

Chapter 5: Specific Goals and Objectives for Restoration of Beneficial Uses

5.1 Process for establishing goals and objectives

5.1.1 Goals listed in the Stage I RAP

As part of the Stage I Rochester Embayment Remedial Action Plan (RAP), the Monroe County Water Quality Management Advisory Committee (WQMAC) developed a list of water quality goals and objectives for the Rochester Embayment watershed (see Chapter 3 "Water Use and Quality Goals and Objectives" of the Stage I RAP). The WQMAC used the following definitions for goals and objectives:

Goals - A goal is a statement of purpose about the end result (desired state of being) of a proposed management activity.

Objectives - An objective is a specific, quantifiable step that will lead to fulfilling the goal (statement of condition).

The goals and objectives were based on the list of Beneficial Use Impairments developed by the International Joint Commission (IJC) and applied to the Rochester Embayment. The goals were devised to reflect unique local conditions or to reflect specific concerns of the WQMAC. Ultimately, the goals and objectives were formally adopted by the WQMAC and included in the Stage I RAP.

For a discussion of the relationship between the RAP goals/objectives/delisting criteria and federal and state standards/objectives/guidelines see Figure 4-1 "Guidelines for Recommending the Listing and Delisting of Great Lakes Areas of Concern" and Appendix B "Water Resources Goals" of the Stage I RAP.

Actions which would contribute to the achievement of the listed objectives were also developed as part of this process. These actions formed the basis of the remedial measures which are discussed in Chapter 7 "Possible New Remedial Measures".

5.1.2 Incorporation of human health considerations in the RAP

The suggestion that WQMAC examine how human health concerns were being incorporated into the RAP arose from two sources: WQMAC review of proposed new remedial actions, and encouragement by the IJC that human health concerns be incorporated into RAPs. The WQMAC listed the pros and cons of including human health issues in the RAP, examined the contents of Stage I and the major chapters of Stage II, and suggested ways that human health issues could be or already were included. The WQMAC then asked its Executive Committee to develop options for the full Committee to vote on. The Executive Committee developed the following two options:

Option #1: Recognize that human health is a consideration in the RAP and will be referred to in Chapters 1 (Introduction) and 5 (Goals).

Option #2: Further develop the existing RAP goals (see Stage I, pages 3-10 through 3-12) to incorporate human health concerns.

The Executive Committee recommended that the WQMAC select:

- Option #1 only, or
- Option #1 and #2 together.

The WQMAC reached consensus on Option #1, and formed a task group to examine the existing goals to see if changes should be made. The task group recommended changing the first goal.

Former text: Virtual elimination of toxic substances causing fish consumption advisories.

Suggested text: Virtual elimination of toxic substances that impair (adversely affect) human health and/or cause fish and wildlife consumption advisories.

The WQMAC reached consensus that the suggested text be adopted, and also reviewed and commented on the narrative regarding the incorporation of human health considerations in the RAP (see 5.3.2).

5.2 Linking locally developed goals with related use impairments

The following table links the locally developed goals with the use impairments that were identified as part of the Stage I Rochester Embayment RAP (see Stage I RAP, Chapter 4 "Water Quality Conditions/Problems").

Table 5-1. Locally Developed Water Quality Goals

Goals (summarized)	Use Impairments *												
	1	3	5	6	7	8	9	10	11	12	13	14	
Virtual elimination of toxic substances that impair human health	X	X	X	X	X							X	
Public beaches are open for swimming					X	X		X	X				
Shorelines are free of aesthetically objectionable materials									X				
Contaminated sediments in the lower Genesee River have no negative impact upon water quality & biota		X	X	X	X							X	X
Water/ shore habitats support thriving fish & wildlife populations		X	X	X		X						X	X
Diversity of plant & animal communities		X	X	X								X	X
Drinking water produced from Lake Ontario has no unusual or unpleasant taste						X	X			X			
Benthic macroinvertebrate community in the lower Genesee River is not degraded by pollution				X									
Littoral zone is mesotrophic rather than eutrophic						X							
Water from the Embayment can be used with minimum added cost due to exotic species										X			

* Use Impairments Identified in the Rochester Embayment:

- | | |
|--|---|
| <ul style="list-style-type: none"> 1. Restrictions on fish and wildlife consumption 3. Degradation of fish and wildlife populations 5. Bird or animal deformities or reproductive problems 6. Degradation of benthos 7. Restrictions on dredging activities 8. Eutrophication or undesirable algae | <ul style="list-style-type: none"> 9. Drinking water taste and odor problems 10. Beach closings 11. Degradation of aesthetics 12. Added cost to agriculture or industry 13. Degradation of plankton populations 14. Loss of fish and wildlife habitat |
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5.3 Additional Information

5.3.1 Federal and New York State water quality goals

Federal and New York State water quality goals, outlined in laws and regulations that support water quality, were described in the Stage I RAP. However, New York State water quality regulations Parts 800 through 941 of Title 6 of the Codes, Rules and Regulations of the State of New York: Stream and Pond Classification, were omitted.

In New York State a stream classification system has been developed to protect the highest and best use of State water resources as determined by the New York State Department of Environmental Conservation (NYSDEC). It does not necessarily reflect existing water use or quality. The classification system is as follows:

Class A Special	International boundary waters
Class AA and A	Drinking and food processing
Class B	Primary contact recreation (i.e., swimming)
Class C	Secondary contact recreation (i.e., fishing and boating)
(ts)	Trout spawning
(t)	Trout fishing

Note that (t) or (ts) may appear as a suffix to Classes AA, A, B and C. When added, these suffixes indicate the waterbody shall receive protection for trout fishing or for trout spawning, as well as the designated best use classification. The lower Genesee River is designated as Class B and the Rochester Embayment of Lake Ontario is designated as Class A. Information regarding the classification of other segments or streams within the Rochester Embayment watershed is available from the NYSDEC.

The NYSDEC has also established New York Water Quality Standards (chemical, physical and biological) for each water classification. These Standards are used to define State Permit Discharge Elimination System (SPDES) permit limits that assure that a waterbody can be used for its best use classification.

5.3.2 Incorporation of human health considerations in the Rochester Embayment RAP

Human health considerations are incorporated in the RAP process in the following ways.

5.3.2.1 Recognition that "ecosystem" includes humans

The definition of "Great Lakes Basin Ecosystem" in the Great Lakes Water Quality Agreement is: "The interacting components of air, land, water and living organisms, *including humans*, within the drainage basin..." (GLWQA as amended in 1987, page 3).

It has been recognized throughout the Stage II RAP process that remedial measures to restore beneficial uses of the environment and to protect wildlife health also protect human health.

5.3.2.2 Development of local goals that are related to human health

Two of the local goals developed for the Rochester Embayment Remedial Action Plan, as part of the Stage I process, are directly related to human health.

- "Virtual elimination of toxic substances that impair (adversely affect) human health and/or cause fish consumption advisories" (amended since the Stage I RAP was completed).
- Public beaches in the Rochester Embayment are open for swimming, based upon best available health and safety standards.

5.3.2.3 Continuation of educational activities related to human health

The Monroe County Water Quality Management Advisory Committee has demonstrated a commitment to human health. One of its task groups developed and distributed a pamphlet that explains the New York State Department of Health fish consumption advisory. Another task group sponsored a conference that reviewed what is known about the effects of hormone-mimicking chemicals on humans and wildlife. Educational programs such as these will be developed in the future.

5.3.2.4 After the Stage II RAP has been completed, there will be continual evaluation of proposed new remedial measures that involve human health

Any proposals for new remedial measures related to human health that are submitted as part of the Stage II RAP review process will be evaluated early in 1997. After that, proposals may be submitted and will be reviewed every other year. (See the Chapter 7 section on "Continually evaluate proposals for possible new remedial measures".)

Authors: Carole Beal and Todd Stevenson

