

# Water Quality and Natural Resource Protection Master Plan and Zoning Ordinance Assessments

## Crawford County

Funding provided by  
Great Lakes Restoration Initiative, USEPA

NEMCOG  
PO Box 457  
80 Livingston Blvd Suite U-108  
Gaylord, MI 49734  
Voice: 989.705.3730  
Fax: 989.705.3729  
[www.nemcog.org](http://www.nemcog.org)





## **Water Quality and Natural Resource Protection MASTER PLAN AND ZONING ORDINANCE ASSESSMENTS**

The report contains master plan and zoning ordinance reviews for communities in the county.

### Section 1 – Master Plan Reviews

- County Report

- Comparison of community planning

### Section 2 – Zoning Ordinance Review

- Comparison of community zoning

### Appendix A

- Individual Community Sheets

### Appendix B

- Individual Community Sheets

### Introduction

NEMCOG received funding from the U.S. EPA Great Lakes Restoration Initiative to work with communities in the Lake Huron Watershed in Northeast Michigan. The effort promotes collaboration between citizens, organizations, communities, & agencies within the Lake Huron Watershed. Outreach and educational activities will provide greater understanding of environmental conditions and identify roles of individuals and communities in protecting their natural resources.

The project has identified common resource related issues & promoted environmentally responsible decision making. Primary focus for the technical assistance component is with coastal communities. Education efforts targeted all communities within the Lake Huron watershed area of northeast Michigan.

### Purpose

One component of the program has been to conduct reviews of community planning and zoning activities for our coastal counties. This report provides an assessment of master plans in the coastal counties to determine each community's level of commitment to resource conservation and water quality protection. The report enables communities to understand how they fit into an overall effort to provide a greater level of water resource protection and may encourage neighbors to collaborate.

### Project Area

Northern Lower Michigan's abundant freshwater resources are at the core of the region's identity and livelihood, even in jurisdictions without Great Lakes shoreline, like

landlocked Crawford County. With dozens of inland lakes, along with groundwater and streams, all of which are part of the great Lake Huron watershed, water quality protection is, and should be, a major concern for the Crawford County government and those of its townships. This concern is manifested in the Crawford County Master Plan, its townships' master plans, and the Crawford County Zoning Ordinance. However, the extent to which the county and its townships officially identify and address specific water issues in these documents is not uniform. This has been shown through use of a planning and zoning assessment form provided by the Northeast Michigan Council of Governments (NEMCOG). Sufficiency in setting water quality protection goals, requirements for attaining those goals, and the relevance of such goals varied within the Crawford County documents and between township master plans. As a result, areas needing improvement within the context of the evaluation form have been identified. To ensure the future health of Crawford County's water resources, and thereby the Lake Huron Watershed as well, appropriate adjustments should be made in these master plans and the zoning code.

Planning and Zoning are the principal tools that local communities have to manage growth, preserve community character, protect property values and enhance the economic viability of the area. Planning helps establish and focus the desired future of the community and zoning ordinances are used as one of the primary ways to implement the community master plan and achieve the goals of the community.

# Section 1

## Master Plan Reviews





### Procedure for Completing the Analysis

For the analysis to be performed, Master Plans were obtained from each community. Every effort was used to obtain the most current plan from all communities. An evaluation form was created by using questions from Tip of the Mitt Watershed Council's Gap Analysis and questions developed by NEMCOG. Master Plans were processed through a list of 23 evaluation questions with scores ranging from 0 to 2 for each question, see explanation below. The list of questions can be found at the end of the report.

The Master Plans for each jurisdiction were scored and then ranked into three categories.

Score	
2	Criteria Met
1	Nominal Representation
0	Missing

Strong: Master Plans with a total score of 31-46 are considered strong in areas protecting water resources and water quality. These plans are more protective than most plans in the state. Strong plans exceed minimum standards for water protection.

Adequate: Master Plans with a total score of 16-30 are considered adequate in areas protecting water resources and water quality. These plans are comparable with other plans in the state. This plan is at least protective as ordinances in other jurisdictions with similar water resources.

Weak: Master Plans with a total score of 0-15 are considered weak in areas protecting water resources and water quality. These plans are less protective than most plans in the state. Weak plans fail to meet minimum standards for water protection and, at the next review period, should be considered for updating to protect the well-being of the watershed.

### Summarize findings

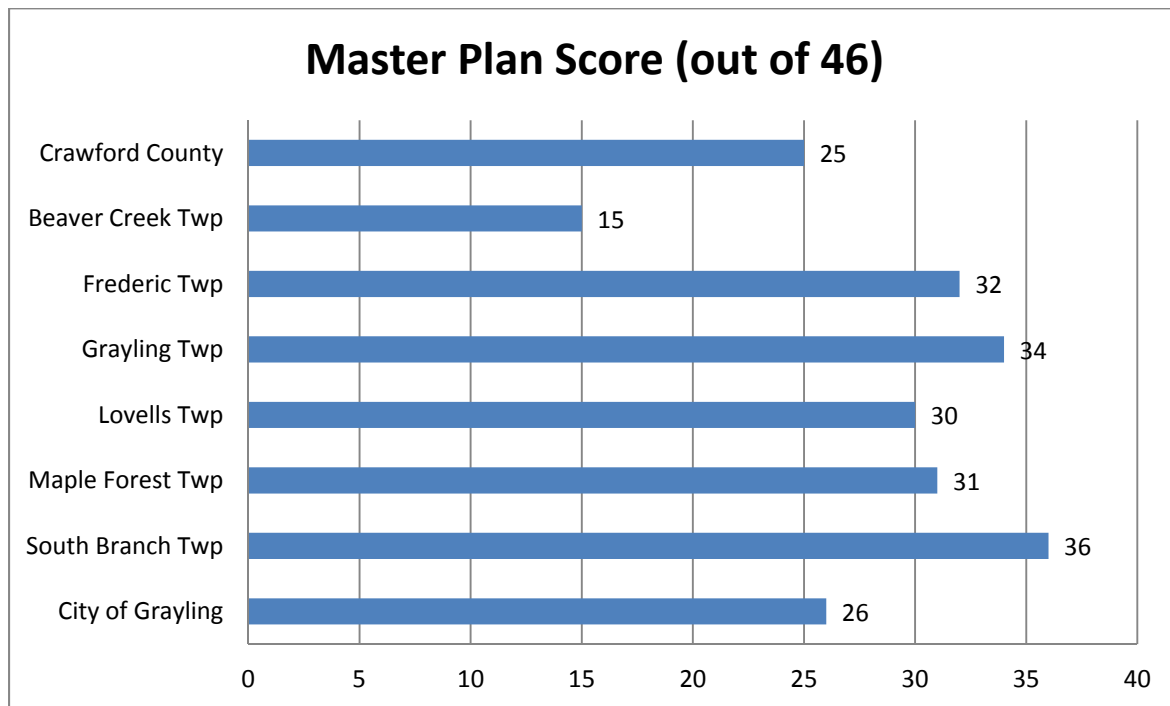
Crawford County has a master plan that addresses many of the water resource protection and resource conservation criteria. The plan can be strengthened by recognizing the importance of open space acquisition and conservation. Along with open spaces, greenbelts are also very important management tools used to protect water resources. Education about these buffer areas will help to control water run-off and keep sediment from entering water bodies.

Most plans for the townships in Crawford County lack goals concerning septic system maintenance. Even though most of the county is rural, stormwater management is addressed in 50% of the master plans throughout the county.

Most communities in Crawford County lack goals in protecting threatened and endangered species. These sensitive species must be protected before it is too late and any become extinct.

### Crawford County Master Plan Scores

Jurisdiction	Strong	Adequate	Weak
Crawford County		X	
Beaver Creek Twp			X
Frederic Twp	X		
Grayling Twp	X		
Lovells Twp		X	
Maple Forest Twp	X		
South Branch Twp	X		
City of Grayling		X	



### **Communities in Crawford County**

The following table shows a summary tally of community's ratings by criteria. There were a total of eight master plans reviewed. For example, all eight of the master plans adequately identified the watersheds.

<b>Master Plan Review – Section 1</b>			
<b>Criteria</b>	<b>Adequate Number of Communities</b>	<b>Minimal Number of Communities</b>	<b>Absent Number of Communities</b>
Does Master Plan exist?	8	0	0
Does the Master Plan specifically identify the watershed(s) in which the community is located?	8	0	0
Does the Master Plan have a complete inventory of lakes, rivers, and wetlands, with maps of their locations?	6	2	0
Does it identify and map groundwater recharge areas?	6	1	1
Does the jurisdiction's Master Plan have a specific and focused goal or statement of intent to protect water resources? If yes, note it in Comments section.	3	3	2
Does the Master Plan include goals for community acquisition or conservation of Open Space to protect surface water, ground water, and wetlands?	3	3	2
Does the Master Plan identify stormwater management as an important community policy?	4	0	4
Does the Master Plan call for minimizing impervious surfaces in new construction and redevelopment projects to reduce stormwater runoff and improve infiltration?	3	1	4
Does the Master Plan include identification and protection of Wildlife corridors?	0	5	3
Does the Master Plan identify and call for preservation of undisturbed Natural Areas and/or Natural River designations for surface water and ground water?	3	3	2
Does the plan acknowledge the importance of well-constructed and maintained road stream crossings on the quality of stream and water resources?	0	1	7
<b>Master Plan Review – Section 2</b>			
Does the master plan provide information on the forest resources in the community?	8	0	0
Does the master plan provide information on the wildlife resources in the community?	6	1	1
Does the master plan provide information on	2	2	4



threatened and endangered species?			
------------------------------------	--	--	--

Criteria	Adequate	Minimal	Absent
Does the master plan provide information on the soils and soils constraints?	8	0	0
Does the master plan address forest and wildlife resources in the goals and objectives section?	6	1	1
Does the master plan address forest and wildlife resources in the future land use section?	2	4	2
Does the master plan address groundwater protection in the goals and objectives section?	7	0	1
Does the plan address retention or restoration of waterside greenbelts or buffers in the goals and objectives section?	6	0	2
Does the plan address use of conservation easement to protect open space in the goals and objectives section?	5	1	2
Does the plan address Septic Systems maintenance in the goals and objectives section?	0	0	8
Does the plan address Wetland Protection and Restoration in the goals and objectives section?	5	2	1
Does the plan address Floodplain Protection in the goals and objectives section?	0	1	7
Total:	99	31	54

## Crawford County

Master Plan Adopted: October 23, 2014

**Master Plan Review Score: 25/46**

The Crawford County, Michigan Master Plan is strong in many areas concerned in the evaluation form. The master plan has been rated "Very Good" or "Satisfactory" in the majority of categories for the evaluation. Resources rated "Satisfactory" can still be improved by strengthening the master plan in regards to a stronger/specific statement of intent to protect water resources, septic system maintenance and protection of wetlands and natural areas/natural rivers. The areas of concern for this plan are forest/wildlife resources in future land use section, identification of road/stream crossings, impervious surface reduction, open space protection/restoration, stormwater management, wildlife protection and floodplain protection. The master plan is reviewed and adopted every five years. At the next review, areas in the "Needs Work" category should be considered for updating to protect the well-being of the watershed.

Resource	Very Good	Satisfactory	Needs Work
Forests		X	
Future Land Use			X
Groundwater	X		
Impervious Surface Reduction			X
Inventory of Water Bodies	X		
Open Space			X
Soils	X		
Statement(s) of Intent		X	
Stormwater			X
Water Resources		X	
Wetlands		X	
Wildlife			X
Undisturbed Natural Areas		X	

## Beaver Creek Township

Master Plan Adopted: June 2006

**Master Plan Review Score: 15/46**

The Beaver Creek Township Comprehensive Plan, June 2006 Update is weak in many areas concerned in the evaluation form. The master plan has been rated "Very Good" or "Satisfactory" in a few of the categories for the evaluation. Resources rated "Satisfactory" can still be improved by strengthening the master plan in regards to mapping of water resources, and wetland protection/restoration in the goals and objective section of the master plan. The areas of concern for this plan are the protection/acquisition of open space and conservation easements, road/stream crossings, septic system maintenance, reduction of impervious surfaces, stormwater management, greenbelt protection, threatened/endangered species, wildlife resources in future land use, and floodplain protection. The master plan is reviewed and adopted every five years. At the next review, areas in the "Needs Work" category should be considered for updating to protect the well-being of the watershed.

Resource	Very Good	Satisfactory	Needs Work
Forests	X		
Future Land Use			X
Groundwater			X
Impervious Surface Reduction			X
Inventory of Water Bodies		X	
Open Space			X
Soils	X		
Statement(s) of Intent	X		
Stormwater			X
Water Resources			X
Wetlands		X	
Wildlife			X
Undisturbed Natural Areas			X

## Frederic Township

Master Plan Adopted: January 28, 2014

### Master Plan Review Score: 32/46

The Frederic Township 2013 Master Plan Update is strong in most areas concerned in the evaluation form. The master plan has been rated "Very Good" or "Satisfactory" in the majority of categories for the evaluation. Resources rated "Satisfactory" can still be improved by strengthening the master plan in regards to open space conservation/acquisition, septic system maintenance, protecting natural rivers/natural areas and identifying wildlife corridors. The areas of concern for this plan are statements of intent to protect water resources, road/stream crossings, wildlife conservation in future land use, threatened/endangered species, and floodplain protection. The master plan is reviewed and adopted every five years. At the next review, areas in the "Needs Work" category should be considered for updating to protect the well-being of the watershed.

Resource	Very Good	Satisfactory	Needs Work
Forests	X		
Future Land Use			X
Groundwater	X		
Impervious Surface Reduction	X		
Inventory of Water Bodies	X		
Open Space		X	
Soils	X		
Statement(s) of Intent			X
Stormwater	X		
Water Resources		X	
Wetlands	X		
Wildlife			X
Undisturbed Natural Areas		X	

## Grayling Township

Master Plan Adopted: 2014 (Currently Being Updated)

**Master Plan Review Score: 34/46**

The Grayling Charter Township Master Plan 2014 is strong in many areas concerned in the evaluation form. The master plan has been rated "Very Good" or "Satisfactory" in most of categories for the evaluation. Resources rated "Satisfactory" can still be improved by strengthening the master plan in regards to stronger statements of intent to protect water resources, wild life corridor protection and wetland protection. The areas of concern for this plan are wildlife and water resources in future land use, septic system maintenance and floodplain protection. The master plan is reviewed and adopted every five years. At the next review, areas in the "Needs Work" category should be considered for updating to protect the well-being of the watershed.

Resource	Very Good	Satisfactory	Needs Work
Forests	X		
Future Land Use			X
Groundwater	X		
Impervious Surface Reduction	X		
Inventory of Water Bodies	X		
Open Space	X		
Soils	X		
Statement(s) of Intent		X	
Stormwater			X
Water Resources			X
Wetlands		X	
Wildlife		X	
Undisturbed Natural Areas	X		

## Lovells Township

Master Plan Adopted: November 2014 (Currently being Updated)

**Master Plan Review Score: 30/46**

The Lovells Township Master Plan 2014 is strong in most areas concerned in the evaluation form. The master plan has been rated "Very Good" or "Satisfactory" in the majority of categories for the evaluation. Resources rated "Satisfactory" can still be improved by strengthening the master plan in regards to using conservation easements to protect open space. The areas of concern for this plan are wildlife protection future land use, impervious surface reduction, stormwater management, septic system maintenance, and protection of wildlife corridors. The master plan is reviewed and adopted every five years. At the next review, areas in the "Needs Work" category should be considered for updating to protect the well-being of the watershed.

Resource	Very Good	Satisfactory	Needs Work
Forests	X		
Future Land Use			X
Groundwater	X		
Impervious Surface Reduction			X
Inventory of Water Bodies	X		
Open Space		X	
Soils	X		
Statement(s) of Intent	X		
Stormwater			X
Water Resources			X
Wetlands	X		
Wildlife			X
Undisturbed Natural Areas	X		



## Maple Forest Township

Master Plan Adopted: November 12, 2013

**Master Plan Review Score: 31/46**

The Maple Forest Township Master Plan Update 2013 is strong in most areas concerned in the evaluation form. The master plan has been rated "Very Good" or "Satisfactory" in the majority of categories for the evaluation. Resources rated "Satisfactory" can still be improved by strengthening the master plan in regards to acquisition/conservation of open space, stronger statements of intent to protect water resources, and septic system maintenance. The areas of concern for this plan are impervious surface reduction, natural areas/natural rivers protection, protection of wildlife corridors and threatened and endangered species identification. The master plan is reviewed and adopted every five years. At the next review, areas in the "Needs Work" category should be considered for updating to protect the well-being of the watershed.

Resource	Very Good	Satisfactory	Needs Work
Forests	X		
Future Land Use	X		
Groundwater	X		
Impervious Surface Reduction			X
Inventory of Water Bodies	X		
Open Space		X	
Soils	X		
Statement(s) of Intent		X	
Stormwater	X		
Water Resources		X	
Wetlands	X		
Wildlife			X
Undisturbed Natural Areas			X

## South Branch Township

Master Plan Adopted: June 1, 2006

**Master Plan Review Score: 36/46**

The South Branch Township Master Plan 2006 is strong in most areas concerned in the evaluation form. The master plan has been rated "Very Good" or "Satisfactory" in the majority of categories for the evaluation. Resources rated "Satisfactory" can still be improved by strengthening the master plan in regards to acquisition/conservation of open spaces and wetland protection/restoration. The areas of concern for this plan are no statement of intent to protect water resources and septic system maintenance. The master plan is reviewed and adopted every five years. At the next review, areas in the "Needs Work" category should be considered for updating to protect the well-being of the watershed.

Resource	Very Good	Satisfactory	Needs Work
Forests	X		
Future Land Use	X		
Groundwater	X		
Impervious Surface Reduction	X		
Inventory of Water Bodies	X		
Open Space		X	
Soils	X		
Statement(s) of Intent			X
Stormwater	X		
Water Resources			X
Wetlands		X	
Wildlife	X		
Undisturbed Natural Areas	X		

## City of Grayling

Master Plan Adopted: 2014 (Currently Being Updated)

**Master Plan Review Score: 26/46**

The City of Grayling Comprehensive Plan is strong in most areas concerned in the evaluation form. The master plan has been rated "Very Good" or "Satisfactory" in the majority of categories for the evaluation. Resources rated "Satisfactory" can still be improved by strengthening the master plan in regards to forest resources, reduction of impervious surfaces, wetland protection/restoration, and undisturbed natural area/natural river designation. The areas of concern are forest and wildlife resources in the future land use section, groundwater protection, maps of water resources/groundwater recharge areas, and wildlife corridor protection. The master plan is reviewed and adopted every five years. At the next review, areas in the "Needs Work" category should be considered for updating to protect the well-being of the watershed.

Resource	Very Good	Satisfactory	Needs Work
Forests		X	
Future Land Use			X
Groundwater			X
Impervious Surface Reduction		X	
Inventory of Water Bodies			X
Open Space	X		
Soils	X		
Statement(s) of Intent	X		
Stormwater	X		
Water Resources	X		
Wetlands		X	
Wildlife			X
Undisturbed Natural Areas		X	

## Section 2

# Zoning Ordinance Reviews



*Promoting collaboration between citizens, organizations, communities, & agencies within the Watershed.*

### Community Zoning Ordinances

Zoning ordinances were reviewed using criteria related to water resource and natural resources protection. The following table shows the criteria and includes a tally of scores for all of the zoning ordinances reviewed. For example, for question 2, all of the communities have fee systems to cover all costs associated with the review of proposal applications or appeals, including any professional reviews. Individual community score sheets follow the table.

<b>Zoning Reviews - Communities in Crawford County</b>			
<b>Criteria</b>	<b>Present</b>	<b>Minimal</b>	<b>Absent</b>
<b>Zoning Ordinance: Administrative</b>	<b>Number of Communities</b>	<b>Number of Communities</b>	<b>Number of Communities</b>
1. Does Zoning Ordinance have a statement of purpose or intent that includes protection of water and/or natural resources?	5	2	0
2. Does it include a fee system to cover costs to the community for review of proposal applications or appeals, including any professional reviews?	7	0	0
3. Does the Zoning Ordinance have methods in place for enforcement, including a clearly defined process for inspections and correction of violations?"	7	0	0
4. Is the Zoning Ordinance proposal review process coordinated with the receipt of other applicable County, State, and/or Federal permits?	3	4	0
5. Does it require a pre-application or pre-construction meeting for new development or redevelopment proposals?	4	3	
6. Does the Zoning Ordinance include requirements for environmental assessment, at the expense of the applicant, for proposals that include a land area of five acres or more, or building over 50,000 sq. ft.?	1	0	6
<b>Zoning Ordinance: Site Plan Review</b>			
7. Does the Zoning Ordinance require Site Plan Review?	7	0	0
8. Is the Site Plan required to indicate all existing natural features?	6	0	1
9. Does the Site Plan Review process require a Soil Erosion and Sedimentation Control Plan, or coordination with County regulations?	3	2	2
10. Does the Zoning Ordinance prohibit land clearing or soil stripping prior to site plan review	2	0	5
<b>Zoning Ordinance: PUD</b>			
11. 12. Does ordinance include Planned Unit Development (PUD) provisions?	7	0	0
12. 13. Do PUDs require inclusion of a minimum	6	1	0

open space threshold?			
<b>Zoning Ordinance: Open Space</b>			
13. Are flexible site design criteria or incentives available to encourage developers to include open space or cluster design provisions?	7	0	0
14. Does the open space have to be managed in a natural condition?	1	2	4
15. Are allowable uses in the open space restricted to low impact uses?	1	2	4
16. Is open space required to be protected through a conservation easement or other similar mechanism?	7	0	0
<b>Zoning Ordinance: Special Districts</b>			
17. Districts specifically designated to protect natural resources such as Resource Conservation or Forest Resource Management	7	0	0
18. Overlay districts for resource protection such as waterfront or wetlands.	5	1	1
<b>Shorelines: Setbacks Inland Lakes</b>			
19. Does the Zoning Ordinance require a minimum shoreline setback for inland lakes? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	1	5	1
<b>Shorelines: Setbacks Streams</b>			
20. Does the Zoning Ordinance require a minimum shoreline setback for streams? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	5	2	0
<b>Shorelines: Protection strips</b>			
21. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Inland Lakes?	4	1	2
22. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Streams?	5	0	2
23. Does Zoning Ordinance specify the degree of vegetation which may be removed in the riparian buffer zone or greenbelt?	5	0	2
24. Does it specify the use of native plant species in the riparian buffer zone?	4	1	2
25. Are invasive and exotic plants prohibited from being used?	0	0	7
<b>Shorelines: Density</b>			
26. Does Zoning Ordinance regulate the width of waterfront lots? 100' or more = 2 75'-99' = 1 Less than 75' = 0	7	0	0
<b>Shorelines: Keyhole/Funneling</b>			
27. Does the Zoning Ordinance include	3	0	4



keyhole prevention provisions by placing restrictions on the size and type of multi-boat launch and docking sites?			
<b>Shorelines: Road Ends</b>			
28. Does the Zoning Ordinance regulate Road Ends terminating at the edge of navigable waters, to ensure the right of public access does not include: the ability to install private docks or boat hoists for the overnight mooring of boats?	0	0	7
<b>Shorelines: Marinas</b>			
29. Does the community regulate marinas by using special land use provisions or other tools?	0	0	7
<b>Stormwater: Construction and Redevelopment</b>			
30. Does the community regulate stormwater as part of the Zoning Ordinance?	5	2	0
31. Are stormwater management areas and facilities whether on-site or off-site, required to be designed, constructed, and maintained to prevent flooding and protect surface and ground water quality?	2	5	0
32. Is the design of any stormwater management system required to be based upon a 25-year frequency, 24-hour duration storm event?	2	1	4
33. Does the stormwater require runoff leaving the site to be controlled to a non-erosive velocity, both during and after construction?	3	0	4
34. Does ordinance require that all stormwater management systems be regularly evaluated and maintained?	2	0	5
<b>Septic Systems</b>			
35. Does the Zoning Ordinance require an inspection of septic tanks by an authorized inspector? Is there a point of sale inspection requirement?	0	0	7
36. Are regulations that pertain to septic systems coordinated with the County Health Department regulations?	7	0	0
<b>Groundwater Protection</b>			
37. Does the Zoning Ordinance have groundwater protection standards for commercial, industrial or other uses that may cause groundwater contamination?	4	0	3
38. Is Site Plan Review used to ensure there are no unnecessary threats posed to groundwater by new or redevelopment proposals?	3	0	4
39. Does the Zoning Ordinance prohibit both direct and indirect discharge of hazardous substances to groundwater without appropriate approvals/permits?	4	1	2
<b>Impervious Surface Reduction: Lot Coverage</b>			

40. Does the Zoning Ordinance contain impervious surface area regulations or guidelines for individual lots?	6	0	1
<b>Impervious Surface Reduction: Parking Lots</b>			
41. Does Zoning Ordinance allow flexibility to reduce the number of parking spaces constructed, if warranted by the proposed development?	3	0	4
42. Does the Zoning Ordinance require/encourage shared use of parking between adjacent land uses? In what districts?	3	1	3
43. Does the Zoning Ordinance require minimum landscaping standards in parking lots?	2	1	4
44. Does the Zoning Ordinance allow for shared driveways and in what instances and in what districts?	1	0	6
<b>Floodplains</b>			
45. If FEMA floodplain mapping has been completed, does community participate in the National Flood Insurance Program?	7	0	0
46. If yes, does is there ordinance language that regulates floodplain development?	5	2	0
47. Does the community coordinate their efforts to protect the floodplain with adjoining communities and the county?	0	0	7
48. Does the Zoning Ordinance require floodplains to be identified on site plans?	6	0	1
<b>TOTAL</b>	<b>185</b>	<b>39</b>	<b>112</b>

# Appendix A

## Community Master Plan Review Sheets

# Beaver Creek Township

Name of Jurisdiction: Beaver Creek Township

Master plan Title: Beaver Creek Township Comprehensive Plan June 2006 Update

Creation date: June 2006

<b>Master Plan Review – Section 1</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b> Answer question #1 or #2, <b>not both.</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does Master Plan exist? (If yes, note when scheduled for review again in Comments section) OR	Yes	2
If no Master Plan, is one currently being drafted? (If yes: note relevant deadlines in Comments section)		
Does the Master Plan specifically identify the watershed(s) in which the community is located?	Yes. AuSable River Watershed and Manistee Watershed	2
Does the Master Plan have a complete inventory of lakes, rivers, and wetlands, with maps of their locations?	Inventory, but no maps	1
Does it identify and map groundwater recharge areas?	No	0
Does the jurisdiction's Master Plan have a specific and focused goal or statement of intent to protect water resources? If yes, note it in Comments section.	Development next to wetlands should be properly constructed to avoid potential pollution problems pg. 25 Conduct periodic monitoring of vulnerable groundwater pg. 35	2
Does the Master Plan include goals for community acquisition or conservation of Open Space to protect surface water, ground water, and wetlands?	No	0
Does the Master Plan identify stormwater management as an important community policy?	No	0
Does the Master Plan call for minimizing impervious surfaces in new construction and redevelopment projects to reduce stormwater runoff and improve infiltration?	No	0
Does the Master Plan include identification and protection of Wildlife corridors?	No	0
Does the Master Plan identify and call for preservation of undisturbed Natural Areas and/or Natural River designations for surface water and ground water?	No	0

Does the plan acknowledge the importance of well-constructed and maintained road stream crossings on the quality of stream and water resources?	No	0
<b>TOTAL POINTS7</b>		

<b>Master Plan Review – Section 2</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does the master plan provide information on the forest resources in the community?	Yes	2
Does the master plan provide information on the wildlife resources in the community?	No	0
Does the master plan provide information on threatened and endangered species?	No	0
Does the master plan provide information on the soils and soils constraints?	Yes	2
Does the master plan address forest and wildlife resources in the goals and objectives section?	Yes Forest	1
Does the master plan address forest and wildlife resources in the future land use section?	Yes Forest	1
Does the master plan address groundwater protection in the goals and objectives section?	Yes	2
Does the plan address retention or restoration of waterside greenbelts or buffers in the goals and objectives section?	No	0
Does the plan address use of conservation easement to protect open space in the goals and objectives section?	No	0
Does the plan address Septic Systems maintenance in the goals and objectives section?	No. Mentions community septic systems where population densities are higher and can support without public sewer available	0
Does the plan address Wetland Protection and Restoration in the goals and objectives section?	No	0
Does the plan address Floodplain Protection in the goals and objectives section?	No	0
		8
	Total:	15

# City of Grayling

## Master Plan Assessment

Name of Jurisdiction: City of Grayling

Master plan Title: City of Grayling Comprehensive Plan

Creation date: 2014 (Currently Being Updated)

<b>Master Plan Review – Section 1</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b> Answer question #1 or #2, <b>not both.</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does Master Plan exist? (If yes, note when scheduled for review again in Comments section) OR	Yes, update process has begun	2
If no Master Plan, is one currently being drafted? (If yes: note relevant deadlines in Comments section)		
Does the Master Plan specifically identify the watershed(s) in which the community is located?	Yes, Au Sable	2
Does the Master Plan have a complete inventory of lakes, rivers, and wetlands, with maps of their locations?	No Maps	1
Does it identify and map groundwater recharge areas?	No Maps	1
Does the jurisdiction's Master Plan have a specific and focused goal or statement of intent to protect water resources? If yes, note it in Comments section.	Yes	2
Does the Master Plan include goals for community acquisition or conservation of Open Space to protect surface water, ground water, and wetlands?	Yes	2
Does the Master Plan identify stormwater management as an important community policy?	Yes	2
Does the Master Plan call for minimizing impervious surfaces in new construction and redevelopment projects to reduce stormwater runoff and improve infiltration?	Mentions use of alternative paving materials	1
Does the Master Plan include identification and protection of Wildlife corridors?	Greenway Corridors	1
Does the Master Plan identify and call for preservation of undisturbed Natural Areas and/or Natural River designations for surface water and ground water?	Mentions Natural Rivers Act	1



Does the plan acknowledge the importance of well-constructed and maintained road stream crossings on the quality of stream and water resources?	No	0
<b>TOTAL POINTS 15</b>		

<b>Master Plan Review – Section 2</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does the master plan provide information on the forest resources in the community?	Yes	2
Does the master plan provide information on the wildlife resources in the community?	Mention only of wetland and woodland create suitable habitat for wildlife	1
Does the master plan provide information on threatened and endangered species?	No	0
Does the master plan provide information on the soils and soils constraints?	Yes	2
Does the master plan address forest and wildlife resources in the goals and objectives section?	No	0
Does the master plan address forest and wildlife resources in the future land use section?	No	0
Does the master plan address groundwater protection in the goals and objectives section?	No	0
Does the plan address retention or restoration of waterside greenbelts or buffers in the goals and objectives section?	Yes	2
Does the plan address use of conservation easement to protect open space in the goals and objectives section?	Yes	2
Does the plan address Septic Systems maintenance in the goals and objectives section?	No	0
Does the plan address Wetland Protection and Restoration in the goals and objectives section?	Acquire conservation easements as buffers around wetlands	2
Does the plan address Floodplain Protection in the goals and objectives section?	No	0
		11
	Total:	26

# Crawford County

## Master Plan Assessment

Name of Jurisdiction: Crawford County

Master plan Title: Crawford County 2014 Master Plan Update

Creation date: October 23, 2014

<b>Master Plan Review – Section 1</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b> Answer question #1 or #2, <b>not both.</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does Master Plan exist? (If yes, note when scheduled for review again in Comments section) OR	Yes. October 23, 2019	2
If no Master Plan, is one currently being drafted? (If yes: note relevant deadlines in Comments section)		
Does the Master Plan specifically identify the watershed(s) in which the community is located?	Yes, Au Sable River & Manistee River in the west	2
Does the Master Plan have a complete inventory of lakes, rivers, and wetlands, with maps of their locations?	Yes	2
Does it identify and map groundwater recharge areas?	Yes	2
Does the jurisdiction's Master Plan have a specific and focused goal or statement of intent to protect water resources? If yes, note it in Comments section.	General statement of importance of water resources to character of the community	1
Does the Master Plan include goals for community acquisition or conservation of Open Space to protect surface water, ground water, and wetlands?	No	0
Does the Master Plan identify stormwater management as an important community policy?	No	0
Does the Master Plan call for minimizing impervious surfaces in new construction and redevelopment projects to reduce stormwater runoff and improve infiltration?	No	0
Does the Master Plan include identification and protection of Wildlife corridors?	Promote identification of ecological corridors	1
Does the Master Plan identify and call for preservation of undisturbed Natural Areas and/or Natural River designations for surface water and ground water?	Only mentions Au Sable River & Upper Manistee River are designated as Natural Rivers	1
Does the plan acknowledge the importance of	No	0

well-constructed and maintained road stream crossings on the quality of stream and water resources?		
<b>TOTAL POINTS 11</b>		

<b>Master Plan Review – Section 2</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does the master plan provide information on the forest resources in the community?	Yes	2
Does the master plan provide information on the wildlife resources in the community?	Yes	2
Does the master plan provide information on threatened and endangered species?	Yes	2
Does the master plan provide information on the soils and soils constraints?	Yes	2
Does the master plan address forest and wildlife resources in the goals and objectives section?	Yes	2
Does the master plan address forest and wildlife resources in the future land use section?	No	0
Does the master plan address groundwater protection in the goals and objectives section?	Yes	2
Does the plan address retention or restoration of waterside greenbelts or buffers in the goals and objectives section?	No	0
Does the plan address use of conservation easement to protect open space in the goals and objectives section?	Mention of using conservation easements in general	1
Does the plan address Septic Systems maintenance in the goals and objectives section?	No	0
Does the plan address Wetland Protection and Restoration in the goals and objectives section?	General mention of protecting wetlands	1
Does the plan address Floodplain Protection in the goals and objectives section?	No	0
		<b>14</b>
	<b>Total:</b>	<b>25</b>

# Frederic Township

## Master Plan Assessment

Name of Jurisdiction: Frederic Township

Master plan Title: Frederic Township 2013 Master Plan Update

Creation date: January 28, 2014

<b>Master Plan Review – Section 1</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b> Answer question #1 or #2, <b>not both.</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does Master Plan exist? (If yes, note when scheduled for review again in Comments section) OR	Yes, January 2019	2
If no Master Plan, is one currently being drafted? (If yes: note relevant deadlines in Comments section)		
Does the Master Plan specifically identify the watershed(s) in which the community is located?	Yes	2
Does the Master Plan have a complete inventory of lakes, rivers, and wetlands, with maps of their locations?	Yes	2
Does it identify and map groundwater recharge areas?	Yes, Septic Limitations	2
Does the jurisdiction's Master Plan have a specific and focused goal or statement of intent to protect water resources? If yes, note it in Comments section.	No	0
Does the Master Plan include goals for community acquisition or conservation of Open Space to protect surface water, ground water, and wetlands?	Just protection of open space to conserve rural character	1
Does the Master Plan identify stormwater management as an important community policy?	Yes	2
Does the Master Plan call for minimizing impervious surfaces in new construction and redevelopment projects to reduce stormwater runoff and improve infiltration?	Yes, Screened parking areas	2
Does the Master Plan include identification and protection of Wildlife corridors?	Protection	1
Does the Master Plan identify and call for preservation of undisturbed Natural Areas and/or Natural River designations for surface water and ground water?	Identifies Upper AuSable and Upper Manistee Rivers	1

Does the plan acknowledge the importance of well-constructed and maintained road stream crossings on the quality of stream and water resources?	No	0
<b>TOTAL POINTS 15</b>		

<b>Master Plan Review – Section 2</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does the master plan provide information on the forest resources in the community?	Yes	2
Does the master plan provide information on the wildlife resources in the community?	Yes	2
Does the master plan provide information on threatened and endangered species?	No	0
Does the master plan provide information on the soils and soils constraints?	Yes	2
Does the master plan address forest and wildlife resources in the goals and objectives section?	Yes	2
Does the master plan address forest and wildlife resources in the future land use section?	Forest	1
Does the master plan address groundwater protection in the goals and objectives section?	Yes	2
Does the plan address retention or restoration of waterside greenbelts or buffers in the goals and objectives section?	Yes	2
Does the plan address use of conservation easement to protect open space in the goals and objectives section?	Yes	2
Does the plan address Septic Systems maintenance in the goals and objectives section?	No	0
Does the plan address Wetland Protection and Restoration in the goals and objectives section?	Yes	2
Does the plan address Floodplain Protection in the goals and objectives section?	No	0
		17
	Total:	32

# Grayling Township

## Master Plan Assessment

Name of Jurisdiction: Grayling Township

Master plan Title: Grayling Charter Township Master Plan 2014

Creation date: 2014 (Currently Being Updated)

<b>Master Plan Review – Section 1</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b> Answer question #1 or #2, <b>not both.</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does Master Plan exist? (If yes, note when scheduled for review again in Comments section) OR	Yes, 2019	2
If no Master Plan, is one currently being drafted? (If yes: note relevant deadlines in Comments section)		
Does the Master Plan specifically identify the watershed(s) in which the community is located?	Yes, Au Sable, and Manistee	2
Does the Master Plan have a complete inventory of lakes, rivers, and wetlands, with maps of their locations?	Yes	2
Does it identify and map groundwater recharge areas?	Yes	2
Does the jurisdiction's Master Plan have a specific and focused goal or statement of intent to protect water resources? If yes, note it in Comments section.	General statement of importance of water resources to character of the community	1
Does the Master Plan include goals for community acquisition or conservation of Open Space to protect surface water, ground water, and wetlands?	Yes	2
Does the Master Plan identify stormwater management as an important community policy?	No	0
Does the Master Plan call for minimizing impervious surfaces in new construction and redevelopment projects to reduce stormwater runoff and improve infiltration?	Yes	2
Does the Master Plan include identification and protection of Wildlife corridors?	Promote identification of ecological corridors	1
Does the Master Plan identify and call for preservation of undisturbed Natural Areas and/or Natural River designations for surface water and ground water?	Yes, River Protection Category in Future Land Use	2
Does the plan acknowledge the importance of well-constructed and maintained road stream	No	0



crossings on the quality of stream and water resources?		
<b>TOTAL POINTS 16</b>		

<b>Master Plan Review – Section 2</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does the master plan provide information on the forest resources in the community?	Yes	2
Does the master plan provide information on the wildlife resources in the community?	Yes	2
Does the master plan provide information on threatened and endangered species?	Yes	2
Does the master plan provide information on the soils and soils constraints?	Yes	2
Does the master plan address forest and wildlife resources in the goals and objectives section?	Yes	2
Does the master plan address forest and wildlife resources in the future land use section?	Forest	1
Does the master plan address groundwater protection in the goals and objectives section?	Yes	2
Does the plan address retention or restoration of waterside greenbelts or buffers in the goals and objectives section?	Yes	2
Does the plan address use of conservation easement to protect open space in the goals and objectives section?	Yes	2
Does the plan address Septic Systems maintenance in the goals and objectives section?	No	0
Does the plan address Wetland Protection and Restoration in the goals and objectives section?	General mention of protecting wetlands	1
Does the plan address Floodplain Protection in the goals and objectives section?	No	0
		18
	Total:	34

# Lovells Township

## Master Plan Assessment

Name of Jurisdiction: Lovells Township

Master plan Title: Lovells Township Master Plan 2014

Creation date: November 2014

<b>Master Plan Review – Section 1</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b> Answer question #1 or #2, <u>not both.</u>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does Master Plan exist? (If yes, note when scheduled for review again in Comments section) OR	Yes, November, 2019	2
If no Master Plan, is one currently being drafted? (If yes: note relevant deadlines in Comments section)		
Does the Master Plan specifically identify the watershed(s) in which the community is located?	Yes, Au Sable River	2
Does the Master Plan have a complete inventory of lakes, rivers, and wetlands, with maps of their locations?	Yes	2
Does it identify and map groundwater recharge areas?	Yes	2
Does the jurisdiction's Master Plan have a specific and focused goal or statement of intent to protect water resources? If yes, note it in Comments section.	It is important that all water resources be protected & managed in a manner that ensures their quality	2
Does the Master Plan include goals for community acquisition or conservation of Open Space to protect surface water, ground water, and wetlands?	Open space to protect rural character of the township	1
Does the Master Plan identify stormwater management as an important community policy?	No	0
Does the Master Plan call for minimizing impervious surfaces in new construction and redevelopment projects to reduce stormwater runoff and improve infiltration?	No	0
Does the Master Plan include identification and protection of Wildlife corridors?	No	0
Does the Master Plan identify and call for preservation of undisturbed Natural Areas and/or Natural River designations for surface water and ground water?	Yes, Au Sable River system	2
Does the plan acknowledge the importance of	No	0

well-constructed and maintained road stream crossings on the quality of stream and water resources?		
<b>TOTAL POINTS 13</b>		

<b>Master Plan Review – Section 2</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does the master plan provide information on the forest resources in the community?	Yes	2
Does the master plan provide information on the wildlife resources in the community?	Yes	2
Does the master plan provide information on threatened and endangered species?	Mentions Bald Eagle and Kirtland Warbler	1
Does the master plan provide information on the soils and soils constraints?	Yes	2
Does the master plan address forest and wildlife resources in the goals and objectives section?	Yes	2
Does the master plan address forest and wildlife resources in the future land use section?	Forest	1
Does the master plan address groundwater protection in the goals and objectives section?	Yes	2
Does the plan address retention or restoration of waterside greenbelts or buffers in the goals and objectives section?	Yes	2
Does the plan address use of conservation easement to protect open space in the goals and objectives section?	No	0
Does the plan address Septic Systems maintenance in the goals and objectives section?	No	0
Does the plan address Wetland Protection and Restoration in the goals and objectives section?	Yes	2
Does the plan address Floodplain Protection in the goals and objectives section?	Mention managing land use patterns to direct new growth away from environmentally sensitive areas including areas subject to flooding	1
		17
	Total:	30

# Maple Forest Township

## Master Plan Assessment

Name of Jurisdiction: Maple Forest Township

Master plan Title: Maple Forest Township Master Plan Update 2013

Creation date: November 12, 2013

<b>Master Plan Review – Section 1</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b> Answer question #1 or #2, <b>not both.</b>	<b>Citation and Comments</b>	<b>Points</b>
Does Master Plan exist? (If yes, note when scheduled for review again in Comments section) OR	Yes, November 12, 2013	2
If no Master Plan, is one currently being drafted? (If yes: note relevant deadlines in Comments section)		
Does the Master Plan specifically identify the watershed(s) in which the community is located?	Yes, Au Sable River	2
Does the Master Plan have a complete inventory of lakes, rivers, and wetlands, with maps of their locations?	Yes	2
Does it identify and map groundwater recharge areas?	Yes	2
Does the jurisdiction's Master Plan have a specific and focused goal or statement of intent to protect water resources? If yes, note it in Comments section.	Not specific, does mention importance of identifying environmental constraints	1
Does the Master Plan include goals for community acquisition or conservation of Open Space to protect surface water, ground water, and wetlands?	Yes	2
Does the Master Plan identify stormwater management as an important community policy?	Yes	2
Does the Master Plan call for minimizing impervious surfaces in new construction and redevelopment projects to reduce stormwater runoff and improve infiltration?	No	0
Does the Master Plan include identification and protection of Wildlife corridors?	No	0
Does the Master Plan identify and call for preservation of undisturbed Natural Areas and/or Natural River designations for surface water and ground water?	No	0

Does the plan acknowledge the importance of well-constructed and maintained road stream crossings on the quality of stream and water resources?	No	0
<b>TOTAL POINTS 13</b>		

<b>Master Plan Review – Section 2</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does the master plan provide information on the forest resources in the community?	Yes	2
Does the master plan provide information on the wildlife resources in the community?	Yes	2
Does the master plan provide information on threatened and endangered species?	No	0
Does the master plan provide information on the soils and soils constraints?	Yes	2
Does the master plan address forest and wildlife resources in the goals and objectives section?	Yes	2
Does the master plan address forest and wildlife resources in the future land use section?	Yes	2
Does the master plan address groundwater protection in the goals and objectives section?	Yes	2
Does the plan address retention or restoration of waterside greenbelts or buffers in the goals and objectives section?	Yes	2
Does the plan address use of conservation easement to protect open space in the goals and objectives section?	Yes	2
Does the plan address Septic Systems maintenance in the goals and objectives section?	No	0
Does the plan address Wetland Protection and Restoration in the goals and objectives section?	Yes	2
Does the plan address Floodplain Protection in the goals and objectives section?	No	0
		<b>18</b>
	Total:	<b>31</b>

# South Branch Township

## Master Plan Assessment

Name of Jurisdiction: South Branch Township

Master plan Title: South Branch Township Master Plan 2006

Creation date: June 1, 2006

Master Plan Review – Section 1 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria Answer question #1 or #2, not both.	Citation and Comments	Points
Does Master Plan exist? (If yes, note when scheduled for review again in Comments section) OR	Yes. June 1, 2011	2
If no Master Plan, is one currently being drafted? (If yes: note relevant deadlines in Comments section)		
Does the Master Plan specifically identify the watershed(s) in which the community is located?	Yes. Au Sable River	2
Does the Master Plan have a complete inventory of lakes, rivers, and wetlands, with maps of their locations?	Yes	2
Does it identify and map groundwater recharge areas?	Yes	2
Does the jurisdiction's Master Plan have a specific and focused goal or statement of intent to protect water resources? If yes, note it in Comments section.	No, does mention importance of protecting water resources, but no specific goal	0
Does the Master Plan include goals for community acquisition or conservation of Open Space to protect surface water, ground water, and wetlands?	Conservation open space development standards	1
Does the Master Plan identify stormwater management as an important community policy?	Yes	2
Does the Master Plan call for minimizing impervious surfaces in new construction and redevelopment projects to reduce stormwater runoff and improve infiltration?	Yes, screened parking areas	2
Does the Master Plan include identification and protection of Wildlife corridors?	Protection	1
Does the Master Plan identify and call for preservation of undisturbed Natural Areas and/or Natural River designations for surface water and ground water?	Natural River zoning enforcement along Au Sable River	2
Does the plan acknowledge the importance of	Lists improvement of	1

well-constructed and maintained road stream crossings on the quality of stream and water resources?	road/stream crossing in other projects under Water Resources heading	
<b>TOTAL POINTS 17</b>		

<b>Master Plan Review – Section 2</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b> note any comments and citation	<b>Points</b>
Does the master plan provide information on the forest resources in the community?	Yes	2
Does the master plan provide information on the wildlife resources in the community?	Yes	2
Does the master plan provide information on threatened and endangered species?	Just Kirtland Warbler	1
Does the master plan provide information on the soils and soils constraints?	Yes	2
Does the master plan address forest and wildlife resources in the goals and objectives section?	Yes	2
Does the master plan address forest and wildlife resources in the future land use section?	Yes	2
Does the master plan address groundwater protection in the goals and objectives section?	Yes	2
Does the plan address retention or restoration of waterside greenbelts or buffers in the goals and objectives section?	Yes	2
Does the plan address use of conservation easement to protect open space in the goals and objectives section?	Yes	2
Does the plan address Septic Systems maintenance in the goals and objectives section?	No	0
Does the plan address Wetland Protection and Restoration in the goals and objectives section?	Yes	2
Does the plan address Floodplain Protection in the goals and objectives section?	No	0
		19
	<b>Total:</b>	<b>36</b>

## **Appendix B**

### **Community Zoning Ordinance Review Sheets**



# City of Grayling

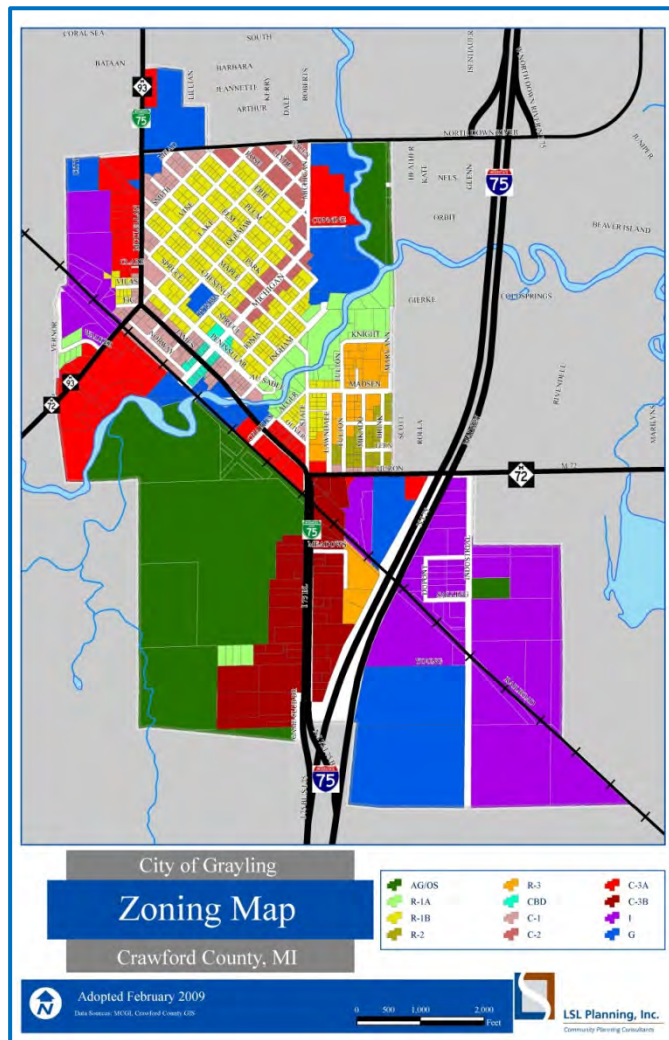
## Zoning Assessment

### Lake Huron Watershed Community Collaboration

Name of Jurisdiction: City of Grayling, Crawford County, Michigan

Name of Reviewer: R. Deuell

Ordinance last amended: 2009



*Funding provided by Great Lakes Restoration Initiative, USEPA*

As a part of the Lake Huron Watershed Project, we have completed a water resource protection review of your community's zoning ordinance. The review is based on a list of zoning standards related to surface and ground water quality protection. The results provide the community an opportunity to compare its current standards with recommended water quality protection standards. While it is understood communities

are not likely to address all of the areas; we are hopeful your community will review the information and consider amending your ordinance to enhance water quality protection.

Questions used in the evaluation were derived from several sources, which included Tip of the Mitt Watershed Council, Land Policy Institute and NEMCOG. The questions evaluated basic zoning elements, shorelines, stormwater management, sewer/septic groundwater and wellhead protection, and impervious surface reduction. Each question was then rated for how well the ordinance met the criteria with a value from 2 to 0. A rating of 2 means "Yes, Criteria Was Met," 1 means "Minimally with Comments," and 0 means "Missing." The values for each question were totaled under each category and classified as strong, adequate or lacking.

**Summary of Zoning Review**

**I. Basic Zoning Elements - Adequate**

**II. Shorelines - Lacking**

**III. Stormwater Management - Strong**

**IV. Sewer/Septic - Adequate**

**V. Groundwater and Wellhead Protection - Strong**

**VI. Impervious Surface Reduction - Strong**

**VII. Other Relevant Elements – Strong**

I. Basic Zoning Elements 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Zoning Ordinance: Administrative</b>		
1. Does Zoning Ordinance have a statement of purpose or intent that includes protection of water and/or natural resources?	Environmental standards are established in order to preserve the short and long-term environmental health, safety, and quality of the City.	2
2. Does it include a fee system to cover costs to the community for review of proposal applications or appeals, including any professional reviews?	Section 3.11 Fees.	2
3. Does the Zoning Ordinance have methods in place for enforcement, including a clearly defined process for inspections and correction of violations?	Article 3, Administration and Enforcement	2
4. Is the Zoning Ordinance proposal review process coordinated with the receipt of other applicable County, State, and/or Federal permits?	Indirect connections in some cases	1
5. Does it require a pre-application or pre-construction meeting for new development or redevelopment proposals?	Pre-application Conference. Prior to the submission of an application for planned unit development approval,	1
6. Does the Zoning Ordinance include requirements for environmental assessment, at the expense of the applicant, for proposals that include a land area of five acres or more, or building over 50,000 sq. ft.?		0
<b>Zoning Ordinance: Site Plan Review</b>		
7. Does the Zoning Ordinance require Site Plan Review?		2
8. Is the Site Plan required to indicate all existing natural features?		2
9. Does the Site Plan Review process require a Soil Erosion and Sedimentation Control Plan, or coordination with County regulations?		0
10. Does the Zoning Ordinance prohibit land clearing or soil stripping prior to site plan review?	No grading, removal of trees or other vegetation, land filling or construction of improvements shall commence for any development which requires site plan approval until a final site plan is approved and is in effect, except as otherwise provided in this Article.	2
<b>Zoning Ordinance: PUD</b>		
11. 12. Does ordinance include Planned Unit Development (PUD) provisions?	Article 7 PUD - Planned Unit Development District	2
12. 13. Do PUDs require inclusion of a minimum open space threshold?	Related to Open Space regulations	1
<b>Zoning Ordinance: Open Space</b>		
13. Are flexible site design criteria or incentives available to encourage developers to include open space or cluster design provisions?	Open space. When completed, the development shall have twenty (20%) percent of the gross acreage in the development devoted to open space, which shall remain in its natural state and/or be restricted to active	2

	and/or passive outdoor recreational purposes.	
14. Does the open space have to be managed in a natural condition?'		<b>0</b>
15. Are allowable uses in the open space restricted to low impact uses?		<b>0</b>
16. Is open space required to be protected through a conservation easement or other similar mechanism?	The dedicated open space shall be set aside by the applicant through an irrevocable conveyance that is found acceptable to the City Attorney.	<b>2</b>
<b>Zoning Ordinance: Special Districts</b>		
17. Does the Zoning Ordinance have districts specifically designated to protect natural resources such as Resource Conservation or Forest Resource Management?	AG/OS Agriculture District/Open Space	<b>2</b>
18. Does the Zoning Ordinance have overlay districts for resource protection such as waterfront or wetlands?	6.14 Riverfront Lands	<b>1</b>
<b>TOTAL POINTS SECTION I</b>		<b>24</b>
<b>TOTAL POSSIBLE POINTS:</b>		<b>36</b>

II. Shorelines 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Shorelines: Setbacks Inland Lakes</b>		
1. Does the Zoning Ordinance require a minimum shoreline setback for inland lakes? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	The minimum distance of any principal building from the ordinary high water mark shall be fifty (50) feet. No commercial or industrial buildings or uses shall occur within one-hundred (100) feet of all rivers and waterways without a conditional use permit.	1
<b>Shorelines: Setbacks Streams</b>		
2. Does the Zoning Ordinance require a minimum shoreline setback for streams? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	<b>6.14 Riverfront Lands</b> The minimum distance of any principal building from the ordinary high water mark shall be fifty (50) feet. No commercial or industrial buildings or uses shall occur within one-hundred (100) feet of all rivers and waterways without a conditional use permit.	1
<b>Shorelines: Protection strips</b>		
3. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Inland Lakes?	6.14.1 A fifty (50) foot greenway shall exist along all rivers and waterways.	2
4. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Streams?	A fifty (50) foot greenway shall exist along all rivers and waterways.	2
5. Does Zoning Ordinance specify the degree of vegetation which may be removed in the riparian buffer zone or greenbelt?		0
6. Does it specify the use of native plant species in the riparian buffer zone?		0
7. Are invasive and exotic plants prohibited from being used?		0
<b>Shorelines: Density</b>		
8. Does Zoning Ordinance regulate the width of waterfront lots? 100' or more = 2 75'-99' = 1 Less than 75' = 0		2
<b>Shorelines: Private Shared Lake Access; Keyhole/Funneling</b>		
9. Does the Zoning Ordinance include Private Shared Lake Access provisions that regulate number of back lots using the shared waterfront lot, development of shared lot, and docks?		0
<b>Shorelines: Road Ends</b>		
10. Does the Zoning Ordinance regulate Road Ends terminating at the edge of navigable waters, to ensure the right of public access does not include: the ability to install private docks or boat hoists for the overnight mooring of boats?		0
<b>Shorelines: Marinas</b>		
11. Does the community regulate marinas by using special land use provisions or other tools?		0
<b>TOTAL POINTS SECTION II</b>		<b>8</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>22</b>

<b>III. Stormwater Management</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Stormwater: Construction and Redevelopment</b>		
1. Does the community regulate stormwater as part of the Zoning Ordinance?	6.11.1. Storm Water Management. All developments and earth changes subject to review under the requirements of this Ordinance shall be designed, constructed, and maintained to prevent flooding and protect water quality. Storm water management facilities shall comply with the standards for green site technology.	<b>2</b>
2. Are stormwater management areas and facilities whether on-site or off-site, required to be designed, constructed, and maintained to prevent flooding and protect surface and ground water quality?	Storm water management systems and facilities will preserve the natural drainage characteristics and enhance the aesthetics of the site to the maximum extent possible, and will not substantially reduce or increase the natural retention or storage capacity of any wetland, water body or water course, or cause alterations which could increase flooding or water pollution on or off site.	<b>2</b>
3. Is the design of any stormwater management system required to be based upon a 25-year frequency, 24-hour duration storm event?	new or improved shall provide for on-site detention storage of storm water in accordance with the current Michigan Department of Environmental Quality standards.	<b>2</b>
4. Does the stormwater require runoff leaving the site to be controlled to a non-erosive velocity, both during and after construction?	Storm water management conveyance, storage and infiltration measures and facilities shall be designed to prevent flood hazards and water pollution related to storm water runoff and soil erosion from the proposed development.	<b>2</b>
5. Does ordinance require that all stormwater management systems be regularly evaluated and maintained?	Shall be designed, constructed, and maintained to prevent flooding and protect water quality.  The Condominium Documents require ongoing preservation and maintenance of drainage, retention, and maintenance of storm water	<b>2</b>
<b>TOTAL POINTS SECTION III</b>		<b>10</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>10</b>

<b>IV. Sewer/Septic</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Septic Systems</b>		
1. Does the Zoning Ordinance require an inspection of septic tanks by an authorized inspector? Is there a point of sale inspection requirement?		<b>0</b>
2. Are regulations that pertain to septic systems coordinated with the County Health Department regulations?	Wastewater treatment systems, including on-site septic systems, will be located to minimize any potential degradation of surface water or groundwater quality and meet County and State standards.	<b>2</b>
<b>TOTAL POINTS SECTION IV</b>		<b>2</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>4</b>

<b>V. Groundwater and Wellhead Protection</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Groundwater Protection</b>		
1. Does the Zoning Ordinance have groundwater protection standards for commercial, industrial or other uses that may cause groundwater contamination?	Section 6.6 Use, Storage and Handling of Hazardous Substance; Storage and Disposal of Solid, Liquid, and Sanitary Wastes.	<b>2</b>
2. Is Site Plan Review used to ensure there are no unnecessary threats posed to groundwater by new or redevelopment proposals?	Must show location of chemical and fuel storage tanks and containers. Sites which include storage of hazardous materials or waste, fuels, salt, or chemicals will be designed to prevent spills and discharges of polluting materials to the surface of the ground, groundwater or nearby water bodies in accordance with County and State standards.	<b>2</b>
3. Does the Zoning Ordinance prohibit both direct and indirect discharge of hazardous substances to groundwater without appropriate approvals/permits?	Sites which include storage of hazardous materials or waste, fuels, salt, or chemicals will be designed to prevent spills and discharges of polluting materials to the surface of the ground, groundwater or nearby water bodies in accordance with County and State standards.	<b>2</b>
TOTAL POINTS SECTION V		<b>6</b>
TOTAL POINTS POSSIBLE		<b>6</b>

<b>VI. Impervious Surface Reduction</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Impervious Surface Reduction: Lot Coverage</b>		
1. Does the Zoning Ordinance contain impervious surface area regulations or guidelines for individual lots?	Section 4.5 Schedule of Regulations	<b>2</b>
<b>Impervious Surface Reduction: Parking Lots</b>		
2. Does Zoning Ordinance allow flexibility to reduce the number of parking spaces constructed, if warranted by the proposed development?	The Planning Commission, based on a recommendation from the Zoning Administrator may permit deviations from the requirements of Section 9.4 and may require more or allow less parking. May allow deviations from the hard durable surface lot requirement for seasonal or auxiliary lots.	<b>2</b>
3. Does the Zoning Ordinance require/encourage shared use of parking between adjacent land uses? In what districts?	9.3.3. Collective Provisions. Nothing in this Section shall be construed to prevent collective provisions of off-street parking facilities for two (2) or more buildings or uses, provided such facilities collectively shall not be less than the sum of the requirements for the various individual uses	<b>1</b>
4. Does the Zoning Ordinance require minimum landscaping standards in parking lots?	9.5.3. Parking lot landscaping and buffering requirements shall meet the standards set forth in Section 6.2.5. Parking Lot Landscaping. Landscaped islands shall be required for any parking lot exceeding thirty-three (33) parking spaces.	<b>2</b>
5. Does the Zoning Ordinance allow	Where feasible, secondary access for non-residential	<b>2</b>

for shared driveways and in what instances and in what districts?	uses shall be provided either through a side street, public easement, service drive, or shared access with other adjacent non-residential uses.	
<b>TOTAL POINTS SECTION VI</b>		<b>9</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>10</b>

<b>VII. Other Relevant Elements</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Floodplains</b>		
1. If FEMA floodplain mapping has been completed, does community participate in the National Flood Insurance Program?	FIRM map date: 04/17/2012)	<b>2</b>
2. If yes, is there ordinance language that regulates floodplain development?	Section 6.12 Regulation of Floodplain Areas.	<b>2</b>
3. Does the community coordinate their efforts to protect the floodplain with adjoining communities and the county?		<b>0</b>
4. Does the Zoning Ordinance require floodplains to be identified on site plans?		<b>2</b>
<b>TOTAL POINTS SECTION VII</b>		<b>6</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>8</b>

**Score: 65**

**Total Possible: 96**

**Percent of total possible score: 68%**



# Beaver Creek Branch Township

## Zoning Assessment

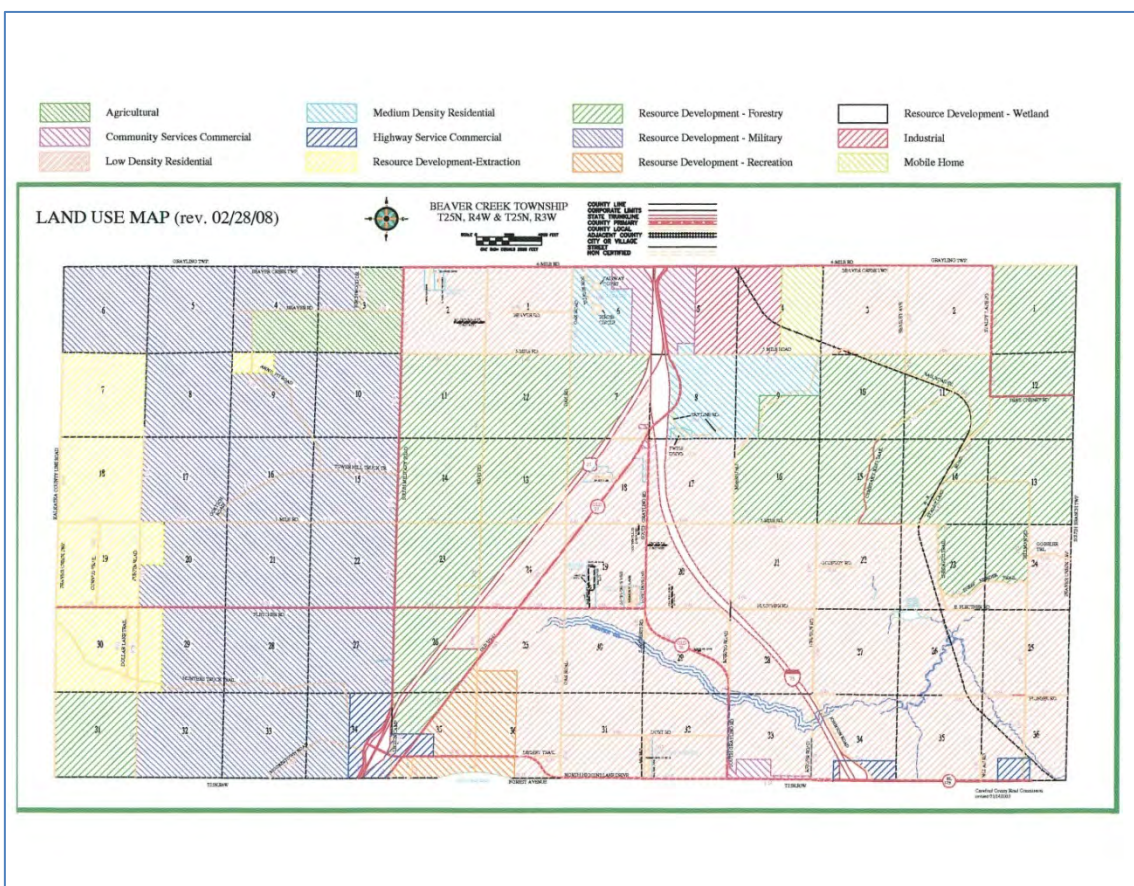
### Lake Huron Watershed Community Collaboration

Name of Jurisdiction: Beaver Creek Township, Crawford County

Date Completed:

Reviewer: R. L. Deuell

Ordinance last amended: 2008



*Funding provided by Great Lakes Restoration Initiative, USEPA*

As a part of the Lake Huron Watershed Project, we have completed a water resource protection review of your community's zoning ordinance. The review is based on a list of zoning standards related to surface and ground water quality protection. The results provide the community an opportunity to compare its current standards with recommended water quality protection standards. While it is understood communities are not likely to address all of the areas; we are hopeful your community will review the

information and consider amending your ordinance to enhance water quality protection.

Questions used in the evaluation were derived from several sources, which included Tip of the Mitt Watershed Council, Land Policy Institute and NEMCOG. The questions evaluated basic zoning elements, shorelines, stormwater management, sewer/septic groundwater and wellhead protection, and impervious surface reduction. Each question was then rated for how well the ordinance met the criteria with a value from 2 to 0. A rating of 2 means "Yes, Criteria Was Met," 1 means "Minimally with Comments," and 0 means "Missing." The values for each question were totaled under each category and classified as strong, adequate or lacking.

#### **Summary of Zoning Review**

**I. Basic Zoning Elements - Strong**

**II. Shorelines - Lacking**

**III. Stormwater Management - Lacking**

**IV. Sewer/Septic - Adequate**

**V. Groundwater and Wellhead Protection - Lacking**

**VI. Impervious Surface Reduction - Lacking**

**VII. Other Relevant Elements - Adequate**

<b>I. Basic Zoning Elements</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Zoning Ordinance: Administrative</b>		
1. Does Zoning Ordinance have a statement of purpose or intent that includes protection of water and/or natural resources?	the proper use of land and natural resources may be encouraged and regulated; to provide for the conservation of agricultural, forest and open space lands, wetlands and land areas containing natural or cultural resources or features necessary to the social and economic well-being of present and future generations;	<b>2</b>
2. Does it include a fee system to cover costs to the community for review of proposal applications or appeals, including any professional reviews?	Such fees may include all costs associated with conducting a public hearing or inspection, including; newspaper notice(s), postage, photocopying, mileage, any costs associated with reviews by qualified professional planners, engineers or attorneys along with time spent by staff, Planning Commission, Board of Trustees and/or Zoning Board of Appeals.	<b>2</b>
3. Does the Zoning Ordinance have methods in place for enforcement, including a clearly defined process for inspections and correction of violations?	Section 19.05 – Violations Section 19.06 – Penalties Section 19.07 - Enforcement Procedure	<b>2</b>
4. Is the Zoning Ordinance proposal review process coordinated with the receipt of other applicable County, State, and/or Federal permits?	Site plan approval requires that the applicant meet all of the requirements of the Natural Resources And Environmental Protection Act, 1994 PA 451, as amended, and the rules promulgated under authority of this Act. In all Zoning Districts the edge, bank, or shore of any lake, pond, river or stream shall not be altered, changed, transformed or otherwise varied from its present condition, except in conformance with the provisions set forth in the most recent adopted versions of the Natural Resources And Environmental Protection Act, 1994 PA 451, as amended, or other laws relating thereto and the rules promulgated under authority of these acts. All uses of land, buildings or structures shall conform to all applicable local, county, state and federal laws, rules and regulations that have been promulgated and administered.....	<b>2</b>
5. Does it require a pre-application or pre-construction meeting for new development or redevelopment proposals?	An applicant for a PUD District may request a pre-application conference with Township Planning Commission prior to filing an application for developing a PUD District.	<b>1</b>
6. Does the Zoning Ordinance include requirements for environmental assessment, at the expense of the applicant, for proposals that include a land area of five acres or more, or building over 50,000 sq. ft.?	Article XV - Environmental Conservation Provisions: Under this Article where it is the judgment of the Planning Commission and their written reasons, the Commission may require the submittal of an Environmental Impact Statement in accordance with "State Guidelines	<b>2</b>
<b>Zoning Ordinance: Site Plan Review</b>		
7. Does the Zoning Ordinance require Site Plan Review?	Article XVIII Site Plan Review Procedures	<b>2</b>
8. Is the Site Plan required to indicate all existing natural features?		<b>0</b>
9. Does the Site Plan Review process require a Soil Erosion and	The conditions to be attached to a permit issued for grading and foundation work may include, but	<b>1</b>

Sedimentation Control Plan, or coordination with County regulations?	not necessarily be limited to, provisions for control of possible erosion, for excluding the Township from any liability, if an acceptable plan is not provided, and for furnishing a financial guarantee for restoration of the site if work does not proceed. Site plan approval requires that the applicant meet all of the requirements of the Natural Resources And Environmental Protection Act, 1994 PA 451, as amended, and the rules promulgated under authority of this Act.	
10. Does the Zoning Ordinance prohibit land clearing or soil stripping prior to site plan review?	No grading, removal of trees or other vegetation, land filling, or construction of improvements shall commence for any development which requires site plan approval, until a final site plan is approved and is in effect, except as provided in this Article. PUD - Construction: No construction, grading, tree removal, soil stripping, or other site improvements or changes shall commence, and no building or zoning permit shall be issued ....., until the requirements of this Article have been met.	<b>2</b>
<b>Zoning Ordinance: PUD</b>		
11. Does ordinance include Planned Unit Development (PUD) provisions?	Article XII - Planned Unit Development District	<b>2</b>
12. Do PUDs require inclusion of a minimum open space threshold?	A land, water or land/water area constituting not less than twenty-five percent of the total (a) land area, or (b) land area, plus no more than three hundred (300) feet into or no more than one-half (1/2) the width or distance across, a natural surface water area of the waterfront parcel shall be designed as permanent open space.	<b>2</b>
<b>Zoning Ordinance: Open Space</b>		
13. Are flexible site design criteria or incentives available to encourage developers to include open space or cluster design provisions?	a combination of uses permitted in each district in the form of clustering principal uses and activities at a higher density than would otherwise be possible under the respective district regulations on a preferred portion of a parcel while maintaining the overall density of development of the parcels consistent with the district regulations.	<b>2</b>
14. Does the open space have to be managed in a natural condition?	The Commission may require that unique natural amenities such as ravines, rock outcrops, wooded areas, tree or shrub specimens, unusual wildlife habitats, ponds, streams, and marshes be preserved as part of the open space system.	<b>1</b>
15. Are allowable uses in the open space restricted to low impact uses?		<b>0</b>
16. Is open space required to be protected through a conservation easement or other similar mechanism?	The required open space must be set aside by the developer in the form of an irrevocable conveyance whereby the open space area must be developed according to the approved site plan and may never be changed to any other use. Further, this conveyance must provide that the open space is for the use and enjoyment of the residents, occupants and users of the district and such open space shall be considered as an integral component of the over-all Planned Unit Development	<b>2</b>

<b>Zoning Ordinance: Special Districts</b>		
17. Does the Zoning Ordinance have districts specifically designated to protect natural resources such as Resource Conservation or Forest Resource Management?	Resource Development District - RD Agricultural Residential District - AR	<b>2</b>
18. Does the Zoning Ordinance have overlay districts for resource protection such as waterfront or wetlands?	Article XV - Environmental Conservation Provisions	<b>2</b>
<b>TOTAL POINTS SECTION I</b>		<b>28</b>
<b>TOTAL POSSIBLE POINTS:</b>		<b>36</b>

<b>II. Shorelines</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Shorelines: Setbacks Inland Lakes</b>		
1. Does the Zoning Ordinance require a minimum shoreline setback for inland lakes? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	Permitted Principal Uses 50' Permitted principal special uses 100'	<b>1</b>
<b>Shorelines: Setbacks Streams</b>		
2. Does the Zoning Ordinance require a minimum shoreline setback for streams? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	Permitted Principal Uses 50' Permitted principal special uses 100'	<b>1</b>
<b>Shorelines: Protection strips</b>		
3. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Inland Lakes?		<b>0</b>
4. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Streams?		<b>0</b>
5. Does Zoning Ordinance specify the degree of vegetation which may be removed in the riparian buffer zone or greenbelt?		<b>0</b>
6. Does it specify the use of native plant species in the riparian buffer zone?		<b>0</b>
7. Are invasive and exotic plants prohibited from being used?		<b>0</b>
<b>Shorelines: Density</b>		
8. Does Zoning Ordinance regulate the width of waterfront lots? 100' or more = 2 75'-99' = 1 Less than 75' = 0	80-200'	<b>2</b>
<b>Shorelines: Private Shared Lake Access; Keyhole/Funneling</b>		
9. Does the Zoning Ordinance include Private Shared Lake Access provisions that regulate number of back lots using the shared waterfront lot, development of shared lot, and docks?		<b>0</b>
<b>Shorelines: Road Ends</b>		
10. Does the Zoning Ordinance regulate Road Ends terminating at the edge of navigable waters, to		<b>0</b>

ensure the right of public access does not include: the ability to install private docks or boat hoists for the overnight mooring of boats?		
<b>Shorelines: Marinas</b>		
11. Does the community regulate marinas by using special land use provisions or other tools?		<b>0</b>
<b>TOTAL POINTS SECTION II</b>		<b>4</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>22</b>

<b>III. Stormwater Management</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Stormwater: Construction and Redevelopment</b>		
1. Does the community regulate stormwater as part of the Zoning Ordinance?	Within PUD	<b>1</b>
2. Are stormwater management areas and facilities whether on-site or off-site, required to be designed, constructed, and maintained to prevent flooding and protect surface and ground water quality?	PUD - Each site shall be provided with adequate storm drainage. Open drainage courses and storm water retention ponds may be permitted. Retention ponds for storm water runoff control in excess of that which is normal and natural prior to construction or development shall be required in accordance with the County Drain Commissioner or Road Commission.	<b>1</b>
3. Is the design of any stormwater management system required to be based upon a 25-year frequency, 24-hour duration storm event?		<b>0</b>
4. Does the stormwater require runoff leaving the site to be controlled to a non-erosive velocity, both during and after construction?		<b>0</b>
5. Does ordinance require that all stormwater management systems be regularly evaluated and maintained?		<b>0</b>
<b>TOTAL POINTS SECTION III</b>		<b>3</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>10</b>

<b>IV. Sewer/Septic</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Septic Systems</b>		
1. Does the Zoning Ordinance require an inspection of septic tanks by an authorized inspector? Is there a point of sale inspection requirement?		<b>0</b>
2. Are regulations that pertain to septic systems coordinated with the County Health Department regulations?		<b>2</b>
<b>TOTAL POINTS SECTION IV</b>		<b>2</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>4</b>



<b>V. Groundwater and Wellhead Protection</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Groundwater Protection</b>		
1. Does the Zoning Ordinance have groundwater protection standards for commercial, industrial or other uses that may cause groundwater contamination?		<b>0</b>
2. Is Site Plan Review used to ensure there are no unnecessary threats posed to groundwater by new or redevelopment proposals?		<b>0</b>
3. Does the Zoning Ordinance prohibit both direct and indirect discharge of hazardous substances to groundwater without appropriate approvals/permits?	Toxic Waste Disposal: All toxic wastes shall be disposed of in accordance with all state or federal laws, rules and regulations governing the disposal of specific toxic substances.	<b>1</b>
<b>TOTAL POINTS SECTION V</b>		<b>1</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>6</b>

<b>VI. Impervious Surface Reduction</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Impervious Surface Reduction: Lot Coverage</b>		
1. Does the Zoning Ordinance contain impervious surface area regulations or guidelines for individual lots?		<b>2</b>
<b>Impervious Surface Reduction: Parking Lots</b>		
2. Does Zoning Ordinance allow flexibility to reduce the number of parking spaces constructed, if warranted by the proposed development?		<b>0</b>
3. Does the Zoning Ordinance require/encourage shared use of parking between adjacent land uses? In what districts?		<b>0</b>
4. Does the Zoning Ordinance require minimum landscaping standards in parking lots?		<b>0</b>
5. Does the Zoning Ordinance allow for shared driveways and in what instances and in what districts?		<b>0</b>
<b>TOTAL POINTS SECTION VI</b>		<b>2</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>10</b>

<b>VII. Other Relevant Elements</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Floodplains</b>		
1. If FEMA floodplain mapping has been completed, does community participate in the National Flood Insurance Program?	04/17/12(M)	<b>2</b>
2. If yes, does is there ordinance language that regulates floodplain development?	Section 15.05 - Flood Plains	<b>2</b>
3. Does the community coordinate their efforts to protect the floodplain with adjoining communities and the county?		<b>0</b>
4. Does the Zoning Ordinance require floodplains to be identified on site plans?		<b>0</b>
TOTAL POINTS SECTION VII		<b>4</b>
TOTAL POINTS POSSIBLE		<b>8</b>

**45/96**

**47%**



# Grayling Township

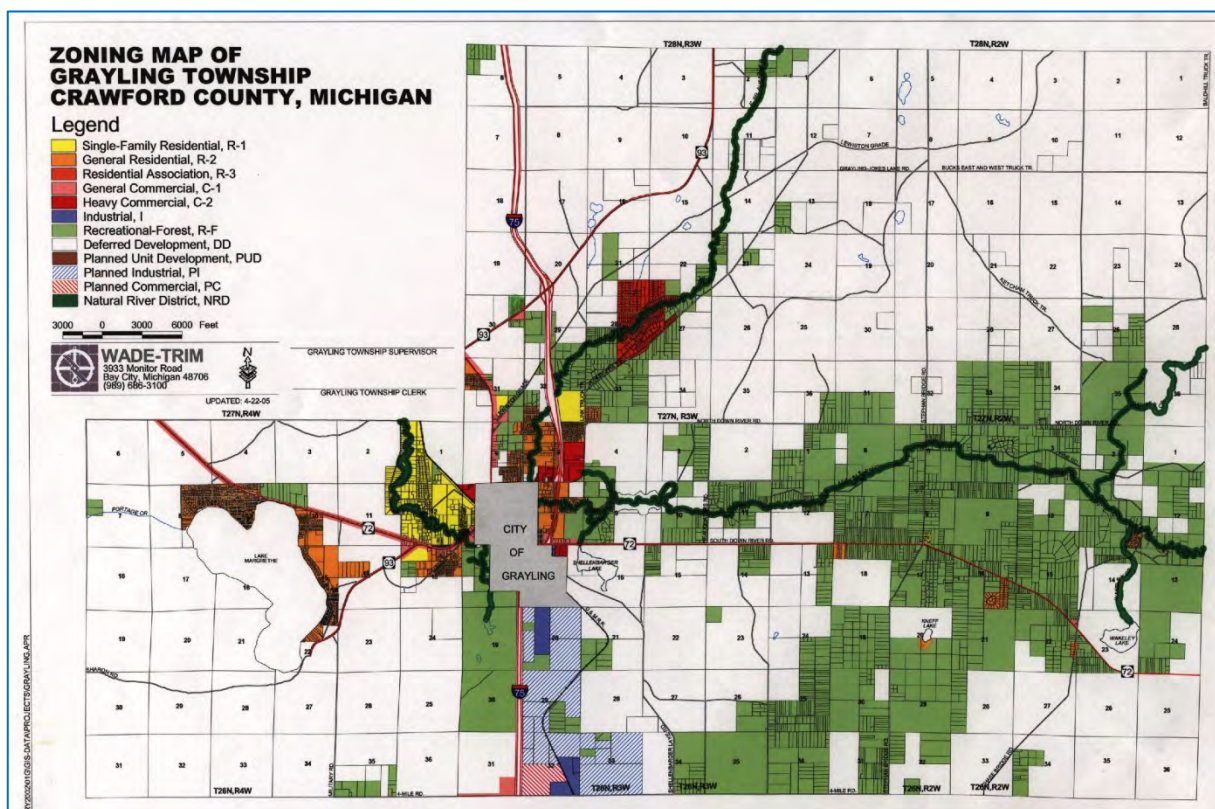
## Zoning Assessment

### Lake Huron Watershed Community Collaboration

Name of Jurisdiction: Grayling Township, Crawford County, Michigan

Name of Reviewer: R. Deuell

Last amended: 2010



*Funding provided by Great Lakes Restoration Initiative, USEPA*

As a part of a Lake Huron Watershed Project, we have completed a water resource protection review of your community's zoning ordinance. The review is based on a list of zoning standards related to surface and ground water quality protection. The results provide communities an opportunity to compare their current standards with recommended water quality protection approaches. While it is understood each community is unique, both its resource and its constituent base; there are several key "common ground" zoning approaches, that if adopted by all communities within a watershed, will support long term water and natural resource protection. We are hopeful your community will review the information and consider amending your ordinance to enhance water quality and natural resource protection.

Questions used in the evaluation were derived from several sources, which included Tip of the Mitt Watershed Council, Land Policy Institute and NEMCOG. The questions are grouped into the following categories: 1) basic zoning elements, 2) shorelines, 3) stormwater management, 4) sewer/septic systems, 5) groundwater and wellhead protection, and 6) impervious surface reduction. Each question was scored based on how the ordinance met the criteria. A score of **2** means "Yes, Criteria Was Met," **1** means "Minimally with Comments," and **0** means "Missing." The values for each question were totaled under each category, which was classified as strong, adequate or lacking.

**Summary of Zoning Review**

**I. Basic Zoning Elements - Strong**

**II. Shorelines - Adequate**

**III. Stormwater Management - Adequate**

**IV. Sewer/Septic - Adequate**

**V. Groundwater and Wellhead Protection - Lacking**

**VI. Impervious Surface Reduction - Adequate**

**VII. Other Relevant Elements - Adequate**

<b>I. Basic Zoning Elements</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Zoning Ordinance: Administrative</b>		
1. Does Zoning Ordinance have a statement of purpose or intent that includes protection of water and/or natural resources?	Conserve natural resources and energy; Conserve the expenditure of funds for public improvements and services to conform to the most advantageous uses of land, resources and properties; Under NRD - The goal is to preserve, protect and enhance the river environment in a natural state for the use and enjoyment of present and future generations, as well to promote the public health, safety and general welfare of Grayling Township and the state as a whole.	<b>2</b>
2. Does it include a fee system to cover costs to the community for review of proposal applications or appeals, including any professional reviews?	Section 21 The amount of these zoning fees shall cover the costs associated with the review of the application or appeal,	<b>2</b>
3. Does the Zoning Ordinance have methods in place for enforcement, including a clearly defined process for inspections and correction of violations?	Section 22	<b>2</b>
4. Is the Zoning Ordinance proposal review process coordinated with the receipt of other applicable County, State, and/or Federal permits?		<b>1</b>
5. Does it require a pre-application or pre-construction meeting for new development or redevelopment proposals?	Only in PUD developments	<b>1</b>
6. Does the Zoning Ordinance include requirements for environmental assessment, at the expense of the applicant, for proposals that include a land area of five acres or more, or building over 50,000 sq. ft.?		<b>0</b>
<b>Zoning Ordinance: Site Plan Review</b>		
7. Does the Zoning Ordinance require Site Plan Review?	ARTICLE XIX SITE PLAN REVIEW	<b>2</b>
8. Is the Site Plan required to indicate all existing natural features?	The location of existing environmental features, such as streams, wetlands, shore-lands, mature specimen trees, wooded areas or any other unusual environmental features.	<b>2</b>
9. Does the Site Plan Review process require a Soil Erosion and Sedimentation Control Plan, or coordination with County regulations?	Within Natural Rivers District	<b>1</b>
10. Does the Zoning Ordinance prohibit land clearing or soil stripping prior to site plan review?		<b>0</b>
<b>Zoning Ordinance: PUD</b>		
11. Does ordinance include Planned Unit Development (PUD) provisions?	ARTICLE XIII PLANNED UNIT DEVELOPMENT DISTRICT, PUD	<b>2</b>
12. Do PUDs require inclusion of a minimum open space threshold?	Required open space shall comprise no less than forty (40) percent of the total lot or parcel area.	<b>2</b>
<b>Zoning Ordinance: Open Space</b>		
13. Are flexible site design criteria or incentives available to encourage developers to include open space or	SECTION 4.05 -- OPEN SPACE PRESERVATION Regardless of zoning district, land zoned for residential development may be developed at the	<b>2</b>

cluster design provisions?	option of the landowner, with the same number of dwelling units on a portion of the land as would be allowed for the buildable portion of the entire parcel. Not more than fifty percent (50%) of the buildable land could be developed.	
14. Does the open space have to be managed in a natural condition?	A percentage of the buildable land area, but not less than fifty percent (50%),	<b>2</b>
15. Are allowable uses in the open space restricted to low impact uses?	See above	<b>2</b>
16. Is open space required to be protected through a conservation easement or other similar mechanism?	will remain perpetually in an undeveloped state by means of a conservation easement, plat dedication, restrictive covenant, or other legal means that runs with the land.	<b>2</b>
<b>Zoning Ordinance: Special Districts</b>		
17. Does the Zoning Ordinance have districts specifically designated to protect natural resources such as Resource Conservation or Forest Resource Management?	Recreational-Forest District, R-F Natural River District, NRD	<b>2</b>
18. Does the Zoning Ordinance have overlay districts for resource protection such as waterfront or wetlands?	Natural River District, NRD	<b>2</b>
<b>TOTAL POINTS SECTION I</b>		<b>29</b>
<b>TOTAL POSSIBLE POINTS:</b>		<b>36</b>

II. Shorelines 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Shorelines: Setbacks Inland Lakes</b>		
1. Does the Zoning Ordinance require a minimum shoreline setback for inland lakes? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	30'	1
<b>Shorelines: Setbacks Streams</b>		
2. Does the Zoning Ordinance require a minimum shoreline setback for streams? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	Natural Rivers District	2
<b>Shorelines: Protection strips</b>		
3. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Inland Lakes?	PUD	1
4. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Streams?	Natural Rivers District and PUD	2
5. Does Zoning Ordinance specify the degree of vegetation which may be removed in the riparian buffer zone or greenbelt?	Natural Rivers District and PUD	2
6. Does it specify the use of native plant species in the riparian buffer zone?	Natural Rivers District - Trees, shrubs and other vegetation types native to the area shall be maintained and enhanced on each side of the river to retain the river's natural values.  PUD- Where those lands border a body of water, there shall be a strip parallel with the water's edge and based on the original zone which shall be strictly maintained in its natural state.....	2
7. Are invasive and exotic plants prohibited from being used?		0
<b>Shorelines: Density</b>		
8. Does Zoning Ordinance regulate the width of waterfront lots? 100' or more = 2 75'-99' = 1 Less than 75' = 0		2
<b>Shorelines: Private Shared Lake Access; Keyhole/Funneling</b>		
9. Does the Zoning Ordinance include Private Shared Lake Access provisions that regulate number of back lots using the shared waterfront lot, development of shared lot, and docks?		0
<b>Shorelines: Road Ends</b>		
10. Does the Zoning Ordinance regulate Road Ends terminating at the edge of navigable waters, to ensure the right of public		0

access does not include: the ability to install private docks or boat hoists for the overnight mooring of boats?		
<b>Shorelines: Marinas</b>		
11. Does the community regulate marinas by using special land use provisions or other tools?		<b>0</b>
<b>TOTAL POINTS SECTION II</b>		<b>12</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>22</b>

<b>III. Stormwater Management</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Stormwater: Construction and Redevelopment</b>		
1. Does the community regulate stormwater as part of the Zoning Ordinance?	Site plan review and PUD. No separate section under	2
2. Are stormwater management areas and facilities whether on-site or off-site, required to be designed, constructed, and maintained to prevent flooding and protect surface and ground water quality?	Site Plan Review - Stormwater will not adversely affect neighboring properties and all water conveyances on land surfaces will transport stormwater at a non-erosive velocity.	1
3. Is the design of any stormwater management system required to be based upon a 25-year frequency, 24-hour duration storm event?		0
4. Does the stormwater require runoff leaving the site to be controlled to a non-erosive velocity, both during and after construction?	Site Plan Review - Stormwater will not adversely affect neighboring properties and all water conveyances on land surfaces will transport stormwater at a non-erosive velocity.	2
5. Does ordinance require that all stormwater management systems be regularly evaluated and maintained?		0
TOTAL POINTS SECTION III		5
TOTAL POINTS POSSIBLE		10

<b>IV. Sewer/Septic</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Septic Systems</b>		
1. Does the Zoning Ordinance require an inspection of septic tanks by an authorized inspector? Is there a point of sale inspection requirement?		0
2. Are regulations that pertain to septic systems coordinated with the County Health Department regulations?		2
TOTAL POINTS SECTION IV		2
TOTAL POINTS POSSIBLE		4

<b>V. Groundwater and Wellhead Protection</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Groundwater Protection</b>		
1. Does the Zoning Ordinance have groundwater protection standards for commercial, industrial or other uses that may cause groundwater contamination?		<b>0</b>
2. Is Site Plan Review used to ensure there are no unnecessary threats posed to groundwater by new or redevelopment proposals?		<b>0</b>
3. Does the Zoning Ordinance prohibit both direct and indirect discharge of hazardous substances to groundwater without appropriate approvals/permits?		<b>0</b>
TOTAL POINTS SECTION V		<b>0</b>
TOTAL POINTS POSSIBLE		<b>6</b>



<b>VI. Impervious Surface Reduction</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Impervious Surface Reduction: Lot Coverage</b>		
1. Does the Zoning Ordinance contain impervious surface area regulations or guidelines for individual lots?	In the Single Family Residential (R-1) and General Residential (R-2) districts, maximum lot coverage shall not exceed forty percent (40%).	<b>1</b>
<b>Impervious Surface Reduction: Parking Lots</b>		
2. Does Zoning Ordinance allow flexibility to reduce the number of parking spaces constructed, if warranted by the proposed development?		<b>1</b>
3. Does the Zoning Ordinance require/encourage shared use of parking between adjacent land uses? In what districts?	In the instance of where different developments have different operating hours or the parking needs of individual buildings or uses occur at different days or times, the same spaces may be credited for both uses.	<b>1</b>
4. Does the Zoning Ordinance require minimum landscaping standards in parking lots?	Parking lots with more than two (2) parking aisles may be required to provide interior landscaped areas, interior being defined as the area within the perimeter of the paved surface.	<b>1</b>
5. Does the Zoning Ordinance allow for shared driveways and in what instances and in what districts?	SECTION 4.03 – ACCESS MANAGEMENT on M-72, M-93 or I-75 Business Loop	<b>1</b>
<b>TOTAL POINTS SECTION VI</b>		<b>5</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>10</b>

<b>VII. Other Relevant Elements</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Floodplains</b>		
1. If FEMA floodplain mapping has been completed, does community participate in the National Flood Insurance Program?		<b>2</b>
2. If yes, is there ordinance language that regulates floodplain development?	Natural Rivers District	<b>1</b>
3. Does the community coordinate their efforts to protect the floodplain with adjoining communities and the county?		<b>0</b>
4. Does the Zoning Ordinance require floodplains to be identified on site plans?	The location of existing environmental features, such as streams, wetlands, shore-lands, mature specimen trees, wooded areas or any other unusual environmental features.	<b>2</b>
TOTAL POINTS SECTION VII		<b>5</b>
TOTAL POINTS POSSIBLE		<b>8</b>

**Score: 58**

**Total Possible: 96**

**Percent of total possible score: 60%**

# Lovells Township

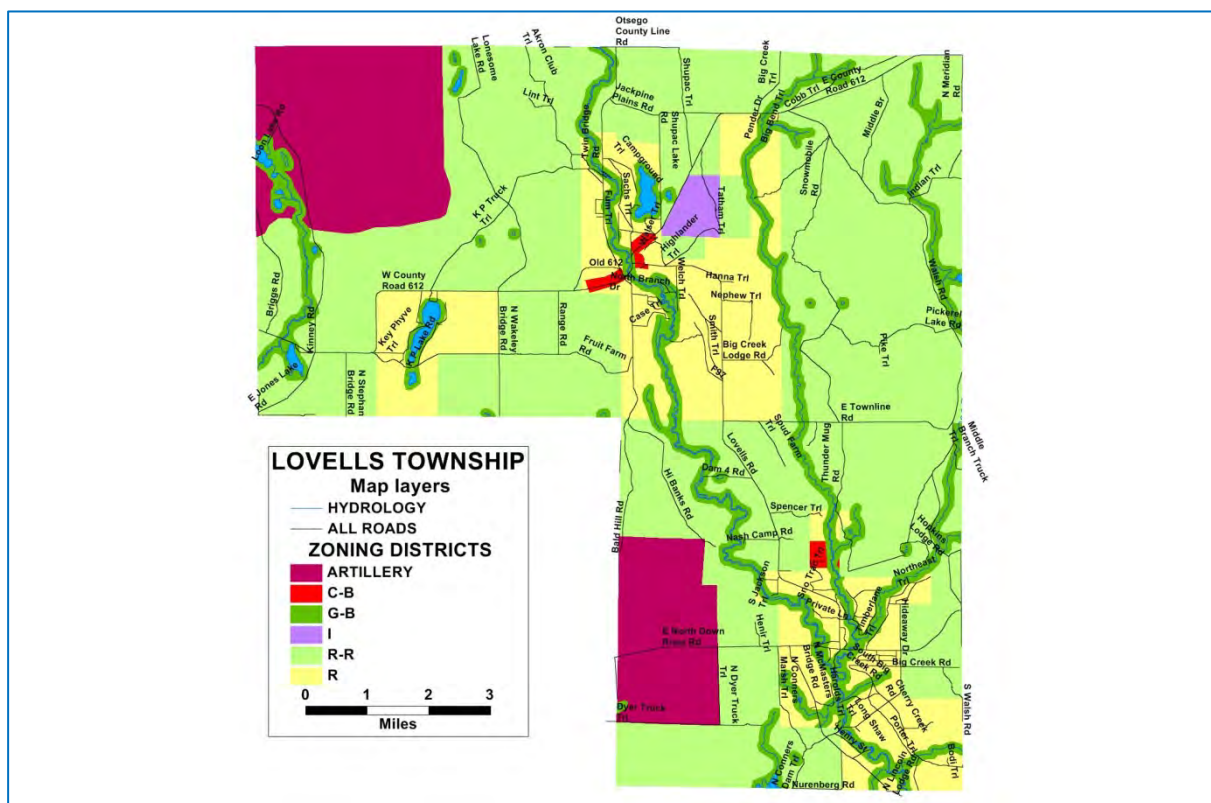
## Zoning Assessment

### Lake Huron Watershed Community Collaboration

Name of Jurisdiction: Lovells Forest Township, Crawford County, Michigan

Name of Reviewer: R. Deuell

Last amended: 2006



***Funding provided by Great Lakes Restoration Initiative, USEPA***

As a part of the Lake Huron Watershed Project, we have completed a water resource protection review of your community's zoning ordinance. The review is based on a list of zoning standards related to surface and ground water quality protection. The results provide the community an opportunity to compare its current standards with recommended water quality protection standards. While it is understood communities are not likely to address all of the areas; we are hopeful your community will review the information and consider amending your ordinance to enhance water quality protection.

Questions used in the evaluation were derived from several sources, which included Tip of the Mitt Watershed Council, Land Policy Institute and NEMCOG. The questions

evaluated basic zoning elements, shorelines, stormwater management, sewer/septic groundwater and wellhead protection, and impervious surface reduction. Each question was then rated for how well the ordinance met the criteria with a value from 2 to 0. A rating of 2 means "Yes, Criteria Was Met," 1 means "Minimally with Comments," and 0 means "Missing." The values for each question were totaled under each category and classified as strong, adequate or lacking.

### Summary of Zoning Review

I. Basic Zoning Elements - Adequate

II. Shorelines - Strong

III. Stormwater Management - Adequate

IV. Sewer/Septic - Adequate

V. Groundwater and Wellhead Protection - Adequate

VI. Impervious Surface Reduction - Adequate

VII. Other Relevant Elements - Strong

I. Basic Zoning Elements 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Zoning Ordinance: Administrative</b>		
1. Does Zoning Ordinance have a statement of purpose or intent that includes protection of water and/or natural resources?	To encourage the use of lands in accordance with their character and adaptability, and to limit the improper use of land. To conserve natural resources and energy. the conservation of property values and natural resources; and the general and appropriate trend and character of land, building, and population development.	2
2. Does it include a fee system to cover costs to the community for review of proposal applications or appeals, including any professional reviews?	SECTION 16.03 - FEES	2
3. Does the Zoning Ordinance have methods in place for enforcement, including a clearly defined process for inspections and correction of violations?	SECTION 16.02 · THE ZONING ADMINISTRATOR	2
4. Is the Zoning Ordinance proposal review process coordinated with the receipt of other applicable County, State, and/or Federal permits?	Under certain circumstances	1
5. Does it require a pre-application or pre-construction meeting for new development or redevelopment proposals?	PUD	1
6. Does the Zoning Ordinance include requirements for environmental assessment, at the expense of the applicant, for proposals that include a		0

land area of five acres or more, or building over 50,000 sq. ft.?		
<b>Zoning Ordinance: Site Plan Review</b>		
7. Does the Zoning Ordinance require Site Plan Review?	Article XII SITE PLAN REVIEW	<b>2</b>
8. Is the Site Plan required to indicate all existing natural features?	The location of existing environmental features, such as streams, wetlands, shore-lands, mature specimen trees, wooded areas or any other unusual environmental features.	<b>2</b>
9. Does the Site Plan Review process require a Soil Erosion and Sedimentation Control Plan, or coordination with County regulations?		<b>0</b>
10. Does the Zoning Ordinance prohibit land clearing or soil stripping prior to site plan review?		<b>0</b>
<b>Zoning Ordinance: PUD</b>		
11. 12. Does ordinance include Planned Unit Development (PUD) provisions?	ARTICLE XI PLANNED UNIT DEVELOPMENT, PUD	<b>2</b>
12. 13. Do PUDs require inclusion of a minimum open space threshold?	SECTION 11.05 - OPEN SPACE REQUIREMENTS A. Required open space shall comprise no less than fifty (50) percent of the total lot or parcel area.	<b>2</b>
<b>Zoning Ordinance: Open Space</b>		
13. Are flexible site design criteria or incentives available to encourage developers to include open space or cluster design provisions?	PUD SECTION 11.05 - OPEN SPACE REQUIREMENTS	<b>2</b>
14. Does the open space have to be managed in a natural condition?'	A minimum of fifty percent (50%) of the required open space shall be devoted to landscaping, patios, walkways and recreation areas for the collective enjoyment and common use of occupants of the development.	<b>1</b>
15. Are allowable uses in the open space restricted to low impact uses?	See #14 above	<b>1</b>
16. Is open space required to be protected through a conservation easement or other similar mechanism?	SECTION 11.06 - INSURING OPEN SPACE INTEGRITY	<b>2</b>
<b>Zoning Ordinance: Special Districts</b>		
17. Does the Zoning Ordinance have districts specifically designated to protect natural resources such as Resource Conservation or Forest Resource Management?	The Green Belt District includes four hundred (400) feet on both sides of the East Branch of the Au Sable River, the North Branch of the Au Sable River, the West Branch of Big Creek, the Middle Branch of Big Creek, the East Branch of Big Creek and around all lakes in Lovells Township.	<b>2</b>
18. Does the Zoning Ordinance have overlay districts for resource protection such as waterfront or wetlands.	In addition to the protection of the Au Sable and designated streams, Lovells Township also wishes to include waterfront protection regulations around the Township's lakes for their enhancement and protection.	<b>2</b>
<b>TOTAL POINTS SECTION I</b>		<b>26</b>
<b>TOTAL POSSIBLE POINTS:</b>		<b>36</b>

II. Shorelines 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Shorelines: Setbacks Inland Lakes</b>		
1. Does the Zoning Ordinance require a minimum shoreline setback for inland lakes? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	SECTION 5.04 - AREA REGULATIONS	2
<b>Shorelines: Setbacks Streams</b>		
2. Does the Zoning Ordinance require a minimum shoreline setback for streams? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	SECTION 5.04 - AREA REGULATIONS	2
<b>Shorelines: Protection strips</b>		
3. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Inland Lakes?	Along the North Branch of the Au Sable River, the natural vegetation strip shall extend a minimum of seventy five (75) feet from the ordinary high water mark. On other streams and lakes in the district, the strip shall extend fifty (50) feet from the ordinary high water mark.	2
4. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Streams?	See # 3 above	2
5. Does Zoning Ordinance specify the degree of vegetation which may be removed in the riparian buffer zone or greenbelt?	Within the natural vegetation strip, trees and shrubs may be selectively pruned, or with Zoning Administrator approval be removed for harvest, to achieve a filtered view of the river or lake from the principal structure and for reasonable private access to the water. any path to the water is no wider than four (4) feet,	2
6. Does it specify the use of native plant species in the riparian buffer zone?	Within the natural vegetation strip, trees and shrubs	2
7. Are invasive and exotic plants prohibited from being used?		0
<b>Shorelines: Density</b>		
8. Does Zoning Ordinance regulate the width of waterfront lots? 100' or more = 2 75'-99' = 1 Less than 75' = 0	The minimum lot size shall be sixty thousand (60,000) square feet. The minimum lot width shall be two hundred (200) square feet measured at the ordinary high water mark. Lots created after the adoption of this Ordinance shall meet the minimum lot width and size.	2
<b>Shorelines: Private Shared Lake Access; Keyhole/Funneling</b>		
9. Does the Zoning Ordinance include Private Shared Lake Access provisions that regulate number of back lots using the shared waterfront lot, development of shared lot, and docks?	SECTION 5.05 - LIMITATION ON FUNNEL DEVELOPMENT	2
<b>Shorelines: Road Ends</b>		
10. Does the Zoning Ordinance regulate Road Ends terminating at the edge of navigable waters, to ensure the right of public		0

access does not include: the ability to install private docks or boat hoists for the overnight mooring of boats?		
<b>Shorelines: Marinas</b>		
11. Does the community regulate marinas by using special land use provisions or other tools?		<b>0</b>
<b>TOTAL POINTS SECTION II</b>		<b>16</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>22</b>

<b>III. Stormwater Management</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Stormwater: Construction and Redevelopment</b>		
1. Does the community regulate stormwater as part of the Zoning Ordinance?	Stormwater will not adversely affect neighboring properties and	<b>1</b>
2. Are stormwater management areas and facilities whether on-site or off-site, required to be designed, constructed, and maintained to prevent flooding and protect surface and ground water quality?	Stormwater will not adversely affect neighboring properties and	<b>1</b>
3. Is the design of any stormwater management system required to be based upon a 25-year frequency, 24-hour duration storm event?		<b>0</b>
4. Does the stormwater require runoff leaving the site to be controlled to a non-erosive velocity, both during and after construction?	all water conveyances on land surfaces will transport stormwater at a non-erosive velocity.	<b>2</b>
5. Does ordinance require that all stormwater management systems be regularly evaluated and maintained?		<b>0</b>
<b>TOTAL POINTS SECTION III</b>		<b>4</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>10</b>

<b>IV. Sewer/Septic</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Septic Systems</b>		
1. Does the Zoning Ordinance require an inspection of septic tanks by an authorized inspector? Is there a point of sale inspection requirement?		<b>0</b>
2. Are regulations that pertain to septic systems coordinated with the County Health Department regulations?	SECTION 3.08- REQUIRED WATER SUPPLY AND SEWAGE DISPOSAL FACILITIES	<b>2</b>
TOTAL POINTS SECTION IV		<b>2</b>
TOTAL POINTS POSSIBLE		<b>4</b>

<b>V. Groundwater and Wellhead Protection</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Groundwater Protection</b>		
1. Does the Zoning Ordinance have groundwater protection standards for commercial, industrial or other uses that may cause groundwater contamination?	Industrial Groundwater Protection (for uses which use, generate or store hazardous substances in quantities greater than 25 gallons or 220 pounds per month):	<b>2</b>
2. Is Site Plan Review used to ensure there are no unnecessary threats posed to groundwater by new or redevelopment proposals?		<b>0</b>
3. Does the Zoning Ordinance prohibit both direct and indirect discharge of hazardous substances to groundwater without appropriate approvals/permits?	The site shall be designed to prevent spills and discharges to the air, surface of the ground, groundwater, surface water and wetlands. floor drains may be allowed only if they ~re connected to an on-site holding tank or a system authorized through a state groundwater discharge permit.	<b>2</b>
TOTAL POINTS SECTION V		<b>4</b>
TOTAL POINTS POSSIBLE		<b>6</b>



<b>VI. Impervious Surface Reduction</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Impervious Surface Reduction: Lot Coverage</b>		
1. Does the Zoning Ordinance contain impervious surface area regulations or guidelines for individual lots?		2
<b>Impervious Surface Reduction: Parking Lots</b>		
2. Does Zoning Ordinance allow flexibility to reduce the number of parking spaces constructed, if warranted by the proposed development?		0
3. Does the Zoning Ordinance require/encourage shared use of parking between adjacent land uses? In what districts?	In the instance of where different developments have different operating hours or the parking needs of individual buildings or uses occur at different days or times; the same spaces may be credited for both uses.	2
4. Does the Zoning Ordinance require minimum landscaping standards in parking lots?	Parking lots with more than two (2) parking aisles may be required to provide interior landscaped areas, interior being defined as the area within the perimeter of the paved surface.	1
5. Does the Zoning Ordinance allow for shared driveways and in what instances and in what districts?		0
<b>TOTAL POINTS SECTION VI</b>		<b>5</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>10</b>

<b>VII. Other Relevant Elements</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Floodplains</b>		
1. If FEMA floodplain mapping has been completed, does community participate in the National Flood Insurance Program?	Yes	2
2. If yes, is there ordinance language that regulates floodplain development?	Waterfront setbacks --Because of the severe limitations for residential development due to poorly drained and unstable soils, high water tables and possible contamination of surface water and ground water supplies; no structures shall be constructed on land subject to flooding.	2
3. Does the community coordinate their efforts to protect the floodplain with adjoining communities and the county?		0
4. Does the Zoning Ordinance require floodplains to be identified on site plans?		2
<b>TOTAL POINTS SECTION VII</b>		<b>6</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>8</b>

**Score: 63**

**Total Possible: 96**

**Percent of total possible score: 66%**

# Lake Huron Watershed Community Collaboration

Last amended: 2010



1

watershed, will support long term water and natural resource protection. We are hopeful your community will review the information and consider amending your ordinance to enhance water quality and natural resource protection.

Questions used in the evaluation were derived from several sources, which included Tip of the Mitt Watershed Council, Land Policy Institute and NEMCOG. The questions are grouped into the following categories: 1) basic zoning elements, 2) shorelines, 3) stormwater management, 4) sewer/septic systems, 5) groundwater and wellhead protection, and 6) impervious surface reduction. Each question was scored based on how the ordinance met the criteria. A score of **2** means "Yes, Criteria Was Met," **1** means "Minimally with Comments," and **0** means "Missing." The values for each question were totaled under each category, which was classified as strong, adequate or lacking.

#### **Summary of Zoning Review**

**I. Basic Zoning Elements - Strong**

**II. Shorelines - Strong**

**III. Stormwater Management - Adequate**

**IV. Sewer/Septic - Adequate**

**V. Groundwater and Wellhead Protection - Strong**

**VI. Impervious Surface Reduction - Adequate**

**VII. Other Relevant Elements - Strong**

I. Basic Zoning Elements 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Zoning Ordinance: Administrative</b>		
1. Does Zoning Ordinance have a statement of purpose or intent that includes protection of water and/or natural resources?	Conserve natural resources and energy; Conserve the expenditure of funds for public improvements and services to conform to the most advantageous uses of land, resources and properties;	1
2. Does it include a fee system to cover costs to the community for review of proposal applications or appeals, including any professional reviews?	Section 9.05 Fees	2
3. Does the Zoning Ordinance have methods in place for enforcement, including a clearly defined process for inspections and correction of violations?	Section 9 Administration and Enforcement of Ordinance	2
4. Is the Zoning Ordinance proposal review process coordinated with the receipt of other applicable County, State, and/or Federal permits?	Site plans shall conform to all applicable requirements of state and federal statutes and the Maple Forest Township Master Plan, and approval may be conditioned on the applicant receiving necessary state and federal permits before the actual zoning permit authorizing the special land use is granted.	1
5. Does it require a pre-application or pre-construction meeting for new development or redevelopment proposals?	Site Plan review Pre-application Conference: The Zoning Administrator, Planning Commission Chair and/or Planning Commission shall have the authority to conduct a pre-application meeting with the applicant/developer PUD A pre-application conference shall be held with the Planning Commission or its representative, unless waived by the applicant, for the purpose of determining the eligibility of the proposed PUD application and to review the procedures and standards for PUD approval.	2
6. Does the Zoning Ordinance include requirements for environmental assessment, at the expense of the applicant, for proposals that include a land area of five acres or more, or building over 50,000 sq. ft.?		0
<b>Zoning Ordinance: Site Plan Review</b>		
7. Does the Zoning Ordinance require Site Plan Review?	Section 6, Site Plan Review	2
8. Is the Site Plan required to indicate all existing natural features?	The location of existing environmental features, such as watercourses, wetlands, shorelines, man-made drains, mature specimen trees, wooded areas or any other unusual environmental features.	2
9. Does the Site Plan Review process require a Soil Erosion and Sedimentation Control Plan, or coordination with County regulations?	All site plans shall comply with the terms of the Crawford County Soil Erosion and Sedimentation Control Ordinance and Stormwater Ordinance. It shall be the applicant's responsibility to provide documentation of compliance of these County Ordinances.	2
10. Does the Zoning Ordinance prohibit land clearing or soil stripping prior to site plan review?		0
<b>Zoning Ordinance: PUD</b>		
11. Does ordinance include Planned Unit Development (PUD) provisions?	Article 8 - Supplemental Site Development Standards PUD	2
12. Do PUDs require inclusion of a	Open Space. A PUD project shall have open space of	2

minimum open space threshold?	no less than twenty-five (25%) percent of the entire project area.	
<b>Zoning Ordinance: Open Space</b>		
13. Are flexible site design criteria or incentives available to encourage developers to include open space or cluster design provisions?	PUD	<b>2</b>
14. Does the open space have to be managed in a natural condition?		<b>0</b>
15. Are allowable uses in the open space restricted to low impact uses?		<b>0</b>
16. Is open space required to be protected through a conservation easement or other similar mechanism?	The applicant shall record an affidavit acceptable to the township attorney with the Crawford County Register of Deeds	<b>2</b>
<b>Zoning Ordinance: Special Districts</b>		
17. Does the Zoning Ordinance have districts specifically designated to protect natural resources such as Resource Conservation or Forest Resource Management?	Section 5.01 Resource Conservation (RC)	<b>2</b>
18. Does the Zoning Ordinance have overlay districts for resource protection such as waterfront or wetlands?	Section 5.09 Stream Corridor Overlay District (SC)	<b>2</b>
<b>TOTAL POINTS SECTION I</b>		<b>26</b>
<b>TOTAL POSSIBLE POINTS:</b>		<b>36</b>

II. Shorelines 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Shorelines: Setbacks Inland Lakes</b>		
1. Does the Zoning Ordinance require a minimum shoreline setback for inland lakes? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	Permanent structures, parking lots, and other impervious surfaces, except boat docks, boat slips, ramps, or marinas, or other water dependent uses, shall observe a minimum setback of seventy-five (75) feet from the documented 1986 High Water Mark in all Districts.	2
<b>Shorelines: Setbacks Streams</b>		
2. Does the Zoning Ordinance require a minimum shoreline setback for streams? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	See #1 above	2
<b>Shorelines: Protection strips</b>		
3. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Inland Lakes?	To preserve natural resources, water quality and community scenic and recreational values, a greenbelt no less than fifty feet in width as measured from the ordinary high water mark of a lake or stream be established and maintained on all waterfront lots.	2
4. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Streams?	See #3 above	2
5. Does Zoning Ordinance specify the degree of vegetation which may be removed in the riparian buffer zone or greenbelt?	At least 70% of the lot width at the water line shall be kept in natural vegetation; either trees, shrubs, herbaceous plants or un-mowed grass.	2
6. Does it specify the use of native plant species in the riparian buffer zone?	See #5 above	1
7. Are invasive and exotic plants prohibited from being used?		0
<b>Shorelines: Density</b>		
8. Does Zoning Ordinance regulate the width of waterfront lots? 100' or more = 2 75'-99' = 1 Less than 75' = 0	150 feet in Overlay	2
<b>Shorelines: Private Shared Lake Access; Keyhole/Funneling</b>		
9. Does the Zoning Ordinance include Private Shared Lake Access provisions that regulate number of back lots using the shared waterfront lot, development of shared lot, and docks?	Section 8 - HH. Common Use Waterfront-Keyhole or Funneling Limitations	2
<b>Shorelines: Road Ends</b>		
10. Does the Zoning Ordinance regulate Road Ends terminating at the edge of navigable waters, to ensure the right of public access does not include: the ability to install private docks or boat hoists for the overnight mooring of boats?		0

<b>Shorelines: Marinas</b>		
11. Does the community regulate marinas by using special land use provisions or other tools?		<b>0</b>
<b>TOTAL POINTS SECTION II</b>		<b>15</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>22</b>

<b>III. Stormwater Management</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Stormwater: Construction and Redevelopment</b>		
1. Does the community regulate stormwater as part of the Zoning Ordinance?	Section 3.16 - Stormwater Retention The property owner or developer is required to retain on site all stormwater drainage in excess of natural conditions.	<b>2</b>
2. Are stormwater management areas and facilities whether on-site or off-site, required to be designed, constructed, and maintained to prevent flooding and protect surface and ground water quality?	This provision may require stormwater retention ponds where appropriate.	<b>1</b>
3. Is the design of any stormwater management system required to be based upon a 25-year frequency, 24-hour duration storm event?	All stormwater facilities, including detention or retention ponds, shall be designed at minimum to handle a storm with the projected frequency of once every ten years (ten year design storm).	<b>1</b>
4. Does the stormwater require runoff leaving the site to be controlled to a non-erosive velocity, both during and after construction?		<b>0</b>
5. Does ordinance require that all stormwater management systems be regularly evaluated and maintained?		<b>0</b>
TOTAL POINTS SECTION III		<b>4</b>
TOTAL POINTS POSSIBLE		<b>10</b>

<b>IV. Sewer/Septic</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Septic Systems</b>		
1. Does the Zoning Ordinance require an inspection of septic tanks by an authorized inspector? Is there a point of sale inspection requirement?		<b>0</b>
2. Are regulations that pertain to septic systems coordinated with the County Health Department regulations?	Section 3.15 - Water Supply and Sewage Disposal Facilities All water supply and sanitary sewage disposal systems either public or private, for any building hereafter erected, altered or moved upon any premises shall be subject to compliance with District Health Department sanitary code requirements.	<b>2</b>
TOTAL POINTS SECTION IV		<b>2</b>
TOTAL POINTS POSSIBLE		<b>4</b>



<b>V. Groundwater and Wellhead Protection</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Groundwater Protection</b>		
1. Does the Zoning Ordinance have groundwater protection standards for commercial, industrial or other uses that may cause groundwater contamination?	Section 3.17- Groundwater Protection These provisions apply to persons, businesses or entities that use, generate or store hazardous substances in quantities greater than twenty-five (25) gallons or two hundred twenty (220) pounds per month.	<b>2</b>
2. Is Site Plan Review used to ensure there are no unnecessary threats posed to groundwater by new or redevelopment proposals?	Statements relative to the impact of the proposed development on soil erosion, shoreline protection, wildlife habitat, air pollution, water pollution (ground and surface), noise and the scale of development in terms of the surrounding environment.	<b>2</b>
3. Does the Zoning Ordinance prohibit both direct and indirect discharge of hazardous substances to groundwater without appropriate approvals/permits?	State and federal agency requirements for storage, spill prevention, record keeping, emergency response, transport and disposal of hazardous substances and polluting materials shall be met. No discharges to groundwater, including direct and indirect discharges, shall be allowed without required permits and approvals.	<b>2</b>
TOTAL POINTS SECTION V		<b>6</b>
TOTAL POINTS POSSIBLE		<b>6</b>

<b>VI. Impervious Surface Reduction</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Impervious Surface Reduction: Lot Coverage</b>		
1. Does the Zoning Ordinance contain impervious surface area regulations or guidelines for individual lots?		<b>2</b>
<b>Impervious Surface Reduction: Parking Lots</b>		
2. Does Zoning Ordinance allow flexibility to reduce the number of parking spaces constructed, if warranted by the proposed development?	Parking Lot Deferment: Where the property owner can demonstrate that the required amount of parking is excessive, the Planning Commission may approve a smaller parking area.	<b>2</b>
3. Does the Zoning Ordinance require/encourage shared use of parking between adjacent land uses? In what districts?	Two (2) or more buildings or uses may collectively provide the required off-street parking. In which case the required number of parking spaces for the individual uses may be reduced by up to twenty-five (25%) if a signed agreement is provided by the property owners.	<b>2</b>
4. Does the Zoning Ordinance require minimum landscaping standards in parking lots?		<b>0</b>
5. Does the Zoning Ordinance allow for shared driveways and in what instances and in what districts?		<b>0</b>
<b>TOTAL POINTS SECTION VI</b>		<b>6</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>10</b>

<b>VII. Other Relevant Elements</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Floodplains</b>		
1. If FEMA floodplain mapping has been completed, does community participate in the National Flood Insurance Program?		<b>2</b>
2. If yes, is there ordinance language that regulates floodplain development?	Any filling or construction within flood plains or wetlands, or other environmental areas protected by State Law, or other laws, shall require appropriate permits from the government unit or agency having jurisdiction.	<b>2</b>
3. Does the community coordinate their efforts to protect the floodplain with adjoining communities and the county?		<b>0</b>
4. Does the Zoning Ordinance require floodplains to be identified on site plans?	The location of existing environmental features, such as watercourses, wetlands, shorelines, man-made drains, mature specimen trees, wooded areas or any other unusual environmental features.	<b>2</b>
TOTAL POINTS SECTION VII		<b>6</b>
TOTAL POINTS POSSIBLE		<b>8</b>

**Score: 65**

**Total Possible: 96**

**Percent of total possible score: 68%**

# South Branch Township Zoning Assessment

## Lake Huron Watershed Community Collaboration

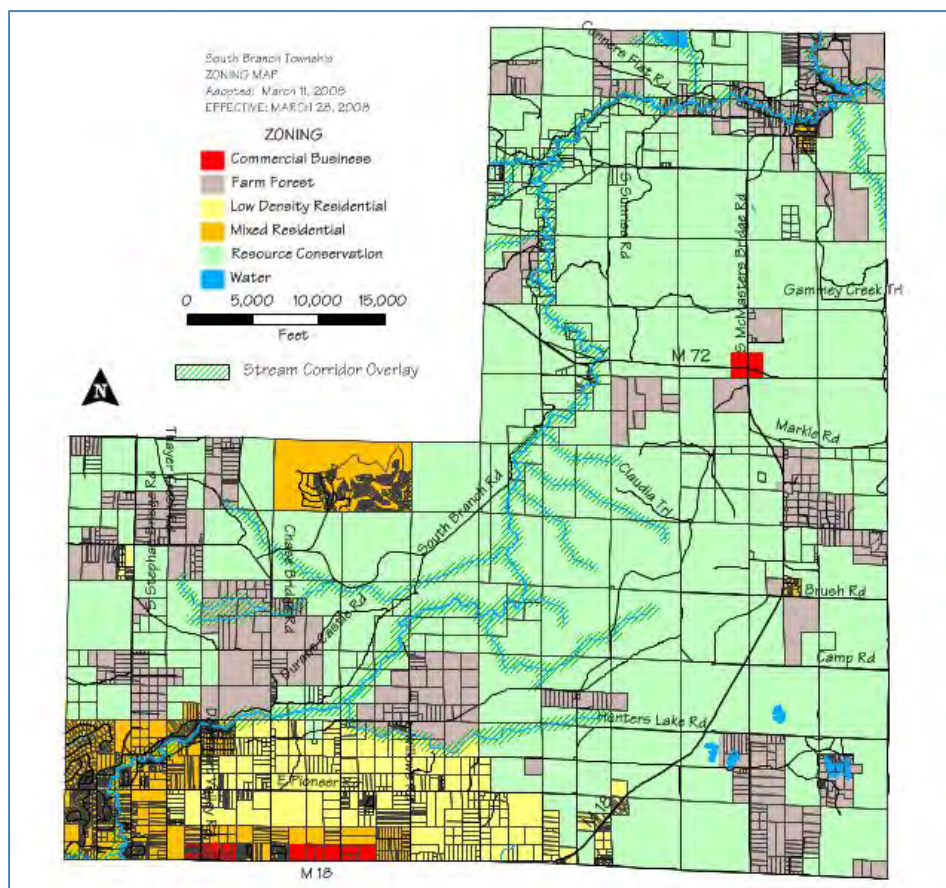
Name of Jurisdiction: South Branch Township, Crawford County

Reviewer: R. L. Deuell

Last amended: June, 2014

Prepared by: MC Planning & Design

*Funding provided by Great Lakes Restoration Initiative, USEPA*



As a part of the Lake Huron Watershed Project, we have completed a water resource protection review of your community's zoning ordinance. The review is based on a list of zoning standards related to surface and ground water quality protection. The results provide the community an opportunity to compare its current standards with recommended water quality protection standards. While it is understood communities are not likely to address all of the areas; we are hopeful your community will review the

information and consider amending your ordinance to enhance water quality protection.

Questions used in the evaluation were derived from several sources, which included Tip of the Mitt Watershed Council, Land Policy Institute and NEMCOG. The questions evaluated basic zoning elements, shorelines, stormwater management, sewer/septic groundwater and wellhead protection, and impervious surface reduction. Each question was then rated for how well the ordinance met the criteria with a value from 2 to 0. A rating of 2 means "Yes, Criteria Was Met," 1 means "Minimally with Comments," and 0 means "Missing." The values for each question were totaled under each category and classified as strong, adequate or lacking.

**Summary of Zoning Review**

**I. Basic Zoning Elements - Strong**

**II. Shorelines - Strong**

**III. Stormwater Management - Adequate**

**IV. Sewer/Septic - Adequate**

**V. Groundwater and Wellhead Protection - Strong**

**VI. Impervious Surface Reduction - Strong**

**VII. Other Relevant Elements - Strong**

I. Basic Zoning Elements 2=Yes; 1=Yes, minimally with comments; 0=missing		
Criteria	Citation and Comments	Points
<b>Zoning Ordinance: Administrative</b>		
1. Does Zoning Ordinance have a statement of purpose or intent that includes protection of water and/or natural resources?	Promote the use of lands and natural resources of the Township in accordance with their character and adaptability and in turn, limit their improper use; Conserve life, property and natural resources	2
2. Does it include a fee system to cover costs to the community for review of proposal applications or appeals, including any professional reviews?	Section 10.05 Fees	2
3. Does the Zoning Ordinance have methods in place for enforcement, including a clearly defined process for inspections and correction of violations?	Section 10.07 Violations and Penalties	2
4. Is the Zoning Ordinance proposal review process coordinated with the receipt of other applicable County, State, and/or Federal permits?	Site plans shall conform to all applicable requirements of state and federal statutes, applicable county regulations and the South Branch Township Master Plan, and approval may be conditioned on the applicant receiving necessary state and federal permits before the actual zoning permit authorizing the special land use is granted.	2
5. Does it require a pre-application or pre-construction meeting for new development or redevelopment proposals?	PUD and Site Plan Review	2
6. Does the Zoning Ordinance include requirements for environmental assessment, at the expense of the applicant, for proposals that include a land area of five acres or more, or building over 50,000 sq. ft.?		0
<b>Zoning Ordinance: Site Plan Review</b>		
7. Does the Zoning Ordinance require Site Plan Review?	Section 6 – Site Plan Review	2
8. Is the Site Plan required to indicate all existing natural features?	The location of existing environmental features, such as watercourses, wetlands, shorelines, man-made drains, mature specimen trees, wooded areas or any other unusual environmental features.	2
9. Does the Site Plan Review process require a Soil Erosion and Sedimentation Control Plan, or coordination with County regulations?	All site plans shall comply with the terms of the Crawford County Soil Erosion and Sedimentation Control Ordinance and Stormwater Ordinance. It shall be the applicant's responsibility to provide documentation of compliance of these County Ordinances.	2
10. Does the Zoning Ordinance prohibit land clearing or soil stripping prior to site plan review?		0
<b>Zoning Ordinance: PUD</b>		
11. Does ordinance include Planned Unit Development (PUD) provisions?	Section 8.19 Planned Unit Development (PUD)	2
12. Do PUDs require inclusion of a minimum open space threshold?	Open Space. A PUD project shall have open space of no less than twenty-five (25%) percent of the entire project area.	2
<b>Zoning Ordinance: Open Space</b>		
13. Are flexible site design criteria or incentives	Other Dimensional Regulations. To	2

available to encourage developers to include open space or cluster design provisions?	promote creativity and flexibility in site design, the Planning Commission may, subject to the following limitations, reduce the other dimensional regulations, as required by the underlying Zoning District,	
14. Does the open space have to be managed in a natural condition?		<b>0</b>
15. Are allowable uses in the open space restricted to low impact uses?		<b>1</b>
16. Is open space required to be protected through a conservation easement or other similar mechanism?	all deed restrictions and easements shall be duly filed with the Crawford County Register of Deeds and copies of recorded documents filed with the Zoning Administrator.	<b>2</b>
<b>Zoning Ordinance: Special Districts</b>		
17. Does the Zoning Ordinance have districts specifically designated to protect natural resources such as Resource Conservation or Forest Resource Management?	Resource Conservation District (RC) Farm Forest District (FF)	<b>2</b>
18. Does the Zoning Ordinance have overlay districts for resource protection such as waterfront or wetlands?	Stream Corridor Overlay District (SC)	<b>2</b>
<b>TOTAL POINTS SECTION I</b>		<b>27</b>
<b>TOTAL POSSIBLE POINTS:</b>		<b>36</b>

<b>II. Shorelines</b> <b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Shorelines: Setbacks Inland Lakes</b>		
1. Does the Zoning Ordinance require a minimum shoreline setback for inland lakes? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	50'	1
<b>Shorelines: Setbacks Streams</b>		
2. Does the Zoning Ordinance require a minimum shoreline setback for streams? SCORE: 75' = 2 25-74' = 1 less than 25' = 0	For the South and North Branches of the Au Sable or the main stream, the setback shall be two hundred (200) feet, For the tributary streams, a minimum of seventy-five (75) feet.	2
<b>Shorelines: Protection strips</b>		
3. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Inland Lakes?	To preserve natural resources, water quality and community scenic and recreational values, a greenbelt no less than fifty (50) feet in width as measured from the ordinary high water mark of a lake or stream shall be established and maintained on all waterfront lots. Main Branch, North Branch and South Branch of the Au Sable River; and Beaver Creek, Douglas Creek and Thayer Creek. It is the intention of the Township to support and administer the Natural Rivers Act	2
4. Does Zoning Ordinance require riparian buffers or greenbelts, a minimum of 30' deep, on Streams?	See above	2
5. Does Zoning Ordinance specify the degree of vegetation which may be removed in the riparian buffer zone or greenbelt?	At least seventy (70%) percent of the lot width at the water line shall be kept in natural vegetation; either trees, shrubs, herbaceous plants or unmowed grass.	2
6. Does it specify the use of native plant species in the riparian buffer zone?	Native Vegetation Buffer A Native vegetation buffer that includes the AuSable River's mainstream and tributaries as well as all corridor land	2
7. Are invasive and exotic plants prohibited from being used?		0
<b>Shorelines: Density</b>		
8. Does Zoning Ordinance regulate the width of waterfront lots? 100' or more = 2 75'-99' = 1 Less than 75' = 0	200'	2
<b>Shorelines: Private Shared Lake Access; Keyhole/Funneling</b>		
9. Does the Zoning Ordinance include Private Shared Lake Access provisions that regulate number of back lots using the shared waterfront lot, development of shared lot, and docks?	Limitations on Funnel Development Funnel development shall not be allowed on the Au Sable River or designated tributaries.	2
<b>Shorelines: Road Ends</b>		



10. Does the Zoning Ordinance regulate Road Ends terminating at the edge of navigable waters, to ensure the right of public access does not include: the ability to install private docks or boat hoists for the overnight mooring of boats?		0
<b>Shorelines: Marinas</b>		
11. Does the community regulate marinas by using special land use provisions or other tools?		0
<b>TOTAL POINTS SECTION II</b>		<b>15</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>22</b>

<b>III. Stormwater Management</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Stormwater: Construction and Redevelopment</b>		
1. Does the community regulate stormwater as part of the Zoning Ordinance?	Section 3.15 Stormwater Retention	<b>2</b>
2. Are stormwater management areas and facilities whether on-site or off-site, required to be designed, constructed, and maintained to prevent flooding and protect surface and ground water quality?	The property owner or developer of property located in either the Commercial and Business District or the Industrial District is required to retain on site all stormwater drainage in excess of natural conditions. This provision may require stormwater retention ponds where appropriate.	<b>2</b>
3. Is the design of any stormwater management system required to be based upon a 25-year frequency, 24-hour duration storm event?	All stormwater facilities, including detention or retention ponds, shall be designed at minimum to handle a storm with the projected frequency of once every twenty-five (25) years (twenty-five (25) year design storm).	<b>2</b>
4. Does the stormwater require runoff leaving the site to be controlled to a non-erosive velocity, both during and after construction?		<b>0</b>
5. Does ordinance require that all stormwater management systems be regularly evaluated and maintained?		<b>0</b>
TOTAL POINTS SECTION III		<b>6</b>
TOTAL POINTS POSSIBLE		<b>10</b>

<b>IV. Sewer/Septic</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Septic Systems</b>		
1. Does the Zoning Ordinance require an inspection of septic tanks by an authorized inspector? Is there a point of sale inspection requirement?		<b>0</b>
2. Are regulations that pertain to septic systems coordinated with the County Health Department regulations?		<b>2</b>
TOTAL POINTS SECTION IV		<b>2</b>
TOTAL POINTS POSSIBLE		<b>4</b>

<b>V. Groundwater and Wellhead Protection</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Groundwater Protection</b>		
1. Does the Zoning Ordinance have groundwater protection standards for commercial, industrial or other uses that may cause groundwater contamination?	Section 3.16 Groundwater Protection These provisions apply to persons, businesses or entities that use, generate or store hazardous substances in quantities greater than twenty-five (25) gallons or two hundred twenty (220) pounds per month.	<b>2</b>
2. Is Site Plan Review used to ensure there are no unnecessary threats posed to groundwater by new or redevelopment proposals?	The Planning Commission may require a performance bond or similar assurance for safeguards prior to approval. The Planning Commission may require site plan review at five (5) year intervals. Statements relative to the impact of the proposed development on soil erosion, shoreline protection, wildlife habitat, air pollution, water pollution (ground and surface), noise and the scale of development in terms of the surrounding environment.	<b>2</b>
3. Does the Zoning Ordinance prohibit both direct and indirect discharge of hazardous substances to groundwater without appropriate approvals/permits?	State and federal agency requirements for storage, spill prevention, record keeping, emergency response, transport and disposal of hazardous substances and polluting materials shall be met. No discharges to groundwater, including direct and indirect discharges, shall be allowed without required permits and approvals.	<b>2</b>
TOTAL POINTS SECTION V		<b>6</b>
TOTAL POINTS POSSIBLE		<b>6</b>

<b>VI. Impervious Surface Reduction</b>		
<b>2=Yes; 1=Yes, minimally with comments; 0=missing</b>		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Impervious Surface Reduction: Lot Coverage</b>		
1. Does the Zoning Ordinance contain impervious surface area regulations or guidelines for individual lots?		<b>2</b>
<b>Impervious Surface Reduction: Parking Lots</b>		
2. Does Zoning Ordinance allow flexibility to reduce the number of parking spaces constructed, if warranted by the proposed development?	Where the property owner can demonstrate that the required amount of parking is excessive, the Planning Commission may approve a smaller parking area. Area of sufficient size to meet the parking space requirements of this Article shall be retained as open space	<b>2</b>
3. Does the Zoning Ordinance require/encourage shared use of parking between adjacent land uses? In what districts?	Two (2) or more buildings or uses may collectively provide the required off-street parking. In which case the required number of parking spaces for the individual uses may be reduced by up to twenty-five (25%) percent if a signed agreement is provided by the property owners. Such parking requirements shall bind future owners of parcels and shall be recorded with the Register of Deeds office.	<b>2</b>
4. Does the Zoning Ordinance require minimum landscaping standards in parking lots?	Separate landscaped areas shall be required either within or at the perimeter of parking lots. There shall be one (1) tree for every eight (8) parking spaces, with minimum landscaped space within a designated parking area of fifty (50) square feet. A minimum distance of three (3) feet shall be established between proposed tree or shrub plantings and the backside of the curb or edge of the pavement.	<b>2</b>
5. Does the Zoning Ordinance allow for shared driveways and in what instances and in what districts?		<b>0</b>
<b>TOTAL POINTS SECTION VI</b>		<b>8</b>
<b>TOTAL POINTS POSSIBLE</b>		<b>10</b>

<b>VII. Other Relevant Elements</b> 2=Yes; 1=Yes, minimally with comments; 0=missing		
<b>Criteria</b>	<b>Citation and Comments</b>	<b>Points</b>
<b>Floodplains</b>		
1. If FEMA floodplain mapping has been completed, does community participate in the National Flood Insurance Program?	04/17/12(M)	<b>2</b>
2. If yes, does is there ordinance language that regulates floodplain development?	Section 5.07 Stream Corridor Overlay District (SC) Cutting or filling for building, including appurtenances, on the flood plain and filling for buildings within four hundred (400) feet of the river's edge where in a regulated wetland, shall be prohibited. Dredging or filling for the construction of fish or wildlife ponds within five hundred (500) feet of the river requires a permit.	<b>2</b>
3. Does the community coordinate their efforts to protect the floodplain with adjoining communities and the county?		<b>0</b>
4. Does the Zoning Ordinance require floodplains to be identified on site plans?	The location of existing environmental features, such as watercourses, wetlands, shorelines, man-made drains, mature specimen trees, wooded areas or any other unusual environmental features.	<b>2</b>
TOTAL POINTS SECTION VII		<b>6</b>
TOTAL POINTS POSSIBLE		<b>8</b>

**Score: 70**

**Total Possible: 96**

**Percent of total possible score: 73%**