	1	12
5 miles or less	44		6	1	51
6-20 miles	51		6	4	61
More than 20 miles	67	1	9	2	79
8 On which side of the Wolf River do you reside?					
East	132	2	27	2	163
West	84		6	6	96
9 Please identify your gender.					
Male	155	1	19	8	183
Female	67	1	14	4	86
10 How many adults and children currently live at this residence?					
___ Adults (18 or older)	454	4	47	19	524
___ Children (17 or younger)	128	2	19	7	156
11 What is your age?					
18-24	1		0	0	1
25-34	22	1	4	0	27
35-44	38		4	3	45
45-54	64		14	2	80
55-64	45		6	5	56
65-74	42	1	5	2	50
75 years and up	26		4	0	30
12 Do you own or operate a farm in Mukwa?					
yes	18	1	6	2	27
no	212	1	31	8	252
13 How long do you and/or your family plan to continue your farm operation?					
5 years or less	2		1	1	4
6-10 years	2		0		2
11-15 years	2		1		3
More than 15 years	6	1	0		7

Don't know	9	4	1	14
14 Approximately what percent of your household income comes from farming?	10, 50, ?, 50, 10, 10, 40, 40, 2, 5, 10, 20, 5, 50, <5, 5, 50, 0-50			
15 How satisfied are you with the Town of Mukwa as it is today?				
Very dissatisfied	8	4	0	12
Dissatisfied	9	1	0	10
Satisfied	134	2	24	168
Very satisfied	72	5	2	79
No opinion	10	3		13
16 In your opinion, how adequate is the current availability of housing options in the Town of Mukwa?				
Housing for seniors:				
Very inadequate	18	2	1	21
Inadequate	51	5	3	59
Adequate	55	13	4	72
Very Adequate	11	3	0	14
No Opinion	101	2	15	120
Housing for people with disabilities:				
Very Inadequate	15	0	0	15
Inadequate	48	7	3	58
Adequate	44	9	5	58
Very Adequate	8	3	0	11
No Opinion	116	2	19	139
Multi-family apartment buildings:				
Very Inadequate	9	1	0	10
Inadequate	36	3	1	40
Adequate	80	13	4	97
Very Adequate	23	4	1	28
No Opinion	82	2	16	104
Single-family houses				
Very Inadequate	7	1	2	10
Inadequate	15	1	0	16
Adequate	106	1	19	130
Very Adequate	55	9	4	68
No Opinion	48	7	2	57
Condominiums/Townhouses				
Very Inadequate	9	2	0	11
Inadequate	26	3	1	30
Adequate	69	9	6	84
Very Adequate	28	2	1	31
No Opinion	107	2	21	132
Affordable rental housing				
Very Inadequate	7	0	1	8
Inadequate	23	6	0	29
Adequate	82	1	14	104
Very Adequate	22	1	0	23
No Opinion	101	1	16	120

Affordable owner-occupied housing				
Very Inadequate	4	0	0	4
Inadequate	18	3	0	21
Adequate	102	1	14	122
Very Adequate	39	5	3	47
No Opinion	70	15	2	87
17 In your opinion, how adequate is the current availability of the following recreational uses in the Town of Mukwa?				
Park space				
Very Inadequate	29	4	0	33
Inadequate	68	2	11	82
Adequate	85	12	7	104
Very Adequate	14	3	0	17
No Opinion	38	6	2	46
Children's playground facilities				
Very Inadequate	33	2	0	35
Inadequate	66	2	15	86
Adequate	71	8	6	85
Very Adequate	8	3	0	11
No Opinion	56	9	1	66
Sports fields (baseball, soccer, etc.)				
Very Inadequate	30	3	0	33
Inadequate	60	2	13	80
Adequate	70	6	3	79
Very Adequate	13	3	0	16
No Opinion	57	11	2	70
Bicycle and pedestrian trails				
Very Inadequate	33	1	4	39
Inadequate	76	15	3	94
Adequate	74	1	11	90
Very Adequate	11	2	1	14
No Opinion	41	6	1	48
Golf Courses				
Very Inadequate	19	2	0	21
Inadequate	41	10	2	53
Adequate	65	1	6	75
Very Adequate	14	5	0	19
No Opinion	92	1	14	112
Skiing and snowshoeing				
Very Inadequate	27	1	0	28
Inadequate	52	13	2	67
Adequate	61	1	10	78
Very Adequate	18	4	2	24
No Opinion	74	1	11	86
Water activities (swimming, canoeing)				
Very Inadequate	12	2	0	14
Inadequate	14	6	0	20
Adequate	127	14	3	144
Very Adequate	60	1	9	77
No Opinion	23	6	0	29

Camping					
Very Inadequate	12	1	3	0	16
Inadequate	25		4	1	30
Adequate	82	1	17	6	106
Very Adequate	64		5	3	72
No Opinion	34		8	0	42
Areas for scenic enjoyment					
Very Inadequate	7	1	3	0	11
Inadequate	24		6	1	31
Adequate	84		16	3	103
Very Adequate	65	1	5	6	77
No Opinion	33		6	0	39
Hunting and/or fishing areas					
Very Inadequate	9	1	2	0	12
Inadequate	10		0	0	10
Adequate	84	1	22	1	108
Very Adequate	84		6	8	98
No Opinion	36		5	1	42
Other: ATV Trails very Inadequate	3		0	0	3

18 In your opinion, how satisfied are you with the current quality of existing transportation facilities in the Town of Mukwa?

Town Roads					
Very Dissatisfied	14		0	0	14
Dissatisfied	30		11	3	44
Satisfied	130	2	21	6	159
Very Satisfied	57		5	1	63
No Opinion	6		1	0	7
County Trunk Roads					
Very Dissatisfied	7		0	0	7
Dissatisfied	20		3	2	25
Satisfied	124	2	28	7	161
Very Satisfied	73		5	1	79
No Opinion	9		2	0	11
State Highway 54					
Very Dissatisfied	6		0	0	6
Dissatisfied	7		1	0	8
Satisfied	121	2	26	10	159
Very Satisfied	84		7		91
No Opinion	15		4		19
Bicycle and pedestrian trails					
Very Dissatisfied	22		1	1	24
Dissatisfied	54	1	9	2	66
Satisfied	68	1	13	4	86
Very Satisfied	35		2	1	38
No Opinion	37		12	2	51
Snowmobile trails					
Very Dissatisfied	3		0	0	3
Dissatisfied	8		2	1	11
Satisfied	68	1	14	5	88
Very Satisfied	48	1	5	1	55

No Opinion	70	16	3	89
Other: Public Canoe Landings	42	0	1	43

19 How important to you are the following natural resources and landscape features of the Town of Mukwa?

Forests and wooded areas					
Very Unimportant	13		3	0	16
Unimportant	5		1	0	6
Important	84		15	3	102
Very Important	122	2	19	6	149
No Opinion	12		0	0	12
Grasslands					
Very Unimportant	12		3	0	15
Unimportant	12		4	0	16
Important	88		12	4	104
Very Important	108	2	17	4	131
No Opinion	15		2	1	18
Wolf River					
Very Unimportant	12		2	0	14
Unimportant	3		2	0	5
Important	52		13	3	68
Very Important	148	2	20	6	176
No Opinion	21		0	0	21
Other streams and surface waters					
Very Unimportant	9		3	0	12
Unimportant	8		0	0	8
Important	67	2	10	6	85
Very Important	137		20	6	163
No Opinion	14		4	0	18
Cincoe and Partridge Crop Lakes					
Very Unimportant	8		2	0	10
Unimportant	8	1	4	0	13
Important	87	1	9	4	101
Very Important	112		13	4	129
No Opinion	26		10	1	37
Wetlands/Marsh/Bayous					
Very Unimportant	10		4	0	14
Unimportant	12		2	1	15
Important	75	1	11	3	90
Very Important	118	1	18	5	142
No Opinion	16		3	0	19
Undeveloped Open Space					
Very Unimportant	10		2	0	12
Unimportant	11		5	1	17
Important	77	1	11	2	91
Very Important	114	1	14	5	134
No Opinion	22		6	1	29
Native plants and animals					
Very Unimportant	8		2	0	10
Unimportant	7		3	0	10
Important	70	1	11	2	84

Very Important	133	1	21	7	162
No Opinion	18		1	0	19
Other:	1		0		1

20 How important to you are the following in the Town of Mukwa

Preservation of Natural Resources					
Very Unimportant	9		2	0	11
Unimportant	8		0	0	8
Important	78		17	2	97
Very Important	137	2	19	7	165
No Opinion	2		0	0	2
Habitat protection for fish and wildlife					
Very Unimportant	8		2	0	10
Unimportant	4		0	0	4
Important	76		15	2	93
Very Important	146	1	20	7	174
No Opinion	3		1	0	4
Water Quality					
Very Unimportant	8		3	0	11
Unimportant	2		0	0	2
Important	47		6	2	55
Very Important	174	2	28	7	211
No Opinion	2		0	0	2
Air Quality					
Very Unimportant	9		2	0	11
Unimportant	3		0	0	3
Important	51		6	2	59
Very Important	168	2	29	7	206
No Opinion	3		0	0	3
Preservation of rural character					
Very Unimportant	9		2	0	11
Unimportant	11		7	0	18
Important	67		9	3	79
Very Important	139	2	17	6	164
No Opinion	2		1	0	3
The area's scenic quality					
Very Unimportant	6		2	0	8
Unimportant	16		1	0	17
Important	74		19	5	98
Very Important	130	2	15	4	151
No Opinion	9		1	0	10
Quiet Places					
Very Unimportant	7		3	0	10
Unimportant	4		0	0	4
Important	75		19	4	98
Very Important	139	2	15	5	161
No Opinion	7		0	0	7
Tourism					
Very Unimportant	40		6	0	46
Unimportant	65	2	16	3	86

Important	71	8	5	84
Very Important	39	4	0	43
No Opinion	19	4	1	24
Other:	1	0		1

21 In your opinion, what effect does existing farmland have on the following in the Town of Mukwa?

Preservation of natural areas				
Very Negative Effect	3		0	3
Negative Effect	15		2	17
Positive Effect	117	1	21	144
Very Positive Effect	83	1	7	95
Don't Know	24		8	33
Habitat for fish and wildlife				
Very Negative Effect	4		0	4
Negative Effect	18		4	22
Positive Effect	99	1	17	121
Very Positive Effect	76	1	9	90
Don't Know	30		8	40
Water Quality				
Very Negative Effect	5		1	6
Negative Effect	43		10	54
Positive Effect	69	2	8	83
Very Positive Effect	61		6	68
Don't Know	44		12	59
Impact on local economy				
Very Negative Effect	0		0	0
Negative Effect	8		1	9
Positive Effect	109	2	16	133
Very Positive Effect	72		10	85
Don't Know	31		10	42
Preservation of rural character				
Very Negative Effect	2		0	2
Negative Effect	11		2	13
Positive Effect	97		15	114
Very Positive Effect	97	2	15	122
Don't Know	18		6	24
The area's scenic quality				
Very Negative Effect	1		0	1
Unimportant	2		2	4
Positive Effect	111		16	129
Very Positive Effect	88	2	16	112
Don't Know	21		4	27
Other:	1		0	1

Job/Industry

22 In your opinion, how important is protecting farmland in the Town of Mukwa?

Very Unimportant	9		5	14
Unimportant	15		3	18
Important	77		12	92
Very Important	117	2	14	139

	No Opinion	12	4	1	17
23	To what extent would you encourage or discourage the following price ranges for future housing development in the Town of Mukwa? Strongly Discourage				
	Housing under \$100,00				
	Discourage	60	1	11	6
	Strongly Discourage	31	1	5	2
	Encourage	60		9	0
	Strongly Encourage	20		0	0
	Neither Encourage nor Discourage	54		13	2
	Housing between \$100,000-\$150,000				
	Discourage	19		2	1
	Strongly Discourage	17	1	1	0
	Encourage	100	1	17	7
	Strongly Encourage	43		8	1
	Neither Encourage nor Discourage	45		9	1
	Housing over \$150,000				
	Discourage	37		4	1
	Strongly Discourage	27	1	5	0
	Encourage	75	1	9	7
	Strongly Encourage	35		6	0
	Neither Encourage nor Discourage	50		13	2
24	To what extent would you encourage or discourage the following kinds of future multi-family and special-needs housing development in the Town of Mukwa?				
	Single-family houses on small lots (less than 1/2-acre*) grouped near others.				
	Strongly Discourage	104	2	19	2
	Discourage	73		8	5
	Encourage	21		5	2
	Strongly Encourage	6		1	0
	Neither Encourage or Discourage	22		5	1
	Single-family houses on large lots (more than 1/2-acre*) grouped near others.				
	Strongly Discourage	58		6	2
	Discourage	43	1	2	4
	Encourage	89	1	19	4
	Strongly Encourage	14		3	0
	Neither Encourage or Discourage	25		6	0
	Single-family houses dispersed around the area - not grouped with others or in subdivisions.				
	Strongly Discourage	19		0	1
	Discourage	19	1	3	2
	Encourage	104	1	17	5
	Strongly Encourage	54		6	0
	Neither Encourage or Discourage	35		10	2

25	To what extent would you encourage or discourage the following kinds of future multi-family and spec. Needs housing development in the Town of Mukwa?				
	Multi-family apartment buildings				
	Strongly Discourage	103	1	12	3
	Discourage	75		17	5
	Encourage	31	1	1	1
	Strongly Encourage	3		1	0
	Neither Encourage or Discourage	22		6	1
	Mobile/manufactured home parks				
	Strongly Discourage	116	2	15	7
	Discourage	71		18	2
	Encourage	20		0	0
	Strongly Encourage	5		1	0
	Neither Encourage or Discourage	23		4	1
	Duplexes/Two-family houses				
	Strongly Discourage	56		8	1
	Discourage	52	1	10	3
	Encourage	85	1	10	2
	Strongly Encourage	6		0	0
	Neither Encourage or Discourage	36		10	4
	Condominiums/Townhouses				
	Strongly Discourage	70		10	3
	Discourage	63	1	10	2
	Encourage	59	1	9	3
	Strongly Encourage	7		2	0
	Neither Encourage or Discourage	33		6	2
	Housing for Seniors				
	Strongly Discourage	23		2	0
	Discourage	22		3	4
	Encourage	128	1	18	4
	Strongly Encourage	34		5	0
	Neither Encourage or Discourage	28	1	10	2
	Housing for people with disabilities				
	Strongly Discourage	21		2	0
	Discourage	28		4	1
	Encourage	123	1	15	6
	Strongly Encourage	26		2	0
	Neither Encourage or Discourage	40	1	13	3
	Other:				
26	Most rural homes rely upon private wells for potable water supply. What extent would you encourage a municipal water supply?				
	Strongly Discourage	89		10	3
	Discourage	67	2	16	5
	Encourage	35		7	1
	Strongly Encourage	19		2	0
	No Opinion	26		3	1
27	To what extent would you encourage or discourage the following kinds of future recreational developments in the Town of Mukwa?				
	Park space				
	Strongly Discourage	19		3	0
	Discourage	46	1	1	1

Encourage	91	1	25	5	122
Strongly Encourage	48		5	2	55
Neither Encourage or Discourage	25		4	2	31
Children's playground facilities					
Strongly Discourage	19		3	0	22
Discourage	29		7	2	38
Encourage	119	2	19	5	145
Strongly Encourage	35		4	1	40
Neither Encourage or Discourage	32		5	2	39
Sport fields (baseball, soccer, etc.)					
Strongly Discourage	28		4	0	32
Discourage	42		6	2	50
Encourage	97	2	15	5	119
Strongly Encourage	28		7	1	36
Neither Encourage or Discourage	42		6	2	50
Bicycle and pedestrian trails					
Strongly Discourage	12		3	0	15
Discourage	19		2	2	23
Encourage	112	2	18	5	137
Strongly Encourage	62		11	2	75
Neither Encourage or Discourage	25		3	1	29
Senior Center					
Strongly Discourage	19		4	0	23
Discourage	48	1	8	4	61
Encourage	96		16	3	115
Strongly Encourage	20		2	0	22
Neither Encourage or Discourage	50	1	7	3	61
Community Pool					
Strongly Discourage	53		11	2	66
Discourage	83	1	9	5	98
Encourage	39	1	11	0	51
Strongly Encourage	14		3	0	17
Neither Encourage or Discourage	42		4	3	49
Hunting and Fishing areas					
Strongly Discourage	13		3	1	17
Discourage	18	1	3	0	22
Encourage	102		16	6	124
Strongly Encourage	66	1	8	3	78
Neither Encourage or Discourage	32		8	0	40
Snowmobile Trails					
Strongly Discourage	27	1	5	2	35
Discourage	34		8	2	44
Encourage	78		11	4	93
Strongly Encourage	36	1	6	1	44
Neither Encourage or Discourage	56		8	1	65
Other:	3		0		3

Discourage	72	1	8	4	85
Encourage	67		10	4	81
Strongly Encourage	16		3	0	19
Neither Encourage or Discourage	32	1	10	1	44
Antique, craft, and specialty stores					
Strongly Discourage	31	1	2	0	34
Discourage	47		7	3	57
Encourage	90		12	4	106
Strongly Encourage	19		4	0	23
Neither Encourage or Discourage	46	1	12	3	62
Shopping centers					
Strongly Discourage	73	1	11	2	87
Discourage	81	1	16	6	104
Encourage	44		5	1	50
Strongly Encourage	8		1	0	9
Neither Encourage or Discourage	30		6	1	37
Grocery Stores					
Strongly Discourage	39	1	6	0	46
Discourage	69	1	9	2	81
Encourage	83		11	5	99
Strongly Encourage	12		2	0	14
Neither Encourage or Discourage	34		10	3	47
Restaurants					
Strongly Discourage	32	1	6	0	39
Discourage	47	1	7	3	58
Encourage	96		15	5	116
Strongly Encourage	16		1	0	17
Neither Encourage or Discourage	43		9	2	54
Child care facilities					
Strongly Discourage	25	1	5	0	31
Discourage	44		6	3	53
Encourage	89		15	4	108
Strongly Encourage	13		0	0	13
Neither Encourage or Discourage	63	1	10	3	77
Office facilities					
Strongly Discourage	39	2	7	0	48
Discourage	74		10	3	87
Encourage	47		4	2	53
Strongly Encourage	9		1	0	10
Neither Encourage or Discourage	57		14	5	76
Health facilities (doctor, dentist, etc.)					
Strongly Discourage	26	1	5	0	32
Discourage	59		8	4	71
Encourage	85		11	2	98
Strongly Encourage	11		3	0	14
Neither Encourage or Discourage	51	1	11	4	67
Other:	1		1		2

28 To what extent would you encourage/discourage the following kinds of future commercial and service related development in Mukwa?

Convenience stores / Gas stations					
Strongly Discourage	45		7	1	53

29 In your opinion, what is the most immediate concern with respect to transportation in the Town of Mukwa?

Driveway access to State Highway 54	6	1	0	7
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Traffic on Town and County Roads	50	7	3	60
Traffic on State Highway 54	22	1	2	26
Timely Road Maintenance	136	1	23	165
Additional trails	16	1	1	18
Bus Service	7	0	0	7
Other:	7	0	1	8
Speeding/ Speeding/ Speed Limit/ Manske Rd/ Speed of traffic on Cty. Rd./ Speeding on hwy 54/				

30 In your opinion, who should be responsible for the costs associated with road expansions to accommodate development?

Town of Mukwa	19	2	0	21
Developer	188	2	28	226
No Opinion	16	3	1	20
Other:	8	3	1	12
Cost should be split/ Both Town of Mukwa & Developer/(3)Shared				

31 To what extent would you encourage/discourage the following kinds of future commercial and service-related development in Mukwa?

Convenience stores / Gas Stations NOT EVERYONE TALLIED THIS QUESTION SINCE IT WAS A DUPLICATE				
Strongly Discourage	37	1	4	42
Discourage	53		3	56
Encourage	48		7	55
Strongly Encourage	6		2	8
Neither Encourage or Discourage	25	1	9	35
Antique, craft, and specialty stores				
Strongly Discourage	25	1	1	27
Discourage	36		5	41
Encourage	64		6	70
Strongly Encourage	6		2	8
Neither Encourage or Discourage	26	1	10	37
Shopping centers				
Strongly Discourage	51	1	3	55
Discourage	59	1	10	70
Encourage	31		4	35
Strongly Encourage	4		1	5
Neither Encourage or Discourage	23		6	29
Grocery stores				
Strongly Discourage	32	1	3	36
Discourage	46	1	5	52
Encourage	56		9	65
Strongly Encourage	8		1	9
Neither Encourage or Discourage	24		7	31
Restaurants				
Strongly Discourage	30	1	3	34
Discourage	29	1	5	35
Encourage	64		11	75
Strongly Encourage	9		1	10
Neither Encourage or Discourage	31		5	36
Child care facilities				
Strongly Discourage	25	1	3	29
Discourage	31		3	34
Encourage	62		8	70

Strongly Encourage	8	1	9	9
Neither Encourage or Discourage	41	1	9	51
Office facilities				
Strongly Discourage	37	1	4	42
Discourage	47	1	5	53
Encourage	34		3	37
Strongly Encourage	5		2	7
Neither Encourage or Discourage	41		9	50
Health facilities (doctor, dentist, etc.)				
Strongly Discourage	28	1	1	30
Discourage	38	1	3	42
Encourage	58		10	68
Strongly Encourage	8		2	10
Neither Encourage or Discourage	35		7	42
Other: Strongly Encourage Rural Farms		1	0	1

32 To what extent would you encourage or discourage the following kinds of future industrial development in the Town of Mukwa?

Large-scale livestock operations					
Strongly Discourage	84	1	11	3	99
Discourage	77	1	17	3	98
Encourage	34		4	3	41
Strongly Encourage	8		1	0	9
Neither Encourage or Discourage	37		4	1	42
Agriculture-related business					
Strongly Discourage	30		0	0	30
Discourage	32		6	0	38
Encourage	122	1	19	7	149
Strongly Encourage	17		2	1	20
Neither Encourage or Discourage	32	1	10	2	45
Warehousing/distribution					
Strongly Discourage	63	1	5	2	71
Discourage	70	1	15	3	89
Encourage	65		6	2	73
Strongly Encourage	7		1	0	8
Neither Encourage or Discourage	35		10	3	48
Manufacturing and assembly					
Strongly Discourage	64	1	4	2	71
Discourage	53	1	12	1	67
Encourage	77		10	4	91
Strongly Encourage	18		3	0	21
Neither Encourage or Discourage	26		9	3	38
Heavy industry					
Strongly Discourage	74	1	10	2	87
Discourage	89	1	19	5	114
Encourage	35		3	1	39
Strongly Encourage	13		1	0	14
Neither Encourage or Discourage	25		5	2	32
Mineral extraction (gravel quarries, etc.)					
Strongly Discourage	93	1	9	2	105
Discourage	77	1	17	4	99

Encourage	25	3	2	30
Strongly Encourage	4	0	0	4
Neither Encourage of Discourage	37	9	2	48
Development in Industrial Park				
Strongly Discourage	61	1	12	76
Discourage	46	1	9	57
Encourage	85	3	2	90
Strongly Encourage	21	7	0	28
Neither Encourage of Discourage	22	0	5	27
Other:	2	0		2
Anything to help bring employment				

33 From 1990 to 2000, the Town's Population increased by 24% (2,304 to 2,850 people). Would you like to see the Town's population increase, decrease, or remain the same over the next twenty years?

Increase at a faster rate	5	0	0	5
Increase at the same rate	71	11	1	83
Remain approximately the same	125	1	22	154
Decrease Slightly	22	1	3	26
Decrease Significantly	4	2	0	6
No Opinion	13	0	3	16

34 In 2001, approximately 30% of the Town was considered farmland or undeveloped. In your opinion, what % of the Town's total land area should be considered farmland/undeveloped in 5, 10, 15 and 20 years?

In 5 years:				
30% or more	98	2	12	117
20-30%	62		13	77
Less than 20%	20		6	27
No Opinion	50		6	58
In 10 years:				
30% or more	84	2	9	98
20-30%	67		15	86
Less than 20%	21		5	27
No Opinion	49		7	58
In 15 years:				
30% or more	77	2	7	89
20%-30%	72		14	91
Less than 20%	21		6	27
No Opinion	48		8	58
In 20 years:				
30% or more	73	2	12	90
20-30%	67		14	86
Less than 20%	32		8	40
No Opinion	53		8	63

35 Where should the following types of development occur within the Town of Mukwa?

Convenience stores/Gas stations:				
On the edge of existing development	49	4	4	57
In specially zoned areas	81	1	15	101
Anywhere in the Town	23		6	30
Development of this type shouldn't occur	65	1	10	76

No Opinion	13	3	1	17
Antique, craft, & specialty stores:				
On the edge of existing development	27		2	31
In specially zoned areas	51	1	9	64
Anywhere in the Town	78		14	95
Development of this type shouldn't occur	57	1	5	64
No Opinion	20		6	27
Shopping Centers:				
On the edge of existing development	24		3	30
In specially zoned areas	58		8	69
Anywhere in the Town	11		1	12
Development of this type shouldn't occur	123	2	23	151
No Opinion	18		3	22
Restaurants:				
On the edge of existing development	25		7	37
In specially zoned areas	60	1	10	73
Anywhere in the Town	72		11	83
Development of this type shouldn't occur	55	1	8	65
No Opinion	20		3	24
Office facilities:				
On the edge of existing development	20		3	25
In specially zoned areas	61		10	73
Anywhere in the Town	27		6	33
Development of this type shouldn't occur	92	2	16	112
No Opinion	29		3	36
Health facilities (doctor, dentist, etc.):				
On the edge of existing development	24		3	31
In specially zoned areas	69	1	12	84
Anywhere in the Town	44		8	52
Development of this type shouldn't occur	72	1	10	83
No Opinion	24		4	32
Agriculture-related business:				
On the edge of existing development	26		0	28
In specially zoned areas	72	1	14	92
Anywhere in the Town	64		13	79
Development of this type shouldn't occur	47	1	7	55
No Opinion	26		3	30
Warehousing/distribution				
On the edge of existing development	19		0	21
In specially zoned areas	68		15	87
Anywhere in the Town	14		3	17
Development of this type shouldn't occur	109	2	16	128
No Opinion	21		4	28
Manufacturing and assembly:				
On the edge of existing development	17		0	20
In specially zoned areas	84		15	103
Anywhere in the Town	14		4	18
Development of this type shouldn't occur	100	2	15	117
No Opinion	19		4	26

Heavy industry:										Strongly Supportive	22	2	0	24
On the edge of existing development	16	0	1	17						No Opinion	59	14	5	78
In specially zoned areas	47	10	1	58										
Anywhere in the Town	6	0	0	6										
Development of this type shouldn't occur	128	2	24	6	160									
No Opinion	20	2	2	24										
36 Which statement best describes your level of awareness about current efforts to develop Smart Growth Plan for Town?														
Prior to receiving this survey, I was not aware of current planning efforts.	93	12	2	107										
I have heard about planning efforts, but I don't know very much about them.	99	2	15	5	121									
I am generally familiar with the current planning efforts.	34	9	3	46										
I am very knowledgeable about the current planning efforts.	8	2	0	10										
37 To what extent would you support the use of a plan developed by the community to guide decisions in the Town of Mukwa?														
Strongly unsupportive	11	2	0	13										
Unsupportive	16	2	0	18										
Supportive	160	1	27	4	192									
Strongly supportive	27	1	4	3	35									
No opinion	38	3	3	44										
38 Do you believe that the future development should be guided so that it occurs in certain areas and not others?														
Yes	170	2	27	7	206									
No	22	6	0	28										
Not sure	39	5	3	47										
No Opinion	10	0		10										
39 To what extent would you support ordinances to protect natural resource areas such as wetlands, woodlands, and land adjacent to lakes and streams in the Town of Mukwa?														
Strongly Unsupportive	7	4	0	11										
Unsupportive	14	2	1	17										
Supportive	94	15	6	115										
Strongly Supportive	114	2	16	3	135									
No Opinion	10	1		11										
40 To what extent would you encourage or discourage this type of development in the Town of Mukwa?														
Strongly Discourage	28	5	0	33										
Discourage	64	1	5	3	73									
Encourage	72	1	15	4	92									
Strongly Encourage	22	3	2	27										
Neither Encourage Nor Discourage	48	10	1	59										
41 To what extent would you support protecting land by allowing land trusts and other organizations to purchase permanent development rights for the Town?														
Strongly Unsupportive	37	5	1	43										
Unsupportive	53	6	1	1	61									
Supportive	68	11	1	3	83									
42 To what extent would you support protecting land by allowing land trusts and other organizations to purchase temporary (for example, 10 to 20-year) development rights for land in the Town?														
Strongly Unsupportive	30	3	2	35										
Unsupportive	52	9	1	2	64									
Supportive	69	9	1	1	80									
Strongly Supportive	17	3	0	20										
No Opinion	65	14	5	84										
43 If you own land in the Town, would you consider taking advantage of opportunities to protect your land by selling development rights for compensation?														
I do not own land in the Town of Mukwa	30	6	0	36										
Very likely to consider giving up development rights for compensation	27	2	1	0	30									
Likely to consider giving up development rights for compensation	22	3	0	25										
Unlikely to consider giving up development rights for compensation	24	7	4	35										
Very unlikely to consider giving up development rights for compensation	70	8	1	2	81									
Don't know/No opinion	61	12	4	77										
44 When farmland is offered for sale in the Town of Mukwa, which ONE statement best describes how you would like to see the land used after the sale?														
The land should be used as the new owner desires	59	9	1	69										
The land should be kept in agricultural use or used for agriculture-related purposes	64	8	1	1	74									
The land should be used in accordance with a land-use plan	109	15	1	7	132									
No opinion	11	5	1	17										
45 Should the Town of Mukwa consider developing a boundary agreement with the City of New London:														
Yes	143	25	2	9	179									
No	28	5		33										
No Opinion	68	7	1	76										
If you have any other comments you would like to have included in the survey, please see addendum number _____.														

Community Survey Comments

The following comments were included by residents in the Community Survey. The are included as written by Survey respondents.

I don't want to see any "big city" development. My husband and I moved here to get away from city noise, congestion, traffic and people. Any new development should be done with respect for the beauty of this area. I would like to see more small town events. Such as a community "Christmas tree lighting," "Ice cream socials," maybe band concerts, etc. I'm a small town person and I would like to see this area stay rural.

I am concerned about the 30+ acre housing developments because I think the water/sewer situations will be big headaches in near future. Therefore I am strongly for a development plan and zoning ordinances. We have great resources in Wisconsin. Let's use them wisely. My father used to say "when one cuts a tree one should plant another in its place," I think that is true of all natural resources.

Question 16 should take into account the whole New London community and its abilities.

Question 18 no reason to leave roadwork unfinished for so long. 30 days is enough for any project you have other than bridges.

Senior housing is available in New London and is conveniently located as if it was built in the town of Mukwa.

The newly elected Town Board is doing an excellent job! Would like to see some of excess vehicles and scrap and old machinery etc. removed from yards. Example Shaw Rd., Day Rd., etc.

As a landowner and farmer I feel I should have the right to decide what I want to do with our land. For a farmer selling the land can a part of his retirement plan. After owning and caring for his land for years he should have the right to decide what happens to it.

I feel that there is too much growth in housing subdivisions. The ground water supply is in danger of being compromised. You can't keep building and sinking wells without affecting the water table. The danger of more septic systems also has to be considered. The large homes and subdivisions are going up in valuable woodland. You can't keep forcing wildlife out. It also seems that more homes only cause our taxes to go up due to more administration and maintenance. The more taxes in the higher they go. Keep the land open. There are more than enough empty homes for sale!!

I love living in the country and taking rides down the country roads, looking for deer. It makes me worried and sad when I see new houses and sub-divisions being built. There are enough houses already built that are for sale. People need to seriously think about the way they are using up the land and taking away so much of gods beauty and peace that he gave us.

Homeowners should be allowed to build on their own parcels of land following certain guidelines. We should have the ability to protect our investments from theft, damage and any other circumstances. Flood plain acres should be reevaluated every 5-10 years.

Questions 28 and 31 are the same!

Question 40 and 24a seem related except question 40 attempts to influence the answer, a bias question without the bad side being given.

The town should not have a sanitary district or a municipal water supply. When sewer and water comes out from New London then that area should go to New London.

I don't think anyone should have more than one acre of land unless they either farm that land, clean it up and take care of it, or develop it.

We have too much vacant wasteland lying around that is an eye sore to the public.

When doing roadwork, the town should take more ownership to put peoples yards back the way they were/and how people maintained their property. Weeds need to be cut more often.

In order to keep the rural appeal I feel the lot sizes should be 5 acres or more. There are to many new subdivisions forming.

This land use direction is about 40 years late, the direction that Mukwa is going to go is already set.

It is about time we do some planning.

There are "very" few ATV trails in this part of the state. Buy pursuing this avenue the snowmobiles would also be able to use these trails in winter.

There are enough government regulations now. Let neighbors use negotiation and common sense skills. "Smart growth" is an unnecessary disguised as "smart" way to take freedom away from landowners. Enough already!

This is a Joke! This board voted to do away with the fire department because longer response times for some of the people of this township. Then come along with a survey like this on how to make things better and waste town money. It's time for a New town board.

Improvement needed – better snowplowing/sand-salt. Beau City road needs new blacktop.

We are not satisfied with the way some people living by the river can build new homes, and some people living along the same river can't even build a garage. This is discrimination!

This land use survey is a waste of paper!! The state of Wisconsin or Waupaca County zoning has the last voice in this matter. Mukwa gave up all the zoning rights to Waupaca County! Example: Driftwood sub-division Wisconsin state approved sub-division, re-zoned without being grandfathered or notifying residents. Paying taxes on worthless property.

I would really like to see some kind of bike trail.

I like the feeling of small towns. I would like to see the countryside stay country. For future developments of homes I think they should be on 5-10 acre parcels or larger. I do not think storage units should be all over. I do not think trailer parks are appropriate. I do not think pole sheds should be made into living quarters like my neighbor is thinking of. I very much would like to see trails of all sorts to view the countryside.

Smart growth plan, surveys, brain child theory's, weather it comes from Town, County, State, or Federal; eventually takes another freedom away from the people. To bad I am as old as I am, I would move away from here!

I'd like to see the loud music from cars and trucks stopped. I'd like to see more police patrol our township.

In regard to #45 if New London wanted to annex some land next to New London High School to expand athletic fields etc. I would vote YES! For a school we would not be able to collect any tax money anyway!

Plan for the future abandon railroad tracks in North Port, Town of Mukwa. 2 local horse clubs – Rodeo City Riders of Manawa and Wolf River Trail Blazers of Bean City are willing to help make and maintain safe horse riding trails in this area.

Question #44 – new land owners – if they are going to do something with their land like K-9 kennel or airport with ultra lights flying over surrounding land owners – anything noise level more then peaceful and quite – the surrounding land owner should be able to vote on it to all it or not. I'm stuck with noisy planes and ultra lights disturbing the peace and quite. That landowner moved in after I did. Should have been able to vote on it.

Anyone who purchases a large trait of land and wants to develop it should be liable for the roads. When they get the large money they get per acre, why should the lot payer have to pay for the roads. I'm a senior citizen and my taxes are 90% school tax and I have no kids in school, which is ridiculous. The town should make some home owners who live on the main roads clean up their yard. Starting with Trent Keuhl on highway X. End of message.

Enforce a no wake zone on the Wolf and its tributaries. Our grandchildren were swamped twice last year in a canoe. The motorboats were unaware of what was done. Before a tragedy occurs, and the townships insurance rates skyrocket, I feel that this issue should be addressed and dealt with. There should also be an ordinance that construction noise should cease at dusk and not begin till dawn. This to should be enforced.

Yes it is good to plan for the future. But we need to take care of the present. Noise pollution from loud cars – motorcycle's people with radio's outside. Loose dogs on the roads. Culvert need to cleaned and maintain, more culvert need to be put in to take care of excess water, get it away faster. A lot of money can be spend thinking of the future, put money to take care of needs now in the present.

There is ENOUGH subdivisions in the town. Annexation should be up to the landowner, not the city or town boards.

Survey is poorly done. Have space for comment after each question.

A state and national treasure runs through Mukwa. Do anything necessary to protect it.

Limit driveway access on Hwy 54 for businesses and homes.

We work and save in our life for retirement, and have some land and want to sell it. It should not be up to the Town or Planning Commission to tell the people what they can do with it. This is then – longer a free country. Roads that are torn up for reconstruction should not be left until the following year. Manske road is a disaster and an accident waiting to happen.

We should get trails and more parks for the kids. Not so many subdivisions.

Our family's desire is to maintain the rural feel of Mukwa as much as possible. Land preservation, wildlife habitat preservation, wide open spaces and nature are what brought us here and what will keep us here. We do not wish to see more urban development – i.e. sub-divisions, malls, stores, etc. For safety purposes, we would like to see speed limits established and enforced on town roads where traffic is increasing (and small children play in the near vicinity). We would love to see bike/pedestrian trails or lanes established alongside county and town roads, so that families with young children could safely take walks, bike ride, rollerblade, etc.

We have a very unique township with the Wolf River, Little Wolf River – Mukwa wildlife area, cut-off area, Parting Crop etc – we need to protect these resources for future generations – but we shouldn't go overboard and restrict our residents so tightly they can't enjoy their properties cut-off shows land__ Northport areas. These areas need a sanitary district so these landowners – can enjoy these benefits as well as protect said resources. It would possibly entertain the idea of working on this project. Thank you Nub C. Klatt

Regarding future recreational developments, (sports field, senior centers, community pool) utilizing the beautiful facilities the City of New London has in these areas is, I feel, the best use of resources. I would choose to discourage any commercial or service – related development. The lack thereof is reason we chose to live in a rural area.

You seem to be worried about water quality with farm pollution and private wells. I believe that we need a sewer system along county X and Northport. I strongly recommend to get out of letting the Waupaca County Zoning office handling the permits for people that live on the Wolf River. Their rules mostly pertain to the Chain O Lakes. Make people deal with the DNR and Corps of Engineers themselves.

Shopping and gas station facilities should only be built on land, which is not useful for any crops, farming or growth of any kind. Natural resources should be considered at all times!

Be careful how you consider developing the town. The charm of living here is the rural beauty, low crime, clean water, wildlife preservation and the community where people still care. That is what attracts tourists to our rivers and lakes. I do not wish to see this community ruined, like the Darboy area – Greenville area. Thanks for your time.

Need more police protection in rural areas, speeding, theft, traffic control.

We would like high speed internet access through cable. I moved to the town of Mukwa for a reason. I like to hunt and fish and I like the land protected from future development.

Please let people do as they wish with the property they own.

With the town growing so fast I feel we need a fire department. The area is growing faster than New London. I feel they are unable to handle all the areas.

Increase minimum acreage size to build – from 1 acre to (3 or 5) acres. Except for “small” pre-approved country subdivisions. Property owners adjacent to any land use decision (subdivision, new road, etc) should have input on decisions made! They were obviously there first, and they moved there for a reason – they deserve input!

This is supposedly a free country; you sure could have fooled me! My land is just that my land to do with as I may.

This survey asks too difficult of questions for me to understand. I thought it was a good survey, but I’ll bet the average person hasn’t even thought much about these issues and the ramifications of their answers. I don’t think you should base any decisions on the results of this survey – I am not sure that I answered them all that way I wanted – nor could a lot of other people. I’d like to see a gas station/convenience store somewhere near the new high school or at W and Dey Rd. Thank you.

#45 – needs more information or an area for comments.

The more you plan for the future the better it will turnout! Your job is not to dictate how the land is used, rather to establish guidelines and areas that are useful to the people. Developers should be educated as the needs in the area and all options of the layouts of potential lots. Who do they meet with now? Surveyors, Lawyers, real estate agents. Why not some one user friendly in place to help with this.

The more development the more services required leave town as is. Cluster developments will eventually require a sanitary district.

I feel that it should be that one purchases land to build a house it should be a 4-5 acre minimum sale to prevent these one acre sales of land to slow down development.

Residents in Northport and along CTY trunk X should have these sewers go to New London.

What makes you think OMNNI Associates knows what it is doing?

There’s enough development in Mukwa. Lets not over crowd the country!! That’s why so many of us moved to the country years ago – for space and peace and quiet.

Final decisions should be made by the people who pay town and Mukwa taxes and not someone who just wants land!

Farmland when sold – go back 3-5 years and tax at the selling price us. What was on tax level for obtaining more dollars? If New London annexes any of Mukwa, any annexation to have New London water and sewage.

I moved to Cathedral Pines and built a house because I liked the rural qualities – quiet, little traffic, no light pollution from street lamps. I bought 2 lots to maintain the woodsy quality. My property backs onto a farmers field and the last thing I would want is a huge subdivision go in since there are no trees in the field the housing would probably be just like a city w/houses right next to each other. I grew up in Chicago w/neighbors houses 10 feet away.

Single-family dwellings should have a minimum of 20 acres for lot or be kept to small subdivisions. This will slow expansion and depletion of existing lands.

I don’t think the government should regulate what I pay taxes on!

There have been at least 3 subdivisions built in my area in the last 5 years. I have not seen any tax relief from any of the huge houses being constructed in these areas. Why? The land in my area is being taken away from agricultural use for private home development too much. If I wanted to live in Appleton, I would have bought a home there. There should be an ordinance limiting the amount of homes per acre as in Hortonia. 1 home per 30 acres. I do not condone any more private home or business expansion in the Mukwa Township.

As Mukwa has no industry or large business to support its tax base, I support a long-term investment in the tourism business – golf course, swimming and picnic area, campsites, etc. to supplement existing business. The river is our main asset; its use year around should aid development. Public access is the key.

No more housing in the town of Mukwa (do not use land to build new houses)

We live close to the city limits but do not want to become annexed to the city.

It would have been nice to have a map outlining the boundaries of Mukwa to aid in answering the questions. Mukwa is not an easy community to identify since it covers such a large area.

Adoption Ordinance

The ordinance officially adopting the Town of Mukwa Comprehensive Plan was approved by the Town Board and signed on September 18, 2006. The document in its entirety appears below.

**TOWN OF MUKWA
ORDINANCE 4-06**

ORDINANCE TO ADOPT COMPREHENSIVE PLAN

STATE OF WISCONSIN)
) s.s.
COUNTY OF WAUPACA)

Pursuant to the provisions of Ch. 66.1001 and Ch. 60.22 (3) Wis. Stats., the Mukwa Town Board of Supervisors, Waupaca County, Wisconsin does ordain as follows:

Having completed the *Town of Mukwa Comprehensive Plan*, in accordance with the requirements stipulated in Wisconsin’s Smart Growth Law, 1999 Wisconsin Act 9, and defined in Ch. 66.1001 Wis. Stats., and as recommended for adoption by the Citizens Advisory Committee for Land Use (Comprehensive Planning) on July 17, 2006, and posted in accordance with Class I Public Notice requirements, the Mukwa Town Board of Supervisors hereby adopts the *Town of Mukwa Comprehensive Plan* as the guide for future land use and development decisions in the Town. All programs and actions of the Town that affect land use shall be consistent with the comprehensive plan. This includes any other ordinances, plans, or regulations of the Town that relate to land use, including, but not limited to: Local Subdivision Regulation under s. 236.45, Town Zoning Ordinances under s. 60.62, Land Acquisition for Recreational Lands under s. 23.09 (20), and Construction Site Erosion Control and Stormwater Management Zoning under s. 61.354.

BACKGROUND. On June 14, 2006 the Town of Mukwa Citizens Advisory Committee for Land Use (Comprehensive Planning) recommended the *Town of Mukwa Comprehensive Plan* be distributed, in accordance with 1999 Wisconsin Act 9, as the Town’s recommended plan.

Mukwa’s neighboring communities as well as, East Central Wisconsin Regional Planning Commission, Wisconsin Department of Natural Resources, Wisconsin Department of Transportation, New London, Weyauwega-Fremont and Manawa Community School Districts, Waupaca County, and the Wisconsin Land Council c/o Wisconsin Department of Administration, were invited to attend the Inter-Governmental Chapter Review Meeting on January 18, 2006. At that time, these local governments and organizations were provided with the web address for the Project to review the draft Comprehensive Plan in its entirety. Mukwa asked that written comments be provided to the community prior to the Open House and Public Hearing held on June 14, 2006. Copies of the recommended plan have been displayed at the Town Hall, the New London Public Library, 406 South Pearl Street, New London, WI 54961 and at www.omni.com for 30 days prior to the Public Hearing. Mukwa will provide all neighboring local governments and organizations identified above with a compact disk copy of the final *Town of Mukwa Comprehensive Plan*, upon its approval by the Town Board of Supervisors.

Following the public hearing, the Citizens Advisory Committee for Land Use (Comprehensive Planning) recommended the Town Board of Supervisors, subject to corrections and comments received during the 30-day comment period and public hearing, adopt the *Town of Mukwa Comprehensive Plan*.

AUTHORITY. This ordinance is enacted pursuant to power granted by virtue of present Wisconsin Statutes, including Section 66.1001 (4) (c).

DEFINITION. Comprehensive Plan is a plan for development that recognizes the physical, economic, social, political, aesthetic, and related factors of the community. As required by the Wisconsin Smart Growth Legislation, the comprehensive plan addresses nine (9) required plan elements: Issues & Opportunities, Housing, Transportation, Agricultural Natural & Cultural Resources, Economic Development, Land Use, Intergovernmental Coordination and Implementation.

RESTRICTIONS. The Town of Mukwa Citizens Advisory Committee for Land Use (Comprehensive Planning) shall review and recommend all subsequent amendments to the plan to the Town Board of Supervisors. All amendment shall require a public hearing and Class I Public Notice. Copies of the recommended and approved changes shall be mailed to all neighboring units of government and affected agencies, in accordance with the Wisconsin Statutes Section 66.1001 (4) (b) requirements for recommendation of the original plan.

EFFECT. This ordinance shall take effect upon its passage and publication or posting as provided by law.

The foregoing ordinance was adopted at a Monthly Town Board Meeting of the Mukwa Town Board of the Town of Mukwa, Waupaca County on September 18, 2006.

Aye 3 /s/Walter Heise, Town Chairman
No 0 /s/Michael G. Wundrock, Supervisor #1
/s/Neil Freeman, Supervisor #2

Filed this 18th day of September, 2006
in the office of the Town Clerk.

Attest: /s/Jeannette Zielinski, Mukwa Town Clerk

Code of Ordinance Published: 9/7/2006
Posted at:
Northport Convenience Center: 9/19/2006
Bean City Bar & Grill: 9/19/2006
Mukwa Town Hall: 9/19/2006
Adoption of Ordinance Published: 9/21/2006

Where is the Town of Mukwa?

The Town of Mukwa is located approximately twenty-five miles west of the Fox Cities in Waupaca County. The community of 2,906 people straddles the Wolf River, one of Wisconsin’s most beautiful waterways. The Town is easily accessible via the newly reconstructed USH 45 running through the nearby City of New London. STH 54 also provides access to Mukwa with ingress and egress via CR X in the northern part of the Town. CR W is a north/south road in the eastern portion of Mukwa providing access to USH 10 five miles south of the Town.

Mukwa is 32.7 square miles in size, with more than forty percent of its total area covered by surface water or wetlands. The community shares borders with the Town of Lebanon to the north, Town of Royalton to the west, the Town of Caledonia to the south, and the Town of Hortonia to the east. The City of New London lies at the northeast corner of the Town.

The Pre-Settlement Era¹



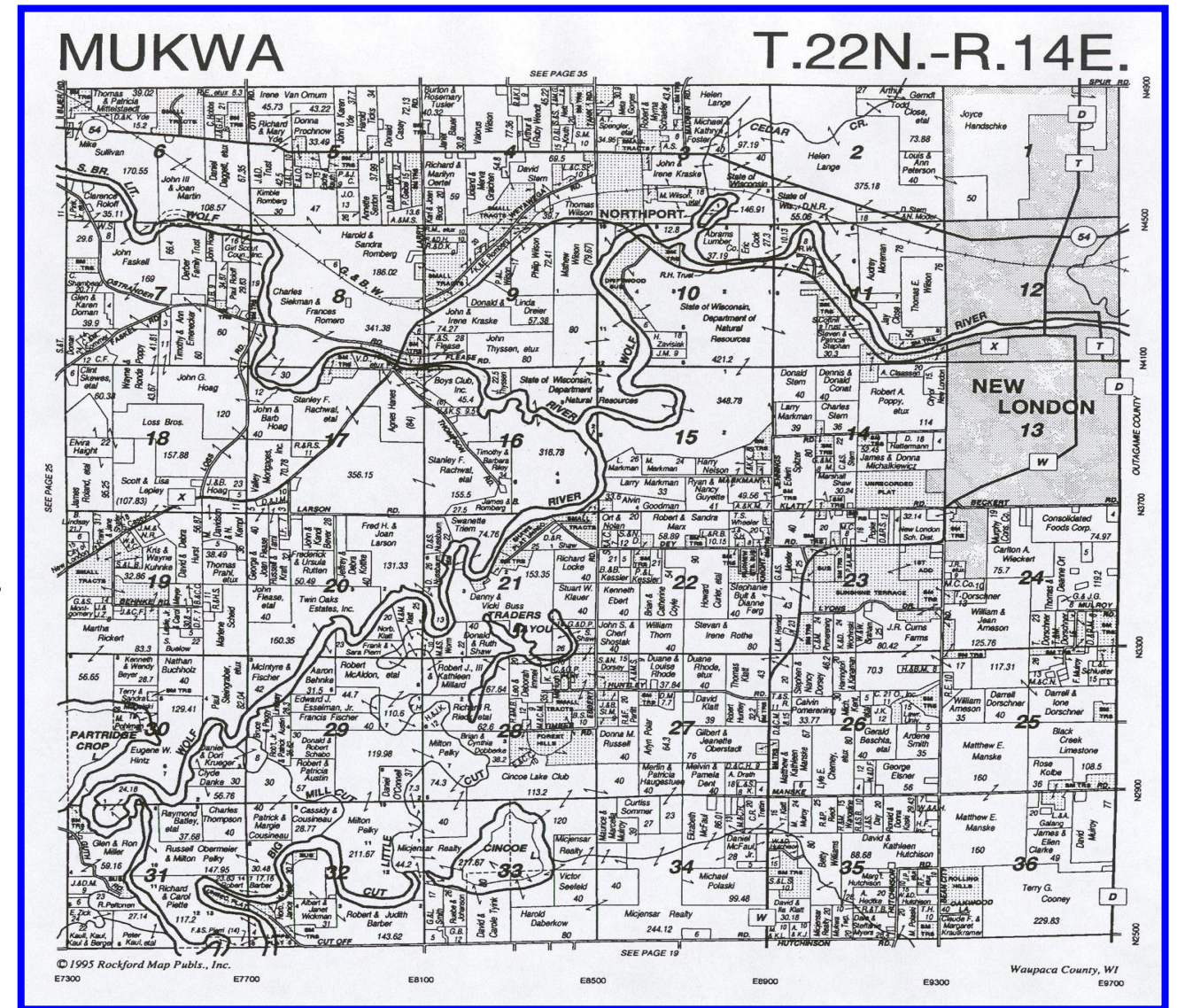
At the time of European settlement, what is now the State of Wisconsin was inhabited by native peoples. Although tribal boundaries often fluctuated, with agreements between tribes made and broken over time, most of the state fell under the domain of four Indian Nations. The Ojibwa (or Chippewa) people gathered rice, fished, and hunted game in the Upper Peninsula of Michigan and across northern Wisconsin. The Ho-Chunk (or Winnebago) lived primarily west of the Wisconsin River with a larger settlement near Wisconsin Dells. Southeastern Wisconsin was home to the Pottawatomi. The remainder of the State, including all of what is now Waupaca County, was the land of the Menominee.

The Menominee are the only people indigenous to Wisconsin. Archaeological records trace their heritage in the state back more than 10,000 years. Prior to the relocation of the Ojibwa, Ho-Chunk, and Pottawatomi to the state (as a result of the Iroquois Wars in the 1600s), Menominee lands totaled more than ten million acres and included much of the Upper Peninsula and western parts of lower Michigan, eastern portions of Minnesota, and the vast majority of Wisconsin. In fact, Michigan, Minnesota, and Wisconsin are all European phonetic translations of Menominee words, as are many of the community names in our state (Milwaukee, Oshkosh, Shawano, Waupaca, and Wausau, to name a few). Mukwa is an Ojibwa word meaning “bear.”

The Treaty with the Menominee of February 1831 (7 Stat. 342, February 8, 1931, Proclaimed July 9, 1832) recognized the Menominee territory as:

On the east side of Green Bay, Fox river, and Winnebago lake; beginning at the south end of Winnebago lake; thence southeastwardly to the Milwaukee or Manawauky river; thence down said river to its mouth at lake Michigan; thence north, along the shore of Lake Michigan, to the mouth of Green Bay thence up Green Bay Fox river and Winnebago lake, to the place of beginning. And on the east side of Fox river as follows: beginning at the mouth of Fox river, thence down the east shore of Green bay, and across its mouth, so as

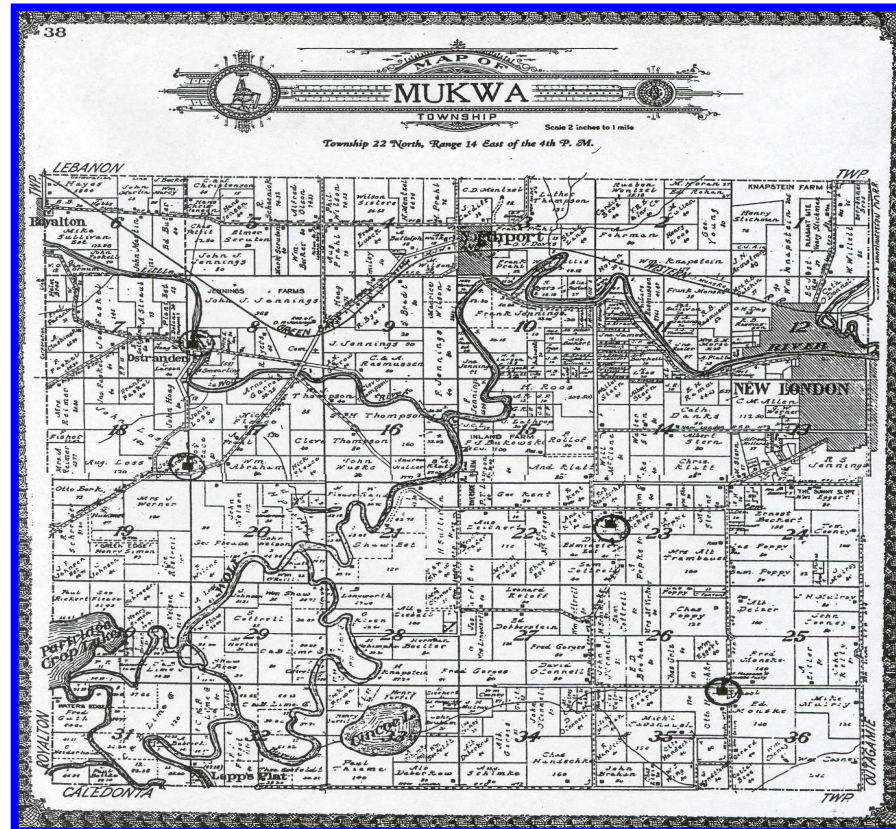
¹ Excerpts from Menominee History, David “Nahwahquaw” Grignon, Menominee Historic Preservation Department. 2003.



Source: *Waupaca County Plat Book*, Rockford Map Publishing, Inc. 1995

to include all the islands of the "Grand Traverse;" thence westerly, on the highlands between the lake Superior and Green bay, to the upper forks of the Menominee river; thence to the Plover portage of the Wisconsin river; thence up the Wisconsin river, to the Soft Maple river; thence to the source of the Soft Maple river; thence west to the Plume river, which falls into the Chippeway river; thence down said Plume river to its mouth; thence down the Chippeway river thirty miles; thence easterly to the forks of the Manoy river, which falls into the Wisconsin river; thence down the said Manoy river to its mouth; thence down the Wisconsin river to the Wisconsin portage; thence across the said portage to the Fox river; thence down Fox river to its mouth at Green bay, or the place of beginning.

In November of 1854, the United States and the Menominee Nation signed the Treaty of Keshena Falls (10 Stat. 1064-1068) establishing the Menominee Reservation North of Shawano.



SOURCE: *Rural Schools of Waupaca County*, Waupaca County Historical Society, Donald Hanson and Joan Paulson. Krause Publications. Iola, Wisconsin. 2000.

Mukwa, leaving its only claim to fame the fact of being the county seat.

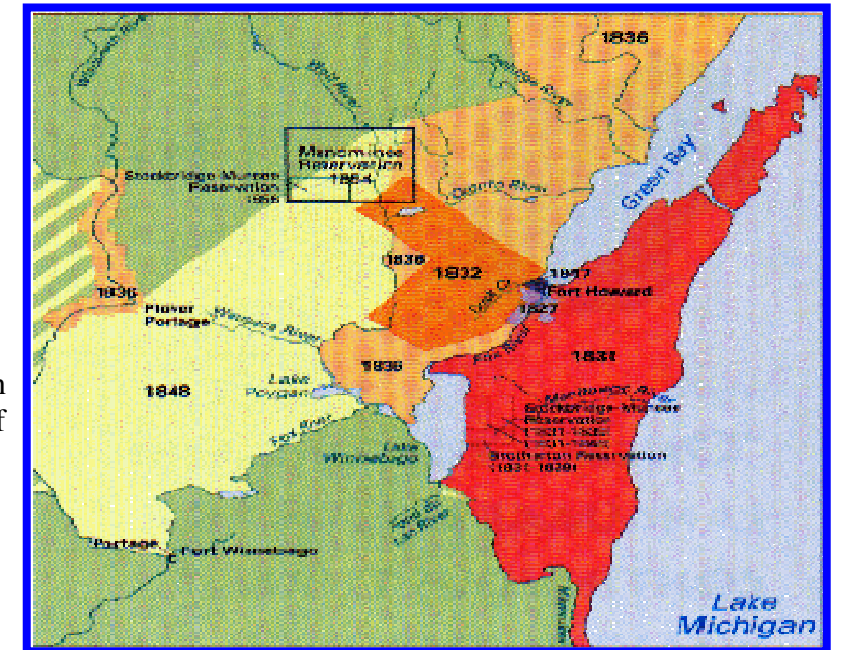
Here developed a great deal of competition with Waupaca Falls as to which should have the honor of being the seat of government for the county, At one point Weyauwega also became involved as a contender. As subsequent events proved, Waupaca eventually became the official county seat and the village of Mukwa lost its political supremacy, which caused a general and inexorable exodus of its inhabitants. Most of the buildings were either removed to other settlements or left to decay; the lots of the once thriving village reverted to farmland. At a special session of the county board in 1871, members present voted to vacate the plat of Mukwa. This was the deathblow to the community, and the final chapter of [the Village of] Mukwa's history was concluded.

² Excerpted from *Standard History of Waupaca County, Vol. 1*, John M. Wolfe, Lewis Publishing Company, Chicago and New York, 1917.

Early Town History²

The Town of Mukwa was organized by act of the Waupaca County Board at a special meeting held in March 1852. At an election on April 6th, 1852, W.N. Davis was elected as the Town's first Chairman, with James Smiley elected Town Clerk. In April 1850, Mukwa was designated as the crossing of the Wolf River at the mouth of the Little Wolf River, at which time there was neither hotel, post office, nor human habitation within a mile of the place. Two years earlier, J.G. Nordman laid claim to some land about two miles south of New London as a soldier of the Mexican American War.

Sometime in 1851, a mail carrier on the route from Green Bay to Plover used the crossing, which prompted Horace Rolph to claim a small corner on the southeast edge of the school section, on the east side of the river, to build a house upon it, to circulate a petition for a post office, and to create a store and tavern in his house. About the same time B.F. Phillips and August Grignon surveyed and platted the village on land adjoining that of Mr. Rolph. This was an important move, since a county seat could not be established at any place unless the land was surveyed and a village platted. Now this was true of Mukwa, laying the foundation for its claim as county seat of Waupaca County. To become a lumber center, a well-located town to serve as a depot for supplies was needed, as well as easy access and necessary conveyance for supplies and products and radiating routes from the center. For a time, Mukwa seemed to be such a place. A large warehouse, hotel, and sawmill, as well as numerous homes were built, the land around was platted and more or less advertised as desirable. Being a county seat was also to its advantage, and the population grew. A resolution adopted by the county board in 1856 gave a permit to Stephen Gouldsbury to keep a ferry across the Wolf River at Mukwa. In spite of the great number of logs rafted down the river by E. Gordon and son, the lumber business removed to New London. This settlement was somewhat nearer the large pineries to the north and was the head of navigation for larger steam vessels. This soon took much business away from

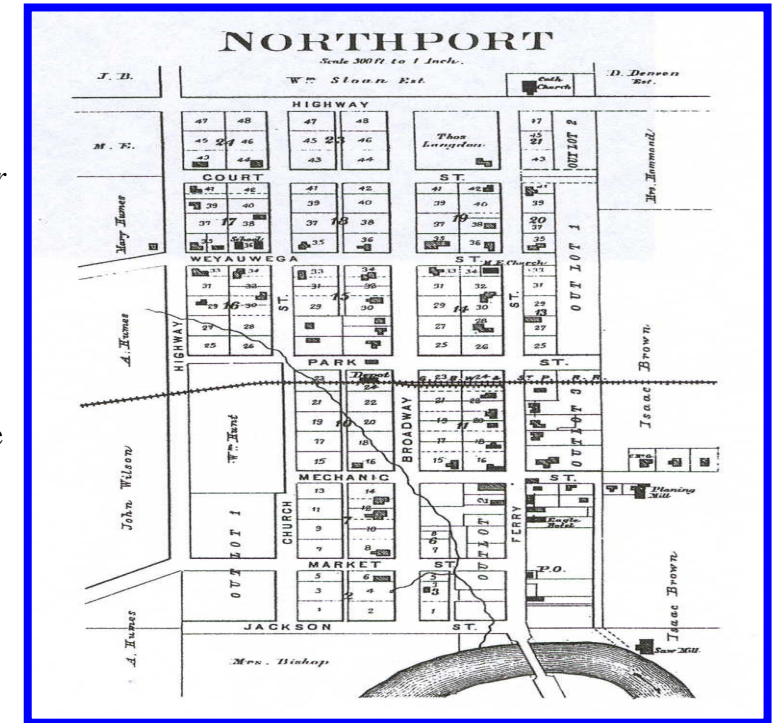


SOURCE: Menominee Historic Preservation Department, *Lands Ceded by treaty to the U.S. by the Menominee Nation*.

NORTHPORT³

The pioneer village of Northport in the township of Mukwa was known by many names. In 1850, it was known as “Stevens Point” for a pioneer bachelor settler named Stevens. Later, it was called “New Boston.” Then in 1855, when J.B. Stoddard and S. Burbank platted the area, they named it “Northport” because, at that time, it was the northernmost port of navigation on the Wolf River. Freighters were seen on the Wolf River in the days when the forests of pine and maple were still there. The big sternwheelers traveled from Oshkosh to Shawano loaded with cordwood, freight, and passengers. The names of the boats were the *Thistle*, the *Leander Choate*, the *Paul L.*, and the *Evelyn*. The street in Northport today called Ferry Street ends at the river, but in 1857 a ferry drawbridge was erected across the river at that point. It was a wooden bridge constructed to swing on a pivot in the middle. This drawbridge was destroyed by a cyclone [tornado] in 1887 and was reconstructed. In the 1890s it was followed by a metal structure.

Isaac Brown, who came to Northport from Connecticut in the early 1850s, started a store in 1859. Sales in this store ranged between \$3 and \$4 per day in the early years, but with the advancement of the lumbering industry, they spiraled to \$600 per day. In 1865 he started a stove factory, and a steam sawmill in 1873. About 100 people were employed. They worked from 7:00 a.m. to 6:00 p.m. for \$3. The first Catholic Church was built in 1857 on the north side of present Highway 54 and the east side of Tank Road. It was the first Catholic Church in Waupaca County and the first one north of Oshkosh. The Methodist Church was built in 1864 by Robert Carroll and sons under the direction of John Walker, who sold them the land for it. The first school was built halfway between Northport and Phillip’s Mill (Ostrander). Miss Lucinda St. Claire was the first teacher in 1852. In 1890 the village had a population of 350 whites and 400 Indians. It had a general store, two saloons, two blacksmith shops, a saw mill and lumber yard, a planing mill, two churches, a hotel run by Isaac Brown and later by George Ellis. When the railroads were built in the early 1870’s, the landing at the point where the Embarrass and Wolf Rivers met provided the most freight. It became a trading center and later the City of New London. As New London grew, Northport dwindled away until it is now one of our ghost towns.



SOURCE: *Ghost Towns of Waupaca County*, published by Waupaca County Historical Society, 1991.

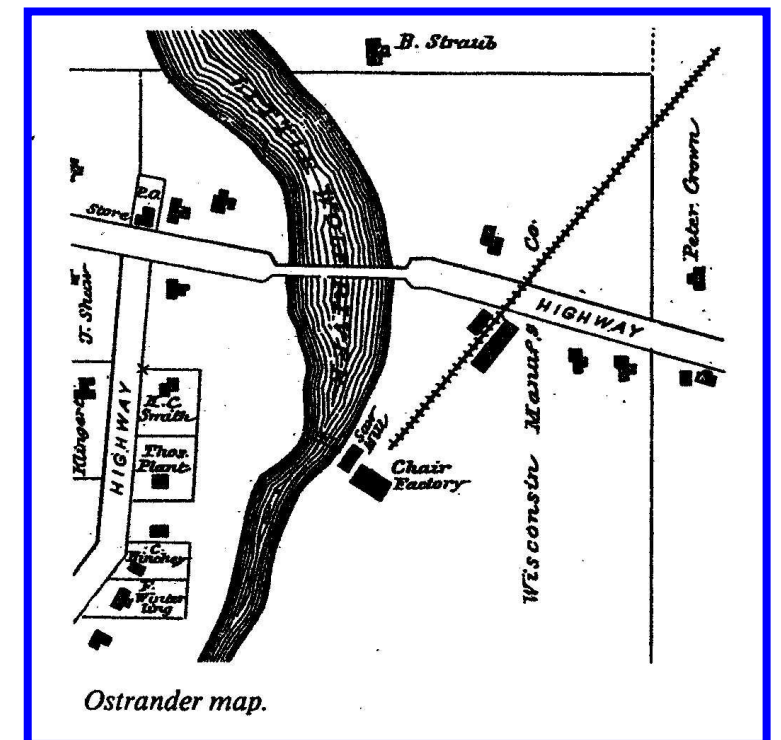
OSTRANDER⁴

The location of Ostrander village was at the junction of the Little Wolf River and what is now Ostrander Road. This place is about a third of a mile west of the junction of present day County Trunk X and Ostrander Road. This later junction is where Clarence Flease presently has his Wolf River Campground. The canoeing and tubing trips run by the Campground pass down the main artery of the old village. In fact, water enthusiasts must dodge the old dam boulders of Ostrander to maneuver their way down stream. The principal portion of the original village eventually became the property of the Martha Siekman estate. Early records of 1852 indicate that the area was occupied by a house and a mill owned and operated by a Caleb Hobart. Caleb E.P. Hobart was a lawyer, turned manufacturing entrepreneur. Records indicate that there were two sawmills at one time located across the river from each other, just south of the present Ostrander Bridge. The one on the east bank originally produced common building materials such as shingles, laths, siding, etc. The mill on the west bank of the river was commonly known as the Hub Factory. Its products were wheel hubs and spokes, probably for farm and industrial wagons.

Today, the only evidence of the village is quite meager. If you stand on the bridge facing southerly and look to your left, you can see some depressions in the riverbank where the old water sluice channel once ran. Local tales and old records indicate that in the peak of prosperity the community had from 50 to 60 houses, a general store, a blacksmith shop, a saloon, a post office, a hotel, and three boarding houses. Lacking a church, people traveled to Royalton and other church towns as they became established.

PHILLIPS’ MILL⁵

A provision of the Lake Poygan Treaty of 1848 granted Robert Grignon 160 acres of land near the mouth of the Little Wolf River on which he built a mill, later called Phillips’ Mill. Benjamin Phillips subsequently became a partner of Robert Grignon and in 1858 the State of Wisconsin authorized Phillips and associates to build a dam across the Little Wolf River provided that such dam shall not raise the water in excess of eleven feet. The dam that furnished water for the Phillips’ sawmill was located up the river from the County Highway X Little Wolf River Bridge. Several houses and the Phillips’ residence were located along the south side of the river. The dam washed out in a spring flood in 1890. The sawmill was torn down in 1895 and the land sold to the Wolf River Power Company.



SOURCE: *Ghost Towns of Waupaca County*, published by Waupaca County Historical Society, 1991.

³ Excerpted from *Ghost Towns of Waupaca County*, published by Waupaca County Historical Society, 1991.

⁴ Excerpted from *Ghost Towns of Waupaca County*, published by Waupaca County Historical Society, 1991.

⁵ Excerpted from *Little Wolf River Country*, Eleanor V. Cooney.

This concludes the historical section of the Mukwa Comprehensive Plan. Information describing Mukwa as it is today will be included in many of the following chapters. The next section of this chapter defines planning and describes comprehensive plans. It also includes background information regarding Wisconsin Act 9, or Smart Growth.

What is Planning?⁶

- Planning is an orderly, open approach to determining local needs, goals and priorities, and developing a guide for action.
- Planning is a concentrated effort by a community to reach a balance between the natural environment and residential, commercial, industrial and agricultural development.
- A plan is a guide for public officials and private citizens to use in making informed decisions that will affect their community.
- Planning is a process that helps a community prepare for change rather than react to it.

Planning is not...

- An attempt to replace market forces of supply and demand. It helps shape and channel market forces by establishing certain guidelines to manage development.
- Action. A plan is only a guide for action and implementation.
- An instrument for immediate change. Change will occur incrementally as the plan is implemented.
- Static. Good planning requires continual review of implementation successes and failures, citizen desires, and the surrounding environment so that the plan can be adjusted as needed.
- Zoning. A comprehensive plan is a foundation and guide for many tools that may be used to implement the plan. Zoning is one of these tools. Utilities, capital improvements planning, and subdivision regulations are examples of other tools.

Why Develop a Plan?

This plan is being made with the general purpose of guiding and accomplishing coordinated and harmonious development of the Town of Mukwa that will, in accordance with existing and future needs, promote public health, safety, morals, order, convenience, prosperity, and the general welfare, as well as efficiency and economy in the process of development.

Scope of This Document

This 20-year *Comprehensive Plan for the Town of Mukwa* includes four major components:

1. *A profile of the demographic, economic and housing characteristics of the Town;*
2. *An inventory and assessment of the environment, community facilities, and natural resources;*
3. *Visions, goals, objectives, policies and implementation strategies; and*
4. *A series of maps that depict existing and future land use patterns in the Town.*

Words To Know

Vision: An overall statement related to each of the nine required Smart Growth elements expressing the Town's expectations for the future. These statements provide a framework and context to consider when making future land use decisions.

Goal : A statement that describes, usually in general terms, a desired future condition. Goals will address one specific aspect of the vision.

Objective : A statement that describes a specific action or condition that is to be attained within a stated period of time. Objectives include ordinance changes, new programs, and other tasks. The objectives serve as a "to do" list to implement the plan. To be effective, objectives must be evaluated regularly and updated as necessary.

Policy : A course of action, or rule of conduct, used to achieve the goals and objectives of the plan. Policies are based on specific research. Therefore, they are developed after vision statements. In some cases, the policies relate closely to the vision, but provide more refined, specific actions the Town will abide by when making decisions.

⁶ Mike Koles, Comprehensive Planning Fundamentals, UW-Extension, 2000.

This plan was developed under the authority of 1999 Wisconsin Act 9, Wisconsin's "Smart Growth" Law. The law requires that a 20-year comprehensive plan be developed and adopted by all units of government that wish to have a say in land use decisions. The law authorizes municipalities to prepare and adopt comprehensive plans to serve as guides for the development of their communities. The law also authorizes multi-jurisdictional planning efforts.

The Smart Growth Law defines, for the first time, what is meant by a "comprehensive plan" in Wisconsin. It includes nine (9) required elements. These are:



- 1) Issues and Opportunities (Chapters 2 & 3)
- 2) Housing (Chapter 4)
- 3) Transportation (Chapter 5)
- 4) Utilities and Community Facilities (Chapter 6)
- 5) Agricultural, Natural and Cultural Resources (Chapter 7)
- 6) Economic Development (Chapter 8)
- 7) Intergovernmental Cooperation (Chapter 9)
- 8) Land Use (Chapters 10 & 11)
- 9) Implementation (Chapter 12)

In addition, the state requires that these elements be developed in concert with Wisconsin's 14 goals for local planning, which are:

- | | | |
|---|--|---|
| <ol style="list-style-type: none"> 1) Promotion of the redevelopment of lands with existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial, and industrial structures. 2) Encouragement of neighborhood designs that support a range of transportation choices. 3) Protection of natural areas, including wetlands, wildlife habitats, lakes, woodlands, open spaces, and groundwater resources. 4) Protection of economically productive areas, including farmland and forests. 5) Encouragement of land uses, densities, and regulations that promote efficient development patterns, and relatively low municipal, state governmental and utility costs. | <ol style="list-style-type: none"> 6) Preservation of cultural, historic, and archeological sites. 7) Encouragement of coordination and cooperation among nearby units of government. 8) Building of community identity by revitalizing main streets and enforcing design standards. 9) Providing an adequate supply of affordable housing for individuals of all income levels throughout each community. 10) Providing adequate infrastructure and public services and an adequate supply of developable land to meet existing and future market demand for residential, commercial, and industrial uses. | <ol style="list-style-type: none"> 11) Promoting the expansion or stabilization of the current economic base and the creation of a range of employment opportunities at the state, regional, and local levels. 12) Balancing individual property rights with community interests and goals. 13) Planning and development of land uses that create or preserve varied and unique urban and rural communities. 14) Providing an integrated, efficient, and economical transportation system that affords mobility, convenience, and safety that meets the needs of all citizens, including transit-dependent and disabled citizens. |
|---|--|---|

Public Involvement

The *Town of Mukwa Comprehensive Plan* was developed with abundant opportunities for public input. To gain citizen understanding and support throughout the planning process, the public was provided with a variety of meaningful opportunities to become involved in the process. Public input was facilitated through a series of workshops and special activities that include a comprehensive community survey. Information was disseminated through direct mailings, media releases, and an interactive Internet Web Site. The adopted *Public Participation Plan* is provided as an appendix to this document. The *Public Participation Plan* describes in detail the scheduled meetings and events held to foster public input.

Town Values

During the Kick-off SWOT Meeting held on July 21, 2004, participants were asked to identify the values that draw people to live in the Town of Mukwa. Those in attendance were also asked to identify what makes residents remain, take pride in, and become actively involved in the community. A summary list of those values is provided below.

- **The serenity of rural living.**
- **The friendliness of the people.**
- **Clean air and clean water.**
- **The Wolf River.**
- **Abundant recreational opportunities, including fishing, hunting, boating, and snowmobiling.**
- **Proximity to the Fox Valley and larger cities.**
- **Honest and responsible Town officials who care about the community.**
- **Quiet, friendly neighborhoods and a good place to raise a family.**
- **Plenty of open space, woodlands, and wildlife.**
- **Poppy's Rock [Cactus Rock].**
- **Artesian wells.**
- **The peaceful, friendly, quiet, country atmosphere.**
- **Good police and fire services**
- **Well-maintained roads and highways**
- **Low taxes.**
- **Safety for our families.**
- **Good, quality schools in nearby New London**

These value statements provided a clear direction for the development and implementation of the *Town of Mukwa Comprehensive Plan*. Moreover, these values clearly indicate that residents of Mukwa share a strong sense of community identity and pride closely associated with the rural character and natural areas that make the Town of Mukwa a desirable place to live. The next chapter of the Plan, *Issues & Opportunities*, includes additional information gathered from residents during the Kick-off/SWOT meeting and Vision Meeting.



Participants at the July 21, 2004 Kick-off / Values / SWOT Meeting held at the Mukwa Town Hall.

A NOTE ABOUT FOOTNOTES

Footnotes are *a note of reference* identifying the origin of text inserted into a book, document, or, in this case, the comprehensive plan. Much of the historical text included in this chapter was excerpted verbatim from existing sources. When a footnote follows the heading of a paragraph (as in *The Pre-Settlement Era*⁷), the entirety of the text within that paragraph is included as written by the original author. When the footnote follows a particular sentence it denotes that the particular sentence, and not those preceding or following it, were excerpted from an existing source. Readers of the plan may note discrepancies in writing style between original and “footnoted” text. In some cases, the footnoted text refers to “today” or “as it is now.” This is done to protect the authenticity of the work completed by the originating author. Even in those cases where the footnoted text appears to contradict current data, or includes grammar styles differing from current standards, it is included as it was originally written.

⁷ Excerpts from Menominee History, David “Nahwahquaw” Grignon, Menominee Historic Preservation Department, 2003.

Introduction

The Issues and Opportunities Element provides the background information about the Town and the overall vision to guide future development and redevelopment through 2025. Specifically, the Issues and Opportunities Element includes population, household, and employment forecasts, demographic trends, age distributions, education levels, income levels, and employment characteristics. This chapter presents the overall vision for Mukwa, including an assessment of local strengths, weaknesses, opportunities, and threats (SWOT). The community characteristics and general background information that form the basis for the Issues & Opportunities Element are provided in Chapter 3.

Community Survey

In July of 2004, OMNNI Associates and the Mukwa Citizen’s Advisory Committee on Land Use/Comprehensive Planning developed and distributed a community survey to Town residents. Nearly three hundred residents responded to the mailing. The purpose of the survey was to assess resident satisfaction with Mukwa and to understand resident desires and expectations for the future. A copy of the complete survey instrument and results are provided in the appendix. Additional results from specific questions are highlighted throughout the Plan to illustrate resident opinions and desires related to topics discussed in the element chapters. A selection of survey questions and responses aimed at gaining a general understanding of the community and its residents are included below. Questions aimed at issues related to specific elements in the Comprehensive Plan (Housing, Transportation, Natural Resources, etc.) will be included at the beginning of each of those chapters.

QUESTION #1

How long have you been a resident of the Town of Mukwa?

Less than 10 years	34%
11-25 years	33%
More than 25 years	33%

QUESTION #8

On which side of the Wolf River do you live?

East	61%
West	39%

QUESTION #9

Please identify your gender.

Male	70%
Female	30%

QUESTION #4

How many acres of land, including your residence, do you own in Mukwa?

None	8%
Less than 1 acre	12%
1-5 acres	52%
6-20 acres	16%
21-40 acres	4%
41-100 acres	5%
More than 100 acres	3%

QUESTION #15

How satisfied are you with the Town of Mukwa today?

Very dissatisfied / Dissatisfied	7%
Satisfied / Very satisfied	88%
No opinion	5%

TOWN OF MUKWA
COMMUNITY LAND USE SURVEY
 Sharing Your Views About the Future

The Town of Mukwa is currently developing a "Smart Growth" Comprehensive Plan, as required by state law. To ensure that the Town's plan accurately reflects resident issues, concerns and priorities, this survey is being distributed to every household in the Mukwa. A high response rate is necessary in order to have accurate results that are representative of the entire community's views. For this reason, we hope you will **strongly consider** taking 10-15 minutes to complete this survey.

The questions in the survey address issues related to community planning. They are divided into four main sections, including: 1) you and your residence; 2) your perspective on the Town of Mukwa; 3) your preferences regarding future development; and 4) your thoughts on options for implementing community decisions. In addition, there is space available at the end of the survey to include any comments you might have regarding the planning process.

Please answer all questions by completely filling in the circle that corresponds to your answer. Your responses will help guide us as we develop your Comprehensive Plan. **All of your responses will remain confidential.**

Please mail your completed survey to the Town of Mukwa, or drop it off at one of the following locations in town: the Mukwa Town Hall, Northport Convenience Center, or Bean City Bar & Grill. We will accept completed surveys throughout the planning process; however, we would appreciate receiving your completed survey form by **Friday, Aug 6, 2004.**

Thank you for helping with this important community initiative!

YOU AND YOUR RESIDENCE

1. How long have you been a resident of the Town of Mukwa?

<input type="radio"/> Less than 1 year	<input type="radio"/> 16-20 years
<input type="radio"/> 1-5 years	<input type="radio"/> 21-25 years
<input type="radio"/> 6-10 years	<input type="radio"/> More than 25 years
<input type="radio"/> 11-15 years	<input type="radio"/> I am not a resident (skip to #5)

2. Which of the following best describes your current residence?

<input type="radio"/> Single-family house	<input type="radio"/> Apartment
<input type="radio"/> Duplex/Two-family house	<input type="radio"/> Farm
<input type="radio"/> Mobile/manufactured home	<input type="radio"/> Other: _____

QUESTION #33

From 1990 to 2000, the Town’s population increased by 24%. Would you like to see the Town’s population increase, decrease, or remain the same over the next twenty years?

Increase at faster rate	2%
Increase at same rate	30%
Remain approximately the same	52%
Decrease slightly	9%
Decrease significantly	2%
No opinion	5%

QUESTION #36

Which statement best describes your level of awareness about current efforts to develop a Smart Growth Plan for the Town?

Prior to receiving this survey, I was not aware of current planning efforts	40%
I have heard about planning efforts, but I don’t know very much about them	42%
I am generally familiar with the current planning efforts	15%
I am very knowledgeable about the current planning efforts	3%

Visioning Process

Rather than solely develop a series of policy statements, in August 2004 the Town participated in a visioning process to establish a framework from which to make future land use decisions. The result of this process was a vision statement for each of the nine required plan elements. This process was critical to establish a unified vision for Mukwa and provide a direction and focus for the planning effort.

A three-step process was used to create visions. This process included a community SWOT meeting, cognitive mapping, and element vision development. What follows is a description of the activities and the major issues and opportunities identified through planning process.

What Does SWOT Stand For?

Strength: Something that makes a community stand out when compared to other communities. Something that makes one proud to call the community home. A strength can be a physical asset, a program, or an environmental condition (i.e. friendly community atmosphere).

Weakness: Opposite of strength. Problem that needs to be addressed

Opportunity: Something that could be done to improve the community. A potential.

Threat: A threat may be internal or external. A threat can be anything that could jeopardize the future success of a community.

SWOT ANALYSIS

A SWOT meeting is a planning exercise used to encourage communities to contemplate:

- Where they have been
- Where they are
- Where they want to be in the future
- How they want to get there

On July 21, 2004, the Mukwa Citizen’s Advisory Committee on Land Use/Comprehensive Planning hosted a SWOT exercise as part of the Kick-off Meeting. The objective of the exercise was to ascertain how residents, business owners, appointed and elected officials, and other local stakeholders viewed various aspects of the Town. This included their thoughts on a variety of issues including the natural environment, built environment (roads, utilities, etc.), and “quality of life” issues, among others.

At the meeting, each participant was asked to write down what he or she thought were the Town’s strengths, weaknesses, opportunities and threats. Each person could list as many items as desired under each category. Next, participants worked in small groups to discuss their answers and collectively decide upon the three the most important strengths, weaknesses, opportunities and threats. A list of the ideas expressed (including all of the group ideas and some additional individual ideas) is provided in the table. This information served as an action agenda for plan development.

What is a Vision?

Webster’s Dictionary defines vision as: (1) sense of sight; (2) something supposedly seen by other than normal sight; something perceived in a dream; (3) mental image; (4) ability to perceive something not actually visible, as through mental acuteness or keen foresight [a project made possible by one man’s vision].

In planning, the term “vision” is an expression or idea of the desired future.

The responses provided by the SWOT and Vision Meeting participants during the exercises are included in this document as written, with no editorial modifications. It must be understood that these responses, which may be contradictory, represent the opinions of those in attendance and may not necessarily reflect the values or beliefs of the community as a whole.

STRENGTHS

- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> • Rivers and lakes • Good roads • Fishing • Recreation • Churches • Good neighbors • Low crime • Woods | <ul style="list-style-type: none"> • Schools • Beauty • Rural character • Proximity to large cities • Honest, responsible public officials • Peaceful • Hunting friendly • Wildlife | <ul style="list-style-type: none"> • Low taxes • Low pollution • Availability of housing • Utilities and cable TV • Open spaces • Natural resources • Wetlands • Sturgeon trail | <ul style="list-style-type: none"> • Transportation facilities • Artesian wells • Elderly housing in New London • Apartments in New London • Water quality |
|---|---|---|---|

WEAKNESSES

- | | | | |
|--|--|--|--|
| <ul style="list-style-type: none"> • No industry or jobs • Junkyards and trashy homesteads • Loss of farmland • Lack of trails • Un-neighborly • Undeveloped use of natural resources • Over-development • New HWY 45 increased traffic • Replacing native plants and trees | <ul style="list-style-type: none"> • Invasive plants • Little diversity • Divided by Wolf River • Too much government owned land • Lack of parks • Bugs • The need for clean-up • Roads too narrow for safe biking, walking • Speed control | <ul style="list-style-type: none"> • Lack of concern from County about rural townships • Lack of affordable housing • Fire protection • Town Board has too much power • Lack of housing for elderly • Road maintenance • Lack of boat launches • Lack of utilities (natural gas, cable TV) | <ul style="list-style-type: none"> • (Town) Board not increasing to five members • Town Board too small • Township too remote from County government • New Town Hall |
|--|--|--|--|

OPPORTUNITIES

- | | | | |
|---|--|---|---|
| <ul style="list-style-type: none"> • Recreational development • Tourism • Local group organization • Development, housing | <ul style="list-style-type: none"> • Boat landings • Bike trails • Affordable housing • Improved roads | <ul style="list-style-type: none"> • Jobs • Shopping centers • Park land • ATV trails | <ul style="list-style-type: none"> • New Hwy 45 corridor |
|---|--|---|---|

THREATS

- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> • Over-zealous use of regulations • Town growth not organized • Lack of police protection • Sharing of taxes • Over-development • Lack of preservation | <ul style="list-style-type: none"> • New London annexation • Animal reintroduction (coyotes, wolves, bears) • Lack of buildable land • Freedom of homeowners for land use • Conflict between old and new residents | <ul style="list-style-type: none"> • DNR has too much control • New London too close • Land taxes too high • Development forcing municipal water and sewage treatment • Flooding waterways | <ul style="list-style-type: none"> • Over -development of wells • Expansion of quarry |
|---|---|---|---|

VISION DEVELOPMENT

To begin to develop vision statements for each of the nine required plan elements, a Vision exercise was held on August 18th, 2004. During this exercise, participants were given a worksheet that included a series of open-ended statements to complete. The goal was to complete the sentences to describe conditions in the Town in 2025. The vision questions included:

- Residents of the Town of Mukwa take great pride in...
- Retired and senior residents who grew up in the area...
- Attractive and desirable housing can be described as...
- The Town provides the following services for residents...
- The Town offers (may be provide by others i.e. schools) the following facilities for residents...
- To receive proper medical care residents need to...
- Recreational opportunities include...
- For entertainment and cultural activities...
- Commercial development in the Town includes...
- Industrial development in the Town includes...and is located...
- On average residents travel ____ miles one way from home to work each day.
- The Town works harmoniously with neighboring communities to...
- Looking down at the Town from an airplane a resident would see...
- The Mukwa Comprehensive Plan was...

Each of the vision questions above is related to a chapter of the Comprehensive Plan. During the drafting of the various chapters, the responses to each question given during the Vision Meeting were used to develop a vision for the corresponding plan element. The wall graphic created during the meeting and the complete list of responses to the vision questions follows below.



Wall Graphic Created During Vision Meeting, August 18, 2004

As was the case with the SWOT responses earlier in this chapter, the responses provided by participants during the Vision Meeting are included in the following table as written, with no editorial modifications. It must be understood that these responses, which may be contradictory, represent the opinions of those in attendance at the Vision Meeting and may not necessarily reflect the values or beliefs of the community as a whole.

Table 1.0: Town of Mukwa Vision Meeting, August 18 th , 2004		
Issues and Opportunities	Residents of the Town of Mukwa take great pride in...	<ul style="list-style-type: none"> ▪ The preservation of the rural character of the Town while experiencing growth ▪ Friendly neighbors, well kept homes with open spaces ▪ Parks, picnic area, playgrounds along the rivers and lakes ▪ A community that grew while keeping its core value, our natural assets and still have areas in which to live ▪ Water resources and the Wolf River, canoe and Partridge Hunt ▪ Home ownership ▪ Abundant natural resources joined by a series of corridors through populated areas ▪ The area of the state they live in close to large cities and industrial development yet clean environment ▪ A good quality place to live with low taxes ▪ The continued miles of Wolf River shoreline which are still undeveloped within the Town ▪ The area, its natural river, lakes, and woods ▪ Rural character and natural resources within the Town ▪ Their rural diversity and ability to easily get to larger cities in a short time ▪ Community, their homes/property, schools, natural resources, and the river ▪ The ability of the community to work toward common goals while maintaining a high quality of life
Housing	Retired and senior residents who grew up in the area...	<ul style="list-style-type: none"> ▪ Are able to maintain residence in the town in affordable senior living centers or small houses ▪ May have opportunities to remain in areas with like age people in low maintenance homes, or housing ▪ Moderately priced community type condos for senior citizens. Planned large lot subdivisions for incoming residents ▪ Have access to available and affordable housing both in Mukwa and the adjacent city of New London ▪ Single family housing setup for seniors; assisted living and nursing homes in New London ▪ They would like to keep the taxes how they are so they can live in their home ▪ Are able to afford to stay in their own homes ▪ Want to stay in their homes and retire close to their families ▪ To have good roads, lots of trees and open land ▪ Have housing -opportunities in a rural setting. These may include personal areas for all types of gardening ▪ Want to stay here like it. Taxes affordable ▪ Remain in the homes in the area ▪ Want housing they can afford and enjoy their neighbors ▪ Live in their own home as long as possible/utilize senior facilities ▪ Are happy with the blend of the past while watching younger people work toward the future
	Attractive and desirable housing in the Town can be described as...	<ul style="list-style-type: none"> ▪ Single family homes located in your choice of .5-.75 acre lots located within subdivisions or 1-5 acres lots ▪ Those with well groomed landscaped yards in surroundings without clutter ▪ Moderately priced community type condos for senior citizens. Planned large lot subdivisions for incoming residents ▪ Large lot housing with areas of green spaces ponds wooded/grassland areas, are still common ▪ Single family housing ▪ Affordable housing ▪ Energy efficient structures constructed from renewable or recycled materials and designed to harmonize with natural surroundings ▪ Nice subdivisions ▪ Tastefully planned, and wisely scattered, thus preserving Mukwa's desired rural and natural environment. ▪ What you can afford ▪ All the different price ranges with areas designated for large lots and areas for more economic housing ▪ Well -maintained homes/yards of good quality single family ▪ Well kept up houses that left part of the original character of the land.

Utilities and Community Facilities	The Town provides the following services for residents...	<ul style="list-style-type: none"> ▪ Road maintenance, natural gas, cable access for television, internet services, and recycling ▪ With well maintained roads, snow removal and an absence of crime ▪ Parks, picnic area, playgrounds along the rivers and lakes ▪ Minimal services - road maintenance, but no utilities would be provided. Some areas requiring sewer and water will annex to the city of New London ▪ Town roads, fire protection, flowing well (on West side - lot of people use it) ▪ Basic services only e.g., road maintenance, snow removal ▪ Fire and Police protection, good government ▪ Keep roads in good repair ▪ A town community building which incorporates a hall for social events, town offices and meeting rooms ▪ Regarding - snow removing - town park need vote at High School ▪ Road, fire protection, zoning, and trails ▪ Good visibility on road and street maintenance. ▪ Improved cable/internet ▪ Basic government functions while working with other government agencies on expensive items (i.e. police, fire, and waste management issues)
	The Town offers the following facilities for residents...	<ul style="list-style-type: none"> ▪ Town hall for meetings ▪ Parkland for recreation (organized and general use) and shelters for gatherings ▪ Facilities for children, teen, and senior activities ▪ Bike trails linking with surrounding townships, designate roadways as "bike traffic" ▪ A few parks and public areas added ▪ Snowmobile trails ▪ Libraries, access to distance and continued learning opportunities, high speed internet (or its successor) access ▪ Easily accessible polling places on both sides of the river ▪ Camp ground ▪ Town hall for meetings/elections ▪ Basic government functions
	To receive proper medical care residents need to...	<ul style="list-style-type: none"> ▪ Drive less than 10 miles and have EMT/First responder services ▪ Have access to nearby clinics or hospitals ▪ Have transportation to New London ▪ Go to New London or Appleton ▪ To travel to New London ▪ Take care of themselves ▪ Drive only a few minutes to New London ▪ Go to New London or Appleton ▪ Go to New London or Fox Cities ▪ Continue using the NLMC ▪ Go to local hospital ▪ New London ▪ Will travel farther for more serious problems and have the aches and pains in the community ▪ Go to New London/Fox Valley
Agricultural, Cultural, and Natural Resources	Recreational opportunities include...	<ul style="list-style-type: none"> ▪ Fishing, boating, camping, and hunting ▪ Boating, hiking, and bicycle routes ▪ Snowmobile trails and biking trails ▪ Same as before ▪ Water sports, fishing, hunting, snowshoe, skiing, park area at boat landing ▪ Hiking, bird watching, snowshoeing ▪ Snowmobile trails and cross county skiing ▪ Lot of hunting and fishing ▪ Fishing, hunting, biking, swimming, and camping ▪ Farmland, woods for hunting, biking-trails, Cactus Rock, Round Barn ▪ Additional recreational trails ▪ Camping, swimming, boating, fishing, and biking

	For entertainment and cultural opportunities, residents in the Town...	<ul style="list-style-type: none"> ▪ Attended community theater, school events, etc ▪ May commute to nearby cities ▪ Hiking and picnic facilities for groups ▪ Can find a number of interesting places within a reasonable drive ▪ Cactus Rock - be made a public park ▪ Take a quick trip to the Fox Cities ▪ Need to go to Appleton or Green Bay ▪ Can go to New London ▪ Need to look towards the greater Fox Valley ▪ Fox Cities ▪ Biking, walking, ATV, Camping ▪ Enjoy festivities in New London/surrounding communities
Economic Development	Commercial development in the Town includes...	<ul style="list-style-type: none"> ▪ Dry goods/Grocery stores within 5-10 miles ▪ More retail in North Port ▪ Shops and a convenience store near the high school ▪ Filling station, grocery store ▪ None the market will develop ▪ Primarily home-based businesses ▪ None ▪ Some restaurants ▪ Very little ▪ Tourist, small business ▪ Restaurants, small shops, convenience-gas, small businesses (i.e. landscapers, construction, etc.)
	Industrial development in the Town includes...	<ul style="list-style-type: none"> ▪ Light Industrial on the eastern edge of town ▪ Light manufacturing in a segregated area away from housing ▪ South along New 45 and Hwy 15 ▪ None ▪ Located in New London Industrial Park ▪ None ▪ Nothing ▪ None ▪ Only in the areas of which have been annex to the City New London ▪ None ▪ Limited ▪ Shouldn't focus on industrial except for Mom and Pop
	On average, residents travel ____ miles one way from home to get to work each day.	<ul style="list-style-type: none"> ▪ Less than 10 miles - 2 ▪ 10 to 19 miles - 1 ▪ 20 to 29 miles - 6 ▪ 30 or more miles - 3
Intergovernmental Cooperation	The Town works harmoniously with neighboring communities to...	<ul style="list-style-type: none"> ▪ Share community services to keep cost down by avoiding redundancy ▪ Support retail, medical and educational facilities ▪ Share equipment needs and expertise on mutually beneficial issues ▪ Coordinate road work, fire protection ▪ Help each other ▪ Leverage services (e.g. Ambulance) and opportunities (e.g. Education) from residents ▪ For fire protection ▪ Not try to take over our land ▪ Continue to preserve the natural environment ▪ Talk ▪ Keep roads in good driving shape ▪ Provide contiguous roads, joint projects to save money when possible
Land Use	Looking down at the Town from an airplane a resident would see...	<ul style="list-style-type: none"> ▪ Woodlands, green space, farmland, and predominantly single family housing ▪ Abundance of green space and water ▪ Lots of green trees and river basin ▪ Green space and a few available runways

		<ul style="list-style-type: none"> ▪ Scattered houses among forest and wetland with a few farms ▪ A mix of land use ▪ Vast areas of woods, fields, water, and connected by corridors of undeveloped land ▪ A very green countryside with a river running through it ▪ Lots of water and woods ▪ Well planned, rural community ▪ Homes, schools, business, farmland, woods ▪ Farms, woods, streams, rivers, rural homes and fields. ▪ A mixture of homes in various places and trails for recreation. Plus good river usage. ▪ Some farms, Wolf River, single family homes, some multi-family units, small businesses
Implementation	The Mukwa Comprehensive Plan was...	<ul style="list-style-type: none"> ▪ Well thought out and provided a guideline for controlled growth ▪ A good opportunity to define land use in the township ▪ A good resource to plan the use of our natural resources and to plan for increased populations ▪ What plan? That was 25 years ago. There was a plan? ▪ A stunning success, thanks to the foresight of Town residents! ▪ Successful ▪ Started 2 years ago ▪ To preserve the rural style of living ▪ Not only mandated by state government, but put in place for the future betterment of our community

COGNITIVE MAPPING

A cognitive map, or mental map, is a map drawn by a person that geographically locates his or her memories, ideas and thoughts of a particular place. Since cognitive maps are based on individual's preferences and opinions there are no "right" or "wrong" maps. Cognitive maps are used to delineate geographic areas of a community people like, dislike, frequently visit, feel are important, travel through regularly, feel safe, etc.

At the Land Use Mapping Forum, held on July 14, 2005, participants were provided two maps of the Town of Mukwa. On the first map, participants outlined portions of the Town based on their opinion of aesthetic appeal. The most attractive places were colored in one shade and least attractive in another. Participants also identified important local travel routes and their residence on this map.

On the second map, participants outlined those areas where they would like to see new commercial/industrial development, new residential subdivision development, new recreation areas, farmland and open space in Mukwa in the year 2025.

These maps were used in the development of the *Future Land Use Maps* presented later in this plan. This approach was helpful in understanding community concerns and priorities for the future. More information about this activity, including composite and majority opinion maps, is provided in the Future Land Use Chapter.

Demographic Profile

The plan for Mukwa begins with a profile of the people who live, work, and own property in the Town. This chapter analyzes the size, composition and trends of the population. This information is critical to forecasting the need for community facilities and services, since it is people who will demand better schools, roads, parks, jobs, and other public services.

POPULATION TRENDS & PROJECTIONS

The Town has experienced steady population gains over the last twenty years, growing by 18.4% between 1980 and 1990 and 20% by the 2000 census (see Table 2.0). Of particular significance is the fact that the Town’s share of the overall County population has steadily increased during this period. Mukwa’s population is growing at a rate faster than that of the County as a whole. This is of significance given the Town’s desire to retain its rural character. Should this trend continue over the next two decades, the Town of Mukwa will experience increased residential and commercial development pressure. Since such a large portion of the community’s land base is deemed “undevelopable” by State and Federal regulation, even small increases in population will significantly change the landscape of Mukwa. Some members of the community will view additional residential and economic growth in the community as necessary and beneficial, while others may see them as threats to the small town character of Mukwa. Finding a balance between the “preservationists” and “pro-growth” advocates was a necessary requirement during the development of the Town of Mukwa Comprehensive Plan.

How Much Growth Is Too Much Growth?

The population of the Town of Mukwa has grown by more than forty percent since the 1980 census. Its population is expected to exceed 3,300 persons by 2025. In fact, the Town is growing at a rate faster than that of Waupaca County as a whole. In a community with more than forty percent of its land base designated as surface waters or wetlands, even moderate growth may have a significant impact upon the landscape. This will offer challenges to both Town officials and community residents.

A primary goal of the Town of Mukwa Comprehensive Plan will be to generate a vision for the future of Mukwa and develop a strategy to effectively prepare for the increased residential and commercial development pressures the community will experience in coming decades.

Location	1980	1990	2000	Actual Change 1980-2000	% Change 1980-2000
Town of Mukwa	1,946	2,304	2,773	827	42.5%
Town of Caledonia	1,040	1,177	1,466	426	41.0%
Town of Lebanon	1,168	1,290	1,648	480	41.1%
Town of Royalton	1,432	1,456	1,544	112	7.8%
City of New London	4,941	5,531	6,618	1,677	33.9%
Waupaca County	42,831	46,104	51,825	8,994	21.1%
Mukwa Share of County Population	4.5%	5.0%	5.4%	n/a	0.9%

Table 3.0 projects the population of Mukwa through 2025. Comparisons to surrounding communities are provided for additional understanding of regional growth. Based on the information provided in Table 3.0, the Town population is expected to steadily increase over the next 20 years. The Committee believes that these estimates are conservative. However, the number of persons per household in Mukwa is decreasing (see Table 5.0). This is significant since an increase in total population in conjunction with decreased household size means that more housing units will be needed to support the population.

Source: WI Dept. Administration, Demographic Service Center and 2000 U.S.

POPULATION DENSITY

The Town of Mukwa covers approximately 32.7 square miles. The population per square mile is nearly 85 persons. However, when undevelopable land is factored into the equation, the density of the Town increases to 138 persons per square mile. As people continue to move into the Town, additional areas will be developed for residential and commercial uses. It is anticipated that new residential development will include primarily single-family homes.

POPULATION CHARACTERISTICS

Population figures and projections offer basic insights into the characteristics of the residents of Mukwa. To learn more, information about the race, sex, and age of the population must be examined. In 2000, there were 1,414 male and 1,359 female residents living in the Town. Ninety-nine percent of the residents reported their race as white. The median age of a Town of Mukwa resident in 2000 was 38.1. This average is slightly lower than that of Waupaca County median (38.5), but higher than those of the Town of Caledonia of New London (35.3), and the State of Wisconsin (36.0).

Location	2005	2010	2015	2020	2025	# Change, 2005-2025	% Change, 2005-2025
Town of Mukwa	2,886	3,009	3,117	3,214	3,303	417	14.4%
Town of Caledonia	1,543	1,621	1,690	1,753	1,811	268	17.4%
Town of Lebanon	1,744	1,891	1,928	2,007	2,080	336	19.3%
Town of Royalton	1,476	1,485	1,489	1,490	1,490	14	0.9%
Waupaca County	52,995	54,263	55,297	56,180	59,691	6,696	12.6%
Mukwa Share of County Population	5.4%	5.5%	5.6%	5.7%	5.5%	n/a	0.1%
City of New London	5,649	5,687	5,705	5,711	5,711	62	1.1%
Town of Hortonia (Outagamie County)	1,123	1,183	1,242	1,302	1,357	234	20.8%
Outagamie County	170,939	180,260	189,556	189,948	205,577	34,338	20.0%

(37.6), Town of Lebanon (35.6), City

Source: WI Dept. Administration, Demographic Service Center and 2000 U.S. Census.

Table 4.0 tracks the population of Town residents, by age, during the 1990-2000 decade. Several interesting figures are presented in Table 4.0 that may have an impact on the future of Mukwa. Although the population has increased significantly during this time frame, the increases were not proportional within the selected age groups. The data reveals:

- The percentage of children under the age of five has decreased by 38% since 1990. Should this trend continue it may result in a reduced need for additional school facilities and recreational programs. Additional monitoring, particularly on the part of the New London School District, will be important.
- The greatest increase in percentage of population occurred between the ages of 20 and 64. This is significant in that the majority of these residents will reach retirement age by 2025. The needs of an aging population have been considered during the development of the Comprehensive Plan.

	1990		2000	
	Number	Percent of Total Population	Number	Percent of Total Population
Under 5	224	9.7%	162	5.8%
5 to 14	386	16.8%	450	16.2%
15 to 19	174	7.6%	238	8.6%
20 to 64	1,306	56.7%	1,682	60.7%
65 and Over	214	9.3%	241	8.7%
All Ages	2,304	100%	2,773	100%

Source: WI Dept. Administration, Demographic Service Center and 2000 U.S. Census

GENERAL HOUSEHOLD TRENDS

National and state trends have moved towards increases in the number of households with decreases in the average number of persons per household. Mukwa has not escaped this trend. Table 5.0 documents its significance in Mukwa. The main reasons for this situation include:

- A decrease in birth rate;
- People waiting longer to get married;
- An increased divorce rate; and,
- An increase in the average life span (resulting in more elderly people living alone or with other family members).

TABLE 5.0: Total Households and Average Household Size							
	1990	2000	2005	2010	2015	2020	2025
Mukwa							
Total Households	790	998	1,075	1,157	1,233	1,350	1,362
Average Household Size	2.92	2.78	2.74	2.67	2.62	2.57	2.55
Waupaca County							
Total Households	17,024	19,863	20,857	21,903	22,773	23,796	23,998
Average Household Size	3.04	2.51	2.48	2.42	2.37	2.30	2.32

SOURCE: 1990 and 2000 U.S. Census; ECRPC.

According to the 2000 U.S. Census, there were 998 households in Mukwa. The vast majority of these (788 or 79%) were family households. Of these, 705 were married-couple family households (70.6%), more than a third of which (34.7%) have children under the age of 18. Female-headed households represented 5.1 percent of the population. Non-family households represented 16.4% of all households in Mukwa in 2000. Fifty-three households had individuals age 65 and over and 39.6 % of all households included children under the age of 18.

What Is A Household?
 A "household" can be described as individual or a group of people living together in a single dwelling unit. This could include a family, a single person, or a group of unrelated individuals sharing a house or an apartment, but excludes those persons living in group quarters (i.e. nursing homes, halfway houses, dormitories, etc.).

WHERE ARE RESIDENTS COMING FROM?

Figure 1.0 provides a breakdown of residency patterns between 1995 and 2000. Of the people currently residing in the Town, sixty-nine percent live in the same residence they occupied in 1995. Seventeen percent either changed residences in Mukwa or moved from another community in Waupaca County. The remainder of the population moved into Mukwa from a different county or another state.

Economic Profile

Economic conditions have a direct impact on the supply, demand, and costs for housing, infrastructure, and services within a community. Therefore, it is necessary to examine the economic situation to predict additional housing, infrastructure, and service needs. This section profiles Mukwa's economic environment by examining factors, including per capita income, poverty rate, and unemployment rate. Additional economic information is provided in the Economic Development Element of this plan.

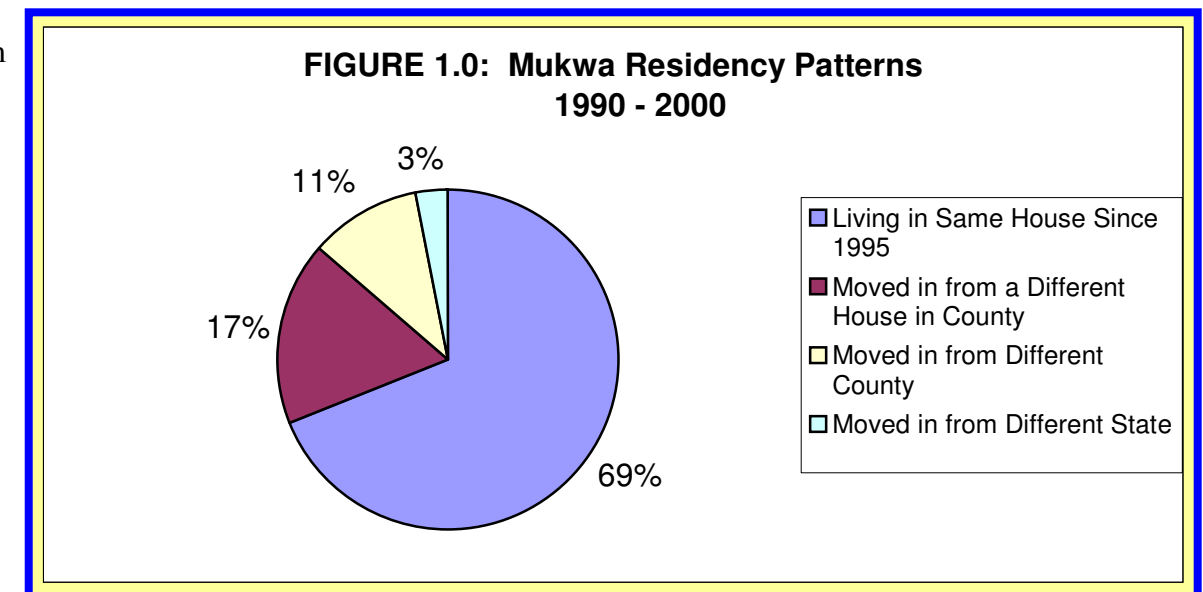
To understand and appreciate the local economic picture, it is necessary to look beyond the Town and examine characteristics in surrounding communities. These comparisons provide much more information about the local economic situation than would a simple look at conditions only in the Town. They also allow for a comparison of the economic environments between neighboring municipalities.

LABOR FORCE

TABLE 6.0: Waupaca County Civilian Labor Force Data						
	1997	1998	1999	2000	2001	2002
Labor Force	26,952	26,703	25,591	26,517	26,987	27,224
Employed	25,969	25,831	24,752	25,554	25,657	25,694
Unemployed	983	872	839	963	1,330	1,530
Unemployment Rate	3.6%	3.3%	3.3%	3.6%	4.9%	5.6%

SOURCE: WI DWD, Bureau of Workforce Information, LAUS program, 2003.

civilian labor force data for Waupaca County from 1997 to 2002.



SOURCE: WI Dept. Administration, Demographic Service Center and 2000 U.S. Census.

In Mukwa, unemployment numbers have bucked state, and national trends. While national unemployment rates have risen noticeably during the economic downturn of the early 2000's, Mukwa has remained relatively stable. The unemployment rate in Mukwa was 2.5% following the 1990 census. By the 2000 Census, the percentage of unemployed persons in the Town had risen slightly to 2.7%. This compares favorably to unemployment rates for Waupaca County (2.4%), the State of Wisconsin (3.2%), and the country as a whole (3.7%). Unfortunately, annual employment data is limited to county and metropolitan statistical areas. Unless communities conduct independent employment studies, individual community data is only released every 10 years in the census. Mukwa has no such data available. It is important to note that recent plant closings and layoffs by three of Mukwa's largest employers may pose significant economic challenges to the Town in coming years. Table 6.0 highlights

	Town of Mukwa	Town of Caledonia	Town of Lebanon	Town of Royalton	City of New London	Waupaca County
Labor Force	1,541	861	878	788	3,672	26,343
Employed	1,499	841	834	757	3,581	26,326
Unemployed	42	20	44	31	91	956
Percent of County Labor Force	5.8%	3.3%	3.2%	3.0%	13.9%	100%
Unemployment Rate	2.7%	2.3%	5.0%	3.9%	2.5%	3.6%

Table 7.0 provides a comparison of the labor force in Mukwa to neighboring communities and the county. As a result, it is believed the unemployment figures are somewhat higher today, as indicated by the 2002 Waupaca county unemployment rate of 5.6 percent. Long-term employment projections indicate that overall employment in the state is on the rise. The largest areas for increase will be in the service and real estate sectors. Declines are predicted in manufacturing and the retail trade.

Are You In The Labor Force?

The **labor force** is the sum of employed and unemployed persons who are 16 years of age and older who are willing and actively seeking work. Institutionalized populations are not included in the labor force.

SOURCE: WI Dept. Administration, Demographic Service Center and 2000 U.S. Census

COMMUTING PATTERNS

The town’s workforce is becoming increasingly mobile. Residents in Waupaca County take advantage of convenient highway access to commute to nearby employment centers, primarily in the Fox Cities. Table 8.0 provides a detailed breakdown of commuting patterns in Waupaca County. Specific information from Town residents is not available; however, it is believed that the commuting habits of Mukwa residents are reflective of the county as a whole. This seems particularly likely given access to USH 45 and STH 15 and 54.

Nearly eighteen percent of the people who represent Waupaca County’s work force commute to jobs in Outagamie County. It is estimated that a higher percentage of Mukwa residents commute to Outagamie County. Employment in Winnebago County accounts for an additional five percent, with other surrounding counties providing employment to just more than six percent of Waupaca County’s residents. Fifty-seven percent of the people who live in Waupaca County also work here.

Outagamie also tops the list of counties with residents commuting to Waupaca County for work, followed by Shawano, Portage, and Waushara Counties. There are more Waupaca County residents commuting outside of the County for employment (4,701), than there are outside residents commuting in (1,760), for a net loss of 2,941 work force participants.

County	Waupaca County Residents Commuting to Other County	Residents of Listed County Commuting into Waupaca County	Net Commute
Outagamie County	4,612	1,340	(3,272)
Winnebago County	1,307	460	(847)
Portage County	572	1,042	470
Shawano County	464	1,199	735
Brown County	301	77	(224)
Waushara County	131	654	523
Fond du Lac County	114	82	(32)
Wood County	76	34	(42)
Marathon County	64	96	32
Milwaukee County	58	5	(53)
Elsewhere	484	253	(231)
Work in Waupaca county	15,143	n/a	n/a

SOURCE: Wisconsin DWD, Office of Economic Advisors, January 2004

TOWN EMPLOYERS

As a small, rural town, Mukwa lacks the commercial and manufacturing activities of larger communities. Most of its residents find employment outside of the community. However, Mukwa does have a small number of service and hospitality businesses, including the Northport Convenience Center, the Pine Tree Supper Club, Bean City Bar & Grill, Phil's Still, Pup's, and the Log Cabin. Locally owned and operated businesses also include Poppy Plumbing and Heating, Heise Heating, auto-service operations, craft stores, and woodworking. Tourism-oriented business in Mukwa includes Wolf River Rafts and Campground, Guth's Resort and Campground, and Huckleberry Acres.

INDUSTRY SECTORS

Table 8.0 provides a breakdown of employment as reported by Mukwa residents in the 2000 U.S. Census.

TABLE 8.0: Mukwa Employment by Industry Sector, 2000		
Industry Sector	Number	Percent
Agriculture, forestry, fishing, hunting & mining	28	1.9%
Construction	127	8.5%
Manufacturing	592	39.5%
Wholesale trade	36	2.4%
Retail trade	167	11.1%
Transportation and warehousing and utilities	35	2.3%
Information	31	2.1%
Finance, insurance, real estate and leasing	46	3.1%
Professional, scientific, management, administrative, and waste management services	50	3.3%
Educational, health and social services	234	15.6%
Arts, entertainment, recreation, accommodation and food services	71	4.7%
Other services (except public administration)	60	4.0%
Public administration		1.5%

SOURCE: WI Dept. Administration, Demographic Service Center and 2000 U.S. Census.

Income & Wages

There are many different breakdowns of income:

- **Per capita income** is total income divided by the total number of residents, including children and other groups of individuals who do not actually earn income.
- **Median household income** is the middle point of household incomes reported in a community (households include families, married couple households, and individual households).
- **Median family income** is the middle income reported by families in the 2000 U.S. Census.

Table 9.0 (on the following page) provides an income comparison between Mukwa, neighboring communities, Waupaca County, and the State of Wisconsin. In 2000, Mukwa's per capita income was higher than all but the Town of Caledonia and the State of Wisconsin. Caledonia was the only community on the list to surpass Mukwa in median household income and median family income in 2000. Table 10.0 (also on the following page) compares average annual wages in Waupaca County with those throughout the State of Wisconsin. Wages in the County were higher than the State as a whole for each industry division in 2002.



Median & Average Income What's the Difference?

The U.S. Census Bureau data related to income is reported as a "median" figure. This represents the middle point of all incomes reported. It is not the same as an "average" income. For example, if 4 people reported their income at \$30,000 and 1 person reported their income at \$100,000, the median income for these 5 people would be \$30,000. In the same scenario, the average income would be \$44,000, which does not accurately depict where the majority (i.e. 4 people vs. only 1) reported their income.

The U.S. Census does not provide an average income figure. Moreover, it is not possible to calculate an average without access to every individual census form from Mukwa where an income was reported. The U.S. Census Bureau privacy policies prohibit this level of access. It is anticipated that Mukwa's average income figures would be higher than the median income.

	2000 Per Capita Income	2000 Median Household Income	2000 Median Family Income
Town of Mukwa	\$21,254	\$51,953	\$57,679
Town of Caledonia	\$21,702	\$53,977	\$60,292
Town of Lebanon	\$18,948	\$47,931	\$51,053
Town of Royalton	\$19,573	\$48,804	\$53,500
City of New London	\$18,153	\$37,491	\$49,028
Waupaca County	\$18,664	\$40,910	\$48,837
Wisconsin	\$21,271	\$43,791	\$52,911

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, 2000 U.S. Census, and Wisconsin Department of Revenue.

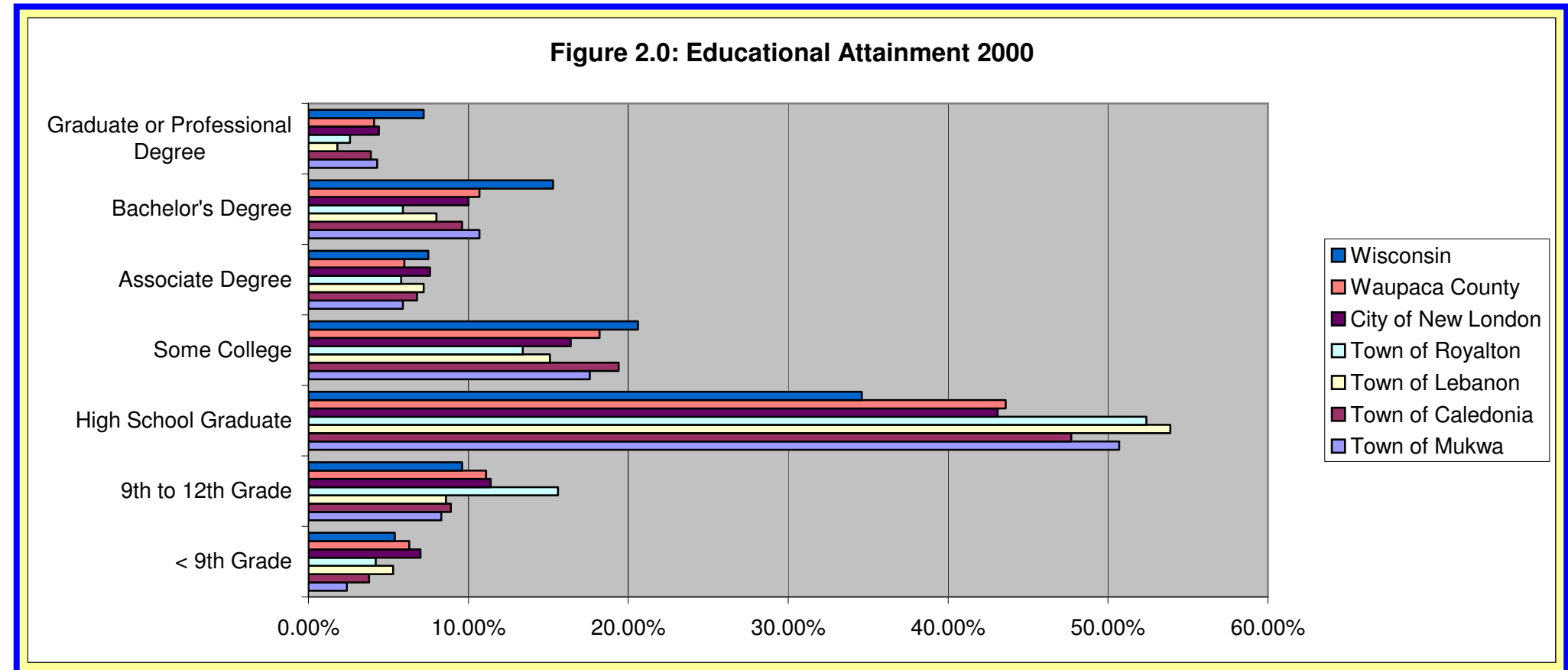
	Average Annual Wage	
	Waupaca County	Wisconsin
All Industries	\$32,422	\$26,684
Natural Resources	\$25,481	\$24,435
Construction	\$39,649	\$29,840
Manufacturing	\$40,584	\$38,642
Trade, Transportation, Utilities	\$28,422	\$23,031
Information	\$38,871	\$29,015
Financial Activities	\$40,337	\$26,506
Professional & Business Services	\$36,324	\$20,901
Education & Health	\$33,768	\$26,574
Leisure & Hospitality	\$11,837	\$8,316
Other Services	\$19,500	\$17,530
Public Administration	\$33,769	\$23,029

SOURCE: Wisconsin DWD, Office of Economic Advisors, January 2004.

EDUCATIONAL ATTAINMENT

A good indicator of the quality of life in a community can be found in the levels of educational attainment of its residents. Generally, a high level of educational attainment reflects a skilled population with higher earnings potential. Based upon the mean scores reported in the nation, Wisconsin students scored highest on the American College Test (ACT) in the 2000- 2001 and again in the 2001 – 2002 school year. The ACT is one of two major college entrance exams (with the SAT) and is used primarily in the Midwest. The latest report, provided in September 2004, again listed Wisconsin students as the highest scoring nationally on the popular college-entrance examination.

Figure 2.0 illustrates the level of educational attainment for persons age 25 and over in Mukwa and surrounding communities in 2000. It is apparent that the population is very well educated. Nearly ninety-percent of Mukwa residents have earned a high school diploma. More than twenty-percent have received associate, bachelor, or graduate degrees. Fewer people in Mukwa have failed to achieve high school graduation or its equivalency than any of the other six jurisdictions listed in Figure 2.0.



SOURCE: WI Dept. Administration, Demographic Service Center and 2000 U.S. Census.

POVERTY STATUS

The federal government evaluates national poverty levels using two similar measures: *poverty thresholds* and *poverty guidelines* (see Table 11.0). The poverty thresholds are the original (and more complex) version of the federal poverty measure. They are updated each year by the Census Bureau and are used mainly for statistical purposes. Poverty guidelines, the other version, are issued each year by the Department of Health and Human Services and are a simplification of the poverty thresholds used for administrative purposes.¹ Planners typically utilize poverty guidelines when developing comprehensive plans.

In 1989, five percent of Mukwa’s residents, or 113 people, fell below the national poverty line. By the 2000 Census, that number had fallen to three and one half percent (98 persons), well below that of Waupaca County (6.8%) and the State of Wisconsin (5.6%).

- The 2000 US Census provides poverty level statistics for a variety of household types. In Mukwa:
- Nineteen families reported living below the poverty level (2.4% of all families);
- Eleven families *with children under the age of eighteen* were living below the poverty level (2.6% of all families with children under 18);
- Four families *with children under 5 years of age* were living below the poverty level (2.5% of all families with children under 5 years of age);
- Five female-headed households (with no husband present) reported living below the poverty level in 2000 (7.4% of all female-headed households); and,
- Twenty-four persons over the age of 65 were living below the poverty level (9.7% of all persons over the age of 65).

For a family of four, the average poverty threshold in 2003 was \$18,400. For individuals, the poverty level was \$8,980. It must be acknowledged that poverty figures, whether thresholds or guidelines, are developed at the national level and are based upon national averages. Poverty guidelines are a base-level figure. They do not take into account, at the local level, the costs of housing, transportation, or goods and services. Although the poverty level for a family of four in Chicago is the same as that of a similarly sized family in Mukwa, the cost-of-living differences between the two communities would indicate a greater ability to “make ends meet” in the rural community.

EMPLOYMENT AND ECONOMIC FORECASTS²

Historically, Waupaca County has had a stable local economy with employment rates that were comparable to state and national figures.

Demographic factors are a key driving force in any long-term projections. The population growth rate and changes in its composition have considerable impact on the labor force, the unemployment rate, housing demand, and other spending categories. The population projections used in the U.S. economic forecast are based on the U.S. Census Bureau's "middle" projection for the U.S. population. This projection is based on specific assumptions about immigration, fertility, and mortality rates. The national fertility rate (the average number of births per woman upon completion of childbearing) is expected to rise from its current level of 2.0 to about 2.2 in 2025. Life expectancy for men and women will rise steadily from 74.1 and 79.8 years in 1999 to 77.6 and 83.6 years in 2025, respectively. Net immigration (including undocumented immigration) is estimated to fall from 960,000 persons in 1999 to 918,000 in 2025.

The age distribution of the population is also an important part of the long-term outlook. As baby boomers begin to retire, the share of the U.S. population aged 65 and over will jump from 13% in 2010 to nearly 19% by 2025, pushing outlays for Social Security, Medicare, and Medicaid higher. In addition, the growth rate of the working-age population will slow by more than that of the overall population. After increasing 1.1% annually over the past 25 years, the population aged 16 to 64 will grow 0.8% per year during 1999-2014 and just 0.2% per year thereafter. Wisconsin total population growth is expected to average 0.4% annually from 2001 to 2025, a rate slightly below the 0.6% average from 1975-2000. Compared to the U.S. projected growth of 0.8% over the same period, Wisconsin is expected to continue the long-term trend of slower population growth than the nation as a whole. The adult population (those over the age of 17) in Wisconsin grew at an average annual rate of 1% over the past 25 years, but is expected to grow by 0.5% per year from 2001 to 2025. Also similar to U.S. demographic trends, the aging population in Wisconsin (those 65 and over) is projected to grow at an average annual rate of 2% for the next 25 years, including 3% per year after 2010. The aging population in Wisconsin grew at an annual rate of 1.3% per year from 1975 to 2000.

¹ SOURCE: 2003 Health and Human Services Poverty Guidelines, *One Version of the Federal Poverty Measure*, Federal Register, Vol. 68, No. 26, February 2, 2003, pp. 5456-6458.

² Much of the information used to develop this section was from the Wisconsin Department of Revenue Long-Term Economic Forecast, 2001.

Size of Family Unit	48 Contiguous States and D.C.	Alaska	Hawaii
1	\$8,980	\$11,210	\$10,330
2	\$12,120	\$15,140	\$13,940
3	\$15,260	\$19,070	\$17,550
4	\$18,400	\$23,000	\$21,160
5	\$21,540	\$26,930	\$24,770
6	\$24,680	\$30,860	\$28,380
7	\$27,820	\$34,790	\$31,990
8	\$30,960	\$38,720	\$35,600
Each Additional	\$3,140	\$3,930	\$3,610

SOURCE: 2003 Health and Human Services Poverty Guidelines, *One Version of the Federal Poverty Measure*. Federal Register, Vol. 68, No. 26, February 2, 2003, pp. 5456-6458.

A key feature of the population projection that is very problematic for growth of the Wisconsin economy and the local economy in Waupaca County is the prospect of a decline in the working-age population after 2011. Statewide, the population aged 16 to 64 is projected to grow at an annual rate of 0.6% from 2000 to 2011, but will then decline to an annual rate of 0.4% from 2012 to 2025. The working-age population grew at an annual rate of 0.9% from 1974 to 1999. The growth of the working-age population has a profound effect on the growth of the labor force and employment.

Because of demographic shifts that will play out as baby boomers age and reach retirement, labor force growth is expected to slow sharply over the next 20 years. First, increases in female participation will taper off, if only because the participation rates for many female age groups are approaching those of males. Also, over time, a growing share of the population will reach retirement age, when the participation rate falls to about 12%. As a result, the Wisconsin labor force is expected to expand by 1.3% per year between 2000 and 2005, 0.8% per year from 2005 to 2014, and by only 0.4% per year from 2015 to 2025. Overall labor force participation is expected to fall as the population progressively moves into age groups with lower participation rates.

The overall dependency ratio (the ratio of those not in the labor force to those who are) will continue to decline for most of the next quarter-century, falling from 1.00 in 1989 to 0.91 by 2010, before rising to 1.01 by 2025. This ratio peaked at 1.65 in 1962, just after the crest of the baby boom. Clearly, the working population will *not* have to support proportionately more non-workers in the next 25 years than it has in the past. However, this assessment does not account for workers who support elderly parents and other retired workers.

In summary, the United States, Wisconsin, and Waupaca County are expected to post slower economic growth over the next 25 years than during the past quarter-century. The prime causal factors for this slow down are already in place: labor force growth constrained by demographic forces that cannot be quickly reversed and relatively moderate growth of the capital stock (houses, businesses, etc.).

MUKWA

For the Town of Mukwa, these national and state economic indicators are important because they serve as a precursor to issues that may affect economy and quality of life for residents living in the Town. Over the 20-year planning period, a limited amount of new industrial and commercial expansion and associated support infrastructure is anticipated in the Town of Mukwa. Economic prosperity will be closely linked to nearby employment centers, local demand, historic development patterns, and highway access. To support economic prosperity, implementation strategies are provided in the Economic Development Element of this Plan.

* A Note About The Statistical Data Contained In This Chapter: The statistics offered throughout this chapter have been collected by a variety of different agencies and organizations. In some cases, discrepancies exist between data provided by different sources. This results from the differing collection methodologies utilized by the various groups.



Introduction

Well-designed, safe, and quality housing choices are vital to healthy communities. Housing choices give communities character and establish a connection between residents and their neighborhoods.

Wisconsin’s Smart Growth Law includes 14 goals for local comprehensive planning. The Town of Mukwa believes that the goals listed below specifically relate to planning for housing:

- Providing adequate infrastructure and public services and an adequate supply of developable land to meet existing and future market demand for residential uses.
- Encouraging neighborhoods that incorporate a variety of housing types.
- Promoting the redevelopment of lands with existing infrastructure and public services.
- Encouraging the maintenance and rehabilitation of existing residential dwellings.
- Providing an adequate supply of affordable housing for individuals of various income levels.
- Providing local housing choices for all stages of life.

The previous chapters in this plan discuss population, household, and economic characteristics and trends in the Town. This chapter profiles the existing housing stock and provides recommendations to meet future housing needs. ***Housing Goals and Objectives and Housing Policies can be found in Chapter 12, Implementation.***

Want to Learn More?

For more information about housing, also see these chapters:

- The Utilities and Community Facilities Chapter discusses water and wastewater issues.
- The Future Land Use Chapter identifies locations for future housing development and discusses development regulations like zoning.
- The Agricultural, Natural & Cultural Resources Chapter includes information about the soils and development limitations in the area. This chapter also describes conservation-based development approaches.
- The Economic Development Chapter considers the role of housing in the Town’s economy.

Housing Vision

In 2025, the Town of Mukwa offers rural residential living choices in harmony with the Town’s natural and cultural landscape: its wetlands, woodlands, farms, lakes and bayous, and the Wolf River. Single family homes are the primary housing choice, with additional well-designed and maintained alternative housing styles meeting the needs of Mukwa’s singles, seniors, and young families. Town codes, ordinances, and the Comprehensive Plan promote attractive housing with abundant green spaces, scenic views, trails, and other amenities in areas identified for residential development.

COMMUNITY SURVEY RESPONSES

Tables CS-1 through CS-6 illustrate community survey responses to questions related to *Housing* in the Town of Mukwa.

TABLE CS-1: Which of the following best describes your current residence?

Single-family house	78.6%
Duplex-Two-family house	1.0%
Mobile/manufactured home	8.5%
Apartment	0
Farm	8.8%
Other: Hobby Farm/farmette	3.1%

TABLE CS-2: Do you own or rent your current residence?

Own	98.6%
Rent	1.4%

TABLE CS-3: In your opinion, how adequate is the current availability of the following housing options in the Town of Mukwa?

	Very Inadequate	Inadequate	Adequate	Very Adequate	No Opinion
Housing for seniors	7.3%	20.6%	25.2%	4.9%	42.0%
Housing for people with disabilities	5.3%	20.6%	20.6%	3.9%	49.5%
Multi-family apartment buildings	3.6%	14.3%	34.8%	10.0%	37.3%
Single-family houses	3.4%	5.5%	44.7%	23.4%	19.6%
Condominiums/townhouses	3.8%	10.4%	29.2%	10.8%	45.8%
Affordable rental housing	2.8%	10.2%	36.6%	8.1%	42.3%
Affordable owner-occupied housing	1.4%	7.5%	43.4%	16.7%	31.0%

TABLE CS-4: To what extent would you encourage or discourage the following price ranges for future housing development in the Town of Mukwa?

	Strongly Discourage	Discourage	Encourage	Strongly Encourage	No Opinion
Housing under \$100,000	14.0%	28.0%	24.7%	7.2%	24.7%
Housing between \$100,000-\$150,000	7.0%	8.1%	45.8%	19.0%	20.1%
Housing over \$150,000	12.1%	15.4%	33.7%	15.0%	23.8%

TABLE CS-5: To what extent would you encourage or discourage the following kinds of future single-family housing in the Town of Mukwa?

	Strongly Discourage	Discourage	Encourage	Strongly Encourage	No Opinion
On small lots (less than 1/2 acre) grouped near others	31.2%	46.0%	10.1%	2.5%	10.1%
On large lots (more than 1/2 acre) grouped near others	18.1%	23.8%	40.8%	6.1%	11.2%
On lots dispersed around the area – not grouped with others or in subdivisions	9.0%	7.2%	45.5%	21.5%	16.8%

TABLE CS-6: To what extent would you encourage or discourage the following kinds of future multi-family and special-needs housing in the Town of Mukwa?

	Strongly Discourage	Discourage	Encourage	Strongly Encourage	No Opinion
Multi-family apartment buildings	34.3%	42.0%	12.0%	1.4%	10.4%
Mobile/manufactured home parks	31.9%	49.1%	7.0%	2.1%	9.8%
Duplexes/two-family houses	23.2%	22.8%	34.4%	2.1%	17.5%
Condominiums/townhouses	27.0%	29.5%	25.6%	3.2%	14.6%
Housing for seniors	10.2%	8.8%	53.0%	13.7%	14.4%
Housing for people with disabilities	11.5%	8.0%	50.7%	9.8%	19.9%

Existing Housing Supply

In 1990, there were 790 housing units in the Town of Mukwa. Based on the 2000 U.S. Census information, the total number of housing units has grown to 1,088, a 37.7% increase in ten years.¹ By comparison, the housing supply in Waupaca County increased by 43.2% (from 17,024 in 1990 to 22,508 in 2000) during the same period of time.

Single-family homes are the primary housing choice in the Town, accounting for more than 86% of all housing units in 2000 (see Table 12.0 below). Mobile homes account for 11.8% of Mukwa housing units. Duplexes, triplexes, and quadplexes round out the housing options in the community. For a variety of reasons, single-family detached homes are not suitable for everyone. Some people are not able to afford a single-family home. Others may not be able to physically handle the maintenance necessary to keep up a home and yard. Still others may simply prefer living in an alternative style of housing. As such, the Town may consider alternative forms of housing at some point in the future to meet the residential needs of a growing population. Alternatives may include condominiums, townhouses, senior housing, low density multi-family, and downsized single-family homes.

TABLE 12.0: BREAKDOWN OF HOUSING STOCK BY TYPE		
Type	Number	Percent
Single Family Detached	915	86.2%
Single Family Attached	-	0%
Duplexes	10	0.9%
Tri- and Quad-Plexes	4	0.4%
5 to 9 Unit Structures	7	0.7%
10 to 19 Unit Structures	-	0%
20 or More Unit Structures	-	0%
Mobile Homes	125	11.8%
Total	1,061	100%

SOURCE: 2000 U.S. Census

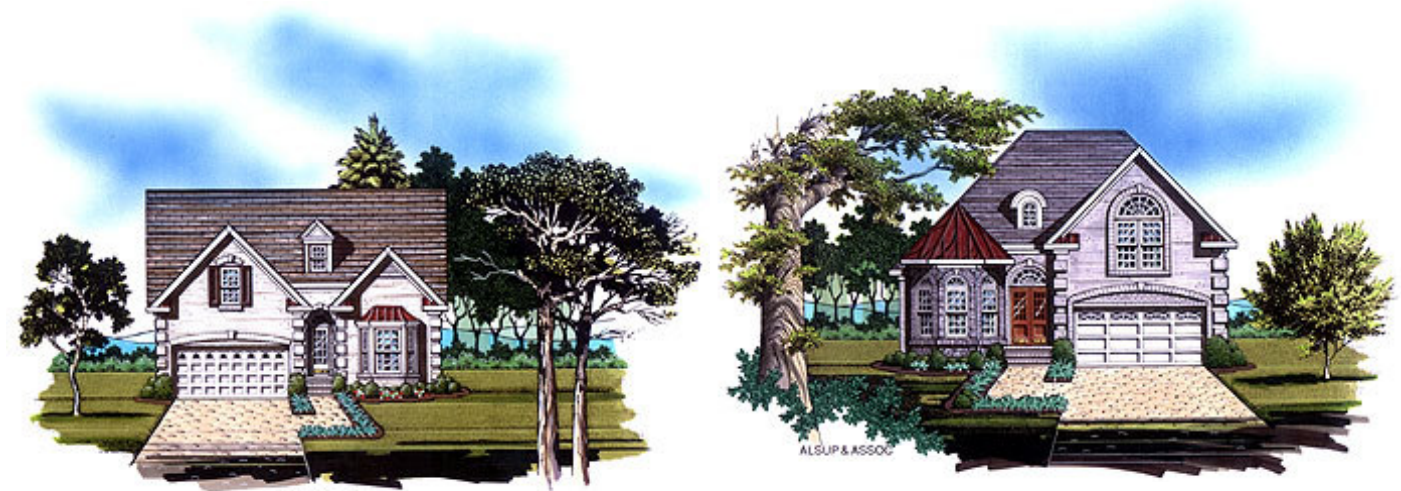
Manufactured homes, duplexes, and townhouses offer affordable alternatives to the single-family detached house. Individuals and couples attracted to home ownership may view one of these options as the ideal home. Multi-family residential developments offer the highest degree of affordability and, when properly designed and located, can become community assets. The Comprehensive Plan encourages the development of a strategy aimed at increased diversity and affordability of available housing.

To achieve this goal:

- The Land Use Element discusses some potential alternative housing choices in Mukwa. This approach may include the development of second story residential units above businesses and the development of condominiums or town homes to provide housing within walking distance of local businesses.
- Opportunities to integrate a variety of housing types into new subdivision developments will be considered. For example, town homes, smaller single family homes, or perhaps even duplexes or triplexes may be included near the entrance of a subdivisions with larger single family homes in other areas of a development.
- Conservation-based condominium developments should be encouraged.

As Table 12.0 shows, single-family detached homes remain the dominant housing type in the Town. However, as the population changes over the next twenty years, it is conceivable to expect that housing needs and desires of its residents will change as well. The questions to be asked include:

- Do the Town's current housing types meet the present and future needs of the community?
- If not, what alternative housing types should be considered within the Town?



Examples of high-quality, smaller home choices (1,000 - 1,500 square feet). These types of homes may be appropriate for seniors, singles, and couples without children. Housing of this type is often intermixed with larger homes in residential development projects.

¹ The figure of 1,088 total housing units in the Town in 2000 (from DP-1 of the U.S. Census General Demographic Characteristics 2000, Housing Occupancy) is inconsistent with the total number of housing units (1,061) identified in Tables 12.0 and 13.0 on pages 25-26 (from DP-4 of the U.S. Census General Demographic Characteristics 2000, Units In Structure). This results from differing reporting options available to Census form recipients and an effort to ensure privacy for the reporter. DP-1 data is regarded as the more accurate figure.

Senior Housing

Determining the need for senior housing in a community is not a simple task. Unfortunately, there is no precise formula or mathematical model available to determine need. This is largely due to the complexity of the marketplace. The majority of seniors in Wisconsin, in all age groups, live in their own homes or in mixed family congregate housing (e.g., apartments that have residents of all age ranges). Although specific data is not available, it is likely that the majority of Mukwa seniors are living in their own homes. The ability of seniors to live alone is increased by their social support network, which may include family, friends, parish nursing programs, home health care, and senior support groups, among others. Availability of local health care providers also has a direct impact on the ability of seniors to continue to live independent lives. However, for a variety of reasons some cannot or will not live in a private home or apartment and will instead need to live in some type of senior housing arrangement.

At this time, there are no senior housing facilities located in the Town of Mukwa. Senior housing facilities are available in the nearby communities of New London, Hortonville, Greenville, and Weyauwega.

Age and Quality of Housing

Understanding the relative age of the housing in a community is a good indicator of the quality of available housing. Thirty-two percent of the Town's housing supply was constructed prior to 1970. While the relative age of a community's housing supply does not necessarily indicate that the units are in poor condition, it does suggest that the need for repairs and maintenance may be greater. Table 13.0 lists the number of units and the corresponding percent of the Town's total housing stock by year built. The information reveals that the Town has experienced very significant growth in its housing supply in the last decade compared to previous decades (more than one quarter of Mukwa's homes were built between 1990 and 2000). This is reflected in the Town's steady population growth over the same period. In the last 10 years an average of 28.7 new single-family homes have been built each year. This trend has continued since the 2000 Census. In 2002, building permits were issued for 27 new single-family homes, followed by 27 in 2003, 28 in 2004, and 19 in 2005.



Example of an upscale quadplex. This type of housing can be developed at the entrance of a single-family home subdivision near a main road. Single-family homes would be located on lots of varying sizes, with plenty of green space, and set back from the road.

TABLE 13.0: AGE OF HOUSING STOCK		
Year Structure Built	# Of Units in Town of Mukwa	% Of Total Town of Mukwa Housing Stock
1990 to 2000	287	27.0%
1980 to 1989	208	19.6%
1970 to 1979	227	21.4%
1960 to 1969	59	5.6%
1940 to 1959	92	8.7%
1939 or earlier	188	17.7%
Total	1,061	100.0%

SOURCE: 2000 U.S. Census

Age alone is not the true measure of housing condition in a community. To achieve greater accuracy in evaluating a community, a visual assessment of the housing stock is helpful. Such an assessment is commonly referred to as a "windshield survey" because it entails driving and walking through the community and developing an assessment of housing based on visual appearance. The exterior appearance of a home generally correlates with interior conditions. The survey revealed that, with some exceptions, housing in the Town appears to be well maintained.

For the housing market to operate efficiently, it must possess an adequate supply of available housing units (for sale or rent). A housing market's supply of available housing units must be sufficient to allow for the formation of new households by the existing population, to allow for in-migration, and to provide opportunities for households to change their housing because of a change in size or status.

According to the U.S. Department of Housing and Urban Development (HUD), an overall available vacancy rate of 6.5% (1.5% for the owner-occupied portion of a housing stock and 5.0% for the rented portion) is required to allow for an adequate housing choice among consumers. The overall available vacancy rate for Wisconsin is 4.75% for rentals and 1.14% for owner occupants (WI Dept. of Commerce, 2000 Consolidated Plan). Vacancy rates vary from one community to the next. High vacancy rates indicate a degree of competition in terms of price. The vacancy rate of a housing market is a good indication of the adequacy of the housing supply, which in turn helps dictate the cost of housing. In 2000, the vacancy rate for owner-occupied housing

units in Mukwa was 1.1%. By comparison, the owner-occupied housing unit vacancy rate in the Waupaca County was 1.5% in 2000. The Town of Mukwa also has 5.6% of its housing units classified as seasonal, recreational or occasional use dwellings (61 units), and had no rental vacancies in 2000 (81 total units).

Cost of Housing

The available supply, age, and condition of the housing stock are the basis for determining the demand for and cost of housing. Table 14.0 compares the median home values in nearby communities and Waupaca County over the last decade. Between 1990 and 2000, only the Town of Lebanon (67%) had a lower increase in median home value than Mukwa (75%), although all of the communities listed in the table experienced healthy increases in their total home valuation.

Community	1990 Median Value	2000 Median Value	% Change 1990 - 2000
Town of Mukwa	\$68,300	\$119,300	75%
Town of Lebanon	\$62,300	\$104,300	67%
Town of Royalton	\$57,600	\$107,100	86%
Town of Caledonia	\$61,700	\$119,800	94%
City of New London	\$47,400	\$83,600	76%
Waupaca County	\$49,300	\$89,300	81%

SOURCE: 1990 and 2000 U.S. Census
NOTE: Median Value of Housing Unit does not include value of land on which the housing unit is located.

Cost Range	Number of Units	% Of All Town Owner Occupied Housing
Less than \$50,000	22	3.5%
\$50,000 to \$99,999	174	27.9%
\$100,000 to \$149,999	265	42.5%
\$150,000 to \$199,999	94	15.1%
\$200,000 to \$299,999	50	8.0%
\$300,000 to \$499,999	15	2.4%
\$500,000 or more	4	0.6%

SOURCE: 2000 U.S. Census – based on 705 owner-occupied units reporting from the long census form
NOTE: Median Value of Housing Unit does not include value of land on which the housing unit is located.

Table 15.0 provides a more detailed breakdown of the 2000 Census information pertaining to the value of owner-occupied housing units in the Town of Mukwa. What is significant to note from this table is that almost three-quarters of the homes in Mukwa (73.9%) are valued at less than \$150,000. This suggests that the Town can support both a continuing increase in “starter homes” as well as upscale owner-occupied housing.

With respect to rental housing, there were 81 renter-occupied housing units in the Town of Mukwa in 2000. The median contract rent rate in the Town was \$520 (not including utilities.) This rate is higher than the 2000 median contract rent rate for Waupaca County (\$450) and just lower than that of the state (\$540). Although Mukwa had eleven structures with between three and nine housing units in 2000, there are no larger, multi-family dwellings in the Town.

Housing Affordability Analysis

Does the cost of housing match the ability of residents to pay for it? This is the fundamental question when determining housing affordability. There are many ways to determine the answer. One common technique comes from the U.S. Department of Housing and Urban Development (HUD). It involves a comparison of income with housing cost. According to HUD, housing is considered affordable when it costs no more than 30% of total household income.

In 2000, the median annual household income in the Town of Mukwa was \$51,953 and the median monthly income was \$4,329. Thirty percent of this figure yields \$1,299 or less to be used for housing costs. The 2000 median mortgage payment in Mukwa was \$984. This is well within the HUD threshold for affordability as long as the average monthly utility costs are less than \$315 per month. It must be noted that, with recent reductions in mortgage rates, many homeowners may have refinanced their homes to a more affordable monthly mortgage payment than that reflected in the 2000 U.S. Census data.

The 2000 Census information specifically breaks out housing costs as a percentage of household income. According to the information, 16.7% of Mukwa homeowners were paying more than 30% of their monthly household income on housing costs. More than half (58%) paid less than 20%. By comparison, 12.5% of renters in Mukwa paid 35% or more of their annual income on housing costs. This is partly attributable to Mukwa’s lower-than-average supply of rental housing.



Example of a smaller single family home (approx 1,600 square feet) on a quarter acre lot. This type of development may be suitable adjacent to existing residential development in Mukwa, or included within proposed subdivisions with larger homes.

The Town’s housing supply is generally unaffordable to residents relying on income from fixed sources (e.g. Social Security) or minimum-wage paying jobs. According to the 2000 U.S. Census, 21.1% of residents (214 persons) were receiving Social Security income². The mean (average) amount of annual Social Security income was \$13,737. For senior residents not receiving income from other sources (e.g. pension, job, etc.), 30% of their income on housing would amount to \$343 per month, far below the amount necessary to afford Mukwa’s owned or rental housing. In 2000 there were 24 units in Mukwa renting for \$500 or less. As a result, seniors dependent on Social Security income would either have to pay a larger percentage of their monthly income for housing than levels deemed affordable by HUD or live elsewhere. A similar situation exists for residents dependent upon jobs paying minimum wage. Working forty hours per week in a minimum wage paying job generates an annual income of \$10,712.

Opportunities for Housing Choice

To meet the needs of all residents, a community should strive to provide a variety of housing types, styles and values. As new, larger, and more expensive single-family homes are constructed, the Town must decide whether to encourage the construction of alternative types of housing. Seniors, singles, young families, and individuals on limited or fixed incomes may find it challenging to find housing in Mukwa today. The City of New London and other nearby communities currently fill that need.

However, the Town would still like to provide *some limited areas* for these types of housing choices in the community. There are many ways to incorporate alternative housing styles (e.g., senior housing, town homes, smaller single family homes) in Mukwa. The first priority when considering alternative housing should be to ensure that units can be adequately served with basic infrastructure needs. Since Mukwa has no municipal water or sewer system, this means the unit must be able to utilize a private well and on-site wastewater treatment. To address this issue and related concerns, the Town could pursue a number of options including forming partnerships with local non-profit organizations, like Habitat for Humanity, to encourage affordable housing development, and providing education materials to developers about grant and loan opportunities available through the state and federal governments for the development of affordable housing. New alternative development should be compatible with surrounding housing. Therefore, special consideration should be given to parking, signage, landscaping and facade requirements.

The projected population for the Town of Mukwa, based on state projections, is 3,303 residents by the year 2025. In the last ten years, household size has decreased from 2.92 to 2.78 persons per housing unit. This trend is expected to continue in the future. Accordingly, more housing units will be needed to accommodate the population, even if the number of people were to remain unchanged. Based on the population projections, it is estimated that there will be 150 additional housing units in the Town of Mukwa by 2025. As was discussed in Chapter 3, these projections are based upon DOA formulae that tend to err towards the conservative. The Town of Mukwa has averaged twenty-seven new home starts during each of the past three years. Should that number indicate the norm, Mukwa could experience a residential growth boom of more than 560 new homes by the year 2025.

Year	Projected Population	Projected Household Size
2005	2,886	2.74
2010	3,009	2.67
2015	3,117	2.62
2020	3,214	2.57
2025	3,303	2.55

Housing Issues and Concerns

RATE OF HOUSING DEVELOPMENT

As is demonstrated by the data in this chapter, the rate of housing development in the Town of Mukwa has remained relatively stable during previous decades, but has intensified in the last five years. Residents are concerned that this rate of housing development may threaten the rural character of the community. Several strategies can be employed to address this concern including: the use of conservation-based development to protect open spaces and natural areas (refer to Chapter 7); protecting the natural areas illustrated on the Future Land Use Maps and directing development away from these areas; and encouraging smaller lot sizes.

² The Census data does not indicate whether Social Security is the sole source of income for the residents identified in the Census report. It should not be assumed that 21.1% of residents are living solely on Social Security income.

AVAILABILITY OF SENIOR HOUSING

The availability of housing for a growing senior population is a concern in Mukwa, as it is throughout the country. Specifically, some residents are concerned about providing an adequate supply of assisted living units for those elderly residents who want to remain in the Town. It is not feasible, from an economic perspective, for Mukwa to develop senior housing as part of the Town budget. Moreover, Waupaca County has no plans to establish a senior housing facility in the community. Therefore, in order to provide assisted living facilities, private developers will in the future have to determine a market need and establish such housing.

DESIRE FOR MIXED DEVELOPMENTS AND AFFORDABLE HOUSING CHOICES

During the development of this plan, some residents expressed a desire to see more diversity in the housing choices available in the Town. Newer development has been dominated by sizable single-family housing. Town homes, housing for seniors, and multi-family apartments have not been pursued. Pursuit of these and other alternative housing options will likely require revisions to the Waupaca County zoning ordinance as it pertains to the Town of Mukwa. The revision may include the incorporation of *planned unit developments* as a land-use tool in Mukwa.

HOUSING CHOICES THAT RESPECT NATURAL CHARACTER OF THE AREA

During the planning program, residents clearly expressed a desire to preserve the unique landscape and natural assets that make Mukwa a special place to live (see survey results in Chapter 7). Accordingly, they do not want to see these features lost to accommodate residential or commercial development. Rather, new housing development should be done in harmony with the natural environment. *Conservation Subdivisions* provide developers with a marketable alternative to conventional subdivision design, allowing communities to accommodate an increasing population while preserving important natural resources (conservation subdivisions will be discussed in detail in the Land Use Chapter of the Comprehensive Plan). The Natural features Map (Chapter 7) identifies building suitability for various soils types used to determine areas that can accommodate housing based on soils, slopes, and other natural limitations. This information was an important tool used to develop the *Future Land Use Maps*.

Housing Programs

A number of federal and state housing programs are available to help the Town of Mukwa promote the development of housing for individuals with lower incomes, senior housing, and housing for people with special and/or housing maintenance needs.

FEDERAL PROGRAMS AND REVENUE SOURCES

HUD is the federal agency primarily responsible for housing programs and community development. Though many of its programs are directed to larger cities and urban areas, the Town of Mukwa may qualify for some funds. HUD provides money to non-entitlement communities (those with populations less than 50,000) through grants. In Wisconsin, the Division of Housing and Intergovernmental Relations (DHIR) within the Department of Administration is responsible for the distribution of these federal funds. It awards these funds through a competitive proposal process.

STATE PROGRAMS AND REVENUE SOURCES

Beyond the funds distributed through HUD, the DHIR administers several state funded programs that can potentially be used to finance housing improvements. Money available through the DHIR, because it is funded by general-purpose revenue, cannot be used to invest directly in housing development. However, funds can achieve the desired result by helping organizations develop the capacity to develop housing or by providing various types of financial assistance to homebuyers or renters through grants to local governments or non-profit agencies. The Wisconsin Housing and Economic Development Authority (WHEDA) is a quasi-governmental agency that finances housing development through the sale of bonds. Unlike the DHIR, it receives no direct state-tax support. Therefore, WHEDA can provide mortgage financing for first-time homebuyers and financing for multifamily housing as well. Specific programs evolve and change with the needs of the housing market.

LOCAL PROGRAMS AND REVENUE SOURCES

The Town of Mukwa has the ability to affect the type and cost of housing available in the area through local regulations and policies. While most government regulations are implemented in order to protect public health, safety, and welfare needs, they may also have unintended adverse impacts on affordability. One technique for ensuring a range of housing choice is to provide a variety of densities and lot sizes. This is regulated through the development of land division, subdivision, and access control ordinances, among others. Recommendations related to these tools are provided in the Land Use and Implementation Chapters of this plan. Town codes and ordinances can also impact the quality of housing choices. The current Waupaca County zoning ordinance has strict requirements for minimum dwelling unit sizes in the residential zoning districts. The Land Use and Implementation chapters of the Plan will discuss ways in which existing ordinances can be modified to allow the Town of Mukwa to implement its housing strategy.

Coordination with Other Comprehensive Plan Elements

Housing directly affects most other elements of this comprehensive plan. Land Use, Utilities and Community Facilities, Transportation, Economic Development and Agricultural, Natural, and Cultural Resources are all influenced by, and directly related to, housing. The goals and policies set forth in this Housing Element will affect these other chapters, and vice versa. Therefore, it is important that these elements are consistent and supportive of each other.

LAND USE ELEMENT

Location considerations are an important aspect of land use planning. Resident needs, such as easy access to services and shops by car, foot, or alternate forms of transportation, should be incorporated into all housing decisions. Even in a predominantly rural community like Mukwa, these issues can be addressed through sound planning. As the community grows, and as commercial development becomes a more significant component in the landscape, it is important to proceed with locational decision-making that guides residential development based not only on market factors, but on ecological and cultural ones as well.

UTILITIES AND COMMUNITY FACILITIES

Improvements such as roads, recreational facilities, and schools must be coordinated with housing decisions and vice versa. The best method to coordinate improvements is to follow the land use pattern presented on the *Future Land Use Maps* as closely as possible and plan for future improvements in the capital improvements process and Town budget. This approach will greatly enhance the efficiency of capital improvements expenditures.

TRANSPORTATION

The location of housing affects commuting patterns and transportation costs and influences which roads people drive or whether they need to drive at all. These factors were carefully considered in the Transportation Element to ensure compatibility with projected residential development.

A Reminder...

When reviewing the Comprehensive Smart Growth Plan, one must remember that the document was created to plan for the Town of Mukwa through 2025. As the landscape has changed during the past twenty years, so shall it change during the next twenty.

The Comprehensive Plan is intended to serve as a guidance document providing the community with a set of tools necessary to address land use issues on the horizon, as well as those faced by the Town today. Although commercial and industrial development are now relatively minor components of the landscape, and may remain so during the next two decades, the plan must be drafted so as to provide Mukwa with the means necessary to address all of the potential land use issues it may face during coming years.

ECONOMIC DEVELOPMENT

The Economic Development Element discusses housing as a strategy for promoting economic development. A key determinant in choosing whether to relocate to a community, by prospective employers or employees, is the quality and availability of desired housing. Local employment choices bring people to the community and keep residents in the community. The Economic Development Element considers housing as an economic activity in the context of the local tax base.

INTERGOVERNMENTAL COOPERATION

To effectively plan for housing, it is imperative that the Town of Mukwa coordinate its planning efforts with those of neighboring communities. If Mukwa pursues aggressive strategies to require mixed development, growth management, and design guidelines, it is possible that developers will simply avoid the Town and seek to develop in neighboring communities. No community is an island. The Town must work with adjacent local government and Waupaca County to ensure that the vision and plan for the region is consistent and compatible.

Goals, Objectives and Policies

Based on the 20-year population projections and the predicted reduction in household size over that same period, it is estimated that there will be at least 150 additional housing units needed in the Town of Mukwa. To ensure that these units are of a high quality, goals and objectives are included in Chapter 12, Implementation, based on the information gained during the visioning process, analysis and input from Town elected officials and residents, and the Citizen's Advisory Committee for Land Use (Comprehensive Planning) (Comprehensive Planning). The goals, objectives, and policies were developed to ensure that Mukwa remains a great place to live and raise a family, with predominately single-family residential uses in a growing community environment: a community that is open to new development, and one that also respects the opportunity for all property owners to receive fair value for their land.

Please refer to Chapter 12 to review the goals, objectives, and policies for the Housing Chapter.



Introduction

A diversified, well-balanced transportation system is a major factor affecting growth and quality of life in a community. The transportation system exists to move people, goods, and services both through and within the community. Planning for the various modes of transportation is one of the most important components of the Comprehensive Plan for the Town of Mukwa.

The transportation system for the Town consists of arterial roads, county trunks, a state highway, and a railroad corridor. This chapter examines the transportation network, including a summary of existing transportation plans, studies, and assessments, and provides a list of recommendations to address future transportation needs and desires.

Wisconsin's Smart Growth Law includes 14 goals for local comprehensive planning. The goals listed below specifically relate to planning for transportation:

- Encouragement of neighborhood designs that support a range of transportation choices.
- Encouragement of coordination and cooperation among nearby units of government.
- Providing an integrated, efficient, and economical transportation system that affords mobility, convenience and safety and that meets the needs of all citizens, including transit dependent and disabled citizens.

Transportation Vision

In 2025, more residents than ever before take advantage of organized transit choices (including car pooling) to cost-effectively connect their community with nearby employment centers, entertainment venues, and retail areas. Trails and walkways are an integral part of the recreation and transportation network, providing connections between neighborhoods, neighboring communities, schools, parks, and the greater region. Although personal vehicles remain the primary choice for transportation, walkers, bicyclists, Nordic skiers, horse riders, and snowmobile and ATV enthusiasts enjoy a network of trails linking the community with surrounding areas. A well-maintained system of Town and County roads and State highways provide for the safe and efficient mobility of people and goods.

VISION, VALUES, AND SWOT EXERCISES

During the Values phase of the Kick-Off meeting held at Mukwa Town Hall on July 21, 2004, Town residents identified “well-maintained roads and highways” as one of seventeen valued assets of the community. Transportation-related issues also played a prominent role during the SWOT portion of the meeting. Existing transportation facilities were identified as a strength of the community, while increased traffic as a result of the new USH 45, speed control, road maintenance, and roads too narrow for safe bicycling and walking were identified as weaknesses. Bike trails, improved roads, ATV trails, and the USH 45 corridor were viewed as opportunities by meeting participants.

COMMUNITY SURVEY RESPONSES

Tables CS-7 through CS-12 illustrate community survey responses to questions related to *Transportation* in the Town of Mukwa.

TABLE CS-7: How far do you travel to work?	
I do not work (i.e. retired, unemployed)	30.2%
Work at home	4.1%
5 miles or less	17.5%
6-20 miles	21.0%
More than 20 miles	27.1%

TABLE CS-8: In your opinion, how adequate is the current availability of bicycle and pedestrian trails in the Town of Mukwa?	
Very inadequate	13.7%
Inadequate	33.0%
Adequate	31.6%
Very adequate	4.9%
No opinion	16.8%

TABLE CS-9: To what extent would you encourage or discourage bicycle and pedestrian trails in the Town of Mukwa?	
Strongly discourage	5.4%
Discourage	8.2%
Encourage	49.1%
Strongly encourage	26.9%
Neither encourage or discourage	10.4%

TABLE CS-10: In your opinion, how satisfied are you with the current quality of existing transportation facilities in the Town of Mukwa?					
	Very Dissatisfied	Dis-satisfied	Satisfied	Very Satisfied	No Opinion
Town roads	4.9%	15.3%	55.4%	22.0%	2.4%
County trunk roads	2.5%	8.8%	56.9%	27.9%	3.9%
State highway 54	2.1%	2.8%	56.2%	32.2%	6.7%
Bicycle and pedestrain trails	9.1%	24.9%	32.5%	14.3%	19.2%
Snowmobile trails	1.4%	5.1%	40.7%	25.7%	41.2%
Other (public canoe landings)	43 people listed canoe landings as a concern but did not identify level of satisfaction				

TABLE CS-11: In your opinion, what is the most immediate concern with respect to transportation in the Town of Mukwa?	
Driveway access to State highway 54	2.4%
Traffic on Town and County roads	20.6%
Traffic on State highway 54	8.9%
Timely road maintenance	56.7%
Additional trails	6.2%
Bus Service	2.4%
Other: speeding in general; speeding on Manske road, county roads, STH 54	2.7%

TABLE CS-12: In your opinion, who should be responsible for the costs associated with road expansions to accommodate development?	
Town of Mukwa	7.5%
Developer	81.0%
No opinion	7.2%
Other: Cost split between Town/developer	4.3%

Inventory of Existing Transportation Facilities

This section provides a description of the transportation choices currently available in the Town of Mukwa.

PEDESTRIAN FACILITIES

Most Americans rely on the automobile as their primary source of transportation. Pedestrians are often overlooked in many plans, particularly those in rural, agricultural areas. Yet, many of America's worst health problems, such as heart disease, high blood pressure, and obesity, are directly related to a sedentary lifestyle. Since World War II, cities and rural areas alike have evolved into a habitat more suited to cars than people. Many residents may find it difficult to get exercise partly because their living situations require them to commute everywhere by car. Modern planning for towns, villages, and cities emphasizes development patterns more suitable to alternative forms of transportation, including walking. These new approaches recommend that residential development be built around the concept of "walkable neighborhoods." Walkable neighborhoods promote social interaction, community safety, and physical fitness. Ideally, new residential development consistent with walkable criteria should be within a quarter mile, or a 5- to 10-minute walk, of a destination point (e.g., school, shopping, park, church, etc.). Trails are often used to provide connections between neighborhoods, communities, and regional destinations.

Generally, there are two classifications of walkers: people who walk for recreation and exercise and those who walk for transportation purposes. People who walk as their primary transportation choice are usually without alternatives (e.g., seniors and youth who cannot drive). Most people walk when it is convenient. Walking facilities in the Town are limited at this time. Nearly half (47.7%) of residents who completed the Community Survey described the existing availability of bicycle and pedestrian trails as inadequate or very inadequate (Table CS-8, page 33). Thirty-four percent of respondents indicated they were dissatisfied or very dissatisfied with the current quality of bicycle and pedestrian trails in the Town (Table CS-10, page 33).

When people walk in Mukwa, for recreation or as an alternative means of transportation, they do so primarily on roads shared with cars and trucks. A smaller population combined with low traffic volumes on many of its rural roads makes the Town a relatively safe place to walk at present. However, as the population increases over the next twenty years, corresponding increases in traffic on these roads may greatly reduce pedestrian safety. One way in which the Town may increase opportunities for safe walking in the community is to require that developers include trails within each new residential development project. Conservation subdivisions often include trails as a key component of their design (for additional information on conservation subdivisions, refer to Chapter 7). Components of the trail network in each new residential development can then be linked to form the foundation of a community-wide trail system.

BICYCLING OPPORTUNITIES

Bicycle usage falls into two categories - utility and recreational. Utility bicycling, or bicycling as a form of transportation, is most common for children. Without bicycle trails, or designated bike lanes, utility bicycling must occur on roads shared by cars and trucks. Safe biking opportunities in the Town are extremely limited at this time. Recreational bicycling can be divided into on-road and off-road uses. On-road users utilize streets, roads, and paved trails. Off-road users bicycle on non-paved routes.

More than three-quarters (76%) of the residents who responded to the Community Survey indicated they would encourage or strongly encourage bicycle and pedestrian trails in Mukwa. The potential exists to establish trails in newly developed and developing areas that include open spaces dedicated for stormwater management or conservation. Through the subdivision review process, Mukwa can work with developers to link these areas to an integrated trail network. The potential to create a network of greenways through the Town, with linkages to nearby trail routes like the Ice Age and Wiouwash, is an achievable goal. While the primary purpose of these corridors is to control storm water or to provide open space, secondary opportunities include their use as wildlife corridors and as a potential greenway trail network.

Local bicycle facilities, including trails and routes (either paved shoulders or visually narrowed roadways), are necessary to provide safe areas for bicyclists. Ideally, bicycle routes will eventually traverse the Town providing links to residential areas, recreation areas, commercial areas, and other destination points.

What's the Difference?

Trail – Off-street paths that accommodate bicycles and pedestrians.

Bicycle Way – Also referred to as Bicycle Route; facilities for bicycle travel associated with street rights-of-way, including signed bicycle routes, striped and signed bicycle lanes and separate bicycle paths within a highway right-of-way. Bicycle routes generally accommodate bicycle travel only. Pedestrian use of these areas is discouraged.

Multi-Use Trail – designed for use by cyclists and pedestrians, and in some cases, horse riders, in-line skaters, Nordic skiers, and others.

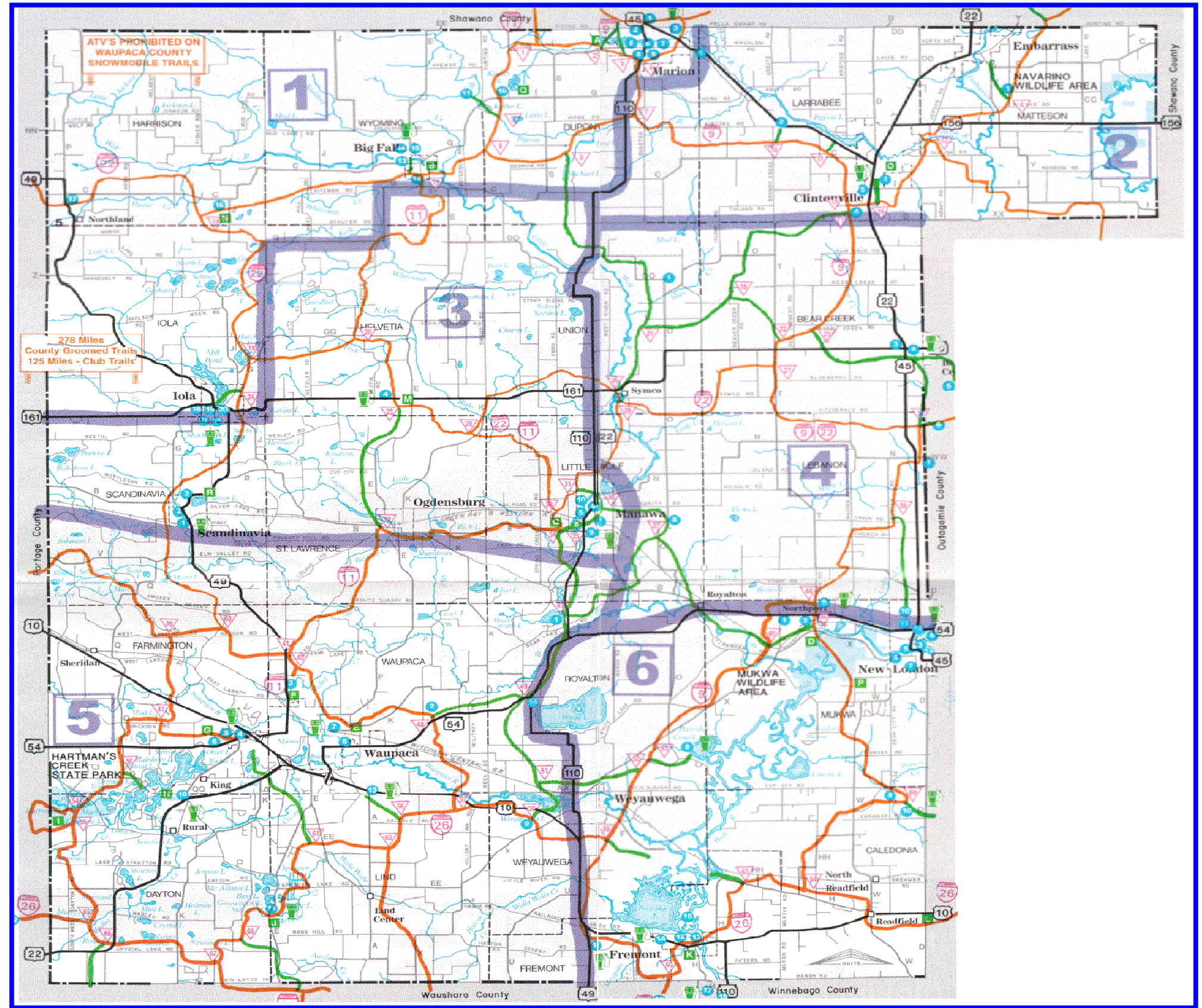
SNOWMOBILE TRAILS

The Association of Wisconsin Snowmobile Clubs (AWSC) was formed in 1969 in Minocqua to serve and represent snowmobile owners and riders in the state. The AWSC is a non-profit organization of local snowmobile clubs dedicated to the welfare of recreational snowmobiling. There are currently sixteen AWSC affiliated clubs located in Waupaca County with one, the *Northport Snow Riders*, located in the Town of Mukwa. There are approximately 278 miles of available trails groomed by Waupaca County, with an additional 125 miles operated by the AWSC clubs located in the county. The AWSC trails are established between affiliated clubs and private landowners that allow the group to groom and use portion of their properties. Use of these trails is dependent upon snow coverage.



ALL TERRAIN VEHICLE (ATV) TRAILS

There are no designated ATV trails located in the Town of Mukwa at this time. All existing snowmobile trails in Waupaca County are off-limits to ATV riders.



SOURCE: Map courtesy of Waupaca County Parks & Recreation Department, 2003.



RAILROAD CORRIDORS

The only active rail line in Mukwa is operated by Canadian National and extends from the City of Appleton in Outagamie County west through the City of New London terminating at the City of Manawa. A second active rail line south of the Town, also operated by Canadian National, extends west from the City of Neenah in Winnebago County through Weyauwega and Waupaca before connecting with other lines in the City of Stevens Point. A rail corridor formerly operated by Canadian National extending east from the City of New London to the Oneida Indian Reservation has been placed in the *Rails-to-Trails* program (see box at right). This corridor is currently owned and maintained as a multi-use recreational trail by WDNR in partnership with the Oneida Nation.

MASS TRANSIT

There are no public transit systems currently operating in the Town of Mukwa. It is important to note, however, that seven residents responding to the Community Survey identified Bus Service as the most immediate transportation concern in the community. As the population of the Town ages, both the need and the market for some form of public transportation will grow.

Road Classifications

Streets and highways are classified according to their primary function, either to move vehicles or to serve adjacent land.

▣ *Principal Arterials* – serve interstate and interregional trips.

▣ *Minor Arterials* –accommodate inter-regional and inter-area traffic movements, often in conjunction with principal arterials.

▣ *Major Collectors* – provide service to moderate sized communities and other intra-area traffic generators. Many county trunk highways fall into this classification.

▣ *Minor Collectors* – these roads collect traffic from local roads and provide links to all remaining portions of smaller communities and other higher function roads.

▣ *Local Roads* – provide direct access to residential, commercial and industrial development.

STREETS AND HIGHWAYS

The roadways that pass through the Town of Mukwa will continue to serve as the primary transportation system for residents. Residents value the easy access the road network provides to the Fox Cities, Oshkosh, Waupaca, Stevens Point, and beyond.

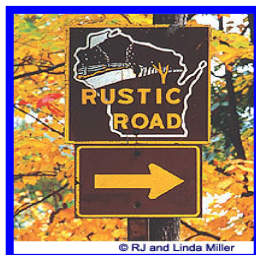
Streets, roads, and highways are classified according to their primary function, either to move vehicles or to serve adjacent land uses (see *Road Classifications* in box at left for definitions). A classification of the roads and highways in Mukwa is provided on the *Transportation Network Map* (on page 38), as are available traffic volume data and other information. At this time, Mukwa has not developed an *Official Map*. The *Official Map* is an important tool allowing local governments to preserve corridors for future capacity expansion, access controls, and to reduce the impact of future development with possible turn lanes, bypass lanes, and intersection improvements. An *Official Map*, if developed, must be updated on a timely basis to keep pace with development.

What is the Rails to Trails program?

In 1983, the U.S. Congress passed the National Trails Systems Act (NTSA). The purpose of the NTSA was to preserve existing rail corridors for future transportation uses.

When it is no longer economically feasible to maintain freight rail service, the rail lines may be rail banked for future use or converted to recreational trails. Lines used as trails under the program are not considered abandoned. These lines retain their titles and easements and may be reactivated in the future.

The majority of the lines preserved under Rails to Trails in Wisconsin have been acquired by the Department of Natural Resources.



RUSTIC ROADS¹

The Wisconsin Legislature established the Rustic Roads program in 1973 to help citizens and local units of government preserve what remains of Wisconsin's scenic, lightly traveled country roads. Unique brown and yellow signs mark the routes of all officially designated Rustic Roads. These routes provide bikers, hikers, and motorists an opportunity to leisurely travel through some of Wisconsin's scenic countryside. Although there are no designated Rustic Roads in Mukwa at this time, the Town may submit an application to WisDOT to have one or more of its roads accorded the designation. To qualify for the Rustic Road program, a road:

¹ Text excerpted from WisDOT Rustic Roads website, 2005.

- Should have outstanding natural features along its borders such as rugged terrain, native vegetation, native wildlife, or include open areas with agricultural vistas which singly or in combination uniquely set this road apart from other roads;
- Should be a lightly traveled local access road, one which serves the adjacent property owners and those wishing to travel by auto, bicycle, or hiking for purposes of recreational enjoyment of its rustic features;
- Should be one not scheduled nor anticipated for major improvements which would change its rustic characteristics; and,
- Should have, preferably, a minimum length of 2 miles and, where feasible, should provide a completed closure or loop, or connect to major highways at both ends of the route.

In order to begin the process for Rustic Road designation, the Town should identify roads it would like to see included as part of the Rustic Roads system. The next step would be to initiate and circulate petitions among resident property owners along the candidate road. WisDOT encourages local governments to work with civic, recreational, and environmental groups to publicize and encourage the success of the Rustic Roads program. An application for Rustic Road designation can be found by visiting the WisDOT website at www.dot.wisconsin.gov/travel/scenic/rusticroads.

WATER TRANSPORTATION

The Wolf River enters Mukwa from the City of New London flowing in a southwesterly direction before exiting the Town in just south of Partridge Crop Lake. Historically, the Wolf served as a vital transportation route linking Lake Winnebago with New London (see Early Town History, page 2). Although the river remains a popular destination for anglers and recreational boaters, it no longer serves as a commercial transportation route.

TRUCK TRANSPORTATION

Truck traffic is a common concern for residents, with speed, noise, and volume being areas of contention. Since it is all but impossible to segregate truck traffic from automobile, WisDOT designates state highways and specified county highways and local roads as truck routes. The designation is based upon a variety of factors including service to local business; proximity to schools, churches, and other places where people congregate; and, the ability of a given roadway to withstand the greater weights associated with truck traffic, among others. Designated truck routes in the Town include USH 45, STH 54, CTH D, CTH W, and CTH X.

The Wisconsin Statutes define standards for the length, width, and weight of trucks allowed on certain roadways to prevent road degradation and untimely maintenance. The goals and objectives listed in Chapter 12, Implementation, discuss this concept and others related to truck transportation in greater detail.

AIRPORTS

There are no public use airports located in the Town and no plans exist for the development of a commercial airport in the near future. The nearest airports are Waupaca Municipal Airport (Transport/Corporate) in Waupaca, Clintonville Municipal Airport (Transport/Corporate) in Clintonville, Outagamie County Regional Airport (Air Carrier/Air Cargo), in Appleton, Stevens Point Municipal Airport (Transport/Corporate) in Stevens Point, and Austin Straubel International Airport (Air Carrier/Air Cargo) in Green Bay. These airports meet current resident needs for travel and business freight and are expected to do so into the foreseeable future.

PRIVATE AIRPORTS/AIRSTRIPS

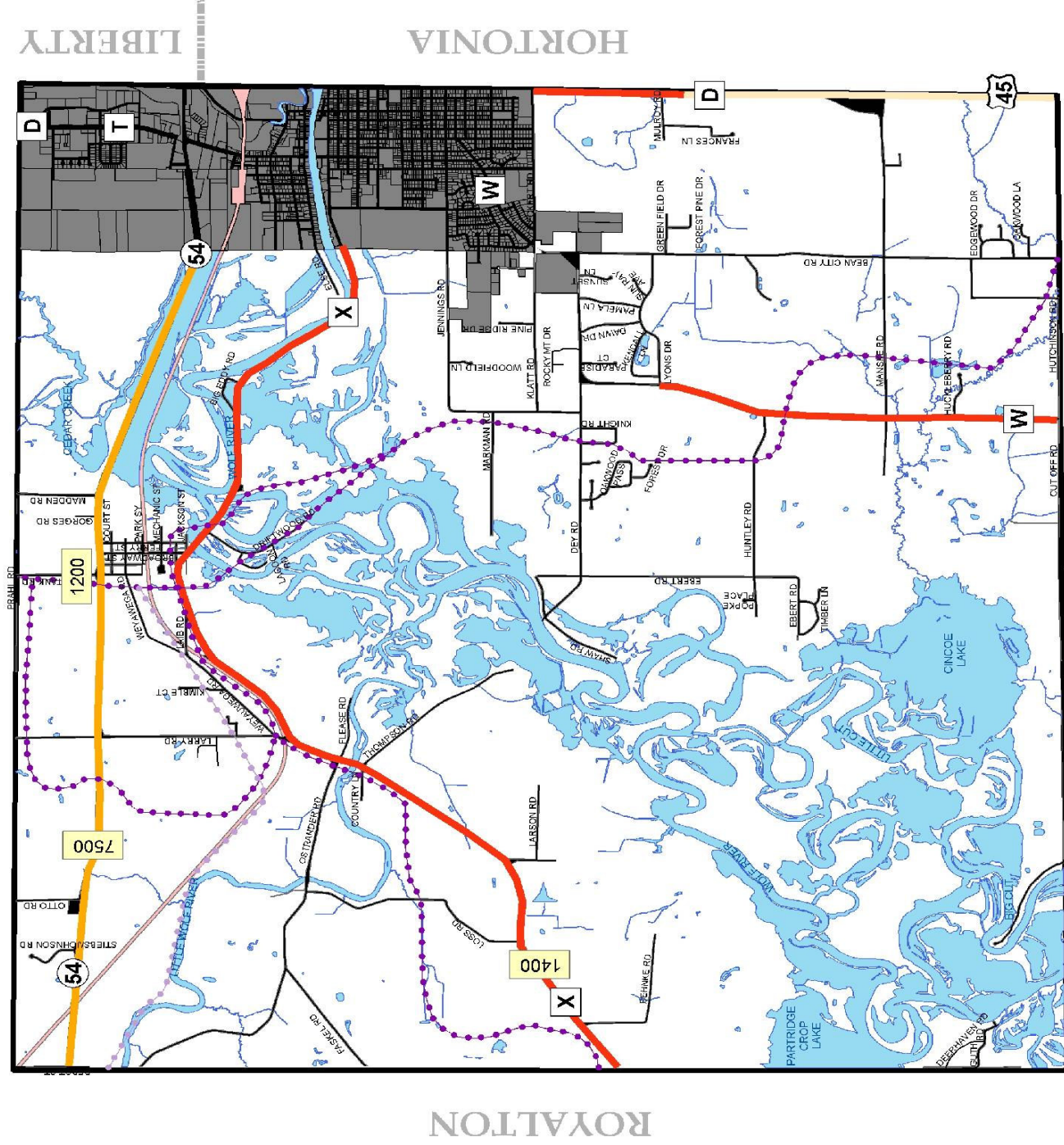
There are three airstrips located in the Town of Mukwa. They include:

- Poppy's Flying Acres (est. 1985) – Three Federal Aviation Administration (FAA) registered runways. Two are turf runways of 2,300' x 125' ft and 3,500' x 100'. The third is a water runway of 1,800' x 100' for seaplane use.
- Curns (est. 1994, 1999) – Two FAA registered turf runways (1,001' x 60' and 2,500' x 60').
- Mc Faul (est. 1999) – One FAA registered turf runway, 1,000' x 60'.

TOWN OF MUKWA

TRANSPORTATION NETWORK

LEBANON



CALEDONIA

LEGEND

- ROADS
- RAIL TRANSPORTATION
- WATER
- CITY OF NEW LONDON
- TRAFFIC COUNTS
- PRINCIPAL ARTERIAL
- MINOR ARTERIAL
- MAJOR COLLECTOR
- COUNTY SNOWMOBILE TRAILS
- CLUB SNOWMOBILE TRAILS

N

0 2,000 4,000 Feet

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Omni
ASSOCIATES

PROJECT # M151A04
DATE: 03/09/05
DRAWN BY: KAL
REVISED: 04/25/06

C:\E:\SYSTEMS\DRIVE\CPLE\TOWN\MUKWA\541

LOCATION: F:\GIS\M151A04\DRAWINGS\Transportation_11x17.mxd
SOURCE: Waupaca County
East Central Wisconsin Regional Planning Commission
Wisconsin DOT - District 4

Summary of Existing Transportation Plans, Studies, and Projects

WISCONSIN STATE HIGHWAY PLAN 2020

Wisconsin's State Trunk Highway system, consisting of approximately 11,800 miles of roads, is aging and deteriorating at the same time traffic is increasing. In response, WisDOT, in partnership with its stakeholders, developed the *WisDOT State Highway Plan 2020*, a strategic plan that considers the highway system's current condition, analyzes future uses, assesses financial constraints, and outlines strategies to address Wisconsin's preservation, traffic movement, and safety needs. The plan is updated every six years to reflect changing transportation technologies, travel demand, and economic conditions in Wisconsin.

The relocation of USH 45 was undertaken as a result of the *WisDOT State Highway Plan 2020* to alleviate congestion between Appleton and New London. There are no other highway improvement plans pending within or nearby the Town of Mukwa during the next five years.

US HIGHWAY 45 RELOCATION AND CORRIDOR STUDY²

The US Highway 45 Relocation and Corridor Study was drafted in July 2001 following a decade-long planning process. It was designed to be a non-technical overview of the USH 45 relocation project. The decision to reroute USH 45 was based on studies showing that significant tourism traffic destined for northern Wisconsin and Michigan's Upper Peninsula were using the STH 110/CTH W/CTH D corridor between Oshkosh and New London rather than the existing USH 45. USH 45 was relocated to address both current and future traffic volumes.

WISCONSIN STATE BICYCLE PLAN 2020

The *Wisconsin Bicycle Transportation Plan 2020* was drafted by WisDOT in December 1998. The vision statement of the plan is: "To establish bicycling as a viable, convenient and safe transportation choice throughout Wisconsin." The document included eight elements: *Plan Vision, Goals and Objectives; Current Bicycling Conditions; Benefits and Impacts of Bicycling; Public Involvement; Intercity; Urban/Suburban; Bicycle Safety; and Implementation*. In the implementation section, WisDOT identified the roles and responsibilities of various levels of state and local government. Local governments are encouraged to:

- Develop, revise, and update long-term bicycle plans and maps;
- Consider the needs of bicyclists in all street projects and build bicycle facilities accordingly;
- Promote and offer bicycle safety programs;
- Consider providing locker room facilities for employees;
- Consider bicycle racks on buses;
- Encourage business involvement as a means to increase bicycle commuting and other functional trips; and,
- Help promote bike to work/school day.

² Text excerpted from *US Highway 45 Relocation and Corridor Study: Summary Report and Adopted Primary Recommendations*, prepared by East Central Wisconsin Regional Planning Commission, 2001.

WDNR STATE RECREATIONAL TRAIL NETWORK PLAN³

The State Trail Network Plan (see map at right) was drafted by WDNR and approved by the Wisconsin Natural Resources Board. The plan provides a long-term, big-picture vision for establishing a comprehensive trail network for the state. It identifies existing and proposed trails and connections that would serve as the main corridors for a statewide trail system. The plan doesn't include every trail in the state, just the major arteries. It focuses mainly on abandoned rail corridors, utility corridors, critical road connections, and natural feature corridors that link places where people live and play, natural resource features, public lands, and other destinations.

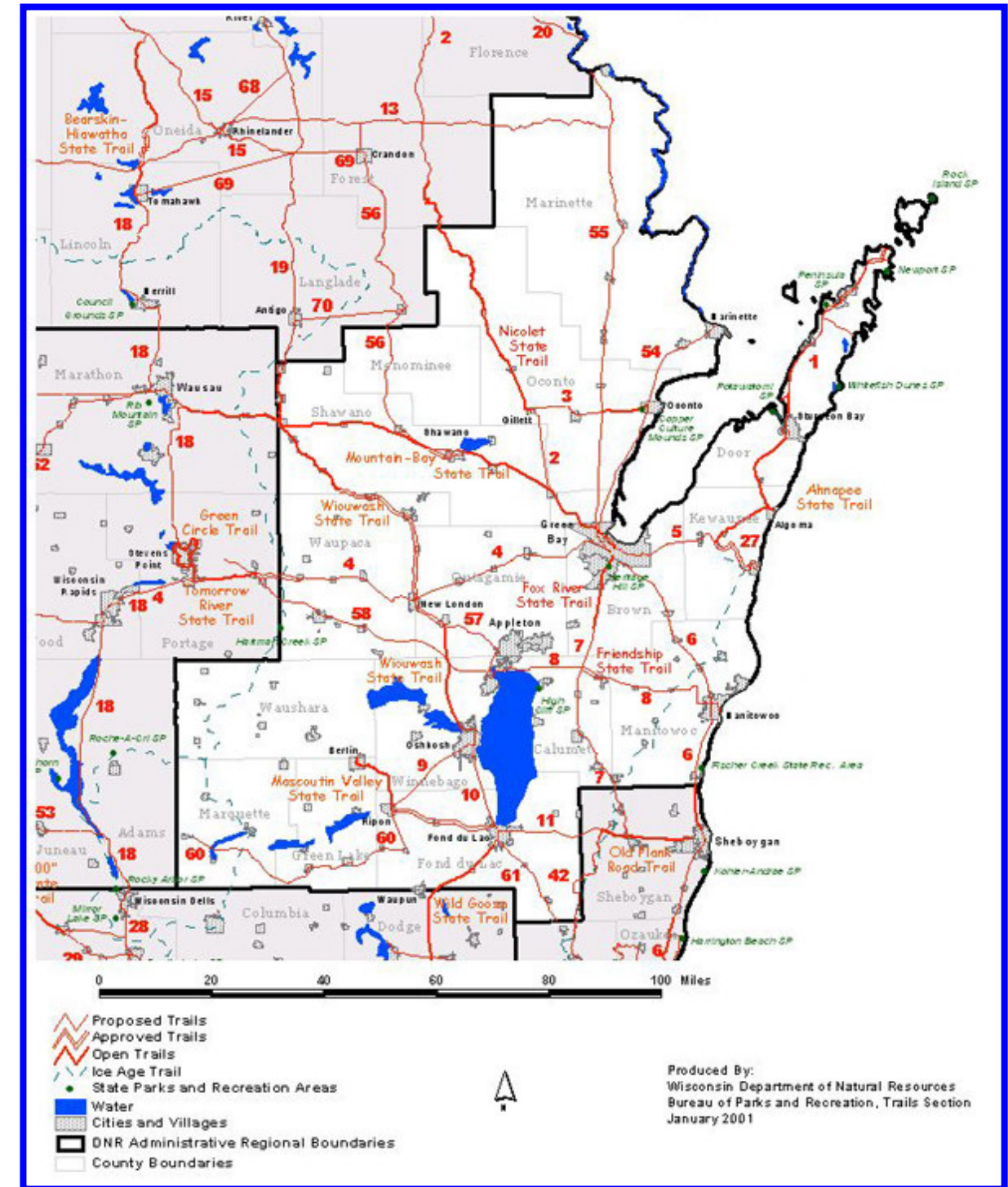
The plan recognizes the important role that trails developed by local units of governments serve as critical links. Under the plan, DNR staff will continue to work with local governments and encourage them to connect trails onto this network as they update local plans.

PAVEMENT SURFACE EVALUATION AND RATING

The Pavement Surface Evaluation and Rating (PASER) system is used to evaluate the surface condition of roadway pavement. Using specially equipped vehicles and advanced computer software, transportation engineers analyze and evaluate a road network to develop a PASER rating (see Table 17.0) which is then used to determine future maintenance and improvement needs. Road surfaces are rated on a scale from one to ten, with ten representing the highest condition and one the lowest. A rating of one or two requires total replacement of the road surface. Ratings of nine or ten require no maintenance. Roadways with ratings between three and eight require varying levels of maintenance that may include crack sealing, minor patching, seal coating, structural improvements, or leveling.

TABLE 17.0: Town of Mukwa Roads by PASER Ratings			
2003 PASER RATING	Number of Miles	Percent of All Roads	
1	1.0	2.5%	
2	0.1	0.3%	
3	1.1	2.7%	
4	4.4	10.8%	
5	9.3	23.1%	
6	4.8	12.0%	
7	12.0	30.0%	
8	3.3	8.3%	
9	0.3	0.8%	
10	3.9	9.7%	

SOURCE: PASER Rating System Reports for Towns of Mukwa, 2003.



NOTE: Map courtesy of Wisconsin Department of Natural Resources State Recreational Trails Network Plan, 2005.

³ Text excerpted from WDNR State Recreational Trail Network Plan website, 2005.

COMPARISON TO STATE AND REGIONAL PLANS

Jurisdiction over transportation facilities and services is divided among several layers of government (e.g., State Highways, County Roads, and Town Roads). Planning for the transportation network in the Town of Mukwa requires coordination among these jurisdictions. During the development of this plan, the Town researched regional and state transportation plans, policies, and programs. As a result, the transportation goals, policies, objectives, and programs in the Comprehensive Plan seek to complement state and regional transportation goals, objectives, policies, and programs by providing local transportation facilities and services that connect to county/regional and state facilities.

Transportation Issues, Concerns, and Opportunities

DEPENDENCY ON AUTOMOBILES

The majority of residents in Mukwa commute to jobs in the nearby employment centers of New London, Waupaca, Weyauwega, the Fox Cities, and elsewhere. Fuel costs have been steadily rising for the past decade and will continue to do so, both in the short- and long-terms. This trend may increase the desire for and value of a mass-transit system for the region. Existing development patterns result in longer commutes from home to work. While traffic congestion is not yet a major issue in Mukwa, anticipated population increases during the next twenty years will create additional strains on the road network. For other segments of the population, particularly children and seniors who are unable to drive, safe and convenient mobility makes them reliant upon the availability of friends or family to get to school, parks, shopping, and other destinations. Although these issues exist in most communities, they are more prevalent in rural areas.

PEDESTRIAN AND BIKE CONNECTIONS

Traffic volumes on town roads and state and county highways can present challenges to pedestrians and bicyclists. As the community continues to grow, safe pedestrian and bike access to local amenities become ever more important considerations for staff and elected officials. The *Transportation Plan* map endorses recommendations for improvements to the existing road network aimed at providing greater access throughout the communities for bicyclists identified within the *Bicycle Transportation Facilities Plan for the Bay-Lake Region*.

CREATING A WALKABLE COMMUNITY ⁴

Creating a “walkable community” provides commercial and residential development strategies to enhance opportunities for multi-modal transportation in Mukwa. Local ordinances can be drafted to include requirements that trails be incorporated into future residential subdivision projects. The following recommendations are aimed at improving walkability within the Town:

- **Providing linkages (including walkways, trails, and roadways) between neighborhoods and to destination nodes.** People need to have choices for traveling. Offering well-maintained roads, walkways, and trails provides improved access for residents (refer to the *Transportation System Plan* for recommended routes).
- **Enforce low speed streets in residential areas.** To promote a walkable community, motorists must respect speed limits in all areas, but particularly near areas where the public may congregate.

⁴ Based on the information available from Walkable Communities, Inc., as prepared by Dan Burden, a nationally recognized authority on bicycle and pedestrian facilities and programs.

What is a Walkable Community?

Walkable communities are desirable places to live, work, learn, worship, and play, and therefore a key component of smart growth. Their desirability comes from two factors:

- 1) They are located within an easy and safe walking distance of goods (such as housing, offices, and retail) and services (such as transportation, schools, libraries) that a community resident or employee would utilize on a regular basis.
- 2) They make pedestrian activity possible, thus expanding transportation options, and creating a streetscape that better serves a range of users - - pedestrians, bicyclists, transit riders, and automobiles.

SOURCE: Smart Growth Network, 2004. Available on-line at www.smartgrowth.org

- **Provide inspiring and well-maintained public streets within future commercial and residential development projects.** Streets in a walkable community are attractive and colorful and may include sidewalks or walkways, planter strips, and other pedestrian amenities providing an attractive, inviting place for walking.
- **Integrate land use and transportation.** In walkable communities, residents understand and support compact development, residential infill, integral placement of mixed-use buildings, and mixed income neighborhoods. Residents feel they have choice of travel modes to most destinations.

SAFETY CONCERNS

Speed enforcement on Town and County roads was the primary safety issue expressed by residents during the Kick-off Meeting and in their responses to Community Survey questions. The Town should collaborate with the County and the Sheriff's department to improve safety and enforce existing speed limits on local roads. The Town should also plan to review and update all ordinances regarding traffic speed and consolidate them accordingly.

TRANSPORTATION BUDGETING

Road maintenance and improvement costs are a major expense and can consume a large share of the local budget. The development of a capital improvements plan (CIP) and budget can aid in anticipating and funding future transportation needs. A CIP is a five to six year short-range plan with updates occurring annually. A transportation-oriented CIP outlines a community's capital item needs and purchase plans, including:

- Park acquisition and improvements
- Public buildings improvements and maintenance
- Emergency vehicle purchase and replacement
- Trail development
- Street improvements (e.g. widening, crosswalks, signalization, corridor studies, etc.)

Capital items are generally defined as those items that are expensive (cost \$5,000 or more) and will last at least 3-5 years. The CIP also includes improvement projects required for the community's future and the appropriate timeline and funding to be followed to implement the improvements. The general steps involved in developing and maintaining a CIP include:

- Identifying desired capital items. Items should be categorized by type (i.e. road, fire, water, sewer, etc.). This process should involve staff, residents, plan commission, and elected officials.
- Estimating the cost and means of financing each capital expenditure.
- Comparing the desired expenditures to the budget to determine annual spending priorities.

The CIP process helps to ensure that improvements are made in a logical order and do not surprise local officials or taxpayers. Moreover, a CIP allows the community to focus on needs and goals and establish rational priorities.

Utility districts are another tool used to provide a variety of public services and improvements including roads, sewers, stormwater, electricity and water. Utility districts establish a "district fund" to finance improvements. These funds are obtained through taxation of property within the district. Service costs are covered through direct billings.

Another financing option to consider is the creation of a transportation utility. A transportation utility deals specifically with transportation infrastructure, including design, construction and reconstruction, operation, and maintenance of streets, sidewalks, street lighting, signalization, and signage in rights-of-way. These activities are currently funded through special assessments, limited state and federal aids, and general revenue from local property taxes. The transportation utility raises revenue by charging all property owners based on the amount of traffic their property generates.

Recommended Road System Improvements

Table 18.0 describes road improvement projects anticipated in the Towns of Mukwa. The projects, along with potential local street connections are identified on the *Transportation System Plan* map on page 44.

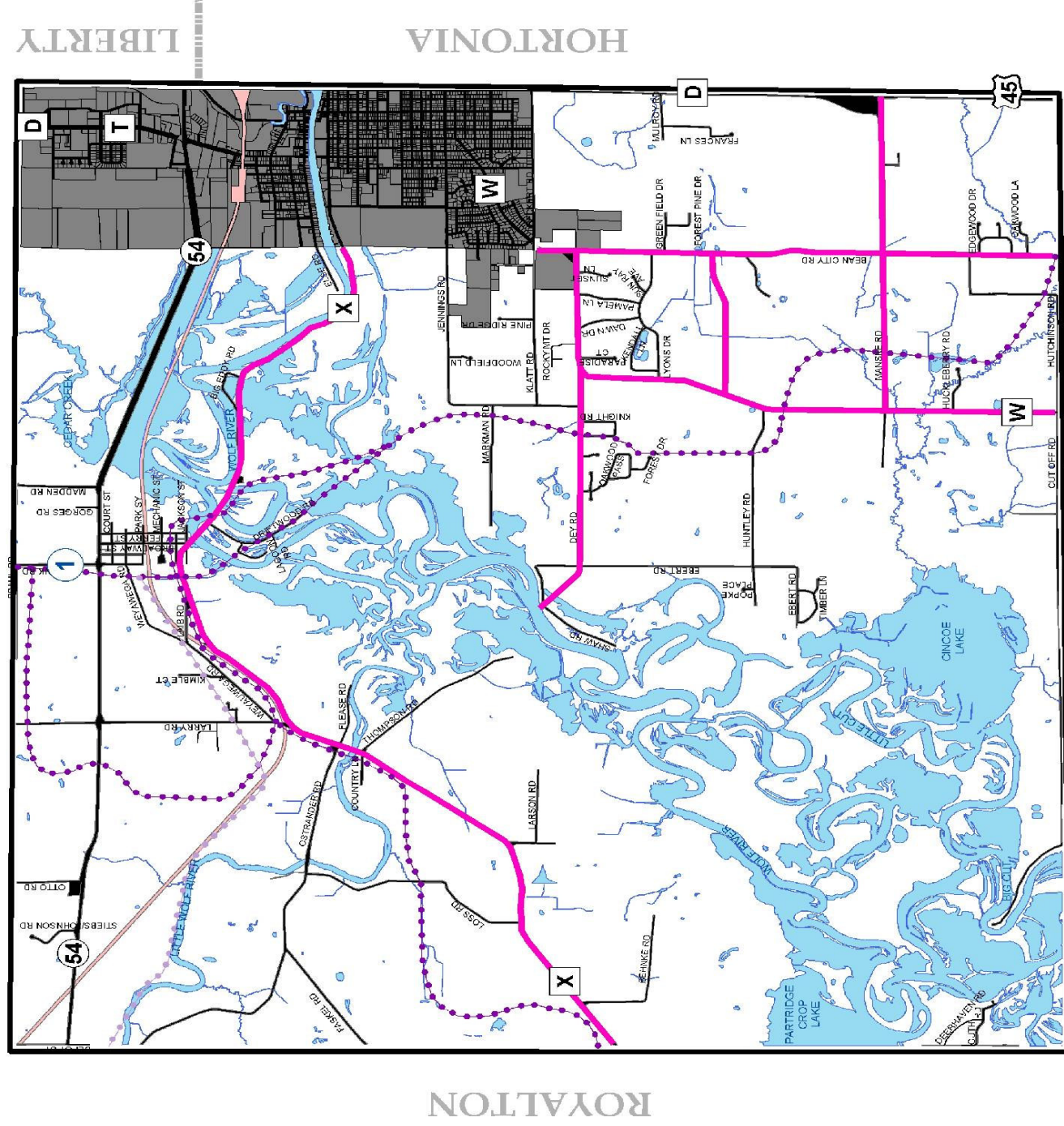
TABLE 18.0: Recommended Road System Improvements					
Local Government	Facility	Jurisdiction	Segment / Location	Recommended Improvement / Action	Map #
Town of Mukwa	Tank Road	Town of Mukwa	Entirety of road in Mukwa from boundary with Lebanon to STH 54	Waupaca County wants to assume jurisdiction over Tank Road. The Town of Mukwa and Lebanon are involved in discussions regarding a potential swap of Town and County Roads.	1

NOTE: Refer to Transportation Plan map for location of Map Reference Numbers.

TOWN OF MUKWA

TRANSPORTATION PLAN

LEBANON



ROYALTON

CALEDONIA



PROJECT # W1161A04
 DATE: 03/09/05
 DRAWN BY: KAL
 REVISED: 04/23/05

Omni
 ASSOCIATES

1000 STEVENS DRIVE, SUITE 200, WISCONSIN
 P.O. BOX 1000, SUITE 200, WISCONSIN

LOCATION: F:\GIS\1161\1161\DRAWINGS\Tans_Plan_11x17.mxd
 SOURCE: Waupaca County
 East Central Wisconsin Regional Planning Commission
 Wisconsin DOT - District 4

LEGEND

- ROADS
- RAIL TRANSPORTATION
- WATER
- CITY OF NEW LONDON
- COUNTY SNOWMOBILE TRAILS
- CLUB SNOWMOBILE TRAILS
- WALKING AND BICYCLING ROUTES

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COORDINATION WITH OTHER REQUIRED PLAN ELEMENTS

ISSUES AND OPPORTUNITIES

The Issues and Opportunities Element establishes the framework for planning...the ideal from which this plan has been developed. That vision will affect the way Town of Mukwa considers and approves changes to the transportation network. It will also guide the Town's participation in activities sponsored by WisDOT and Waupaca County. To realize the vision, and support the transportation vision presented in this chapter, the Town will seek to maintain its quality road network and expand multi-modal transportation opportunities aimed at improving bicycle and pedestrian access.

HOUSING ELEMENT

The Town of Mukwa will require that subdivision streets be built to minimum standards and require that developers comply with local requirements regarding trails and multi-modal access. The Town will encourage development patterns that provide multi-modal connections between neighborhoods and safe ingress and egress where subdivision streets connect to town roads, and county and state highways. The Town will explore ways in which connections between existing and future subdivisions can be improved through the development of trail or path connections within open space corridors.

AGRICULTURAL, NATURAL AND CULTURAL RESOURCES

The Town of Mukwa possesses a variety of natural features, including forests, rolling topography, scenic vistas, river corridors, wetlands, bayous, and floodplains. These features contribute to the character of the community and the quality of life of its residents. The development of recreational trails is encouraged so as to provide access to these areas and to enhance enjoyment for residents and visitors.

UTILITIES AND COMMUNITY FACILITIES

A close relationship exists between the Transportation Element and the Utilities and Community Facilities Element. This is due to the fact that transportation facilities, and the transportation network, are the most frequently utilized community facility. Access to schools, parks, and other public areas is improved by providing transportation choices beyond the automobile. This plan seeks to encourage access via trails and sidewalks to link these important community features to nearby neighborhoods.

ECONOMIC DEVELOPMENT

Providing a quality transportation system is important to successful local economic development. A quality transportation network aids business and commerce by improving accessibility for customers and suppliers. This is particularly true as it relates to quality rail and highway access. Residents desire efficient access to places of employment. When trails and sidewalks are provided to link commercial areas to outlying neighborhoods, they offers increased opportunities for customers to easily move from business to business. They also provide an opportunity for groups that may not have access to vehicles (e.g. elderly and youth populations) to safely access local businesses.

LAND USE

Land use and transportation are intertwined and have an effect on every facet of the community. Transportation choices provide connections between land uses. The density and intensity of land uses affects the type and number of transportation choices needed. While land use decisions are generally considered local and regional issues, the transportation consequences that accompany land use decisions can transcend the boundaries of communities and regions.

INTERGOVERNMENTAL COOPERATION

Maintaining and improving the transportation network is multi-jurisdictional process, with responsibilities falling to local, state, and federal government alike. County trunk highways, state highways, and air transportation choices all fall under the authority of state and national Departments of Transportation. As a result, intergovernmental cooperation is a critical component of the Transportation Element and the key to future transportation initiatives and goals. The Town of Mukwa will continue to coordinate transportation planning activities with these agencies and organizations.

IMPLEMENTATION

Through the use of a capital improvements plan and budget, the costs of transportation improvements identified in this chapter can be addressed efficiently and economically over time. Communities across the state use the CIP process to plan for current and future transportation needs in a responsible manner. More information about this tool is provided in the Utilities and Community Facilities Element. A transportation utility provides another potentially useful tool for local government to address transportation concerns.

Goals, Objectives and Policies

The goals and objectives identified in Chapter 12, Implementation, are implementable tasks that can be achieved by the Town of Mukwa. The goals will be achieved through cooperation and coordination with neighboring communities, Waupaca County, ECWRPC, and WisDOT.



Introduction

Understanding the location, use, and capacity of utilities and community facilities is an important consideration when planning for the future. This information, coupled with demographic trends and projections, provides a realistic picture of service supply and demand. The community facilities and utilities discussed in this chapter were carefully considered in the development of the *Future Land Use Maps*. Wisconsin’s Smart Growth Law includes 14 goals for local comprehensive planning. The goals from the planning law listed below specifically relate to planning for utilities and community facilities:

- Promotion of the redevelopment of lands within existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial, and industrial structures.
- Providing infrastructure and public service and an adequate supply of developable land to meet existing and future market demand for residential, commercial, and industrial uses.

During the Values phase of the Kick-off Meeting on July 21, 2004, participants identified “good police and fire services” as a valued community asset. More responses were related to Utilities & Community Facilities than any other plan chapter during the SWOT exercise. Low crime, schools, utilities and cable TV, and artesian wells were cited as community strengths. Fire protection, the lack of parks, and the lack of certain utilities such as natural gas and cable TV were offered as weaknesses in Mukwa. The development of park land was seen as an opportunity, while lack of police protection, municipal water and sewage treatment (in response to increased development), and the over-development of wells were viewed as potential future threats.

Utilities and Community Facilities Vision

In 2025, the Town of Mukwa coordinates with neighboring municipalities and the County to ensure that Towns residents have easy access to efficient services and quality facilities. Waupaca County and the cities of New London and Weyauwega collaborate with the Town Constable to improve response times and provide Mukwa’s residents with quality public safety services. Mukwa has utilized a mixture of general funds, state and federal grants, and volunteer labor to establish the Town park system. The Town’s property taxes have been maintained at a stable level by controlling debt, maintaining Town equipment, and carefully planning expenditures. The Town has been able to reduce costs and improve efficiencies in services by entering into shared service agreements with neighboring communities.

COMMUNITY SURVEY RESPONSES

Tables CS-13 through CS-17 illustrate community survey responses to questions related to Utilities in the Town of Mukwa.

TABLE CS-13: On Which side of the Wolf River do you reside?	
East	62.9%
West	37.1%

TABLE CS-14: How satisfied are you with the Town of Mukwa as it is today?	
Very dissatisfied	4.3%
Dissatisfied	3.5%
Satisfied	59.6%
Very satisfied	28.0%
No opinion	4.6%

TABLE CS-15: Most rural homes rely on private wells for potable water supply. To what extent would you encourage a municipal water supply?	
Strongly discourage	35.7%
Discourage	31.5%
Encourage	15.0%
Strongly encourage	7.3%
Neither encourage or discourage	10.5%

TABLE CS-16: In your opinion, how adequate is the current availability of the following recreational uses in the Town of Mukwa?

	Very Inadequate	Inadequate	Adequate	Very Adequate	No Opinion
Park space	11.7%	29.1%	36.9%	6.0%	16.3%
Children's playgrounds	12.4%	30.4%	30.0%	3.9%	23.3%
Sports fields	11.9%	28.8%	28.4%	6.8%	25.2%
Bicycle and pedestrian trails	13.7%	33.0%	31.6%	4.9%	16.8%
Golf courses	7.5%	18.9%	26.8%	6.8%	40.0%
Skiing and snowshoeing	9.9%	23.7%	27.9%	8.5%	30.4%
Water activities	4.9%	7.0%	50.7%	27.1%	10.2%
Camping	6.0%	11.3%	39.8%	27.1%	15.8%
Areas for scenic enjoyment	4.2%	11.9%	39.5%	29.5%	14.9%
Hunting/fishing areas	4.4%	3.7%	39.6%	35.9%	15.4%

Three people responded that the current availability of ATV trails is very inadequate.

TABLE CS-17: To what extent would you encourage or discourage the following kinds of future recreational development in the Town of Mukwa?

	Strongly Discourage	Discourage	Encourage	Strongly Encourage	No Opinion
Park space	17.6%	7.9%	43.7%	19.7%	11.1%
Children's playgrounds	13.4%	7.7%	51.1%	14.1%	13.7%
Sports fields	17.4%	11.1%	41.5%	12.5%	17.4%
Bicycle and pedestrian trails	8.2%	5.4%	49.1%	26.9%	10.4%
Senior center	21.6%	8.2%	40.8%	7.8%	21.6%
Community pool	34.9%	23.5%	18.1%	6.0%	17.4%
Hunting/fishing areas	7.8%	6.0%	44.1%	27.8%	14.2%
Snowmobile trails	15.7%	12.5%	33.1%	15.7%	23.1%

Three people responded that they would encourage ATV trails in the Town.

Utilities and Services Inventory– Location, Use, Capacity

The following sections describe existing utilities and services available within the Town of Mukwa. This section documents those utilities and services provided by the Town and private providers.

WASTEWATER COLLECTION & TREATMENT

Development in Mukwa is accommodated with private, on-site sanitary wastewater treatment systems. These systems must comply with the state plumbing code (COMM 83), which is designed to ensure that systems do not threaten groundwater resources. Moreover, these individual systems must be properly permitted by Waupaca County and maintained as required by County Ordinance. Soils in the Town vary in terms of their suitability for on-site wastewater treatment.

In upland areas, soil percability is generally high and well suited to individual on-site systems. In lower-lying areas, particularly within and adjacent to floodplains and wetlands, soils are typically inundated with water for such a considerable amount of the year as to prohibit septic, mound, and other conventional sanitary treatment systems. Although these percability issues are typical in most towns, they are exacerbated in the Town of Mukwa due to the abundance of surface waters, wetlands, and floodplains within the community. The high likelihood of soil saturation in many areas of the Town creates a situation wherein on-site wastewater treatment systems, which will eventually fail under the best of conditions, are prone to failure at a much faster rate than those in communities dominated by an upland environment. Alternatives to individual, on-site treatment include clustered systems, re-circulating sand/gravel filters, Living Machines®, and municipal systems. Each alternative has their strengths and weaknesses when compared to conventional systems.

- **Clustered Systems**

Clustered treatment systems provide an economical alternative to individual systems, particularly in areas with space limitations. Like septic tanks and mounds, shared systems are infiltration systems. They differ from the former two in that multiple homes “feed” into one treatment and discharge unit. Although economies of scale are created when multiple units utilize a shared drain field, issues related to soil percability remain. The advantage of a clustered system from the perspective of soil inundation is that, since the system is located off-site, the site can be selected based upon ideal performance criteria. On-site systems are limited to the best location available *within that particular home site*.

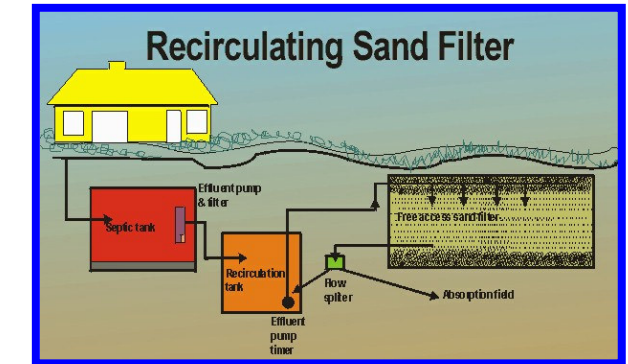
Sanitary System Choices

In July 2000, the Wisconsin Department of Commerce implemented an administrative rule known as COMM 83. This rule allows homebuilders to install nine new kinds of innovative septic systems. The rule allows for development in areas that cannot be served by conventional systems.

For additional information about the COMM 83 rule and the nine systems permitted, visit the Department of Commerce on the Web:
www.commerce.state.wi.us

- **Re-circulating Sand/Gravel Filters**

Re-circulating sand/gravel filters (RS/GF) offer an economically viable, environmentally benign alternative to conventional drain field-based treatment systems. The basic components of a RS/GF system include a septic tank, recirculation tank, and sand or gravel filter. Water discharged from the system far exceeds the quality of a conventional system, and at a fraction of the price. RS/GFs have been in use for more than a century and are a WDNR permitted alternative to septic tanks and mound systems.



SOURCE: ToolBase Services, 2005.

- **Infiltration Wetlands**

Infiltration wetlands have been used as effective wastewater treatment systems for more than thirty years. They have become the dominant treatment system for communities in the Minneapolis metropolitan region not served by municipal wastewater treatment. Although there are a variety of wetland-based systems used to treat effluent, the most common is a *sub-surface flow* wetland. Sub-surface flow wetlands utilize an anaerobic reactor (septic tank) for pretreatment followed by a forced-bed aeration system and wetland treatment cells. Infiltration wetlands are designed to achieve tertiary treatment at a fraction of the cost of a municipal system. They become cost-effective at the small scale when treating effluent from eight or more homes.



SOURCE: North American Wetlands Engineering, 2004.

- **Living Machines®**

Living Machines are a patented wastewater treatment system that is growing in popularity around the world. They entail a series of tanks teeming with live plants, trees, grasses algae, fish, shrimp, snails, and a diversity of microorganisms and bacteria. Each tank is a mini-ecosystem designed to eat or break down waste. The process takes about four days to turn wastewater crystal clear. It is chemical-free, odor-free, and, compared to conventional wastewater treatment, costs less financially and ecologically.¹ Living Machines are WDNR permitted systems and are currently in use at the Conserve School in Land O' Lakes, at Cedar Grove Cheese Factory in Cedar Grove, and at Edgewood College in Madison.



SOURCE: Living Machines, Inc., 2001.

- **Municipal Wastewater Treatment**

The costs associated with the development of a Town-wide municipal sewer system are prohibitive given the scattered, low-density nature of development in Mukwa. The Town supports the continued use of private on-site facilities to handle wastewater needs, including innovative treatment systems, as approved by the Town, County, and WDNR. Based on soil conditions, anticipated development densities, and state laws governing the quality of individual system, a municipal sanitary system is not needed in Mukwa at this time or in the foreseeable future.

STORM WATER MANAGEMENT²

The Town of Mukwa is located in the Wolf River basin and the lower Wolf River and Little Wolf South Branch watersheds (for additional information on the Wolf River basin and Mukwa's watersheds refer to Chapter 7: Agricultural, Natural, and Cultural Resources). Nearly forty percent of the Town's total acreage is covered by surface waters and wetlands. Potter's Creek drains to the Wolf River in the far southeast portion of the Town. Other surface waters in Mukwa include Cincoe Lake, the eastern half of Partridge Crop Lake, Horseshoe Bayou, Tom Bayou, and Trader's Bayou. A number of smaller unnamed lakes and ponds are dispersed throughout the Town.

¹ Excerpted from *The Living Machine*, Jeff Wolovitz, Penn State Department of Research and Policy, 2000.

² Refer to Chapter 7: Agricultural, Natural, and Cultural Resources for more information about the Town's water resources.

Enforcement of stormwater management, construction-site erosion control, and shoreland protection currently falls under the jurisdiction of Waupaca County. The enforcement and permitting requirements relative to existing County ordinances is coordinated through the Waupaca County Land and Water Conservation Department. Should the Town of Mukwa develop a Subdivision Ordinance in the future, it may include stormwater management requirements within that ordinance.

WATER SUPPLY

Drinking water in Mukwa is obtained from individual, private wells. Although private wells offer a low-cost source of potable water, they do not provide the level of testing typical of a municipal water supply. Contamination of groundwater is a serious issue for many rural communities. Sources of groundwater contamination include leaking fuel tanks, surface discharges, and natural substances present in the subsurface geology. A common naturally occurring contaminant of groundwater in the Fox/Wolf basin is arsenic. Although no private wells in Mukwa have yet tested positive for arsenic, it is important to note that arsenic has been detected in amounts greater than 10 parts/billion in Waupaca, Shawano, Outagamie, and Winnebago Counties (for additional information on groundwater and arsenic contamination, refer to Chapter 7: Agricultural, Natural and Cultural Resources).

Given the generally low density of single-family residential development in the Town, and the barrier created by the Wolf River, it would be difficult to establish a cost-effective municipal water system to efficiently serve all areas of the community. Therefore, it is important that Town residents seek to maintain groundwater quality through construction site and agricultural erosion control practices, private sanitary system maintenance, well-head protection, and periodic groundwater studies.

ELECTRICITY AND NATURAL GAS

Natural gas and electric power service in Mukwa is provided by WE Energies. Transmission lines are owned and maintained by American Transmission Company (ATC). These companies have a long history of supplying safe, reliable, and reasonably priced service. Current facilities are adequate to provide continued service into the foreseeable future.

SOLID WASTE DISPOSAL AND RECYCLING

Onyx Waste Services, Waste Management, Graichen Sanitation, and Wittenberg Disposal Services L.L.C. are available to provide weekly garbage and recycling pick-up for residents and businesses in Mukwa. Residents and businesses can choose which provider they would like to contract with. The companies welcome new customers and do not anticipate problems meeting future waste and recycling needs. The Town of Mukwa provides recycling services in the community by way of a contract with Graichen Sanitation through monthly pick-up.

POLICE PROTECTION

The Waupaca County Sheriff's Office provides police protection to the Town of Mukwa. The Department patrols more than 346 miles of County Roads covering 750 square miles. Deputies handle over 8,000 complaints per year. Waupaca County Deputies are located in numerous cities throughout Waupaca County, including the City of New London, making them readily available to assist the public when an emergency arises.

In 1985 the Waupaca County Sheriff's Department, in cooperation with all Law Enforcement agencies within the County, formed the first Tactical Team in Waupaca County history. The team was named the Waupaca County Emergency Response Unit (ERU). The team is multi-jurisdictional and comprised of members from the Sheriff's Department and officers from various agencies within Waupaca County. All members are FBI trained and are members of the Wisconsin Association of SWAT personnel, which is the oldest such organization in the nation.³



Waupaca County Sheriff's Department
1402 E. Royalton St. Waupaca, WI
54981 715-258-4466

³ Text excerpted from Waupaca County Sheriff's Department website, 2005.

TOWN CONSTABLE

The Town Constable is a part-time elected law enforcement position within Town government. Wisconsin Statutes 60.35 establishes the authority for a Town Constable. The authority and duties of the position are further defined in the Municipal Code. The Town Constable is an elected position and serves a two-year term. The role of the Constable is to fill the gaps in service from the Waupaca County Sheriff's Department, enforce Town Ordinances and act as a liaison to Town officials and other law enforcement agencies. Typical issues handled by the Constable include animal / dog violations, abandoned vehicles, boating violations, burning violations, parking violations, illegal dumping, junk vehicles, snowmobile violations, shooting violations, and public nuisance violations.

FIRE PROTECTION & RESCUE SERVICES

Fire protection services in Mukwa are provided by the New London Fire Department and the Weyauwega Area Fire Department. The New London Fire Department has 30 members. The department provides fire protection to the City of New London, and portions of the townships of Liberty, Maple Creek, Caledonia, Lebanon, and Mukwa. In addition to fire protection, the New London Fire Department also has a "Jaws of Life" unit, air bags, and other rescue tools for extrication of victims of motor vehicle accidents, farm accidents and industrial accidents. Water and ice rescue is also provided by use of a fire department boat and ice rescue sled. All members of the department are trained to a minimum classification of Firefighter II, along with CPR and Automatic External Defibrillator (AED) training. There are also 15 First Responders and 1 EMT in the department.⁴ In addition, Mukwa has a First Responders team comprised of approximately ten individuals.

The Weyauwega Area Fire Department is an all volunteer, paid-on-call department. Its thirty-five member staff of fire fighters and administrative personnel serves approximately 4000 people in a 79 sq. mile territory that encompasses the City of Weyauwega, the Town of Weyauwega, the south 3/4 of the Town of Royalton, the east half of the Town of Lind, and a small portion of the Town of Mukwa. The department currently has 3 pumpers, 2 tankers, 1 equipment van, 1 brush truck, and 1 rescue truck.⁵

Rescue service is provided by the New London Family Medical Center (municipal ambulance), Waupaca Area Ambulance LTD (private, for-profit ambulance), and Weyauwega Ambulance Service (municipal ambulance).

Community Facilities Inventory

This portion of the chapter profiles the community facilities available to Town residents.

PARK AND RECREATION FACILITIES

Mukwa does not currently have parks or recreational facilities; however, a 35-acre County Park formerly owned by the Girl Scouts is located in the northwest portion of the Town. Access to this park is somewhat limited. The Wolf River Sturgeon trail is located in the northern portion of the community.



New London Fire Department, 2005.

⁴ Text excerpted from City of New London web page, 2005.

⁵ Text excerpted from Weyauwega Area Fire Department web page, 2005.

- [Wolf River Sturgeon Trail](#)

The Sturgeon Trail is a one half-mile blacktop surface trail along the shoreline of the Wolf River between New London and Northport, adjacent to CH X. This site has been a favorite place for sturgeon to spawn and for people to get an up-close view of Wisconsin's oldest and largest fish. Initially, 1600 feet of shoreline was rip-rapped to create more conducive sturgeon spawning habitat and to create the base for part of the half-mile blacktop trail. The riprap restored one of the best sturgeon spawning areas on the Wolf River and made establishing a safe, paved trail possible for people who want to view this annual rite of spring. Other plans include continuation of the trail, improved parking, and tying the trail into the overall plan for a trail system in Waupaca County.⁶

- [Shaw's Landing](#)

This public boat landing is maintained by Waupaca County.

- [Mukwa Wildlife Area](#)

The Mukwa Wildlife Area is discussed in detail in Chapter 7: Agricultural, Natural, and Cultural Resources.



SOURCE: Waupaca County Parks & Recreation website, 2005

COMMUNICATION FACILITIES

Access to communication facilities is very important in the modern economy. The quality of communication services depends on the capacity of the lines, towers and supporting infrastructure serving the Town.

- [Television and Radio](#)

There are no television or radio stations located in Mukwa. Residents receive radio and television station coverage from Green Bay, the Fox Cities, and other areas in Northeast and North Central Wisconsin.

- [Cable Television](#)

Charter Communications provides cable television service to the certain areas within the Town. The company offers cable and digital packages. Some residents have also purchased satellites to receive additional channels. Television and radio coverage from the greater region will continue to meet resident needs over the life of this plan.

- [Telephone Service](#)

Multiple providers offer local and long distance telephone services in Mukwa and are expected to do so in the foreseeable future.

- [Internet](#)

Access to the Internet in Mukwa is available through a variety of companies providing dial-up service. High-speed Internet access is currently unavailable in the Town.

- [Newspapers](#)

⁶ Text excerpted from Waupaca County Parks & Recreation website, 2005.

The Town does not publish its own newspaper or newsletter, although several newspapers published in neighboring communities are available to residents. The Press Star of New London is the most widely read newspaper in Mukwa, followed by the Post Crescent. The Buyer's Guide is also available.

- **Postal Service**

The Town of Mukwa is served by U.S. Post Offices located in New London and Weyauwega.

- **Cellular/PCS Towers**

There are no cell towers currently located in the Town.

HEALTH CARE FACILITIES

Health care services for Mukwa residents are provided by the New London Family Medical Center in New London, Riverside Medical Center in Waupaca, and various providers throughout the Fox Valley. The New London Family Medical Center is located at 1405 Mill Street in New London and provides emergency, family care, and rehabilitation services to the City of New London and surrounding communities. Riverside Medical Center, located at 800 Riverside Drive in Waupaca, provides emergency and family-care services to the City of Waupaca and surrounding communities. These facilities meet the existing health care needs of the Town and will continue to do so in the future.

CEMETERIES

There are four cemeteries near Mukwa: Most Precious Blood Catholic Cemetery on Bean City Road in the City of New London, the Ostrander/Northport cemetery off of CTH X, Oelfke Cemetery on Ostrander Road west of the Ostrander/Northport cemetery, and Floral Hill cemetery off Beckert Road. Town residents may also use space available in other public and private cemeteries located elsewhere in New London, Waupaca, and surrounding Communities.

CHILDCARE FACILITIES

There are no childcare facilities located in the Town. There are; however, a few private in-home daycare businesses in Mukwa.

EDUCATIONAL FACILITIES

The Town of Mukwa is located in the New London, Manawa, and Weyauwega/Fremont school districts. There are no schools currently located in the Town and no plans to build schools in the foreseeable future.

- **New London School District⁷**

The New London School District covers 144 square miles in three counties. The district serves approximately 2,600 students (grade PK-12), which ranks 87th out of Wisconsin's 426 public school districts in size. It employs over 350 full and part time individuals (the fourth largest employer in New London) and has nine buildings: four elementary schools, a middle school, a high school, a transportation department building, a grounds department shop, and an administrative office. The District office is located at 901 W. Washington Street in New London.

⁷ Excerpted from New London School District web site, 2005.

- [Manawa School District](#)⁸

The three schools of the Manawa School District serve 903 students in grades pre-Kindergarten through 12. The district employs 79 teachers and administrative staff and is located at 800 Beech Street in Manawa.

- [Weyauwega-Fremont School District](#)⁹

The Weyauwega-Fremont School District has a teaching staff of 86 serving 1,159 students in grades Kindergarten through 12. District offices are located at 410 Ann Street in Weyauwega.

Under the full-time interdistrict open enrollment program, Wisconsin students may apply to attend school in any K-12 public school district in the state, regardless of whether or not they live in the district. Families of students who transfer from their local district do not pay tuition. However, a local district loses state aid for each student who transfers to another district and gains state aid for each student who transfers from another district. The program first took effect in the 1998-99 school year. It is designed to encourage competition among districts as a means of fostering improvement in public schools and to provide families with increased flexibility in their educational choices. Participation has increased each year since the program's inception.

Wisconsin also has a charter schools program. The Wisconsin Charter School Program was initiated in the 1993-1994 school year. Charter schools are public schools that are exempt from many state regulations and rules. In exchange, the schools are accountable to their chartering authority for meeting measurable goals in their charter. This freedom encourages various programs that may stimulate change, innovation, and creativity to enhance student learning. In 2004, there were 137 charter schools in the state. Charter schools are nonsectarian, employ DPI-certified staff, and participate in statewide assessments.

- [Waupaca County Charter School](#)¹⁰

The Waupaca County Charter School (WCCS) is a collaborative effort of six school districts, the Waupaca County Department of Human Services, and one of Wisconsin's cooperative educational service agencies, CESA 6. The administrative relationship among WCCS participants is unique. Although the Weyauwega-Fremont School District holds the charter, the charter school is a non-instrumentality and is managed by CESA 6. CESA 6 employs all charter school personnel, including a coordinator who oversees daily operations and ensures that educational goals are attained. The school opened in 1998 and is located at 310 East Main Street in Weyauwega. It serves students in grades 6 through 12 and currently has four students.

Nearby college choices include: Lawrence University (Appleton), University of Wisconsin Center (Menasha), Fox Valley Technical College (Appleton), Fox Valley Technical College Regional Centers (Clintonville, Waupaca), the University of Wisconsin – Green Bay (Green Bay), St. Norbert College (De Pere), Concordia University Center (Green Bay); UW Oshkosh (Oshkosh), College of the Menominee Nation (Green Bay), Northeast Wisconsin Technical College (Green Bay), Bellin College of Nursing (Green Bay), and the University of Wisconsin – Stevens Point (Stevens Point).

LIBRARY SERVICES

Library service for Mukwa residents can be found at the New London Public Library at 406 South Pearl Street in New London, the Weyauwega Public Library at 310 South Mill Street in Weyauwega, and the Waupaca Public Library at 107 South Main Street in Waupaca. The three libraries participate in a regional consortium providing combined catalogs, Internet catalog, and other services designed to improve resident access. These nearby public libraries, combined with the public school libraries (catering to district school children), are expected to continue to meet resident needs. As such, there are no plans to locate a library in the Town of Mukwa.

⁸ Excerpted from Manawa School District web site, 2005.

⁹ Excerpted from Weyauwega-Fremont School District web site, 2005.

¹⁰ Excerpted from Wisconsin Department of Public Instruction, School Management Services web site, 2005.

SENIOR SERVICES

At 241 persons (8.7% of the population) following the 2000 Census, Mukwa's senior population is a small but growing segment of the community. Services to seniors are available through a variety of organizations in the Cities of New London, Waupaca, and Weyauwega, and by local churches, the American Red Cross, and volunteer groups. The population of persons at 65 years or older is expected to increase as a percentage of the total population. The Town must continue to collaborate with neighboring municipalities to ensure that the services necessary to support an aging population are sufficient to meet future needs.

TOWN FACILITIES

The Town Hall and Garage are located at E8514 Weyauwega Road in Mukwa. The Town owns a 1997 International Dump Truck/Snow Plow, a 2000 Chevrolet Truck with Blade and Sanders, and a 1977 John Deere 770 Grader.

Utilities and Community Facilities Map

The Utilities and Community Facilities map for the Town of Mukwa is located on page 6-13. The map depicts existing conditions by showing the location of schools, parks, cemeteries, fire stations, and other amenities profiled in this chapter.

Utilities and Community Facilities Funding Options

Grant and loan programs are available from a variety of state and federal sources. The following section provides a brief description of some of the programs that may be available to the Town.

WATER AND WASTEWATER GRANT AND LOAN PROGRAM

The United States Department of Agriculture Rural Development Section (Rural Utility Service) has a water and wastewater grant and loan program to assist cities, tribes, sanitary districts, and towns in rural areas with a population up to 10,000. The program provides loans and grants to construct, improve, or modify municipal drinking water and wastewater systems, storm sewers, and solid waste disposal and recycling facilities.

STATE TRUST FUND LOAN PROGRAM

The Board of Commissioners of Public Lands provides this loan program with terms of up to 20 years and deeply discounted interest rates. Loans may be used for a variety of purposes including road improvements, community centers/halls, trail development, and property acquisition. Available funding is determined on an annual basis. The loan limit during the 2004 fiscal year was \$3,000,000. The State Trust Fund Loan Program may provide the Town with opportunities to fund the development of park facilities and trails.

RURAL COMMUNITY DEVELOPMENT GRANTS

A variety of grants are available from various federal agencies to aid the Town in implementing its development and preservation goals. A partial list of programs includes:

- Rural Housing Preservation Grant
- Rural Community Development Initiative
- Rural Development, Forestry, and Communities
- Community Facilities Loans and Grants
- Rural Business Enterprise and Opportunity Grants
- Rural Economic Development Loans and Grants
- Historic Preservation Fund Grants-in-Aid
- Outdoor Recreation Acquisition, Development, and Planning

The majority of these grants are awarded to communities with a population up to 10,000 based on a competitive application process.

FIRE ADMINISTRATION GRANTS

The Federal Emergency Management Administration (FEMA) offers annual grant awards to fire departments in six specific areas: training, fitness programs, vehicles, firefighting equipment, and fire prevention programs. Applicants from communities that serve a population of less than 50,000 must provide a 10% match. If the need warrants, Mukwa may collaborate with New London and Weyauwega to apply for grants to improve response times, expand equipment inventories, or enhance fire prevention programs.

STATE STEWARDSHIP FUND

The Stewardship Fund is the State of Wisconsin's land acquisition program for public outdoor recreation and habitat protection. The fund is administered by WDNR and provides grants for land purchase, park and trail development, habitat protection, expansion of hunting/fishing opportunities, and other outdoor recreational opportunities. Available funding is determined on an annual basis as part of the Governor's budget.

Utilities and Community Facilities Issues & Concerns

PARK FACILITIES

The need for park and recreation facilities grows with the population of a community. The lack of Town parks was a concern expressed by residents in the *Community Survey* and during the *SWOT, Visions, and Values* exercises. The National Recreation and Parks Association (NRPA) has developed recreation, parks, and open space standards and guidelines for communities in the United States. These standards identify the recommended amount of parkland that should be available in a community based upon its population. NRPA has established three categories for local facilities: *neighborhood parks*, *community parks*, and *metropolitan parks*. Neighborhood parks are intended to serve communities (or neighborhoods, in larger communities) with populations of 1,000 to 5,000 residents. Community and Metropolitan Parks serve larger towns, villages, and cities. NRPA guidelines recommend a minimum of five acres of park and recreational space per 1,000 residents. With an anticipated population of 3,303 persons by 2025, NRPA guidelines would recommend that Mukwa plan for the development of one or more parks totaling fifteen acres in size. Typical facilities in a neighborhood park may include play apparatus for children of all ages, picnic areas with shelters, walking and bicycling trails, informal ball fields, tennis courts, and rest rooms, among others.

East Central Wisconsin Regional Planning Commission recommends a minimum of 10 acres of parkland for each 1,000 residents. By ECWRPC standards, Mukwa should plan for the development of one or more parks equaling or exceeding 30 combined acres by the year 2025.

Potential partnerships with Waupaca County and the City of New London may provide opportunities to address some park and recreation needs in Mukwa. Waupaca County owns a 35-acre park on the west bank of the Little Wolf River north of Ostrander Road. The small park, formerly owned by the Girls Scouts of America, is within one of the few upland hardwood areas in Mukwa. The lack of an easement providing access to the park is a limiting factor; however, a partnership between the Town and the County would provide an opportunity to pursue grant funding for land acquisition, enhancement, and park development. The Town of Mukwa may begin discussion with the City of New London regarding the development of park and playground facilities in the Town. New London is in need of additional ball fields and soccer fields to meet their youth recreation needs. The Town may consider a cooperative venture with the City to provide land for the development of community sports fields with the understanding that the City would fund the development and maintenance of the facilities.

PUBLIC SAFETY

The Waupaca County Sheriff's Department will continue to be the primary law enforcement agency in Mukwa. However, the resurrection of the Town Constable position will aid in improving safety and security in the community and serving as a community liaison between residents and Sheriff deputies. The Town must work closely with the Cities of New London and Weyauwega to improve fire and rescue response times, particularly in

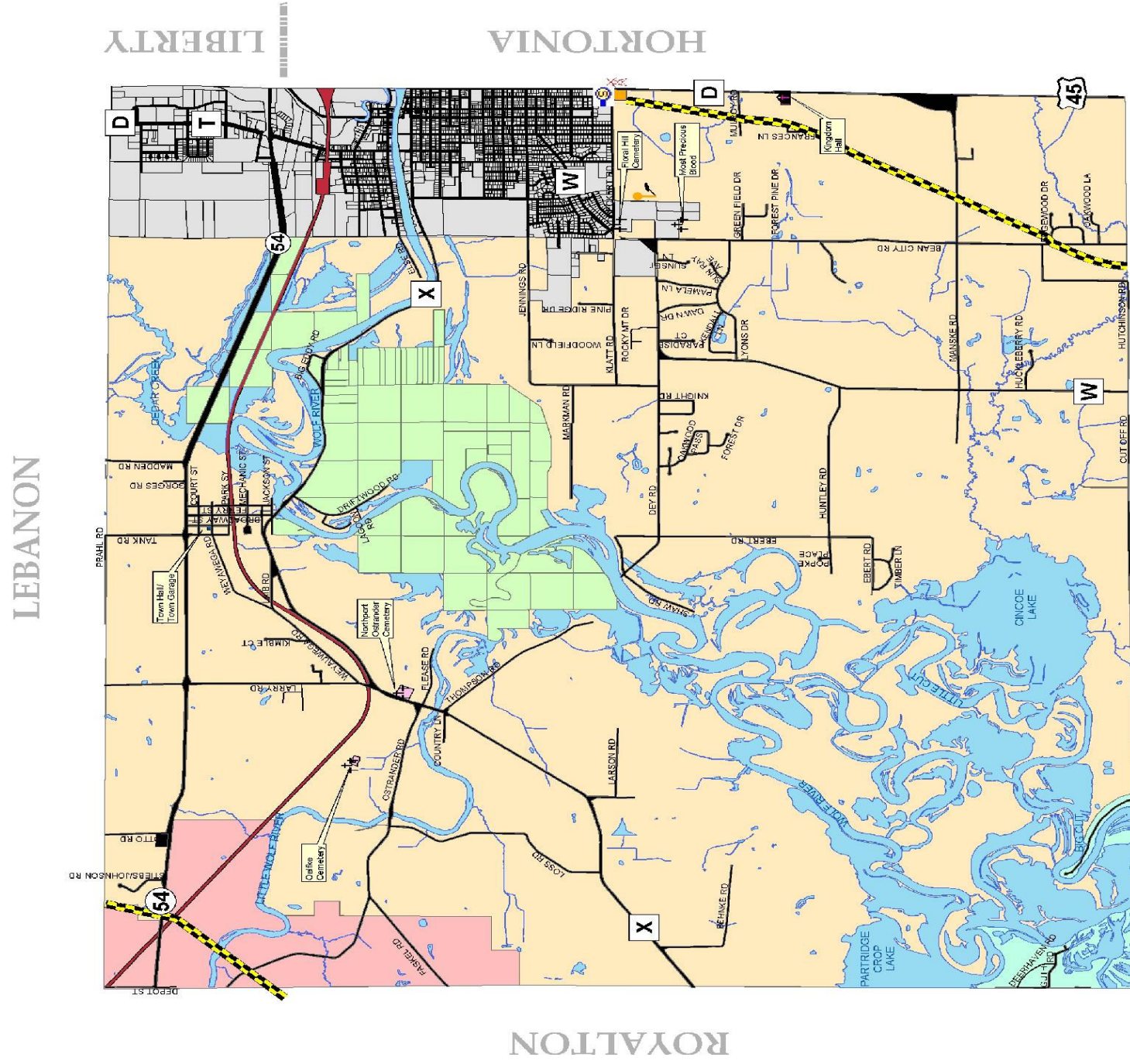
areas west of the Wolf River. As Mukwa's population increases, the Town may consider whether the reestablishment of a local volunteer Fire Department becomes a more feasible alternative to relying on neighboring municipalities. Grant funding is available through State and Federal sources to alleviate some of the costs of building a Mukwa Fire Department.

COMMUNITY SERVICES

In many ways, the City of New London serves as Mukwa's "downtown." Libraries, health care facilities, senior and youth programs, churches, and other services typically provided by a municipality are conveniently accessed and accessible in New London and, to a lesser degree, in the City of Weyauwega. Moreover, it is unlikely that the Town's expected population growth will warrant changes to this existing arrangement. However, it does require that the Town work closely with the cities to make certain that these necessary services can be adequately provided in the future.

TOWN OF MUKWA

UTILITIES & COMMUNITY FACILITIES



CALEDONIA

LEGEND

	ROADS		NATURAL GAS DISTRIBUTION
	RAIL TRANSPORTATION		BROADCASTING TOWER
	WATER		WATER TOWER
	CITY OF NEW LONDON		PIPELINE
	DNR PROPERTY		NEW LONDON PUBLIC SCHOOL DISTRICT
	UTILITIES		MANAWA PUBLIC SCHOOL DISTRICT
	INSTITUTIONAL		WEYAUWEGA-FREMONT SCHOOL DISTRICT
	CEMETERIES		
	CHURCHES		

4,000 2,000 0 4,000 Feet

The base mapping data displayed in this map was obtained from Waupesa County & East Central Regional Planning Commission. This data has not been officially verified for accuracy by OMNI Associates or the Town of Mukwa. Any use without prior written permission of OMNI Associates is prohibited. OMNI Associates or Mukwa for this specific purpose intended will be at Owner's sole risk and without liability or legal exposure to OMNI Associates or the Town of Mukwa.

OMNI ASSOCIATES

PROJECT # M1151A04
DATE: 04/01/05
DRAWN BY: KAL
REVISED: 04/25/05

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P:\PUBLIC\2005\2005_04\20050401.mxd

LOCATION: F:\GIS\M1151A04\DRAWINGS\UTILITIES_11\117.mxd
SOURCE: Waupesa County
East Central Wisconsin Regional Planning Commission

Coordination with Other Comprehensive Plan Chapters

The ability of a community to grow is directly tied to its capacity to serve its residents. The preceding sections of this chapter have inventoried existing community facilities, identified current deficiencies, and provided achievable goals for future implementation. This section will focus upon the ways in which the Utilities and Community Facilities Chapter is related to, and will be integrated with, the other chapters of the Comprehensive Plan.

HOUSING

As the population of Mukwa grows, additional strains will be placed upon the Town's infrastructure. New housing will require the extension of utilities like gas and electric, as well as services such as fire protection, garbage collection, and snow plowing. In a community with no municipal wastewater treatment facility, it is important to ensure that housing is built in areas capable of satisfying the percolability requirements of on-site or alternative treatment systems. This necessarily requires that the Town consider costs of services as part of the review process for proposed residential subdivisions.

TRANSPORTATION

Planning for transportation infrastructure and utilities and community facilities are often tied together. New roads in the Town will undoubtedly result from transportation needs associated with new residential development projects. Utilities are most frequently located in road rights-of-way. Therefore, it is imperative that the Town coordinate planning and construction activities related to the transportation network and future utilities and community facilities to minimize costs and maximize preservation of quality of life issues for residents.

NATURAL, CULTURAL, AND AGRICULTURAL RESOURCES

A wide variety of natural resources, including the Wolf River and its tributary streams, provide Mukwa with its natural beauty. Town residents participating in the plan process have identified the natural environment of the community as a valued asset warranting active preservation efforts on the part of their elected officials. Responses received during the SWOT, Values, and Vision exercises, along with comments provided to Community Survey questions, have also indicated that residents value the recreational opportunities afforded by the rivers, streams, bayous, and forests of Mukwa. The Utilities and Community Facilities Chapter has identified the creation of community parks as a goal for the Town. The combination of a desirable landscape and prospective grant funding provide Mukwa with an opportunity to establish a Town Park System closely tied to the natural environment.

ECONOMIC DEVELOPMENT

The availability of utilities and community facilities like electricity, police protection, and communications services are critical to economic development. Therefore, the goals and objectives, found in Chapter 12, seek to maintain, and where feasible, improve local utilities and community facilities to allow for economic development opportunities in the Town where they are desired.

LAND USE

Development brings more people and businesses to a community. Accordingly, the need for associated utilities and facilities increases with development. There is a very close relationship between the land use and utilities and community facilities elements of this plan. The Future Land Use Maps were developed after careful consideration of where utilities and community facilities are now available, or will be available, over the next 20 years. Development will be discouraged in those areas where the wastewater treatment systems, communication services, power supplies, or other infrastructure costs are prohibitive.

INTERGOVERNMENTAL COOPERATION

Due to its rural nature and close proximity to the cities of New London and Weyauwega, the Town is reliant upon, and benefits from, other communities and the services they provided to Mukwa residents. The Town will continue to depend upon its neighbors and Waupaca County to meet the needs of its growing population. Therefore, coordination with neighboring governments is essential to ensure that development in the Town is compatible with local utility and community facility capacities. Goals and objectives included in Chapter 12, Implementation, as well as the Intergovernmental Coordination Element, support continued coordination to efficiently provide needed utilities and community facilities to the Town.

Goals, Objectives and Policies

It is the goal of the Town that future utility and community facilities needs be met through the year 2025 and beyond. To that end, Mukwa will continue to work with neighboring communities, the school districts, Waupaca County, and other organizations that provide the community facilities and utilities used by its residents. The goals, objectives, and policies listed in Chapter 12, Implementation, represent achievable tasks to be undertaken upon the completion of the Comprehensive Plan.



Introduction

This chapter provides an inventory of existing agricultural, natural, and cultural resources in the Town of Mukwa. Issues associated with these resources are discussed and a vision, with supporting goals and objectives, is presented.

Wisconsin's Smart Growth Law includes 14 goals for local comprehensive planning. The goals listed below specifically relate to planning for agricultural and natural resources:

- Protection of natural areas, including wetlands, wildlife habitats, lakes, woodlands, open spaces and environmental corridors.
- Protection of economically productive agricultural areas.
- Protection of agricultural lands for agricultural purposes.

Agricultural, Natural, and Cultural Resources Vision

In 2025, woodlands, wetlands, lakes, bayous, prime agricultural lands, and the Wolf River and its tributaries remain the dominant landscape features in Mukwa. Natural areas and open spaces provide recreational opportunities for residents and habitat for wildlife. Farming continues to be a productive and economically viable source of income for individual families and the community as a whole. Residential and commercial areas have been developed with protected open spaces, preserving the scenery and panoramic views that define the community. Residents and visitors enjoy access to the natural environment via a network of local and county trails connecting neighborhoods to the Wiouwash Trail, Sturgeon Trail, Mukwa Wildlife Area, and Mosquito Hill.

The Town's natural environment provides abundant opportunities for outdoor enthusiasts including hunting, fishing, camping, hiking, canoeing, kayaking, and Nordic skiing, among others. The Wolf River, Mukwa Wildlife Area, and Cactus Rock continue to serve as outdoor laboratories for scientists, academics, and students of all ages. Mukwa has maintained its cultural traditions and continues to embrace its history through numerous area-wide events.

VISIONS, VALUES AND SWOT EXERCISES

During the Visions, Values, and SWOT exercises, participants were asked to identify the attributes, both positive and negative, that identify Mukwa to residents and visitors. The rural character and natural environment of the community garnered the majority of the responses. When asked to offer the things most valued in Mukwa, attendees at the July 21, 2004 Kick-off Meeting listed the serenity of rural living, clean air and water, the Wolf River, open space, Cactus Rock, and artesian wells as important community resources. Nearly half of the strengths identified during the SWOT exercise were related to agricultural, natural, and cultural resources. As can be deduced from these three exercises, and the Community Survey responses on the following page, this community more than most sees its past, present, and future as tied to the agricultural, natural, and cultural environment within which it exists.

Community Survey

Tables CS-18 through CS-24 illustrate community survey responses related to *Agricultural, Natural, and Cultural Resources* in the Town of Mukwa.

TABLE CS-18: Do you own or operate a farm in Mukwa??	
Yes	9.7%
No	90.3%

TABLE CS-19: How long do you and/or your family plan to continue your farm operation?	
5 years or less	13.3%
6-10 years	6.7%
11-15 years	10.0%
More than 15 years	23.3%
Don't know	46.7%

TABLE CS-20: How important to you are the following natural resources and landscape features of the Town of Mukwa?					
	Very Unimportant	Unimportant	Important	Very Important	No Opinion
Forests and wooded areas	5.4%	2.0%	34.6%	50.5%	4.1%
Grasslands	5.3%	5.6%	36.6%	46.1%	6.3%
Wolf River	4.9%	1.8%	22.9%	62.0%	7.4%
Other streams and surface waters	4.2%	2.8%	29.7%	57.0%	6.3%
Cincoe and Partridge Crop Lakes	3.4%	4.5%	34.9%	44.5%	12.8%
Wetlands/marsh/bayous	5.0%	5.4%	32.1%	20.7%	6.8%
Undeveloped open space	4.2%	6.0%	32.2%	47.3%	10.2%
Native plants and animals	3.5%	3.5%	29.5%	56.8%	6.7%

TABLE CS-21: How important to you are the following in the Town of Mukwa?					
	Very Unimportant	Unimportant	Important	Very Important	No Opinion
Preservation of natural resources	3.9%	2.8%	34.3%	58.3%	0.7%
Habitat protection for fish and wildlife	3.5%	1.4%	32.6%	61.1%	1.4%
Water quality	3.9%	0.7%	19.6%	75.1%	0.7%
Air quality	3.9%	1.1%	20.9%	73.0%	1.1%
Preservation of rural character	4.0%	6.5%	28.7%	59.6%	1.1%
The area's scenic quality	2.8%	6.0%	34.5%	53.2%	3.5%
Quiet places	3.6%	1.4%	35.0%	57.5%	2.5%
Tourism	16.2%	30.3%	29.6%	15.1%	8.5%

TABLE CS-22: In your opinion, how important is protecting farmland in the Town of Mukwa?	
Very Unimportant	0.5%
Unimportant	6.4%
Important	32.9%
Very Important	49.7%
No Opinion	6.1%

TABLE CS-23: In your opinion, what effect does farming have on the following in the Town of Mukwa?					
	Very Negative Effect	Negative Effect	Positive Effect	Very Positive Effect	Don't Know
Preservation of natural areas	1.0%	5.8%	49.3%	32.5%	11.3%
Habitat for fish and wildlife	1.4%	7.9%	43.7%	32.5%	14.4%
Water quality	7.2%	20.0%	30.7%	25.2%	22.0%
Impact on local economy	0%	3.3%	49.4%	31.6%	15.6%
Preservation of rural character	0.7%	4.7%	40.2%	43.7%	8.6%
The area's scenic quality	0.3%	1.5%	47.3%	41.0%	9.9%

TABLE CS-24: To what extent would you encourage or discourage large-scale livestock operations in the Town of Mukwa?	
Strongly discourage	34.3%
Discourage	33.9%
Encourage	14.2%
Strongly encourage	3.1%
Neither	14.5%

Agricultural Resources

Agriculture remains one of the largest land use categories in Mukwa, accounting for nearly twenty percent of the Town’s land base. However, it is also among the most threatened. Residential and commercial growth in rural communities typically occurs through “green field” development; that is, it takes place on land not previously developed. Green fields include woodlands, wetlands, grasslands, fallow areas, and agricultural lands. In Mukwa, a substantial portion of wooded areas is classified as forested wetlands. The state and federal regulatory hurdles required to be crossed for development to occur in delineated wetlands are such that developers will often look elsewhere to build subdivisions, shopping centers, and the like. In Mukwa, elsewhere is agricultural land. Therefore, anticipated future development in the community will result in a significant decrease in available agricultural acreage unless steps are taken to preserve farming as both a viable land use and as an income producer for farm families.

Productive farm soils are located throughout the community (refer to *Agricultural Suitability Map* on the following page). Existing agricultural lands are concentrated in the northwest and southeast portions of the community. A variety of factors threaten the long-term viability of farming in Mukwa. They include:

- A projected population of more than 3,300 by the year 2025;
- The potential future annexation of land by the City of New London;
- The desire for large-lot residential development;
- The increasing average age of the typical farm operator combined with fewer young people interested in farming;
- The development barrier formed by the Wolf River, which will intensify the loss of agricultural lands in the eastern half of the community.

A variety of tools are available to local governments and farmers to preserve prime agricultural lands. These include Wisconsin’s Farmland Preservation Program, various Natural Resource Conservation Service programs, and the purchase or transfer of development rights, among others. These programs are most effective in communities where farming will remain a primary land use over time. Successful farmland preservation efforts are dependant upon the support of local farmers and their ability to pursue new markets to sustain operations over time.

ATCP 51

On September 16, 2005, the Wisconsin Department of Agriculture's Board gave final approval of ATCP 51 establishes standards for the siting of livestock operations. In its approval, the Board added an amendment to have the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) annually review ATCP 51 to see if any modifications are needed.

ATCP 51, implements Wisconsin’s Livestock Facility Siting Law (s. 93.90, Stats.). The law does not require local approval of new and expanding livestock operations, but if local approval is required by the community, the local government must grant or deny approval according to this rule. A local government may not consider other siting criteria, or apply standards that differ from this rule, except as specifically authorized in the law. This rule applies to new or expanded facilities that keep cattle, swine, poultry, sheep or goats.

Under the law, a local government may not deny or prohibit the siting or expansion of a livestock facility of any size unless one of the following applies:

- The site is located in a non-agricultural zoning district.
- The site is located in an agricultural zoning district where the livestock facility is prohibited. The zoning prohibition, if any, must be clearly justified on the basis of public health or safety. The law limits exclusionary local zoning based solely on livestock facility size.
- The proposed livestock facility violates a valid local ordinance adopted under certain state laws related to shoreland zoning, floodplain zoning, and construction site erosion control or stormwater management.
- The proposed livestock facility violates a state building, electrical or plumbing code for that type of facility.
- The proposed livestock facility will have 500 or more “animal units” (or will exceed a lower threshold incorporated in a local zoning ordinance prior to July 19, 2003), and the proposed livestock facility violates either 1) the standards in the rule or, 2) a stricter local standard by ordinance. Those standards must be based on scientifically defensible findings of fact that clearly show the standards are necessary to protect public health or safety.

To ensure that farming remains an important ongoing land use in Mukwa, this Comprehensive Plan seeks to identify prime agricultural areas to be protected from residential and commercial development.



For More Information
about EQIP, CRP, and other programs to
preserve farmland, visit:
www.fsa.usda.gov/dafp/cepd/crp.htm
www.nrcs.usda.gov/programs/eqip

Long Term Sustainability of Farming in Mukwa

This section provides options available to the Town and local farmers to preserve locally owned agricultural operations. Local land trusts and conservation subdivision designs are encouraged, but may not be appropriate in all areas. Other strategies to protect farmland include:

- Permitting value-added operations such as cheese making and on- and off-farm direct retailing (roadside farm stands);
- Encouraging local schools to provide education to students about careers in farming;
- Transitioning from conventional to organic farming techniques; and,
- Reevaluating current livestock and crop selection.

CONSERVATION-BASED DEVELOPMENT

Conservation-based development techniques may involve the establishment of a conservation easement (see box). In a conservation subdivision, homes are “clustered” together so that a greater proportion of the land is protected from development.

- A typical conservation subdivision will require that 40% of a site be set aside and preserved as undevelopable open space.
- Protection and maintenance of the conserved area can be accomplished through a conservation easement with an appropriate conservation organization, land trust, homeowners association, government body, or through deed covenants.
- The areas to be conserved must be protected indefinitely.
- The land designated for protection will be preserved as natural habitat, open space, or farmland. If it is farmland, special consideration should be given to where residential development is located (e.g. prevailing winds, buffers, etc) to allow farm uses to coexist harmoniously with residential uses.
- In conservation subdivisions, the development of walking and bicycle trails is encouraged, particularly to provide limited access to protected natural areas.

LAND TRUSTS AND CONSERVATION EASEMENTS

Land trusts provide another option to landowners seeking to protect natural areas and farmland. Land trusts provide landowners with advice on protection strategies that best meet the landowner’s conservation and financial needs. Land trusts accept lands donated by landowners for conservation purposes. Land trusts can also work with landowners to establish *conservation easements* (see box).

SPECIALTY FARMING

Thus far, this chapter has focused on traditional agricultural operations (e.g. crop and family farming). Specialty or niche farming provides an alternative to conventional agricultural production, particularly for smaller farms attempting to compete with large agricultural operations. Mukwa’s location and ready highway access provides an opportunity to market directly to the larger population centers of central Wisconsin and the Fox River Valley. Marketable agricultural products may include:

- Organic milk and cheese from local dairy operations
- Organic vegetables and produce (sold locally at a collective farmers’ market in Mukwa or in nearby cities)
- Aquaculture products
- Pumpkin patches, berry farms, and orchards that allow visitors to pick their own produce.
- Walnuts, maple syrup, and pine trees (for landscaping or holidays) from local tree farms
- Horse farms (offering boarding and potential future trail access)

What is a Conservation Easement?

A conservation easement is a **voluntary legal agreement** between a landowner and a land trust or government agency that limits present and future development of a parcel.

Under a conservation easement, the **landowner retains ownership** of the land (within the terms of the easement – i.e. only for farmland or natural space, not for development) and the land trust takes the responsibility for protecting the land’s conservation values.

Donated conservation easements that meet federal tax code requirements can provide significant **tax advantages** to landowners because their land will be taxed as undevelopable land, which is a much lower rate than developable land. Qualified easements may also generate charitable contribution deductions for income and transfer tax purposes.



How is a Conservation/Cluster Subdivision Created?

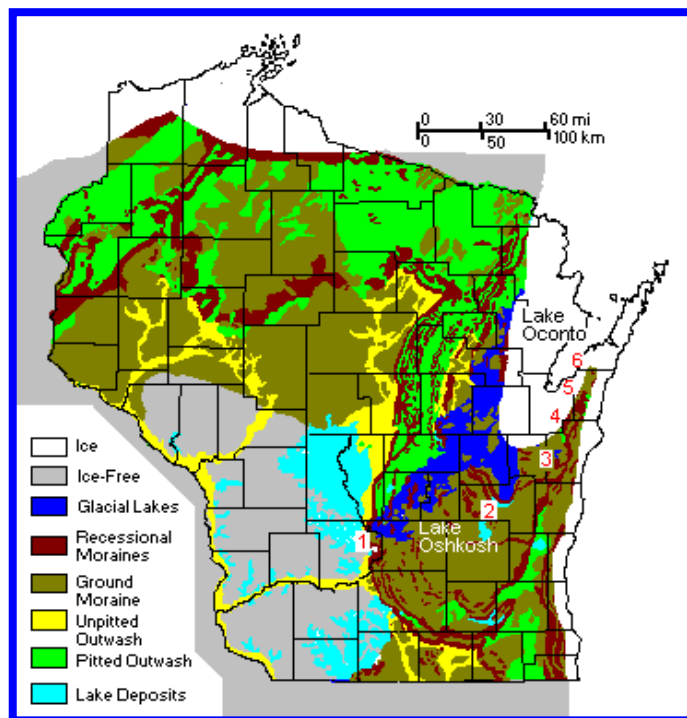
1. **Develop a Yield Plan.** This plan essentially shows how many homes could be developed if a traditional subdivision layout were used.
2. **Identify Primary And Secondary Conservation Areas.** Primary conservation areas include: poor soils, steep slopes, wetlands, waterways and floodplains that are not conducive to development. Secondary conservation areas include other areas of local importance targeted for protection (i.e. farmland, woodlands, scenic views, etc.).
3. **Locate the Home Sites.**
4. **Include Roads, Sidewalks and Trails.**
5. **Draw the Lot Lines.** This is usually the first step in a traditional approach.

Organic food is a fast-growing industry in the United States. Products that once occupied a boutique marketplace niche are becoming main-stream, as consumers seek healthier alternatives to conventional farm produce. Organic and specialty farming counter the notion that farms must become very big or be lost to development. They provide a profitable choice for small, local farmers. Additional information about strategies to sustain agriculture through specialty farming is included in the Economic Development Chapter. In addition, the Future Land Use Chapter identifies agricultural districts to target farm preservation.

Natural Resources

The natural environment is a key indicator in enhancing positive “quality of life” attitudes among local residents. A correlation often exists between the presence and prevalence of open space and the positive feelings people have about their community. Woodlands, wetlands, grasslands, and surface waters provide important wildlife habitat and recreational opportunities for residents. They improve the visual appeal of the community and can function as development buffers, both within the Town and between Mukwa and its municipal neighbors. In many respects, the natural landscape determines where development can and can’t happen. Diverse topography limits the type and density of development that can occur. Certain soils types have limitations that preclude development upon them. Construction activities within wetlands and flood plains are strictly regulated by local, state, and federal agencies. Woodlands and grasslands, however, are afforded little state or federal protection. They, along with agricultural lands, tend to experience the greatest amount of development pressure and, therefore, require a greater level of local protection...at least for those communities intent upon preserving them. Preservation of natural resources (wetlands, surface and groundwater, woodlands, shorelines) is an important priority in Mukwa. Local residents value the benefits provided by a healthy and diverse natural environment. Many of Mukwa’s natural assets are shown on the *Natural Features Map* located on page 7-10.

GLACIATION, TOPOGRAPHY, AND GEOLOGY



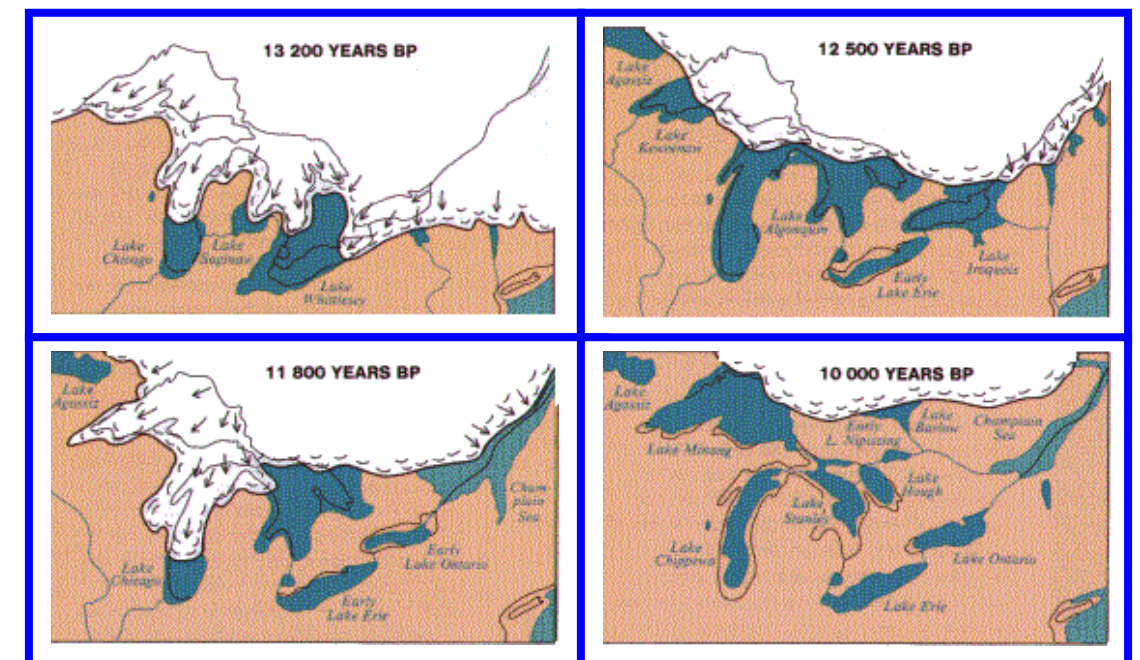
SOURCE: *Geology of Wisconsin*, Steven Dutch, June 1999.

Mukwa, like most of Wisconsin, owes its unique landscape to the cumulative affects of past ice ages. More than 95% of Wisconsin’s natural lakes and many of its major rivers (including the Fox, Wisconsin, and Wolf Rivers) were formed during the last glacial recession. The Wisconsin Glacial stage began approximately 65,000 years ago and lasted about 54,000 years. The ice that covered most of the state was up to one mile thick in places and extended in five lobes: the Superior, Chippewa, Wisconsin Valley, Green Bay, and Lake Michigan lobes. The Green Bay lobe extended along the eastern part of the state (see illustration at left) carving out Green Bay, the Fox River, and Lake Winnebago and reaching as far south as the city of Madison. As these lobes receded, they left glacial lakes in their path (see text and box below). The last glacier in Wisconsin began receding about 11,000 years ago.

Waupaca County is part of the Eastern Ridges and Lowlands geographic province of Wisconsin. The topography in Mukwa is characterized by rolling hills, plain meadows, and forested riparian floodplains. Elevations range from a high of 930 feet above sea level in the far southeastern portion of the Town to a low of 750 in the southwest. In general, the Town is characterized by rolling topography varying from 770 to 850 feet above sea level. The wide Wolf River floodplain in its downstream section and the smaller Little Wolf River valley provide the lowest points in Town.

Mukwa’s subsurface geology is comprised of dolomitic limestone and sedimentary rock layers with granitic outcroppings. The outcropping at Cactus Rock (see description on the following page) represents the oldest rock unit in Mukwa. The rocks that occur at the surface and at depth in Waupaca County may be classified in three groups: the crystalline rocks of Precambrian age, the consolidated sedimentary rocks of Cambrian and Ordovician age, and the unconsolidated deposits of Quaternary age.¹ For additional information regarding the subsurface geology of

Waupaca County please refer to the Groundwater Resources section of this chapter.

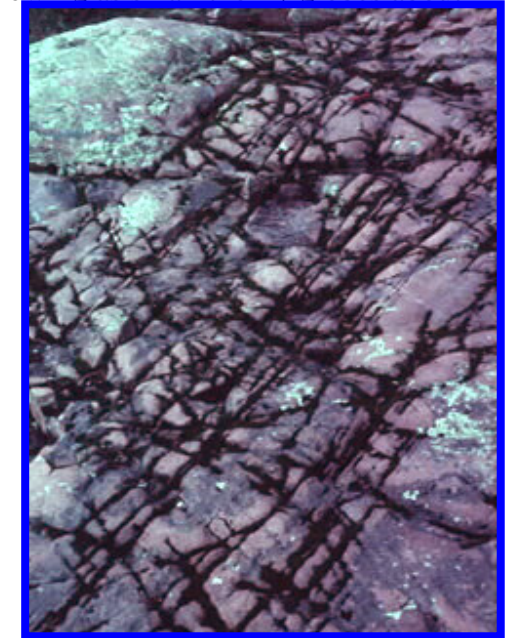


SOURCE: Original source unknown.

¹ Excerpted from *Ground-Water Resources of Waupaca County Wisconsin*, Geological Survey, United States Department of the Interior, 1964.

- **Cactus Rock²**

Cactus Rock is an ice-sculpted landform with a steep glacially-plucked southwestern face. The northeast side of the rock is somewhat gentler than the southwest side, but still quite irregular. The gentle slope leading up to the rock on the northeast side is probably ice-sculpted glacial deposits, banked up against the outcrop by ice flow. A low ridge extends as a "tail" southwest from the eastern end of the outcrop for about half a kilometer; it is apparent on topographic maps but not very obvious from the ground. This feature may have resulted from ice being diverted southeastward around the end of the ridge, depositing drift in the lee of the outcrop. The site is a scientific reserve owned by Lawrence University and named for growths of a wild cactus, *Opuntia fragilis*. The cactus is a ground-hugging variety, usually growing as small thorny globes about 2-3 cm in diameter in mossy crevices. Larger growths look a little like miniature cholla cactus, with stubby finger-like branches. It has been largely eradicated from the most heavily-traveled areas of the rock; if you find any, please do not disturb it. Cactus Rock is the easternmost Precambrian outcrop in east-central Wisconsin. The granite at Cactus Rock is a uniform, fine-grained pink granite composed mostly of quartz and potash feldspar. Bedrock contacts in the area are concealed by Pleistocene deposits. The oldest rock unit in the area is a suite of granitic and rhyolitic rocks about 1760 million years old (Smith, 1978; 1983; Van Schmus, 1978), exposed in about ten outcrops in south-central Wisconsin. Although Cactus Rock has not been radiometrically dated, it is lithologically similar to this suite and probably belongs to it.



SOURCE: *Cactus Rock*, Steven Dutch, Natural and Applied Sciences, University of Wisconsin - Green Bay, May 1999.

The State of the Wolf Basin³

The Wolf River Basin (see map on the following page) drains 3,690 square miles and includes all of Waupaca County and parts of Forest, Langlade, Marathon, Menominee, Oneida, Outagamie, Portage, Shawano, Waushara and Winnebago Counties. The Wolf River runs from southern Oneida and Forest Counties south to where it joins the Upper Fox River just above the Lake Winnebago Pools System. The Wolf River Basin is comprised of 20 smaller watersheds including the Little Wolf River flowing through Mukwa.



Lower Wolf River Bottomlands⁴

The Lower Wolf River Bottomlands Natural Resource Area (see map on the following page) includes 214,000 acres of land in portions of Shawano, Outagamie, Waupaca, and Winnebago Counties. The entirety of the Town of Mukwa is included in the Lower Wolf River Bottomlands Natural Resource Area. The WDNR owns 14 properties within the Lower Wolf River Bottomlands Resource Area including the Mukwa Bottomland Forest (Mukwa Wildlife Area).

- **Mukwa Bottomland Forest (Mukwa Wildlife Area)⁵**

Located along the lower Wolf River, the Mukwa Bottomland Forest is a diverse southern wet-mesic forest in the floodplain of the Wolf River. Although dominated by silver maple and swamp white oak, small numbers of American elm persist. The trees vary in size from saplings to an occasional specimen more than 30 inches in diameter at breast height. Areas with smaller trees appear quite natural with no evidence of past logging or grazing. Additional tree species include red elm, black ash, green ash, basswood, bur oak, hackberry, cottonwood, willows, and red maple. The under story has mostly buttonbush and prickly ash as shrubs; the herbaceous layer is dominated by wood nettle but also has Canadian honeysuckle, moneywort, northern bugleweed, tall coneflower, woodland phlox, carrion flower, and bristly green briar. The topography is uneven, the site having been dissected by many old channels and fluctuating water levels. The Mukwa Bottomland Forest is owned by the DNR and was designated a State Natural Area in 1980.

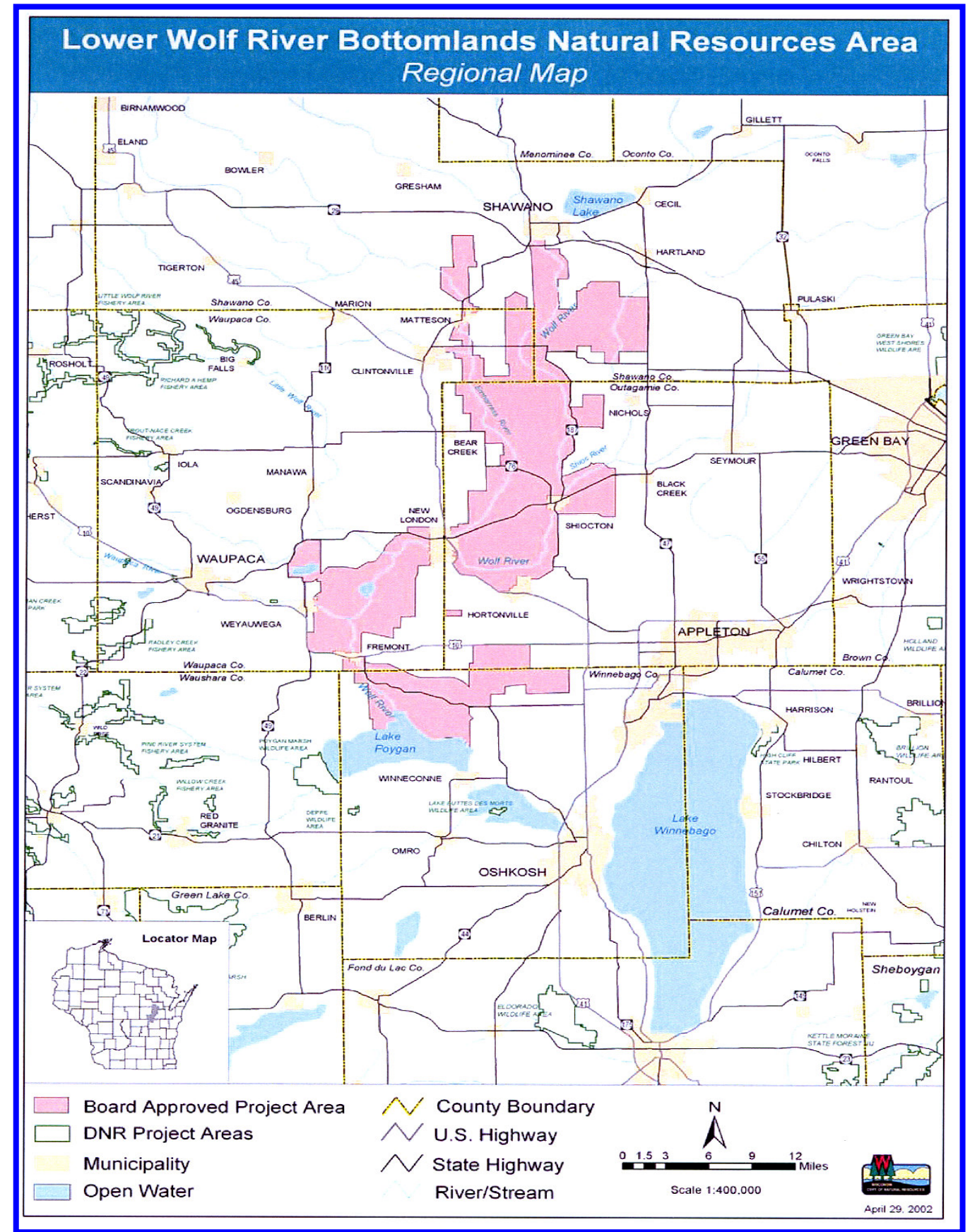
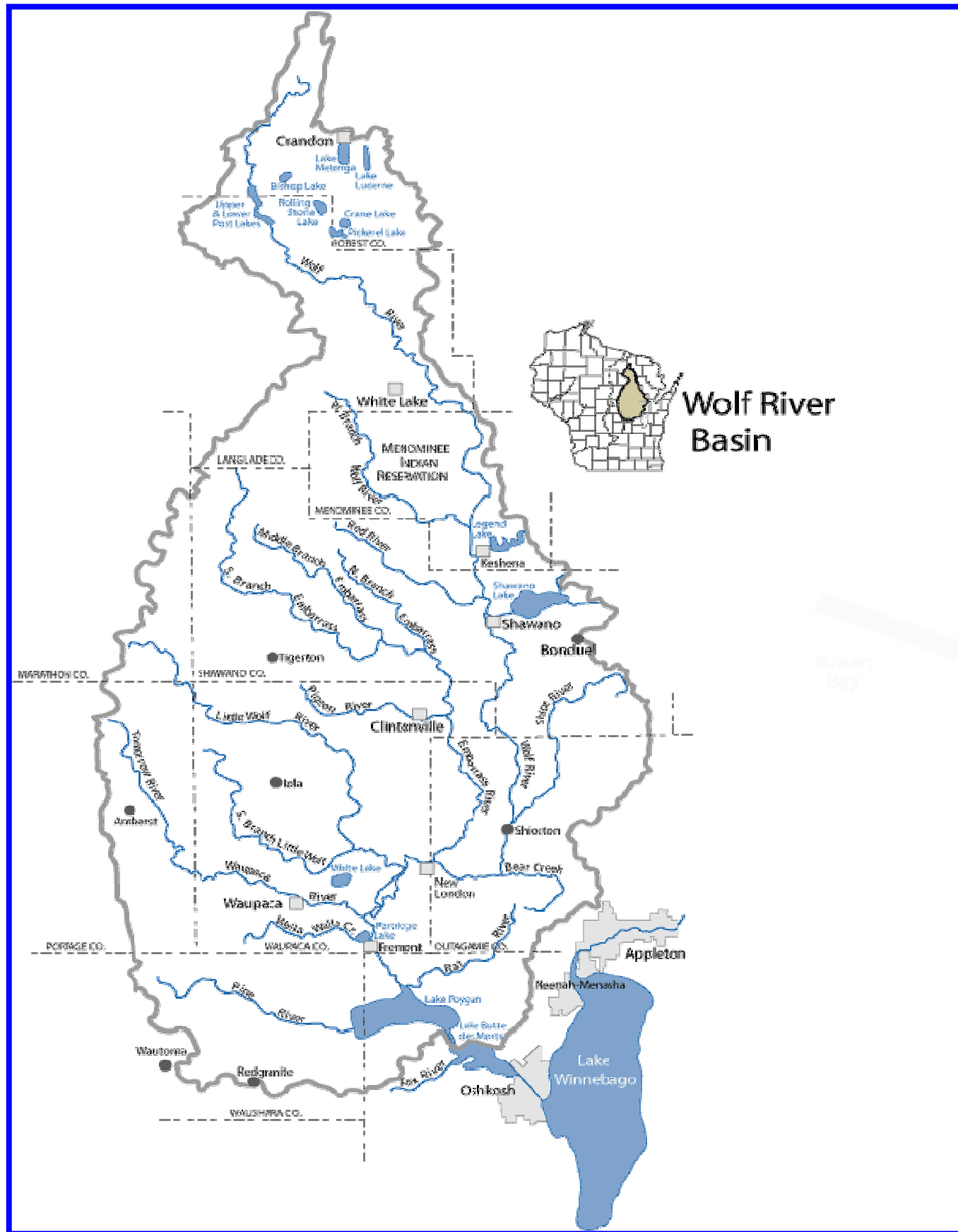
SOURCE: *Mukwa Bottomland Forest*, Wisconsin Department of Natural Resources *Maps* website, 2005.

² SOURCE: Steven Dutch, Natural and Applied Sciences, University of Wisconsin - Green Bay, May 1999.

³ Text excerpted from www.dnr.state.wi.us/org/gmu/wolf/, 2005.

⁴ Information from this section was excerpted from the *Lower Wolf River Bottomlands Natural Resource Area Feasibility Study and Environmental Impact Statement* developed by the WDNR, 2002. Copies of this report are available on-line at www.dnr.state.wi.us/master_planning/Wolf/index2.htm.

⁵ Text excerpted from www.dnr.state.wi.us/org/land/, 2005.



SOURCE: Wolf and Upper Fox Basins website, 2005.

SOURCE: Lower Wolf River Bottomlands Natural Resource Area Feasibility Study and EIS, March 2002.

WHY IS THE LOWER WOLF RIVER AREA IMPORTANT?

The Lower Wolf River Bottomland is an ecologically important landscape located between the urban areas and agricultural communities of east central Wisconsin and the extensive forests of northern Wisconsin. The natural communities that comprise the bottomland area are described in Table 19.0 below. The Lower Wolf River Bottomlands support a diversity of aquatic communities that provide spawning habitat for a variety of fish (see Table 20.0 below).

During the spring, numerous fish species make their way up the Wolf River and its tributaries from Lake Winnebago to spawn. This annual migration differs for each species. The annual fish “runs” of northern, walleye, and white bass attract thousands of anglers to the region. These annual spawning migrations provide a seasonal boost to the economy of Mukwa and the other towns and villages located within the Lower Wolf River Bottomlands.

TABLE 19.0: Natural Communities in the Lower Wolf River Bottomlands		
Natural Community	Common Plants	Description
Emergent Aquatic	Cattail-bulrush-bur-reed-arrowhead	Open marsh, lake, and river communities with permanent standing water
Submergent Aquatic	Pondweeds-wild celery-waterweed-water milfoil	Deeper water community found in lakes and rivers
Southern Sedge Meadow	Tussock sedge-Canada blue joint grass	An open wetland community
Floodplain Forest	Silver maple-green ash-swamp white oak-cottonwood	A lowland hardwood forest along large rivers
Southern Hardwood Swamp	Red maple-elms-ashes	A deciduous forested wetland community found in areas with seasonally high water tables

TABLE 20.0: Wolf River Fish Spawning	
Fish Species	Description of Spawning Habits
Northern Pike	Northern Pike are the first to spawn. As temperatures rise, “northerns” migrate from the Wolf River into small creeks and streams to spawn on marshes in the river’s floodplain. The fish spawn on flooded vegetation and quickly return to the river.
Walleye	Walleye migrate into old river bayous along the Wolf River’s floodplain. The Winnebago strain of walleye prefers to use grass for spawning.
Lake Sturgeon	Lake sturgeon spawn when the water temperature reaches 55 degrees Fahrenheit. The majority of these fish migrate up the Wolf River during the previous fall. They stay in deep pools during the winter months waiting for spring. Once the water reaches the proper temperature, the large fish will spawn along the river’s rocky shoreline.
White Bass	White bass run up the river and spawn in the brushy cover fringes of the main channel. After spawning their voracious appetite and good taste makes them a favorite of anglers.

SOURCE for Tables 19.0 and 20.0: Lower Wolf River Bottomlands Natural Resource Area Feasibility Study and EIS, March 2002.

▪ **Little Wolf River Watershed**

The Little Wolf River watershed is 336 square miles in size. Its headwaters are located in Marathon, Portage, and Shawano Counties. The 161-acre Little Wolf River State Natural Area is located in northwest Waupaca County. The stretch of the Little Wolf within the state natural area includes a high quality trout stream and unfragmented blocks of northern wet-mesic forest dominated by white cedar with balsam fir, yellow birch, hemlock, and American elm. The Little Wolf River flows through the Mukwa before discharging to the Wolf River within the Mukwa Wildlife Area.

LAND USES IN THE LOWER WOLF RIVER BOTTOMLANDS

Land uses throughout the Lower Wolf River Bottomlands are changing as demand for housing development increases. The proximity of the Lower Wolf River Bottomlands to the Fox Cities, combined with the expansive range of habitats it offers, makes it a popular destination for outdoor enthusiasts. Uncontrolled development will eventually fragment the unique habitat contained in this system, potentially causing declines in important wildlife and fish populations and a decrease in recreational opportunities.

FEASIBILITY STUDY & ENVIRONMENTAL IMPACT STATEMENT

In 2002, the WDNR completed the *Feasibility Study and Environmental Impact Statement for The Lower Wolf River Bottomlands Natural Resource Area*. The report proposed that WDNR, through partnerships with local governments, conservation groups and others, protect important natural resources within the bottomlands. WDNR has established a land acquisition goal of 45,000 additional acres outside of existing state properties (no

timeline is offered for acquisition, however, given state budget limitations, it will likely take up to fifty years to achieve this goal). The focus for land purchase is aimed at protecting floodplain forests, sand marshes, and sensitive spawning habitat along the Little Wolf, Lower Wolf, and Embarrass Rivers. This goal may result in additional WDNR land acquisitions in the Town of Mukwa.

The WDNR goals for the Lower Wolf River Bottomlands Natural Resource Area are that:

- The land along the Lower Wolf River Bottomlands is protected through ecologically sound management decisions that reflect long-term considerations for healthy ecosystems.
- The Lower Wolf River Bottomlands protects the quality and quantity of surface and groundwater resources.
- All citizens share the responsibility for stewardship of the natural resources in the Lower Wolf River Bottomlands for the benefit of current and future generations.
- The public has opportunities to experience a diverse range of compatible outdoor recreational and educational activities that enhance the quality of life and economy within the Lower Wolf River Bottomlands.
- The Lower Wolf River Bottomlands provides opportunities to preserve agricultural land through creative land management options.



IMPLICATIONS FOR THE TOWN OF MUKWA

To achieve long-term protection goals for the Lower Wolf River Bottomlands, WDNR will seek to acquire an additional 45,000 acres of land within the Lower Wolf River Bottomlands beyond existing land holdings. The targeted timeframe for acquisition is 50 years. The goal of the Lower Wolf River Bottomlands acquisition effort is to:

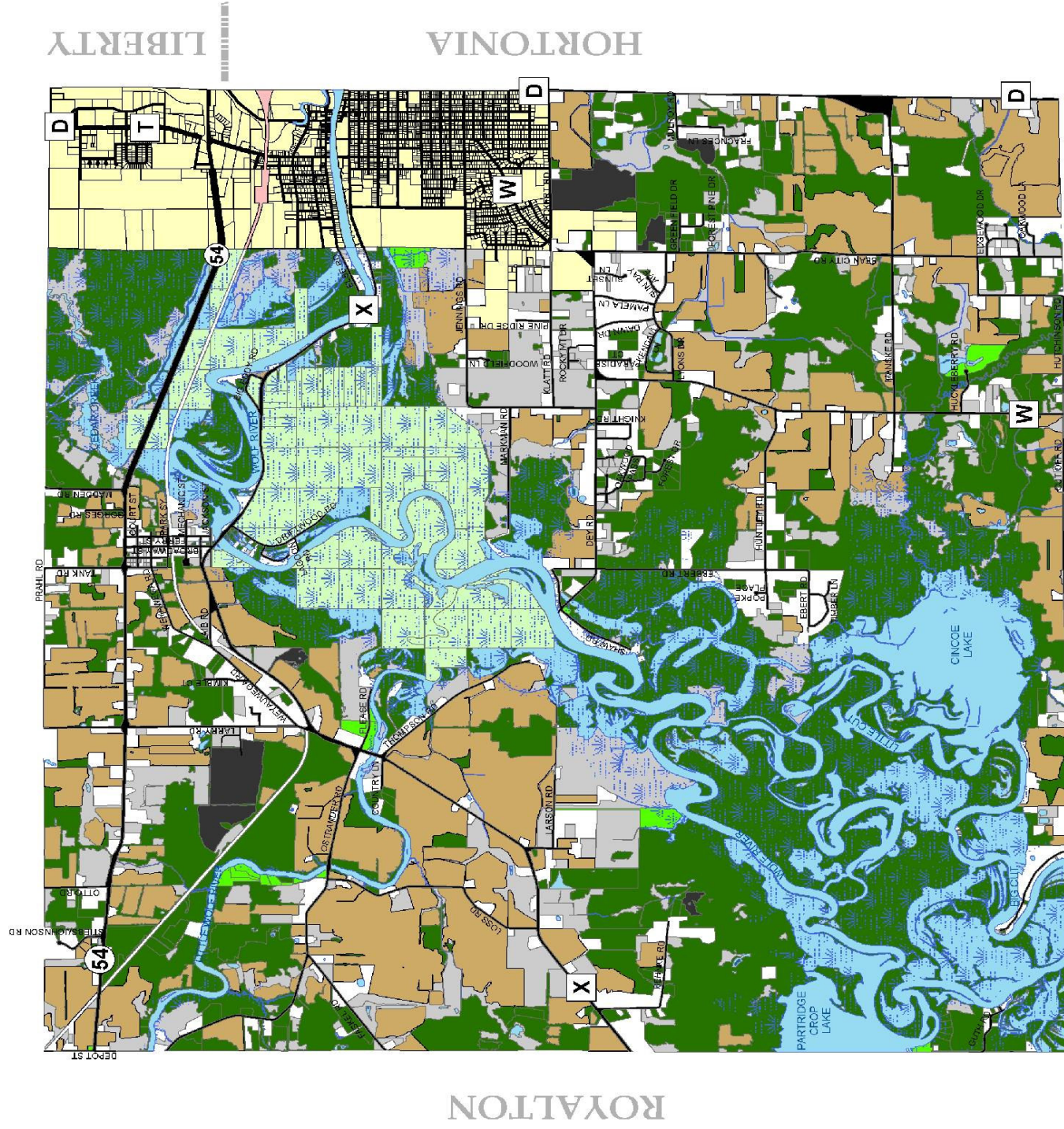
- Preserve important wetland habitats;
- Maintain hunting and fishing opportunities; and,
- Preserve open, undeveloped areas that contribute to the region's rural character.

If additional property within Mukwa is acquired by the WDNR, the Town will receive annual *payments in lieu of taxes* as required by state statute. The amount of the payment is calculated in the same manner as property taxes are derived for private landowner – the mill rate is multiplied by the assessed value of the land, except the assessed value is considered the fair market value of the land. The initial assessed value is set at the price the WDNR paid for the land, which is based on its appraised market value. The value is adjusted annually to reflect changes in the assessed value. If the price of land goes up, the payment in lieu of taxes by the WDNR will also increase. This system ensures that Mukwa will continue to receive revenue equivalent to taxable land without assuming the additional costs associated with the provision of Town services.

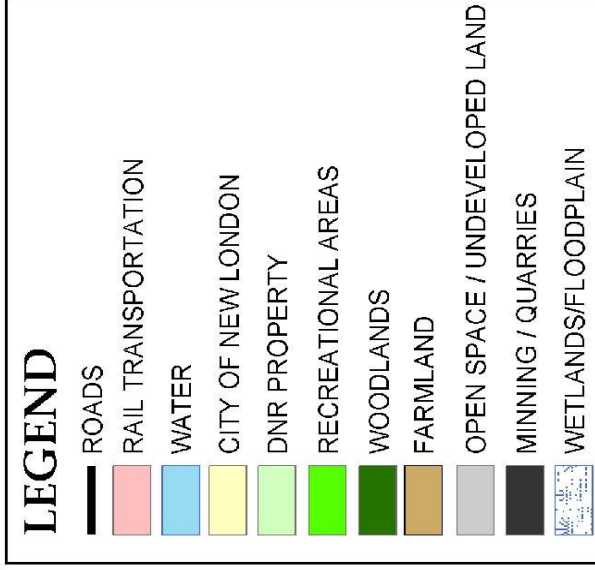
TOWN OF MUKWA

NATURAL FEATURES

LEBANON



CALEDONIA



1" = 4000'

OMNI ASSOCIATES

PROJECT # M1151A04
 DATE: 10/04/04
 DRAWN BY: KAL
 REVISED:

C:\E:\SYSTEMS\BRIEF\PROJECT\1151A04\DRAWINGS\Natural_Features_11x17.mxd
 K:\WORK\2004\1151A04\1151A04.DWG

LOCATION: F:\GIS\M1151A04\DRAWINGS\Natural_Features_11x17.mxd
 SOURCE: Waupaca County
 Est. Central Wisconsin Regional Planning Commission

WATERSHEDS AND DRAINAGE

Mukwa is located in the Wolf River watershed and the Lower Wolf River, Little Wolf River, and Potter's Creek sub watersheds and falls on the Eastern side of the sub-continental divide. Water in the Town that doesn't evaporate or infiltrate ground water reserves eventually flows to the Atlantic Ocean. Waters to the west of the divide flow to the Mississippi River and into the Gulf of Mexico. Water that results from precipitation or snow melt will eventually do one of three things: evaporate, infiltrate, or run-off. Evaporated water re-enters the air column to fall as precipitation at a later time. Infiltrated water soaks through the topsoil and subsurface layers and will enter and recharge groundwater reserves or flow through to the nearest surface water. The greatest percentage of water re-entering the aquatic system does so through runoff, flowing over the land, from the highest point to the lowest, until it reaches a receiving body, e.g. a wetlands, lake, or stream. When rain falls or snow melts in Mukwa it eventually enters the Atlantic Ocean via the Wolf River, Lake Winnebago, Fox River, Lakes Michigan, Huron, Erie, and Ontario, and the St. Lawrence River.

LAKES

There are a total of 142 named lakes in Waupaca County. Five of these (Cincoe Lake, Horseshoe Bayou, Partridge Crop Lake, Tom Bayou, and Traders Bayou) can be found in Mukwa. At 243 acres in size, Partridge Crop Lake is the largest, although, the majority of the lake lies in the Town of Royalton. There are also a number of smaller unnamed lakes and ponds in the Town. Water quality levels in Mukwa's lakes vary from one water body to another. Most of the lakes (named and unnamed) are classified as mesotrophic or eutrophic. Lakes, rivers, and other surface waters are classified by their "trophic state." Trophic states refer to water clarity and levels of dissolved oxygen, nutrients, fish, and invertebrates found in the water column. The trophic state of a lake can vary from one part of the lake to another. Trophic states should be thought of as a continuum with most lakes evolving from oligotrophic to eutrophic over time.

- **Cincoe Lake**
Located in the south-central portion of the Town, Cincoe Lake is a drainage lake 169 square-acres in size with a maximum depth of 4 feet and is classified as mesotrophic. It supports a fishery including blue gill, large mouth bass, and northern pike.
- **Horseshoe Bayou**
Horseshoe Bayou is an 18 square-acre drainage lake with a maximum depth of 8 feet. It is located in southern Mukwa roughly halfway between Cincoe Lake and Traders Bayou. Horseshoe Bayou supports bluegill, largemouth bass, northern pike, small mouth bass, and walleye. It is classified as eutrophic.
- **Partridge Crop Lake**
The eastern portion of 243 square-acre Partridge Crop Lake is located in southwestern Mukwa and has a maximum depth of 5 feet. The drainage lake supports a fishery including bluegill, lake sturgeon, largemouth bass, northern pike, and walleye. Like Cincoe Lake, Partridge Crop is classified as mesotrophic.
- **Tom Bayou**
Tom Bayou is located in central Mukwa adjacent to the Wolf River. It is a seepage lake of 5 square-acres in size with a maximum depth of 5 feet, and is classified as eutrophic. Tom Bayou supports bluegill, largemouth bass, and northern pike.
- **Traders Bayou**
At 24 feet in depth, Traders Bayou is Mukwa's deepest lake. Located half way between Tom Bayou and Horseshoe Bayou, it is 23 square-acres in size and supports a fishery including bluegill, largemouth bass, and northern pike. Like Horseshoe Bayou and Tom Bayou, Traders Bayou is a seepage lake and is classified as mesotrophic.

What is your watershed address?

Subwatershed – A land area, bounded by ridges or similar topographic features, encompassing only part of a watershed.

Watershed – An area of land draining water, organic matter, dissolved nutrients, and sediments into a lake or stream. The topographic boundary, usually a height of land, that marks the dividing line from which surface streams flow in two different directions.

Basin – A depressed area having no, or very limited, outlets for surface waters. Basins can vary in size from small rural ponds to the Great Lakes Basin.

Region – The largest watershed classification below the level of ocean. Comprised of one or more basins.

If you live in Mukwa, your watershed address is within the Lower Wolf, Little Wolf, or Potter's Creek subwatersheds ...within the Wolf River Watershed...within the Fox/Wolf River Basin...within the Lake Michigan Basin...and, within the Great Lakes Region.

LAKE CLASSIFICATION

Very clear lakes, referred to as **oligotrophic**, are low in nutrients, organic matter, and sediments. They are typically deeper and colder than the typical lake and are capable of supporting trout populations. They tend to have clear water with visibility over ten feet and are considered pristine. The lack of nutrients in the water column limits the number of plant and fish species that would occur in such lakes. Though they can be excellent for swimming, they are often quite cold. Oligotrophic lakes are typically characterized by:

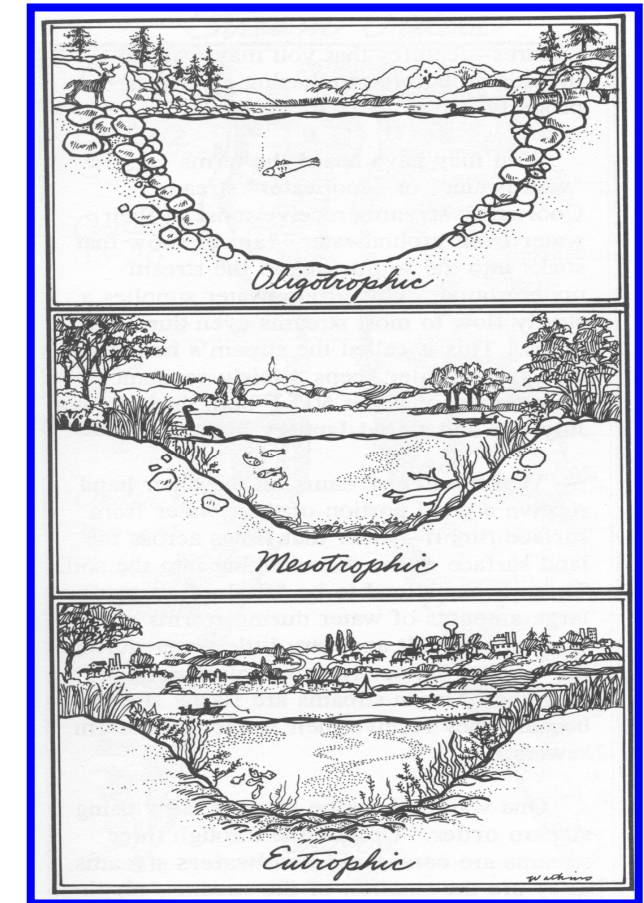
- A small watershed with nutrient-poor soils;
- A majority of the lake deeper than thirty feet;
- Minimal development;
- A watershed undisturbed by intensive human activities (agriculture, development, forestry); and,
- No discharges of pollution from industry or cities.

Somewhat less clear **mesotrophic** lakes have higher amounts of nutrients than oligotrophic lakes and represent the mid-point on the lake evolution continuum. They often support a rich array of aquatic plants and a wide variety of fish species. The biological diversity present in a mesotrophic lake provides a tremendous range of recreational opportunities making them very popular for fishing, swimming, and a variety of other activities. Mesotrophic lakes tend to have:

- A small- to medium-sized watershed with organic (nutrient rich) soils;
- Parts of the lake deeper than 20 feet;
- Moderate land development and land disturbing activities around the lake; and
- Few point sources of pollution (though nonpoint sources can accelerate the evolution to eutrophic).

Eutrophic lakes are very productive and have high levels of nutrients, organic matter, and sediments. They can support large fish populations; however, the diversity of fish species is usually much lower than that of a mesotrophic lake. High nutrient levels encourage plant growth, sometimes excessively so. These lakes often lack enough dissolved oxygen to support some fish species, like trout, walleye, and other prized game fish. As the lake eutrophies, it becomes less and less capable of supporting cool and coldwater fishes. Decaying vegetation can further reduce oxygen levels and cause fish kills, particularly during winter months. Eutrophic lakes usually have:

- A large watershed with organic soils;
- Depths shallower than ten feet;
- Substantial areas of land-disturbance in the watershed;
- Considerable to excessive development along the lake shore; and
- Multiple sources of pollution.



Source: *Life on the Edge...Owning Waterfront Property*, Dresen and Korth, UWEX, 1994

SHORELINES

Shorelines, riverbanks, and floodplains in Mukwa are protected and regulated by the Wisconsin Department of Natural Resources and Waupaca County through the County *Shoreland, Wetland, and Floodplain Zoning Ordinance*. Shoreland zoning regulations are designed for efficient use, conservation, development, and protection of water resources. They are intended to:

- Prevent and control water pollution;
- Protect spawning ground for fish and aquatic life;
- Control building sites, placement of structures, and land use; and
- Preserve shore cover and natural beauty.

As this chapter indicates, Waupaca County has a wide variety of water resources, including lakes, rivers, streams, and wetlands. The natural qualities of Waupaca County's water resources are important for environmental, economic, and cultural reasons. These resources provide habitat for fish and wildlife, natural beauty and serenity, and opportunities for outdoor recreation. Shorelines must not be thought of as a boundary between the land and water, but as a transition area within which the health of land and water ecosystems can be positively or negatively affected. Shoreland vegetation traps and filters sediment and debris from rainfall and snow melt.

Depending upon the size and complexity of a given shoreline, 50-100% of the solid particles can settle out as plants slow sediment-laden runoff. Reduced runoff leads to cleaner lakes, healthier aquatic ecosystems, and increased recreational opportunities.

GROUNDWATER & AQUIFERS

Groundwater is the primary source of potable water for the residents of Mukwa. The ground beneath Mukwa is comprised of glacial outwash and till. These deposits rest upon a layer of dolomite limestone which itself sits upon a layer of granite. It is from the aquifer formed by these glacial deposits that the majority of Mukwa's residents draw their potable water.

Aquifers are stratum, or layers, of gravel, sand, or porous, fractured, or cavernous rock capable of holding and/or conducting water. When fully charged, an aquifer is saturated with water. Water collects in the recharge area and flows, or percolates, to the lowest point of the aquifer. Recharge areas serve a function similar to that of headwaters for a river. They are the entry point for rainwater and snow melt into the aquifer. As the entry point, recharge areas are one of the most likely venues for contamination of groundwater.

What is an aquifer?

An aquifer is a layer of gravel, sand, or porous, fractured, rock capable of holding or conducting water. When fully charged, an aquifer is saturated with water. Most, if not all, private wells in Mukwa draw water from an aquifer made up of glacial outwash very near the surface. A much larger aquifer comprised of sandstone known as the St. Peter's aquifer lies much further below the Town.

System	Geologic Unit	Maximum Depth to Top (feet)	Maximum Thickness (feet)	Character	Water-Bearing Properties
Quaternary	Recent Deposits	0	30	Alluvium, dune sand, peat, and marl.	Small to large yields depending upon the thickness and character of the material.
	Pleistocene Deposits	0	277	Glaciolacustrine deposits, fine sand, clay, and peat.	Generally small yields.
				Till, unstratified and unsorted mixture of clay, silt, sand, gravel, and boulders.	Small to large yields depending on the character of the material.
				Glaciofluvial deposits; outwash, delta, and terrace deposits; chiefly well-sorted deposits of sand and gravel.	Generally large yields.
	Till and glaciofluvial deposits, undifferentiated.	Small to large yields depending on the character of the material.			
Ordovician	Prairie du Chien Group	35	125	Dolomite, thin- to thick-bedded, locally massive, yellowish-gray to buff; sandy and shaly zones common.	Small yields from joints, solution channels, and sandy zones. Not important to county.
Cambrian	Upper Cambrian Series	265	160	Sandstone, very fine to coarse-grained, well rounded, yellowish-orange to white or light-gray, alternating layers of soft and hard beds of sandstone; locally silty or shaly.	Small to moderate yields, depending on depth of well penetration, thickness of formation, and character of aquifer. Second most important source of water in county.
Precambrian	Crystalline Rocks of Precambrian age	303	Unknown	Granite, fine- to coarse-grained, pink, red, medium-gray, dark gray. Gneiss, schist, and quartzite may occur locally.	Nearly impermeable; yields water locally from weathered or fractured zones.

SOURCE: *Ground-Water Resources of Waupaca County Wisconsin*, Geological Survey, United States Department of the Interior, 1964.

In communities without municipal water supplies, people get their water from private wells. In most cases these wells draw water from aquifers with recharge areas located outside of the community. In many instances, the recharge area may be located in another county altogether. How fast the water percolates depends upon the type of aquifer. Those comprised of sand and gravel are highly permeable. Limestone aquifers are less so. In slowly percolating aquifers the water from a faucet may have fallen as rain hundreds, or thousands, of years ago. The distance and rate that water percolates through, and the depth from the surface of, an aquifer play key roles in the determining the purity of water drawn from it. The farther the distance and slower the percolation rate, the greater the level of purification that occurs. Aquifers located deep underground, particularly those covered by an

impervious layer of deep clays or shale, are less susceptible to ground water contamination. Land uses related to residential, commercial, industrial, and agricultural development all pose a risk to groundwater resources. Failing septic systems, unregulated landfills, leaking underground storage tanks, the uncontrolled application of fertilizers and pesticides, and road salt are all sources of contamination. Water quantity is another area of potential concern. As the population of the community continues to grow, more strain will be placed upon the aquifer. The long-term viability of the sand and gravel aquifer as a potable water source is not yet known.

WETLANDS & FLOODPLAINS

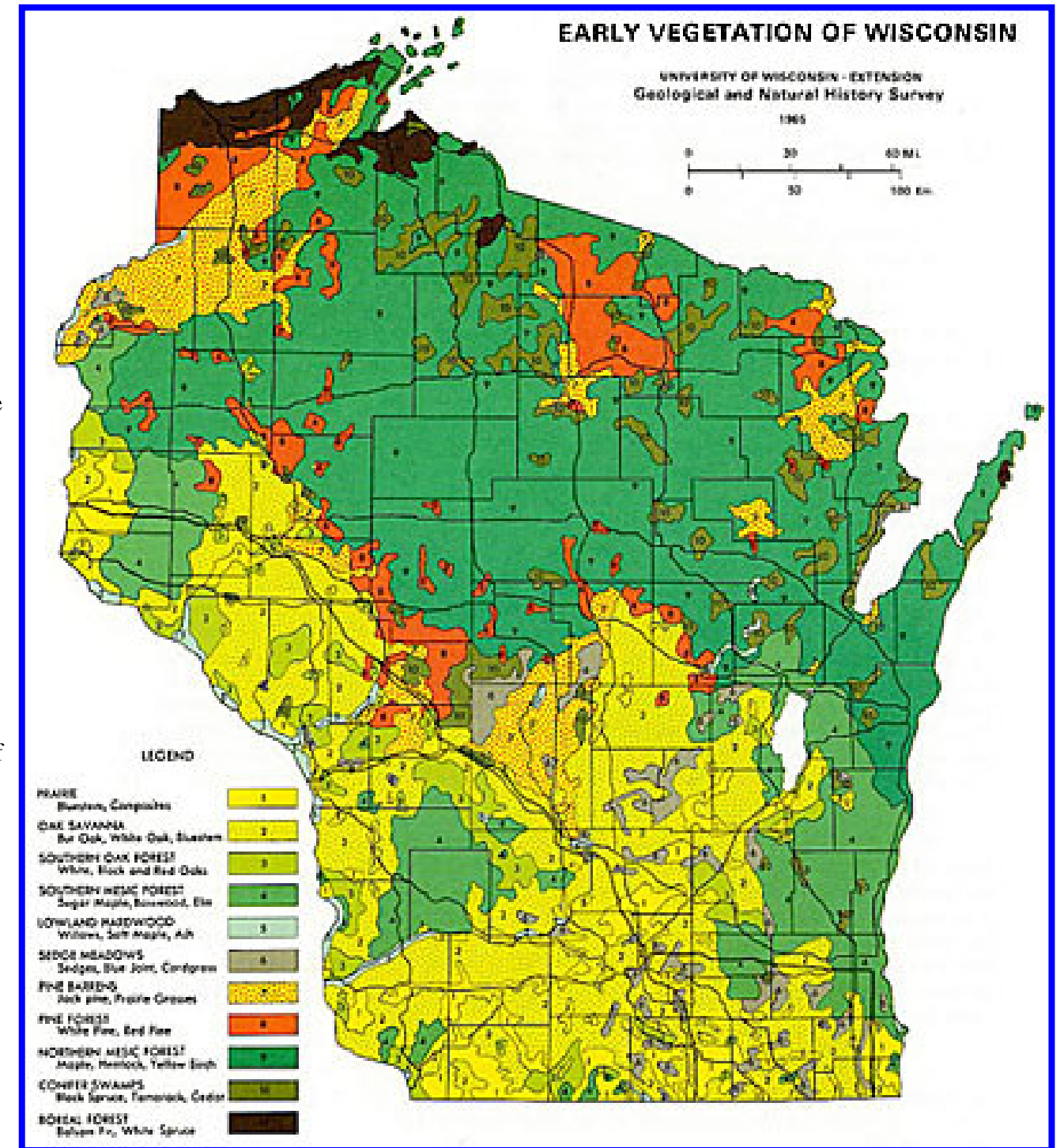
Wetlands act as a natural filtering system for sediment and nutrients such as phosphorus and nitrates. They also serve as a natural buffer, protecting shorelines and stream banks from erosion. Wetlands are essential in providing wildlife habitat, flood control, and groundwater recharge. Floodplains serve many important functions related to flood and erosion control, water quality, groundwater recharge and fish and wildlife habitats. Areas susceptible to flooding are considered unsuitable for development because of risks to lives and property. Regulations place limitations on the development and use of wetlands and floodplains. Under sections 87.3 and 144.26 of the Wisconsin Statutes, a municipality has the authority to accord greater protection to wetlands, shoreland and floodplain areas. The *Natural Features Map* on page 7-10 illustrates the locations of wetlands and floodplains within the Town.

WOODLANDS

Forested areas dominate the landscape of Mukwa and represent the largest individual land use category. More than one third of the Town's land base is classified as woodlands (35.43% or 8,226.62 acres), with the majority of that percentage located within the Wolf River floodplain. Prior to settlement by European immigrants, the vegetation of Waupaca County would have been dominated by the Northern Mesic Forest regime (maple, birch, hemlock, red pine, white pine). The Wolf River floodplain was comprised of a mixture of Lowland Hardwoods (willow, ash, maple) and Conifer Swamp (white cedar, black spruce, tamarack)(see map at right). As settlers moved into the area, much of the forests were cleared, initially for timber and then for agricultural crops. The entirety of the original old growth vegetation present at the time of European settlement was clear-cut by the late nineteenth century. Today, the floodplain areas are dominated by forested and non-forested wetlands, while the upland areas are characterized by second and/or third growth conifer and mixed deciduous/coniferous forests.

Woodlands are important for a variety of economic and ecological reasons. In addition to providing habitat for wildlife, they are an important tool in reducing carbon dioxide levels and filtering pollutants from the atmosphere.

The *Natural Features Map* delineates the location of woodland areas, including wooded wetlands. Since many of the Town's woodlands are also wetlands, they are accorded a greater level of protection from future development than upland forests. The WDNR Managed Forest Law is a program available to landowners who own more than 10 acres of contiguous forestland. Through the program, landowners agree to limit their forestlands to hunting, fishing, wildlife, and recreation purposes and not allow development. In exchange, the landowner receives significant tax credits from the state. Additional information is available on the internet at www.dnr.state.wi.us/org/land/forestry.



SOURCE: Wisconsin Geological and Natural History Survey, 1976.

WILDLIFE HABITAT

More than 50% of Mukwa's landscape classified as woodlands, wetlands, or surface waters, offering a wide variety of plant and animal habitat. Primary wildlife habitat areas correspond with the forested areas and wetland areas shown on the *Natural Features Map*. These areas provide food and cover for deer, bears, raccoons, skunk, and other creatures common in the area. Local farm fields also serve as a food source for deer, sandhill cranes, turkeys, and waterfowl, often to the chagrin of farmers. Agricultural lands also serve as important wildlife corridors between living, feeding, and breeding areas.

The Wolf and Little Wolf Rivers are major waterfowl, aquatic, reptile and amphibian habitat areas. The value of these rivers as fish spawning habitat is discussed earlier in this chapter in the subsection addressing the Lower Wolf River Bottomlands. The remainder of the town (residential areas, road corridors, and other developed areas) is not classified as primary wildlife habitat areas though animals do wander into and through these areas.

The primary threats to wildlife in Mukwa, as elsewhere, are habitat loss and habitat fragmentation. Habitat loss typically occurs through the destruction of natural and agricultural lands during the commercial or residential development process. Fragmentation occurs when large contiguous areas of wildlife habitat are broken apart during commercial and residential development and new road construction. When fragmentation occurs, the remaining wildlife areas are known as *habitat islands*. Reconnecting fragmented habitat islands is the most effective way of increasing wildlife diversity.

ENVIRONMENTAL CORRIDORS

Environmental corridors are components of the landscape connecting natural areas, open space, and wildlife habitat. They provide physical linkages between fragmented habitat areas and provide animals a means of travel to and from feeding and breeding places. Fish and wildlife populations, native plant distribution, and even clean water all depend upon movement through corridors. Most native species decline when habitat areas are fragmented due to agricultural operations or residential and commercial development. Wildlife populations isolated in one location, like a stand of trees or a secluded wetland, can overpopulate or die out without adequate corridors allowing free and unimpeded movement.

The functional effectiveness of a corridor depends on the type of species that use it, its size and shape, and its edge effects. Larger corridors offer greater habitat diversity. Linear corridors tend to be less diverse but offer important migration routes. Edge effects include the penetration of wind, light, and sound, as well as visibility beyond and into surrounding areas. They are crucial in determining the type of habitat a corridor will provide.

One way to think of environmental corridors is to compare them to hallways. A building contains hallways, which are places of concentrated movement back and forth; and rooms, which are destination points where people eat, work, play, and sleep. The hallways serve to link places of activity. Just as hallways enhance the operation of a building, environmental corridors increase the value of natural resource areas. Areas of concentrated natural resource activity ("rooms"), such as wetlands, woodlands, prairies, lakes, and other features, become more functional when linked by environmental corridors ("hallways").⁶

In suburban environments, corridors often lie along stream and riverbanks. More than seventy-percent of all terrestrial wildlife species use riparian corridors. In farming areas, fencerows provide important habitat links for songbirds and other wildlife. In Wisconsin, fencerows were used to mark off ownership of farm fields. Stones and stumps cleared from cultivated areas were laid along property lines or to separate "forties," the common forty-acre field. During the 1920's the federal government advocated tree-lined fencerows as a means of reducing topsoil loss. Nation-wide, farmers began planting trees along fence lines to reduce wind erosion. Over time, these fence lines became more complex, providing habitat for a variety of plant and animal species. As more of Wisconsin's farms are converted to subdivisions, these important areas of wildlife habitat are lost.

THREATENED AND ENDANGERED SPECIES

WDNR defines an endangered species as *any species whose continued existence as a viable component of this state's wild animals or wild plants is determined by the Department to be in jeopardy on the basis of scientific evidence*. Threatened species are defined as *any species which appears likely, within the foreseeable future, on the basis of scientific evidence to become endangered*. The United States Fish and Wildlife Service (USFWS), maintains a listing of all threatened and endangered species in the nation. WDNR maintains a similar listing of all endangered and threatened species in the state of Wisconsin. It is against the policy of the USFWS to identify

⁶ *Environmental Corridors: "Lifelines for Living"; University of Illinois Extension; Fact Sheet Series, 2001-013.*

Habitat Fragmentation

A primary threat to wildlife is **fragmentation** -- the breaking up of larger habitat areas into smaller sections.

Habitat fragmentation is the alteration or fracturing of wildlife habitat into discrete or tenuously connected islands. This results from modification or conversion of the landscape due to development or agricultural operations.

Carefully planned environmental corridors provide opportunities to reconnect fragmented natural areas and improve habitat for important plant, animal and insect species.

Fragmentation decreases wildlife population sizes, isolates habitat areas and creates more edges – where two dissimilar habitats meet (i.e. grassland and residential subdivisions).

Isolated areas of habitat are known as **habitat islands**. Habitat islands can occur naturally (islands, mountain tops), but are most often human caused.

specific areas where species may exist. However, WDNR does provide a list of rare plant and animal species on a county basis. The following endangered (E) and threatened (T) animal species are known to exist, or are suspected of existing, in Waupaca County⁷:

- Bald Eagle (T)
- Blanchard's Cricket Frog (E)
- Blanding's Turtle (T)
- Cerulean Warbler (T)
- Great Lakes Piping Plover (E)
- Greater Redhorse (T)
- Higgins Eye (pearly mussel) (E)
- Hine's Emerald Dragonfly (E)
- Karner Blue Butterfly (E)
- Kirtland's Wood Warbler (E)
- Osprey (T)
- Pugnose Shiner (T)
- Pygmy Snaketail (T)
- Red-shouldered Hawk (T)
- Redfin Shiner (T)
- River Redhorse (T)
- Salamander Mussel (T)
- Snuffbox (mussel) (E)
- Winged Mapleleaf (mussel)(E)
- Wood Turtle (T)
- Yellow-crowned Night Heron (T)

For a complete listing of Wisconsin's Endangered and Threatened animal and plant species and natural communities, go to www.dnr.state.wi.us/org/land.

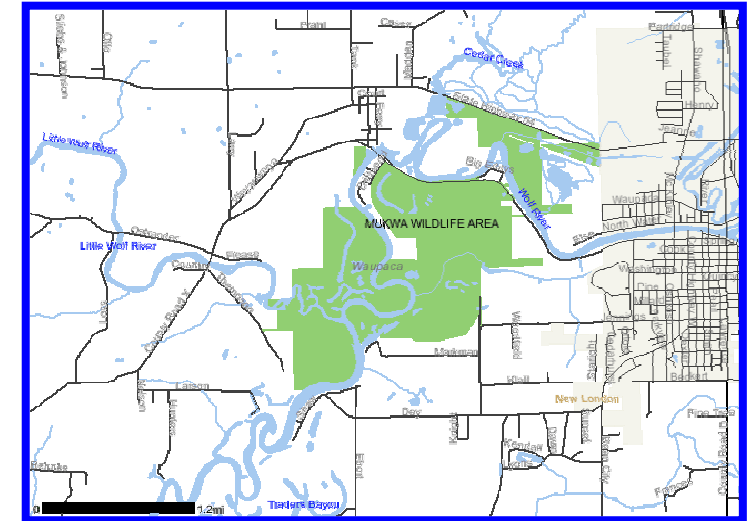
⁷ SOURCES: *Threatened and Endangered Species System (TESS)*, Wisconsin Department of Natural Resources, 2002.

▪ Mukwa State Wildlife Area

State wildlife areas were acquired to preserve an important American heritage of wild lands and wild things for hunters, trappers, hikers, wildlife watchers, and all people interested in the out-of-doors. They were sought to help protect and manage important habitat for wildlife and to help prevent draining, filling, and destruction of wetlands. They were also purchased to prevent private blocking of important waterways, game lands, and lakes.

Except for the properties such as Crex Meadows, Sandhill, Horicon Marsh, or Mead, state wildlife areas tend to have only minor facility development like a very small, gravel parking lot. Most do not have formal, designated roads or trails, public restrooms or pit toilets, drinking fountains, concessions, or large, mowed picnic areas. Most do not encourage or allow camping, though some provide primitive camping sites.⁸

The Mukwa State Wildlife Area is 1,290 acres in size and is located in the northeast portion of the Town. Habitat within the wildlife area includes marsh, brush, and lowland river forest. Principal wildlife species include ruffed grouse, rabbits, deer, osprey, turkey, and a variety of waterfowl. Fishing and canoeing are allowed within the wildlife area.



SOURCE: Wisconsin Department of Natural Resources, 2005.

EXOTIC AND INVASIVE SPECIES

Non-native, or exotic, plant and animal species have been recognized in recent years as a major threat to the integrity of native habitats and species, as well as a potential economic threat (damage to crops, tourist economy, etc). The WDNR requires that any person seeking to bring a non-native fish or wild animal for introduction in Wisconsin obtain a permit. The Town of Mukwa can help combat exotic species by educating residents about non-native species, encouraging residents to use native plants in landscaping, and developing ordinances.

For a complete listing of invasive plants and animals, visit: www.dnr.state.wi.us/org/land/er/invasive.

METALLIC AND NON-METALLIC MINING RESOURCES

As part of NR 135, Wisconsin Administrative Code, adopted in December 2000, any community in Wisconsin may adopt an ordinance to establish requirements for reclamation of non-metallic mines, such as gravel pits and rock quarries. If a town decides not to develop its own ordinance, a county may develop an ordinance for the area in its stead. Likewise, regional planning agencies may develop ordinances for counties within their region. The ordinances must establish reclamation requirements to prevent owners and operators of quarries and gravel pits from abandoning their operations without proper reclamation of the mine or quarry.

The process of siting a mine continues to be a local matter governed under existing zoning procedures by local authorities. The new reclamation requirements through NR 135 add to the status quo, but do not replace or remove any other current means of regulation. The requirements neither regulate active mining processes nor have any effect upon local zoning decisions like those related to the approval of new mine sites. The Waupaca County Zoning Ordinance regulates the location and operation of quarry operations in the Town.

Under the law, any landowner of a demonstrated “marketable non-metallic deposit” may register the site for mining. The local zoning authority may object to the application if the zone does not permit non-metallic mining as a use. Registration expires after a 10-year period and may be extended for a single 10-year period if it is demonstrated that commercially feasible quantities continue to exist at the property. Otherwise, remediation action is required. Towns rezoning property in a manner consistent with a Comprehensive Plan are not required to permit non-metallic mining operations that are inconsistent with the plan.

With respect to all non-metallic mining operations, the Town should adhere to general principles ensuring that the operations will not be detrimental to or endanger the public health, safety, comfort, or general welfare and will not substantially impair or diminish the uses, values, and enjoyment of nearby properties.

The location of existing quarries is shown on the *Existing Land Use Map* in the Existing Land Use Chapter of this plan.

⁸ Text excerpted from Wisconsin Department of Natural Resources Wildlife Areas webpage, 2005.

MUKWA QUARRY COMMITTEE/BLACK CREEK LIMESTONE

During the planning process, the Citizens Advisory Committee for Land Use (Comprehensive Planning) was made aware of a proposed expansion of the Black Creek Limestone/MCC, Inc. quarry site in the southeast portion of the Town. Area residents and property owners raised various concerns about the proposed expansion, including the potential effects on air and water quality, noise and light pollution, structural damage to nearby roads and homes, and adverse effects on property values and quality of life. To address these concerns, the Town Board, at the recommendation of the Committee, commissioned a separate group (the "quarry committee") to review and resolve these issues. The quarry committee was comprised of representatives of MCC, neighboring residents, local business owners, and Committee and Town Board representatives. The quarry committee considered the issues at great length, reached a general consensus on several significant issues, and submitted its recommendations in writing to the Mukwa Town Board.

AIR QUALITY

A few common air pollutants are found throughout the United States. These pollutants can impair human health, harm the environment and cause property damage. The United States Environmental Protection Agency (USEPA) calls these *criteria air pollutants* because the agency has regulated them by first developing health-based criteria (science-based guidelines) as the basis for setting permissible levels. One set of limits (*primary standard*) protects health; another set of limits (*secondary standard*) is intended to prevent environmental and property damage. A geographic area that meets or exceeds the primary standard is called an *attainment area*; areas that don't meet the primary standard are called non-attainment areas.

Waupaca County is an attainment area. Based on available data from the Wisconsin Department of Natural Resources, Mukwa appears to have good-moderate air quality. The closest non-attainment areas to Waupaca County include Door, Kewaunee, and Manitowoc Counties and are classified as having seasonally unhealthy conditions for sensitive groups of people (e.g. elderly, children, asthmatics). The nearest air quality monitoring stations are located in Appleton and Green Bay. More information on air quality is available at www.dnr.state.wi.us/org/aw/air/.

One of the primary contributors to diminished air quality in Mukwa is emissions from automobiles, trucks, and farm equipment. Providing access to mass transit, encouraging carpooling, and providing a trail system are some of the methods often discussed as means of ameliorating the amount of air pollution caused by motor vehicles. As fuel costs rise, automobile manufacturers continue to expand choices in fuel-efficient, environmentally friendly automobiles.

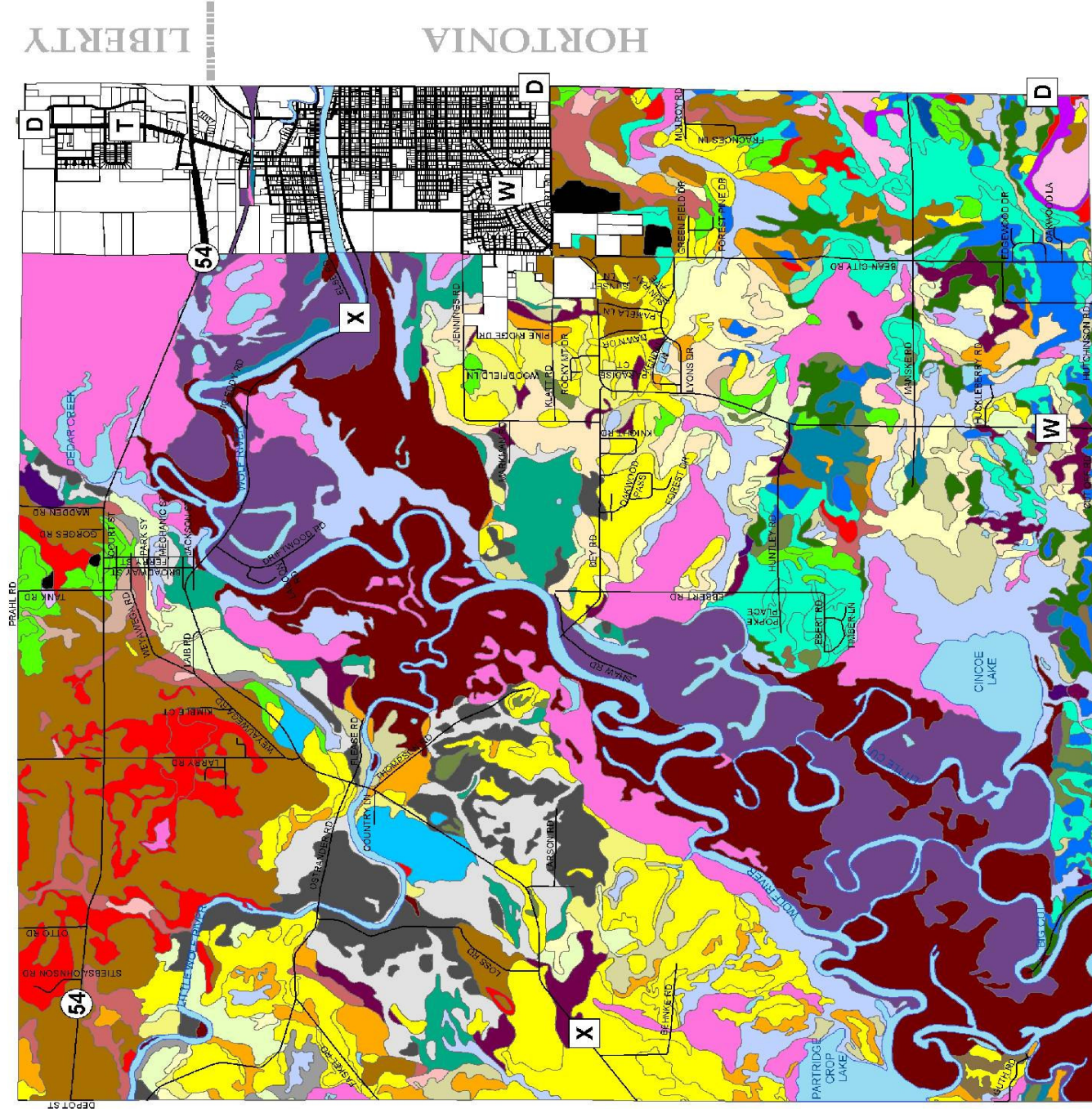
SOILS ASSOCIATION MAP

The Soils Association Map which appears on the following page was prepared from data provided by Waupaca County, the accuracy of which has not been confirmed by the Mukwa Citizens' Advisory Committee on Comprehensive Planning.

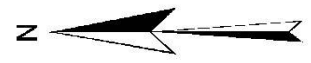
TOWN OF MUKWA

SOILS ASSOCIATION

LEBANON



CALEDONIA



1"= 4000'

LEGEND — ROADS □ CITY OF NEW LONDON

SOIL TYPES	
Angelica Silt Loam	Seelyeville muck
Borth sandy loam	Shawano loamy fine sand
Borth silty clay loam	Symco loam
Cathro and Markey mucks	Tustin loamy sand
Elderon-Rosholt complex	Ucipsammets
Fordum loam	Water
Hortonville fine sandy loam	Wainola loamy fine sand
Hortonville loam	Waupaca silt loam
Kennan bouldery sandy loam	Wega silt loam
Meenan loamy sand	Whalan loam
Menasha silty clay	Whalan variant loamy fine sand
Military loamy sand	Zurich silt loam
Minocqua mucky fine sandy loam	
Nebago loamy sand	
Neenah silty clay	
Oesterie sandy loam	
Oshkosh silty clay loam	
Pits, gravel	
Plainflec loamy sand	
Poy clay loam	
Richford loamy sand	
Roscommon loamy sand	
Rosholt sandy loam	
Rosholt-Rock outcrop complex	
Rousseau loamy fine sand	

PROJECT # M1151A04
 DATE: 10/14/04
 DRAWN BY: KAL
 REVISED:

Omni
ASSOCIATES

205 S STEVENS DRIVE, P.O. BOX 1211
 WISCONSIN, 53190-0121

LOCATION: F:\GIS\M1151A04\DRAWINGS\Soils_11x17.mxd
 SOURCE: Waupaca County
 Ext Central Wisconsin Regional Planning Commission

Historical Resources⁹

Historical and cultural resources, like natural resources, are valuable community assets warranting preservation. Town governments, like other governments in Wisconsin, have the authority to preserve their historical heritage (Wisconsin Statutes §60.64). One of the most effective ways to do so is through a local historic preservation ordinance. The historic preservation ordinance can establish procedures to designate historically and culturally sensitive properties and places and to review projects that have the potential to negatively affect these important places.

The Wisconsin Historical Society has created the *Architecture and History Inventory* (AHI), an internet-based search engine that provides architectural and historical information on approximately 120,000 properties in Wisconsin. The AHI contains information on buildings, structures, and objects that illustrate Wisconsin's unique history. The AHI documents a wide range of historic properties such as round barns, log houses, cast iron bridges, small town commercial buildings, and Queen Anne houses, among others. The Wisconsin Historical Society lists the following structures in Mukwa on its AHI:

- [Mike Mulroy House](#)

The Mike Mulroy House is located at N2841 CTH D in the Town of Mukwa. The building is a Side Gabled, Balloon Frame house constructed in 1890. The home is currently owned by David and Melissa Mulroy.

- [John Kelly House](#)

Constructed in 1870, the John Kelly House is a Side Gabled, Balloon Structure building. It is located at N3099 CTH D in Mukwa. The current owner is not listed in the AHI.

- [John Cooney House](#)

The John Cooney House is a Dutch Colonial Revival structure constructed in 1915. It is located at N3125 CTH D and is currently owned by G. Cooney.

- [John Cooney Barn](#)

Located on the same property as the John Cooney House, the John Cooney Barn is classified as an Astylistic Utilitarian Barn. The wood, timber frame structure was built in 1910 and is also owned by G. Cooney.

- [J. H. Mulroy House](#)

The J. H. Mulroy House is the current home of L. L. Schlueter. It is classified as a Gabled Ell structure and was constructed in 1900. The home is located at N3253 on CTH D.

Cultural Resources

As discussed in the Introduction chapter, what is now the Town of Mukwa was long occupied by native people. Reminders of the pre-settler cultures can still be found today in the arrowheads, spear points, and campsites that turn up on occasion. For additional information on the Native American history of Mukwa, visit the Menominee History website at www.menominee.nsn.us/History/HISTORYHOME.

Modern cultural assets in Mukwa include the historic church sites, schools, and mills scattered throughout the community. These facilities offer spiritual enrichment, education, and festivals that contribute to the local culture.

⁹ Much of the text included in the following paragraphs was excerpted from *Town Governments and Historic Preservation*, Wisconsin Historical Society, 2004.

Agricultural, Natural & Cultural Resources Issues and Concerns

This section describes the major concerns expressed during the planning process and those revealed in inventory portion of this chapter. Strategies to address these concerns are included in the Goals, Objectives, and Policies section at the end of this chapter.

SUSTAINING FARMLANDS AND NATURAL AREAS IN A GROWING COMMUNITY

Given the projected growth rate in the Town and surrounding area, there is a real concern about the impact development will have on natural areas and farmland. Preservation of natural resources and farmland is important to preserving the rural character of the area, maintaining wildlife habitat, and providing green infrastructure (e.g. wetlands and floodplains for storm water management, scenic areas, etc.) needed to sustain Mukwa's high quality of living.

In addition to the Conservation Subdivisions discussed earlier in this chapter, another means of preserving important landscapes, natural and agricultural, is to establish a purchase and/or transfer of development rights (PDR/TDR) program. A PDR or TDR program would allow the Town to "send" development from farmland and natural resource areas to designated "receiving" areas. Advantages of these approaches include the fact that landowners are compensated and farmland and natural resource preservation is permanent. PDR is a voluntary program, where a land trust, local government, or some other agency usually linked to local government makes an offer to a landowner to buy the development rights on the parcel. The landowner is free to turn down the offer, or to try to negotiate a higher price. When the development rights to a farm are sold, the farmer receives payment equal to the difference between the fair market value of the land a developer would pay if it could be developed and the price the land would command for agricultural use. In return for this payment, a conservation easement is recorded on the deed to the property. The easement stays with the land in perpetuity. The private landowner still retains the right to occupy and make economic use of the land for agricultural purposes. The landowner gives up the right to develop the property for some other use in the future. Farmers are not compelled to sell their development rights. Participation in PDR programs is entirely voluntary. The main disadvantage of PDR is cost. Development rights can be expensive to purchase, so funding for PDR needs to be selectively targeted to preserve and protect agricultural land that is most worthy of preservation. As a result, not every farmer who wants to sell his or her development rights will be able to do so.

TDR involves transferring development rights from one piece of property to another. In this approach, a landowner is compensated for selling his/her development rights. However, rather than simply eliminating these rights, they are transferred to another property in the Town that is planned for development. That landowner has the right to develop his/her property and also use the transferred rights they purchased from the other landowner to develop at a greater density or intensity (e.g. smaller lot sizes to locate more homes in a single area). This approach results in the preservation of farmland and natural areas in designated "sending" zones and more intensive development in the designated "receiving" zones.

ATCP 51 - LIVESTOCK SITING RULE

On September 16, 2005, the Wisconsin Department of Agriculture's Board gave final approval of ATCP 51 establishes standards for the siting of livestock operations. In its approval, the Board added an amendment to have the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) annually review ATCP 51 to see if any modifications are needed.

ATCP 51, implements Wisconsin's Livestock Facility Siting Law (s. 93.90, Stats.). The law does not require local approval of new and expanding livestock operations, but if local approval is required by the community, the local government must grant or deny approval according to this rule. A local government may not consider other siting criteria, or apply standards that differ from this rule, except as specifically authorized in the law. This rule applies to new or expanded facilities that keep cattle, swine, poultry, sheep or goats.

Under the law, a local government may not deny or prohibit the siting or expansion of a livestock facility of any size unless one of the following applies:

- The site is located in a non-agricultural zoning district.
- The site is located in an agricultural zoning district where the livestock facility is prohibited. The zoning prohibition, if any, must be clearly justified on the basis of public health or safety. The law limits exclusionary local zoning based solely on livestock facility size.
- The proposed livestock facility violates a valid local ordinance adopted under certain state laws related to shoreland zoning, floodplain zoning, and construction site erosion control or stormwater management.
- The proposed livestock facility violates a state building, electrical or plumbing code for that type of facility.

- The proposed livestock facility will have 500 or more “animal units” (or will exceed a lower threshold incorporated in a local zoning ordinance prior to July 19, 2003), and the proposed livestock facility violates either 1) the standards in the rule or, 2) a stricter local standard by ordinance. Those standards must be based on scientifically defensible findings of fact that clearly show the standards are necessary to protect public health or safety.

With respect to future applications for new livestock facilities and the expansion of existing operations to include more than 500 animal units, the Town of Empire will deny applications in areas with non-agricultural zoning (e.g. residential, commercial, etc.). Applications will also be denied in areas zoned agricultural-transition if located within an approved Town or City Growth Area because these areas are expected to transition to a non-agricultural use. Applications for new livestock facilities or expansion of existing farm operations to include more than 500 animal units in other areas of the Town will be subject to state requirements included in ATCP 51.

LOSS OF HABITAT FOR UNIQUE SPECIES

Mukwa has an abundance of important natural resources. As discussed earlier in this chapter, Mukwa’s natural areas provide important wildlife habitat for a number of rare, threatened, and endangered species. Responses to the Community Survey and during the public meetings held at the beginning of this plan process demonstrated the importance of the natural environment in the eyes of the residents of the community. Habitat loss and fragmentation are often the results of poorly planned development. In a community that values its natural environment as much as Mukwa does, it will be important for the Town to guide development away from the most sensitive habitat areas to insure the long-term viability of a healthy local ecosystem.

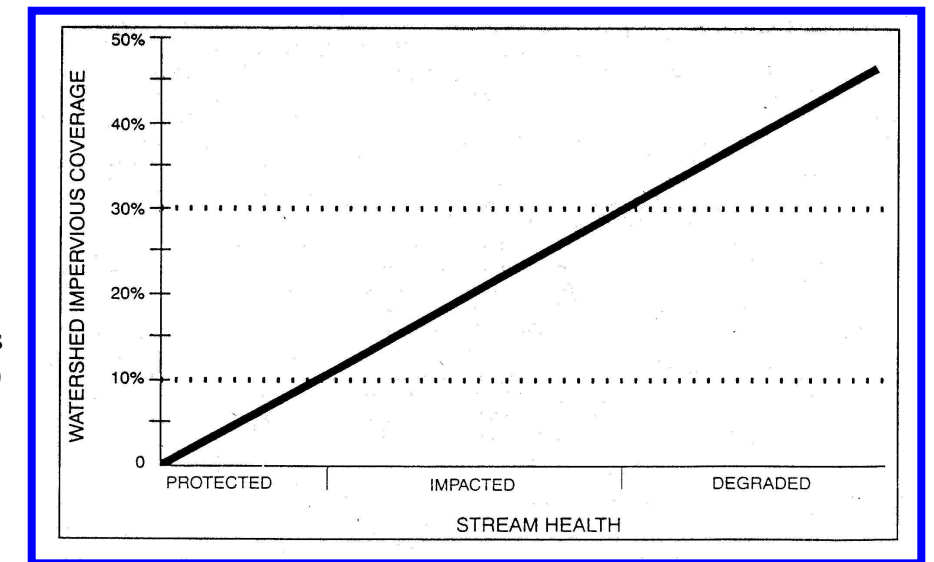
PRESERVATION OF SURFACE WATER QUALITY

In many ways, the Wolf River serves as the backbone of Mukwa. It was the river that drew the original settlers and entrepreneurs to the community and continues to attract visitors and new residents to this day. However, with each new home, additional strains are placed upon the aquatic ecosystem. Development in a watershed has direct and predictable effects on the lakes, streams, and wetlands within the watershed. Historically, water quality was degraded by *point sources*, or direct discharges to lakes and rivers from industry, municipal sewerage districts, and the like. Since the passage of the Federal Water Pollution Control Act of 1972 (the Clean Water Act), the United States had taken dramatic steps to improve the quality of our water resources. No longer are industries allowed to discharge untreated waste directly to surface waters.

Today, the greatest threat from a cumulative standpoint, to our streams and lakes comes through *nonpoint source* water pollution. Nonpoint source water pollution, or runoff, cannot easily be traced to a single point of origin. It occurs when rainwater or snowmelt flows across the land and picks up soil particles, organic wastes, fertilizers, and other contaminants that become pollution when carried to surface and/or groundwater. Nonpoint pollution, in the form of nitrogen, phosphorus, and total suspended solids (soil particles), contaminates streams and lakes, increases the growth of algae and harmful aquatic weeds, covers spawning beds and feeding areas, and turns blue rivers into conveyances of stormwater. The sources of nonpoint pollution include:

- **Impervious Surface**

A positive correlation exists between the percentage of impervious surface in a watershed and surface water quality (see graph at right). Stormwater runoff from impervious surfaces such as roads and roofs has an adverse effect on surface waters. As the percentage of impervious surfaces increases in a watershed, lakes and streams experience greater degradation from stormwater runoff. According to the *Center for Watershed Protection (CWP)* in Ellicott City, Maryland, “More than 30 different scientific studies have documented that stream, lake, and wetland quality declines sharply when impervious cover in upstream watersheds exceeds 10%.” In 1999, CWP developed criteria that allowed local governments and watershed organizations to predict the effects upon surface water quality resulting from increases in impervious surfaces within a watershed. CWP classified watersheds into three groups, each defined by the percentage of impervious surface within the watershed.



SOURCE: Tom Schueler, Center for Watershed Protection, 1995.

- **Agricultural Fields**

Plowed fields, row crops, winter manure spreading, lack of riparian buffers, wetland conversion, and the over use of commercial pesticides and fertilizers all intensify nonpoint source pollution loading to surface waters. By utilizing techniques such as conservation tillage, nutrient management planning, wetland restoration, grazing management, cover crops, manure confinement, and agricultural buffers, farmers can dramatically reduce nonpoint source pollution as well as the cost of farming.

- **Fertilizers, Herbicides, and Pesticides**

Wisconsin and Minnesota residents use more fertilizers and pesticides on their lawns per capita than those of any other state. Upwards of 95% of the chemicals applied to residential lawns are washed into storm drains and then into nearby creeks and streams following rain events. In northern climates, turf grass is only capable of ingesting fertilizer during the fall. Fertilizers applied during spring and summer months contribute to algae blooms and eutrophication of lakes and streams (the annual “greening” of Lake Winnebago is a result of the over use of commercial and residential fertilizers). Most herbicides, even those that claim to be focused on specific “weeds” or “pests”, kill healthy aquatic and terrestrial organisms and are suspected causal factors in many autoimmune and endocrine illnesses in humans and pets. By reducing or eliminating the amount of pesticides and herbicides applied to lawns, and fertilizing once per year during the month of September, Mukwa residents can greatly improve water quality and aquatic habitat in local lakes and streams.

The Implementation chapter will discuss a variety of tools, best management practices, and funding courses to aid in the reduction of nonpoint source water pollution in the Town of Mukwa.

PROTECTION OF GROUNDWATER

With all of Mukwa’s supply of potable water provided by private wells, susceptibility to contamination remains a concern. As discussed in *Chapter 6: Utilities and Community Facilities*, sources of groundwater contamination include leaking fuel tanks, surface discharges, and natural substances present in the subsurface geology. A common naturally occurring contaminant of groundwater in the Fox/Wolf basin is arsenic. Although no private wells in Mukwa have yet tested positive for arsenic, it is important to note that arsenic has been detected in amounts greater than 10 parts/billion in Waupaca, Shawano, Outagamie, and Winnebago Counties. Homeowners can protect groundwater by properly sealing abandoned wells. Always use "best management practices" on lawns and farm fields. Practices include properly treating sewage, improving roadway and property drainage, minimizing pesticide and fertilizer use, and following application guidelines when pesticides or fertilizers are necessary will all decrease the risk of contaminating potable water supplies. Recycling programs that reduce the solid waste stream and proper disposal of hazardous household waste reduce the risks of contamination to nearby residential wells.

PRESERVATION TAX INCENTIVES

The Federal government encourages the preservation of historic buildings through various means. One of these is the program of Federal tax incentives to support the rehabilitation of historic and older buildings. The Federal Historic Preservation Tax Incentives program is one of the Federal government’s most successful and cost-effective community revitalization programs. The Preservation Tax Incentives reward private investment in rehabilitating historic properties such as offices, rental housing, and retail stores. Current tax incentives for preservation, established by the Tax Reform Act of 1986 (PL 99-514: Internal Revenue Code section 47 [formerly Section 48(g)]) include:

<i>Healthy Lawn Maintenance</i>	
<i>January</i>	Remember you have a lawn under all that snow. Consider reducing or eliminating salt, which can harm grass and water quality.
<i>February</i>	Read up on lawns and gardens; knowledge is the key to eliminating the need for pesticides.
<i>March</i>	After snow melt, evaluate your lawn for winter damage. Note dead patches from salt, rodents, or mechanical damage. Consider reducing the size of your lawn by planting a shade, perennial wildlife, or prairie garden.
<i>April</i>	Repair or replace sod damaged by snowblower, foot traffic, salt, or cars. Lightly rake dead spots and plant seed.
<i>May</i>	Mow high (3"), leave clippings on lawn and cut frequently; remove no more than 1/3 of the grass blade when you cut. Do not fertilize in spring.
<i>June</i>	As it warms, grass growth will slow – reduce mowing frequency to every 1-2 weeks. Raise lawn mower height to 3 1/2". Monitor lawn for heat stress.
<i>July</i>	Cut only when necessary during the hot and dry months. Sharpen mower blades. Aerate lawn with core remover. Allow lawn to get brown (it will recover when it rains).
<i>August</i>	Don't cut lawn if grass has not received moisture for last 10 days. Aerate lawn with core remover (late August).
<i>September</i>	Soil test (every 3 years). Enrich soil for next season by applying a thin layer of compost (no more than 1/4" thick) to your lawn; lightly rake. Lower mower height back to 3". If you wish to fertilize, do it now (late September). Overseed entire lawn with a good seed mix (4-6 lbs/1000 sq. ft).
<i>October</i>	Chop fallen leaves with mower and leave a 1/4" thick mulch; rake remaining leaves and put into your compost pile. Last cut late October.
<i>November</i>	Service lawn mower; sharpen blades.
<i>December</i>	Rest and play!

- A 20% tax credit for the *certified rehabilitation* of *certified historic structures*; and,
- A 10% tax credit for the rehabilitation of *non-historic, non-residential* buildings constructed before 1936.

For more information on this and other programs to protect and restore historic structures, contact the Wisconsin State Historical Preservation Officer.

Coordination with Other Comprehensive Plan Elements

The development of the Agricultural, Natural and Cultural Resources Element required coordination with all of the required plan elements. For example, when considering economic development strategies, the limitations presented by natural resources (e.g. wetlands, floodplains) was important to consider as were the benefits natural areas provide to the local quality of living. Below is a description of the critical issues addressed with respect to the Land Use and Housing Elements. These elements are profiled because their coordination with the Agricultural, Natural and Cultural Resources Element is critical to the success of the plan.

LAND USE

Residents of the Town have clearly indicated that the preservation of natural resources is a priority. As a result, when the *Future Land Use Maps* were developed, special consideration was given to this desire. Environmental corridors are identified and protected. In addition, the goals, objectives, and policies in this chapter include provisions to protect floodplains, wetlands, streams, lakes, Cactus Rock, and other natural resources.

HOUSING

Housing, if not carefully located and planned for, can result in negative effects upon farming and the natural environment. Housing development can fragment farming operations and wildlife habitat areas. The additional traffic, people, and services associated with residential development can quickly impact rural character. The Town of Mukwa would like to encourage development within its boundaries primarily in those areas where services are readily available. Directing development in the Town will help to protect natural resources and farmlands in surrounding communities. This strategy for housing development is reflected in the Future Land Use Maps.

Goals and Objectives

The residents of Mukwa value the community's rural character, scenic landscape, and natural environment. It is important that the community protect its woodland, wetlands, lakes, and streams so that they may continue to provide a high quality of life for residents and viable habitat for flora and fauna. Residential and commercial development will occur in harmony with the Town's natural environment. The Town will also work with neighboring communities, the school districts, Waupaca County, and the State of Wisconsin to ensure that natural resources are adequately protected for future generations.

GOAL 1: Protect wetlands in the Town of Mukwa.

SUPPORTING OBJECTIVES:

1. Wetland areas adjacent to the Wolf and Little Wolf Rivers, Potter's Creek, Cincoe and Partridge Crop Lakes, and the bayous; having special wildlife and other natural values; and having an area of one acre or more should not be allocated to any residential or commercial development and should not be drained or filled.
2. To the extent practicable, areas immediately adjacent to and surrounding wetlands should be developed using techniques to minimize effects on wetlands (e.g. buffers, setbacks, etc.).
3. Preserve wetlands in their natural state through the adoption and enforcement of a wetland preservation ordinance.

GOAL 2: Preserve the rural character and support country living by maintaining open space, natural areas, and farmland.

SUPPORTING OBJECTIVES:

1. Using the *Future Land Use Map* as a guide, seek to direct residential and commercial development to certain areas, including those areas least suited for farming, with soils that support foundations and septic systems.
2. Individual lot development on farmland should be directed to the edges of farm fields so as to preserve contiguous blocks of farmland that can continue to remain productive.
3. Review and revise the zoning ordinance to permit additional accessory uses in agricultural areas to help sustain local farming operations (e.g. roadside stands, farmers markets, horse boarding, bed and breakfasts, etc.) and allow for adequate on-site and directional signage.

3.4. Establish an Agriculture Committee to:

- a. Provide education to local landowners regarding conservation subdivisions, land trusts, development rights options, etc.
- b. Coordinate with local farmers to consider consolidated strategies for efficient niche farming (e.g. local farmers market, specialty farming, equipment sharing, education seminars, insurance/benefit consolidation programs, etc.).
- c. Oversee an education and marketing campaign to generate local interest for new agricultural endeavors (e.g. organic foods, stables, orchards, etc.).

GOAL 3: Preserve and enhance wildlife habitat.

SUPPORTING OBJECTIVES:

1. Partner with local land trusts to protect wildlife habitat areas. Encourage local landowners to pursue opportunities to protect their land by working with land trusts.
2. Coordinate with WDNR to better identify and protect wildlife habitats, particularly those unique to the community.
3. Discourage habitat fragmentation by encouraging development adjacent to existing development.
4. Establish a network of green corridors thorough the community to act as wildlife corridors. This effort should begin with areas protected through shoreland wetland zoning, open areas preserved in conservation-based subdivisions, and with the establishment of additional trails and greenways in accordance with the *Future Land Use Maps*.

GOAL 4: Protect the quality of surface and groundwater.

SUPPORTING OBJECTIVES:

- 5.1. Create, maintain and enhance natural buffers along stream banks.
 - a. Support the efforts of Waupaca County to enforce stream and lake setback requirements by enforcing local zoning requirements and policies established by the Waupaca County Land and Water Conservation Board (WCLWCB).
 - b. Work with WCLWCB, Waupaca County, WDNR and the Wisconsin Department of Agriculture Trade and Consumer Protection to promote and help fund riparian buffers along streams and lakeshores.
 - c. Educate residents about the importance of environmental corridors.
2. Coordinate with the WCLWCB and WDNR to implement agricultural and residential best management practices to reduce nonpoint source water pollution.
3. Encourage farmers to use available manure management technologies.
4. Encourage residents to replace lawns with native species and use rain gardens to encourage infiltration of storm water and recharge to groundwater.
5. Develop and revitalize ordinances aimed at minimizing paved surfaces such as driveways and roads. This can be achieved with driveway maximum length standards that have the added benefit of providing better access to residences for fire and police protection and subdivision and private road design ordinances that limit roadway access and reduce vehicle speed.
6. Coordinate with Waupaca County and ECWRPC to educate homeowners on the need for proper maintenance of private well and onsite wastewater treatment systems, periodic testing of private well water, and planning for eventual well, pump or drain field replacements.
7. Strongly encourage or require water conservation and use of water saving devices such as low-flow showerheads and toilets within homes.
8. Require conservation subdivision principals for all residential development occurring in sensitive ecological areas for prime agricultural lands.
9. Coordinate with local quarry operators to ensure that operations adhere to the requirements of NR 135.

GOAL 5: Preserve and protect the historic resources of the Town to promote the educational, cultural, and general welfare of residents of Mukwa and provide for a more interesting, attractive and vital community.

1. Work with residents and other groups to inventory historic properties and locations in the Town of Mukwa. Share this information with the State of Wisconsin Architecture and History Inventory.
2. Adopt a historic preservation ordinance, in cooperation with the State Historical Society.
3. Promote the historic resources of the community by supporting local preservation groups.

GOAL 6: PRESERVE AND PROTECT MUKWA'S groundwater to ensure a long-term, viable source of potable water for current and future residents of the Town.

1. Develop and implement an annual well-monitoring strategy for existing wells within the Town.
2. Establish a requirement to install passive monitoring wells, or piezometers, within all future development projects.
3. Identify those areas within the Town where susceptibility to groundwater contamination is highest and develop plans to ensure that land use within these areas occurs in a manner consistent with protecting groundwater.
4. Develop an information & education strategy aimed at providing Town residents with the tools to protect their potable water supply.
5. Develop guidelines to determine at what point in the future the Town should consider developing a municipal water system.

Policies

Preserve the natural resource base, primary environmental corridors, and surrounding agricultural lands, which contribute to the maintenance of the ecological balance, natural beauty, and economic well being of the Town.

Protect floodplains and other areas having severe soil restrictions from development through local ordinances.

Protect groundwater and develop programs to ensure the long-term viability of the aquifer as a source of potable water.

Encourage the proper handling of wastes and chemicals so that they produce a minimum effect upon ground and surface water.

Regulate the type of commercial and industrial development in the Town to minimize the chances of groundwater contamination.

Discourage development that will interfere with important natural resources, including area lakes and rivers.

Provide zoning that supports local family farm operations and small specialty farms to maintain agriculture as a productive part of the rural landscape.

Maintain the Town's rural character by:

- Limiting residential development to areas with soils to support foundations and septic systems.*
- Communicating with local farmers who want to sell their property about options available through land trusts and conservation development design techniques.*
- Protecting scenic views by limiting development on hilltops.*

Introduction

According to the Comprehensive Planning Law, the purpose of the Economic Development Element is to promote the stabilization, retention and expansion of the economic base, and quality employment opportunities. To address this element, this chapter includes:

- Highlights of the labor force information from Chapter 3;
- An assessment of strengths and weaknesses with respect to attracting and retaining business and industry;
- An overview of programs that deal with environmentally contaminated sites for commercial or industrial uses; and
- A list of agencies (and website information) providing economic development programs at the county, regional, state and federal levels.

In terms of the 14 state comprehensive planning goals, those listed below relate specifically to planning for Mukwa’s economic development:

- Promotion of the redevelopment of lands with existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial, and industrial structures.
- Encouragement of land uses, densities, and regulations that promote efficient development patterns and relatively low municipal, state governmental, and utility costs.
- Encouragement of coordination and cooperation among nearby units of government.
- Building of community identity by revitalizing main streets and enforcing design standards.
- Providing adequate infrastructure and public services and an adequate supply of developable land to meet existing and future market demand for residential, commercial, and industrial uses.
- Promoting the expansion or stabilization of the current economic base and the creation of a range of employment opportunities at the state, regional, and local levels.

Want to Learn More?

For more information about economic development, also see these chapters:

- The Utilities and Community Facilities Chapter discusses water and wastewater issues.
- The Future Land Use Chapter identifies locations for business development and discusses development regulations like zoning and community design.
- The Agricultural, Natural & Cultural Resources Element includes information about the soils and development limitations in the area. This chapter also describes the importance of groundwater considerations in development approvals.

Economic Development Vision

In 2025, Mukwa is a rural, agricultural community that supports local businesses catering to residents and tourists. The Town relies primarily on residential acres to support its tax base. Economic development is in harmony with the Town’s natural environment and residential areas. The City of New London and surrounding area communities provide economic development that supports the needs of Mukwa and provides employment for area residents.

Tourism has expanded due to the Town’s scenic character, recreational choices, and proximity to the Wolf River. Visitors and residents enjoy local parks, trails, open spaces, and the small town atmosphere.

Community Survey

Tables CS-25 through CS-28 illustrate community survey responses related to *Economic Development* in the Town of Mukwa.

Response	Percentage
Very Unimportant	16.2%
Unimportant	30.3%
Important	29.6%
Very Important	15.1%
No opinion	8.5%

	On the edge of existing development	In specially zoned areas	Anywhere in the Town	Development of this type shouldn't occur	No opinion
Convenience Store/Gas Station	20.3%	35.9%	10.7%	27.0%	6.0%
Antique, craft, and specialty stores	11.0%	22.8%	33.8%	22.8%	9.6%
Shopping centers	10.6%	24.3%	4.2%	53.2%	7.7%
Restaurants	13.1%	25.9%	29.4%	23.0%	8.5%
Office facilities	9.0%	26.2%	11.8%	40.1%	12.9%
Health care facilities	11.0%	30.0%	18.4%	29.4%	11.3%
Agriculture-related business	9.9%	32.4%	27.8%	19.4%	10.6%
Warehousing/distribution	7.4%	31.0%	6.0%	45.6%	10.0%
Manufacturing and assembly	7.0%	36.3%	6.3%	41.2%	9.2%
Heavy industry	6.4%	21.9%	2.3%	60.4%	9.1%

	Strongly Discourage	Discourage	Encourage	Strongly Encourage	No Opinion
Convenience Store/Gas Station	30.1%	18.8%	28.7%	6.7%	15.6%
Antique, craft, and specialty stores	20.2%	12.1%	37.6%	8.2%	22.0%
Shopping centers	36.2%	30.3%	17.4%	3.1%	13.1%
Grocery stores	28.2%	16.4%	34.5%	4.9%	16.4%
Restaurants	20.4%	13.7%	40.8%	6.0%	19.0%
Child care facilities	18.8%	11.0%	38.3%	4.6%	27.3%
Office facilities	31.8%	17.5%	19.3%	3.6%	27.7%
Health care facilities	25.2%	1.3%	34.8%	5.0%	23.8%

	Strongly Discourage	Discourage	Encourage	Strongly Encourage	No Opinion
Large-scale livestock operations	33.9%	34.3%	14.2%	3.1%	14.5%
Agriculture-related business	13.5%	10.6%	52.8%	7.1%	16.0%
Warehousing/distribution	30.8%	24.6%	25.3%	2.8%	16.6%
Manufacturing and assembly	23.3%	24.6%	31.6%	7.3%	13.2%
Heavy industry	39.9%	30.4%	13.6%	4.9%	11.1%
Mineral extraction (quarries)	34.6%	36.7%	10.5%	1.4%	16.8%
Development within industrial park	20.5%	27.3%	32.4%	10.1%	9.7%

Labor Force and Economic Base

The Community Profile Chapter (Chapter 3) provided a detailed analysis of the local and County economy as well as the labor force. Highlights from that chapter include:

- Local workers are very mobile. Residents take advantage of highway access to commute to nearby employment centers.
- Manufacturing related occupations employed 39.5% of Town residents according to 2000 Census information.
- Nearly 16% of the Town's residents held educational, health or social services employment according to the 2000 Census.
- Commercial and business land uses represent a very small fraction of the community. In fact, only 0.56% or 132 acres of the overall Town landscape is classified as commercial or industrial.

These facts reflect the Town of Mukwa's economic base, which consists of a few businesses. This situation is desirable for Town residents as the community takes great pride in its residential, farmland and natural areas. Extensive areas of commercial and industrial development and large-scale livestock operations are not desired. The Town has identified areas for limited additional commercial and industrial development on the *Future Land Use Map*.

Current Business Inventory and Business Environment

In order to prevent the plan from becoming quickly outdated, a list of existing businesses is not provided. Rather, businesses are reviewed in more general terms.

There are few businesses located in the Town. Residents regularly travel to larger communities in the region to purchase needed goods and services. Historically, economic activity in the Town was closely tied to the land (e.g. farming, logging, recreation).

Essentially three business types are found in Mukwa: home occupations, basic services and recreation. *Home occupations* include the professional services of accountants, farming, and childcare, as well as roofers, builders, and woodworking. Some of these uses have relocated from homes to commercial building spaces. *Basic services* include businesses like gas stations, convenience stores, plumbing and heating, automobile repair, and other home-based businesses. *Recreation uses* include restaurants, bars, campgrounds, resorts, and similar uses. The remainder of the local business inventory is in the recreation and hospitality sectors.

Mukwa has no centralized commercial activity center. Businesses are scattered throughout the Town with recreation business concentrated around various wildlife areas. Basic service businesses are located around higher populations and major roadways. USH 45, STH 54, and CTH D provide local traffic access to the City of New London. Direct access is available to the highway and has the potential for commercial or industrial development.



It is known that home occupations tend to have no noticeable benefit or harm to adjacent properties. Some residents may work at home utilizing the Internet and other technologies. The Town encourages home-based businesses, provided that the business activity does not create a nuisance for neighboring property owners by generating excessive traffic, noise, lighting, signage, etc.



Desired Future Economic Development

Three different planning tools were used to ascertain what type and where business (commercial and /or industrial) development are desired in Mukwa:

1. The visioning exercise completed at the July 21, 2004 Vision and Value Meeting
2. The community survey conducted in the Summer of 2004
3. The cognitive mapping exercise held as part of the Mid-Course Meeting in July 2005

COMMUNITY SURVEY RESULTS

Two important questions were included in the community survey with respect to economic development (Refer to the appendix for the complete survey instrument and results). The first question provided a series of different types of commercial and service businesses and asked residents if they would encourage or discourage this type of development. The most popular responses people would encourage were:

- 47% - Restaurants
- 46% - Antique, craft, and specialty stores
- 43% - Childcare facilities

The least encouraged types of commercial and service development identified by respondents were:

- 23% - Office facilities
- 21% - Shopping Centers

It is important to note that with this first question, the most encouraged activities are usually small in building size and have a significant impact on the local community, but not the surrounding areas. The community prefers smaller commercial facilities in the Town, versus having a large shopping center that would attract from the neighboring communities. The community would like to concentrate its economic efforts on offering niche (e.g. specialty, small, locally-owned) business choices for residents and visitors.

A second question in the community survey provided a series of potential industrial uses in the Town and asked to what extent would residents encourage this type of development. The most popular responses citizens would encourage were:

- 60% - Agriculture-related business
- 43% - Development in industrial park
- 39% - Manufacturing and assembly

The least encouraged types of industrial development selected by survey respondents were:

- 17% - Large-scale livestock operations
- 12% - Mineral extraction (gravel quarries, etc.)

Given these results, the Town wants to be sure that new development does not jeopardize the rural quality of life. Therefore, businesses and industries that locate in the Town should:

- Be environmentally responsible and compatible with rural residential development;
- Generate minimal noise;
- Generate traffic that can easily be accommodated by the existing transportation network or proposed improvements; and
- Have generous landscaping to improve façade from the roadway and buffer the development from differing adjacent land uses (e.g. residential uses adjacent to commercial development).

Given these constraints, the Town will promote the following types of development:

- **Local service businesses** (e.g. restaurants, coffee shops, small specialty stores, etc.)
- **Home occupations** of a professional nature utilizing the Internet and other technologies that permit people to work from the privacy of their homes. Home occupations are particularly attractive to the Town.
- **Farming operations**

MID-COURSE/MAPPING MEETING

During the Mid-Course/Mapping meeting, held on July 14, 2005 at the New London High School, Town residents and stakeholders were led through a mapping exercise to illustrate their preferred future land use map for Mukwa. Participants were asked to identify areas within the community where they would like to see various types of land uses in the future. Upon completion of the exercise, the maps were collected and used as the foundation for the development of the *Majority Opinion Map* (included in the Future Land Use Chapter). The *Majority Opinion Map* will, in turn, be used to develop the *Future Land Use Map* that will appear in the final draft of the Town of Mukwa Comprehensive Plan.

As part of the economic development portion of the mapping exercise, participants were asked to identify areas in the Town where they would like to see commercial and industrial development. They identified three areas in the community as compatible and desirable for commercial and industrial development. Those areas are highlighted in red (commercial) and purple (industrial) on the map sections below.

Environmentally Contaminated Sites

Development efforts can sometimes encounter the challenge of potentially contaminated properties, which are commonly referred to as brownfield sites (see box at right). Brownfield sites vary in size, location, age, and past use. A brownfield site can be a former corner gas station or an empty manufacturing plant. There are an estimated 10,000 brownfields across Wisconsin. These sites pose a number of problems for communities, including:

- Neighborhood deterioration and community blight
- Potential harm to human health and the environment
- Reduced tax revenue and economic growth
- Attraction for vandalism, open dumping and other illegal activity

The United States Environmental Protection Agency (EPA) defines **brownfield sites** as “With certain legal exclusions and additions, the term ‘brownfield site’ means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.”

Using one of several databases, interested residents can search for properties in Mukwa that have been affected by environmental contamination (and have been reported). The WDNR Bureau for Remediation and Redevelopment Internet website tracking list is one such database. This database is available at: <http://botw.dnr.state.wi.us/botw/Welcome.do>. This database tracks identified sites from first reporting through closure or no further action. Records are kept in perpetuity regardless of whether or not contamination was actually found, the size of the incidence, and whether or not the site has been cleaned.

The WDNR database currently lists 7 sites in Mukwa. Six (6) of the sites are identified as spills. The WDNR defines spills as a discharge of a hazardous substance that may adversely impact, or threaten to impact public health, welfare, or the environment. The majority of the spills in Mukwa are caused by traffic accidents and all but one has been properly cleaned up. According to the WDNR website, spills are “usually cleaned up quickly.” The one other property the WDNR has identified in the Town requires no action.

Governments at all levels have recognized that brownfield redevelopment is an important issue. Numerous programs have been created to encourage brownfield redevelopment including grants, loans, and tax incentives. In the future, the Town will encourage landowners to pursue the cleanup and redevelopment of any contaminated or brownfield site. Likewise, to minimize future environmental impacts, the Town will encourage environmentally friendly business development that is properly permitted and regulated to protect the Town’s natural environment, particularly its groundwater resources.

Economic Development Opportunities

During the planning process, several economic development opportunities were identified. What follows is a few of the primary opportunities. Supporting goals, objectives and policies are provided at the end of this chapter to help the Town capitalize on these opportunities.

TOURISM

The Town has the opportunity to market itself to tourists interested in the Wolf River and other wildlife areas. In the future, agri-tourism (e.g. farmers markets, organic farming, roadside stands) and trail development can act as means to attract tourist dollars to Mukwa. The Town’s investment in infrastructure (e.g. trails, roads, beautification) and the promotion of local events (e.g. concerts, festivals, farmers markets, etc.) is an important part of the community’s family atmosphere and also a potential draw for tourists.

AGRICULTURE AND ECONOMIC DEVELOPMENT

The Agricultural, Natural and Cultural Resources Chapter of this plan discussed several strategies for sustaining agriculture in the Town over the next 20 years and beyond. In addition to the program / policy initiatives indicated, the Town can take other actions to support the local agricultural economy, including:

- Providing a centralized marketplace for local farmers to sell goods. An ideal location is along STH 54 or at the Town Hall. Both of these potential locations provide sufficient access for the community, visitors and farmers.
- Coordinate with local farmers to develop a historical and/or niche farm tour.
- Organize educational seminars for farmers about the tools the Town can provide to accommodate development requests (e.g. transfer and purchase of development rights, zoning ordinance tools) and other opportunities they may want to consider in their farming practice (e.g. the sale of farm by-products for energy generation, organic farming opportunities, niche farming opportunities, etc.).

Economic Development Tools & Programs

TAX INCREMENT FINANCING

Tax Incremental Financing (TIF) allows communities to undertake a public project to stimulate beneficial development or redevelopment that would not otherwise occur. It is a mechanism for financing local economic development projects in underdeveloped and blighted areas. Taxes generated by the increased property values pay for land acquisition or needed public works.

Wisconsin has amended its legislation to allow Towns to establish TIF districts to promote agricultural and forestry development. Previously a Town's authority to use TIF was limited to environmental remediation projects. Towns are more restricted than cities and villages in the range of activities that may receive TIF benefit. The list of eligible activities for a Town TIF district includes:

- Agriculture - Defined as animal and crop production and direct support activities.
- Tourism – Defined as camps, RV parks, campgrounds, dairy product stores, and public golf courses;
- Forestry – Defined as forestry, logging, and direct support activities;
- Manufacturing – Defined as animal slaughtering and processing, wood product manufacturing, paper manufacturing, or ethyl alcohol manufacturing;
- Residential development – Limited to sleeping quarters within a TIF district for employees who work for employers engaged in an eligible TIF project. Residential development does not include hotels, motels, or general residential development.
- Retail development - Related to the sale of products as a result of the allowed agriculture, forestry, or manufacturing activities.

The maximum life of a TIF district is sixteen years and the expenditure period is five years. The boundary of a Town TIF may be amended one time within the first five years. The expenditures within the amended territory must be made within two years of the amendment.

INTERNET MARKETING

The Town of Mukwa should consider enhancing its website to provide Town government information, schedules of community events, feedback opportunities for local residents, and a business directory. Ordinances, meeting agendas, and minutes could all be placed on the website to provide better access to the community. Highlights could include a community calendar listing events and festivals occurring in the Town. It could also emphasize the recreational opportunities available. A business directory would allow citizens easy access to important information about local contractors, restaurants, and recreational facilities.

How Does a TIF Work?

1. The Town defines a TIF district area.
2. Tax assessments for the district are frozen at their current value.
3. The Town prepares a plan for the TIF district called a "project plan" to describe costs to be incurred and the anticipated tax revenue to make up for the cost overtime.
- 2.4. The Town, through its tax-increment finance authority, can acquire land and make capital improvements in the district (e.g. streets, lighting, landscaping, etc.) to make it more desirable to developers.
- 3.5. When development occurs, the value of the land in the district increases. This increased value is taxed, but for a period of time while the TIF district is in effect, the additional tax revenues go to the TIF.
- 4.6. This additional tax revenue is used to pay off the expenses incurred by the Town in land acquisition and installation of capital improvements.

More information about establishing a TIF is available in Wis. Stats. Ch. 66.1105(5)(g).

CAPITAL IMPROVEMENTS PROGRAM (CIP)

Through a CIP, communities are able to responsibly plan for future improvements. The Town of Mukwa does not currently utilize this tool. As is recommended in the Utilities and Community Facilities Element of this Plan, the Town should seriously consider developing a CIP, which will help the Town plan for improvements that can support local economic development.

STATE AGENCIES/PROGRAMS

- Wisconsin Department of Commerce – www.commerce.state.wi.us: This department is the state’s primary agency for delivery of integrated services to businesses.
- Wisconsin Department of Transportation – www.dot.state.wi.us: The Office of Disadvantaged Business Enterprise Programs encourages firms owned by disadvantaged individuals to participate in all federal and state transportation facility contracts.
- Forward Wisconsin – www.forwardwi.com: Forward Wisconsin markets outside Wisconsin to attract new businesses, jobs, and increased state economic activity.
- Department of Workforce Development – www.dwd.state.wi.us: This department builds and strengthens Wisconsin’s workforce by providing job services, providing training and employment assistance, and helping employers find necessary workers.
- Wisconsin Small Business Development Centers – <http://www.wisconsinsbdc.org/>: These centers help ensure the state’s economic health and stability. They offer formative business education, counseling, and technology training.
- UW-Extension – <http://www.uwex.edu/>: The Extension provides small business management assistance workshops, one-on-one counseling, information on County revolving loan funds and other sources of financing, research into available government loans, and local demographic information.

FEDERAL AGENCIES/PROGRAMS

- Department of Agriculture Rural Development Administration – www.rurdev.usda.gov
- US Small Business Administration – www.sba.gov: provides financial, technical and management assistance to help Americans start, run, and grow their businesses.
- US Department of Commerce – <http://www.commerce.gov/>
- US Department of Transportation – www.dot.gov

Economic Development Issues & Concerns

RESIDENTIAL DEVELOPMENT AS ECONOMIC DEVELOPMENT

Presently, residential development is the primary source of the local tax base. Accordingly, economic development in Mukwa is often seen as residential development. Fortunately, from an economic standpoint, residential development is growing in the Town. Moreover, the housing being developed is of significant value. As such, it continues to provide an increasing share of the Town’s tax base. Therefore, residential development does provide some economic development gains for the Town.

However, to a much greater degree than commercial and industrial development, housing requires extensive services to accommodate resident needs. These services include schools, parks, trails, public safety, roads and associated maintenance (including snowplowing), and other amenities.

A number of community studies have been completed across the country to compare tax revenue generated by different land uses (e.g. commercial, industrial, single family residential, multiple family residential, etc.) to the municipal services they require. Study after study demonstrates that single-family residential development often increases public costs by a larger amount than it increases tax revenue for local governments that must provide those services. Commercial and industrial development has a much more positive balance relative to tax dollars paid and dollars expended on services.

The premier example of such a study in Wisconsin was completed by the Town of Dunn (Dane County) in 1994. Subsequent studies rely on the Town of Dunn as a model in their efforts.¹ The study revealed that for every dollar in tax revenue collected by the Town of Dunn, \$1.24 cents in services was required in local services (including schools). The ratios for commercial and industrial uses were far more favorable (e.g. for every \$1 in tax revenues collected significantly less than \$1 of services is required). Not surprisingly, the ratio is most favorable for farmland and natural areas.

Over the next 20 years, it is expected that the vast majority of residents in the Town of Mukwa will continue to commute to other communities for employment opportunities because significant new business investment in Town to support local employment choices is not desired. Accordingly, residents accept the notion that they will face a higher cost of living due to increased transportation costs to reach employment and business centers and other advanced services in outlying communities. Moreover, residents accept the fact that the bulk of the money needed to support road improvements and maintenance, parks, and other Town facilities and services will be from residential property taxes and impact fees.

It is important to ensure that local residential tax dollars cover the costs to provide needed services. Therefore, the Town supports new residential development paying a fair and proportionate share of service costs. Impact fees can be used to further ensure that new development is paying a fair and equitable share of road improvement and park costs. It should be noted that this fee income only is available as long as new development occurs.

From a planning perspective, one successful strategy will be to locate residential development, including condominiums and senior housing, within walking distance of commercial areas. This is an important technique that supports local commercial development and the local tax base. In addition, this approach has the added benefit of creating a buffer between commercial areas and rural housing development and offering a choice for residential living within the Town.

PROTECTING GROUNDWATER

As is evident based on the information in the Agricultural, Natural and Cultural Resources Element of this plan, groundwater resources are susceptible to contamination. Given the fact that the counties located east of Mukwa, Outagamie and Winnebago, have an arsenic advisory, it is important for Mukwa to protect the present groundwater supply.

To reduce and avoid the contamination, it is necessary to protect local groundwater quality and quantity. Accordingly, water-intensive land uses are discouraged. Likewise, dry cleaners and other establishments that utilize extensive chemicals are also discouraged as a means to prevent potential groundwater contamination.

RESPECTING RURAL CHARACTER

The vision in this chapter describes the Town as a rural community in 2025. The visions in preceding chapters have highlighted the need to preserve natural features, maintain farmland, and continue to offer a quality country living environment. It is important that economic development respect these visions by being of a smaller scale. Intensive industry (with potential pollution concerns) and large commercial establishments (e.g. superstores, strip malls, etc) are not consistent with this image.

Residents have clearly expressed that local business choices in the Town and the City of New London are available to meet basic needs (e.g. gasoline, groceries, bank, etc.), and that the Town should remain a rural, residential community with abundant natural areas.

Little additional local development is desired, and should only occur in appropriate locations (e.g. near existing development, near highway corridors, etc.) to avoid conflicts with residential uses. This could include some small-scale restaurants, specialty stores, daycare centers, and other tourism-orientated commercial activities. It is expected that new development will exist in harmony with the Town's rural setting.

NON-METALLIC MINING

The Agricultural, Natural, and Cultural Resources Chapter has information about the abundance of different soil types in the community (including some areas of sand and gravel) as a potential resource for non-metallic mining. Local quarries are one form of economic development not previously discussed in this chapter. The potential exists for additional non-metallic operations or expansion of existing operations in the Town. Extensive regulations exist that require any non-metallic mining operation to develop a reclamation plan to indicate how the property will be utilized after the mining operation is complete. Chapter 7 provides a discussion of specific concerns relating to non-metallic mining.

¹ Additional Information about the Town of Dunn Community Services Study is available on-line at www.town.dunn.wi.us.

Non-metallic mining can be an important asset to the community by creating jobs and providing important construction materials for new houses, roads and other development activities. Supporting goals, objectives and policies are included in this chapter to address this important issue.

Coordination with Other Comprehensive Plan Elements

Economic development in Mukwa directly affects all other elements of this comprehensive plan. Specifically, the Economic Development Element impacts the Land Use, Transportation, Housing, and Utilities and Community Facilities Elements. Therefore, it is important that the elements are consistent and support one another.

LAND USE ELEMENT

New commercial and industrial development must be located in areas that the market will support. Furthermore, new commercial and industrial development should not create a nuisance for neighboring properties or natural resources. As such, new development should have a minimal environmental impact and be located in areas that have access to needed infrastructure. These concerns were carefully considered during the development of the *Future Land Use Maps*.

TRANSPORTATION ELEMENT

Additional economic development may result in increased truck traffic for deliveries and more local traffic from customers frequenting businesses. The Town must work with the County and WisDOT to monitor traffic flows to ensure that new development is appropriately planned and sited to minimize its impact on adjacent roadways. This may periodically require traffic studies to understand the impacts of proposed developments. Pedestrian and bicycle access must also be considered.

HOUSING ELEMENT

New economic development will bring visitors to the community. Economic development can also result in jobs that bring people to the community looking for places to live near their place of employment. Areas for additional housing development are denoted on the *Future Land Use Maps*.

UTILITIES & COMMUNITY FACILITIES

To support economic development, infrastructure (transportation, electricity, communication, public safety, etc.) must be available to meet the needs of business. The Utilities and Community Facilities Element discusses several planned capacity improvements to better serve the needs of the community, including the economic interests.

Goals, Objectives and Policies

Please refer to Chapter 12: Implementation for a complete listing of goals, objectives, and policies.

Introduction

Land use is the central element of a comprehensive plan. Previous elements have discussed:

- Projected population growth.
- Available housing in the Town and potential future housing needs.
- The transportation network and challenges arising from increased population growth.
- Available utilities and community facilities.
- Local business choices and economic growth opportunities.
- The natural environment, cultural history and resources, and agriculture.

This element assesses land use trends by compiling the recommendations of previous chapters. The Land Use Element is divided into two chapters in the plan. This chapter discusses existing land uses, regulations, trends and opportunities. The next chapter discusses desired development patterns, community design standards, and coordination with other required plan elements. The supporting goals, objectives and policies for Future Land Use are located in Chapter 12: Implementation. Chapter 10 concludes with the Future Land Use Maps and a discussion of how they were created and how they are to be used to guide future preservation and development actions.

Of the 14 local planning goals provided in the Comprehensive Planning Law, the goals listed below specifically relate to planning for land use:

- Promotion of the redevelopment of lands with existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial and industrial structures.
- Encouragement of neighborhood designs that support a range of transportation choices.
- Protection of natural areas, including wetlands, wildlife habitats, lakes, woodlands, open space and ground water resources.
- Protection of environmentally productive areas.
- Encouragement of land uses, densities and regulations that promote efficient development patterns and relatively low municipal, state governmental and utility costs.
- Preservation of cultural, historical and archaeological sites.
- Providing adequate infrastructure and public services and an adequate supply of developable land to meet existing and future market demand for residential, commercial and industrial uses.
- Balancing individual property rights with community interests and goals.
- Planning and development of land uses that create or preserve varied and unique urban and rural communities.

Existing Land Use Inventory

The *Existing Land Use Map* was created from information provided by the East Central Wisconsin Regional Plan Commission (ECWRPC) and Waupaca County. The Citizen's Advisory Committee on Land Use, town residents, and other stakeholders provided additional updates throughout the planning process. What follows is a description of the land use categories illustrated on the *Existing Land Use Map*.

SINGLE FAMILY HOMES

Single-family residential development is spread throughout the community, with the highest densities concentrated near the City of New London and on the east side of the Wolf River. As of the 2000 US Census, there were 1,061 residential properties in the Town. The majority of new housing development (constructed since 1990) has occurred within planned subdivisions. Information about the characteristics and quality of the Town's housing supply is available in Chapter 4.

COMMERCIAL/INDUSTRIAL

Existing commercial land uses are scattered throughout the Town but tend to be concentrated near New London and along the STH 54 corridor. Commercial land uses include retail business, restaurants, gasoline stations, and home-based businesses. Chapter 8 profiles economic development opportunities.

INSTITUTIONAL

Institutional uses include churches and schools. For more information about area churches refer to the Cultural Resources portion of Chapter 7. For information about the local school districts refer to the Utilities and Community Facilities Chapter, Chapter 6.

RECREATION

The Sturgeon Trail and Mukwa Wildlife Area provide wildlife viewing and recreational opportunities in the Town. A map highlighting snowmobile trails in Waupaca County can be found in Chapter 5. For more information on these areas, see Chapters 6 and 7.

WOODLANDS

Forested areas in the Town are scattered throughout the community and are particularly dense in floodplain areas adjacent to the Wolf and Little Wolf River corridor. Forested areas are shown in dark green on the *Existing Land Use Map*. For information about woodlands and other natural areas, refer to Chapter 7.

NON-METALLIC MINING OPERATIONS

Existing quarry operations in the Town of Mukwa are identified in black on the Existing Land Use Map on page 9-4. Refer to the Agricultural, Natural and Cultural Resources Element (Chapter 7), as well as the Economic Development Element (Chapter 8) for more information.

AGRICULTURE

Nearly 20% of the Town's land base is classified as agricultural land. The largest areas of contiguous farmland are located near the Little Wolf River in the northwest part of Mukwa and in the southeast between CR D and CR W. For additional information about local agricultural land uses, refer to Chapter 7 and Chapter 8.

UTILITIES

Utilities include electricity, natural gas, communications, and other service providers. Information is provided in Chapter 6.

CEMETERIES

Cemetery locations are also illustrated on the *Existing Land Use Map*. A brief profile of each cemetery is included in the Utilities and Community Facilities Element (Chapter 6).

UNDEVELOPED / PRESERVED OPEN SPACE AREAS

Areas classified as *undeveloped* consist of residential subdivision lots that are not yet developed, preserved open space in subdivisions, and other areas that are not classified as wooded, wetland, or farmland (e.g. shrub covered, open space).

WATER FEATURES

Water features include ponds, streams, and creeks. The primary water features in the Town are the Wolf and Little Wolf Rivers, Cincoe and Partridge Crop Lakes, and Horseshoe, Tom, and Traders Bayous. To learn more about the surface waters of Mukwa, see Chapter 7.

WETLANDS

Wetlands are found adjacent to water features and in lowland marsh areas. Refer to Chapter 7 for more information.

RIGHTS-OF-WAY

All roadways are shown in black on the *Existing Land Use Map*. Railroad corridors are shown with a spiked line. To learn more about transportation facilities, refer to Chapter 5.

The table to the right provides a numerical breakdown of the existing land uses in the Town of Mukwa. The information used to develop the table was gathered from ECWRPC and Waupaca County.

Table 26: 2004 EXISTING LAND USE AMOUNT & INTENSITY		
Land Use Type	Amount (in acres)	Amount (percentage)
Institutional	3.13	0.01%
Parks and recreation	78.44	0.34%
Roads	567.09	2.44%
Single-family residential	1,501.78	6.47%
Undeveloped	2,411.41	10.39%
Utilities	3.72	0.02%
Commercial / Industrial	14.98	0.06%
Water	3,616.55	15.58%
Cemeteries	5.45	0.02%
Farmsteads	60.81	0.26%
Mining	118.32	0.51%
Mobile Homes	58.25	0.25%
Agriculture	4,424.38	19.05%
Wetlands / Floodplain	4,355.07	19.22%
Woodland	4,150.24	18.31%
Rail lines	71.61	0.31%
Total	22,664.19	100%
Potential Future Developable Acres*	10,323.39	45.55%
Natural Resources (wetlands, surface water, floodplains, steep slopes)	7,971.56	35.17%
Already Developed	4,369.24	19.28%

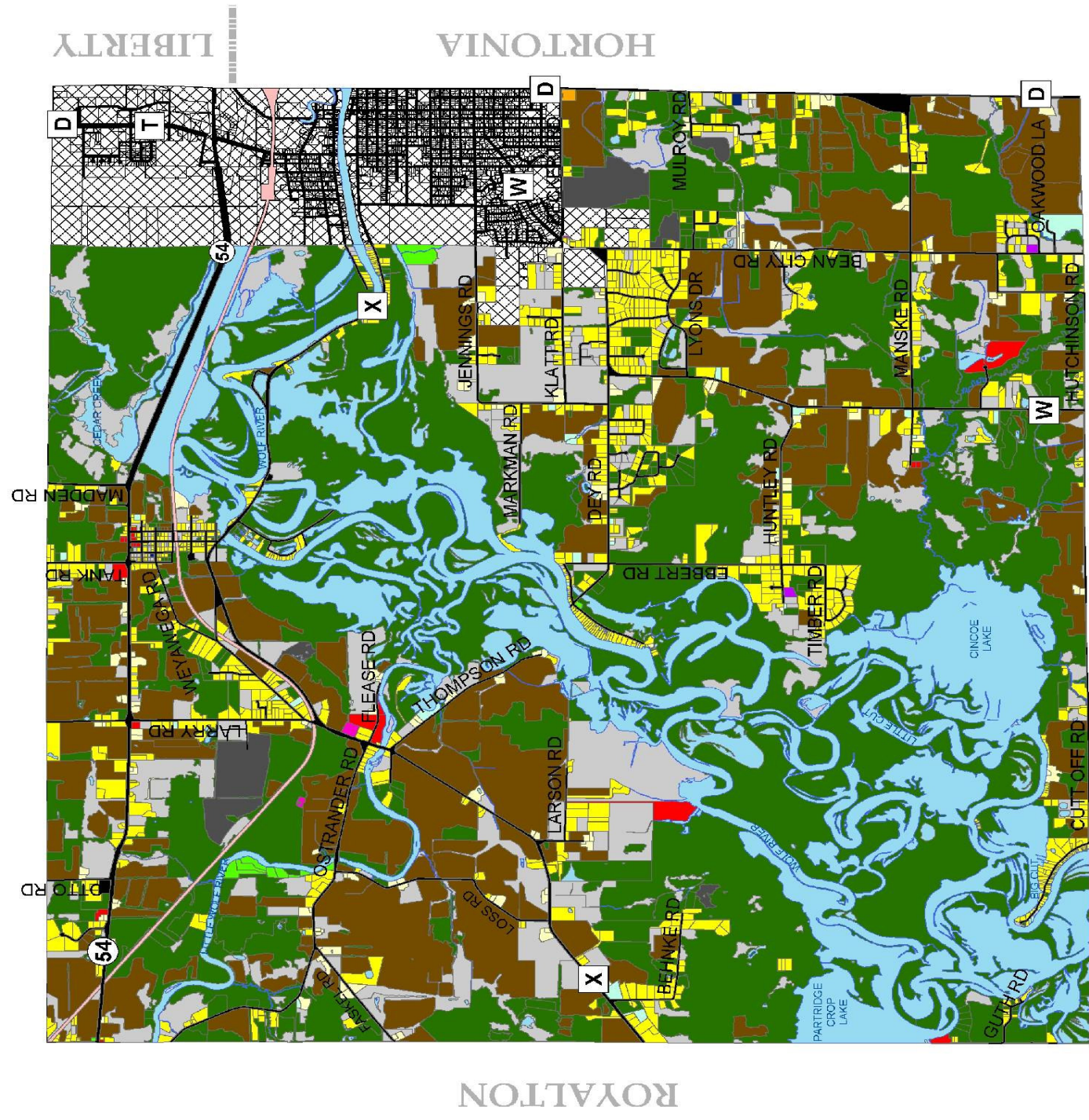
SOURCE: *Town of Mukwa Existing Land Use Map*; data for map provided by ECWRPC and Waupaca County.

* Potential Future Development Acres = total of agriculture, woodland, and undeveloped land.

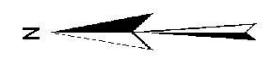
TOWN OF MUKWA

EXISTING LAND USE

LEBANON



CALEDONIA



PROJECT # 11/15/10/04
 DATE 05/10/04
 DRAWN BY: KAL
 REVISED:

Omni
 ASSOCIATES

345 WEST 48 STREET, FORT COLLINS, CO 80521
 P: 970.226.1500 F: 970.226.8047

LOCATION: F:\GIS\1151\04\DRAWINGS\Land_Use_11x17.mxd
 SOURCE: Waupaca County
 Est. Central Wisconsin Regional Planning Commission

LEGEND

	INSTITUTIONAL		CEMETERIES
	PARKS & RECREATION		FARMSTEADS
	ROADS		MINING
	SINGLE FAMILY RESIDENTIAL		MOBILE HOMES
	UNDEVELOPED LAND		NONIRRIGATED CROPLAND
	UTILITIES		WOODLANDS
	INDUSTRIAL		RAIL TRANSPORTATION
	WATER		CITY OF NEW LONDON
	COMMERCIAL		

Waupaca County Land Use Regulations

Waupaca County maintains regulatory authority for a variety of land uses within the Town of Mukwa. This section provides a listing and description of the current regulatory programs applicable to the Town. Although most of the programs listed below fall under the sole authority of the County, the regulation of major land divisions through the development of a Subdivision Ordinance may be assumed by the Town of Mukwa should it choose to develop and implement its own and Division / Subdivision Ordinance.

CHAPTER 32 - WAUPACA COUNTY SHORELAND ZONING ORDINANCE

The Waupaca County Shoreland Zoning Ordinance regulates “shoreland” areas, defined as lakes, ponds, and flowages; rivers and streams; and contiguous wetlands. The regulated areas are as follows:

- Lakes, Ponds, and Flowages – Within 1,000 feet of the ordinary high water mark of navigable lakes, ponds, or flowages or within 1,000 feet of the high water mark of glacial pothole lakes. Lakes, ponds, or flowages shall be presumed to be navigable if they are listed in the WDNR publication “Surface Water Resources of Waupaca County” or are shown on the United States Geological Survey quadrangle maps or other zoning base maps.
- Rivers and Streams – Within 300 feet of the ordinary high water mark of navigable rivers or streams, or to the landward side of the floodplain, whichever is greater. Rivers and streams in Waupaca County shall be presumed to be navigable if they are designated as continuous waterways or intermittent waterways on the United States Geological Survey quadrangle maps. Flood hazard boundary maps, flood insurance rate maps, flood boundary-floodway maps, county soil survey maps, or other existing county floodplain zoning maps shall be used to delineate floodplain areas.
- Contiguous Wetlands – Delineated as wetlands on Wisconsin Wetland Inventory Maps for Waupaca County and which are at least partially within shoreland area. Such wetlands and adjacent contiguous wetlands shall be regulated as if they were entirely within the shoreland area.

CHAPTER 34 - WAUPACA COUNTY ZONING ORDINANCE

Waupaca County has zoning authority for all lands within the Town of Mukwa. The zoning ordinance is organized into different districts. Within each district specific uses are permitted subject to certain requirements. Of the sixteen districts identified in the Waupaca County zoning ordinance, the following exist in the Town of Mukwa:

- | | | |
|----------------------------------|--|-----------------------|
| ▪ O-N Natural Preservation Zone | ▪ M-I Intensive Manufacturing Zone | ▪ Floodway |
| ▪ C-G General Commercial Zone | ▪ A-G General Agriculture Zone | ▪ General Flood Plain |
| ▪ C-S Service Commercial Zone | ▪ RS-20 Residential Single-Family Zone | ▪ Flood Fringe |
| ▪ M-G General Manufacturing Zone | ▪ R-M Residential Multi-family Zone | ▪ Water Features |

The Waupaca County zoning ordinance follows a traditional Euclidean¹ model that seeks to segregate uses by type and establish dimensional requirements related to lot size, setbacks, and building height. As new uses are created over time, they are listed specifically in the zones in which they are permitted. To be most effective, this type of ordinance must list every possible use and establish a zone in which that use would be appropriate. Euclidean ordinances are based on a philosophy that separation of uses will create a safer, healthier environment. In recent years, the planning profession has developed alternative zoning models based on performance standards and building form.

Form-based zoning codes regulate a community based on the appearance (e.g. building line, landscaping, lighting, signage, building size, building materials, building design) rather than the type of use. Ordinances based on performance standards seek to regulate based on a particular set of operation standards rather than on particular type of use.

Performance standards provide specific criteria for limiting noise, air pollution, emissions, odors, vibration, dust, dirt, glare, heat, fire hazards, wastes, traffic impacts, and visual impacts of a use. In this approach, the proposed use is not a factor in development. If all operation standards can be met, any use can be permitted adjacent to another. Some communities are also using hybrid-zoning codes that combine performance and form-based zoning criteria to regulate land use.

¹ Reference to Euclid vs. Amber Realty Company, 1926 U.S. Supreme Court Decision, which serves as the foundation for zoning practice in the United States.

These two alternative zoning approaches offer the advantage of regulating the impact and design characteristics of different uses, rather than limiting the types of uses allowed in a community. As a result, communities relying on these newer models are creating mixed-use communities with a variety of different land uses established in close proximity. This pattern of development provides a walkable environment with easy and convenient non-automotive travel between neighborhoods, retail areas, schools, and employment destinations. The Euclidian model separates uses and may result in the need to drive to different destinations, or requires multiple variances to gain approval. More information about walkable communities is provided in Chapter 5 and Chapter 10.

Table 23 provides a breakdown of the different zoning districts found in the Town of Mukwa. For additional information refer to the Waupaca County Zoning Ordinance. The different zoning districts are illustrated on the *Zoning Map* provided in this chapter.

CHAPTER 35 - WAUPACA COUNTY SANITARY ORDINANCE

The Waupaca County Sanitary Ordinance was adopted by the Waupaca County Board on November 8, 1967, and most recently amended on January 21, 2003. The intent of the ordinance is to regulate the location, construction, installation, alteration, design, and use of all private sewage disposal systems so as to protect the health of residents and preserve and promote the beauty of Waupaca County. The ordinance applies to the entire unincorporated or unsewered area of the County. The ordinance allows for conventional, mound, in-ground pressure, at grade, and alternative private sewage systems. It does not allow for holding tanks unless they are to be used as a temporary means of addressing a failing on-site system.

CHAPTER 36 - WAUPACA COUNTY FLOODPLAIN ORDINANCE

The current Waupaca County Floodplain Ordinance was adopted by the Waupaca County Board on May 19, 1987 and amended on February 17, 2004. The ordinance regulates all areas that would be covered by the regional flood or base flood. Base flood elevations are derived from the flood profiles in the Flood Insurance Study. Regional flood elevations may be derived from other studies. The regional floodplain areas are divided into three districts as follows:

- The Floodway District (FW) is the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional floodwaters.
- The Floodfringe District (FF) is that portion of the floodplain between the regional flood limits and the floodway.
- The General Floodplain District (GFP) is the area or areas that have been or may be covered by floodwater during the regional flood.

The Waupaca County Floodplain Ordinance applies to all cities, villages, and towns in Waupaca County unless specifically exempted by law.

CHAPTER 37 - WAUPACA COUNTY SUBDIVISION ORDINANCE

The Waupaca County Subdivision Ordinance was adopted by the Waupaca County Board on April 17, 1968 and most recently amended on November 19, 2002. The purpose of the ordinance is to regulate and control the division of land within the unincorporated areas of Waupaca County. The ordinance requires that developers of proposed subdivisions submit to the County an initial pre-application packet and sketch plan, followed by a preliminary and final plat. Each submittal requires a review by the County and the local governing body within which the development is proposed. The ordinance covers minor land division (through the Certified Survey Map process) and major land divisions (subdivisions of land into five or more separate parcels). It also sets standards for street arrangement and design; highway access control; block width, length, and shape; lot size and shape; building setbacks; sewage requirements; and required improvements.

CHAPTER 43 - WAUPACA COUNTY NON-METALLIC MINING RECLAMATION ORDINANCE

The Waupaca County Non-Metallic Mining Reclamation Ordinance was enacted by the Waupaca County Board on June 19th, 2001. The purpose of the ordinance is to adopt and implement the uniform statewide standards for nonmetallic mining reclamation required by § 295.12(1)(a), Stats. and contained in Chapter NR 135, Wisconsin Administrative Code. The ordinance identifies the steps necessary for reclaiming a quarry, sandpit, or other similar nonmetallic mining site once operation of the site is discontinued, and applies to all nonmetallic mining sites within Waupaca County operating or commencing to operate after August 1, 2001. Non-metallic mine operators must apply for a Reclamation Permit from ECWRPC for new or re-opened mine sites.

EXTRATERRITORIAL ZONING

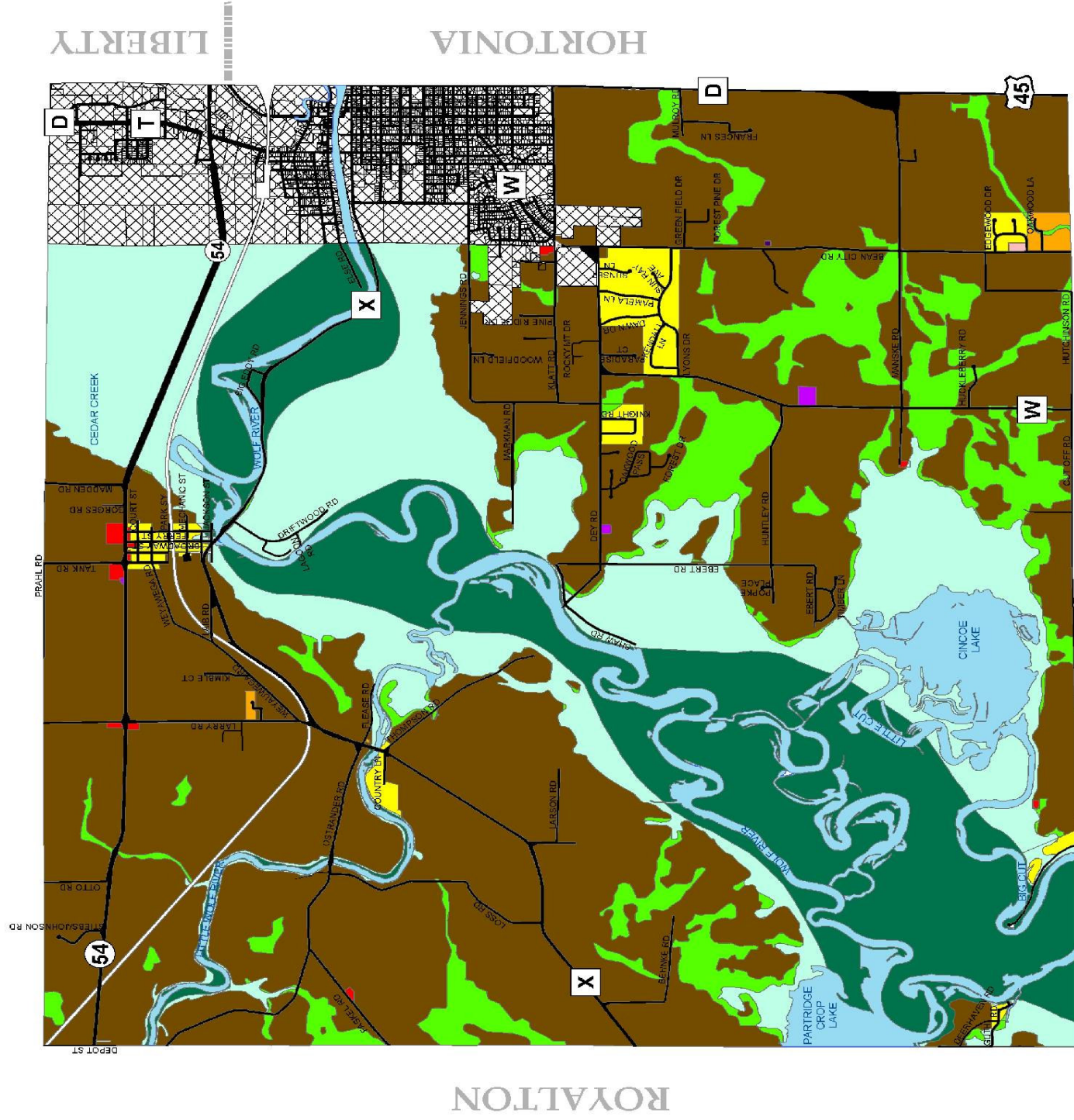
An extraterritorial zoning ordinance adopted by an incorporated municipality may regulate the subdivision of land within the extraterritorial jurisdiction of that municipality (e.g. within 1.5 miles of a Village and 3 miles of a City boundary). The objective of extraterritorial jurisdiction is to review land divisions that are proposed beyond the municipality to ensure street extensions, environmental corridors, and parks are preserved to provide efficient municipal growth without having to annex extensive rural development. At this time, the City of New London has not exploited its extraterritorial zoning authority in the Town of Mukwa. Additional information about extraterritorial zoning is providing in the Intergovernmental Element Chapter of this plan.

TABLE 27.0: Waupaca County Zoning Classifications for the Town of Mukwa								
District Name	Permitted Uses	Minimum Lot Size	Minimum Lot Width	Height Regulation	Front Yard Setback	Side Yard Setback	Rear Yard Setback	Water Setback
O-N Natural Resource Preservation Zone	Conservation and preservation of natural resources. Agriculture, including animal and poultry husbandry, beekeeping, dairying and grazing, field crops, forestry, orchards and wild crop harvesting, truck farming, horticulture or viticulture.	1 acre	150'	35'	Class A Hwy – Greater of 110' from centerline or 50' from right-of-way line Class B Hwy – Greater of 75' from centerline or 42' from right-of-way line Class C Hwy – Greater of 63' feet from centerline or 30' from right-of-way line	25'	50'	75'
C-G General Commercial Zone	Small commercial uses. Auto service stations, banks and similar services, business and professional offices and studios, commercial entertainment facilities, dental and medical clinics, dwelling (single-family, but only as accessory to principal use), funeral homes, garages for storage of vehicles used in conjunction with permitted uses, hotels, laundromats, new car sales, restaurant, retail stores and shops offering convenience goods and services, semi-public uses (fire station, police station, administrative building or similar use according to definition).	None	50'	35'	Same as above	None	20'	75'
C-S Service Commercial Zone	Commercial service type uses. Boat sales and service, club or lodge, motels and hotels, swimming pools.	10,000 sq ft	75'	35'	Same as above	None	20'	75'
M-G General Manufacturing Zone	Manufacturing and industrial operations. Automotive heavy repair and upholstery, cleaning, pressing, and dyeing establishments, commercial bakeries, commercial greenhouses, distributors, farm machinery sales and/or service, food locker plants, laboratories, machine shops, manufacturing and bottling of non-alcoholic beverages, manufacture, fabrication, processing, packaging, and packing of: confections, cosmetics, electrical appliances, electronic devices, food except cabbage, fish, fish products, meat, and meat products, pea vining, jewelry, instruments, pharmaceuticals, tobacco, toiletries, manufacture, fabrication, packing, packaging, and assembly of products from: furs, glass. Leather, metals, paper, plaster, plastics, textiles, tobacco, wood, printing and publishing, storage and sales of machinery and equipment, trade and contractor's offices, warehousing and wholesaling, Office, storage, power supply and other such uses normally incident to the principal use.	20,000 sq ft	150'	35'	Same as above	20'	20'	75'
M-I Intensive Manufacturing Zone	All permitted uses from the General manufacturing Zone, plus: freight yards and depots, breweries, inside storage.	10,000 sq ft	75'	35'	Same as above	10'	20'	75'
A-G General Agricultural Zone	Large scale agricultural uses of land related to growing of crops and the raising of livestock. Agriculture, including: animal and poultry husbandry, beekeeping, dairying and grazing, field crops,	1 acre	100'	35'	Same as above	20'	20'	75'

	forestry, greenhouses, orchards and wild crop harvesting, truck farming, horticulture or viticulture.							
RS-20 Residential Single-Family Zone	Single-family residential on large lots. Agriculture uses including: beekeeping, field crops, forestry, orchards and wild crop harvesting, truck farming, horticulture or viticulture, dwelling, single-family.	20,000 sq ft	100'	35'	Same as above	15'	20'	75'
R-M Residential Multi-Family Zone	Multi-family dwellings in a residential environment. Agriculture uses including: beekeeping, field crops, forestry, orchards and wild crop harvesting, truck farming, horticulture or viticulture, dwelling, multi-family and duplex, retail consumer goods, sales and service conducted solely for the convenience of the resident of a multi-family dwelling.	Private sewer and water – 20,000 sq ft and 10,000 sq ft per dwelling unit; Public sewer – 15,000 sq ft and 5,000 sq ft per dwelling unit	Private sewer and water – 100' Public sewer – 75'	35'	Same as above	10'	20'	75'
Floodway	The channel of the stream or river and that portion of the adjoining floodplain necessary to discharge the 100-year flood flow without increasing the 100-year flood flow by any measurable increase in flood height.	N/a	N/a	N/a	N/a	N/a	N/a	N/a
General Flood Plain	The total area subject to inundation by the 100-year flood (also known as base flood).	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Flood Fringe	The portion of the floodplain outside of the sero-rise floodway that is covered by flood waters during the 100-year flood. Generally associated with standing water.	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Water Features	Lakes, ponds, bayous, rivers, creeks, streams, and other water bodies deemed navigable by WDNR.	N/a	N/a	N/a	N/a	N/a	N/a	N/a

TOWN OF MUKWA

ZONING LEBANON



CALEDONIA

LEGEND

- O-N: NATURAL PRESERVATION ZONE
- C-G: GENERAL COMMERCIAL ZONE
- C-S: SERVICE COMMERCIAL ZONE
- M-G: GENERAL MANUFACTURING ZONE
- M-I: INTENSIVE MANUFACTURING ZONE
- FLOODWAY
- GENERAL FLOODPLAIN
- F-F: FLOOD FRINGE
- A-G: GENERAL AGRICULTURE ZONE
- RS-20: RESIDENTIAL SINGLE-FAMILY ZONE
- R-M: RESIDENTIAL MULTI-FAMILY ZONE
- WATER FEATURES
- NEW LONDON
- ROADS



4,000 2,000 0 4,000 Feet

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PROJECT # M1151A04
 DATE: 10/04/04
 DRAWN BY: KAL
 REVISED: 05/31/06

ONE SIX SEVEN FIVE FLETCHER AVENUE
 MILWAUKEE, WISCONSIN 53212

LOCATION: F:\GIS\M1151A04\DRAWINGS\Zoning_11x17.mxd
 SOURCE: Mequica County
 East Central Wisconsin Regional Planning Commission

Trends in Land Supply and Demand

The Town of Mukwa covers 20,928 acres, or 32.7 square miles, of land and water. At present, less than one-fifth of the land within the community is classified as developed with just over a third classified as un-developable (see Table 26 on page 9-3). Slightly less than half (45.55%) is available for residential, commercial, industrial, or other types of development. Potential areas for development include all lands, beyond wetland and floodplain areas, that are currently undeveloped (but not part of a residential subdivision or park area), those currently used as cropland, and quarry sites that may be redeveloped once a reclamation plan has been approved and mining operations have ceased.

RESIDENTIAL DEVELOPMENT

Residential development accounts for 7% of the Mukwa's developed land base, and the bulk of the Town's tax base. Most residents prefer to see rural, country living continue as the primary land use in the Town. Based upon available undeveloped land (including woodlands and agricultural acreage) and County zoning requirements (RS-20 single-family homes), Mukwa can easily accommodate population growth projections anticipated by ECWRPC (conservatively estimated at 417 new residents by 2025). At present, nearly half of the community's land base is available for development. However, the majority of the developable lands are currently forested or under agricultural uses. Residential development in these areas has the potential to significantly change the landscape of the community.

One issue that has been raised is the fact that nearly 100% of the local housing supply is single-family homes. People who live in these homes do not want to see the Town overdevelop with multiple family housing (e.g. rental properties, high-density developments, and other "urban" archetypes). However, there is a growing realization that older residents living in Mukwa may not be able to live and maintain a single family home on a sizeable lot. If they are not able to handle this responsibility, or if they desire some other type of living (e.g. townhomes, condos, etc.), they may have to move to outside of Mukwa.

FARMING

Farming has been in decline as a component of the land base in Mukwa. Although agricultural land uses represent nearly one-fifth of Mukwa's land (19.05%), only a handful of individuals continue active agricultural operations. As the demand for more housing increases during the next twenty years, the percentage of Mukwa's land base classified as agricultural will decrease. Unless options for economically viable agricultural operations are pursued, increasing property values will result in a greater percentage of land transitioning to residential and commercial development from agricultural uses.

It is anticipated that, over the next 20 years, farmland will remain in the Town but the number of acres will decrease dramatically and the farming that does remain will consist of some rented cropland, hobby farms, and specialty or niche farming.

COMMERCIAL AND INDUSTRIAL DEVELOPMENT

Commercial and industrial development represents a very small portion of the community's land base (.06%, or 15 acres). Although some residents have expressed a desire for more jobs in Mukwa, the majority appeared content with the current levels of commercial and industrial development in the Town. Of those who would like to see more business development in Mukwa, antique and specialty shops, restaurants, and childcare facilities were identified as desired future development types in Mukwa. Few residents work within the Town. Most commute to jobs elsewhere in Waupaca and Outagamie Counties, with a smaller number traveling to other counties for employment. Recent improvements to STH 45 will also affect commercial and industrial development in Mukwa.

DEMAND

Given the Town's high quality of life, abundant natural resources, and desirable location within close proximity to nearby employment centers, the demand for additional housing is expected to increase in the future. Official state population projections, even though conservative in their predictive ability, anticipate a 14% increase in population during the next 20 years. While land remains available to accommodate new development, it will likely occur within forested areas and on agricultural lands.

Annexation

In Wisconsin, Cities and Villages cannot initiate annexations. Town landowners have to petition for annexation; then Cities and Villages have to determine whether or not they are willing to annex those parcels. On April 22, 2004, the Governor signed SB 87 (2003 Wisconsin Act 317), which prohibits a City or Village from annexing any Town territory unless the City or Village agrees to pay the Town, for five years, an amount equal to the property taxes that the Town imposed on that land in the year in which the annexation was finalized. The City of New London is the sole potential annexing municipality adjoining Mukwa. Should the Town desire to counteract potential future annexation requests, and since the annexation process begins at the behest of landowners with property abutting City boundaries, Mukwa should consider the following questions with respect to properties in proximity to the City of New London:

- Do residents want services the Town is unable to provide?
- Does annexation increase the marketability and value of their property?
- Is the annexing municipality more willing than the Town to address their concerns?
- What other issues are involved?

Once the issues have been identified, the Town can determine what measures it is willing and able to take to address those issues. To minimize the potential for annexation, several solutions exist, including:

- Educating landowners about advantages to remaining in the Town in order to prevent annexation.
- Utilizing innovative water and sewer technologies to ensure that Town development can be served with alternative systems, rather than requiring annexation by adjacent municipalities to extend municipal water and sewer.
- Establishing Conservation Design requirements for subdivisions proposed in areas near city boundaries.
- The creative use of a Purchase of Development Rights (PDR) Program. By purchasing the development rights of land adjacent to the Town's common boundaries with New London, the bordering land will be less desirable for annexation because its development potential will be gone.
- Innovative Town systems for sewer and water can be used to effectively support local development and counter the perception that extension of municipal water and sewer service is necessary to accommodate development.
- Obtaining Charter Township status (if this becomes an option in Wisconsin) as a means to protect the Town's boundaries from annexation. As recommended by the Wisconsin Towns Association (and periodically presented to the WI Legislature for consideration), charter townships have their boundaries protected from annexation. Annexation requests would need to be approved by both the Town and the annexing community before it could be finalized.
- Approval of a boundary agreement with New London.

What's a Growth Boundary?

A growth boundary represents the planned limit of urban growth for a 10 and 20-year period. The establishment of these growth lines may help the Town to plan for its own growth and development and limit potential future conflicts between Mukwa and New London.

Incorporation²

Incorporation is a means by which towns in Wisconsin can prevent annexation. Sections 66.0201 through 66.0211 of the Wisconsin Statutes regulate municipal incorporation *-the process of creating new Villages and Cities from Town territory*. The Department of Administration (DOA) is the administrative agency charged with facilitating the incorporation process. The DOA determines the ability of the territory petitioning for incorporation to meet certain minimum statutory standards and advises the circuit court to either accept or reject the incorporation petition.

Deciding whether or not to attempt incorporation is a decision to be collectively undertaken and financed by citizens residing in the territory under consideration. Citizens need to consider not only whether or not the standards to be initially reviewed by the circuit court can be met, but also whether the territory, level of proposed services and budget, and other relevant issues meet the more difficult statutory standards required to be evaluated by the DOA.

² Text from this section taken from the Wisconsin Department of Administration Web Site, www.doa.state.wi.us

REQUIREMENTS FOR INCORPORATION

Although it is unlikely that Mukwa in its current form could successfully argue for incorporation, it is conceivable, with the level of growth projected by 2025, that the Town could meet state requirements for incorporation at some point in the foreseeable future.

- **Characteristics of the Territory.** The entire territory of the proposed Village or City shall be reasonably homogenous and compact, taking into consideration natural boundaries, natural drainage basins, soil conditions, present and potential transportation facilities, previous political boundaries, boundaries of school districts, shopping and social customs. An isolated municipality shall have a reasonably developed community center, including some or all of such features as retail stores, churches, post office, telecommunications exchange and similar centers of activity. *Northport would be the likely community center for an incorporated Mukwa.*
- **Territory Beyond the Core.** The territory beyond the most densely populated one-half square mile specified in s. 66.0205 (1), or the most densely populated square mile specified in s. 66.0205 (2) shall have an average of more than 30 housing units per quarter section or an assessed value, as defined in s. 66.0217 (1)(a) for real estate purposes, more than 25% of which is attributable to existing or potential mercantile, manufacturing or public utility uses. The territory beyond the most densely populated square mile as specified in s. 66.0205 (3) shall have the potential for residential or other urban land use development on a substantial scale within the next 3 years. The Department may waive these requirements to the extent that water, terrain or geography prevents such development.

Beyond these two basic criteria, any application submitted to the DOA will also be evaluated based on:

- **Tax Revenue.** The present and potential sources of future tax revenue must appear sufficient to defray the anticipated cost of governmental services at a local tax rate that compares favorably with the tax rate in a similar area for the same level of services.
- **Level of Services.** The level of governmental services desired or needed by the residents of the territory compared to the level of services offered by the proposed Village or City is also considered.
- **Impact on the Remainder of the Town.** The impact, financial and otherwise, upon the remainder of the Town from which the territory is to be incorporated is considered in the application.
- **Impact on the Metropolitan Community.** The effect upon the future rendering of governmental services both inside the territory proposed for incorporation and elsewhere within the metropolitan community is a factor to determine incorporation. There shall be an express finding that the proposed incorporation will not substantially hinder the solution of governmental problems affecting the metropolitan community.

Based on these standards it is not a realistic option for the Town of Mukwa to become a Village at this time. The underlying problem is that if the Town were to see a portion of the community incorporate, outlying areas would not meet the DOA criteria. Moreover, there is not a desire on the part of residents to see the density and type of development needed to meet the DOA criteria in outlying areas. Furthermore, if the Town were to see an area within the community become a Village, that Village, in turn, would pose the same threat of annexation to the remainder of the Town as New London does today.

Opportunities for Redevelopment

The Smart Growth Law requires that communities examine opportunities for redevelopment of blighted, underdeveloped, or other areas of a community. This is different from opportunities for *new* development on farm fields or lands that have never been built upon. Redevelopment involves the revitalization of commercial and industrial areas to accommodate different (or more) types of development. In the Town of Mukwa there are relatively few areas that qualify for redevelopment. Areas in and around Northport may qualify, as well as abandoned or discontinued non-metallic mining operations.

With respect to local quarries, the opportunity exists to redevelop these sites (once the quarry operations cease) into residential developments or recreation areas. Such development will be based on the reclamation plan completed for each local quarry operation. When redevelopment opportunities arise, the Town will rely on zoning requirements, site plan review, and this plan as tools to oversee these activities.

Introduction

The character of Mukwa is defined by its people, rural setting, agricultural land, and natural environment. From the Wolf River corridor to the rolling topography of the southeast portion of the Town, Mukwa is a beautiful place to live. The community's proximity to the Fox Cities and other urban areas provides for a highly desirable place to live for working families.

This chapter provides the *Town of Mukwa Future Land Use Maps*. These maps illustrate the goals, objectives, visions and policies expressed throughout this plan. More importantly, they seek to reflect, to the greatest extent feasible, the desires, expectations, and demands of residents and landowners in the Town of Mukwa.

Background

The Town of Mukwa Comprehensive Plan process was initiated with an extensive vision development effort and review of the historic and existing population characteristics. This information is described in Chapters 1 and 2 of the document. From there, the Citizen's Advisory Committee for Land Use studied current conditions and future needs related to housing (Chapter 4), transportation (Chapter 5), utilities and community facilities (Chapter 6), and economic development (Chapter 8). The Committee also examined the natural environment and agricultural considerations in Chapter 7. Finally, existing land use patterns and regulations were considered in Chapter 9.

Understanding Development Desires

Three activities were instrumental in understanding local development desires and expectations:

- Kick-off Meeting & Value Workshop (41 Participants)
- Vision Meeting (34 Participants)
- Community Survey (300+ Returned Surveys)
- Cognitive Mapping Exercise (52 Participants)

Land Use Vision

In 2025, Mukwa has retained its rural character by preserving natural resources and agricultural lands, while allowing for well constructed housing to meet the needs of a growing population. Conservation subdivision design has become the most commonly used approach to accommodating single-family residential development in the Town of Mukwa. Local businesses are concentrated in Northport. Other areas in the Town have retained their rural, low-density residential character with patches of farmland and woodlands and the Wolf River corridors adding to the Town's scenic charm.

Mukwa relies on effective, local land use ordinances (subdivision, design, sign, and historic preservation, among others) to conserve the Town's natural and cultural resources, promote quality residential development, and provide development options that are sensitive to the preservation of rural character.

COGNITIVE MAPPING

Cognitive mapping is a planning tool used to determine desired future development. The two-part process provided participants with an opportunity to create a *Composite Attitude Map* to identify areas of the Town that, in their opinion, are attractive and unattractive. The map also indicates important local travel routes and places that have special meaning. The *Composite Attitude Map* is provided on the following page. It represents consistent patterns and ideas represented on the maps prepared by individual participants. It is not a direct translation of any single map created during the exercise.

The *Composite Attitude Map* reveals:

- The Wolf River and Little Wolf River corridors and Bean City Road near Manske Road are scenic areas and have special meaning to residents.
- STH 54, CR D, CR X, CR W, and Bean City Road are the most frequently traveled routes in the Town.
- CR X, Dey Road, Erbert Road, Manske Road, and Bean City Road are the most frequently walked and biked routes in Mukwa.
- The least pleasing areas are concentrated south of Beckert Road between CR D and CR W, and west of Larry Road near the Little Wolf River.

Following the *Composite Attitude* exercise, participants developed *Individual Future Land Use Maps* based on their ideas, perceptions, experiences and beliefs. Following the completion of their individual base maps, participants met in small groups to identify common ideas. OMNNI then utilized this data in the creation of the *Future Land Use Map* (presented on page 10-11).

Special Considerations

PROPERTY RIGHTS

The issue of private property rights versus community needs underlies every comprehensive planning effort. Throughout the development of this plan, landowners have consistently expressed their desire to see property rights protected. Property rights have been respected, to the greatest extent feasible, throughout this planning effort. This plan seeks to respect the property rights by illustrating planned development patterns for all property owners to understand and use to make their own personal development decisions. If a landowner disagrees with the *Future Land Use Maps*, or another aspect of this plan, they have the right to petition the Town to amend the document. All amendments occur through a public process, including a public hearing.

HIGHWAY CORRIDORS AND INTERCHANGES

The Cognitive Mapping Exercise revealed that residents generally support commercial development along the STH 54 corridor, away from the residential areas of the community. This idea was also a popular response on the community survey question that asked where, if anywhere, should commercial, office, and/or manufacturing development be located in the Town. The market provided by the daily traffic volumes on STH 54 may prove an attractive commercial development opportunity for existing landowners. The Future Land Use Maps seek to present a pattern for development that respects the opinions and desires of residents, while accommodating market-driven economic activities to provide additional opportunities for local employment.

POPULATION PROJECTIONS

Population projections for the Town are provided in Chapter 3. The WDOA projections indicate the Town's population is expected to increase to 3,303 people by 2025. Building permits and subdivision development proposals indicate that WDOA projections are more conservative than anticipated growth. Based upon building permits issued during the past tens years, and demographic trends occurring within the state and nationally, it is not unreasonable to expect a 2025 population approaching 3,600 residents. The Future Land Use Maps provided in this chapter are designed to accommodate this larger population growth.

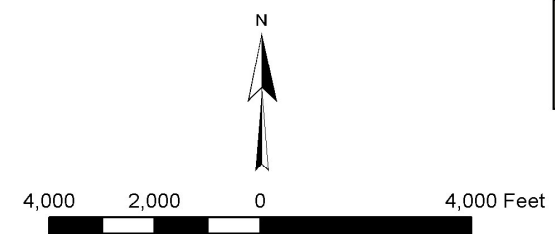
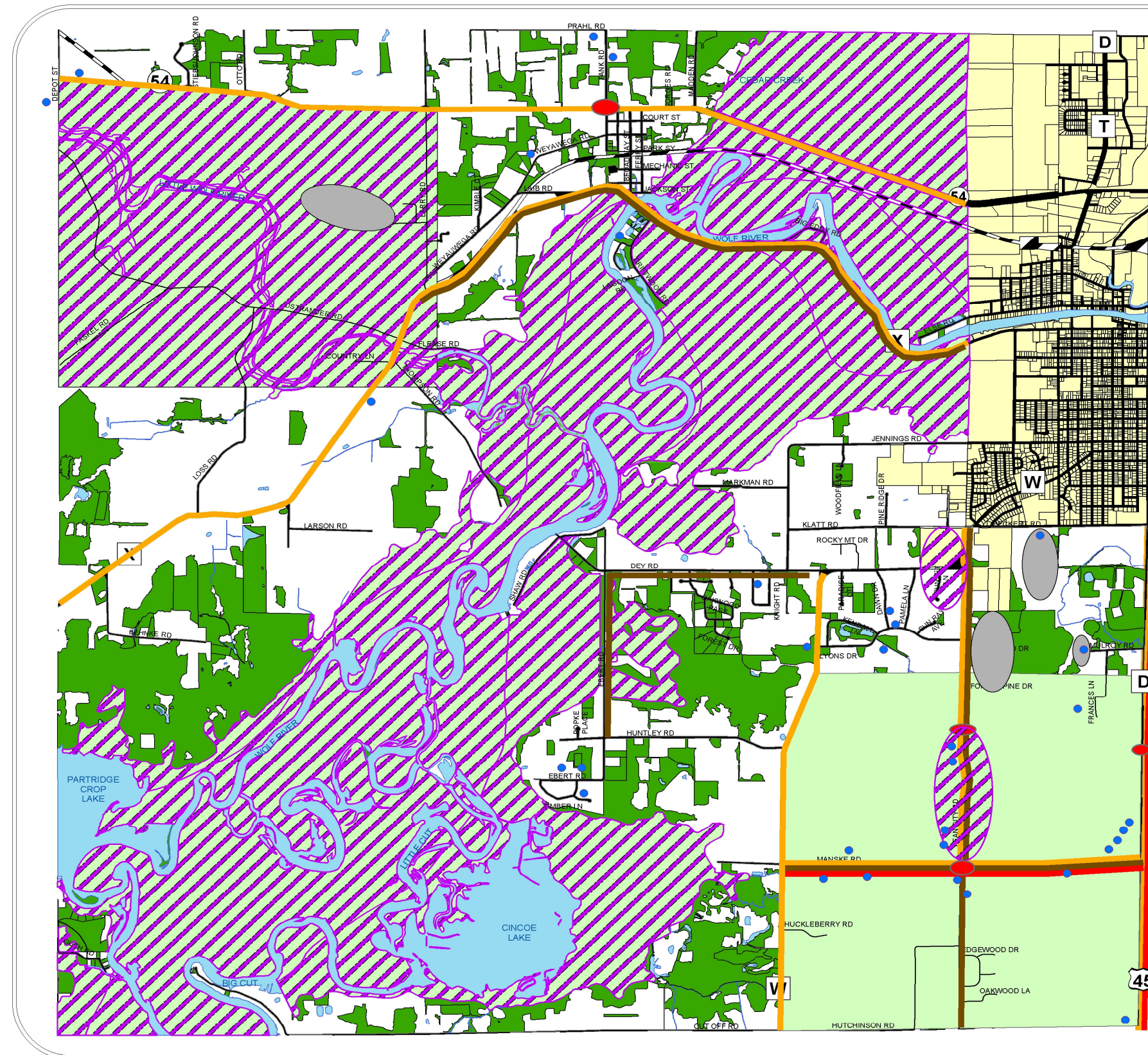


Participants at Cognitive Mapping meeting, July 14, 2005.

TOWN OF MUKWA COMPOSITE ATTITUDE MAP

LEGEND

- LOCATION OF RESIDENCE
- ROADS
- RAILROAD
- FREQUENTLY TRAVEL ROUTES
- WALKING AND BICYCLING ROUTES
- CITY OF NEW LONDON
- FORESTED AREAS
- WATER FEATURES
- TRAFFIC CONCERNS
- LEAST PLEASING
- SPECIAL MEANING AREAS
- ATTRACTIVE / SCENIC AREAS



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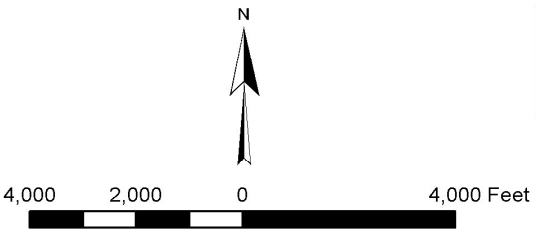
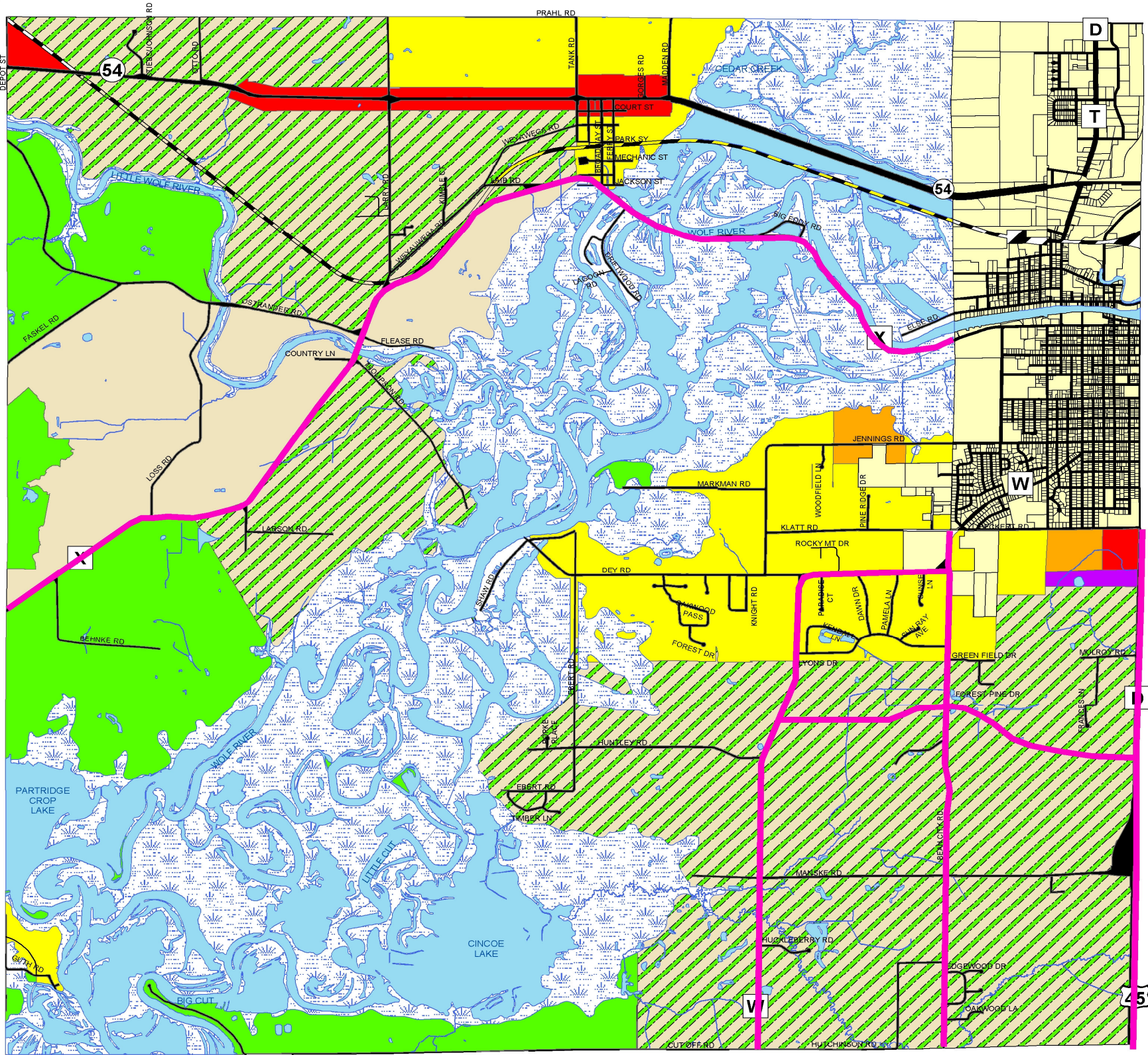
LOCATION: F:\GIS\1151A\DRAWINGS\2\Exorcco_1.mxd
SOURCE: Waupaca County
East Central Wisconsin Regional Planning Commission

TOWN OF MUKWA

MAJORITY OPINION MAP

LEGEND

- ROADS
- RAILROAD
- WALKING AND BICYCLING ROUTES
- CITY OF NEW LONDON
- WETLANDS / FLOODPLAIN
- WATER
- AGRICULTURAL
- COMMERCIAL
- INDUSTRIAL
- MULTIPLE FAMILY
- PRESERVATION
- PRESERVED FOR AGRICULTURE
- SINGLE FAMILY



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SOURCE: Waupaca County
East Central Wisconsin Regional Planning Commission

QUARRY AND LANDFILL OPERATIONS

Quarries and landfills are intensive land uses. As such, they may create disturbances to neighboring properties, including: vibration, odors, noise, groundwater contamination, and related concerns. The WDNR requires a 1,200-foot set back for private wells near landfills. To develop within this area, property owners are required to obtain a variance from the WDNR in order to drill a residential well (irrigation wells are not subject to this requirement). This process is intended to protect residents from potential environmental hazards, including groundwater issues. Since non-metallic mining operations are intensive land uses, and have the potential to affect groundwater quality, the plans recommends the establishment of a similar buffer around existing, operational quarry and sandpit sites. Please refer to Chapter 7 for additional information on quarry and landfill operations.

Over the 20 year planning period, as local quarries and pits are reclaimed, the Town of Mukwa will support the redevelopment of these properties in accordance with their adopted reclamation plans.

AGRICULTURAL LAND

Agriculture once represented a significant component of the Town economy. Although substantial portions of the Town's land base remain classified under agricultural uses, much of this land is no longer actively farmed. Through the Community Survey and other public participation components of the Comprehensive Plan process, residents have stated a desire to retain agricultural uses as a defining characteristic of the Mukwa landscape. Accordingly, the Comprehensive Plan encourages future farming through the designation of agricultural land on the Future Land Use map.

ENVIRONMENTAL CORRIDORS

The Community Survey results clearly indicated residents consider natural features a very important part of the community. Likewise, resident support for protecting natural areas, including woodlands, wetlands, and rivers is very strong. To that end, the *Future Land Use Maps* delineate the wetlands, floodplains, forests, and environmental corridors/conservation areas.

DESIRED AMENITIES

During the planning process two additional community amenities were identified as desired to meet the future to meet the demands of the growing community:

- **Trails.** The Transportation Element includes a *Transportation Plan Map* that illustrates potential trail routes through the community.
- **Community Park Facilities.** Community survey responses indicated a desire on the part of residents for the development of Town parks. The *Utilities & Community Facilities* chapter of the plan proposed the creation of an integrated, nature-based park system for the community. The system would entail a variety of park types including playgrounds, ball fields, bicycle and pedestrian trails, and passive open spaces. Future park locations will be identified when the Town begins implementation of the Comprehensive Plan.

Community Design Approaches

Community design principles are integral to the future of Mukwa. The use of community design can ensure that new development will blend harmoniously with existing development and the natural environment while providing profitable new development patterns that promote a high quality of living.

CONSERVATION SUBDIVISION DESIGNS

Mukwa's landscape provides an array of natural features including rolling hills, steep slopes, wetlands, woodlands, bayous, floodplains, and river corridors. Preserving the character of the Wolf River corridor has consistently been identified as a necessary component of the Comprehensive Plan. To accommodate the growing demand for housing while maintaining the integrity of Mukwa's natural environment, the Town will develop a Land Division/Subdivision Ordinance that requires *conservation design* for all subdivisions developed in unsewered areas of the community. Conservation subdivision design will allow the Town to:

- Protect rural character by maintaining natural areas, woodlands, scenic views, open undeveloped areas, and farm fields, while addressing housing needs;

- Lower the cost of development, to the Town and developers by reducing the amount of impervious surface (roads, driveways, etc.), minimizing stormwater management requirements, shortening permit review timeframes, and addressing the desire for community parks and open space lands.
- Creating natural corridors of green space between developments that can be used by wildlife and also have the potential to be used as trail or walkway areas to improve connections between developments.

TRADITIONAL NEIGHBORHOOD DEVELOPMENT (TND)¹

The comprehensive planning law defines “traditional neighborhood development” (TND) to mean: *compact, mixed-use neighborhood where residential, commercial and civic buildings are in close proximity to each other.* TND is a planning concept based on the principles of new urbanism to promote traditional small towns. TND is found in the older parts of Wisconsin’s cities and villages. Principles of TND include:

- **Compact.** TND areas have a higher density than traditional single-family subdivision (i.e. duplexes, apartments, etc. as well as single family homes in a single area). Compact development also means that the developed area is designed for human scale, not always the automobile. This includes being sensitive to walking distances, heights of buildings, design of streetlights, signs, sidewalks and other features. Compact development includes parks, public buildings, and retail development within a close proximity. These features serve as destination points for surrounding residential areas in the immediate vicinity (1/2 mile or less).
- **Mixed Use.** TND includes a mixture of land uses. This means that nonresidential land uses, such as commercial areas, are mixed with residential development. Mixing uses helps promote walking throughout the community. Mixing land uses can also broaden the tax base. Furthermore, mixed uses can mean that different means of transportation are promoted in the community (walking, bicycling, automobiles). Mixed use also means promoting varied housing types and sizes to accommodate households of all ages, sizes, and incomes. This translates into varying lot sizes and allowing varied types of housing such as attached single-family residences, townhomes, duplexes, and housing for seniors. Mixed use may also mean that residential uses are provided above or in the same building as commercial uses such as shops or offices. This environment provides housing for a lifetime.
- **Street Patterns, Sidewalks, and Bikeways.** TND provides for access through an interconnected network of streets, that facilitate walking, bicycling and driving.
- **Cultural and Environmental Sensitivity and Design.** TND can foster a sense of community identity. The design of buildings and their placement receives special attention. Provision of adequate open spaces, use of indigenous vegetation, and the use of environmentally responsive storm water management systems are equally important.

The adoption of TND principles in the Town of Mukwa would be most appropriate within and adjacent to Northport and near the boundary with the City of New London.

Community Design Tools

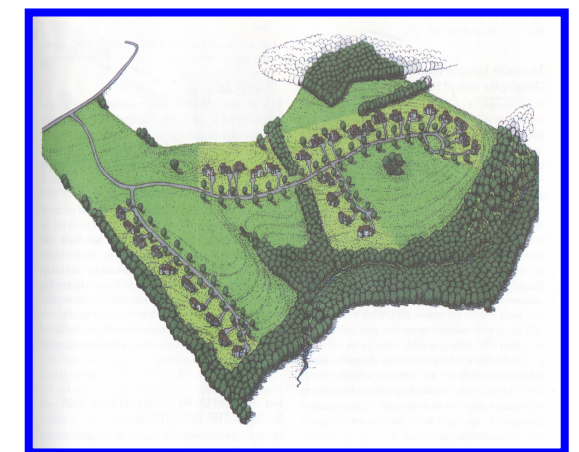


Conventional subdivision, Arendt, 1996.

LAND DIVISION ORDINANCE²

Land division (or subdivision) regulations provide the procedures and standards for dividing a large parcel of land into smaller parcels for sale and development. Subdivision regulations require a developer to meet certain conditions in order to record a plat. As with zoning, subdivision regulation is a land use control used to carry out a community’s plan. However, the regulations governing the division of land are different from zoning regulations in two primary areas.

First, while zoning regulations are meant to control the use of property, subdivision regulations address the quality of development (the availability of public services, services the subdivider must provide, the layout of the site, etc.). The way in which lands are divided plays a key role in the orderly development of a community. Properly administered subdivision regulations can be more useful in achieving planning goals than zoning ordinances. The impact of subdivision regulations is more permanent than zoning. Once land is divided into lots and streets are laid out, development patterns are set. Subdivision control ordinances often give a community its only opportunity to ensure that new neighborhoods are properly designed. Failure to plan for the subdivision of land is felt in many areas such as tax burdens, the high cost of



Conservation subdivision, Arendt, 1996.

¹ A Model Traditional Neighborhood Development Ordinance is available from the UW-Extension. This ordinance was developed in 2000 as a means to implement Smart Growth Comprehensive Plans.

² The first three paragraphs of this section were excerpted from *Guide to Community Planning in Wisconsin*, Brian Ohm, 1999.

extending utilities, street and traffic problems, overcrowded schools, health hazards caused by waste water treatment systems unsuited to a particular area, and a loss of a sense of community.

Second, the requirements and procedures for regulating subdivisions provided under the Wisconsin Statutes are very different from the statutory requirements for zoning. Though it has three separate zoning enabling laws for cities/villages, towns, and counties (discussed in Chapter 5), Wisconsin has only one local enabling law for local subdivision regulation. That law is found in Chapter 236 of the Wisconsin Statutes. This single enabling law provides the authority to adopt subdivision regulations is very different from the authority for zoning. For example, as discussed later in this chapter, towns do not need county approval to adopt subdivision regulations. Likewise, counties do not need town approval for the county subdivision regulations to apply within that town.

The design standards included within a land division ordinance provide a community with the tools necessary to protect public health and safety, preserve natural resources, and enhance quality of life. Design standards may be included in narrative or graphic form to provide developers and other interested parties with examples of the types of development and design acceptable to the community. At a minimum, a land division ordinance will govern how a subdivision is laid out (lot size and shape, access, open space, etc.), and the design of necessary improvements (road widths, sidewalk locations, tree plantings, etc.). A land division ordinance may also incorporate a variety of design standards, including but not limited to:

- Protecting Open Space – The ordinance may specify standards that limit construction on natural features that are unsuitable or undesirable for development.
- Roads and Streets – The ordinance may specify the standards for the design and construction of streets and related improvements within the subdivision. These standards may include street widths, intersection design, maximum grades, and length of cul-de-sacs, among others.
- Configuration of blocks and lots – The ordinance may provide standards for the size and location of blocks and lots. Minimum and maximum lot sizes may be established regardless of existing County requirements.
- Parks and Open Space – The ordinance may specify the amount and type of open space dedication required for new development and the location and dimensional standards for different types of parks.

In addition to the standards bulleted above, the ordinance can set requirements for: Stormwater management and constructions site erosion control, wastewater treatment, potable water systems, lake and stream shore plats, trees and landscaping, and lighting.

All Town ordinances related to water quality and wastewater treatment must be consistent with applicable state standards.

HISTORIC PRESERVATION ORDINANCE³

Many Wisconsin communities have a rich assortment of properties with architectural, historical, archeological, and/or cultural significance. These properties may include Indian burial mounds, residences, public or commercial buildings, barns, or bridges. A community may only have one property of historic significance or it may have several historic properties that together may constitute an historic district. The presence of historic or prehistoric properties in a community provides community identity and helps foster a special sense of place and an association with the past. A growing number of communities have sought to protect and enhance historic structures in a variety of ways.

SIGN ORDINANCE

A sign ordinance is another design tool available to the Town to protect and preserve the rural character of the community. Sign ordinances provide the mechanism for regulating the size, color, style, location, and lighting for signs and billboards located within Mukwa.

³ This section was excerpted from *Guide to Community Planning in Wisconsin*, Brian Ohm, 1999.



Smart Growth Area⁴ - Northport

Northport received its name in 1855, reflecting its status as the northern most port on the Wolf River. Once a thriving river community, Northport is now a small, developed crossroads within the Town of Mukwa serving as the Town center for the community. During the Midcourse / Mapping Meeting, participants were asked to identify those areas within the Town desirable for future commercial development. Northport and the STH 54 corridor to the west were most frequently identified for such development.

Mukwa lacks a typical “downtown;” however, Northport serves as the focal point for the community. A significant portion of future economic development within Mukwa is likely to occur within Northport. Development options within this Smart Growth area may include restaurants, gift shops, convenience stores, and agricultural services, among others. The Comprehensive Plan recommends the establishment of design and signage standards, based upon desirable, existing architectural themes, for Northport. These standards will be used to guide all future economic development within Northport.

DEVELOPMENT CONCEPTS FOR NORTHPORT

The following design standards are recommended for future development within Northport.

1. *Incorporate Sidewalks and Build to the Sidewalk*
Northport and the surrounding residential neighborhoods were established at a time when development was oriented for pedestrians not automobiles. Future development should respect the pedestrian scale (minimal setbacks, on-street parking to accommodate cars and also to serve as a buffer between the street traffic and pedestrians walking along sidewalks, etc.).
2. *Make the front of the building “permeable”* (i.e., no blank walls, use windows, doors, material changes, and other amenities to keep the buildings interesting).
3. *Prohibit parking lots in front of buildings*, unless on-street parking. Instead, encourage parking in the rear, but in doing so don’t ignore this side of the building. Provide attractive rear entrances and landscape buffers to adjacent property.
4. *Invest in streetscape improvements and encourage façade restoration.*
5. *Encourage infill development based on TND and New Urbanism Principles.*
Infill development could include specialty/collectable retail stores, service businesses like beauty salons and exercise establishments, food for home businesses (e.g. bakery, winery, delicatessen, butcher), and local gathering places (e.g. coffee shop, ice cream parlor, etc.).
6. *Improve connectivity by building in a grid and using trails and sidewalks to make walking easy and safe.*
7. *Provide a variety of housing types.*
Housing in Northport should accommodate the needs of residents of all ages. This in turn will provide a live-in market to frequent local businesses (e.g. apartments over retail, town homes, single family homes on smaller lots) and act as a buffer between small local commercial businesses and outlying rural country living.



⁴ Wisconsin Act 9 (Comprehensive Planning Law) requires that municipalities developing comprehensive plans identify Smart Growth areas within the community. These areas are identified as the places within which future development is expected and/or desired. The standards and guidelines developed for Smart Growth areas are typically distinct from those related to other parts of the community. In Mukwa, Northport is the area most likely to undergo change during the twenty-year duration of the Comprehensive Plan.

How Were the Future Land Use Maps Developed?

The *Future Land Use Maps* were developed using a very specific process:

1. Natural resource areas were identified to understand development limitations.
2. Future population and household projections, in conjunction with zoning requirements, were examined to understand the extent of future residential development needed in the Town.
3. Utility and community facility capacities were reviewed to ensure new development would be adequately serviced.
4. Existing development plans, including applications received during the planning process, were considered as the plan maps were developed.
5. Planned and anticipated road and trail network changes were incorporated into the plan maps.
6. The results of the community survey and cognitive mapping exercise were reviewed and incorporated into the plan to address resident desires and expectations.

The result of this process is the detailed set of *Future Land Use Maps* presented at the end of this chapter.

How Are the Future Land Use Maps Used?

The *Future Land Use Maps* are a planning resource for the Town of Mukwa. In accordance with the Comprehensive Planning Law, they should be used to guide the following actions:

- Official Mapping
- Local Subdivision Regulation
- Zoning (in consultation with Waupaca County)

Town appointed and elected officials should use the plan maps as a guide for making future land use decisions. Developers and residents should understand that the plan maps are intended to direct development to certain areas where facilities and services are feasible. It is important to remember that a plan is not a static document. It must evolve to reflect current conditions. If not regularly reviewed and amended, it will become ineffective. Applications for rezoning and development that are inconsistent with the plan must still be considered. In some situations, it may be desirable to amend the plan (and maps) to accommodate a compatible, but previously unplanned use. Likewise, a change in county or regional policy, technological changes, or environmental changes may also impact the plan.

Any change to the plan (including the plan maps) must be considered in the context of all nine required plan elements, including the visions, goals, objectives, and policies expressed in this document. If an amendment is to be approved, the process must include a formal public hearing and distribution per the requirements of the Wisconsin Comprehensive Planning Law. Any amendment must be recommended by the duly sanctioned Planning Committee and approved by the Town Board before development is permitted.

Relationship to Other Required Plan Elements

Throughout this plan, important ways each of the required elements relates to the Land Use Element have been discussed. The Land Use Element will have a significant role in the two remaining elements of this plan, as described below.

INTERGOVERNMENTAL COOPERATION ELEMENT

Intergovernmental activities have the potential to impact the Town in many ways. Waupaca County works to make sure the community is safe (e.g. Waupaca County Sheriff's Office) and that development respects natural resources (e.g. Waupaca County Land Conservation Department). One example of an intergovernmental issue that has been discussed many times during the planning program is the potential impact of annexation on the Town. This issue is addressed in Chapter 9 and again in Chapter 11. The development pattern reflected on the *Future Land Use Maps* in this chapter does not require extension of municipal water or sewer, and therefore, does not require annexation, to become a reality. It is expected that local school districts will look to this plan as a tool for projecting new residential development within their district boundaries.

IMPLEMENTATION ELEMENT

It takes much more than simply adopting a plan to see the community's visions become reality. The Implementation Element outlines the goals and objectives from all required elements with milestone dates for achieving each item. In addition, the implementation element discusses the potential for the purchase/transfer of development rights, housing for life strategies, and zoning changes to achieve the visions expressed in this plan.

Future Land Use Map

The *Future Land Use Map* provided in this plan depicts a pattern for development of the entire community. It represents the anticipated and desired changes that will occur during the next twenty years throughout the Town of Mukwa.

Goals, Objectives and Policies

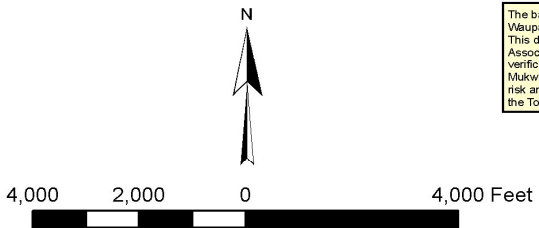
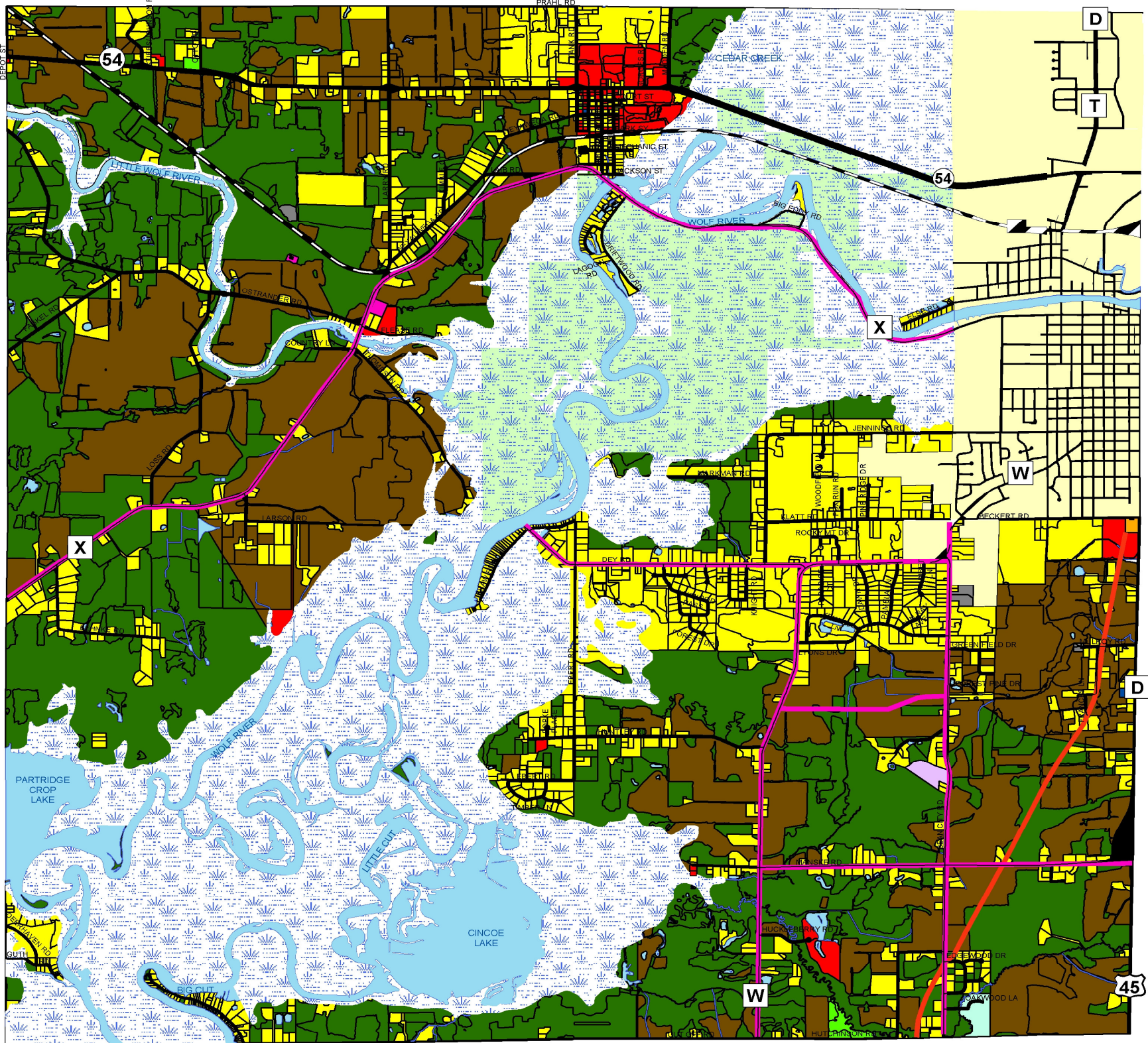
For a complete list of Goals, Objectives, and Policies related to future land use, please refer to Chapter 12: *Implementation*.

TOWN OF MUKWA

FUTURE LAND USE MAP

LEGEND

- INSTITUTIONAL**
Schools, churches, health care centers or clinics, nursing homes
- PARKS & RECREATION**
Trails, town park, town hall grounds
- ROADS**
Shall be maintained by the town in a reasonable manor. Commercial properties, farms, institutional properties and businesses shall not be limited by year round weight restrictions
- SINGLE FAMILY**
Residential, duplex, open space
- DNR PROPERTY**
- CACTUS ROCK (PRESERVE)**
- UTILITIES**
- WATER**
- COMMERCIAL**
To include business properties of many types
- CEMETERIES**
- MINING/QUARRY**
- MOBILE HOME PARKS**
- NONIRRIGATED CROPLAND**
Contains land often farmed or used as recreational land. Some areas may experience future development.
- WOODLANDS/OPEN SPACE**
Some areas may experience future development. Much is used as green space or recreational land.
- WETLANDS/LOW AREAS**
Logging areas & recreational lands. Spawning marshes.
- CITY OF NEW LONDON**
- RAILROAD**
- WALKING AND BICYCLING ROUTES**
Trails along roadways in the town right-of-way would be encouraged in areas marked. These trails across private lands would need land owners consent. Locations of these have not been determined.
- ANR PIPELINE**



The base mapping data displayed in this map was obtained from Waupaca County & East Central Regional Planning Commission. This data has not been officially verified for accuracy by OMNI Associates or the Town of Mukwa. Any reuse without prior written verification or adaptation by OMNI Associates or the Town of Mukwa for the specific purpose intended will be at Owner's sole risk and without liability or legal exposure to OMNI Associates or the Town of Mukwa.

OMNI ASSOCIATES
PROJECT #M1151A04
DATE: 10/26/05
DRAWN BY: KAL
REVISED: 05/31/06

LOCATION: F:\GIS\M1151A04\DRAWING\S100_Future_Land_Use.mxd
SOURCE: Waupaca County
East Central Wisconsin Regional Planning Commission

Introduction

Intergovernmental cooperation involves working with neighboring communities and agencies to understand how their future planning activities will impact the Town of Mukwa. At a minimum, this involves sharing information about Mukwa’s plan with neighboring communities and agencies and vice versa. However, Mukwa believes intergovernmental cooperation should not end with the sharing of plans. Instead, this process should be the beginning for joint planning and decision-making, conflict resolution, and other strategies to promote regional coordination.

The Comprehensive Planning Law requires that the Town of Mukwa coordinate its planning effort with:

- Towns of Lebanon, Royalton, Caledonia, and Hortonia.
- City of New London
- Waupaca County
- East Central Wisconsin Regional Planning Commission
- New London, Manawa, Weyauwega-Fremont, and Waupaca County School Districts
- Wisconsin Department of Transportation
- Wisconsin Department of Natural Resources
- Wisconsin Department of Administration
- Wisconsin Land Council

Intergovernmental Cooperation Vision

By 2025, intergovernmental cooperation efforts have enabled Mukwa to establish partnerships with neighboring communities, state agencies, Waupaca County, and the school districts to provide coordinated, cost-effective services. Through cooperation with adjacent communities, the Town has preserved its rural lifestyle, while providing a unique blend of needed and desired commercial, industrial, and residential development.

Mukwa has successfully partnered with the Town of Hortonia, Waupaca County, and Outagamie County to create a network of trails linking the community with the Wiouwash and Ice Age Trails, providing recreational and educational opportunities for residents and visitors.

Intergovernmental Partners, Activities and Conflicts

Many intergovernmental programs already in effect impact the Town of Mukwa. This section highlights programs that are currently in place. The maps provided throughout this plan indicate the proximity of adjacent communities to Mukwa.

ADJACENT / NEARBY GOVERNMENTAL UNITS

- Towns of Lebanon, Royalton, Caledonia, and Hortonia
- City of New London

Mukwa's relationship with neighboring communities can be characterized as one of mutual respect and compatibility from a land use and political standpoint. These Towns share a common rural character with Mukwa. Since Towns cannot annex land from one another, boundary disputes are non-existent. Public services such as road maintenance and construction are often cooperative efforts between communities. Furthermore, as mutually beneficial opportunities for shared services arise, the Town, City and other neighboring communities are open to considering additional shared services options.

CITY OF NEW LONDON / ANNEXATION

The Town of Mukwa shares its northeastern boundary with the City of New London. Mukwa residents enjoy access to New London's parks, library and businesses. As a result, New London is an important destination point for residents. New London is also the community that has the greatest potential for future conflict over land use with the Town of Mukwa, particularly as it relates to possible annexation and the desirability of sewer and water service extensions. The Town of Mukwa is committed to providing quality development choices within its boundaries and believes that, with proper planning, its soil conditions and water resources make this possible without municipal water or sewer systems. The Town will coordinate its development in ways consistent with the development plans of the City of New London.

SCHOOL DISTRICTS

The Town's relationship with the school districts can be characterized as cooperative. The Town appreciates the quality service provided by the school districts and the fact that the schools are a major draw to the area for new residents. Regular and open communication is critical to ensure that this cooperative relationship will continue and be strengthened as growth continues.

COUNTY AND REGIONAL GOVERNMENTS

The Town of Mukwa is located in Waupaca County. Waupaca County provides many programs, services, and facilities that are available to Mukwa residents. Waupaca County programs that most directly impact Mukwa include:

- Zoning
- County highway maintenance and improvement programs
- County park maintenance
- County police protection
- Land and Water Conservation efforts for permitted sanitary systems and maintaining wetland areas and lake quality
- Economic development assistance
- Social services

In those areas where Waupaca County has jurisdiction, the County solicits input from the Town before making decisions affecting Mukwa. Likewise, the Town has attempted to maintain communication with Waupaca County by providing recommendations regarding transportation, economic growth, and residential development. During the planning process, additional communication with the County was identified as a priority, particularly with respect to County road improvement projects. Future communication will also be especially important as it relates to:

- Zoning
- Stormwater management
- Coordination with the Waupaca County Comprehensive Plan
- Economic development
- Emergency management
- Courts
- Health department
- Public safety

Coordination with Outagamie County and the Town of Mukwa has been very limited. This situation is not expected to change significantly in the future, though the Town will participate in the Outagamie County Planning process if appropriate.

Waupaca County and the Town of Mukwa are part of the East Central Wisconsin Regional Planning Commission (ECWRPC). The Town of Mukwa acquired mapping data, demographic statistics, and policy information for this comprehensive plan effort from Waupaca County and ECWRPC.

STATE AGENCIES

- Wisconsin Department of Natural Resources (WDNR)
- Wisconsin Department of Transportation (WisDOT)
- Wisconsin State Historical Society
- Wisconsin Department of Administration (WDOA)
- Department of Agriculture, Trade and Consumer Protection (DATCP)

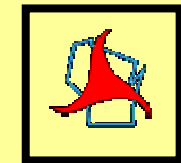
The activities of the WDNR are discussed further in the *Agricultural, Natural and Cultural Resources Element* of this plan. Additional information is also available on-line at: www.dnr.state.wi.us.

WDNR and WisDOT are the primary state agencies with which Mukwa must coordinate to achieve the goals and objectives of this plan. Given the wetlands and waters located within the Town, it will be important for the Town to work with the WDNR to ensure the protection of these natural resources. WDNR takes a lead role in wildlife protection and the sustainable management of woodlands, stormwater regulations, wetlands, and other natural wildlife habitat areas.

WisDOT is a key player in the planning and development of highways and pedestrian/cycling facilities in the region.

The mission of DATCP is to serve Wisconsin citizens by ensuring:

- The safety and quality of food
- Fair business practices for the buyer and seller
- Efficient use of agricultural resources in a quality environment
- Consumer protection
- Healthy animals and plants
- The vitality of Wisconsin agriculture and commerce.



For additional information about WisDOT activities in the Town of Mukwa, refer to the *Transportation Element* of this plan. Additional information is also available on-line at: www.dot.state.wi.us

Open communication and participation in historic, natural, land use, and transportation decisions that impact the Town will remain important priorities for intergovernmental cooperation with state agencies.

Intergovernmental Comprehensive Planning Process

To facilitate a planning environment open to intergovernmental cooperation, Mukwa sent all of its intergovernmental partners to participate in the planning program prior to beginning the actual plan development process. The letter included direction to the project web page and an open invitation to review materials and provide feedback. All plan documents, including text and maps, were available throughout the plan program on the project web site for review and comment to ensure the widest range of public participation and input from overlapping and neighboring jurisdictions as well as any other interested entity or individual.

Throughout the plan development process, the Town also coordinated with Waupaca County and ECWRPC to obtain mapping resources as well as information from existing plan documents. On January 18, 2006, the Town of Mukwa hosted an intergovernmental planning meeting with representatives of neighboring jurisdictions to discuss opportunities for cooperation and areas of potential conflict.

More than 30 days prior to the public hearing, all intergovernmental agencies/communities were provided a copy of the Recommended Plan and asked to provide comments, as is required by state statues. Comments received were addressed at the Public Hearing and in the Final Adopted Plan.

Existing and Proposed Plans

ADJACENT/NEARBY GOVERNMENTAL UNITS

WAUPACA COUNTY COMPREHENSIVE PLAN

Waupaca County began its Comprehensive Planning process in 2003. The multi-jurisdiction planning effort, led by the County, was separated into five regions including the following communities:

- Central Region
City of Manawa; Village of Ogdensburg; Towns of Little Wolf, Royalton, and St. Lawrence
- Northeast Region
Cities of Clintonville and Marion; Village of Embarrass; Towns of Dupont, Matteson, Union, Larabee, and Bear Creek
- Northwest Region
Villages of Iola, Scandinavia, and Big Falls; Towns of Helvetia, Iola, Scandinavia, Wyoming, and Harrison
- Southwest Region
City of Waupaca; Towns of Dayton, Lind, Waupaca, and Farmington
- Southeast Region
Cities of New London and Weyauwega; Village of Fremont; Towns of Caledonia, Lebanon, Fremont, and Weyauwega

The Waupaca County Comprehensive Planning Process is uniquely structured to encourage grassroots, citizen-based planning. Each participating local town, village, and city will develop their own very localized plan. Each local plan will be developed by a Local Planning Group and eventually recommended to the local governing body. The local governing body will be responsible for adopting the plan through an ordinance. To help foster intergovernmental cooperation, a “Cluster Committee” will consider how governments should better plan and work together. There are five Cluster Committees representing five regions of Waupaca County. The municipalities included in each region can be viewed by clicking on the regions on the left side of the home page. The Cluster Committees are only a tool to help foster cooperation. Local plans are still 100% in the control of the local decision-makers. In the end, there will be 33 town, village, and city plans.

At the County level, the Core Planning Committee, which is comprised of one representative from each participating local unit of government and two representatives from the County Board, will develop the County Plan. The Core Planning Committee will make a recommendation to the County Zoning Committee and they, in turn, to the County Board. The County Board is responsible for adopting the County Plan through an ordinance. In the end, there will be 33 local plans and one County Plan. The projected completion and date for the Plan is April 2007.¹

Upon completion of the Town of Mukwa Comprehensive Plan, the document will be incorporated into the Waupaca County-wide plan.

¹ Text excerpted from Waupaca County Comprehensive Plan website, 2006.

TOWN OF HORTONIA, OUTAGAMIE COUNTY

During the development of this plan, only the Town of Dale among Mukwa's neighboring local governmental units had adopted a Comprehensive Plan. However, a great deal of planning is underway. The Town of Hortonia, in Outagamie County, and Waupaca County and the majority of its communities are currently developing Comprehensive Plans. Waupaca County is well into a multi-jurisdictional program that includes every community in the County save Mukwa. It is expected that the County Plan will be completed in 2007. Outagamie County is near the halfway point in its planning effort.

During the planning process, Mukwa has worked with the Town of Hortonia to ensure the plans are consistent with one another. Mukwa has had the opportunity to assist Hortonia in the planning process, and Hortonia has had the opportunity to assist Mukwa. The communication between these two Towns will continue in the future.

Based on schedule information available from ECWRPC, a regional comprehensive plan should be completed in 2006. In preparing the Mukwa Comprehensive Plan, transportation and land use planning materials available from ECWRPC were used as a tool for understanding regional development plans. In order to improve communication with ECWRPC and to avoid inconsistency in plan development and implementation, a series of activities and programs are identified in the Goals, Objectives and Policies of this Chapter.

To ensure compatibility with the goals and objectives of this plan, Mukwa will continue to participate in the planning efforts of its neighboring communities, counties, and ECWRPC as opportunities arise.

SCHOOL DISTRICTS

At this time, no school district has plans to construct new facilities within the Town of Mukwa. In order to facilitate future school district planning efforts, the Utilities and Community Facilities chapter of this plan recommends the Town continue to work with the schools districts on future facilities and studies.

The three school districts serving the Town have a long history of planning for improvements and expansion in response to population growth rates. The districts' facilities can accommodate a significant number of new students. Since school district boundaries extend well beyond the Town, it is likely that new schools, if constructed, will be located outside of Mukwa. To further facilitate school district planning, this plan has been made available to those districts as a tool to predict future school enrollments from the Town of Mukwa.

STATE AGENCIES

WDNR is a major agency involved in the acquisition and development of recreational/pedestrian trails – an important component of this plan. Furthermore, the WDNR takes a lead role in wildlife protection and the protection and sustained management of woodlands, wetlands and other natural wildlife habitat areas. These priorities are reflected in the environmental corridors shown on the *Future Land Use Maps*, as well as the groundwater protection and other natural resource goals, objectives and policies outlined in the Agricultural, Natural and Cultural Resources Element.

WisDOT has completed a series of statewide planning documents for use in the development of local comprehensive plans. These documents include plans for the state highway corridors, bicycle corridors, rail corridors, and air transportation. The plans were used as a starting point when preparing the Transportation Element Chapter of this plan. Recommendations from these plans are addressed in the Transportation Element.

Human Infrastructure to Support Town Success

Historically, Mukwa has been able to function very well with minimal staff. However, as the Town's population continues to grow, additional staff may be needed to meet the demands of a growing community. The addition of staff should be carefully considered as part of a larger organization structure designed to meet resident, economic, and intergovernmental challenges. Future expansion decisions should be based on periodic reviews of the Town staff.

The provision of adequate space for government to function is also an issue that will impact the Town's ability to coordinate well with neighboring communities and provide needed services for residents. This issue is addressed in the Utilities and Community Facilities Chapter with information provided regarding local facilities assessments.

Relationship to Other Required Plan Elements

Intergovernmental Cooperation weaves its way into every element of this Plan. Regional housing demand and supplies determine the market for housing in the Town of Mukwa. Transportation improvements made to County and State highways have the potential to affect land use and development patterns in the Town. Likewise, the Town's ability to expand economically depends on quality services being provided, not only by the Town but also by its intergovernmental partners (e.g. schools, police, fire, etc.). Moreover, the Town's ability to support development opportunities at its perimeter must be coordinated with neighboring communities to ensure compatibility with adjacent land uses.

Intergovernmental Goals, Objectives and Policies

The goals, objectives and policies provided in Chapter 12 generally seek to enhance the lines of communication between Mukwa and its neighbors. This approach will help to create an environment where cooperation is possible and conflicts are minimized.

Introduction

The Implementation Element is the “how to” portion of the plan. It describes those actions necessary to realize the visions, including proposed changes to any applicable zoning ordinances, sign regulations, site plan regulations, design review ordinances, and subdivision ordinances.

This chapter includes all of the goals, objectives, and policies developed to support all other elements of this plan. In this way, this chapter serves as the master “to do” list for implementing the plan.

Relationship Between Elements

Throughout the plan, coordination between the nine required elements has been highlighted as a special section of each element chapter. In several instances, a single objective and theme applies to more than one element of the plan and was reprinted in several chapters. To further highlight the interconnected nature of the elements, within the tables provided at the conclusion of this chapter a column titled “*Related Elements*” is included. This section highlights how each particular objective relates to other elements of the plan.

Measuring Progress

To track planning progress and help to ensure that the plan is implemented, milestone dates (see definition in box) are provided for each objective. Special attention has been given to the milestone dates to ensure that individual objectives act in harmony with other stated goals and objectives and are feasible expectations for the Town.

To ensure that the plan elements are understood in their totality over the life of the plan, the Town of Mukwa Comprehensive Plan’s goals and objectives will be reviewed annually to monitor progress and identify necessary revisions.

Responsibilities

Implementation of the Town of Mukwa Comprehensive Plan will be the responsibility of the Town of Mukwa Board. The Town Board anticipates appointing a permanent planning commission to assist with this responsibility. The Town Board, or Planning Commission (when appointed) will make recommendations pertaining to development issues, in accordance with the Comprehensive Plan and will consider these when making final decisions. The element tables provided at the end of this chapter also include a “*Champion/Partner*” column. This individual, group, or board is anticipated to play a crucial role in the completion of the particular objective for which they are identified.

Milestone Date

A specific date, after the adoption of the Comprehensive Plan, when the Town will review the plan implementation action to see if the objective has been met and consider additional implementation strategies to achieve the stated goal.

Updating the Comprehensive Plan

As stipulated in 1999 Wisconsin Act 9, a comprehensive plan must be updated at least once every 10 years. However, in order to ensure that Mukwa’s plan is an effective management tool, the Town will review the plan goals and objectives annually to track those activities that have been completed and add additional objectives as needed to accomplish community goals. The tracking will be done in an annual “*evaluation and appraisal report*”(EAR).

The Town of Mukwa will initiate its first comprehensive update of this plan by 2016. This update will also involve a comprehensive review of the inventory information presented in each chapter. Furthermore, the Town will coordinate with all partners identified in the Intergovernmental Element to understand any external changes that may impact the plan. Finally, the Town will complete a comprehensive review of all visions/policies, goals, objectives and programs outlined in this plan to evaluate progress and consider additional opportunities. Given the anticipated growth rates in the Town, comprehensive updates will be scheduled on a ten-year basis to ensure that this plan remains an up-to-date and effective tool for decision-making.

Implementation Programs

The Town of Mukwa will seek to implement this plan through the diligent pursuit of the goals and objectives outlined in this chapter. To the greatest extent possible, existing Town, County, and State programs will be employed. It is possible that additional program needs may be identified during the annual review of this chapter and subsequent comprehensive plan updates.

HOUSING AGENDA

HOUSING POLICIES

- 1) Utilize the patterns presented on the Future Land Use Maps as a guide for development.
- 2) Encourage new developments to provide abundant green space and access to planned trails.
- 3) Encourage the integration of varied housing types within developments. This would include a blend of single-family, two-family and other choices within the same development.
- 4) Provide a range of housing styles, types, and price ranges to support lifestyle needs and preferences.

GOAL 1: Enhance the environmental assets and residential atmosphere of the Town so that it continues to be an attractive place to live.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Ag., Nat. & Cult. Resources	Prohibit residential development in floodplains, wetlands, and environmentally sensitive areas	NA	Waupaca County WDNR	Continuous
Ag., Nat. & Cult. Resources	Encourage “low impact” development, including conservation subdivisions, within the Town to reduce stormwater runoff and flooding.	NA	WDNR	Continuous
Transportation	Consider pedestrian and bicycle access and amenities (e.g., trails and sidewalks) as part of all residential development projects. This includes considering location choices for developments catering to individuals of all ages that provide opportunities to walk or bike to important destinations like schools, parks, and shopping.	NA	Town Board	Continuous
Ag., Nat. & Cult. Resources	Make green space an integral part of residential neighborhoods.	NA	Town Board	Continuous

GOAL 2: Maintain housing values over time.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Implementation	Enforce residential codes and ordinances to ensure that properties are well maintained.	Town Budget	Building Inspector / Waupaca County	Continuous
Implementation	Conduct an internal review of Town codes and ordinances every five years to consider amendments to address housing concerns.	Wisconsin Comprehensive Planning Grant Program	Town Board	2006, 2011, 2016, 2021
Implementation Land Use	Educate residents about the importance of property maintenance by developing and distributing a brochure highlighting property maintenance techniques and benefits.	Town Budget	Town Board	2013

GOAL 3: Provide a variety of housing types, designs, densities, and price ranges to meet the needs of residents of varying incomes, ages and lifestyle preferences and to support economic development.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Implementation	Evaluate (through survey and Census Data) and monitor the need for alternative housing and support services for residents.	Town Budget	Waupaca County ECWRPC	2011
Land Use	Review and update existing ordinances to allow for smaller dwelling sizes and smaller garages as conditional uses in mixed use and infill developments.	Town Budget	Building Inspector Town Board	2011
Intergovernmental	Support existing county, private, and church efforts and consider new programs that provide needed assistance for elderly and disabled residents who wish to stay in their own homes.	NA	See Objective	Continuous
Implementation	Promote the establishment of a senior care facility or retirement community in the Town.	WHEDA Foundation Housing Grants	Waupaca County WHEDA	2013
Land Use	Encourage the construction of alternative housing units in the Town of Mukwa.	Town Budget	Town Board	2008
Land Use	Consider adopting a policy and supporting ordinances to require that a percentage of alternative housing units be included in future developments.	Town Budget	Town Board	2008
Land Use	<ol style="list-style-type: none"> 1. Coordinate with local developers to establish a variety of local housing choices. <ol style="list-style-type: none"> a. Using the <i>Future Land Use Maps</i> as a guide, prepare an inventory of potential infill sites in and adjacent to existing areas of concentrated residential development. Distribute this list to developers. b. Create a new Planned Unit Development Zoning District to accommodate a blend of commercial, multiple and single-family development on a single property. This district would include performance standards, as opposed to strict setback requirements, to provide flexibility for developers interested in smaller properties with mixed housing types uses. 	Town Budget	Local Builders & Developers	2009

GOAL 4: The Town of Mukwa enjoys a significant, yet manageable rate of housing development.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use	Investigate the potential for establishing a growth management ordinance to provide for subdivision phasing requirements, building permit limitations, and mapped annual growth boundaries.	Town Budget	Town Board	2009
Implementation	Consider revisions to local building and mechanical codes to encourage energy efficient housing choices.	WI Focus on Energy	Local Builders	2011

Transportation Agenda

TRANSPORTATION POLICIES

- 1) Provide a greater range of transportation choices, including quality streets, roads, highways, bicycle routes, and trails to meet the needs of a growing population.
- 2) Provide inspiring and well-maintained public streets in proposed residential subdivisions.
- 3) Provide multi-modal transportation links connecting proposed subdivision with existing trail networks.
- 4) Encourage residential subdivision developers to include public access trails in proposed conservation subdivisions.
- 5) Promote opportunities for walking, hiking, and biking through the community to enjoy the natural character of the community.
- 6) Expand transportation choices for the elderly, disabled, and children.
- 7) Discourage the development of roadways in environmentally sensitive areas such as wetlands, floodplains, prime agricultural lands, and soils with severe engineering limitations.
- 8) Schedule street improvements according to the analysis of existing physical street conditions and Town budget capacities using a Capital Improvement Plan and Budget.

GOAL 1: Maintain and improve Town Roads in a timely and well-planned manner.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Implementation	In accordance with state law, using PASER, continue to update road ratings, as required. Seek to increase local funds for road maintenance to support PASER recommendations.	WisDOT	Highway Superintendent	Continuous
Utilities & Community Facilities	Use a <i>Capital Improvements Plan</i> , PASER results, traffic counts, and accident rates to coordinate and plan for annual roadway improvements and maintenance as well as other capital projects (e.g., municipal building upgrades, equipment purchases, etc.).	Town Budget	Town Board	2007
Implementation	Research and consider creating a transportation utility to finance road maintenance and system improvements. Review, update, and consolidate all ordinances regarding traffic speed.	Town Budget	Town Board	2016

GOAL 2: Promote a multi-modal transportation system for efficient, safe, and convenient movement of people, goods, and services.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Utilities & Community Facilities	Develop a <i>Pedestrian Plan</i> , with particular emphasis on walkability within a 10-15 minute walking distance of important local destinations and existing trail routes. The <i>Pedestrian Plan</i> should use the <i>Transportation System</i> map as a guide for more specifically delineating the location, dimensions, and quality of walkways and trails through the community.	WisDOT Transportation Enhancement Program	Town Board	2007
Housing	Encourage all new residential subdivisions include to include trails and paths within the project area to provide safe and convenient opportunities to walk, and connections to adjacent trail and path systems so as to ensure the creation of a network of pedestrian and bicycle trails and paths throughout the Town.	Town Budget	Local Developers & Town Board	2006
Utilities & Community Facilities	Pursue grant funds to develop the recommended trail and bicycle routes through the Town and County.	WisDOT Transportation Enhancement Program	Waupaca County & Town Board	2008
Utilities & Community Facilities	Coordinate with senior groups and the school district to identify priorities for pedestrian improvements.	WisDOT Transportation Enhancement Program	See Objective	2010
Utilities & Community Facilities	Using the <i>Pedestrian Plan</i> , devise a construction and maintenance schedule to be incorporated into a <i>Capital Improvement Plan</i> and <i>Official Map</i> .	Town Budget	Town Board	2011
Implementation	Periodically update the <i>Pedestrian Plan</i> as new areas are developed.	WisDOT Transportation Enhancement Program	Town Board	2016, 2021
Intergovernmental	Collaborate with Waupaca County, Outagamie County, and the Town of Hortonville to identify potential linkages between the Town of Mukwa and the future expansion of the Wiouwash Trail.	WisDOT Transportation Enhancement Program	See Objective	2007

GOAL 3: Support the long-term viability of area roads.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use Intergovernmental	Require larger setbacks along highway right-of-ways to ensure adequate available space for future expansion.	NA	Town Board WisDOT Waupaca County Highway Commissioner	Continuous
Implementation	Continue to support the efforts of law enforcement officials to achieve heightened enforcement for required stops and speed limits along area roads.	Waupaca County	Waupaca County Sheriff	Continuous
Land Use	Include language in future subdivision ordinances requiring that residential developers complete traffic impact analyses for new subdivisions to ensure that the road network can accommodate the additional traffic volumes resulting from the proposed development.	NA	Town Board	2007

GOAL4: Keep residents informed of transportation improvements.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Issues & Opportunities	Provide information about road improvements at public meetings.	Town Budget	Town Highway Superintendent	Continuous
Issues & Opportunities	Provide information about transportation improvements on community web sites, newsletters, and other media.	Town Budget	Town Highway Superintendent	Continuous

GOAL 5: Develop the transportation network in accordance with adopted land use plans, economic considerations, physical constraints, and community desires to meet local travel needs.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use	Develop and maintain an <i>Official Map</i> to plan for roadway extensions and improvements over time.	Town Budget	Town Highway Superintendent	Continuous
Land Use	Review the <i>Transportation Network Map</i> provided in this chapter at least every five (5) years to ensure that it accurately reflects changes indicated on Town <i>Official Map</i> and any current development plans.	Town Budget	Town Highway Superintendent Town Board	2011, 2016 2021, 2026

GOAL 6: Partner with the County, ECWRPC, and WisDOT to plan and coordinate transportation improvements.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Intergovernmental	Communicate and coordinate transportation improvements and plans with WisDOT, ECWRPC and the Waupaca County Highway Department.	Town Budget	Planning & Zoning Administrator	Continuous
Intergovernmental	Provide copies of this plan and subsequent updates to WisDOT, ECWRPC, and Waupaca County.	Town Budget	Town Clerk	Continuous
Intergovernmental	Encourage WisDOT, Waupaca County, and ECWRPC to directly notify residents and businesses of anticipated transportation projects, as well as, provide regular work schedule updates.	WisDOT	WisDOT Waupaca County Town Board	Continuous
Intergovernmental	Work with WisDOT, Waupaca County, and ECWRPC to identify and designate Town roads as Wisconsin Rustic Roads.	ECWRPC	WisDOT Waupaca County Town Board	Continuous

Utilities & Community Facilities Agenda

UTILITIES AND COMMUNITY FACILITIES POLICIES

- 1) Require parkland dedication and/or fees in lieu of land dedication for new residential development projects in the Town of Mukwa.
- 2) Locate park and open space throughout the community to ensure all neighborhoods have access to open space.
- 3) Encourage the involvement of citizens in the planning and improvement of Town parks.
- 4) Consider the year-round use of park and trail facilities to provide additional winter recreation choices in the Town.
- 5) Construct all new park facilities for handicapped accessibility. (This is required to maintain eligibility for matching park funds from the Department of Natural Resources.)
- 6) Use the Town's Official Map to reserve areas particularly suitable for future parks, trails, and utilities.
- 7) Require developers to pay their "fair share" for improvements needed to support new development requests.
- 8) Consider partnering with the City of New London to provide mutual recreational opportunities.

GOAL 1: Ensure that all Town development is served by efficient, cost-effective utilities and community facilities within the Town's capacity to provide such services.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Implementation	Develop a Capital Improvements Program as a central tool to implement the Comprehensive Plan. The CIP should help the Town plan for needed utilities and community facilities improvements, as well as transportation and other improvements.	Town Budget	Town Board	2006
Intergovernmental	The Town Board or its designate should meet with the local school districts each year to discuss issues with respect to growth and development.	Town Budget	Town Board	2006
Intergovernmental	Pursue shared service opportunities when mutually beneficial (i.e. cost savings) to improve the efficiency and quality of utilities and community facilities.	Town Budget	Town Board	Continuous
Implementation	Explore the potential for adopting local impact fees to help pay for new construction (schools, town hall, fire department buildings).	Town Budget	Town Board	2006

GOAL 2: Establish a "nature-based" Park System to increase educational and recreational opportunities for Town residents and visitors.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Ag., Nat. & Cult. Resources	Undertake a planning and assessment effort to identify Town park needs and potential sites for park development.	Town Budget	ECWRPC Waupaca County	2007
Intergovernmental	Pursue State and Federal grant funding to offset Town costs for park establishment.	Town Budget	ECWRPC	2008
Intergovernmental	Engage local environmental groups, youth groups, senior organizations, and other interested parties to aid in the planning and design of park facilities.	Town Budget	UW-Extension ECWRPC Waupaca County	2008
Intergovernmental	Coordinate with neighboring communities and the County to develop mutually beneficial park and recreation facilities.	Waupaca County	ECWRPC Waupaca County	2007

GOAL 3: As the population grows, continue to ensure that Mukwa is a safe community by meeting or exceeding recognized standards for public safety.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Issues & Opportunities	Coordinate with neighboring communities to maintain adequate fire department staff coverage during all shifts.	Volunteer Fire Assistance Grant Program	Local Fire Departments	2008
Issues & Opportunities	Evaluate the number, availability, and response time of daytime staff.	Volunteer Fire Assistance Grant Program	Local Fire Departments	2008
Issues & Opportunities	Monitor emergency response times, particularly west of the Wolf River.	Volunteer Fire Assistance Grant Program	Local Fire Departments	2008
Land Use	When new subdivision, commercial, or industrial development requests are submitted to the Town, submit the requests to the New London and Weyauwega Fire Departments for review and recommendation.	Town Budget	Local Fire Departments	Begin in 2007

Agricultural, Natural & Cultural Resources Agenda

AGRICULTURAL, NATURAL AND CULTURAL RESOURCES POLICIES

1. *Preserve the natural resource base, primary environmental corridors, and surrounding agricultural lands, which contribute to the maintenance of the ecological balance, natural beauty, and economic well being of the Town.*
2. *Protect floodplains and other areas having severe soil restrictions from development through local ordinances.*
3. *Protect groundwater and develop programs to ensure the long-term viability of the aquifer as a source of potable water.*
4. *Encourage the proper handling of wastes and chemicals so that they produce a minimum effect upon ground and surface water.*
5. *Regulate the type of commercial and industrial development in the Town to minimize the chances of groundwater contamination.*
6. *Discourage development that will interfere with important natural resources, including area lakes and rivers.*
7. *Provide zoning that supports local family farm operations and small specialty farms to maintain agriculture as a productive part of the rural landscape.*
8. *Maintain the Town's rural character by:*
 - *Limiting residential development to areas with soils to support foundations and septic systems.*
 - *Communicating with local farmers who want to sell their property about options available through land trusts and conservation development design techniques.*

GOAL 1: PROTECT WETLANDS IN THE TOWN OF MUKWA.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use	Wetland areas adjacent to the Wolf and Little Wolf Rivers, Potter's Creek, Cincoe and Partridge Crop Lakes, and the bayous having special wildlife and other natural values and having an area of one acre or more should not be allocated to any residential or commercial development and should not be drained or filled.	Waupaca County	Waupaca County WDNR	Continuous
Land Use	To the extent practicable, areas immediately adjacent to and surrounding wetlands should be developed using techniques to minimize effects on wetlands (e.g. buffers, setbacks, etc.).	N/A	Waupaca County WDNR	Continuous
Land Use	Preserve wetlands in their natural state through the adoption and enforcement of a wetland preservation ordinance.	Municipal Flood Control Grant Program	Town Board WDNR	Continuous

GOAL 2: Preserve the rural character and support country living by maintaining open space, natural areas, and farmland.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use	Using the <i>Future Land Use Map</i> as a guide, seek to direct residential and commercial development to certain areas, including those areas least suited for farming, with soils that support foundations and septic systems.	N/A	Town Board	Continuous
Housing & Land Use	Individual lot development on farmland should be directed to the edges of farm fields so as to preserve contiguous blocks of farmland that can continue to remain productive.	N/A	Town Board	Continuous
Land Use	Review and revise the zoning ordinance to permit additional accessory uses in agricultural areas to help sustain local farming operations (e.g. roadside stands, farmers markets, horse boarding, bed and breakfasts, etc.) and allow for adequate on-site and directional signage.	Town Budget	Town Board	2008
Land Use	3.Establish an Agriculture Committee to: <ul style="list-style-type: none"> a. Provide education to local landowners regarding conservation subdivisions, land trusts, development rights options, etc. b. Coordinate with local farmers to consider consolidated strategies for efficient niche farming (e.g. local farmers market, specialty farming, equipment sharing, education seminars, insurance/benefit consolidation programs, etc.). c. Oversee an education and marketing campaign to generate local interest for new agricultural endeavors (e.g. organic foods, stables, orchards, etc.). 	Agricultural Development and Diversification Grant Program	UW-Extension	2009

GOAL 3: Preserve and enhance wildlife habitats.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use	Partner with local land trusts to protect wildlife habitat areas. Encourage local landowners to pursue opportunities to protect their land by working with land trusts.	River Protection Grant Program	Land Trusts WDNR	Continuous
Land Use	Coordinate with WDNR to better identify and protect wildlife habitats, particularly those unique to the community.	River Protection Grant Program	WDNR	2011
Land Use	Discourage habitat fragmentation by encouraging development adjacent to existing development.	N/A	WDNR	Continuous
Land Use	Establish a network of green corridors thorough the community to act as wildlife corridors. This effort should begin with areas protected through shoreland wetland zoning, open areas preserved in conservation-based subdivisions, and with the establishment of additional trails and greenways in accordance with the <i>Future Land Use Maps</i> .	River Protection Grant Program	Waupaca County WDNR	Continuous

GOAL 4: Protect the quality of surface and groundwater.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use	5.Create, maintain and enhance natural buffers along stream banks. <ul style="list-style-type: none"> a. Support the efforts of Waupaca County to enforce stream and lake setback requirements by enforcing local zoning requirements and policies established by the Waupaca County Land and Water Conservation Board (WCLWCB). b. Work with WCLWCB, Waupaca County, WDNR and the Wisconsin Department of Agriculture Trade and Consumer Protection to promote and help fund riparian buffers along streams and lakeshores. c. Educate residents about the importance of environmental corridors. 	WDNR Lake Classification and Protection Grants WDNR River Protection Grant Program Wisconsin Environmental Education Board Grant	See objective	Continuous

Land Use	Coordinate with the WCLWCB and WDNR to implement agricultural and residential best management practices to reduce nonpoint source water pollution.	Lake Planning Grant River Protection Grant	See objective	2009
Land Use	Encourage farmers to use available manure management technologies.	Waupaca County USDA	Town Board	Continuous
Land Use	Encourage residents to replace lawns with native species and use rain gardens to encourage infiltration of storm water and recharge to groundwater.	N/A	Town Board	Continuous
Housing & Transportation	Develop and revitalize ordinances aimed at minimizing paved surfaces such as driveways and roads. This can be achieved with driveway maximum length standards that have the added benefit of providing better access to residences for fire and police protection and subdivision and private road design ordinances that limit roadway access and reduce vehicle speed.	Town Budget	Town Board	2009
Utilities & Community Facilities	Coordinate with Waupaca County and ECWRPC to educate homeowners on the need for proper maintenance of private well and onsite wastewater treatment systems, periodic testing of private well water, and planning for eventual well, pump or drain field replacements.	ECWRPC	ECWRPC UW-Extension Waupaca County	2008
Housing	Strongly encourage or require water conservation and use of water saving devices such as low-flow showerheads and toilets within homes.	N/A	Town Board	Continuous
Housing	Require conservation subdivision principals for all residential development occurring in sensitive ecological areas or prime agricultural lands.	Town Budget	Town Board	2007
Land Use	Coordinate with local quarry operators to ensure that operations adhere to the requirements of NR 135.	Town Budget	Planning & Zoning Administrator	Continuous

GOAL 5: Preserve and protect the historic resources of the Town to promote the educational, cultural, and general welfare of residents of Mukwa and provide for a more interesting, attractive and vital community.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use	Work with residents and other groups to inventory historic properties and locations in the Town of Mukwa. Share this information with the State of Wisconsin Architecture and History Inventory.	State Historical Society	State Historical Society	2009
Implementation	Adopt a historic preservation ordinance, in cooperation with the State Historical Society.	State Historical Society	State Historical Society	2011
Land Use	Promote the historic resources of the community by supporting local preservation groups.	State Historical Society	See objective	Continuous

GOAL 6: Preserve and protect Mukwa's groundwater to ensure a long-term, viable source of potable water for current and future residents of the Town.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Utilities & Community Facilities	Develop and implement a periodic well-monitoring strategy for existing wells within the Town.	Town Budget	Waupaca County	2008
Land Use	Identify those areas within the Town where susceptibility to groundwater contamination is highest and develop plans to ensure that land use within these areas occurs in a manner consistent with protecting groundwater.	Town Budget	Comm 82	2007
Issues & Opportunities	Develop an information & education strategy aimed at providing Town residents with the tools to protect their potable water supply.	Wisconsin Environmental Education Board Grant	Waupaca County UW-Extension	2009

Economic Development Agenda

ECONOMIC DEVELOPMENT POLICIES

1. Provide assistance to persons and organizations interested in developing new, or expanding existing, small businesses in the Town.
2. Enhance the natural character of the Wolf River to ensure the attractiveness of the Town to tourists.
3. Support local agriculture as an integral part of the Town's economy.
4. Support the ultimate redevelopment of local quarries for residential and recreational uses.

GOAL 1: Encourage local economic development opportunities that exist in harmony with the Town's rural residential atmosphere.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Issues & Opportunities	Enhance the Town Website to provide additional public information, opportunities for feedback and comment, and to serve as an economic marketing tool. <ol style="list-style-type: none"> a. Provide a community calendar containing event and festival information. b. Provide a list of area attractions and recreational opportunities. c. Maintain the list of current businesses. 	Joint Effort Marketing Destination Marketing Grant	Wisconsin Department of Tourism Chamber of Commerce Waupaca County Town Staff	2014
Land Use	Seek to limit economic development to the identified districts shown on the <i>Future Land Use Maps</i> .	Town Budget	Town Board Chamber of Commerce Waupaca County	Continuous
Land Use	Encourage local entrepreneurs who seek to expand and diversify the area economy by supporting home occupations.	Town Budget	Town Board Chamber of Commerce Waupaca County	2008
Ag., Nat. & Cult. Resources	Support local farmers wishing by establishing a farmers' market and encourage forms of non-traditional farming (organic, etc.).	Town Budget	Town Board Chamber of Commerce Waupaca County	2008

GOAL 2: Collect the revenue needed to maintain and expand public infrastructure and services needed for economic development.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Intergovernmental	Coordinate improvements with state, county and other agencies as needed to minimize duplication of services and increase efficiencies in services provided.	Town Budget	Town Board	Continuous
Implementation	Consider the establishment of impact fees to finance needed capital improvements.	Town Budget	Town Board	2008
Utilities & Community Facilities	Investigate opportunities to establish TIF districts.	Town Budget	Town Board	2013

GOAL 3: Improve communication and coordination with local businesses to support the retention of local businesses and establishment of new small, local businesses.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Intergovernmental	Continue to develop working relationship with New London, School Districts, Waupaca County, and area economic development organizations to support the long-term economic success of the area.	Waupaca County	ECWRPC Waupaca County	2009

Land Use Agenda

LAND USE POLICIES

1. It is the policy of the Town to review all development proposals in accordance with this Comprehensive Plan, to encourage conservation-based residential use and to address the design and scale of non-residential uses.
2. It is the policy of the Town to promote energy efficiency building and design practices by encouraging development that complies with the Wisconsin Energy Star program.
3. It is the policy of the Town to support business designs that respect the residential character of the community.
4. It is the policy of the Town to support infrastructure improvements (e.g. walkways, trails, etc.) to improve the walkability of Northport and connections between residential developments.
5. It is the policy of the Town to promote development patterns in Northport that respect Traditional Neighborhood Design and New Urbanism Design principles.

GOAL 1: Provide effective tools to promote desired development patterns in the Town of Mukwa.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Implementation	Create an Official Zoning Map that accurately reflects existing zoning patterns.	Town Budget	Town Board	2007
Housing Implementation	Develop a Town land division / subdivision ordinance to localize the regulation of residential development. <ol style="list-style-type: none"> a. Develop standards within the subdivision ordinance to promote better connectivity though the community, create design standards, and provide park and recreational opportunities for residents. 	Town Budget	Town Board	2007

GOAL 2: Create an accessible destination point for residents and visitors that offer basic goods, services, and residential choices.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Economic Development Transportation Land Use	Guide future commercial and economic development within Northport as a primary community asset and focal point for quality mixed development using grants and private investment. <ol style="list-style-type: none"> a. Pursue sidewalk development with links to parks, businesses, and other community destination nodes. b. Develop design and sign standards, based upon desirable, existing architectural themes, to guide future development. 	Town Budget	Town Board	2008

GOAL 3: Protect the Town's abundant and high quality natural resource areas to maintain Mukwa's natural atmosphere and community character.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Housing Agricultural, Natural & Cultural Resources	Encourage the development of conservation subdivisions to maintain open spaces, wildlife habitat, scenic vistas, and perhaps some farmland.	Town Budget	Town Board	Continuous
Agricultural, Natural & Cultural Resources	Develop a night-sky lighting ordinance to regulate the intensity, use, and direction of lighting in order to preserve the dark skies over Mukwa.	Town Budget	Town Board	2007

Intergovernmental Agenda

INTERGOVERNMENTAL POLICY

The Town of Mukwa will seek to cooperate with all neighboring municipalities, Waupaca and Outagamie Counties, ECWRPC, state agencies, and school districts for mutual benefit.

GOAL 1: Mukwa will maintain and seek additional opportunities to improve communication with neighboring communities, the school districts, the WDNR, WisDOT, Waupaca County, ECWRPC and other intergovernmental partners.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use	Continue to actively participate in the comprehensive planning activities of neighboring communities, Waupaca County and ECWRPC.	Town Budget	Town Board	Through 2010
Utilities & Community Facilities	Participate in the planning activities of the school districts, particularly with respect to expansion and building of new facilities.	Town Budget	Town Board	Continuous

GOAL 2: Resolve annexation and boundary disputes in a mutually beneficial manner.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use	Pursue the development of boundary agreements with the City of New London to establish expansion areas for a minimum of 10 years.	Town Budget	Town Board	Continuous
Utilities & Community Facilities	Consider opportunities for shared service agreements between the City of New London and Town of Mukwa to potentially extend sewer and water service to portions of the Town.	Town Budget	Town Board	Continuous

GOAL 3: Seek new ways to coordinate and share community facilities and services with neighboring communities, the school districts and Waupaca County (including opportunities possible through Charter Town Legislation).

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Utilities & Community Facilities	Consider opportunities when signing contracts with private companies to coordinate with neighboring communities and the school districts that need similar services (i.e. plowing, resurfacing, etc.) and then negotiate with the private company for a reduced cost based on the larger project volume.	N/A	Town Board	Continuous
Transportation	Consider opportunities to purchase expensive road maintenance equipment jointly with neighboring communities that can share the equipment in exchange for paying a portion of the purchase and maintenance costs.	N/A	Town Board	Continuous
Transportation	Consider opportunities to lease existing Town equipment to generate revenue for the Town and avoid situations where neighboring communities and the school district own similar equipment that is underutilized.	N/A	Town Board	Continuous
Transportation	Coordinate with surrounding communities, to consider snowplowing schedules that efficiently meet the needs of area residents. This may involve using Town equipment to plow portions of City streets (and vice versa) to maximize efficiencies and minimize costs.	N/A	Town Board	Continuous
Transportation	Using the <i>Transportation Network Map</i> and <i>Transportation Plan Map</i> provided in this plan and the plans of neighboring communities, develop and adopt a coordinated traffic circulation and access plan along all of Mukwa's boundary road corridors.	Town Budget	See objective	2014

Utilities & Community Facilities	Investigate opportunities to provide garbage collection and recycling more efficiently by cooperating with neighboring communities and the school districts to coordinate collection times and contract negotiations with private providers to secure cost savings.	N/A	See objective	Continuous
Utilities & Community Facilities	Encourage the school districts to collaborate in ways that will allow them to provide additional services to Town residents (e.g. expanded library hours, youth summer reading programs, opportunities for community use of classrooms as meeting spaces for seniors and community classes).	School District Budgets	Local School Districts	Continuous
Utilities & Community Facilities	The Town, school districts and other public and private entities should explore joint use agreements concerning the use of recreational facilities in order that the advantages of such an agreement can result in avoidance of facility duplication and a greater diversity of recreational opportunities.	N/A	See objective	2009

Implementation Agenda

IMPLEMENTATION POLICIES

It is the policy of the Town of Mukwa to use its comprehensive plan as a central tool in local decision-making.

GOAL 1: To ensure that the Town of Mukwa Comprehensive Plan is an effective tool for making local land use decisions.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Issues & Opportunities	Annually review the goals and objectives presented throughout this chapter to assess implementation success and consider additional objectives.	Town Budget	Town Board	Annually
All Elements	As available, provide updated information to supplement the plan information (e.g. updated <i>Existing Land Use Map</i> , updated <i>Zoning Map</i> , updated <i>Transportation Network Map</i> , groundwater study information, etc.)	Town Budget	Town Board	Continuous

GOAL 2: To ensure that the Town of Mukwa Ordinances are effective tools for making land use decisions.

Related Element(s)	Objectives	Potential Funding Source	Champion/Partner	Milestone Date
Land Use	Update the <i>Official Zoning Map</i> based on a complete review of Town zoning approvals. The current zoning map is outdated and in some cases inaccurate.	Town Budget	Town Board	2007
Land Use	Review the time a building permit is valid in order to prevent a situation whereby development is initiated, but not completed.	Town Budget	Building Inspector	2010
Land Use	Revise the Town of Mukwa Subdivision Ordinance regarding phased development to promote orderly development of commercial and mixed-use areas in accordance with the <i>Future Land Use Maps</i> .	Town Budget	Town Board	2007
Land Use Economic Development	Consider development of a sign ordinance to address signs permitted in each zoning district and planned use area outlined on the <i>Future Land Use Map</i> , consider applications of new sign technology (e.g. changeable message boards), more clearly address requirements for institutional signage, and provide expanded definitions.	Town Budget	Town Board	2007