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## CHAPTER 4

### WATERSHED PLAN GOALS & OBJECTIVES

#### 4.0 Introduction

After the watershed analysis had been completed, the next step in the planning process followed by the group was to come up with goals and objectives for the Upper Clinton subwatershed. This chapter explains the process the group followed, describes who was involved, and presents the goals and objectives the group decided upon.

#### 4.1 Determining Goals and Objectives for the Upper Clinton Subwatershed

The subwatershed group felt it was very important to solicit input from other people in creating the goals for this plan. The group held two meetings to accomplish this: one in August, 2004, and the other in February, 2005.

##### Steering Committee Meeting

The first meeting in August, 2004 was scheduled during the day, and members of the Steering Committee were invited to attend. As described in the Public Participation Plan, the Steering Committee involves a wide range of regional and county agencies, state environmental agencies, business organizations, and others who have information about the subwatershed and a unique perspective on water quality issues. Example invitees include Chamber of Commerce representatives, school district staff, lake associations, Oakland County divisions such as the Drain Commissioner's Office, Road Commission, Health Department, and Planning and Economic Development Department, as well as the Southeast Michigan Council of Governments (SEMCOG), the Michigan Department of Transportation (MDOT), and the Michigan Department of Environmental Quality.

Participants were asked to answer three questions after they heard a presentation describing the current state of the subwatershed. These questions were:

- 1) ***What do we know about our watershed?*** This question was asked to gather any additional information that should be added to the Watershed Analysis chapter. The meeting participants responded to this question by using information in the Impervious Study, and stated that redevelopment should focus on Best Management Practices (BMPs), increasing required landscaping, and limiting removal of riparian vegetation (mowing to the edge). The group also thought that MDOT needs to focus on drainage impacts, and environmental studies.
  
- 2) ***How do we use/value the water resources in the watershed?*** This was asked to determine if there were any additional uses of water resources valued by the participants that were not already included in the State's "Designated Uses" listing. Responses to this question resulted in the following information:

**Table 4.1**  
**Water Resource Uses 8-24-04 Steering Committee Meeting**

Designated Uses	Desired Uses
1. Agriculture	
2. Industrial water supply	
3. Public water supply at point of intake	
4. Navigation	
5. Warmwater fishery	1. Fishing
6. Other indigenous aquatic life and wildlife	2. Nature observation
7. Partial body contact recreation	3. Boating (motor, sail, canoe, kayak)
8. Total body contact recreation between May 1 and October 31	4. Swimming
	5. Jet skiing
	6. Trails
	7. Education
	8. Drinking water (ground)
	9. Aesthetics
	10. Maintain the function of rainwater and water resources (groundwater recharge, infiltration, open spaces, forested areas, wetlands, waters edge vegetation)

- 3) ***What goals do we have for the watershed and/or the watershed plan?*** This question was asked to gather input on how the participants view the future of the watershed. The group answered this last question with the following top five goals for the watershed:
- a) Provide tools for communities to protect sensitive areas (i.e. wetlands ordinance).
  - b) Reduce the effects of commercial corridors/impervious impacts.
  - c) Because forty-one percent of the subwatershed is designated as residential land use, we need to educate the public/residents.
  - d) Because thirty percent of the subwatershed is used for recreation, we need to work with those in charge of operating and maintaining these properties.
  - e) Regional drainage. Control flashy flows during storm events and during dry conditions.

### **Public Stakeholder Meeting**

The second meeting, which was held in February, 2005, was scheduled during the evening. Because this meeting was intended to target residents and members of the public at large, each community created a list of potential stakeholders using the five stakeholder categories identified in the Public Participation Plan. These categories were as follows:

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- 1) Developers/Builders/Home Builders Associations
  - 2) Lake Boards/ Lake Property Owners/ Riparian Land Owners
  - 3) Planning Commission/ Township Boards/ City Councils
  - 4) Landscaping Industry (MNLA, Nurseries – especially Bordines)
  - 5) School Districts/ School Environmental Programs

Each community member personally invited the people on their lists to the meeting. As a result, the meeting was well attended with 50 participants and all the above named categories represented. The meeting began with introductions of all participants, and a presentation outlining the results of the watershed analysis. Then the group was divided into six small groups, and each was asked to come up with goals for the subwatershed, based on the findings of the analysis and their own knowledge and understanding of water quality in their community. A worksheet was provided that listed a few “example” goals to get everyone started. A Core Group member from each community facilitated the small groups to ensure that everyone had a chance to share their ideas and to keep the conversation going. Once each group had created a list of goals, they were asked to prioritize these goals to come up with their “top” five. At the end of the meeting, each small group shared their top five goals with the large group. The top five goals for each group are listed in the following table. Complete results of each small group’s discussion are included in the Appendix of this document.

**Table 4.2**  
**Goals per Group 2-1-05 Public Meeting**

<b>Group No.</b>	<b>Goal #1</b>	<b>Goal #2</b>	<b>Goal #3</b>	<b>Goal #4</b>	<b>Goal #5</b>
<b>1</b>	Educate residents about fertilizers, alternative landscaping, pesticides	Update local ordinances to preserve natural areas and reduce stormwater problems	Change public attitudes about what is aesthetically pleasing	Educate developers	Locate old drains to determine where they go and how they may be contributing to problems
<b>2</b>	Create long range plans for storm drains.	Reduce waterfowl/seagull problems	Promote use of less damaging fertilizers	Improve water management on/along roads	Protect river corridors in Townships (100’ buffers) include wetlands

Group No.	Goal #1	Goal #2	Goal #3	Goal #4	Goal #5
3	Contain storm water runoff	Conduct consistent monitoring and testing of lakes and streams	Create regional agency for lake boards for coordinated efforts	Review design standards in communities for consistency	Address phosphorus problem (reduce on residential properties, public education, buffer zones)
4	Educate developers and municipal officials on sustainable storm water management activities (BMPs)	Increase lake area/riparian residents' awareness and involvement: geese, fertilizer, landscaping	Preserve/keep intact as many high quality wetlands as possible	Educate residents on septic maintenance	Provide incentives to residents, developers & others for good practices (landscaping awards, etc.)
5	Land Use Planning: Increase buffers, BMPs (\$), cluster developments, indigenous species, mitigation, decrease impervious areas	Fishery: control pollutants, address invasive species, identify species, identify location, water temperature control	Public Awareness: workshops, media coverage, publish data, organizations	Recreational Access: Evaluate lake access, lake reclamation, remove pollutants, geese control, timely septic maintenance	High Phosphorus: septic maintenance
6	Increase regulation of phosphorus	Promote use of native vegetation	Buffers within developments	Increase involvement of lawn care companies	Promote monitoring/enforcement of septic fields and self-contained sewer systems

## Core Group Input

The Core Group, made up of representatives from each subwatershed community, then consolidated this information to determine the desired uses, how these uses are impacted by pollutants within the subwatershed, and the top goals for the subwatershed plan. They then determined the objectives of each goal, oftentimes which reflect “goals” that were discussed at the Steering Committee or Public Input meetings.

## 4.2 Designated and Desired Uses of the Subwatershed

As described by the Michigan Department of Environmental Quality, the primary criterion for water quality is whether the water body meets designated uses. “Designated Uses” are recognized uses of water established by the state and federal water quality programs. In Michigan, the goal is to have all waters of the state meet all designated uses. While not all of these uses may be attainable, meeting all of them is the ultimate goal. As described above, the “Desired” uses are additional uses for water resources identified by the subwatershed partners.

Based on the water quality data available, and existing land use patterns within the subwatershed, the following table describes how the designated uses are impaired by different types of pollutants.

**Table 4.3**  
**Relationship between Uses & Pollutants**

Designated Use	Impaired or Threatened?	Pollutants/Threats
<b>Agricultural water supply</b>	No impairment identified	
<b>Industrial water supply</b>	No impairment identified	
<b>Public water supply at point of intake</b>	No impairment identified	
<b>Navigation</b>	Impaired in some areas (lakes) due to aquatic plants	Phosphorous (k)
<b>Warmwater fishery</b>	Impaired in some areas	Phosphorus (k)
		Hydrology (k)
		Sediment (s)
<b>Other indigenous aquatic life and wildlife</b>	Impaired in some areas	Phosphorus (k)
		Hydrology (k)
		Sediment (s)
<b>Full body contact recreation</b>	Impaired in some areas	Phosphorus (k)
		E-coli (k)
<b>Partial body contact recreation</b>	Impaired in some areas	Phosphorus (k)
		E-coli (k)
<b>Desired Use</b>		
<b>Trails</b>	Potential trail locations impaired in some areas	Hydrology (k) (Stream bank erosion)
<b>Education</b>		
<b>Drinking water (ground)</b>	Impaired in some areas	Hydrology (k) (Impaired infiltration into groundwater due to impervious surfaces)
<b>Aesthetics</b>	Impaired in some areas	Phosphorus (k) (Excessive plant growth & algae blooms)
		Hydrology (k) (Stream bank erosion)
		Sediment (s)
<b>Maintain function of rainwater and water resources</b>	Impaired in some areas	Hydrology (k) (Impaired infiltration into groundwater due to impervious surfaces)
		Sediment (s)

(k) = Known; (s) = Suspected

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### 4.3 Upper Clinton Goals and Objectives

As described in the land use analysis portion of this document, the subwatershed ranges from undeveloped natural areas to urban corridors and suburban development. Because of this range, the main intent of the watershed plan is twofold: to protect water features and natural areas that have not yet been developed, and to restore areas that have already been developed. With this in mind, the Upper Clinton Subwatershed Core group used the data obtained through the stakeholders and public meetings and the watershed analysis to establish the goals for the watershed plan. These goals are intentionally broad to cover all the main areas of impairment, and also to provide flexibility in addressing the goals.

The goals are considered to be long-term goals, which will be accomplished beyond the five-year scope of this plan. Progress will be evaluated based on water quality data obtained through the sources identified in the watershed analysis, and by the success of programs implemented by the participating communities. The objectives provide a general list of activities, tasks or Best Management Practices (BMPs) that are recommended for addressing and ultimately reaching each long term goal. Note that all objectives will not be applicable or feasible for every participating community.

The goals have been listed in order of priority. Priority rankings were determined by the impact the issue was having on the subwatershed as determined by the watershed analysis data, and then opinions of stakeholders. Therefore, objective data was considered first in setting goals, and then subjective opinions were used to refine and finalize the goal priorities.

Measurable objectives that describe how each goal can be accomplished were then developed by the Subwatershed Group. The way the objectives are worded makes the time-frame in which they could be carried out flexible. They are broad, and on-going, and do not represent a single action that, once accomplished, will make the objective obsolete. However, actions (as described starting on page 6-5) can be taken to address the objectives in the short-term (five years), but the objectives will remain something to strive toward in future permit cycles.

#### **Long Term Goal 1: Restore and protect water quality in local waterways and lakes.**

- Objectives:
- 1-A: Identify and reduce sources of bacteria and illicit discharges.
  - 1-B: Reduce nutrient loading contributing to excessive aquatic plant growth.
  - 1-C: Reduce siltation from construction sites and road crossings.
  - 1-D: Promote and implement pollution prevention programs.

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**Long Term Goal 2: Reduce flow variability.**

- Objectives:
- 2-A: Minimize the increase in impervious surfaces and mitigate the amount of existing impervious surface.
  - 2-B: Restore and protect riparian vegetation.
  - 2-C: Reduce the amount of stormwater runoff to predevelopment patterns and levels to stabilize stream flow.

**Long Term Goal 3: Improve local regulations regarding protection of natural areas and water resources.**

- Objectives:
- 3-A: Develop natural feature inventories and/or assessments to create plans for preservation and/or restoration of natural features.
  - 3-B: Develop goals and policies in the Master Plan regarding natural feature protection and management.
  - 3-C: Develop ordinances for managing natural features to benefit stormwater quality and quantity.

**Long Term Goal 4: Increase public understanding of their role in protecting water quality.**

- Objectives:
- 4-A: Develop and/or promote existing public involvement programs (workshops, events, etc.) to improve the public's understanding of their role in protecting water quality.
  - 4-B: Develop and/or continue information and education programs (brochures, newsletter articles, etc.) to disseminate water quality messages to the public.

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**Long Term Goal 5: Protect and restore quality aquatic and riparian habitats.**

- Objectives:
- 5-A: Develop a habitat protection and/or restoration plan.
  - 5-B: Reduce siltation from construction sites and road crossings.
  - 5-C: Restore and protect riparian vegetation.
  - 5-D: Develop natural feature inventories and/or assessments to create plans for preservation and/or restoration of natural features.
  - 5-E: Develop goals and policies in the Master Plan regarding natural feature protection and management.
  - 5-F: Develop ordinances for managing natural features to benefit stormwater quality and quantity.

**Long Term Goal 6: Increase opportunities for passive and active recreational uses while at the same time protecting water resources.**

- Objectives:
- 6-A: Identify key areas to protect and restore, and plan for recreational and interpretive opportunities adjacent to lake shores and riparian corridors.
  - 6-B: Develop recreation plans for key natural areas that are consistent with this Watershed Management Plan.

These goals relate to the Designated and Desired uses as follows:

**Table 4.4  
Relationship between Goals & Uses**

Goals	Designated and Desired Uses									
	N	F	WL	PR	TR	T	E	DW	A	FU
1. Restore and protect water quality in local waterways and lakes.	X	X	X	X	X		X	X	X	X
2. Reduce flow variability.	X	X	X	X	X		X	X	X	X
3. Improve local regulations regarding protection of natural areas and water resources.	X	X	X	X	X	X	X	X	X	X
4. Increase public understanding of their role in protecting water quality.	X	X	X	X	X	X	X	X	X	X
5. Protect and restore quality aquatic and riparian habitats.		X	X	X	X		X	X	X	
6. Increase opportunities for passive and active recreational uses.	X	X	X	X	X	X	X			

N= Navigation

F= Warmwater fishery

WL= Other indigenous aquatic life and wildlife (Nature observation)

PR= Partial body contact recreation (Boating – motor, sail, canoe, kayak)

TR= Total body contact recreation between May 1 and October 31 (Swimming, jet skiing)

T= Trails

E= Education

DW= Drinking water (ground)

A= Aesthetics

FU= Maintain function of rainwater and water resources (groundwater recharge, infiltration, open spaces, forested areas, wetlands, waters edge vegetation)