
Remedial Action Plan Workshop Steering Committee

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Stage 2 Remedial Action Plans:
Content and Key Issues

Based on a Workshop sponsored by the
IJC's Water Quality Board,
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Cover Photo:
The photograph on the cover shows the Cuyahoga River Area of Concern in Cleveland, Ohio. The Cuyahoga River has historically been infamous for its water pollution problems. This recent picture documents increased multiple use in the Cuyahoga River and emphasizes the goal of RAPs, which is to restore all beneficial uses in the Areas of Concern.

Photo by John Hartig
STAGE 2
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The Governments of Canada and the United States, the eight Great Lakes states and the Province of Ontario are in the early stages of developing Stage 2 remedial action plans (RAPs) which will identify remedial measures required to restore beneficial uses in Great Lakes Areas of Concern. Therefore, there is an opportunity and need to clarify expectations for Stage 2 RAPs. A workshop, attended by approximately 100 RAP coordinators, RAP managers, public advisory committee and stakeholder group representatives, and citizen representatives, was held in April 1991 to share ideas and make recommendations on realistic expectations for Stage 2 RAPs, including specific content, format, level of detail, and process. The workshop utilized plenary presentations and breakout sessions to discuss expectations for Stage 2 RAPs, specific content (including an outline for Stage 2 RAPs - see Table 1), and key issues. The 12 categories of key issues discussed in breakout sessions were:

- Defining the minimum content for a Stage 2 RAP
- Incorporating habitat
- Embodying the ecosystem approach
- Securing commitments
- Embodying virtual elimination of persistent toxic substances
- Establishing quantitative goals
- Linking RAPs to larger efforts
- Managing RAP implementation
- Selecting preferred actions
- Evaluating benefits
- Determining meaningful public participation
- Incorporating a technical document into public consultation

Based on the input received at the workshop, the following conclusions were drawn by the Stage 2 RAP Workshop Steering Committee:

- Expectations and views pertaining to Stage 2 RAPs differ substantially among participants. Considerable effort will be required to reconcile differing expectations at both the program and local levels. This workshop represents a productive step in that direction.
- Although there is no obvious single best approach, it is clear that a successful process will:

  be integrative; work to achieve a planned, agreed-upon and flexible roadmap to restoration;
and provide evidence of commitment and continuing accountability. Stakeholder and public involvement are essential for success.

- Innovation and creativity are encouraged in the development processes for Stage 2 RAPs. There are, however, advantages in reaching an early common understanding of the necessary minimum content and cleanup standards (e.g. water quality and sediment standards, criteria, guidelines, site-specific goals) for Stage 2 RAPs.
- A standardized Stage 2 RAP format has advantages during both RAP development and final document review (e.g. numerous agencies and individuals must review RAPs, therefore, a standardized format will increase the effectiveness and timeliness of peer reviews).
- Each Stage 2 RAP must identify the key actions, sequencing, timeframe, and responsibilities in order to eliminate uncertainty in remediation. As part of this process, it is important to achieve broad-based agreement on benchmarks, indicators, and endpoints in order to celebrate progress and sustain momentum.
- The agency primarily responsible for preparing a Stage 2 RAP is not solely responsible for implementing it. The mandate of the lead agency should not restrict the RAP planning effort from properly addressing relevant issues.
- There is a need to recognize the iterative and ongoing nature of RAPs. Full commitments may need to be obtained through a step-wise process.
- Communication and information-sharing among participants in the RAP process on both sides of the border are extremely important. Attention needs to be given to the presentation of information in a style and format which makes it accessible to the general public.

IJC participation in the planning and facilitation of the Stage 2 RAP Workshop was critical to its success and timeliness.

Based on a review of the information and conclusions of the Stage 2 RAP Workshop, the Stage 2 RAP Steering Committee recommends that:

- The IJC, Parties and jurisdictions periodically sponsor RAP workshops on specific topics of common interest which are beneficial to all sides (e.g. successful approaches to public participation, creative financing, explicit accounting for environment-economy linkages, benefit analyses, comparing successful approaches to Stage 2 RAP development and implementation).
- The IJC further identify expectations and elaborate on the Stage 2 RAP review guidelines which will be used in the IJC RAP review process.
- The Parties provide more specific guidance to the jurisdictions, based on this workshop report, in terms of what is expected in Stage 2 RAPs and how Stage 2 RAPs could be developed. Efforts must be made to ensure binational consistency.
- The IJC recognize the iterative and dynamic nature of RAPs (including that RAP documents represent a "snapshot in time") in the review of RAPs.
- The Parties and jurisdictions use the example Stage 2 RAP outline presented in Table 1 of this report as a starting point in providing guidance on content requirements, while recognizing the unique circumstances of each Area of Concern.
INTRODUCTION AND WORKSHOP PROCESS

As a result of a 1985 recommendation of the Great Lakes Water Quality Board, the eight Great Lakes states and the Province of Ontario committed themselves to developing and implementing remedial action plans (RAPs) to restore impaired beneficial uses in each Area of Concern within their political boundaries. In an effort to endorse and build on these efforts, the Parties (U.S. and Canadian federal governments) incorporated RAPs into the 1987 Protocol to the Great Lakes Water Quality Agreement (GLWQA). The GLWQA states that RAPs will be submitted to the IJC for review and comment at three stages: 1) problem definition and causes; 2) selection of remedial actions; and 3) confirmation of use restoration.

With many of the RAP writing teams and RAP institutional structures facing preparation of Stage 2 RAPs, there was an opportunity and need to clarify expectations for Stage 2 RAPs. The GLWQA states that a Stage 2 RAP shall include:

- an evaluation of remedial measures in place;
- an evaluation of alternative additional measures to restore beneficial uses;
- a selection of additional remedial measures to restore beneficial uses and a schedule for their implementation;
- an identification of the persons or agencies responsible for implementation of remedial measures; and
- a process for evaluating remedial measure implementation and effectiveness.

To address this opportunity and need to clarify expectations for Stage 2 RAPs, the IJC's Great Lakes Water Quality Board and the Governments of Canada and the United States co-sponsored a Stage 2 RAP Workshop on April 15-16, 1991. Over 100 people actively involved in RAPs (RAP coordinators, RAP managers, public advisory committee and stakeholder group representatives, public interest groups, etc.) shared ideas and made recommendations on what realistically should be expected from Stage 2 RAPs, including specific content, format, level of detail, and process.

The format of the workshop was designed to utilize RAP practitioners to identify areas of commonality and differences regarding realistic expectations for Stage 2 RAPs (see workshop agenda in Appendix 1 and list of participants in Appendix 2). To initiate and stimulate discussion, the workshop began with keynote presentations on expectations for Stage 2 RAPs from: Mr. Gordon K. Durnil (U.S. Chairman, IJC), Mr. E. Davie Fulton (Canadian Chairman, IJC), Mr. John Jackson (President, Great Lakes United), Ms. Nancy Douglas-Howayeck (Chairperson, Menominee River RAP Citizen Advisory Committee),
and Mr. Steve Skavronbeck (member, Milwaukee Estuary RAP Citizens' advisory Committee).

Mr. Durnil noted that the co-sponsorship of this workshop demonstrated a continuing resolve by the two governments to continue the important work of RAPs. Emphasis on pollution prevention was viewed as essential. Mr. Durnil stressed the need for substantial ongoing public support, political will, and funds to ensure the efforts put forth are successful upon completion. Stage 2 constitutes an extremely important decision point on how to invest scarce resources. Although each RAP will be unique in its own right, some elements should be common to all Stage 2 RAPs. For instance, agreement on the nature and scope of the problems being addressed, how RAPs relate to other planning or development initiatives, and an understanding of the consequences of any proposed actions (i.e. social, economic, etc.). The complete text of Mr. Durnil’s speech can be found in Appendix 3.

Mr. Fulton commended the efforts put forth by the RAP practitioners to fulfill the obligations of their respective countries under the GLWQA. He underscored the importance of integrating environmental strategies and understanding social, economic, and environmental implications. In order for RAPs to be successful, RAP teams must: understand and incorporate the biological systems beyond the Area of Concern; avoid or prevent further insults to the environment even if they are not part of the original problem; and identify significant economic and social trends that might influence the impacts on, and demands for, environmental quality and the area’s water resources. RAPs will be difficult to sustain if these issues are ignored. The scope and impact of public consultation should be reported in detail in RAPs. Creative financing will be required during a continuing era of fiscal constraint by governments. The full text of Mr. Fulton’s speech is also provided in Appendix 3.

Mr. Jackson asked three questions: "What are we really going to do to clean up Areas of Concern?"; "What do we want out of a RAP?"; and "Will the public see results of their hard work?" From his perspective there are often two different goals being pursued for RAPs: to delist the Area of Concern, and to increase the quality of life in the communities within Areas of Concern. He perceived the first to be a search for the quick and easy way to deal with the problems and an objective that would then lose the support of the communities. Mr. Jackson preferred the latter route, that would encompass the holistic ecosystem approach. This approach would call for integrating RAPs with other efforts, rather than treating the plan in isolation from land use plans, pollution prevention, or zero discharge programs. Other expectations included: achieving a sense of shared responsibility for RAP implementation, clear timetables, clear responsibility, establishing an implementation committee to facilitate implementation of actions, and an oversight/watchdog committee to independently assess implementation progress.

Ms. Douglas-Howayeck noted that closure/delisting of an Area of Concern was important so as not to disenfranchise the community. Enfranchisement can be accomplished by keeping the RAP teams "at the table" to solve ongoing problems. The success of the Stage 2 RAP is dependent upon diligent reporting of the problems and verifying that solutions are likely to give the desired result. Care must be taken to ensure that a Stage 2 RAP is easily understood by the citizens and is specific about its purpose and goals (e.g. a publicly "usable" and accessible shoreline). Ms. Douglas-Howayeck reminded the participants that a RAP is neither a regulatory tool nor a plan to advance political agendas, but a plan that outlines who is responsible, documents financial commitments, etc. What is needed is less intellectual
and hysterical debate, and more pragmatic debate on real solutions to real problems.

Mr. Skavronnek urged that RAPs need to be visionary and practical, offer short and long term recommendations, go beyond the status quo, and develop implementation structures with the necessary authority and funding. A Stage 2 RAP should take a watershed approach. Pollution prevention and remediation should go hand-in-hand in a Stage 2 RAP and not be dealt with separately. RAPs must call for new ideas, new approaches, and new mechanisms. Legislators should be involved throughout the Stage 2 RAP process. To move beyond the status quo, innovation and creativity are required and will undoubtedly include lifestyle changes for those within the Area of Concern. Public dialogue throughout the Stage 2 RAP process should lead to greater support for implementation.

Following the keynote presentations, an example of a hypothetical Stage 2 RAP outline was presented in plenary to all workshop participants. This outline was developed as a "straw man" for discussion purposes and was intended to address the minimum requirements or expectations for a Stage 2 RAP. Participants were then assigned to one of seven breakout sessions to critically review and comment on the Stage 2 RAP outline and identify the key issues which needed to be addressed or further explored. Participants then reconvened in plenary at the end of the first day to hear comments from individual breakout sessions on the outline and key issues which needed to be addressed.

On the evening of the first day the workshop steering committee met to organize and group the key issues into categories for discussion in breakout sessions on the second day. Twelve key issues (categories) were identified and participants were allowed to choose which breakout session/issue they wanted to be involved with. Each breakout session was asked to provide specific suggestions and make recommendations on how each issue could be addressed through the development of a Stage 2 RAP. The workshop concluded in plenary with a representative from each breakout session summarizing their discussions and presenting their ideas and recommendations on how to specifically address each Stage 2 RAP issue.

This report presents a summary of the conclusions and recommendations from the Stage 2 RAP Workshop Steering Committee. Included are some additional suggestions from the Steering Committee on the specific content for Stage 2 RAPs and recommendations for addressing key issues pertinent to Stage 2 RAPs.
The basic intent of RAPs has not changed since 1985 - a RAP is a blueprint for restoration of impaired beneficial uses which identifies when specific remedial actions will be taken and who is responsible for implementation. The Great Lakes Water Quality Agreement also requires that RAPs be developed and submitted to the IJC for review at three stages (i.e. 1: problem definition; 2: selection of remedial actions; and 3: confirmation of use restoration) to ensure that there is broad-based agreement on strategic aspects of RAPs at key points in the planning process.

As part of the IJC's independent review of a RAP, the Great Lakes Water Quality Board has used the following questions to review and evaluate the adequacy of a Stage 2 RAP:

- Are the goals and objectives clear and precise? Are they consistent with the general and specific objectives of the Great Lakes Water Quality Agreement?
- Have remedial measures in place been evaluated?
- Have alternative, additional remedial measures to restore beneficial uses been evaluated?
- Have additional remedial measures to restore beneficial uses been identified, including a schedule for implementation? What beneficial uses (if any) will not be restored? Does the RAP indicate why?
- Have work plans and resource commitments been made?
- Has the surveillance and monitoring program, designed to track effectiveness of remedial actions and confirm restoration of beneficial uses, been adequately described?
- Have the persons or agencies responsible for implementation been identified? Have the beneficiaries or organizations affected by the RAP been identified? Has there been adequate opportunity for consultation with the public?

In addition, the IJC has approved a set of listing/delisting guidelines for Areas of Concern, based on the 14 use impairments identified in Annex 2 of the GLWQA. These guidelines provide guidance for determining when use impairments exist and when impaired uses have been restored.

Each of the points mentioned above has direct bearing on the development process and content of Stage 2 RAPs. Above all, RAPs are intended to create accountability for the key action steps necessary to restore beneficial uses. It is critically important that the key action steps be identified and the sequencing of steps be determined so that progress can
be tracked. If progress is delayed, it will then be clear at which step it is delayed, who is responsible, and who should be held accountable.

Table 1 presents an example of a RAP outline. Both Stage 1 and Stage 2 elements are presented because Stage 2 (elements 1, 2, 11-16) is meant to be a continuation of Stage 1 (elements 2, 4-10). The outline identifies, in general, the information that should be found in a Stage 1 and Stage 2 RAP. The information relative to a Stage 1 RAP is included for illustrative purposes only. In some cases there may be a compelling rationale for combining a Stage 1 and 2 RAP, and in others there may be a compelling rationale for keeping them separate. In either case, the decision can be made for each RAP, based on site-specific considerations.

This outline is intended to identify the essential information or content for a Stage 2 RAP. However, it is recognized that each Stage 2 RAP may vary structurally and, to some degree, in content and level of detail, depending on site-specific considerations. For example, it may be useful to: separate the remedial options and remedial actions identified in element 14 into two separate chapters; present some information in appendices; or structure the information presented in elements 12-14 according to use impairment. In any event, creativity and ingenuity can be used to structure the information presented in Table 1 to best meet site-specific needs. The purpose is to communicate clearly the necessary sequence of key action steps in order to increase accountability for restoring beneficial uses.

A more standardized RAP format, such as that presented in Table 1, will also facilitate reviews of these documents, both during RAP development and final review. A number of people and agencies must review numerous individual RAPs (e.g. technical advisory committees, members of the public, parties, agency managers, IJC). The effectiveness and timeliness of these reviews are increased by a standardized format because people will know where to look within the documents for specific types of information. This benefits both reviewers and authors of RAPs.
EXAMPLE OF STAGE 2 RAP OUTLINE

1. UPDATE OF EXECUTIVE SUMMARY for Stage 2

2. INTRODUCTION
   (Stage 1, update if needed/desired)

3. PUBLIC PARTICIPATION PROCESS
   AND PARTICIPANTS
   (participants, roles and responsibilities, process)
   (update for Stage 2)

4. DESCRIPTION OF REGULATORY
   AND RESOURCE MANAGEMENT PROGRAMS
   (including GLWQA principles and requirements; Stage 1 update if needed/desired)

5. DESCRIPTION OF THE AREA OF CONCERN
   (Stage 1 update if needed/desired)

6. ENVIRONMENTAL CONDITIONS
   (Stage 1 update if needed/desired)

7. PROBLEM DEFINITION IN TERMS OF USE IMPAIRMENTS AND DESCRIPTION OF CAUSES
   (Stage 1 update if needed/desired)

8. SOURCES AND LOADS OF POLLUTANTS CAUSING IMPAIRMENTS
   (Stage 1 update if needed/desired)

9. STAGE 1 ADDENDUM
   - This optional chapter would contain information on use impairments, sources and causes obtained after the Stage 1 document was submitted to ICJ, or since the Stage 1 document was last revised. An addendum would be included when there is not enough significant new information to warrant revising the Stage 1 chapters

10. STUDIES REQUIRED TO COMPLETE IDENTIFICATION OF USE IMPAIRMENTS, DESCRIPTION OF CAUSES, AND QUANTIFICATION OF SOURCES (completing Stage 1)
   A. For each required study:
      a) Identification of data gaps the study is meant to fill (e.g. status of use impairment unknown, sources and/or causes unknown or uncertain)
      b) Description of study
      c) Cost
      d) Sequence of actions and time required to complete
      e) Relative priority
      f) Responsible entity

11. SPECIFIC GOALS AND OBJECTIVES FOR RESTORATION OF BENEFICIAL USES
    A. Specific RAP goals and quantifiable objectives, and relationship to use impairments
    B. Relationships of goals and objectives to federal/state/provincial standards, objectives and guidelines, and delisting guidelines (comments on attainability)
    C. Process for establishing goals and objectives

12. EVALUATION OF EFFECTIVENESS OF REMEDIAL MEASURES IN PLACE (COMPLETED) RELATED TO USE IMPAIRMENTS
    A. Brief description of remedial measure (e.g. construction projects, management practices, administrative actions, enforcement actions, etc.)
       a) Cost and source(s) of funding (capital and operation and maintenance), if readily accessible
       b) Responsible entity
       c) Effectiveness of remedial measures in place (uses restored or progress toward restoration)

13. ACTIONS IN PROGRESS RELATED TO USE IMPAIRMENTS
    A. Plans and studies underway
       a) Description of study, including relationship to use impairment
       b) Cost
       c) Schedule
       d) Responsible entity
B. Specific remedial actions
   a) Description of the action to address use impairments (e.g. construction projects, management practices, administrative actions, enforcement actions, etc.)
   b) Description of the use impairment(s) addressed
   c) Expected benefits in terms of beneficial uses restored or indicators of progress toward restoration (including expected time frame for achievement)
   d) Estimated economic and environmental costs
   e) Funding source(s)
   f) Implementation sequence and schedule
   g) Responsible entity

14. SELECTED ACTIONS
A. Process for identifying remedial options and selecting recommended actions
   (analyses used to select actions)
B. Identification and evaluation of options to address use impairments
   a) Plans and feasibility studies
      i) description of specific plans, feasibility studies
      ii) time required
      iii) estimated cost
      iv) available funding/source
   b) Remedial options (including pollution prevention)
      i) description of remedial option
      ii) expected benefits in terms of beneficial uses restored or progress toward restoration
      iii) estimated economic and environmental costs
      iv) possible funding source(s)
      v) required time for implementation
      vi) responsible entity
C. Identification of actions to address use impairments (feasibility studies and remedial actions)
   a) Description of use impairment(s) addressed
   b) Description of the action to address use impairments (e.g. construction projects, management practices, administrative actions, enforcement actions, feasibility studies, etc.)
   c) Expected benefits in terms of beneficial uses restored or progress toward restoration; comments on attainability
   d) Rationale for selection
   e) Estimated cost
   f) Responsible entity(s), including identification of lead responsibility
   g) Evidence of commitment to action, if available (e.g. letter of intent, consent decree)
   h) Implementation schedule or time required to complete
   i) Identification of milestones
   j) Relative priority
   k) Special sequencing requirements with respect to other recommended actions
D. Recommendations to address other problems or environmental issues of concern

15. SURVEILLANCE AND MONITORING PROGRAM
A. Description of the surveillance and monitoring program to determine the effectiveness of remedial actions (in terms of pollution control and restoration of beneficial uses)
   a) Description of parameters and methods
   b) Cost
   c) Schedule and frequency of monitoring
   d) Responsible entity(s)

16. MANAGEMENT OF RAP IMPLEMENTATION
A. Responsible entity(s) for oversight of RAP implementation (e.g. institutional structure)
B. Strategy for obtaining additional funding and commitments to action
C. Description of mechanism to track implementation of actions, and propose additional actions as needed
D. Role and responsibility of public and public participation during RAP implementation (e.g. outreach, coalition-building, community strategy, evaluation of progress)

BIBLIOGRAPHY - Update for Stage 2

APPENDICES - Update for Stage 2
KEY ISSUES RELATIVE TO STAGE 2 RAPs

In addition to discussing the specific content of Stage 2 RAPs, workshop participants were asked to identify key issues pertaining to Stage 2 RAPs, which needed to be further defined or characterized. All issues identified were compiled by the workshop steering committee and grouped into twelve categories of key issues. These included:

- What is the "irreducible minimum" content for a Stage 2 RAP?
- How do we incorporate the issue of habitat into a Stage 2 RAP and develop a strategy for evaluation, restoration and protection?
- How should a RAP embody the systematic and comprehensive ecosystem approach called for in the GLWQA?
- Should a Stage 2 RAP contain all commitments necessary for implementation (e.g. commitments from responsible parties, human and financial resource commitments, follow-up mechanisms)?
- How can a Stage 2 RAP embody the principle of virtual elimination of persistent toxic substances and the philosophy of zero discharge?
- What processes should be used to establish goals? How should we establish quantitative objectives considering differences among agencies' standards?
- How should RAPs be linked to larger efforts (lakewide management plans, fishery management plans, land use, etc.)?
- How should RAP implementation be managed relative to responsible entities, mechanism to track remediation, surveillance and monitoring programs, milestones, and the role of the public?
- What is the process for selecting preferred actions from among all options (how to deal with conflicting views; criteria to select preferred actions)?
- How do we evaluate benefits (including applying risk/benefit analysis)?
- What are the criteria for determining "meaningful" public participation?
- How do we incorporate a technical document into public consultation?

Presented below are the suggestions and recommendations from the workshop breakout sessions for addressing each of the twelve key issue categories pertaining to Stage 2 RAPs.
WHAT IS THE IRREDUCIBLE MINIMUM CONTENT FOR A STAGE 2 RAP?

In general, breakout session participants agreed that Stage 2 RAPs should serve as templates or yardsticks against which progress can be measured. The priority elements of a Stage 2 RAP should include:

- identification of endpoints (indicators, criteria, goals - including rationale) which will be used to measure progress and confirm use restoration;
- description of the key actions (including rationale) to be taken to restore each impaired use and delineation of responsibility;
- identification of the key actions (including rationale) to be taken to resolve any unknowns that prevent selection of remedial actions;
- demonstration of commitments from responsible parties/agencies and endorsements from stakeholders/public;
- delineation of sequencing of key actions (e.g. clear time lines); and
- demonstration of integration and linkages to other plans (e.g. lakewide management plans, waterfront development, land use, basin, etc.).

In addition, it was thought that the chances for implementation are proportional to the degree of stakeholder involvement in development of a Stage 2 RAP.

The critical point is that the path to restoration must be clearly defined so that progress can be tracked and obstacles overcome. In addition, it must be sufficiently detailed to ensure accountability and yet concise enough to ensure broad communication of the critical path to restoration.

HOW DO WE INCORPORATE THE ISSUE OF HABITAT INTO A STAGE 2 RAP AND DEVELOP A STRATEGY FOR EVALUATION, RESTORATION AND PROTECTION?

Loss of habitat can be either an impaired use or a cause of an impaired use, such as degraded fish and wildlife populations. There can be physical, chemical or biological causes of habitat loss.

Ideally, a Stage 2 RAP should incorporate a policy for no net loss or a net increase in habitat. Breakout session participants considered that it was important to agree upon fish and wildlife community objectives for each Area of Concern and to ensure that these objectives are integrated with each corresponding lakewide management plan.

It was suggested that the Stage 2 RAP outline should include a section dealing with the preservation/restoration of wetlands and fish and wildlife habitat. This habitat section should: outline the nature of the concern (restoration or preservation); identify the causes and sources of habitat loss (include cause of threat, if the concern is preservation); identify quantifiable habitat goals; evaluate alternative solutions; and select rehabilitation methods/techniques to achieve habitat goals. Habitat loss should address both quantity and quality.

Additional points pertaining to habitat included:

- it is important to direct wetland rehabilitation toward ecosystem goals as well as production goals (e.g. food chain as well as fish, ducks, etc.);
- a determination must be made on the geographic scale of "no net loss" or "net gain"
of habitat (e.g. within an Area of Concern or on a lakewide basis); * tracking habitat rehabilitation will require a commitment to ongoing and future assessment of biota and physical-chemical conditions; * in some areas it may be necessary to differentiate between wetlands suitable for fisheries and those managed for wildlife (i.e. state game areas) since both uses are not always supported by the same wetlands; and * there is a need to share successful habitat rehabilitation strategies/techniques among RAP groups.

HOW SHOULD A RAP EMBODY THE SYSTEMATIC AND COMPREHENSIVE ECOSYSTEM APPROACH CALLED FOR IN THE GLWQA?

The GLWQA states that RAPs shall embody a systematic and comprehensive ecosystem approach. An ecosystem approach is an integrative and holistic perspective required to protect water quality and ecosystem health. It attempts to account for the interrelationships among water, land, air, and all living things, including humans and their activities.

Breakout session participants noted that implementing the ecosystem approach is a process. Participants felt that to implement the ecosystem approach in RAPs, stakeholders must establish a spirit of cooperation and build a sense of community. One way of manifesting these features would be to explicitly adopt the ecosystem approach and acknowledge ecosystem integrity in the Stage 2 RAP goals and the vision for each Area of Concern. Specific suggestions on how to use an ecosystem approach to develop and implement Stage 2 RAPs include:

* **Education:**
  - adopt school curricula on ecosystem approach/RAPs; adopt school monitoring program such as the Rouge River Interactive Water Quality Project; encourage/support nonprofit organizations such as Friends of the Rouge and Friends of the Buffalo; encourage projects which citizens can accomplish; encourage education on ecosystem approach/RAPs through television and other media; and solicit minority input on educational needs/approaches.

* **Land use:**
  - rezoning for development should not occur until a masterplan, that is consistent with an ecosystem approach, is in place; development projects should not be approved until they are consistent with RAP goals; performance/evaluation criteria should be established for reviewing projects; zoning/land use initiatives should ensure consistency with Stage 2 RAPs; and an institutional analysis should be performed which identifies multi-agency roles, responsibilities and interrelationships.

* **Sources/air-land-water considerations:**
  - priority must be given to understanding causes of each use impairment; all sources must be identified and loadings quantified; all point and nonpoint source permits should be issued/revised at the same time on a watershed basis; enforceable means of controlling unpermitted sources should be identified; all control orders/permits should have a compliance schedule for achieving a step toward virtual elimination of persistent toxic substances; all point sources should have an approved pollution prevention plan in place; and greater emphasis
must be placed on fate and effects of toxic substances and multi-media pathways.

- **Human health:**
  it was suggested that perception-of-risk surveys be performed in each Area of Concern; responsible public health agencies be required to perform risk assessments on priority contaminants; and more effort be placed on communicating relative risk (i.e. risk communication).

- **Economy:**
  it was suggested that a chapter be prepared for each Stage 2 RAP which documents environment-economy linkages in the Area of Concern; efforts be taken to encourage economic development plans to complement and reinforce Stage 2 RAPs; economic interests must be represented on RAP citizen committees and public advisory committees; an economy/environment planning forum be hosted to identify creative alternatives; an "ecosystem approach to funding" of remediation be encouraged; economic benefit studies be performed; and an attempt be made to understand the hidden costs/real costs of doing business (e.g. costs of existing pollution and degradation).

- **Habitat and resource management:**
  resource management agencies must work to ensure that goals for fishery management plans, wildlife management plans and habitat management plans complement and reinforce RAPs; agencies responsible for fish and wildlife management must disclose use impairments and utilize their existing tools for habitat rehabilitation; and any terms of reference for waterfront or habitat development must be vetted by agencies through the public.

- **Geographic Scope of a RAP:**
  geographic boundaries should be defined based on the nature of problems (in some cases entire watersheds, in others portions of watersheds, in still others larger areas of Boundary Waters); and both impacts and causes of impacts should have upstream and downstream geographic boundaries (in addition, available ambient and source loading data should be evaluated with respect to the contribution of the Area of Concern as a source or pathway of critical pollutants to the Great Lakes proper or to adjacent Areas of Concern).

- **RAP implementation:**
  membership on RAP implementation committees should be based on who is implementing and what is affected; a separate watchdog committee, independent of agencies, could also be established to monitor and report on implementation, and to account for interrelationships among air, land, water and biota; and contact teams (who would be made up of informed persons who would make contact with critical implementors and work to achieve commitments) should be used to facilitate RAP implementation.

**SHOULD A STAGE 2 RAP CONTAIN ALL COMMITMENTS NECESSARY FOR IMPLEMENTATION** (e.g. commitments from responsible parties, human and financial resource commitments, follow-up mechanisms)?

The issue of commitments (e.g. resource, financial methods) for Stage 2 RAPs was examined by the participants. Participants concluded that there should be at least a statement of responsibilities so that all the interested parties are aware of what is expected of them. This provision would also ensure that certain responsibilities are not overlooked. A process for follow-up in securing the commitments should also be devised to ensure
continued progress in the implementation of RAPs. It must also be recognized that the process of obtaining commitments is iterative and non-static. For this reason, there should be a progress report to monitor the status of current commitments, and this report should be updated to accommodate changes when they occur.

Another suggestion was to celebrate major milestones for Stage 2 RAPs. For example, one significant milestone could be the public advisory committees and RAP teams reaching agreement on preferred remedial options. At this stage, consideration could be given to submitting this to the IJC for review and comment. A second significant milestone could then be obtaining resource commitments for implementing the preferred remedial options, and thereby completing the Stage 2 RAP process. Such an approach would both help celebrate progress and sustain momentum of RAPs.

The participants felt that when commitments are in place, public support and public interest become intensified. By putting a structure in place to secure commitments as well as to track commitments, the public will be informed and see that things are being done to clean up the Areas of Concern.

As the financial aspect of the Stage 2 RAPs is such a major factor in their success, it will be imperative that all financing and financial options be fully researched and documented. The participants suggested that a comparative research study be undertaken to evaluate and establish priorities for different financing options. Existing research should also be accessed and disseminated to ensure that all options have been considered.

A subject of intense debate was the role of government in implementing RAPs. Some thought that the governments should have more responsibilities, while others did not. An overall consensus was reached that there should be a commitment from governments to sustain the RAPs and to support the overall implementation structure and process. Endorsement by lead agencies should be sought.

For the Stage 2 RAP process to be effective, it will be necessary to define the framework for regulatory action. The application of regulatory programs must be fully explained. For example, remediation will be undertaken, using better enforcement and new programs, which must be defined so that other agencies can understand their operation. Timetables will be useful in tracking progress.

It is important that all voluntary commitments by independent companies or organizations be acknowledged. If source control technology is implemented or if a pollution prevention program is organized, the responsible parties should receive public recognition. This action may encourage other voluntary commitments to be made.

Participants considered that there should be made available to each RAP some examples of project management tools and mechanisms useful in tracking the progress of projects. The IJC should solicit methods, such as performance/responsibility matrices, so that RAP implementation runs smoothly.

It was also thought that the IJC should broaden participation in workshops, such as the Stage 2 RAP workshop, to include more representatives from industry, agriculture and minority groups. With a broad spectrum of viewpoints, all aspects of a project would be examined and a variety of advice would be introduced.

A basin-wide, information-sharing system could be set up so that RAP teams can learn from each others' experiences. Preparation and distribution of planned and ongoing studies, reports, events, program developments and contacts would all serve as valuable resources for RAPs around the Great Lakes basin.
HOW CAN A STAGE 2 RAP EMBODY THE PRINCIPLE OF VIRTUAL ELIMINATION OF PERSISTENT TOXIC SUBSTANCES AND THE PHILOSOPHY OF ZERO DISCHARGE?

Annex 2 of the GLWQA states that RAPs will "serve as an important step toward virtual elimination of persistent toxic substances." The IJC supports the principle of virtual elimination, while keeping in mind the philosophy of zero discharge. In its Fifth Biennial Report, the IJC urged the Parties to take every available action to stop the inflow of persistent toxic substances into the Great Lakes environment. Specifically, the IJC recommended in its Fifth Biennial Report that "the Parties and all levels of government, including local authorities, cooperatively develop and implement appropriate legislation, standards and/or regulatory measures that will give enforceable effect to principles (like virtual elimination) and objectives of the GLWQA." Further, there should be "provisions for initiation, implementation and coordination of action to enforce the enacted laws and/or regulations."

A key conceptual point is that while priority in managing available resources must be given to meeting regulatory requirements and threshold conditions needed to restore beneficial uses, the long-term goal is the virtual elimination of persistent toxic substances. Also, some near-term actions, such as pollution prevention, may be able to make progress beyond threshold levels.

Some participants in the breakout session noted the importance of the IJC's Virtual Elimination Task Force in defining the virtual elimination of persistent toxic substances and in identifying ways of achieving it. This work will be particularly important in the process of developing Stage 2 RAPs. It was suggested that all RAPs should work toward the virtual elimination of persistent toxic substances. This action could represent an initial step toward reconciling any differences in current lists of persistent toxic substances used among agencies.

The idea of consistency among the 43 RAPs was one of the main concerns of the participants. They thought that the best way to accomplish consistency was through the publication of a guidance document for Stage 2 RAPs. This document would provide advice on how to develop and implement a Stage 2 RAP in the most effective manner. It would include items such as guidance on implementing virtual elimination, information on training courses and educational opportunities for RAP coordinators, as well as information contacts, upcoming events, and professional societies which could assist in the development of a Stage 2 RAP. In terms of chemical inputs to the Areas of Concern, the document should address more than just point sources, and extend its vision to urban and agricultural runoff, hazardous waste sites and sediments in order to best achieve the virtual elimination of persistent toxic substances. Finally, the document should identify broadly-accepted indicators of progress for a Stage 2 RAP so that stakeholders can ensure that the RAP is progressing to Stage 3 at an acceptable rate. For the virtual elimination of persistent toxic chemicals to become a reality, participants agreed that it would be necessary for federal-state/federal-provincial governments to act together. Only through this cooperation can Stage 2 RAPs be successful.
WHAT PROCESSES SHOULD BE USED TO ESTABLISH GOALS? HOW SHOULD WE ESTABLISH QUANTITATIVE OBJECTIVES CONSIDERING DIFFERENCES AMONG AGENCIES' STANDARDS?

An essential step in any planning process is to define goals and objectives clearly. Participants in the breakout session viewed a goal as an ultimate endpoint, visionary in nature. Objectives are the measurable means of achieving a goal. In many planning processes it is necessary to establish a goal with multiple objectives because of the long time between goal setting and actual goal attainment. Milestones can be used as a tracking mechanism to report interim progress and celebrate progress. They can be divided into two categories: those that report on the implementation of actions and those that measure changes in the ecosystem.

Session participants thought that the 'how to' of setting goals is important. It is more important, however, that the end result be supported by the public. The point to be made is not to dwell on developing the perfect process, but to make sure that there is broad-based support for the final outcome. To achieve this end, the RAP team must actively involve stakeholders in the process of formulating the goals and selecting actions to address those needs. Each Stage 2 RAP should also include a description of the process used to reach agreement on goals and objectives.

Participants in the breakout session considered that it should be a minimum requirement in a RAP to establish goals for restoration of uses identified as impaired in the Stage 1 RAP. However, any individual RAP could choose to establish additional goals beyond the 14 use impairments (rationale and justification should be provided). GLWQA-related and local goals should both be defined in the Stage 2 RAP. The GLWQA-related goals would be based upon the IJC's listing/delisting guidelines, while the community goals would reflect additional dimensions to the desired state of the local environment. In some circumstances, local goals for use restoration may be proposed, that are not consistent with IJC delisting guidelines. In such cases, the IJC delisting guidelines and site-specific goals should be included along with a discussion/rationale as to why they are different.

Due to the binational nature of some RAPs, it will be difficult to decide upon which objectives/standards to use as goals or to measure the progress of remediation. If achieving the respective jurisdictional standards does not reach the desired state, then it must be agreed upon to establish additional/new standards that would achieve the goals.

HOW SHOULD RAPs BE LINKED TO LARGER EFFORTS (lakewide management plans, fishery management plans, land use, etc.)?

The RAP program was established to restore beneficial uses in the 43 Areas of Concern within the Great Lakes basin. RAPs are to embody a systematic and comprehensive ecosystem approach to achieve restoration within the geographic boundaries of the Area of Concern. This is a very large undertaking for the jurisdictions. Linking RAPs to larger efforts will be challenging. RAPs cannot be expected to accomplish everything. Other programs/planning processes should be recognized in RAPs.

The integration of related planning efforts is valuable in understanding and resolving complex problems, and building broad-based support for action. The more people and plans that explicitly acknowledge interrelated problems and reinforce the goals of related
programs, the more support there will be for a comprehensive 'cure' and the closer we will come to an "ecosystem approach." If managed effectively, linkages to other planning efforts would expedite the process of remediation and further coalition-building throughout the basin.

The linkages among other planning efforts with RAPs would begin a new era for government programs, which have historically been treated in isolation and lacked integration with other plans which often have common goals. Historically, programs were developed to address a single issue. For example, land use plans dealt directly with the two-dimensional perspective for the organizational layout of a city or town. Generally, fishery management plans attempt to improve upon and maintain the quality and quantity of fish species within an area. The integrated approach suggested for RAPs would explicitly recognize these plans and ensure that the RAP goals complement and reinforce the goals of other plans (and vice versa). Efforts would be initiated to ensure integration.

HOW SHOULD RAP IMPLEMENTATION BE MANAGED RELATIVE TO RESPONSIBLE ENTITIES, MECHANISM TO TRACK REMEDIATION, SURVEILLANCE AND MONITORING PROGRAMS, MILESTONES, AND THE ROLE OF THE PUBLIC?

Management of RAP implementation will require addressing a number of fundamental needs: commitment to implement the RAP; regulatory/resource management agency cooperation; long-term commitment to funding; continuity of personnel; political support; specific quantitative goals; spirit of cooperation and trust to reach broad-based agreement on necessary actions; and periodic "reality checks." Whether one or more committees are established to achieve RAP implementation, all must work to address the fundamental needs pertaining to implementation.

Participants in the breakout session suggested that an implementation committee would be useful to coordinate and oversee RAP implementation. Ideally, it should report to the jurisdiction. Roles and responsibilities of the implementation committee would include: general oversight, mid-course corrections/adjustments, advisory, coordination, communication/information exchange, evaluation, prioritization, and issuing RAP implementation progress reports. Membership should include: government (both elected officials and employees), dischargers, public, technical/legal advisors, and project managers for remedial actions.

It was also suggested that a surveillance and monitoring/technical group be established to track the effectiveness of remedial actions and confirm use restoration. Responsibilities would include evaluation of remedial program implementation (e.g. construction/capital works, nonpoint source control initiatives), overall progress towards goals, ecosystem conditions, and use restoration.

The citizen advisory committees and public advisory committees should continue to function throughout the entire RAP process. These committees have proven invaluable in building community support, education, communication, information exchange, outreach and goal setting, and their membership must be encouraged to sustain interest and impetus if the RAP is to succeed.

As part of the RAP implementation process, it was thought that periodic progress reports should be published to celebrate milestones and sustain momentum. The most significant milestones are the restoration of beneficial uses. However, incremental changes
brainstorming. The "no action alternative" should be among the options considered. Issues pertaining to preliminary screening include: addressing use impairments identified in a Stage I RAP; determining costs and who bears costs; identifying technological/legal constraints; applying innovation and creativity; achieving involvement/agreement among stakeholders; identifying short and long term impacts/benefits; and examining trade-offs. Participants agreed that the process should be inclusive.

Priorities undoubtedly have to be set. The hierarchy of actions can be based on importance, urgency and opportunity. This relates to impaired uses and capacity for solutions. Priorities must include pollution prevention.

Criteria for selecting preferred options should include: technological feasibility; potential for ecosystem enhancement; whether or not it is legally required/mandated; direct and indirect costs (must be measurable); benefits (must be measurable, but not necessarily in dollars); cost-effectiveness; social impacts; and time scale. The difficulty arises in integrating this information. Professional expertise in problem-solving may be required. Expertise in both natural and social sciences is essential.

**HOW DO WE EVALUATE BENEFITS** (including applying risk/benefit analysis)?

Quantifying benefits of RAPs is an important part of the process. Some of the RAP benefits identified so far include: restoration of beneficial uses, increased property value, enhanced self-image of the community, increased recreational use of Areas of Concern, increased access, increased public awareness and public participation in local planning, and a more integrated approach to resource management in Areas of Concern.

The evaluation of benefits can be divided into three categories: qualitative benefits, quantitative ecosystem improvements, and socio-economic benefits. Qualitative benefits are difficult to measure as they are mostly in "the eye of the beholder" and reflect the interests of individuals, groups, and agencies. On the other hand, quantitative benefits can be easily measured, depending upon the availability of data and tools. For example, quantitative ecosystem benefits can be assessed by quantifying the increase in frequency/extent of achieving water quality standards within each state or province or achieving the objectives of the GLWQA. Other benefits of remedial action can be of a social or monetary nature. An economic benefit that results from restoring the fishery in an Area of Concern can be quantified in terms of increased angler days, increased employment, and/or increased revenue.

The process of analysis needs to integrate a method of resolving conflicting beneficial uses (e.g. commercial fishing vs. boating), to incorporate the social sciences, and to apply risk/benefit analysis. During evaluation, it will be important to involve the public to weigh the risks and perceived benefits.

Participants in the breakout session agreed that benefits of RAPs must be measured, in a way that accounts for the costs and benefits of "not acting." In some cases the benefits of RAPs may not be just local, but lakewide, binational or basinwide. Measuring short-term benefits will provide encouragement to stakeholders and help sustain the RAP process until long-term goals are achieved. Again, it was thought that a process was needed to integrate the information on benefits, which may require professional expertise in problem solving.
WHAT ARE THE CRITERIA FOR DETERMINING "MEANINGFUL PUBLIC PARTICIPATION"?

The issue of public participation had been brought to the forefront throughout the workshop. Public participation is a required and essential element for establishing goals, selecting remedial options and actions, and implementing Stage 2 RAPs.

Session participants thought that the success of public participation is determined by what approach the lead agency assumes when interacting among the publics. Do agencies perceive their function to be control or management? In order to effectively conduct the public participation process, the lead agency must take the role of management, and not control. The control approach relays a message to the public that implies they are not to be directly involved or consulted in terms of the future state of their community. On the other hand, the management approach oversees the process to ensure the process stays on track and presumes that the public has an equal stake in the restoration of the impaired uses. The management approach permits the distribution of responsibilities and shares in the decision-making process.

Participants in the breakout session agreed that the purpose of public participation was to be as inclusive as possible to develop all possible public support for the RAP (development and implementation). This idea is particularly important in view of the current and likely continuing shortage of resources at all levels of government.

Because public participation is an ongoing activity throughout the RAP process, it is difficult for a RAP document to describe it fully. What the RAP can do is to describe the specific activities that have occurred or are planned, and articulate the commitment of the agencies responsible for RAP development and implementation to ongoing public participation. The document can also briefly outline the issues which required alteration in order for consensus to be reached.

While recognizing that each Area of Concern is distinct, participants discussed several specific activities which either encourage or accomplish public participation. These are the kinds of activities which, if built into a RAP document, would provide evidence that meaningful public participation was taking place and would continue in the future.

1. It is important that a formal Citizens Advisory Committee (CAC), Public Advisory Committee (PAC), or comparable institutional structure (broadly representative of the community) be established for public participation and institutional cooperation in RAP development and implementation. This committee can be an important focal point for ongoing participation. These groups, being diverse and knowledgeable about the Area of Concern and its problems, can help educate the RAP writing team and bring pressure to bear on agencies and legislators at all levels of government. To help create an open process, multisectoral subcommittees can be established to deal with specific technical issues, community relations, or education.

2. Members of the CAC or PAC should be appointed to the RAP writing team or regular meetings should be held between the two groups. Such linkages are important at all stages of the RAP process, from problem definition stage (i.e. deciding what the RAP will cover) all the way through the implementation and confirmation of use restoration. One objective of this process is to give more responsibility for goal-setting in Areas of Concern to members of the community. The public will be involved while issues are being developed.
and material prepared, rather than being merely consulted after reports are written. It will also facilitate and help assure accountability of all concerned.

3. All meetings regarding RAPs should be open to the public, and the public should feel welcome.

4. A "marketing plan" or outreach strategy tailored to the particular Area of Concern needs to be developed to try to involve all relevant publics in the RAP process. This plan should be described in the RAP document.

5. RAP coordinators should endeavor to develop a sense of identity for the Area of Concern. Techniques include creating a logo for the Area of Concern that can be used on all RAP-related documents, preparing an exhibit that can be displayed at various locations such as malls and schools, preparing brochures and newsletters, and speaking at meetings of other organizations.

Participants thought that the workshop was a valuable learning experience and this conclusion led to the strong recommendation that there be a special meeting of individuals from all RAP teams devoted solely to sharing experiences regarding communication efforts and public participation.

**HOW DO WE INCORPORATE A TECHNICAL DOCUMENT INTO PUBLIC CONSULTATION?**

Once all the input and decisions have been made, a major obstacle to overcome is to determine the presentation, format and specific content of a Stage 2 RAP. Session participants felt that the goal for all RAPs should be to create a "readable" plan that can be understood by the general public without omitting pertinent technical information. For this purpose, the members of the RAP writing team must be carefully selected to ensure that community and technical viewpoints are represented throughout this phase.

A document that is too detailed in terms of substantial technical information may confuse and discourage the general public, while the lack of such information will not provide the technical staff or key decision makers with the supporting information necessary to comprehend the rationale for the decisions. The challenge is to balance the need to communicate clearly the content of a RAP in an understandable fashion, with the need to include technical data and rationale.

Participants in the breakout session recognized that the RAPs will inevitably be quite technical. Nevertheless, they did not think that a separate report should be prepared for the general public. The principal concern here was the potential lack of consistency between reports that are prepared for different purposes. Participants preferred the preparation of an executive summary of the RAP, which could also be published separately for wider distribution. A different format could be used to make this separate document more visually appealing. It was suggested that involving members of the Citizens Advisory Committee or Public Advisory Committee in RAP writing would help address the problem of consistency between reports.
CONCLUSIONS

Based on the input received at the workshop, the following conclusions were drawn by the Stage 2 RAP Workshop Steering Committee:

- Expectations and views pertaining to Stage 2 RAPs differ substantially among participants. Considerable effort will be required to reconcile differing expectations at both the program and local levels. This workshop represents a productive step in that direction.

- The process by which a Stage 2 RAP is developed is as important as its content. Although there is no obvious single best approach, it is clear that a successful process will: be integrative; work to achieve a planned, agreed-upon and flexible roadmap to restoration; and provide evidence of commitment and continuing accountability. Stakeholder and public involvement are essential for success.

- Innovation and creativity are encouraged in the development processes for Stage 2 RAPs. There are, however, advantages in reaching an early common understanding of the necessary minimum content and cleanup standards (e.g. water quality and sediment standards, criteria, guidelines, site-specific goals) for Stage 2 RAPs.

- A standardized Stage 2 RAP format has advantages during both RAP development and final document review (e.g. numerous agencies and individuals must review RAPs, therefore, a standardized format will increase the effectiveness and timeliness of peer reviews).

- Each Stage 2 RAP must identify the key actions, sequencing, timeframe, and responsibilities in order to eliminate uncertainty in remediation. As part of this process, it is important to achieve broad-based agreement on benchmarks, indicators, and endpoints in order to celebrate progress and sustain momentum.

- The agency primarily responsible for preparing a Stage 2 RAP is not solely responsible for implementing it. The mandate of the lead agency should not restrict the RAP planning effort from properly addressing relevant issues.

- There is a need to recognize the iterative and ongoing nature of RAPs. Full commitments may need to be obtained through a step-wise process.
Communication and information-sharing among participants in the RAP process on both sides of the border are extremely important. Attention needs to be given to the presentation of information in a style and format which makes it accessible to the general public.

IJC participation in the planning and facilitation of the Stage 2 RAP Workshop was critical to its success and timeliness.
Based on a review of the information and conclusions of the Stage 2 RAP Workshop, the Stage 2 RAP Steering Committee recommends that:

- The IJC, Parties and jurisdictions periodically sponsor RAP workshops on specific topics of common interest which are beneficial to all sides (e.g. successful approaches to public participation, creative financing, explicit accounting for environment-economy linkages, benefit analyses, comparing successful approaches to Stage 2 RAP development and implementation).

- The IJC further identify expectations and elaborate on the Stage 2 RAP review guidelines which will be used in the IJC RAP review process.

- The Parties provide more specific guidance to the jurisdictions, based on this workshop report, in terms of what is expected in Stage 2 RAPs and how Stage 2 RAPs could be developed. Efforts must be made to ensure binational consistency.

- The IJC recognize the iterative and dynamic nature of RAPs (including that RAP documents represent a “snapshot in time”) in the review of RAPs.

- The Parties and jurisdictions use the example Stage 2 RAP outline presented in Table 1 of this report as a starting point in providing guidance on content requirements, while recognizing the unique circumstances of each Area of Concern.
# WORKSHOP AGENDA

## DAY 1 - MONDAY APRIL 15, 1991

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>9:30 - 10:00 A.M.</td>
<td>Registration</td>
</tr>
<tr>
<td>10:00 - 10:15</td>
<td><strong>Welcome and opening remarks</strong>&lt;br&gt;Mr. Richard Powers, Michigan Department of Natural Resources (MDNR)&lt;br&gt;Mr. Kent Fuller, Great Lakes National Program Office, U.S. Environmental Protection Agency&lt;br&gt;Ms. Louise Knox, Great Lakes Environmental Program, Environment Canada</td>
</tr>
<tr>
<td>10:15 - Noon</td>
<td><strong>Expectations for Stage II RAPs:</strong>&lt;br&gt;Commissioner Gordon K. Durnil (U.S. Chair)&lt;br&gt;Commissioner E. Davie Fulton (Canadian Chair)&lt;br&gt;Mr. John Jackson, President, Great Lakes United (GLU)&lt;br&gt;Ms. Nancy Douglas-Howayack, Chairperson, Menominee River RAP Citizen Advisory Committee&lt;br&gt;Mr. Steve Skavroneck, Milwaukee Metropolitan Sewerage District</td>
</tr>
<tr>
<td>Noon - 1:00 P.M.</td>
<td>Lunch</td>
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<tr>
<td>1:00 - 1:30</td>
<td><strong>Presentation of draft Stage II RAP outline</strong>&lt;br&gt;Ms. Diana Klemans, MDNR</td>
</tr>
<tr>
<td>1:30 - 4:00</td>
<td><strong>Charge to DAY 1 breakout session</strong>&lt;br&gt;Mr. Richard Powers, MDNR</td>
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<tr>
<td>4:00 - 5:00</td>
<td><strong>Break-out sessions</strong></td>
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<tr>
<td>7:30</td>
<td><strong>Reception</strong></td>
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## DAY 2 - TUESDAY APRIL 16, 1991

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00 A.M. - 8:30</td>
<td><strong>Overview of key issues and charge to DAY 2 breakout session</strong>&lt;br&gt;Mr. Tom Coape-Arnold, Ontario Ministry of the Environment</td>
</tr>
<tr>
<td>8:30 - 1:00 P.M.</td>
<td><strong>Breakout sessions</strong> (lunch will be provided in each of the breakout rooms, breaks can be taken as necessary)</td>
</tr>
<tr>
<td>1:00 - 3:00</td>
<td><strong>Plenary presentations by breakout groups and discussion</strong>&lt;br&gt;Closing remarks&lt;br&gt;Mr. Fred Fleischer, Ontario Ministry of the Environment</td>
</tr>
</tbody>
</table>
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Remarks by Gordon K. Durnil  
Chairman, U.S. Section  
International Joint Commission  
at the  
Stage 2 Remedial Action Plan Workshop  
April 15-16, 1991  
Radisson Hotel, Romulus, Michigan

I want to thank you for inviting Chairman Fulton and me to share some of our thoughts with you at the start of this important workshop. We've been looking forward to participating since we first learned that the session was being planned.

Last week I went to Chicago to be present at and applaud the unveiling of the U.S. governments' pollution prevention initiative for the Great Lakes. This is an important step forward, and while I know we must monitor the governments' progress closely, I am quite encouraged. I say I am encouraged because I have felt for a long time that until we find a way to turn off the toxic faucet to the Great Lakes, even our best efforts to remediate past problems can only be of limited success.

I also believe that pollution prevention initiatives and a continuation of our remedial efforts should go hand in hand.

We are delighted to see the governments as co-sponsors of this workshop. This demonstrates what I hope is a continuing resolve by our two countries to continue the important work that is suggested by Remedial Action Plans.

I think that all of us here know that the goals of the Remedial Action Plan process are a long way from being successfully achieved. Development and implementation of the plans is going to cost a lot of money. These plans are going to require a tremendous amount of political will. And most of all, they are going to require substantial ongoing public support and insistence in order that they may be successfully completed. These are themes the Commission emphasized in its Fifth Biennial Report to Governments.

I know that all of you here today bring that commitment to the process.

With this in mind, let me say again that the Commission enthusiastically joins with the Governments of the United States and Canada in sponsoring this workshop. Our interest in doing this is to help develop a set of common or complementary expectations regarding Stage 2 RAPs. These will help us in preparing our comments on those RAPs when they are submitted to us for review. This is part of our advisory role under the Great Lakes Water Quality Agreement.
In our view, this is an opportune time to hold a workshop on Stage 2 RAPs.

- Several RAPs are moving beyond Stage 1, and the RAP Coordinators are entitled to have a sense of what is expected of them now.
- Recent legislation in the U.S. imposes specific deadlines on certain RAP activities. This adds some urgency to our work over the next two days.

Now, let me now share with you some of the things we will be looking for as the Commission reviews RAPs at Stage 2 of their development.

Stage 2 constitutes an extremely important decision point. It is the time when we are sufficiently sure of the problems we are dealing with, clear about the options available to solve those problems, and confident about the likely success of those options so that we are prepared to make choices on how to invest scarce public and private resources.

This is not a simple task; there is no simple formula that will work in all cases. There are, however, some things I think we can hope to find in Stage 2 RAPs.

First, it is essential that there be agreement on the nature and scope of the problems being addressed. This may seem self-evident, but after reviewing several of the early RAPs, I think it merits renewed emphasis. Problem definition, after all, is the foundation upon which the rest of the process will be built.

Second, I think it is important for the RAPs to describe how the remedial actions selected are related to or fit in with other planning or development efforts in the area. This means that those contributing to RAP documents will have to be aware of demographic and other socio-economic trends and be in contact with other groups and institutions in the area. Here is one area where public input will be essential.

Third, it is important that, to the extent possible, RAPs assess the consequences of any proposed actions. This would include not only any possible adverse effects or new problems that might result, but also any new opportunities that might be created. It will be important to know whether the remedial actions are foreclosing or pre-empting other future activities or uses, or are they facilitating other activities such as the development of Lakewide Management Plans. In this regard, I encourage you all to explore some of the work that has been done regarding environmental impact statements in the U.S.

These are the principal issues that I wanted to raise with you at the start of this workshop. There are, of course, many other subjects that need to be covered in Stage 2 RAPs, and we'll be talking about them over the next two days.

Thank you for being here. I'm looking forward to an interesting and productive session.
Remarks by E. Davie Fulton  
Chairman, Canadian Section  
International Joint Commission  
at the  
Stage 2 Remedial Action Plan Workshop  
April 15-16, 1991  
Radisson Hotel, Romulus, Michigan  

I would like first to add my own expression of pleasure at having been invited to address this gathering of RAP practitioners. The work that you are doing is important, certainly, to the pollution control programs of both our nations and to the fulfillment of their obligations under the Great Lakes Water Quality Agreement.

It is also important, however, to the future of the local communities concerned, as well as to our understanding of institutional mechanisms that will bring about the much needed integration of environmental strategies. As my colleague, Gordon Durnil, has suggested, we are very much concerned with all these aspects - that is, with the identification of remedial and preventive measures in the water, and with the broader ecosystemic and long term implications, including the economic and social implications of RAP proposals.

Consequently, the Commission has consistently, in its RAP review letters to the governments, made the point that the physical and remedial aspects of restoring Areas of Concern, if they are really to be effective, must not proceed, or indeed even be planned, in isolation, but rather must be designed as the result of an overview based on a broad ecological perspective. This would involve taking into account and, where relevant, reflecting in the plan such matters as:

1. Understanding of and coordination with the biological systems that often extend beyond the immediate RAP area and are simultaneously stressed by other factors including fishing pressure, other activities such as boating, and land use, especially in the wetlands or other parts of the shoreline;
2. The need to avoid or prevent other insults to the environment even if they are not part of the original problem; and
3. Significant trends in the region's demographic, economic and social structure that might influence the impacts on, and demands for, environmental quality and the area's water resources.
It is our conviction that, if such matters are ignored in the RAPs, the hard work and short term investments in remedial programs may well end up as difficult to sustain at best, and perhaps even irrelevant.

This comment brings me to another aspect of RAPs about which the Commission felt very strongly in the early stages of this process and which, I am pleased to see, has resulted in considerable progress in recent times: I am referring here to public participation. In this regard, I would remind you that, while public consultation itself has been left to the jurisdictions, it is within the Commission's mandate to assess the adequacy of such activities. However, we have to date seen little information on the scope and impact of public consultation, or the other issues that I have mentioned, in the RAP documents themselves. This is a shortcoming which, I think, bears some consideration at this workshop.

We see meaningful public participation, from the very beginning of the process, through goal setting and assessing remedial options, to the monitoring of the results, as one of the keys to the long-term success in RAPs. Only with the support of the various interests in the community and jurisdiction, and in particular broad public support, will the sustained will for the required changes in practices and the great financial costs be possible.

Many of you may need to consider innovative ways to finance these projects during a continuing era of fiscal constraint by governments. With private sector involvement, or at least the integration with other projects such as marina or careful land redevelopment schemes, creative financing and the interest of the public may be established.

Let me close by saying that I know that, for many of you, this is a different way of doing business, but I do believe that the time has passed when we can afford to divide these issues up into governmental vs. non-governmental spheres of interest. Governments cannot do it alone. Rather, we will need a concerted effort by all stakeholder groups.

I would urge, therefore, that the RAP documents, especially at Stage 2, include the types of information that will be required to assess these broader dimensions of the problem, and that explicit provision be made for chapters or appendices which address the means being taken to address the socio-economic considerations, public involvement, and broadly-based implementation strategies. Other topics that should be covered in developing and writing RAPs, but which I will mention only in passing for now, are the human health concerns with respect to toxic substances, and how the RAP will ensure that the objectives of the Great Lakes Water Quality Agreement, including those of virtual elimination and zero discharge of persistent toxic substances, are to be achieved.

We wish you a successful workshop and look forward, not only to a stimulating two days for all of us, but also a useful product at the end.