

Appendix A:
Genesee River Sediment Toxics Survey

Genesee River Sediment Toxics Survey (205j)

Background:

Problem that this measure was designed to address:

Degradation of benthos

The objectives of the Monroe County Department of Health (DOH) survey were:

- To determine the toxicity of the lower Genesee River sediment, particularly emphasizing the relationship to harbor dredging impacts.
- To establish a database prior to the diversion of combined sewer overflows to allow determination of diversion impacts.
- To attempt to identify any problem areas, locate the source of the discharge(s) and recommend abatement alternatives.

Affected water body: Lower Genesee River, Lake Ontario

Date project initiated: Phase I took place on May 16, 1984. Phase II took place from August 2 to November 15, 1984.

Completed or ongoing? The Survey is completed. Many of the recommendations are ongoing.

Project description: The project took place in two phases. For Phase I, sediment samples were composited from locations on a straight line across the River between east and west banks (see Figure A-1). The first composite sample was taken in the Lower Turning Basin near the mouth of the River. The second composite sample was taken two miles upstream of the mouth in the Upper Turning Basin.

For Phase II (see Figure A-2), composite samples were collected at:

- Riverside Cemetery
- Downstream of King's Landing Treatment Plant
- Upstream of King's Landing Treatment Plant
- Lower Falls
- Barge Canal - West Guard Lock
- Barge Canal Junction
- Downstream of Gates-Chili-Ogden Wastewater Treatment Plant (GCO)
- Upstream of Gates-Chili-Ogden Wastewater Treatment Plant

In addition to collecting samples, this Study compared sampling data to that collected in previous studies (see Table A-1).

During the course of the survey a technical advisory team guided the process. Members of the team represented the Monroe County Departments of Health, Planning, Pure Waters,

Engineering, and the Environmental Management Council; New York State Department of Environmental Conservation (NYSDEC); City of Rochester; Eastman Kodak Company; Rochester Gas and Electric Corporation; U.S. Army Corps of Engineers; and Rochester Institute of Technology. The technical advisory team was responsible for the conclusions and recommendations.

After analysis of the samples, the conclusions were:

1. The levels of toxic metals and organic contaminants evaluated, for which there is data from previous reports, generally remained unchanged or are declining.
2. The number of organic chemicals found, but not reported previously, is small and the levels detected are low.
3. Transport, chemical interactions and degradation processes are complex and in need of further study.
4. Organic contaminants from tar residues not currently considered a problem may be a concern in the future. (See the Chapter 7 section on "Investigate contamination in the Genesee River gorge.")
5. Toluene upstream of the GCO discharge, and benzene, toluene and xylene near the Lower Falls are most likely from landfills or other nonpoint sources.
6. Cadmium, silver, and copper, priority metals in Lake Ontario, according to the International Joint Commission, are all at sufficiently elevated levels in lower river sediments to warrant further investigation. (It was findings such as this that led the International Joint Commission to the idea of use impairments and areas of concern.)
7. The present Environmental Protection Agency (EPA) schedule of assessing suitability for open lake disposal of dredged spoils every five years appears to be adequate based on the levels of contaminants found in this study.

For recommendations of the Survey, see "Effectiveness", below.

Total cost: \$27,200 of which \$9,848 was in-kind services

Sources of funding: Section 205(j) of the Clean Water Act, via the New York State Department of Environmental Conservation (NYSDEC)

Responsible entity: Monroe County Department of Health for the survey, Monroe County Water Quality Management Agency (WQMA) for recommendations

Effectiveness:

Recommendations - Management/Reporting

1. The Monroe County WQMA should coordinate Genesee River Basin research in the County and consider establishing a basin or subbasin water quality committee.

Response: The Monroe County Water Quality Management Agency is responsible for water quality management oversight and coordination. During the 1980s, the Agency took no direct responsibility for coordinating Genesee River Basin research in the County. In the 1990s, however, the structure of water quality management administration in Monroe County was modified to establish both an Agency and a Water Quality Coordinating Committee. The Coordinating Committee has been working to plan and coordinate many water quality activities, including research. The Coordinating Committee has kept itself abreast of ongoing research, including research in the Genesee Basin. The Committee has also coordinated the initiation of new research.

The already existing Water Quality Management Committee was reorganized in 1989 and renamed the Water Quality Management Advisory Committee. Its purpose is to advise on the Rochester Embayment Remedial Action Plan and other water quality issues. During 1989 and 1990 three basin subcommittees were formed for the Lake Ontario West Basin, Genesee River Basin, and Lake Ontario Central/Irondequoit Basin. (See Chapter 1 of the Stage I RAP.)

The Genesee Basin Subcommittee initially had representatives from the entire basin. However, attendance at their meetings was very small, and a decision was made to achieve coordination and public participation on water quality planning in the basin with a two-pronged approach. The first prong was a Monroe County Genesee Basin Subcommittee, and the second was to encourage interested members of the public in the Genesee Basin to be included in Water Quality Coordinating Committees in their respective counties. The intention was to sponsor periodic coordination meetings of the Genesee Basin County Water Quality Coordinating Committees. Both the Monroe County Genesee Basin Subcommittee and the coordinating meetings of the Genesee Basin WQCCs have been dormant since 1993. The development of an effective Genesee Basin Water Quality Coordinating Committee needs to be addressed.

2. An annual report assessing all available data, including toxics, should be prepared by the WQMA and NYSDEC.

Response: Neither the WQMA nor the NYSDEC produces an annual report that includes sediment analysis. However, the NYSDEC Rotating Intensive Basin Studies (RIBS) Program, which produces a report for the Genesee River Basin every six years, samples sediment once per year for two consecutive years in each six-year cycle. The sampling site is at the Genesee docks, an historic sampling site since 1968. The sediments are analyzed for aluminum, cadmium, copper, iron, lead, manganese, mercury, nickel, zinc, total volatile solids, total organic carbon, and acid volatile sulfides.

In 1993 the Stage I RAP assessed all available data, including toxics, and made the information available to the public.

3. The WQMA and NYSDEC should establish sediment quality objectives for the Genesee River Harbor.

Comment: This has not been accomplished. It is a possible new remedial action described in the Chapter 7 section "Establish sediment quality goals for the Genesee River harbor."

4. In addressing landfill problems the WQMA should monitor Superfund progress through the Landfill Review Committee reports.

Comment: The Waste Site Advisory Committee, the successor to the Landfill Review Committee, monitors Superfund activities in Monroe County. (See the Chapter 6 section on "Monroe County Waste Site Advisory Committee and proper closure of waste sites.")

5. The County should continue to use the approach of addressing sediment toxics identified in the Genesee River by locating source(s) and reducing discharges to levels adequate to meet sediment quality objectives (the objectives of recommendation 3).

Comment: Although the County has not established sediment quality objectives, it is locating many sources of toxics, and will be reducing discharges as part of the Remedial Action Plan process.

Recommendations - Monitoring/Assessment

6. Standard sediment sampling locations should be established in the Genesee River.

Comment: This Study used U.S. Army Corps of Engineers harbor sampling sites (for suitability of sediment for open-lake disposal) plus additional sites upstream of the harbor. The Lower Genesee River Study used standard sampling sites already established by the NYSDEC Rotating Intensive Basin Studies (see Chapter 6 section on the "Lower Genesee River Study"). Other sampling sites along the River are those used by the U.S. Geological Survey and for the NYSDEC 20 Year Trend report on macroinvertebrates (see Chapter 6 section on "State Pollution Discharge Elimination System").

7. A sediment status study should be conducted upstream of the harbor every five years, in conjunction with EPA's effort (testing mandated because of harbor dredging by the U.S. Army COE) in the harbor area.

Comment: The U.S. Army COE has sampled upriver to just south of the Upper Turning Basin (see Figure A-1). This Study sampled sites further upstream. The sites for this study should be sampled every five years. (See Chapter 7 section on "Establish sediment quality goals for the Genesee River harbor.")

8. Permitted discharges should be sampled annually for priority pollutants. Major discharges should be tested for toxicity and, where feasible, sediment samples taken above and below discharges and subjected to the same tests.

Comment: This recommendation has not been acted upon. Permitted facilities do not generally monitor for priority pollutants.

9. Consideration should be given to monitoring toluene in permitted discharges based on its presence in several locations.

Comment: (For information on dischargers of toluene, see Chapter 3, Section B.) Continuous monitoring of toluene can be accomplished by the WQCC as a regular part of proposed monitoring of permit renewals (see Chapter 7 section on "Promote pollution prevention in the Rochester Embayment watershed.")

10. NYSDEC should study the impacts of the present discharges of cadmium, silver and copper to the Genesee River on the levels of these metals in Lake Ontario to determine if additional reductions are necessary.

Comment: The Lower Genesee River Study sampled both the water column and sediment for cadmium, silver and copper in the lower Genesee River. (See Chapter 6 section on "Lower Genesee River Study.") The 1989-1990 RIBS Program sampled the water column and sediments of the lower Genesee River for cadmium and copper. However, no study has related the discharges of these three metals to impacts in Lake Ontario. One of the objectives of the Lake Ontario Toxics Management Plan is to relate toxic inputs to pollutant fate. (See "Lake Ontario Toxics Management Plan.")

11. NYSDEC should continue fish flesh analysis surveys as an indicator of sediment and water quality trends.

Comment: The fish flesh analysis surveys are performed on an ongoing basis. (See Chapter 6 section on "Fish flesh monitoring and annual advisory.")

12. NYSDEC should establish a stream toxics survey station at USGS site 04-2320-00, located [approximately one mile] upstream of Driving Park.

Comment: According to USGS Water Resources Data New York Water Year 1992, this station has been discontinued as a water quality station by the USGS. Its periods of record are 1955-1971 and 1975-1977. The site does not coincide with sites used in the Lower Genesee River Study or in the RIBS Program.

13. NEW YORK STATE DOH/NYSDEC macroinvertebrate studies should be continued on a five-year basis to track water quality changes related to continued implementation of Monroe County's Pure Waters Program.

Comment: Macroinvertebrate studies are part of the RIBS Program. Tissue is analyzed once at each site during the two years of intensive study and multiplate samplers are deployed three

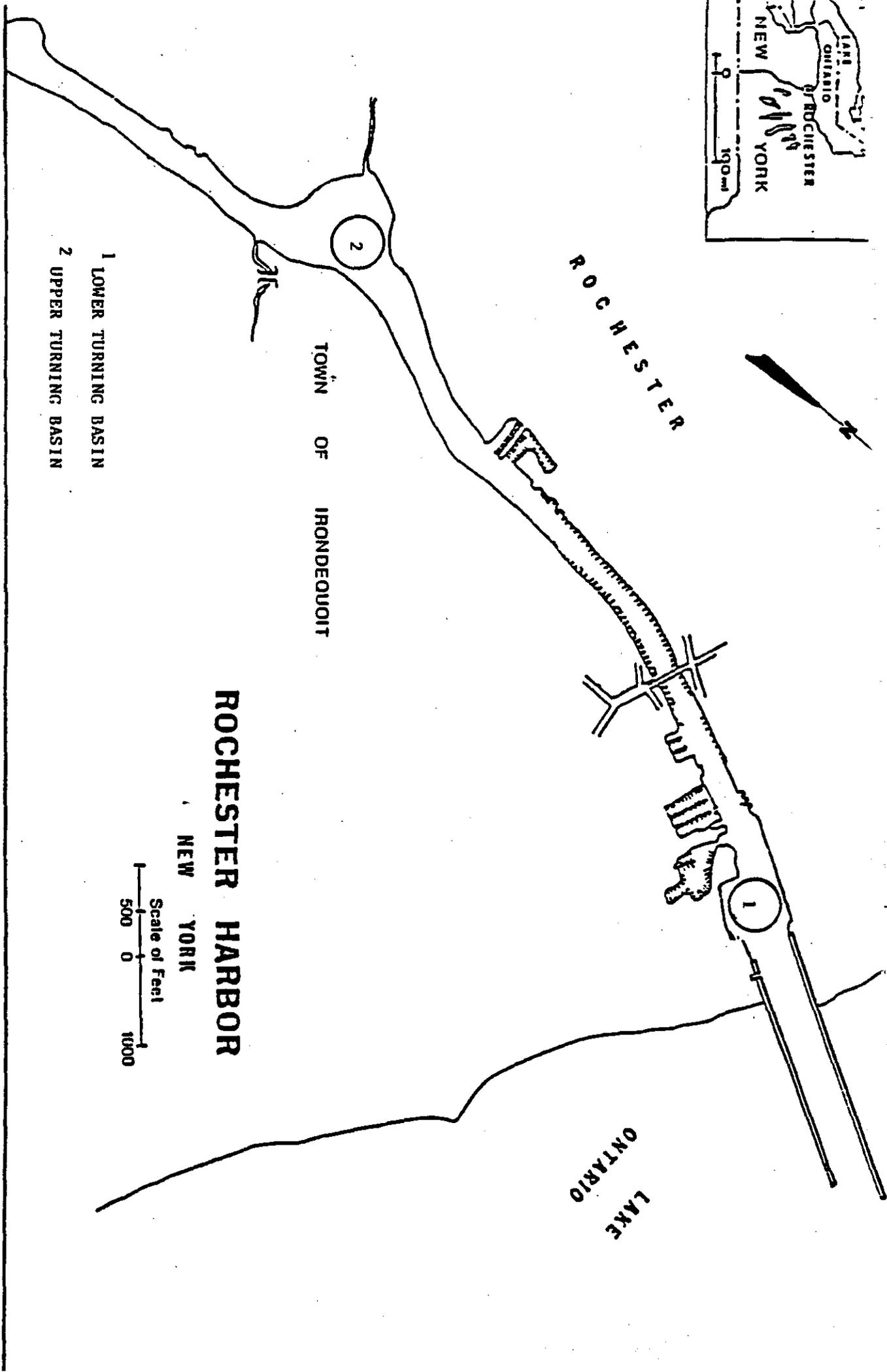
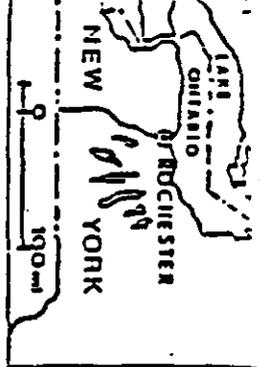
times per year during the two-year intensive study. The Lower Genesee River Study also provides a base for future sampling of macroinvertebrates.

The NYSDEC 20 Year Trends Report (based on macroinvertebrate data) states that it is important to maintain continuity in biological methods and sampling sites, and that biological monitoring will continue to be a valuable water quality tool in the future. NYSDEC would like to repeat the macroinvertebrate sampling every ten years.

Primary author and date: Carole Beal, October 23, 1995

Resources:

- Abele, Larry, NYSDEC. Personal communication with Carole Beal, August 11, 1995.
- Burton, Richard S.; Evans, Robin M.; Monroe County Department of Health Environmental Health Laboratory (March 1986). Genesee River Sediment Toxics Survey 205(j): Final Report.
- Burton, Richard, Monroe County Department of Health. Meeting with Carole Beal, August 3, 1995.
- Eichel, Louis, Monroe County Environmental Health Laboratory (December 1991). Genesee River Management of Heavy Metals in Harbor Sediment: Final Report.
- Hannaford, Robert, NYSDEC. Personal communication with Carole Beal, August 16, 1995.
- Hartig, John, IJC. Personal communication with Carole Beal, July 21, 1995.
- Monroe County Water Quality Management Agency (September 1984). Annual Report.
- Monroe County Water Quality Management Agency (December 1987). 1985-1986 Annual Report.
- Myers, Jeff, NYSDEC. Personal communication with Carole Beal, August 16, 1995.
- NYSDEC (May 1992). Biennial Report: Rotating Intensive Basin Studies Water Quality Assessment Program 1989-1990.
- NYSDEC (1993). 20 Year Trends in Water Quality of Rivers and Streams in New York State Based on Macroinvertebrate Data 1972-1992.
- NYSDEC (September 1993). Phase I Status Report: Lower Genesee River Study.
- Quarterman, Sue, Monroe County Environmental Management Council. Meeting with Carole Beal, July 19, 1995.
- Townsend, Robert, NYSDEC. Personal communication with Carole Beal, July 19, 1995.
- Townsend, Robert, NYSDEC. Personal communication with Carole Beal, August 11, 1995.
- U.S. Army Corps of Engineers, Buffalo District (December 1994). Final Data Report: Sediment Sampling and Testing, Rochester Harbor, New York.
- USGS (1991). Water Resources Data: New York Water Year 1992.



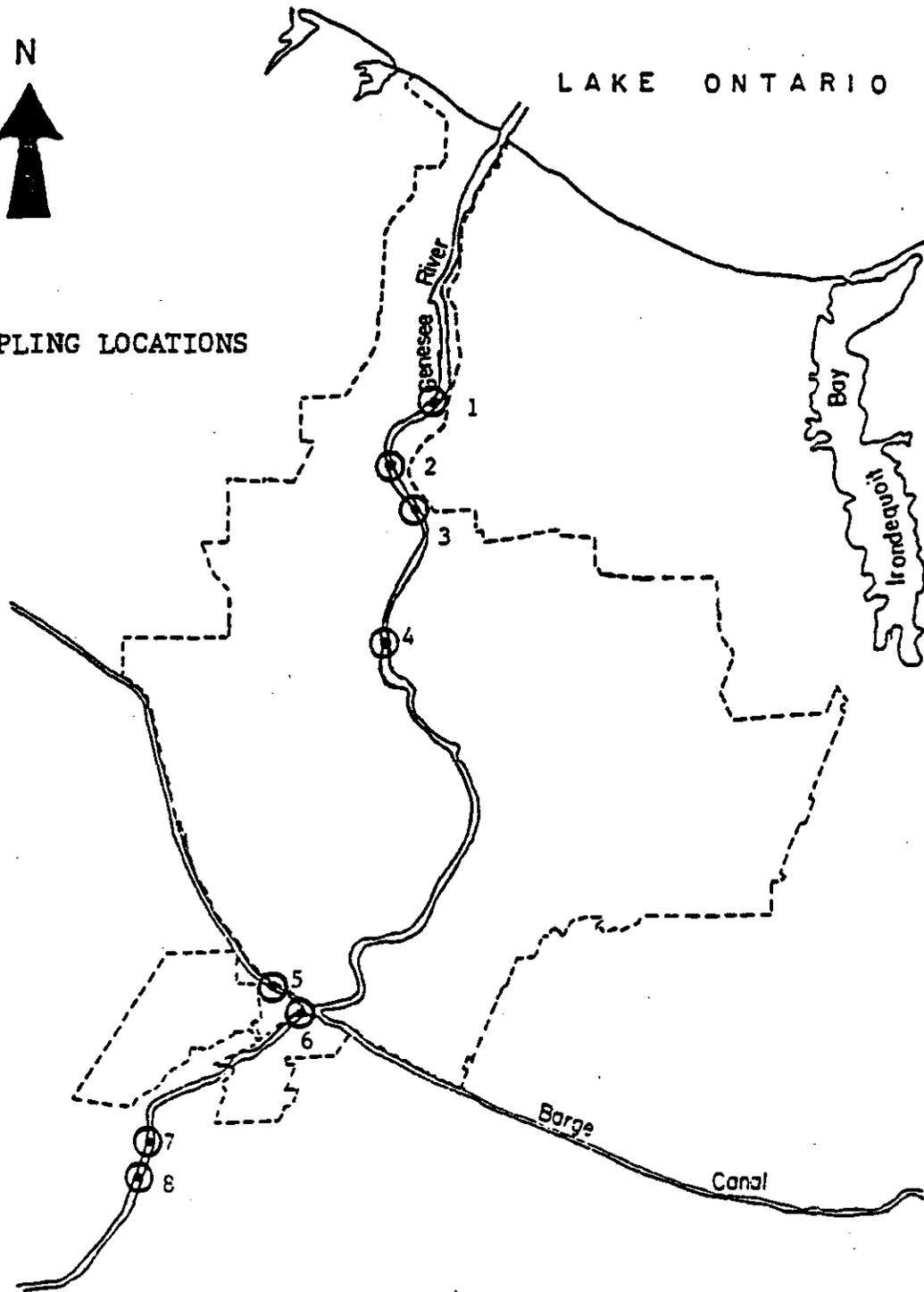
- 1 LOWER TURNING BASIN
- 2 UPPER TURNING BASIN

PHASE I SAMPLING LOCATIONS



LAKE ONTARIO

PHASE II SAMPLING LOCATIONS



KEY:

Scale: 1" = 9100'

- 1 Riverside Cemetery
- 2 Downstream of King's Landing Treatment Plant
- 3 Upstream of King's Landing Treatment Plant
- 4 Lower Falls
- 5 Barge Canal - West Guard Lock
- 6 Barge Canal Junction
- Downstream of Gates-Chili-Ogden Treatment Plant
- 8 Upstream of Gates-Chili-Ogden Treatment Plant

Genesee River Historical Studies

Study	Agent	Date	Purpose
Report on Sewage Disposal System of Rochester, NY	Edwin Fisher	1913	Impact of sewage disposal on the River
Report to Commissioner of Public Works upon Sewage Disposal Problem, Rochester, NY	Metcalf & Eddy, Consulting Engineers for Rochester	1929	Sanitary conditions of the River and Lake Ontario near Rochester
Report on Comprehensive Sewerage Study for City of Rochester, NY	Black & Veatch, Consulting Engineers for NYSDOH	1969	Develop major service areas that need collection & treatment of wastewaters, leading to reduced pollutant loads from CSOs
Water Pollution Investigation: Genesee River and Rochester Area	O'Brien & Gere Engineers, Inc., for USEPA	1975	Investigate impact of pollution sources (point & nonpoint) on water quality of the River
Investigation into Potential Disposal Sites for Genesee River Dredge Spoils	O'Brien & Gere Engineers, Inc.	1975	Evaluate potential dredge spoil disposal sites including open-lake and land sites
Genesee River Watershed Study (Special Studies) PLUARG Task C	IJC, NYSDEC	1974-1977	Develop & verify a model of occurrence & transport of pollutants from land use activities in the River Basin
Wastewater Facilities Plan (Combined Sewer Overflow Abatement Program)	Joint venture for Rochester Pure Waters District	1976	Series of volumes about the impact of CSOs on the River and Irondequoit Bay
Water Quality Management Plan for the Genesee River Basin	NYSDEC	1976	Identify pollution problems, treatment needs, priorities & schedules for abatement
Comprehensive IFYGL Materials Balance Study for Lake Ontario Basin	USEPA	1977	Provide description of trophic status of Lake Ontario; determine chemical loadings of major tributaries including the Genesee River
Best Management Practices	O'Brien & Gere Engineers, Inc., for USEPA	1981	Concepts for management of CSOs from Rochester sewer system, the majority of which impact the River

Appendix B: Advisory Group Responsiveness Summaries

**Response to Water Quality Coordinating Committee Comments on RAP Chapter 2
July 3, 1996**

Chapter 2, paragraph on Erie Canal

Suggested changes to paragraph and suggested new section on monitoring the impact of the Canal.

The following paragraph (page 2-5) on the Erie Canal has been substituted:

The Erie Canal flows east from the Niagara River, via Tonawanda Creek, through the Rochester Embayment watershed. The Canal receives water from and discharges water into a number of local waterways including the Genesee River and streams to its east and west. For information about the impact of the Canal on the streams to the east of the River, see the Chapter 3 section on "Impact of the Erie Canal on the Genesee River and streams".

To the WQCC: Existing data on the impact of the Canal on streams to the east of the Genesee River will be gathered and an interpretive report will be written by an Environmental Health Laboratory intern. It will be included in Chapter 3, New information about use impairments, causes and sources. Does the WQCC recommend that monitoring for the impact of the Canal on streams to the west of the Genesee River be proposed for evaluation in 1997?

WQMAC Responsiveness Summary
Chapter 3: Use Impairments, Causes and Sources
September 3, 1996

General comments on Chapter 3:

Issue #1: Note sections that are an update of Stage I. (Sawyko)

The information is in the text. It has also been added in parentheses below the section title.

Issue #2: State ranking given by the SAM group in each action. (Fredette)

Notes about the history of the black tern section (B.8) and the zebra mussel section (B.9) have been added at the beginning of these sections.

IJC Definition

Why isn't human health addressed in the IJC fourteen use impairments list? (Brett)

As part of the discussion about including the human health issue in the RAP, the WQMAC decided not to "amend" the IJC list of 14 use impairments because, at this time, it is too difficult to prove cause and effect. The WQMAC agreed to incorporate the human health issue into the RAP in other ways. (See Chapter 5.)

Use impairments identified in the Rochester Embayment

"To determine status and/or unknown sources" in place of first sentence in the second paragraph. (Fredette)

The change has been made.

Evidence for Rochester Embayment use impairments

Issue #1: Fish advisory issued every year. (Brazda)

The change has been made.

Issue #2: Explain cause of increased PCBs/mirex levels in trout. (Ruszczuk)

Issue #3: Cite the source of this information. (Brett)

Issue #4: Leaks from disposal areas may be a possible cause. (Brett)

The information is included in a letter from Lawrence Skinner, NYSDEC (December 11, 1995) to natural resource supervisors and regional fisheries managers. The resource has been listed and the paragraph has been changed:

Recent fish contamination data for Lake Ontario indicate that PCB and mirex levels increased significantly in rainbow trout collected from the Salmon River estuary between 1991 and 1993. As a result of these data, the 1996-1997 advisory for rainbow trout has been changed to "eat none". Before this change, the "eat none" advisory had only applied to rainbow trout more than 25 inches long. The cause(s) for the change are not known at this time (Skinner, 1995).

Issue #1: Note SAM activities relating to the studies mentioned in A3. (Fredette)

A referral to the Chapter 10 section on the Studies and Monitoring Task Group has been made.

Issue #2: Use Impairment #3: "Unlikely that absence of mink.." a less definitive statement.

The change has been made.

Why does "microtox" have a trade-mark symbol? Clarify on chart. (Rhoades)

The cultures were purchased (in a freeze-dried state) from Microbics™ Corporation, Carlsbad, CA. This statement has been added to the table.

Use Impairment #7: Add the following to the last sentence under evidence: "...to a greater extent than other dredging techniques." (Nelson)

The phrase has been added.

Issue #1: Use Impairment #12: Do zebra mussels constitute a water quality "problem"?
(Nelson)

There was much debate about this question during the preparation of the Stage I RAP. It was decided that, although the zebra mussel is not strictly a "water quality problem", it is a water-related problem, is a high cost to industry and should be included as a use impairment.

Issue #2: Have we shown an increased cost due to agriculture and industry? (Ruszczuk)

The following statement has been added: The cost to the Monroe County Water Authority for installation of a control system at its water intake was \$800,000. The cost to Rochester Gas and Electric Corporation for installation of control systems for cooling water at two generating stations was \$170,000. In addition to installation costs, there are operating and maintenance costs. (See the Chapter 6 section on "Zebra mussel control systems".)

Causes

Include an introduction to the "Causes" part -- purpose.

The person to which this comment was attributed did not actually make the comment, so it was not possible to learn more about what was being requested. Note that the "Use impairments" and "Sources" parts of the chapter do not have introductions either, but there is an introduction for the chapter as a whole. Are there further suggestions for the introduction? (The names of the parts have been changed to "Information about Use Impairments," "Information about Causes" and "Information about Sources".)

Ranking of High Priority Pollutants

Issue #1. Further explain the logic, process of the priority pollutants list. This section needs an introduction explaining the relationship between this "Causes" section and the description here. (Fry). Is the ranking of priority pollutants an attempt at assessment of impact? If so, what were the protocols? (Thompson).

We have added an introduction to this section as follows:

" The Stage I RAP included a list of 80 pollutants . The list of 80 includes those associated with impaired uses, eleven critical pollutants identified by the IJC Water Quality Board; the pollutants that were exceeding criteria

in Lake Ontario, additional pollutants identified in the Niagara River Toxics Management Plan, and those supplemented by a subcommittee of the RAP Technical Group (the Loading Task Group).

In May of 1992, the RAP Project Management Group suggested that a Task Group be established to narrow the initial list of 80 pollutants of concern down to a smaller number for detailed discussion in the Stage I RAP. The group did narrow the list down to 21 pollutants prior to the completion of the Stage I RAP. The list was included in the Stage I RAP. There was also a detailed discussion in the Stage I RAP about each of the pollutants on the list of 21 that have been linked to use impairments in our area of concern. This includes the following pollutants: Mirex/photomirex; dioxin; PCBs; chlordane; PAHs; metals as a group; cyanide; and phosphorus.

Because the list of 21 priority pollutants were recognized as very diverse, the Priority Pollutant Task Group felt that the next logical step in dealing with the pollutants, was to rank them.”

Issue #2: Ranking distorts the data, for example chart on page 3-25 and tables on pages 3-20 and 3-23. The process of adding ranks distorts information for magnitude of data. I have reservations about ranking before the final stage. Ranking ignores the relative magnitude of different toxic substances. It distorts the data. (Nelson)

If a reader looks at ranks alone, it could be interpreted that the relative concerns about the pollutants are very similar because they are ranked relatively closely together when ranking goes from 1 to 21. That is why we are showing, in this section, all of the data used to determine the final ranks. In order to address this concern, however, we have added another section to the narrative as follows:

“Final Ranking Caution: The end result of this effort could be considered to be shown in Table 3-H. However, the display of data in this chart alone does not fully represent the relative magnitude of the potential impact of the various pollutants. For example, looking at table 3-F, which summarizes the discharges of the pollutants, phosphorus is ranked number 1 and Benzo(a) pyrene as 8. However, the total discharge of phosphorus is in excess of 1 million pounds per year, while Benzo(a)pyrene is only 28 pounds.”

In addition, a footnote will be added to Table 3-H as follows: “The final ranking is a priority guide for selecting chemicals for future remediation/action” This footnote was actually suggested at the January, 1994 meeting of the priority pollutant task group, but was not implemented.

Issue #3: Address issue of toxic forms of chemicals (i.e. silver): metallic versus ionic forms (Ruszczuk).

At the last meeting of the Priority Pollutant Task Group, they discussed the metals speciation issue. A specific reference identified by Ken Robillard of Eastman Kodak was “An Indexing System for Comparing Toxic Air Pollutants Based Upon Their Potential Environmental Impacts.” At that time it was thought that the final outcome of the work described in the paper, along with information that may be available from USEPA and NYSDEC regarding speciation may tell us what further work is needed on the speciation issue. There was consensus at the January, 1994 meeting that we should ask NYSDEC, and USEPA what they are doing on the speciation issue as part of our work on the Stage II RAP. The metals of greatest concern were identified as alkylated lead, cadmium, mercury, and silver. No efforts have been made to date to do this.

Options for dealing with this now include adding this to the list of studies that need to be done. However, since the ranking of studies and monitoring activities has already been done, this idea

would not be able to be ranked. Another option would be to add this to the list of new remedial measures that need to be ranked next year after the RAP is complete. A third option that could be done in conjunction with either of the other 2 options is to include the information in the paragraph above, in chapter 3.

Issue #4: Ranking of bioaccumulation factors--are these correct? For example, silver--how were these relative rankings computed? (Ruszczyk)

The procedure outlined by the Ontario Ministry of the Environment in its 1990 "Candidate substances for bans or phase outs; and a scoring system for assessing environmental contaminants," pages 4 and 8 were used as the basis for determining bioaccumulation factors."

Trackdown of Chemical Contaminants

If tables cover more than one page, there should also be a heading on the second page. (Fry)

We intend to present the entire tables on one page only, where possible, in the final version of the RAP. If they do not fit on one page, the headings will be repeated.

Issue #1: Explain the criteria that were used for stating that mercury and PAHs are high. (Fry)

Issue #2: State who is being quoted in statement that mercury and PAHs are high. (Peet)

Issue #3: Give comparable data for other areas. (Ruszczyk)

Mercury: The paragraphs following the table have been changed:

Mercury levels in Monroe County wastewater effluents were high, as compared with the proposed GLI standard and with other areas in the State (Litten, personal communication). The Lockport Sewage Treatment Plant is the only treatment plant outside Monroe County that is represented in the report. Data for Lockport can be compared with data for the three Monroe County treatment plants:

<u>Treatment Plant</u>	<u>Mercury, ng/L</u>	
	<u>Influent</u>	<u>Effluent</u>
Northwest Quadrant	389	5.31
Van Lare	660	8.22
Gates-Chili-Ogden	50.5	2.93
Lockport	96.1	1.88

The influent concentration at the largest Monroe County treatment plant, Van Lare (#M2a), was 660 ng/L. Removal efficiency at the plant was greater than 98%, but the plant effluent still had a mercury concentration more than six times above the proposed 1.3 ng/L GLI standard. The highest wastewater mercury concentrations seen in the project were in Monroe County: 16,469 ng/L in a sewer below a former mercury thermometer factory (#M9) and 7,451 ng/L in a sewer below a dental facility (#M14).

PAHs

The paragraph before the table has been changed and a paragraph has been added after the table: Sediments were sampled at two Monroe County sites for PAHs on August 9, 1994. Underlined values are considered to be high contamination, according to New York State Department of Environmental Conservation Division of Water, Draft Interim Guidance: Freshwater Navigational Dredging (October 1994).

The underlined, "high contamination" values for Monroe County sites are compared with the values from the other

four sites in the project where sediments were analyzed for PAHs:

	<u>Anthracene</u>	<u>μg PAH/kg sediment</u> <u>Benz(a)anthracene</u>	<u>Total PAH</u>
Genesee River, Monroe Co.	2,100	1,700	43,000
Black River, Jefferson Co.	82	190	1,600
Beals Cr., Orleans Co.	ND	200	1,722
Oak Orchard Cr., Orleans Co.	31	170	1,800
18-Mile Cr., Niagara Co.	100	610	8,100

ND = Not detected

Table: Explain why the underlined values are considered high, for example anthracene, when some other values are even higher on the same table. (Rhoades)

Different chemicals have different properties. An amount that is “high contamination” for one chemical may be “low contamination” or “no contamination” for another.

Point source discharges

Move Table on pages 3-88a-d to page 3-40. Needs further description, introduction. (Nelson)
The sections on SPDES (total loading) and SPDES (facility loading) have been merged, with an expanded introduction. The new section is being reviewed by Ray Nelson.

Issue #1: Selected pollutants: Who did the selecting? (Graham)

A statement has been added to the introduction: The process for choosing the priority pollutants is described in the Stage I RAP on page 5-1 and in Appendix D. The title of the table has been changed to: Wastewater Discharges of Priority Pollutants...”

Issue #2: Explain blanks in table: not measured? (Ruszczuk)

A note has been added: A “0” in the table means that an analysis for a chemical was performed, and the results were below detection limits. A blank means that there was no analysis required.

Where is anthracene? Explain inconsistency with table on page 3-33. (Brett)

The chemicals that were database-searched for the table on page 3-41 are those on the Rochester Embayment list of priority pollutants. In the section’s introduction, it is noted that the process for choosing the priority pollutants is described in the Stage I RAP on page 5-1 and in Appendix D. Anthracene is not on the priority pollutant list. The chemicals listed in the table on page 3-33 are part of a different section. They are polynuclear aromatic hydrocarbons that Simon Litten of NYSDEC analyzed in sediments throughout the state, including Irondequoit Creek and the Genesee River. A proposal will be submitted in 1997 that the priority pollutant list be reviewed. Additions to the list and deletions from the list can be made during the review.

Lower Genesee River Study

Include a reference to map on page 3-56 for sampling locations. (Brett)

There are two references on this page, where the sites are listed and briefly described.

Issue #1: Reviewer comment should be deleted. (Brett)

Issue #2: Will reviewer comments be resolved? (Nelson)

Issue #3: Should this be a topic for future WQMAC meetings? (Fredette)

Issue #4: Perhaps use footnotes instead of italics. (Rhoades)

Issues #1-4 should be discussed by the WQMAC. The writers of the Lower Genesee River Report and those who made comments on this section are all qualified technical people. That makes it difficult to decide if and/or how there should be resolution, or if the comments should simply be noted, perhaps by footnotes as suggested.

WQMAC Responsiveness Summary
Chapter 3: Use Impairments, Causes and Sources
October 1, 1996

(Page numbers are *former* page numbers)

Chapter 3, general comments

Clarify, in the introduction, the history of the zebra mussel and black tern sections. Be consistent with SAM outcome. (Fredette)

There are statements in the introduction to Chapter 4 (where readers might expect to find these sections) that the WQMAC and the Studies and Monitoring Task Group decided that:

- It is inappropriate for a zebra mussel study to be conducted as part of the RAP process because zebra mussels are a Great Lakes problem and research is already being conducted from that perspective.
- Local study of the black tern is inappropriate because local conditions are not a primary factor contributing to its decline.

References are made to Chapter 3 where each of these sections states the reasons why a local study is not recommended.

For references to Stage I, include page numbers, or copy the table into Stage II. May need to include the old and new tables. (Thompson)

Page numbers have been included. WQMAC should discuss whether or not to include the Stage I tables.

Section C: How does this relate to use impairment and causes? (Woods)

There was brief discussion during the listing that the chapter should be organized in a different way. The following categories are proposed and should be discussed by WQMAC:

- IJC information
- Rochester Embayment use impairments information
- Updates of information in the Stage I RAP
- New information

Evidence for Rochester Embayment use impairments

Relate the table to the text. Reword use impairments to parallel our actual problems, i.e. mink reproduction problems, drinking water taste and odor problems. (Beal/Thompson)

It is proposed to:

- Consider IJC use impairments 3 and 5 as one local use impairment called "Mink reproductive problems".
- Consider the IJC use impairment 9 as local use impairment "drinking water taste and odor problems".

These changes would be made throughout the Stage II RAP. This should be discussed by

WQMAC.

Page 3-10: Zebra mussels cause potential high costs to agricultural and residential users. (Woods)

This information has been added.

Ranking of High Priority Pollutants

Page 3-19: Box titles should correspond with related column headings.

These changes have been made.

Lower Genesee River Study

Name of commenter should be included (Watson)

The names have been added.

Effect of zebra mussels on water quality and the food chain

Zebra mussels - clarify that we are not making a recommendation. (Woods)

I believe that the intent of Woods' comment was to clarify that we *are* making a recommendation: A local study should not be conducted because zebra mussels are a Great Lakes problem and research is already being conducted from that perspective. A statement similar to this has been included in the section.

Update on International Joint Commission activities regarding environmental impacts on human health

Page 3-70: The resource on the last page should be at the beginning. (Woods)

The resource has been added as part of the title.

Move IJC section to Part A. (Woods)

The following reorganization of the chapter is proposed and should be discussed by WQMAC:

IJC information

Rochester Embayment use impairments information

Updates of information in the Stage I RAP

New information

Use impairments, causes and sources

Make it clear which boxes belong together. (Rhoades)

This change has been made on the re-typed table.

Cross-check High Priority Pollutant List with this table. The High Priority Pollutants should

show up often as causing use impairments. Otherwise, why are they High Priority Pollutants? (Watson)

This should be discussed by the WQMAC. Facts that may help with the discussion follow:

- Benzo(a)pyrene is a PAH (see “fish tumors or other deformities”).
- The “metals” designation (see “degradation of benthos”) has been broken into separate boxes for cadmium, copper, iron, nickel and silver.
- DDT has been added as a known cause under “Restrictions in fish and wildlife consumption”.

Page 3-80: Are these locations where road salt has affected habitat? (Watson)

Yes.

Nonpoint sources

Page 3-81: Reference to Stage I, Table 5-13. (Nelson)

Ray Nelson and Carole Beal are studying discrepancies in Stage I data. Most discrepancies are small, but one (for mercury) seems large. Notes will be added to this Stage II section, if they will be helpful. This has not been resolved. This can be a WQMAC parking lot item.

Page 3-83: Add a column providing the totals. Consider removing column 4. (Nelson)

The table has been broken into 2 tables:

- Loading from the Genesee basin, including sums of the loadings from the 3 categories.
- Loading directly to the Embayment.

Impact of the Erie Canal on the Genesee River and streams

Page 3-84: Estimate pollutants coming from the canal. (Nelson)

It has not yet been resolved whether or not there is enough available data to estimate pollutant loading to the River. It is likely that the Canal water mixing with Genesee River water actually dilutes pollutants in the River. However, the mixing degrades the water quality of the Canal in the eastern portion of the County. Loadings to Allen’s Creek from the Canal have been provided by the Environmental Health Lab and will be included in the RAP as soon as the EHL report has been finalized. This item should be placed in the WQMAC parking lot.

Include mention of past and future MOUs regarding the Canal. (Zorn)

This information has been added.

State Pollution Discharge Elimination System discharges from Rochester Embayment watershed facilities

How were these numbers derived - daily, continuous, infrequent sampling? What does a blank space indicate? (Watson)

(The two SPDES sections have been combined - those on pages 3-39 and 3-86.) The section

now states that facilities are required to report the monthly *maximum* concentration or loading of the substances listed in their permit. A blank means that no analysis is required under the permit. A "0" means that an analysis for a chemical was performed and the results were below detection limits, or that analysis is not required under current operating conditions. (An example of the latter is a sewage treatment plant that must report phosphorus concentration only if the flow at the plant is one million gallons per day or more.)

Clarify the relationship between use impairments and SPDES discharges. (Woods)
WQMAC should discuss how this should be done.

Discussion items:

1. Include the Stage I table if there is an update of the table in Stage II.
2. Reorganize the chapter into the following categories:
 - IJC information
 - Rochester Embayment use impairments information
 - Updates of information in the Stage I RAP
 - New information
3. Reword use impairment names to express our Rochester Embayment problems, i.e. mink reproduction problems, drinking water taste and odor problems.
4. Cross-check High Priority Pollutant List with the table on Use Impairments, Causes and Sources (page 3-73). The High Priority Pollutants should show up often as causing use impairments. Otherwise, why are they High Priority Pollutants?
5. Clarify the relationship between use impairments and SPDES discharges.

Addendum to the October 1, 1996 WQMAC Responsiveness Summary
Chapter 3: Use Impairments, Causes, and Sources
October 28, 1996

(Page numbers are *former* page numbers)

Contaminant impacts on black tern populations in the Rochester Embayment watershed

Page 3-60, 2nd paragraph: Was bioaccumulation considered in this conclusion? (Nelson)
In her thesis, Heidi Firstencel recognized that black terns, as fish-eating birds, occupy a high level on the food chain in the Great Lakes. Therefore, the possible affect of bioaccumulative chemicals on the black tern population at Yanty Creek Marsh was a focus of her research.

Page 3-62: There are many indigenous species (cattails) that fill in open-water areas. (Nelson)
It is my understanding that the problem with purple loosestrife is that it is particularly invasive and therefore can rapidly fill in open-water areas that serve as critical foraging areas for black terns.

Page 3-63: Do recommendations 2 and 3 need to be re-visited? (Thompson)
The committee needs to discuss whether it would like to revisit these recommendations.

Page 3-63: Recommendation #4 - WQMAC does not have expertise with endangered species; it is not appropriate for the RAP - not related to water quality. (Watson)
The NYSDEC is very interested in having the black tern listed as an endangered species. Currently, the black tern is only listed as a species of special concern. The idea behind Recommendation #4 was that the WQCC could write a letter of support for the NYSDEC's effort to list the black tern as an endangered species. However, almost a year has passed since the research was conducted for this section of Chapter 3. During that time, the NYSDEC has initiated the process of listing the black tern as an endangered species. It is anticipated that the review process will be completed within the next several months. Therefore, if Recommendation #4 is to implemented, it would have to be done very soon. Given the existing work load associated with the RAP and other water quality projects, this may not be very realistic. The WQMAC may wish to discuss this issue.

Also, as far as the relationship between endangered species and water quality is concerned, the goals that were developed for the Stage I RAP include two that relate to biodiversity.

We need to know the implications of listing the black tern as an endangered species. (Woods)
The WQMAC may wish to discuss this issue.

WQMAC Responsiveness Summary
Chapter 3: Use Impairments, Causes and Sources
October 31, 1996

Monroe County air deposition monitoring

Issue: Date not defined. (Elliott)

The date has been added.

Air Loading Data

Comment on significant changes since Stage I in the narrative. (Nelson)

A comparison of Table 5-5 (Stage I RAP) and Table 3-10 reveals that there have been a number of changes in reported emissions of priority pollutants in the five county area. A list of generic possible explanations for these changes has been added to the text. In addition, an analytical comparison of the Stage I and Stage II air emissions data has been included in the Chapter 11 list "Remedial Measures, Studies, and Monitoring Methods to be Evaluated in 1997". This list was developed so that new remedial measures, studies, and monitoring methods that were proposed during the development of the Stage II RAP will receive the same consideration for potential implementation as the proposals presented in Chapters 4, 7, and 9.

State the industries required to report TRI data only. (Elliott)

Information regarding the limitations of the TRI data base has been requested from the NYSDEC and will be added to the narrative when it is received.

Landfills and waste sites

Issue #1: Problems at Flynn Road (Ernst)

A footnote has been added about the recently noted problems.

Issue #2: Reason for delisting is incorrect. It is due to insufficient documentation. (Elliott)

The explanation has been changed.

Issue #3: Table appears not to have heading. Combine last two columns. (Nelson)

The table has been retyped so that it can be manipulated. The headings are repeated at the top of every page. The last two columns have been combined.

Issue #4: Comment on seriousness of problem (increasing or decreasing). (Nelson)

Overview information has been requested from NYSDEC and will be added.

Issue #5: Some sites are missing from list, not due simply to name change. (Nelson)

The sites were those that had already been delisted at the time the Stage I RAP was published. They have been added to the list of waste sites that have been delisted.

WQMAC Responsiveness Summary
Chapter 4 "Studies"
June 11, 1996

General comment on Chapters 4 and 9:

Issue #1: It should be clear to the reader that the proposals in these chapters will be ranked.
This information will be included in an introductory page to each of these sections.

Section 4.1. Verify whether or not fish in the AOC have a chemical flavor or odor

Issue #1: The name of the study is missing. There is duplication within the "sequence of actions" paragraph.

The corrections have been made.

Issue #2: Which chemicals (page 1, middle paragraph)? (Fry)

The anglers would have no way of knowing which chemicals, if any, might be contributing to a bad odor or taste. The survey would only measure their perception about flavor or odor. The wording has been changed to "It is proposed that anglers who purchase fishing licenses in Monroe County be surveyed by mail to determine their perception of fish tainted by a "chemical" flavor and/or odor".

Issue #3: This would be a good statistical project for a student. (Fry)

An addition has been made to the implementor statement that says: " The project is suitable for a student intern working under the supervision of the implementor".

Section 4.2. Verify whether a fishless segment exists in the lower Genesee River

Issue #1: The caged fish study is not an appropriate method for determining the presence or absence of a fishless segment. (Sawyko, Fry, Haynes)

This will be a discussion item for the WQMAC. The WQMAC may choose to pass the decision making about this method to the Studies and Monitoring Ranking Group which will be composed of technical persons. A preliminary suggestion is to simply delete this method from the section.

Issue #2: What is the meaning of the word "composite"? (Page 3, Rhoades)

The meaning of the word has been added to the paragraph.

Section 4.4. Genesee River sediment loading study

Issue #1: What is the meaning of "abnormal behavior" in this context (page 9, middle paragraph)? (Rhoades)

The sentence has been changed to say: "The desired result of the study is a better understanding

of what constitutes normal (historical) and abnormal (man-caused) streambank erosion in this part of the Genesee River, in order to plan measures that prevent erosion and stabilize streambanks”.

Section 4.5. Does the Lake Ontario portion of the Rochester Embayment suffer from degradation of benthos?

Issue #1: The question in the title should be answered before proceeding with the next section (Identify contaminants affecting the benthic community in the lower Genesee River). (Mohr)
Section 4.5 applies to the *Lake Ontario* portion of the Embayment. Section 4.6 applies to the *lower Genesee River* portion of the Embayment. In Section 4.5, a statement has been added: "The status of the benthic macroinvertebrate community structure in the lower Genesee River is impaired”.

Section 4.6. Identify contaminants affecting the benthic community in the lower Genesee River

Issue #1: The Kemble citation is not complete enough. (Rhoades)

It will be difficult to get the complete citation. Because the information was mailed only to inform the writer about the complexity of sediment research and was not actually used as a resource, the citation has been deleted.

Issue #2: The word "contaminant" means "not natural, but not necessarily causing a problem". The word "pollutant" implies "causing a problem". Be consistent. (Mohr)

The title has been changed to "Identify whether contaminants affect the benthic community in the lower Genesee River". The new title implies that it is not known whether or not the contaminants are a problem.

Section 4.8. Estimate the loadings of cadmium and lead from vehicle tires

Issue #1: Need a better statement for why this is a problem. (Mohr)

The statement is made in the Stage I RAP that "Some of the cadmium that reaches waterways comes from vehicle tires. Cadmium is contained in tires and wears off onto road surfaces" (page 5-16). "An estimation of cadmium loading from vehicle tires" is listed in the Stage I RAP as a remaining question to be considered in the development of the Stage II RAP (page 6-7).

References are not given for the statements in the Stage I RAP, and recent attempts to find documentation about the problem have been unsuccessful. This proposed study will be ranked along with the other studies by the Studies and Monitoring Ranking Task Group.

Section 4.9. Quantify cyanide loadings to air

Issue #1: It is doubtful that "there is not enough oxygen in the incinerator to oxidize the cyanide to carbon dioxide". (Fry)

Michael Schifano of the Monroe County Department of Environmental Services states that, if there is insufficient oxygen in the incinerator to oxidize cyanide produced during combustion, there is the potential for cyanide and cyanide-like compounds in the effluent. Introduction of air or oxygen to the incinerator is tightly controlled in order to conserve fuel. Schifano also states that, since 1995, cyanide in effluent is less likely to be a problem, because of the installation of continuous effluent monitoring that allows incinerator operators to more tightly control incinerator combustion parameters. The latter statement has been added to the section.

Issue #2: Explain why loadings to air are a water quality problem. (Mohr)

A statement has been added to the introduction: "Air loading data is important to a water quality study, because deposition from the air is a major component of runoff to waterways".

Section 4.11 Contaminant impacts on black tern populations in the Rochester Embayment watershed

Issue #1: The study of the black tern colony at Yanty Creek Marsh cited in this section is very old (Fry).

In general, very little research has been conducted on the effects of contaminants on black tern populations. In the Rochester Embayment watershed, there has not been any additional research on this subject since Heidi Firstencel conducted her research on the black tern colony at Yanty Creek Marsh in 1983-1984.

Issue #2: The table in Section 11 includes DDE. Is DDE a break down product of DDT (Fry)?
Yes. This information will be added to the section.

WQMAC Responsiveness Summary #2
Chapter 4 "Studies"
June 19, 1996

General comment on Chapter 4

Issue #1: Some sections conclude that a study is not needed. Should they be in a different chapter, perhaps Chapter 3? (Sawyko)

This should be a WQMAC discussion item.

Section 4.1. Verify whether or not fish in the AOC have a chemical flavor or odor

Issue #1: Consider the fact that many species of fish move in and out of the Lake. (Wagner)

The evidence that the problem may originate in the Genesee River would have to be considered "circumstantial". Bill Abraham of NYSDEC states that he does not hear comments about tainting of fish from anglers fishing in waters other than the Genesee River.

Issue #2: Quality control is needed. (Ruszczuk)

Information has been added: An additional control for the survey is a similar survey of anglers who purchase fishing licenses in another county and who fish distant rivers or Lake Ontario. The surveys would be compared to see if there is a significant difference in reports of tainting between the two groups of anglers.

Section 4.2. Verify whether a fishless segment exists in the lower Genesee River

Issue #1: Discuss reviewer comments on methods #1 and #2. (Brett)

Paul Sawyko, James Haynes, and Barry Fry state that the caged fish study is not the appropriate method for determining the presence or absence of a fishless segment, and that an intensive hydroacoustic survey is the best way. Either WQMAC can discuss this and decide whether or not to eliminate method #1, or the Studies and Monitoring Ranking Task group could discuss it.

Issue #2: More information is needed on the anglers that identified the fishless segment. (Madden)

Information has been added: In 1987, about a half-dozen charter boat captains using sonar alleged a "fishless" segment in the Genesee River downstream of the Lower Falls and upstream of the Riverside Cemetery. The alleged segment was observed during the chinook salmon run. A New York State Department of Environmental Conservation (NYSDEC) staffperson, in a boat with a charter boat captain and sophisticated equipment, also observed it in late August 1987.

Section 4.3 Incidence of fish tumors

Issue #1: Further address the issue of controls. (Sawyko)

Issue #2: Mention non-toxic factors. (Rusczyk)

The following statement has already been included in the narrative in order to address this concern. "In addition, it is recognized that many of the tumors that may be present are induced by bacteria and viruses."

Section 4.4. Genesee River sediment loading study

Issue #1: Update the funding situation. (McNulty)

Dr. Young states that the funding has been confirmed and he is now beginning the project. This section may no longer belong in Section 4. The WQMAC should discuss this.

Issue #2: What is the impact and usefulness of historical data? (Sawyko)

Dr. Young states that the historical data is an average background for the behavior of the Genesee River before the dam was built.

Section 4.6. Identify contaminants affecting the benthic community in the lower Genesee River

Issue #1: Where did this idea come from? (Brett)

The commenter has been contacted to find out what information is requested.

Section 4.9. Quantify cyanide loadings to air

Issue #1: Background section is outdated due to status of GCO. (Daley)

The commenter is reviewing revisions.

Section 4.10. Effect of zebra mussel on water quality and the food chain

Issue #1: Does not belong in Chapter 4 because no further study is needed. (Sawyko)

This should be discussed by WQMAC as part of the discussion suggested in Chapter 4 general comments.

Issue #2: Impact of muskrats on zebra mussels. (Brett)

Betty Lou Brett has offered to give us information on this topic.

Section 4.11 Contaminant impacts on black tern populations in the Rochester Embayment watershed

Issue #1: Move to different chapter. (Sawyko)

Issue #2: Why is there a section on black terns -- not an indicator species. (Wagner)

This section was included because in the Stage I RAP concern was expressed that toxins in fish, or other unknown factors, might be affecting black tern populations. Therefore, on page 6-6 of

the Stage I RAP, this issue is included in a "Summary of Remaining Questions".

Section 4.12 Validate the phosphorus loadings of the Genesee River and treatment plants

Issue #1: This section is missing.

It has not yet been complete.

Discussion Items

General comment on Chapter 4

Some sections conclude that a study is not needed. Should they be in a different chapter, perhaps Chapter 3? (Sawyko)

Contaminant impacts on black tern population

Effect of zebra mussel on water quality and the food chain

Validate the phosphorus loadings of the Genesee River and treatment plants

Section 4.2. Verify whether a fishless segment exists in the lower Genesee River

Discuss reviewer comments on methods #1 and #2. (Brett)

Section 4.3. Incidence of fish tumors or other deformities in the Rochester Embayment Watershed

Section 4.4. Genesee River sediment loading study

Dr. Young states that the funding has been confirmed and he is now beginning the project. This section may no longer belong in Section 4.

Water Quality Coordinating Committee Responsiveness Summary
Chapter 7 discussion items
January 25, 1996

Section 7.3. New York State Water Quality Enhancement and Protection Plan

Action C Substance bans. Says "NYSDEC lacks the statutory authority to ban substances" but states a need to develop a substance ban strategy. Pesticides are banned.

The following information has been added to the section:

The legal authority for New York State to ban a substance could lie in either or both of two federal statutes:

1. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). NYSDEC is assigned primary responsibility for the State Pesticide Law and for elements of FIFRA delegated to New York. New York State Pesticide Law ECL Section 33-0303(3)(d) authorizes NYSDEC to develop a list of restricted use pesticides subject to conditions and limitations that NYSDEC deems appropriate. "Restricted" may include "distributed, sold, purchased, possessed or used for any purpose". Examples are aldrin, chlordane and DDT.
2. The Federal Toxic Substances Control Act (TSCA). TSCA allows a state government to prohibit the use of a substance under defined circumstances.

Section 7.4. Promote pollution prevention in the Rochester Embayment watershed

Add homeowner use of pesticides to a section

This information is included in the section on "Intensify and focus public education effort regarding the proper use of lawn care fertilizers and pesticides".

Toxics

Part A Instead of "fish are safe to eat", use an achievable goal such as "fish consumption advisories are lifted".

This has been changed to "Fish and wildlife consumption advisories are not necessary."

Add a section on in-building drains.

Marty Brewster is writing a section.

Section 7.11. Promote impervious surface reduction

Change name of section

New name is "Promote impervious surface reduction and mitigation".

As suggested, several mitigation strategies have been included in the section.

Section 7.12 Identify and solve onsite sewage disposal system problems

Add costs from homeowner's perspective.

The following cost information has been added.

Costs for scheduled pumpouts: \$95-\$135 for a 1,000 gallon tank

Costs for required inspections:

1. Routine inspections: \$40-\$100
2. Property transfer inspections:
 - a. Occupied premises: \$100-\$200
 - b. Premises unoccupied for at least past 15 days: \$150-\$300

Add costs for replacement of an entire septic system and typical types of repairs for subsurface systems and raised fill systems.

Costs have been added for replacement of tanks, conventional leachlines and sand and leach lines for full-size raised systems.

Section 7.16. Develop streambank erosion control program

Define "bioengineering".

Definition has been included.

Section 6.38. New York State Coastal Nonpoint Pollution Control Program (moved section from Chapter 7 to Chapter 6)

Marinas: Emphasize education. Marina facilities - what permit process? Is there follow-up?

The following information has been added:

These management measures can be achieved through permit processes:

- Dredging: Section 404 permit under the federal Clean Water Act.
- Building in water or a wetland: NYSDEC permit.

The amount of follow-through inspection for these permits depends on the type of permit, funding, and the size of the project.

The need for education about proper refueling technique has been added as a reviewer comment.

Is boat pumpout included under marinas?

A management measure listed under "Marinas and recreational boating" is "Maintain sewage pumpout facilities and encourage their use." The program suggests that this be addressed as a permit condition for new marinas. Also, New York is in the process of implementing a grant received under the Clean Vessel Act that will improve access to pumpout facilities.

Eutrophication

Add highway projects to a section.

There is information about the Highway Drainage Task Group of the WQCC in the Chapter 7 section on "Manage Stormwater Quality in Existing and Newly Developing Urban Areas", page 50.

Highway projects are also discussed in the Chapter 6 section on "Erosion and Sediment Control": During 1995 the Highway Drainage Task Group of the Monroe County Water Quality Coordinating Committee conducted an effort to review plans for County highway and bridge projects. The goal is to fully integrate water quality considerations into transportation planning. (See also "Manage stormwater quality in existing and newly developing urban areas.")

As part of the Development Review Committee, the Monroe County Department of Transportation comments on all permit applications for road cuts. The applicant must seed and stabilize the site within 15 days of final grading or when incomplete construction is suspended. Site-specific comments are also made when appropriate.

Effectiveness The NYSDOT has effectively applied many of the ESC practices described in the New York Guidelines for Urban Erosion and Sediment Control, and recommended by the Stormwater Management Specialist. One practice that has dramatically reduced erosion on bare soil on almost all sites observed is the use of straw mulch. Used in conjunction with a seeding of grass, straw mulch spread evenly over bare ground absorbs the impact of rain drops, slows runoff, and creates an excellent microenvironment for seed germination by holding moisture and controlling soil temperature fluctuations.

Section 7.21. Educate about exotic species introduction

Educate about purple loosestrife. It is also an upland problem. Can educate via parks education programs.

The wording in the background and Action B has been changed to (1) reflect a watershed ecosystem problem rather than a Lake Ontario problem; (2) list purple loosestrife first as an example; (3) list parks education programs first as a type of program; (4) note that very few educational materials are available except for zebra mussel.

Add an action: The state should ban the sale of purple loosestrife.

A new action has been added to the section: Encourage the NYSDEC to implement a ban on the sale of purple loosestrife in New York State

Add an action: Identify new species being brought in when there is still time to control them.

Identification and education about species that have recently been introduced or are proposed for introduction are part of Action A, for which NYSDEC is seeking funding.

New section: Accelerate PCB removal
Paul Sawyko will make suggested revisions.

Amendment to: WQMAC Responsiveness Summary
Chapter 7 discussion items
Salt issues (page 5)
January 12, 1996

The WQMAC Executive Committee recommends incorporating the two salt issues into the Stage II RAP in the following ways:

1. Road salt

Include a section in Chapter 4, Studies Required to Complete Identification of Use Impairments, suggesting a literature review of:

- How salt affects habitat.
- What is the current extent and location of salt damage in the Embayment watershed.

The purpose of the study would be to determine whether or not action is necessary to remediate or prevent an impairment.

2. Akzo mine

Include a section in Chapter 9, Surveillance and Monitoring Program, suggesting ongoing monitoring (awareness) by the Monroe County WQCC and the Monroe County WQMAC of news, decisions, reports and known or suspected chemical or physical changes involving:

- Impacts of the mine collapse on the Genesee River.
- Potential impacts of the relocated mine on the Genesee River.

WQMAC Responsiveness Summary
Chapter 7 discussion items
Revised February 1, 1996
(Page numbers are *former* page numbers)

Section 7.2. Ensure that critical pollutant sources located outside the Rochester Embayment....:

Issue 1 - vague

We have substituted "WQMAC" for "RAP Advisory Committee", and stated the actions more succinctly.

Issue 2 - Consider the impact of the other Great Lakes in A.2

The LaMP itself will take the impact of the other Great Lakes into account. We have added this information to the section.

Issue 3 - Listing human health effects as impairment

The International Joint Commission has been considering how to incorporate human health into RAPs. A conference held last year by the Great Lakes Research Consortium focused specifically on this issue. Margy attended this conference and brought back information from that conference to the WQMAC. Paralleling this, the WQMAC became interested in human health issues and sponsored the Hormone Disrupters conference held last march. Staff have felt that it would be important to try to incorporate human health issues into the RAP, and it was initiated by listing human health concerns as an impairment that some remedial measures may address. We recognize that this is putting the cart before the horse, but it was done mostly so we wouldn't forget to consider the issue. One option identified at the Human Health Conference was for RAPs to consider developing a human health goal for the RAP. Rochester Embayment RAP staff are currently drafting a possible human health goal for consideration by the WQMAC. We would ask that this issue be tabled until after discussion of other Chapter 7 issues. At that time, we would like the WQMAC to consider a draft human health goal, and make a recommendation regarding your thoughts on listing human health as a possible impairment.

Issue 4 - Use the word "promote" to characterize the action or recommendation, not "ensure"
Response: Have changed.

New York State pollution prevention (Toxic Chemical Reduction Plans (section deleted)

This proposed regulation (Part 378) is considered to be "dead." This section has been deleted from the RAP.

Section 7.3. New York State Water Quality Enhancement and Protection Plan

Issue 1 - Does State have legal authority for action?

The State has legal authority for Discharge Restriction Categories, and this is already a regulation and therefore enforceable. Antidegradation and substance bans are proposed policies still under development and are not currently enforceable. The antidegradation policy will be influenced by the antidegradation requirement in the federal Great Lakes Guidance. (See Chapter 6 section on "Great Lakes Guidance".) The substance ban proposed policy will be influenced by the EPA virtual elimination project. (See Chapter 6 section on "EPA voluntary pollution prevention programs".) This information has been added to the section.

Issue 2 - Do substance bans work on the state level? Suggest specific substances. Who has authority?

Information has been added to the section on the statutory authority for New York State to regulate the registration, commercial use, purchase, and custom application of pesticides and to ban substances.

It would be beyond the scope of the RAP to suggest specific substances that should be banned. What is proposed here is a process, with scientific criteria, to make decisions on substances that should be banned. Such a process would have to be implemented before any specific recommendations on banning could be made.

Issue 3 - Action B List "high quality" water areas

DEC does not maintain a list of waters that are above the standards for their use classification. A complication in compiling such a list is that a waterbody can be above a standard for its use classification for one chemical, but not another. A list would soon become out-of-date, because antidegradation will be based on the new standards required by the Great Lakes Guidance. This information has been added to the section.

Section 7.4. Promote pollution prevention in the Rochester Embayment watershed

Issue 1 - Clarify pollution prevention

The EPA/DEC definition of pollution prevention has been incorporated into the section: Source reduction or other practices that reduce the amount of pollutants that enter the water stream prior to out-of-process recycling, treatment or disposal.

Issue 2 - Is the household hazardous waste collection center/education program pollution prevention?

Not by the EPA/DEC definition. They are not source reduction. These ideas have been deleted from this section and added to the stewardship section.

Issue 3 - Monitoring is neither a remedial action nor pollution prevention

Have moved this to the monitoring chapter with a cross reference.

Issue 4 - Are there reasons for doing more than one chemical at a time?

The reasons that we have recommended addressing one chemical at a time are twofold: First, we

believe that, to promote pollution prevention, there must be a cooperative effort of many different entities that must be coordinated by one person or office. We do not think it is feasible to obtain the financial resources to promote pollution prevention efforts on more than one chemical at a time while also implementing other recommendations of the RAP. Second, we think that there is a lot to be learned about pollution prevention, so that by going one chemical at a time, there will be knowledge gained that will make subsequent efforts easier.

Section 7.5. Ensure proper closure/remediation of landfills and hazardous waste sites

Issue 1 - Use the word "promote" to characterize the action or recommendation, not "ensure".
Have changed.

Issue 2 - Action E Do we need to add an implementor?

We contacted the person who made this comment and added the implementor.

Issue 3 - .Action C Need for legislative authority

The NYS Dept. of Health has legal authority under the State Environmental Quality Review Act to write guidelines for how an investigation should be done. It has been added to the section that SEQRA is the legal authority.

Section 7.6. New storm drain message system

Issue 1 - Already being implemented. Add stenciling at new construction sites. Add new ideas such as using adhesive and metal stencils

Response: We have added that some stenciling has already been done and other suggested information.

Section 7.7. Investigate contamination and opportunities for remediation in the Genesee River gorge

Issue 1 - Question whether this section should be included in the RAP

Expected benefits of the four proposed actions are:

1. Decrease the chances of contamination reaching the River.
2. Understanding the amount and locations of contaminant discharge.
3. Developers' awareness of the potential for finding contaminated fluid under sites to be developed.
4. Remedial and closure activities at a contaminated site.

If we delete this action, we are likely to face severe criticism from the IJC and the environmental community since the Stage I RAP identifies the site as a source of pollutants. Also, deleting it now would have the effect of ranking it before the ranking process begins.

Issue 2 - Action A This measure is not likely to be an effective way of removing pollutants. The sampling point was not designed for removal of materials. Recovery wells, specifically installed

for the purpose, would likely be much more productive.

The proposal is to investigate the feasibility of pumping and remediating. A group of involved agencies (RG&E, Monroe County representatives) felt it was worth evaluating.

Issue 3 - Action D Question funding sources and implementors

This may have to be negotiated as part of the action.

Issue 4 - Action D An evaluation of the entire gorge would allow the community to set reasonable cleanup goals for the entire gorge including the Brewer St. site. Such a recommendation does not appear to be included in Chapter 7

An evaluation has been done. Suspected and known coal tar sites are identified in a NYSDEC report. Statewide cleanup goals for coal tar sites in New York State are being developed by NYSDEC in cooperation with utilities.

Toxics

Issue 1 - Consider new remedial measure: educate health care professionals

Whether or not to include references to human health in the Stage II RAP will be discussed as the last discussion item for Chapter 7. This proposed measure could be discussed at that time. See response to A.2 Action 3.

Issue 2 - Move stormwater sections to Part A

We would recommend keeping the stormwater sections where they are. While stormwater does carry metals and other toxics to the Embayment, we have much less information on the amount of toxics causing impairment in stormwater. Instead of moving sections, we can use cross references on the impairment tables to show that stormwater also contributes toxics to the Embayment.

Section 4.4 Genesee River sediment loading study (moved section from Chapter 7 to Chapter 4)

Issue 1 - Clarify the problem

Have added a reference: "See Stage I RAP, pages 5-17 and 5-18, Table 5-13, and Figure 5-10." These pages discuss what is known about the sources of sediments.

Issue 2 - Seriousness of the problem

Have added a reference: "See Stage I RAP, pages 5-17 and 5-18, Table 5-13, and Figure 5-10." These pages discuss what is known about the sources of sediments.

Issue 3 - Appropriateness of listing expert's name

This section has been moved to Chapter 4: Studies. In this case, it is appropriate to include the expert's name. This is an unusual case, because the contract has already been signed and the money has already been allocated.

Benthos

Issue 1 - Consider adding action referring to erosion remediation

Sections in Chapter 7, Part D that refer to erosion control are:

- Promote agricultural Best Management Practices
- Develop streambank erosion control program
- New York State Coastal Nonpoint Pollution Control Program

Issue 2 - Sediment not only factor in degrading benthos

Sediment is not the only factor that affects degrading benthos. In fact this comment has caused us to check the Stage I RAP and find that we did not even list sediment as a factor in degrading benthos - instead we listed oxygen depletion as the primary known factor, and some heavy metals as some possible factors. Therefore, we have moved this remedial measure (Genesee River sediment loading study) to Chapter 4, Studies. Other measures that may affect degradation of benthos appear in Parts A and C. Cross references on the impairment table are needed to reflect this.

Issue 3- Consider salt issue

There are two salt issues. They will be incorporated into the Stage II RAP in the following ways:

1. Road salt: A section will be added to Chapter 4, Studies, proposing a literature review of:

- How salt affects habitat.
- What is the current extent and location of salt damage in the Embayment watershed.

If the literature review shows that there is an impairment in the Embayment due to salt, then further research would be conducted on salt alternatives.

The purpose of the study would be to determine whether or not action is necessary to remediate or prevent an impairment.

2. Akzo mine: A section will be added to Chapter 9, Surveillance and Monitoring Program, suggesting ongoing monitoring (awareness) by the Monroe County WQCC and the Monroe County WQMAC of news, decisions, reports and known or suspected chemical or physical changes involving:

- Impacts of the mine collapse on the Genesee River.
- Potential impacts of the relocated mine on the Genesee River.

Participation in the public review process for SPDES permits would be part of the monitoring.

Section 7.8. Intergovernmental Agreement with the Army Corps of Engineers

Issue 1 - Is this an ongoing action?

No. There is currently no agreement.

Section 9.2. Establish sediment quality goals for the Rochester harbor (section moved from Chapter 7 to Chapter 9)

Issue 1 - Question whether this section should be removed (or strengthened)

Monitoring as follow-up to goal setting has been added to the title and to the action. There is a cross-reference from the sediment monitoring section in chapter 9. "Measures to reach goals should be established" was not added because proposed RAP actions are the measures.

Issue 2 - Definition of Rochester Harbor

Have added the Army Corps of Engineers definition (northern end of the breakwall to the southern end of the Charlotte docks).

Dredging

Issue 1 - Add a sediment mapping and mitigation section

At the suggestion of WQMAC, a mapping and mitigation section has not been added. A section on monitoring sediment was added to Chapter 9, Monitoring. It includes:

1. Monitoring as follow-up to C.2. (See above.)
2. Review monitoring by the Army Corps of Engineers at Rochester harbor.

Issue 2 -Response: Consider adding measure relating to dredging in other areas such as Irondequoit Bay, Braddock Bay and Greece Ponds

The use impairment that we have identified for dredging is that overflow dredging is prohibited in the Rochester Embayment because of the negative water quality impacts it causes. Overflow dredging has never been proposed in Irondequoit Bay, Braddock Bay or the Greece Ponds, and other methods of dredging do not have such negative impacts on water quality of the Embayment. Therefore, we recommend that a new remedial measure related to dredging in these other areas not be developed at this time.

Section 7.9. Institute Intergovernmental Agreements to protect water quality

Issue 1 - Within the section, mention the limitations of Intergovernmental Agreements, such as the fact that a municipality may terminate the agreement with 60 days notice. (M. McNulty)

The section has been amended to include mention of the fact that some municipalities may not be interested in entering into IGAs and that these agreements can be terminated by either party.

Issue 2 - Who would pay for the implementation of this action? (D. Woods)

If this action is implemented, the cost of funding an IGA coordinator position would most likely be borne by Monroe County. In regards to the implementation of IGAs, it is most likely that the costs would be borne by the municipalities with technical assistance provided by the County. The information has been added to the section.

Issue 3 - On page 43 of the text, reference the "Develop Streambank Erosion Control Program" section. (R. Nelson)

This reference is already included in the section.

Section 7.11. Promote Impervious Surface Reduction

Issue 1 - The name of this section should be changed to "mitigation and reduction of impervious surfaces." (P. Smith/C. Fredette)

The title of this section has been changed to "Reduce and Mitigate Impervious Surfaces".

Issue 2 - Mention the use of pervious surfaces in overflow parking areas as a mitigating strategy. (C. Fredette)

This strategy has been incorporated into the section.

Issue 3 - Is state/county legislation required in order to establish a special district? (M. McNulty)

Yes, both state and county legislation is required in order to establish a special district. As mentioned in the Chapter 7 section entitled "Institute Intergovernmental Agreements: "The Monroe County Water Quality Management Agency (WQMA) has adopted intergovernmental cooperation as a strategy to address water quality impairments. This strategy consists of two complementary components, one being the phased development of IGAs. As part of the IGA process, the possibility of establishing special districts (based upon watersheds) as a funding mechanism for stormwater management will be explored."

Issue 4 - Include infill development as a mitigating strategy. (M. McNulty)

This strategy has been incorporated into the section.

Section 7.12. Identify and solve onsite sewage disposal system problems

Issue 1 - Implementors include counties. Questions whether rural counties would be interested. How would this section apply outside Monroe County? In the absence of known the problems, new requirements would not be popular.. (Woods)

The rural counties, as a group, will rank the possible new remedial measures separately from Monroe County.

Section 7.13. Manage phosphorus loadings from point sources

Issue 1 - Three treatment plants discharge outside of the Rochester Embayment. Should they be asked to discharge less phosphorus? (p. 71)

This section has been greatly revised. In the new version, learning the impact of the three treatment plants on the Embayment is part of an action. The impact needs to be known before it can be decided whether or not they should be asked to discharge less phosphorus.

Issue 2 - Action B (p. 73): Does this belong in the section on "identify and solve onsite sewage disposal problems"?

Although septic systems are generally considered to be nonpoint sources, some large restaurants in unsewered areas have commercial sand filters with a discrete discharge point, and can also be

considered as point sources. The action fits better into the phosphorus point source section because both the action and the section focus on ways to decrease phosphorus discharge to the Embayment from facilities larger than that of a single-family home. The "Identify and solve onsite sewage disposal problems" section focuses on septic systems for single-family homes.

Issue 3 - Should the Spencerport WWTP be included in this section? (Sawyko)

Changes in the treatment process at the Spencerport WWTP are used as an example in an action entitled "Maximize phosphorus removal from the effluent of small wastewater treatment plants".

Section 7.14. Promote agricultural Best Management Practices (p. 76)

Issue 1 - Include cooperation with Cornell Cooperative Extension and non-governmental organizations in this section. In addition, include private foundations as a possible funding source. (W. Baker)

These ideas have been included in the section

Issue 2 - Include Aid to Localities as a possible funding source. (D. Woods)

This idea has been incorporated into the section.

Issue 3 - This section should be more than four pages long. (E. Watson)

Because of the size of the Stage II RAP, every effort is being made to keep the individual sections as concise as possible. However, if there are specific concepts or actions which have been omitted, changes could be made.

Issue 4 - Recognize the differences among WQCCs within the Watershed. (D. Woods)

We will state: "WQCCs or other county agency responsible for coordinating water quality activities".

Section 7.15. Intensify and focus public education efforts regarding the proper use of lawn care fertilizers and pesticides

Issue 1 - Do we know what locations are characterized by eutrophication problems? (R. Nelson)

The Stage I RAP identifies eutrophication as a problem in the Rochester Embayment of Lake Ontario. As mentioned in this section, eutrophication has also been identified as a problem in Irondequoit Bay and the Greece Ponds.

Section 7.16. Develop streambank erosion control program

Issue 1 - WQCCs may not be appropriate implementors outside of Monroe County. (D. Woods)

We will state: "WQCCs or other county agency responsible for coordinating water quality activities".

Section 6.38. New York State Coastal Nonpoint Pollution Control Program (Note (February 22, 1996): Since the following responses were written, it was decided to move the section to Chapter 6.)

Issue 1: Nothing new is proposed here. Should this be in Chapter 6?

We put the section into Chapter 7 because the program is so new (July 1995) that the public is not aware of it. Also it would not be possible to write about effectiveness for a program that is so new. The WQMAC has not suggested moving the section to Chapter 6. The title has been changed to "Enhance and help implement the New York State Coastal Nonpoint Pollution Control Program".

Issue 2- Move the 90% statement on page 88 upfront as a statement of the problem. Make the 80% statement on page 129 consistent with the 90% statement. (Watson)

The statement that 90% of NEW YORK STATE water quality impairments are caused by nonpoint sources is the first sentence in this section.

Issue 3 - Is having these measures described elsewhere in the document sufficient?

Many of the actions described in the section appear elsewhere in Chapter 7. The section is a means of consolidating information about the State's official coastal nonpoint pollution control program. The section reflects New York's response to federal legislation that required New York to develop and implement a coastal nonpoint pollution control program. New York's response was to build on existing programs wherever possible and to avoid duplication.

Chapter 7

Issue 1 - Needs more information on land use planning.

The importance of land use planning in protecting water quality is addressed in a number of sections including the following: D-3, D-10, and J-4.

Issue 2 - "Current conditions" part of sections should include seriousness of problem.

It has been left to the Ranking Task Group to considering "urgency" as part of the ranking process. In any case, a description of "seriousness" is subjective .

WQMAC Responsiveness Summary
Chapter 7 discussion items
February 22, 1996

Section 6.38. New York State Coastal Nonpoint Pollution Control Program (moved section from Chapter 7 to Chapter 6)
(Unresolved when Responsiveness Summary for Part D was prepared.)

Issue 2- Move the 90% statement on page 88 upfront as a statement of the problem. Make the 80% statement on page 129 consistent with the 90% statement. (Watson)

The statement that 90% of NEW YORK STATE water quality impairments are caused by nonpoint sources is now the first sentence in this section. The 90% statement is also being used in "Develop public education structure". The reference is NEW YORK STATE Dept. of State (1995), Executive Summary to the New York State Coastal Nonpoint Pollution Control Program. It states: "Based on water quality information collected by the New York State Department of Environmental Conservation over the past decade, nonpoint pollution from sources such as urban runoff, agriculture, and onsite wastewater treatment systems is responsible for over 90% of the water quality impairments in New York State." The 80% statement referred to the number of stream segments that are impacted by nonpoint source pollution.

Section 7.17. Educate local officials and the public on the value of wetlands

(Action A) Multiple workshops may be required to reach rural counties and be close to the audience.

1. References to agencies that are specific to Monroe County have been removed and replaced with references that apply to all counties.
2. The following statement has been added near the beginning of Action A: "The workshop location should be convenient and close for the audience it expects to educate. If representatives from the entire Rochester Embayment watershed are to be educated, many workshops would need to be held in a minimum of four locations."
3. The potential for a minimum of four workshops has been incorporated into the costs.

Section 7.21. Educate about exotic species introduction

Include Pacific salmon, carp, alewives, etc., as exotic species that we now accept as natural.

A note has been added that many species that are really exotic to the Great Lakes have come to be accepted as natural. They include the following fish species:
brown trout, chinook and coho salmon, carp and alewife.

Section 7.23. Complete basin water quality plans

Include the Water Resources Board, NYSDEC and Regional Planning Councils as implementors. Recognize potential conflicts among implementors.

Implementors have been added, as suggested. A statement has been added: "As many implementors as possible should be identified at the beginning of the planning process. Many are listed below; there may be others. These implementors should be represented in plan preparation in order to avoid potential conflict among implementors".

Chapter 8 Responsiveness Summary October 1, 1996

(Please note that the page numbers referenced below are former page numbers and may no longer be accurate.)

Chapter 8 - general comments

A table of contents is needed for Chapter 8. (Fredette)

A complete Stage II RAP table of contents was developed for the draft version of the RAP which was submitted to the NYSDEC on September 30, 1996. The table of contents is located at the beginning of the document. Therefore, individual table of contents will no longer be included at the beginning of each chapter.

No author or sources were included in this draft. (Fredette)

These items were added to the draft which was submitted to the NYSDEC.

In part B "Establishing New Financing Options", there is a formatting problem with the section numbers. (Fredette)

In the latest draft of this chapter, the numbering scheme has been corrected.

Section 8.1.1 Background:

Where did the definitions come from? What is the significance of the question marks? (Graham)

The criteria definitions were compiled from a number of different sources including several USEPA and IJC documents. The significance of the question marks is that each of these criteria should be considered when evaluating the different funding options that are outlined in Chapter 8. A RAP funding strategy is outlined in Chapter 11 "Management of RAP Implementation".

Discuss equal weight to polluter pays or beneficiary pays. Polluter pays is more fair? (Nelson)

The concepts of "polluter pays" and "beneficiary pays" were included in the explanation of the "equity" criteria so that the reader could keep these issues in mind when reviewing the different funding strategies. With the existing narrative, the intent was to simply provide information rather than make a statement that "polluter pays" is more appropriate than "beneficiary pays" or vice versa. The WQMAC may wish to discuss how they would like this type of information to be presented.

Section 8.1.2 Special District Task Group

Can we include Water Resources Board document that is referred to? (Zorn)

The Water Resources Board document Protecting the Lake Ontario Drainage Basin in New York State: A Proposal to Develop a Finger Lakes - Lake Ontario Watershed Protection Alliance is

summarized on the bottom of page 8-2. However, this document is short enough (4 pages) that it could also be included as an appendix to the Stage II RAP.

FL-LOWPA - Change to "county" level rather than local government. (unknown)

I assume that the commenter is referring to the statement at the bottom of page 8-2 that reads "The primary role of the Alliance would be to develop and implement coordinated watershed protection strategies at the local government level throughout New York State's Lake Ontario Basin". This wording was taken directly from the Water Resources Board document mentioned in the previous comment.

Clarify Pure Waters versus Department of Environmental Services (Graham)

The following wording has been added as a footnote on page 8-2 in order to clarify this subject. "The Monroe County Department of Environmental Services (DES) is divided into divisions including Pure Waters, Solid Waste Management, and the Environmental Management Council. The 5 Pure Waters Districts are funding mechanisms that are used to fund the Pure Waters Division."

Bottom paragraph of page 8-2 - Is the Finger Lakes - Lake Ontario Watershed Protection Alliance Representative of the 25 counties? It should not be limited to counties. (Zorn)

The paragraph on the bottom of page 8-2 is a summary of the Water Resources Board document Protecting the Lake Ontario Drainage Basin in New York State: A Proposal to Develop a Finger Lakes - Lake Ontario Watershed Protection Alliance.

Section 8.2.1 Special Districts

Page 8-3 - Add option - non-property taxes, i.e. water bills. (unknown)

The following wording has been added as a third option under the heading Options relating to the tax/fee structure of a special district "The tax or fee could be added to the existing water bill".

Page 8-4 - Consider more information on watershed districts. (unknown)

The existing draft narrative of Chapter 8 includes the advantages and disadvantages of each of the options under the heading "Options relating to the geographic/political scope of the special district". Does the reviewer have specific types of information that he/she would like to see added.

Section 8.2.2 General Tax Revenue

Page 8-5 - Include garbage collection as an example of a service that is provided through general tax revenues? (Fredette)

This addition has been added to the narrative.

Section 8.2.4 Fees

Page 8-6 - Collection costs are a disadvantage of fees. (unknown)

This addition has been added to the narrative.

Section 8.2.5 Not-for-profit organization

Page 8-7 - A disadvantage of a not-for-profit organization is that it does not possess any regulatory authority. (Graham)

This addition has been added to the narrative.

Section 8.2.6 Partnerships

Page 8-8 - A disadvantage of partnerships is that the partners can change and organizations can expand or collapse. (Graham)

This addition has been added to the narrative.

Section 8.2.8 Fines

Page 8-10 - A disadvantage of fines is that they are subject to litigation. (Graham)

This addition has been added to the narrative.

Section 8.2.9 Lotteries

Page 8-11 - A disadvantage of a lottery is that the funding level may be variable. (Fredette)

This addition has been added to the narrative.

Page 8-11 - Are lotteries regressive? (Woods)

The existing narrative has been revised as follows. "As a funding mechanism, lotteries do not target polluters or beneficiaries. Instead, lottery revenues *are considered by some to be a regressive source of income, that is lower-income groups bear a greater financial burden than higher-income groups.*

Section 8.3 Accessing Funds from Existing Sources

Page 8-16 - What does the Ontario Lake Plains Resource Conservation and Development Council do? (Fredette)

Because the Council has not yet received authorization from the United States Department of Agriculture, it has remained relatively inactive. However, once authorized, the Council will begin actively pursuing funding for projects which meet its objectives. The Council has identified the following categories for priority projects: water quality and lake shore concerns, promoting local agricultural products, and recreation/tourism.

Parking lot items:

- At the September WQMAC meeting, a comment was made that the Monroe County Water Authority sells water outside of Monroe County. However, we are uncertain as to who made this comment and how they would like it incorporated into Chapter 8.
- Comments on Chapter 8 that have been received since the September WQMAC meeting will be responded to in the next responsiveness summary.

**Response to Water Quality Coordinating Committee Comments on RAP Chapter 9
July 3, 1996**

Monitoring for toxics

Monitoring for toxics should talk about NYSDEC air toxics station in Rochester and Kodak air monitoring.

This information has been added.

Monitor the impact of road salt

Need to monitor usage - suggest MCDOT, IGAs, WQMAC combination to get it done.

The change has been made in the section.

Monitoring for aesthetics - chemical seeps

There are other seeps near Kodak, Beebee Station, behind Rayco.

The following action has been added to the section (see reverse side):

Proposed monitoring #2: Monitor other seeps in the Genesee River gorge

Description of method: In addition to the seeps at the Lower Falls, there are other areas in the gorge where seeps have reportedly been observed, such as:

- North of the Eastman Kodak Company King's Landing Wastewater Treatment Plant (behind the former St. Bernard's Seminary).
- Near RG&E's Beebee Station.
- At Ambrose Street.
- East bank of River at RG&E's Brewer Street headgates

A Task Group would develop a list of sites to be monitored. The Task Group should include representatives of the Monroe County Department of Health (MCDOH), the New York State Department of Environmental Conservation (NYSDEC), RG&E, Eastman Kodak Company, and other owners of property where seeps have been observed. The Task Group must seek permission from property owners before the monitoring team enters any property.

Some of the sites will be more accessible for monitoring than others. The seeps will be visually inspected as closely as possible. Adherence to standard safety practices may require that some sites be viewed from a distance with binoculars. The distant viewing may determine whether or not a closer look is warranted in the future.

If the site is accessible, samples of the seeping material should be taken and analyzed by the Monroe County Environmental Health Laboratory, NYSDEC, NYSDOH Wadsworth Laboratory, Eastman Kodak Company, or a commercial laboratory.

The frequency of monitoring would be determined after the first viewing.

Estimated cost:

Development of a list of sites and permission for access:

5 environmental staff persons x 4 hours/person x \$24/hour = \$ 480.

Monitoring and sample collection:

2 environmental staff persons x 8 hours/person x \$24/hour = \$ 384
Sample analysis: \$1,000 per sample, estimate of 4 samples \$4,000
Total = \$4,864

Five-year monitoring costs cannot be determined until frequency of monitoring is determined.

Possible funding sources: MCDOH (staff time), NYSDEC, property owners where seeps have been observed

Responsible entity: MCDOH, NYSDEC, property owners

WQMAC Responsiveness Summary
Chapter 9 "Surveillance and Monitoring Program"
June 19, 1996

Chapter 9. General

Issue #1: Should the monitoring be grouped by use impairment" (Sawyko)

On October 17, 1995, a task group composed of Knauf, Sawyko, Schifano, Brazda, Peet, Stevenson and Beal considered 3 ways of organizing the chapter. The group chose to organize the chapter based on use impairments in order to be consistent with the rest of the RAP.

Issue #2: Include an introduction to Chapters 4 and 9. (Sawyko)

All chapters will have an introduction.

Issue #3: Include delisting criteria in each section. (Sawyko)

This has been added.

Issue #4: Consider a monitoring program regarding the surge control project. (Rusczyk)

Because of the time pressure of completing the RAP by September, this suggestion has been added to the file of proposals to evaluate in 1997.

Section 9.1. Toxics

Issue #1: Should bird/animal deformities be included? The impact is indirect. (Sawyko)

This should be discussed by WQMAC.

Section 9.3. Eutrophication

Issue #1: Why was location outside of the Embayment chosen? (Sawyko)

The locations outside the Embayment are control sites. This information has been added.

Issue #2: Need more information about what we expect to learn.

The name of the monitoring method has been changed to: "Measure phosphorus loading trends from the Genesee River at an agricultural and an urban location to learn their relative contributions". The measured parameters are given as: "Total phosphorus and soluble reactive phosphorus in an agricultural area and in an area downstream from both agricultural and urban areas. The difference between the two represents the contribution from the urban area."

Issue #3: Were additional monitoring strategies considered? (Fry)

A meeting on November 17, 1995, was held to discuss possible monitoring methods. Other methods that were initially recommended were:

- Record algae weight from aquatic harvester. (Learned later that this is not feasible.)
- Develop phosphorus loading target for Embayment. (Became a Chapter 7 section.)

- Gather and coordinate data from already existing monitoring by a point person from DEPARTMENT OF ENVIRONMENTAL CONSERVATION, County or university). (Did not answer our questions about the impact on the Embayment.)

Section 9.6. Beach closings

Issue #1: Should monitoring for cladophora be included here? Section 9.3 is monitoring for eutrophication and cladophora. (Sawyko)

The aerial photography monitoring method was moved to the eutrophication section. The ongoing beach monitoring was left in Section 9.6 because it is specific to the topic of beach closings.

Section 9.7. Aesthetics - chemical seeps

Issue #1: Clarify numbering. (Fredette)

A WQMAC member suggested reversing Sections 9.7 and 9.8, because "aesthetics - algae" follows logically after "beach closings".

Issue #2: Change description of method. (Sawyko)

Paul Sawyko will submit the necessary changes.

Section 9.8 Aesthetics -algae

Issue #1: Could be merged with 9.3 Eutrophication (Sawyko)

This monitoring method was placed in a separate section because it is specific to the disagreeable appearance of algae on the shore.

Section 9.12. Phytoplankton and zooplankton

Issue #1: Too much detail. (Sawyko)

It has been agreed to keep the detail in through the studies and monitoring ranking process. Excessive detail will be deleted after that.

Discussion items

Section 9.1 Toxics

Should bird/animal deformities be included? The impact is indirect. (Sawyko)

WQMAC Responsiveness Summary
Chapter 9 "Surveillance and Monitoring Program"
June 20, 1996

General comments on Chapter 9, Surveillance and Monitoring Program

Issue #1: Need matrix that summarizes total costs. (Graham)

A summary of total costs will be prepared after all cost information has been received.

Issue #2: Costs are outdated. (Fry)

Cost information will be updated after it is received.

Issue #3: Standardize format. Use decimal system for headings. Page numbers: 9-1, 9-2, etc. (Graham, Brett)

We suggest that a WQMAC task group submit a proposal for format with examples. We will number the pages as suggested.

Issue #4: Clarify "reviewer" and "preliminary review team". (Rhoades)

"Preliminary review teams" consist of subject experts who review sections before a chapter is submitted to WQMAC and WQCC. WQMAC and WQCC are "reviewers". Notes referring to reviewers and preliminary review team are temporary and will not appear in the final text.

Issue #5: Alphabetize references (for all chapters). (Fredette)

All references will be alphabetized.

Issue #6: Standardize first and last names in references. (Brett)

All references will be last name first.

Section 9.1. Toxics

Issue #1: (Page 1) There are overall fish advisories for the Genesee River. (Brett)

The text has been changed to reflect this.

Issue #2: Need references for monitoring activities. (Brett)

The references have been inserted.

Issue #3: Say "local universities".

The text has been changed.

Issue #4: Page 3. Why is the sampling frequency every 5 years? It would seem that problems could occur in much shorter time periods. (Nelson)

The frequency of monitoring is dependent on the cost and the availability of qualified researchers. The authors felt that 5 years was a good compromise for monitoring long-term

changes.

Issue #5: Page 4. Responsible entity: What university? (Nelson)

The university would be one of the local ones (Monroe County, Livingston County). The implementor name has been changed to "local university".

Issue #6: Page 5. Species diversity and abundance. Does this constitute measurement of water column macroinvertebrates as referred to at the bottom of page 4? (Nelson)

Yes. The subheadings under proposed monitoring #2 have been changed to say "Species diversity and abundance of benthic and water-column macroinvertebrates" and "Benthic and water-column chironomid larvae deformities".

Issue #7: Page 3. Does "sample" consistently mean 10 fish? (Harter)

For cost of analysis, the words "per sample" have been changed to "per fish". The first sentence under "frequency of monitoring" has been clarified. The calculation of total costs is correct as it appears.

Section 9.2. Contaminated sediments

Issue #1: It's not clear why establishing sediment quality goals would include actual monitoring. (Nelson)

Establishing sediment quality goals was a recommendation of the 1984 Genesee River Sediment Toxic Survey that has never been carried out. The establishment of goals under the RAP was first suggested as a Chapter 7 proposed new remedial action. The WQMAC suggested that establishing goals is not a remedial action and is not meaningful unless there is monitoring of progress toward the goals. Then this action was moved to the monitoring chapter.

Section 9.3. Eutrophication and cladophora

Issue #1: Under "locations of monitoring", it would be helpful to explain why these three sampling locations have been chosen. (Nelson)

Brief notes have been added stating that: (1) measurements at site #1 at the mouth of the River are intended to indicate the contribution of the River to phosphorus loading in the littoral zone; (2) the other two sites are control sites.

Issue #2: It seems odd that the best way to prepare status reports is to search the literature. It implies confidence that someone else is collecting data. Do we know that this is the case? (Nelson)

The use of second-hand information was suggested to take advantage of what is already known, rather than undertaking an expensive research project. If a research project was ever undertaken in the future, the information collected in the literature search would be important background.

Section 9.6. Beach closings

Issue #1: Include cost. (Brett)

Cost information has been requested from the Environmental Health Laboratory and will be inserted.

Issue #2: "Monitoring" implies the expectation that the Cladophora beds may change over time. A single flight or flights every 5 years won't yield much information of that sort. Also, it's not clear why this is being done. How would knowledge of the location of the beds help? What might be done as the result of knowing where the beds are? (Nelson)

The originator of the proposal, Richard Burton, states that the purpose of this monitoring is trend analysis - beginning a database for future decision makers. It would give information about aquatic habitat that we already have for terrestrial habitat. Changes in cladophora beds are not fast enough to warrant monitoring more frequently than every 5 years, given the high costs.

Section 9.7. Aesthetics - chemical seeps

Issue #1: Clarify who will be doing monitoring: RG&E, volunteers? (Graham)

The text has been changed to say: "The status of the seeps could be monitored by staff representatives of Rochester Gas and Electric Corporation, the City of Rochester, and Monroe County departments, and by volunteer representatives of the Monroe County Water Quality Advisory Committee."

Issue #2: Page 25. Is danger an issue for volunteers? (Rhoades)

A statement has been added: "Issues of safety and liability must be considered before any field trip to view the Falls."

Issue #3: Why not monitor more frequently than every 5 years? (Fry)

The text has been changed to say: "The status of the seeps could be observed by the group approximately every five years, depending on River flow conditions. However, RG&E staff would have the opportunity to view the Falls more frequently, and could be accompanied by one or more interested persons, by prior arrangement."

Section 9.9 Aesthetics - litter

Issue 1 - Address the issue of liability associated with using volunteers (J. Ernst).

The following wording has been added to this section. "However, before this action could be implemented, liability issues associated with the use of volunteers would have to be resolved."

Issue 2 - Input from the other counties is needed on this action because they are listed as implementors (D. Woods).

Chapter 9 has been sent to the Rural Ranking Task Group for comment.

Issue 3 - Include more information regarding the not-for-profit, in particular its purpose (M. Rhoades).

The following narrative has been incorporated into the text. "The purpose of the not-for-profit organization would be to serve as an advocate for water quality by planning, coordinating, funding, and implementing educational activities within the Rochester Embayment Watershed. In addition, the not-for-profit could be involved in implementation activities such as assisting municipalities in developing ordinances that protect water quality, coordinating citizen monitoring of water quality, and monitoring the implementation of the RAP."

Issue 4 - Is this (Use of local water quality not-for-profit organization ...) the Clean-a-Stream activity? If not, should it be (R. Nelson)?

The creation of a local water quality not-for-profit organization would be a separate activity from the Clean-a-Stream program. The intent of the proposal outlined in this section is to monitor and collect litter along shorelines and waterways throughout the Rochester Embayment Watershed. The focus of the Clean-a-Stream program is to involve citizens in improving the water quality in streams. However, there may be some opportunities for coordination. Therefore, the following statement has been included in the narrative. "There may be some opportunities to coordinate this program with Monroe County's Clean-A-Stream program. The Clean-a-Stream program is a voluntary activity involving volunteers in efforts to improve and sustain the quality of the waterways in the County. Citizen activities that might be conducted as part of this program include surveys, monitoring, litter clean up, and storm drain stenciling."

Section 9.10. Turbidity

Issue #1: Page 31. Check wording of goals. (Brett)

The goals are now stated exactly as they are in Stage I. The phrases that had been added to two of the goals to relate them to turbidity have been removed.

Issue #2: Add costs. (Brett)

Cost information has been requested from the Environmental Health Laboratory and will be inserted.

Section 9.11. Added costs to agriculture and industry - zebra mussels

Issue #1: Incorporate species name for zebra mussel. (Brett)

The species name has been incorporated.

Issue #2: Could apply to rural counties. (Woods)

a. Proposed monitoring #1: The text has been changed to refer to "county" rather "Monroe County". Responsible entities have been added: regional planning councils and Water Quality Coordinating Committees.

b. Proposed monitoring #2: A reference has been added about participation of water treatment plants in the rural counties. Responsible entities have been added: regional planning councils

and Water Quality Coordinating Committees.

Issue #3: Costs are too low. (Brett)

The costs have been changed to reflect a cost of \$840 for a paid intern and \$80 for the mailing.

Issue #4: Incorporate Sea Grant as implementor. (Woods)

Sea Grant was added as an implementor for proposed monitoring #1.

Issue #5: Should survey be more frequent than every 10 years? (Worboys)

Three advisors for this section felt that it was not a good use of resources to conduct the survey more frequently, because we have very little control over this impairment.

Section 9.12. Status of phytoplankton and zooplankton in the lower Genesee River portion of the Rochester Embayment

Issue #1: Page: 41: Remove "I would". (Fredette)

The text has been changed.

Issue #2: Further break down the costs. (Brett)

The author, who is not a Monroe County employee, does not have time to break down the costs now. They will be broken down further if this monitoring method is one that is selected by the Studies and Monitoring Task Group.

Issue #3: Add "precision goal" to glossary. (Fredette)

The definition has been added.

Issue #4: Under Zooplankton, why is the sample frequency so frequent (biweekly)? (Nelson)

A phone call has been placed to the author. The information will be added after the author returns the call.

Section 9.13 Fish and wildlife habitat

Issue 1 - Add phosphorus to the second list on page 49 (J. Ernst).

The list has been amended as suggested.

Issue 2 - Communicate with the rural counties regarding this action (D. Woods).

Chapter 9 has been sent to the Rural Ranking Task Group for comment.

Issue 3 - Under "Description of method" it's not clear what the proposal would add or change from what is already being done in the existing programs (R. Nelson).

Proposed monitoring A involves building upon the Long Point Bird Observatory's Marsh Monitoring Program and the New York State Department of Environmental Conservation's proposed Reference Wetland System. This expansion would involve increasing the number of

wetlands being monitored and increasing the range of parameters being monitored.

Section 9.14. Enforcement of existing regulations

Issue #1: Page 53: List goals. (Graham)

The goals have been listed.

Issue #2: Communicate with rural counties.

A copy of Chapter 9 has been mailed to the members of the Rural Ranking Task Group with a request that they review it and comment on it.

Issue #3: Proposed monitoring #2: Towns could be funding source/implementors. (Fredette)

The reference to "towns" has been added.

Issue #4: Proposed monitoring #3: Regional planning councils could serve as liaison with Department of Environmental Conservation. (Woods)

This statement has been added.

Issue #5: (Under "Description of method") In addition to reporting SPDES permit changes, it would be of interest to collect Toxic Release Inventory (TRI) data on what is actually being discharged. (Nelson)

This statement has been added to the text.

Issue #5: Page 56: Rural EMCs may not have staff. (Woods)

No changes were made. Each time EMCs were suggested as an implementor, there were other possible implementors listed.

Section 9.15 Public attitudes and knowledge

Issue 1 - Add the Survey Research Center at SUNY Geneseo as a possible implementor (D. Woods).

This addition has been incorporated into the section.

Issue 2 - Include the groups represented on the WQMAC in the description of methods and funding sources parts of this section (?).

As suggested, the groups represented on the WQMAC have been included as possible implementors.

Section 9.16. Events at the Akzo Nobel Salt Mine

Note: Because there is so much interest among WQMAC members about the Akzo mine, we propose devoting a WQMAC meeting to the topic, rather than performing extensive additional research for the monitoring section. Information gathered in response to members' questions

will be *briefly* summarized in the monitoring section.

Issue #1: Update references to new mine. (Woods, Fredette)

References to a new mine leave out the name "Akzo Nobel" and refer to the new mine as a possibility only.

Issue #2: Page 60: Clarify further subsidence statement. (Woods)

The sentence has been deleted. There are differing opinions on further subsidence. Monitoring what actually happens is part of this monitoring proposal.

Issue #3: Page 61, 3rd paragraph: There are other MOUs. (Woods)

The other MOUs have been requested from the Livingston County Health Department. Brief information about the MOUs will be added.

Issue #4: Add latest research. (Woods)

We are seeking a source of the report suggested by David Woods. A brief summary of the report will be included.

Issue #5: Uncovered salt piles: something to research. (Fredette)

The following information has been added: The salt piles are too big and "active" for covering to be successful. However, when it rains, the salt piles form a crust. The rain runs off the piles and does not sink into the piles. The runoff goes to the brine lagoon for which there is a SPDES permit.

Issue #6: Page 61: Clarify "surface reclamation". (Rhoades)

A note has been added to describe "surface reclamation" as "...restoration of disturbed areas of the ground surface above a mine so that it is revegetated, if necessary, and aesthetically pleasing. Sometimes reclaimed areas are used for another purpose."

Issue #7: Has the mine been closed properly? Incorporate Dick Young information. (McNulty)

A note has been added that the mine has been closed according to NYSDEC regulations. The following information has been added from a Dick Young RCSI News Note: "Accelerated erosion of channel banks along the River is a likely consequence of changes in the River gradient caused by dewatering and subsidence of the flood plain."

Issue #8: Liability issue: Will Akzo remain responsible? (McNulty)

Akzo will remain responsible for the impacts of the mine, even though it is closed. Akzo responsibility is outlined in several Memoranda of Understanding (MOUs). The MOUs have been requested and information about the MOUs will be added to the section.

Section 9.17 Road Salt

Issue 1 - Add figure numbers to the graphs at the end of the section and shrink the graphs to half

page (Graham, Brett).

Figure numbers will be added to the graphs at the end of the section for the next printing of the chapter. The graphs were provided by the Monroe County Environmental Health Laboratory in hard copy form (as opposed to a disk) one per page. If they can be neatly reduced so that two may be placed on a page, that will be done for the next printing of the chapter.

Issue 2 - Has this section received preliminary review (C. Fredette)?

Preliminary review of this section was delayed because chloride concentration data for the years 1993 to the present was not yet available in the desired format. Although this data is still not available, the section has been sent out for preliminary review.

Issue 3 - Separate out the background information from the description of method part of the section on page 67 (C. Fredette).

The second, third, and fourth sentence have been move to the background paragraph.

WQMAC Responsiveness Summary
Chapter 9 "Surveillance and Monitoring Program"
July 9, 1996

Chapter 9. General

Issue #1: Should the monitoring be grouped by use impairment" (Sawyko)

On October 17, 1995, a task group composed of Knauf, Sawyko, Schifano, Brazda, Peet, Stevenson and Beal considered 3 ways of organizing the chapter. The group chose to organize the chapter based on use impairments in order to be consistent with the rest of the RAP.

Issue #2: Include an introduction to Chapters 4 and 9. (Sawyko)

All chapters will have an introduction.

Issue #3: Include delisting criteria in each section. (Sawyko)

This has been added.

Issue #4: Consider a monitoring program regarding the surge control project. (Ruszczyk)

Because of the time pressure of completing the RAP by September, this suggestion has been added to the file of proposals to evaluate in 1997.

Section 9.1. Toxics

Issue #1: Should bird/animal deformities be included? The impact is indirect. (Sawyko)

This impairment has been deleted.

Section 9.3. Eutrophication

Issue #1: Why was location outside of the Embayment chosen? (Sawyko)

The locations outside the Embayment are control sites. This information has been added.

Issue #2: Need more information about what we expect to learn.

The name of the monitoring method has been changed to: "Measure phosphorus loading trends from the Genesee River at an agricultural and an urban location to learn their relative contributions". The measured parameters are given as: "Total phosphorus and soluble reactive phosphorus in an agricultural area and in an area downstream from both agricultural and urban areas. The difference between the two represents the contribution from the urban area."

Issue #3: Were additional monitoring strategies considered? (Fry)

A meeting on November 17, 1995, was held to discuss possible monitoring methods. Other methods that were initially recommended were:

- Record algae weight from aquatic harvester. (Learned later that this is not feasible.)
- Develop phosphorus loading target for Embayment. (Became a Chapter 7 section.)

- Gather and coordinate data from already existing monitoring by a point person from Department of Environmental Conservation, County or university). (Did not answer our questions about the impact on the Embayment.)

Section 9.6. Beach closings

Issue #1: Should monitoring for cladophora be included here? Section 9.3 is monitoring for eutrophication and cladophora. (Sawyko)

The aerial photography monitoring method was moved to the eutrophication section. The ongoing beach monitoring was left in Section 9.6 because it is specific to the topic of beach closings.

Section 9.7. Aesthetics - chemical seeps

Issue #1: Clarify numbering. (Fredette)

A WQMAC member suggested reversing Sections 9.7 and 9.8, because "aesthetics - algae" follows logically after "beach closings".

Issue #2: Change description of method. (Sawyko)

Paul Sawyko has submitted the necessary changes.

Section 9.8 Aesthetics -algae

Issue #1: Could be merged with 9.3 Eutrophication (Sawyko)

This monitoring method was placed in a separate section because it is specific to the disagreeable appearance of algae on the shore.

Section 9.9. Aesthetics - litter

Issue #1: Litter pick-up/not-for-profit and Clean-A-Stream program overlap. Should be merged. (Nelson)

The following wording has been added to this section to clarify how the litter monitoring program might be implemented. "The coordination of the volunteer litter monitoring would be conducted by the not-for-profit organization (as described above) or as part of Monroe County's Clean-A-Stream program (as described above)."

Issue #2: Not all of the carcasses are the result of fishing. (Wagner)

The following wording has been added to the narrative. " (Please note, not all of the fish carcasses are associated with fishing activities. Some of the carcasses are the result of annual die-offs.)"

Issue #3: Include Coast Guard programs. (Ruszczuk)

Information regarding the United States Coast Guard's Sea Partners program will be

incorporated into this section.

Section 9.12. Phytoplankton and zooplankton

Issue #1: Too much detail. (Sawyko)

It has been agreed to keep the detail in through the studies and monitoring ranking process. Excessive detail will be deleted after that.

Section 9.13 Monitoring Fish and Wildlife Habitat

Issue #1: Too much detail. (Sawyko)

After discussion with the commenter, it was decided to leave the section as it is currently written.

Section 9.17 Monitoring of the Impact of Road Salt on Fish and Wildlife Habitat

Issue #1: Unclear as to what is proposed. (Fry)

After discussion with the commenter, it was decided that the primary issues are (1) who will evaluate the results of the monitoring and (2) does the section contain the most current information on Irondequoit Bay. The evaluation of monitoring results will be addressed in Chapter 11 "Management of RAP Implementation". In regards to the post-1992 chloride concentration data, the Environmental Health Laboratory is in the process of developing graphs of this data.

WQMAC Responsiveness Summary
Chapter 10: Selected Actions, Studies and Monitoring Methods
November 20, 1996
(Page numbers are *former* page numbers)

General:

Page 10-1: Reference where to find the Environmental Impact Statement. (Mohr)
The reference has been added.

Page 10-7: Put Figure 10-1 in an appendix (Sawyko/Graham) or footnote that it is a separate document.

The Figure has been moved to the end of the chapter and is referenced in the text. Figure 10-7 was also placed at the end of the chapter and is referenced. Figure 10-5 was deleted.

Ranking Process (urban)

Page 10-3, Step 3, 2nd paragraph: Delete paragraph about "relative consensus".
The paragraph has been deleted.

Page 10-4, Step 5, item c: Explain what a "package plant" is. (Mohr)
A brief explanation has been added.

Page 10-10, Figure 10-2: Include some narrative to explain what the figure is. (Graham)
An actual example has been substituted for the empty figure. A brief explanation has been added to the text.

Page 10-11: Include column titles. (Graham)
Column titles have been added.

Page 10-11: Include "RAP Chapter 7" in the title. (Mohr)
"Chapter 7 (Urban)" has been added to the first line of the title.

Page 10-11/12: Note what happened to the low priority items, perhaps addendum. (J. Ernst)

Page 10-11/12: Provide a list of the items that were not prioritized. (Nelson)

The low priority items have been added at the end of the list.

Page 10-11: Provide an overview of the ranking process. (Graham)

The ranking process is described at the beginning of Chapter 10. A reference to the description has been added to the figure.

Page 10-12, 10e.: Should be a high priority. (Mohr)

Page 10-12, 16a.: Should be a high priority. (Van Keuren)

Page 10-12, 1a.: Should be a higher priority. (Moffett)
Any changes in ranking should be discussed by the WQMAC.

Page 10-13, Figure 10-4: Convert into table format. (J. Ernst)
It has been converted into a table.

Page 10-13, Figure 10-4: Mention if actions are high priority and their section number. (Mohr)
The actions are listed in their ranked order, starting with the highest priority. However, in the new table format, it is difficult and space-consuming to state whether the actions are high priority or recommended, and the section number has not been included.

Page 10-13, Objective #3: Include "are" between "pollutants" and "outside". (Mohr)
The change has been made to: Address critical pollutants outside of the Rochester Embayment.

Page 10-13: State the purpose of Figure 10-4.
The explanation for Figure 10-4 is Step #8 on page 10-5. The explanation has been expanded.

Page 10-13, Goal #2, Objective #1: Is this still appropriate? Since CSOAP, the problem seems to be bird and animal waste. (Mohr)
Because the wording of the objective has not been changed, no change was made in Figure 10-4. In any case, human waste is still part of the problem.

Page 10-13: Include actions in descending order. (Mohr)
This has been done.

Page 10-19: remove heading. (Graham)
The heading has been removed.

Page 10-21: Change funding source (A.1.b) to "county". (Woods)
The change has been made.

Ranking Process (rural)

Shorten the process description. (Woods)
Figure 10-5 (five pages) has been deleted, as suggested by Woods after the November WQMAC meeting.

Make sure the format is consistent with the urban part of the chapter. (Graham)
The chapter has been formatted in the style chosen by the Format Task Group.

Page 10-29: Make certain that it is clear that the rural participants were not able to make commitments, not likely to be formal commitments. (Woods)
The figure has been deleted.

Page 10-34: Explain ranking of streambank erosion section. (R. Van Keuren)

Representatives of the five counties reached consensus on this action so easily, that there were no comments documented in the minutes. David Woods and David Zorn may be able to help with this explanation.

Studies and Monitoring Ranking Process

Page 10-40: Remove WQCC from P. Sawyko's reference.

The change has been made.

Pages 10-40-42: shorten description of process. (Fredette)

The document that was used by the Task Group has been moved to the end of the chapter, and so the section has been shortened by 5 pages.

Page 10-47, Ranking of Studies:

Standardize the list of ranked items. (Sawyko)

Explain that there were three different methods of ranking. (Brazda)

The second option was chosen. The explanation is in the Introduction.

Discussion items based on urban ranking, pages 10-11 and 10-12:

1. 10e. (Promote the use of biofilters where appropriate): Should be a high priority. (Mohr)
2. 16a. (Develop streambank erosion control programs): Should be a high priority. (Van Keuren)
3. 1a. (Scheduled reduction of PCBs in equipment): Should be a higher priority. (Moffett)
4. If the water quality coordinator position is in the middle of the recommended list, how will the educational activities above it on the lists be implemented? (Thompson)
5. Should recommendation 14 not be in the priority list, especially since IPM programs may be the agricultural BMP sought? The same is true for other nonpoint source pollution educational activities. (Thompson)

Chapter 11: Management of RAP Implementation
WQMAC Responsiveness Summary
November 26, 1996
(Page numbers are *former* page numbers)

Page 11-4: Include SWCDs, Planning Departments, Health Department -- may not be an active WQCC. (Woods)

The following narrative has been added to the text. "Please note that not all of the rural counties have active WQCCs. In the absence of an active WQCC, the agency that provides coordination of water quality activities (Soil and Water Conservation District, County Health Department, or County Planning Department) may perform those functions assigned to the WQCC."

Page 11-4: Is this a proposed system? Include "proposed" in title. (Graham)

Comments are being solicited from the agencies listed in the chart. The chart is being revised as comments are received.

Page 11-4: Include narrative that explains process for bringing these organizations into the process ... MOUs. (Graham)

The roles of the international, federal, and state agencies in implementing the RAP, as listed in Chart 11-1.a, are not new. The regional and county agencies and organizations are reviewing their proposed roles as part of the review and comment process. It is possible that some of the listed organizations might included their role in their work plans.

Page 11-5: Include mention that Task Groups should have input on request for proposals. (Fredette)

The suggested addition has been incorporated into the narrative.

Page 11-7: Label as proposed process and remove mention of formal agreements. (Woods)

The suggested changes have been made.

**Appendix C: Finger Lakes - Lake
Ontario Watershed Protection
Alliance (FL-LOWPA)**

About the

Finger Lakes - Lake Ontario Watershed Protection Alliance (FL-LOWPA)

History

The Finger Lakes - Lake Ontario Watershed Protection Alliance grew out of the former Finger Lakes Aquatic Vegetation Control Program (AVCP). The AVCP was initiated in 1984 in Cayuga County, New York, in the heart of the Finger Lakes Region, to address surface water quality concerns. The program subsequently grew to include 18 area counties encompassing a multitude of water resources, including all eleven Finger Lakes, many smaller lakes and ponds, the Genesee, Oswego and Seneca Rivers and tributaries, connecting channels, and Lake Ontario embayments.

When the AVCP was created, there was significant concern about water resource impairments stemming from cultural eutrophication of the region's lakes and waterways. Dense growth of nuisance aquatic vegetation altered fish and wildlife habitat and diminished the aesthetic, recreational, and economic values of water resources. The control of nuisance aquatic vegetation was a major program emphasis for several counties during the 1980's. Through the past decade, the program has become more watershed-focused, with an emphasis on pollution prevention through control of nonpoint sources. In 1994, a proposal was developed by the member counties to more explicitly identify holistic, grassroots watershed management as the primary focus of the existing program. This proposal was implemented during 1996, resulting in a new program name, the Finger Lakes - Lake Ontario Watershed Protection Alliance (FL-LOWPA), and a membership including 24 New York State counties wholly or partially in the Lake Ontario watershed. These 24 counties are divided into three regions which are interrelated by geography or shared watersheds.

Purpose

The purpose of FL-LOWPA is to protect and enhance water resources by **1)** promoting the sharing of information, data, ideas, and resources pertaining to the management of watersheds in New York's Lake Ontario Basin; **2)** fostering dynamic and collaborative watershed management programs and partnerships; and **3)** emphasizing a holistic, ecosystem-based approach to water quality improvement and protection.

A major tenet of FL-LOWPA is grassroots programming. Water quality problems are defined and solutions are developed and implemented at the local level. Through participation in the Alliance, however, member counties develop a more regional perspective that informs local programming and encourages cooperation.

Current Membership

FL-LOWPA membership in 1996 includes the following New York State Counties wholly or partially in the Lake Ontario drainage basin:

Allegany	Jefferson	Oneida	Seneca
Cayuga	Lewis	Onondaga	Steuben
Chemung	Livingston	Ontario	Tompkins
Cortland	Madison	Orleans	Wayne
Genesee	Monroe	Oswego	Wyoming
Hamilton	Niagara	Schuyler	Yates

Governance

The governing body of FL-LOWPA is the **Water Resources Board (WRB)**. Each participating county selects, through its local processes, one voting member to serve on the WRB. The WRB is comprised of county representatives from multiple disciplines and agencies, including Soil and Water Conservation Districts, Planning and Health Departments, Water Quality Management Agencies, and Environmental Management Councils. The Water Resources Board holds meetings monthly, with the Full Board (all 24 counties) meeting three times each year, regional groups (eight counties per region) meeting three times each year, and the seven-member Executive Committee meeting six times each year. The WRB makes decisions by consensus, or majority vote when necessary. The WRB employs a part-time program coordinator and is housed at the Finger Lakes Association, Inc. in Penn Yan, New York. The Finger Lakes Association provides office space for FL-LOWPA on an in-kind basis.

Funding

Funding for FL-LOWPA is provided through an annual appropriation by the New York State Legislature. Since 1984, more than \$13 million has been granted to the current program or its predecessor (AVCP). The 1996 fiscal year appropriation for FL-LOWPA is \$1.2 million. Each county receives an equal share of funding to carry out water quality programming. The program has been heralded as unusually cost-efficient: fully 96 percent of funding has been passed through to counties for implementation of projects, with only four percent retained for administration and activities coordinated through the Water Resources Board. Member counties contribute staff and other resources to the program on an in-kind basis. In many counties, FL-LOWPA funds have leveraged additional monies through grants and local appropriations.

Programs

Each member county of FL-LOWPA develops an annual plan of work, called the program narrative, to be funded by FL-LOWPA. All narratives are reviewed by the New York State Department of Environmental Conservation. Counties frequently coordinate FL-LOWPA work plans with strategies developed by county water quality coordinating committees, or with other existing local water quality plans or programs. Program narratives include projects in the following areas:

- water quality research and monitoring;
- implementation projects to reduce pollutant loads or remediate problem areas;
- watershed planning; and
- public education.

Cross-county projects, such as joint watershed plans for lakes in multiple jurisdictions (i.e., Tully Lake) and regional research projects (i.e., European aquatic moth survey) have resulted from counties' associations through FL-LOWPA, and are encouraged where appropriate. Final reports are written by counties for each year of funding.

The **Water Resources Board** has its own annual plan of work to assist communication among member counties and other agencies, organizations, and individuals with an interest in water quality. A technical workshop is held each spring to discuss techniques in water quality management. An annual conference is held each fall to promote public discourse on the future of the region's water resources. The location of the public forum cycles throughout the 24-county region, each year addressing issues and concerns related to a few neighboring watersheds. The conference series is designed to revisit each location every five years to track progress in watershed management. The last conference in the first five-year cycle (1996) is focused on the Lake Ontario watershed. This forum attempts to attract participants representing diverse interests from across the Lake Ontario basin; raise awareness of the contribution each local water quality effort can make to the region as a whole; and foster cooperative water quality initiatives. The WRB's semi-annual newsletter, *The Information Exchange*, contains program updates, research findings, and perspectives from a variety of individuals involved in water quality. The Water Resources Board also publishes a biennial report of member county program activities. □

**Appendix D:
Remedial Measures, Studies
and Monitoring Methods to be
Evaluated in 1997**

Remedial measures, studies and monitoring methods to be evaluated in 1997

The following remedial measures, studies and monitoring measures were proposed during review of the Stage II Remedial Action Plan. They are slated to be evaluated during 1997. The person or group responsible for the proposal is also shown below.

Remedial measures:

1. Identify and eliminate water pollution problems caused by in-building drains. (Martin Brewster)
2. Explore opportunities to reduce the use of road salt and to use alternative deicing materials as part of the intergovernmental agreement process. (Monroe County Water Quality Coordinating Committee)
3. Have the flow regime from the Mt. Morris dam regulated to minimize problems from the dam. (Use the results of Dr. Richard Young's study on the effects of the dam on bank erosion downstream. The study is described in the Chapter 4 section on "Genesee River erosion study.") (Michael McNulty)
4. Eliminate dredging of the Rochester Harbor. (Michael McNulty)
5. Restore the Turning Basin of the lower Genesee River to marshland. (Michael McNulty)
6. Use dredged silts to rebuild topsoils on land. (Michael McNulty)
7. Restore the Genesee River estuary to its natural state as much as possible. (Michael McNulty)
8. Establish a policy for commercial wastewater discharges to sand filter systems. (Joseph Albert)
9. Create a stormwater State Pollution Discharge Elimination System educational action. (Studies and Monitoring Ranking Task Group)
10. Reevaluate the rankings of the remedial measures, studies and monitoring methods every five years. (Monroe County Water Quality Coordinating Committee)
11. Promote programs to identify and remediate cross connections in all sewer areas. (Joseph Albert)
12. Investigate and remediate stormwater quality problems associated with local streams at Durand Eastman Beach. (Richard Burton)

Studies:

1. Study the impact of the Erie Canal on the streams west of the Genesee River. (Michael McNulty, Monroe County Water Quality Coordinating Committee)
2. Add the percentage contribution from each source to Stage II RAP Table 3-19 relating use impairments to causes and sources. (Monroe County Water Quality Management Advisory Committee)
3. Study the thermal effects of the Rochester Gas & Electric discharge at Russell Station on eutrophication problems in the Rochester Embayment. (Michael McNulty)
4. Study the effect that the Court Street dam is having on the benthic community upstream from the dam and require that environmental effects be strongly considered as a factor in regulating water levels above the dam. (Michael McNulty)

5. Focus on local foundries, past and present, to investigate potentially huge sources of PCBs. (PCBs were widely used in foundries that cast aluminum in the 1950s-1970s.) (Michael McNulty)
6. Verify whether a fishless segment exists in the lower Genesee River: A cheaper way than an intensive hydroacoustic survey would be to use gill nets in regions supposedly without fish. This could probably be done for less than \$25,000. (James Haynes)
7. Review the list of Rochester Embayment Priority Chemical Pollutants for possible additions or deletions. (Mary Lou Brett) A candidate for addition is anthracene, due to its high reported level in sediments in the Genesee River at Turning Point Park (see Chapter 3 section on "Trackdown of Chemical Contaminants to Lake Ontario from New York State Tributaries").
8. Learn the reasons for large differences between Stage I and Stage II TRI data. (Nelson)
9. Consider alternative modes of transporting concrete so that dredging of the Genesee River would not be required. (Arthur Graham)

Monitoring methods:

1. Monitor the surge control project at the mouth of the Genesee River. (Ruszczyk)
2. Monitor species populations after a species has been introduced (example: otter). (Monroe County Water Quality Management Advisory Committee)
3. The Monroe County Water Quality Management Advisory Committee should annually rank municipalities on their use of land use powers to help meet water quality goals. (Michael McNulty)
4. Encourage more stringent permit standards if and when permit limits for chemicals on the list of High Priority Chemical Pollutants are documented (as permits are renewed). (James Haynes)
5. Encourage the New York State Department of Environmental Conservation to alter State Pollution Discharge Elimination System permit reporting requirements and database storage so that accurate annual loadings can be calculated as a monitoring method. (Monroe County Department of Health Water Quality Bureau staff)
6. Stock mink for future monitoring. (Michael Ruszczyk)
7. Monitor indicator species populations and compare with historical data. Candidates include sturgeon and whitefish. (Richard Swacen)

**Appendix E:
The Urban Ranking Task Group
Ranking System**



**The Urban Ranking Task Group
Ranking System
revised - April 4, 1996**

Background

The following ranking system was developed by the Urban Ranking Task Group at the April 1, 1996 meeting of the Task Group. The ranking system will be used to prioritize the remedial actions outlined in Chapter 7 "Possible New Remedial Measures" of the Stage II Rochester Embayment Remedial Action Plan (RAP).

Description

The Urban Ranking Task Group's ranking system requires that each possible remedial action in Chapter 7 be assigned a total score between 2 and 10 based on benefit, cost, feasibility, and popularity. These four criteria are described below.

Step 1: The individual Task Group members will assign a score between 1 and 5 to each of the remedial actions for each of the criteria (benefit, cost, feasibility, and popularity).

Step 2: Task Group members will compute their total score for each remedial action by calculating the sum of: (1) the benefit score; and (2) the average of the cost, feasibility, and popularity scores.

$\text{Total Score} = \text{Benefit Score} + (\text{Cost Score} + \text{Feasibility Score} + \text{Popularity Score} / 3)$
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Step 3: Monroe County Health Department water quality staff will place the results of the individual rankings on matrices. The horizontal axis of the matrix will be the average of the cost, feasibility, and popularity scores and the vertical axis will be the benefit score. Matrices that display the average of the scores assigned by Task Group members will also be developed. In addition, wall charts will be developed that list the remedial actions and the range of scores that were assigned by the Task Group members.

Step 4: The Task Group will discuss the results of the individual rankings and come to consensus as to the recommended ranking that should be presented to the Water Quality Management Advisory Committee and the Water Quality Coordinating Committee.

Criteria

1. Benefit: The benefits of a particular action may be measured in a number of ways including the degree of its impact on Use Impairments, the number of Use Impairments impacted, the number or type of pollutants affected, or the urgency of taking the action. The following table attempts to develop a framework for determining the benefit of an action. Please note, High Priority and Priority Pollutants are defined in the Stage I RAP (pages 5-39 and 5-40).

Score	Impact on Use Impairment/s		Pollutants affected		# Use Impairments addressed		Urgency
5	Very significant - for example, implemented by itself, the action will result in improvement	or	1 or more High Priority Pollutants	or	Several (≥ 3)	or	Without action, irreparable damage will occur
4	Significant - for example, implemented in combination with another action, the action will result in improvement	or	1 or more High Priority Pollutants	or	several	or	Without action, the Use Impairment will become worse
3	Moderate - for example, implemented in combination with other actions, will result in improvement	or	1 or more Priority Pollutants	or	several	or	The Use Impairment is not becoming worse
2	Some	or	1 or more Priority Pollutants	or	More than one	or	The Use Impairment is not becoming worse
1	Very limited	or	1 or more Priority Pollutants	or	one	or	Even without action, the Use Impairment is being lessened

2. Cost: The cost of implementing an action includes consideration of the possible costs of not implementing the action. Quantitative information regarding the cost of implementing an action is contained within each section of Chapter 7.

Score	Cost range for implementing action
5	≤ \$10,000
4	\$10,001 - \$35,000
3	\$35,001 - \$60,000
2	\$60,001 - 85,000
1	≥ \$85,001

3. Feasibility: For the purposes of ranking, feasibility is defined as follows.

Score	Definition
5	The action has a very high likelihood of success because the action is a continuation of an ongoing program, the technology is proven, and/or funding is available.
4	The action has a high likelihood of success
3	The action has a moderate likelihood of success
2	The action is experimental and/or funding will be difficult to obtain
1	The action is very experimental and/or funding will be very difficult to obtain

4. Popularity: For the purposes of ranking, popularity is defined as follows.

Score	Definition
5	The action is likely to receive widespread government and public support and the action would benefit the entire Rochester Embayment Watershed.
4	The action is likely to receive significant government and public support
3	The action is likely to receive some government and public support
2	The action is likely to receive little government and public support
1	There is likely to be substantial government or public opposition to the action