

Program Strategies, 1999-2003

for the

**Cuyahoga River Remedial Action Plan (RAP) Coordinating
Committee**

To study, to know, to act.

- Aristotle

Submitted by the Strategic Planning Committee, March 25, 1999

Resolution

WHEREAS, a Strategic Planning Committee, comprised of nine members of the Cuyahoga River Remedial Action Plan Coordinating Committee, Kay Carlson of the CRCPO, and Chaired by Peter H. Henderson, was formed in January, 1998, and charged with the task of drafting a strategic plan for the Cuyahoga River Remedial Action Plan; and

WHEREAS, draft strategic plans were presented to the Coordinating Committee in September, 1998, and again in January, 1999, for review and comment; and

WHEREAS, a Retreat of the full Coordinating Committee was held on March 11, 1999 and facilitated by Mr. Kenneth Kovach to identify prioritized goals and actions for the Cuyahoga River Remedial Action Plan; and

WHEREAS, the results of that Retreat in terms of identified areas for prioritized goals and actions have been presented to the Coordinating Committee at its March 25, 1999, meeting; and

WHEREAS, a document entitled "Program Strategies, 1999-2003" has been submitted to the Coordinating Committee at its March 25, 1999 meeting by the Strategic Planning Committee for adoption by the Coordinating Committee; and

WHEREAS, the "Program Strategies" document was drafted to reflect comments made on previous draft strategic plans submitted at the September, 1998 and January, 1999 meetings of the Coordinating Committee;

NOW, THEREFORE, be it resolved that:

1. The Coordinating Committee acknowledges and accepts the results of the Retreat held March 11, 1999 for generating ideas for work actions and for setting priorities among potential impairment related action items; and
2. The Coordinating Committee adopts the document entitled "Program Strategies, 1999-2003" as presented by the Strategic Planning Committee on March 25, 1999.

Approved: March 25, 1999

Members of the Coordinating Committee, 1999
(Members of Steering Committee shown in **boldface**)

Ted Esborn*, Chair

State and Federal Agencies

Cuyahoga Valley National Recreation Area John P. Debo, Jr.
Ohio Environmental Protection Agency **Kelvin Rogers**
Ohio Department of Health Don Miles
Ohio Department of Natural Resources Phil Hillman
Natural Resource Conservation Services, USDA James D. Storer
US Army Corps of Engineers Steve Yaksich
US Environmental Protection Agency Mark Maloney

Industry/Commercial and Private Interests

Flats Oxbow Association James Pressler
Goodyear Tire & Rubber Company Martin Tremblay
Greater Cleveland Growth Association (vacant)
American Steel and Wire Chris Zielinski
Lake Carriers Association Richard Harkins
LTV Steel **Larry Szuhay***
Samsel Supply Co. Frank Samsel
Flats Industry **Jack Cox***

Community Interest Groups

Cleveland Waterfront Coalition Genevieve Ray
Greater Cleveland Boating Association Rolf Tinge
Great Lakes Tomorrow **James Cowden***
Great Lakes United Kathryn Brock
League of Women Voters **Edith Chase***
Friends of the Crooked River Elaine Marsh
Sierra Club David Beach

Local Public Jurisdictions

Akron Public Utilities Management **David Crandell***
Cleveland Department of Public Utilities Darnell Brown
Cuyahoga County Planning Commission **Virginia Aveni***
Cuyahoga County Sanitary Engineering Office Ruth Langsner
Cuyahoga Mayors & Managers Association Thomas Longo
Cuyahoga Valley Communities Council Peter Henderson
Northeast Ohio Four County Regional Planning & Development Organization **Joseph Hadley, Jr.***
Northeast Ohio Regional Sewer District **Lester Stumpe***
Northeast Ohio Areawide Coordinating Agency **John Beeker***
Summit County Department of Environmental Services James Demboski

Greg Studen, *ex officio*

Robert Wysenski, *ex officio*

* Members, Board of Trustees, Cuyahoga River Community Planning Organization

Preface and Acknowledgments

The purpose of this document, *Program Strategies, 1999-2003*, is to present strategies for our program, i.e., the ways we will go about carrying out our program. It is not a Remedial Action Plan for restoring and protecting the beneficial uses of water in the Cuyahoga River Area of Concern. Nor is it a work plan which will be developed annually on the basis of these strategies.

A preliminary draft of this document was presented for review by the Coordinating Committee in September 1998; and a revised, more complete draft was presented for review by the Coordinating Committee in January 1999. In both instances, particularly the latter, oral commentary at the meetings, as well as written commentary submitted before and after the meeting, was constructively useful in guiding the preparation of this draft. It is hoped, therefore, that this draft will be acceptable to the Coordinating Committee.

The Strategic Planning Committee was formed in January 1998 and began meeting in February on a monthly basis, twice in some months, generally in the afternoons, twice for a full day. The absence of even one member was the exception rather than the rule for all of the committee's nineteen meetings.

We were greatly assisted by the skills of Kenneth J. Kovach who was retained as our facilitator and whose insights and warm personality carried us through some difficult moments. His and our work was competently and conscientiously supported by the recording skills of Angela R. Brightman who was retained as the Strategic Planning Project Intern. For the grant which provided financial support of these resources persons we are indebted to the Ohio Environmental Protection Agency.

Strategic Planning Committee:

Peter H. Henderson, Chair
Joseph Hadley, Jr., Vice Chair
Kay Carlson
Edith Chase
James Cowden
Jack Cox
Phil Hillman
Kelvin Rogers
Frank Samsel
James D. Storer

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Foreword

We are two organizations working together as one. The Cuyahoga River Remedial Action Planning (RAP) Coordinating Committee (CCC), appointed by the Ohio Environmental Protection Agency (Ohio EPA), is our deliberative and decision-making body; the Cuyahoga River Community Planning Organization (CRCPO) is a non-profit corporation formed by the CCC to support its activities.

This report presents our 5-year strategic plan. It is the result of a strategic planning process launched in January, 1998, by the Coordinating Committee to review progress over the past ten years, assess organizational needs, and develop a strategic plan for the future. It is intended to prioritize and focus our efforts to restore and maintain the beneficial uses of the lower Cuyahoga River and the near shore areas of Lake Erie.

The current strategic planning effort is the first time in this decade that there has been an attempt to evaluate current programs and activities for relevance to our mission, goals, and circumstances. See Appendix A. In our Strategy for Program Operations, we have proposed changes that should facilitate the organization's future directions. However, this strategy needs ongoing monitoring to assure it supports our goals and objectives.

Statement of Vision

Our vision as we enter the 21st Century is to restore and protect the Cuyahoga River and near shore area of Lake Erie as a natural resource which we can use, enjoy, and bequeath with pride as our heritage to our children and future generations.

Statement of Mission

Our mission, with the participation of the community, is to plan and promote the restoration and preservation of beneficial uses of the lower Cuyahoga River and near shore area of Lake Erie through remediation of existing conditions and prevention of further pollution and other degradation.

Chapter One

How We Started

The Remedial Action Plan (RAP) program was established subsequent to an agreement between the United States and Canada in an effort to clean up the Great Lakes by reducing contaminants from the major tributaries. The Cuyahoga River was one of 43 tributaries designated as an Area of Concern (AOC) warranting the development of a Remedial Action Plan.

The concept of RAPs originated from a 1985 recommendation of the Great Lakes Water Quality Board (GLWQB) of the International Joint Commission (IJC). The GLWQB found that despite implementation of regulatory pollution control programs, a number of beneficial uses (e.g., unrestricted human consumption of fish, successful reproduction of sentinel wildlife species, fish and wildlife habitat) were not being restored, and recommended that comprehensive and systematic RAPs be developed and implemented to restore all beneficial uses in Areas of Concern.

Areas of Concern

The 1987 Protocol amending the Great Lakes Water Quality Agreement (GLWQA) formalized the RAP program and defined AOCs as specific geographic areas that fail to meet the general or specific objectives of the GLWQA where such failure has caused or is likely to cause impairment of beneficial uses or of the area's ability to support aquatic life. Impairment of beneficial use means a change in the chemical, physical, or biological integrity of the Great Lakes ecosystem sufficient to cause any of 14 use "impairments" (See Appendix B).

The navigation channel and harbor area of the Cuyahoga River and adjacent near shore area of Lake Erie was one of the designated AOCs. After lengthy discussion, the Coordinating Committee agreed to extend the AOC to the Ohio Edison Dam and the near shore area from Edgewater Park eastward to Wildwood Park, including consideration of upstream point and non-point sources of pollution. See Appendix C.

The 1987 Protocol called for developing Remedial Action Plans in three stages, taking an ecosystem approach, and involvement of the public during each stage. The three stages are defined as follows (Great Lakes Water Quality Agreement of 1978 as amended by the Protocol signed November 18, 1987):

Stage One: *Stage One shall include: (a) a definition and detailed description of the environmental problem in the Areas of Concern, including a definition of the beneficial uses that are impaired, the degree of impairment and the geographic extent of such impairment; and (b) a definition of the causes of the use impairment, including a description of all known sources of pollutants involved and an evaluation of other possible sources.*

Stage Two: *Stage Two shall include: (a) an evaluation of remedial measures in place, (b) an evaluation of alternative additional measures to restore beneficial uses, (c) a selection of additional measures to restore beneficial uses and a schedule for their implementation, and (d) an identification of the persons or agencies responsible for the implementation of remedial measures.*

Stage Three: *Stage Three shall include: (a) a description of the process for evaluating remedial measure implementation and effectiveness, and (b) a description of surveillance and monitoring processes to track the effectiveness of remedial measures and the eventual confirmation of the restoration of uses.*

In 1990, Congress amended the Federal Water Pollution Control Act by enacting the Great Lakes Critical Programs Act of 1990, which 1) required the development of Remedial Action Plans for each Area of Concern in the United States; and 2) proposed water quality guidance for the Great Lakes system to conform with the objectives and provisions of the Great Lakes Water Quality Agreement.

Organization

The Ohio EPA in 1988, on behalf of the USEPA, created the Cuyahoga River Remedial Action Plan Coordinating Committee (CCC) and appointed a chairman and thirty-two members, to represent stakeholder groups. These groups include State and Federal Agencies; Industry, Commerce, and Private Interests; Community Interest Groups; and Local Public Jurisdictions. Ohio EPA also engaged the Northeast Ohio Areawide Coordinating Agency (NOACA) to serve as secretariat to the Coordinating Committee.

At its first meeting in September 1988, the CCC selected a 9-member Steering Committee, consisting of two members nominated by each caucus group, plus the chairman.

Cuyahoga River Community Planning Organization

In 1989, members of the Coordinating Committee voted to establish the Cuyahoga River Community Planning Organization (CRCPO) as a non-profit 501(c)(3) organization to support the activities of the CCC by securing funds to support staff services and to enable the undertaking of projects and programs. The commitment to "charitable, educational, scientific and other non-profitable purposes" under the IRS code includes:

1. To coordinate pollution abatement needs assessment and the identification of remediation alternatives in the Cuyahoga River;
2. To develop a community plan for the remediation of the Cuyahoga River:
3. To encourage and provide for community involvement in the development of the Cuyahoga River community remediation plan; and
4. To encourage and provide for public education to support development and implementation of the Cuyahoga River community remediation plan.
5. To enter into various business arrangements to support the program.

The CRCPO Board of Directors is comprised of members of the CCC Steering Committee. Funding for the CRCPO has been provided by grants from local foundations, state and federal agencies, and annual member contributions.

Chapter Two ***Reflections on Lessons Learned***

Stage One Development

The first important development in the RAP process was the preparation and publication of the *Stage One Report*. This is a consensus document which identifies the environmental problems, as well as the sources and causes of impairments to beneficial uses in the lower 45 miles of the Cuyahoga River and near shore Lake Erie (the Area of Concern). Research issues were also identified to address cases where there exists an absence of data or an inadequate standard of evaluation. The *Stage One Report* took over 2½ years to be developed by several working committees and coordinated by a Plan Drafting Committee. It was approved by the CCC and presented to the Ohio EPA and the IJC in 1992. As a result of subsequent research activities and an influx of new data, the *Stage One Report* was updated in 1995 and will be updated again in 2000. Also spawned from the original *Stage One Report* was a document produced in 1996 (*Progress in Restoring the Environmental Quality of the Cuyahoga River*), which outlined problems, work being done, and proposed actions associated with impairments to the beneficial uses of the Cuyahoga River.

In its own analysis, the CCC actually expanded the IJC's list of beneficial use impairments to separate out different aspects of several uses (e.g. restrictions on fish consumption and restrictions on wildlife consumption) and to add one new use (recreational access) to the list. The beneficial use impairments were then grouped into six priority problem areas and separated into "known beneficial use impairments," "unknown/possible beneficial use impairments," and "beneficial uses that are not impaired". These were further refined to cover three distinct sections of the Area of Concern: from the Ohio Edison Dam (RM [River Mile] 45.1) to the head of the Navigation Channel (RM 5.6); the Navigation Channel (RM 5.6 to 0.0); and the near shore area of Lake Erie from Edgewater Park to Wildwood Park. Current findings from the 1992 *Stage One Report* and 1995 *Stage One Report Update* are summarized in Table 3-1 in the 1995 Stage One Update Report.

Cuyahoga River RAP Accomplishments 1988 - 1998

The findings of the *Stage One Report* served as a focal point for subsequent

Stage Two river restoration planning and implementation activities undertaken by the Cuyahoga River RAP. This report not only identified many of the problems, causes and sources of pollutants to the river, it also provided a Mission Statement, Work Program, Research Agenda, and Public Involvement Strategy for the CCC. The CCC and the CRCPO have evolved a variety of roles in accomplishing these tasks in order to address the beneficial use impairments. These roles include:

- ! **Maintenance of a Stakeholders Forum** - Members of the CCC represent a broad-based community of river stakeholders. The CCC established a successful institutional framework that includes a Steering Committee, Subcommittees and Work Groups to address specific issues. It also established the CRCPO which has received over \$500,000 in the past 9 years for staffing, activities, projects and programs that address issues identified in the *Stage One Report* and *Stage One Report Update*. These reports, along with the *Early Implementation Report* were developed as planning tools to provide data for addressing the identified beneficial use impairments.
- ! **Planning and Conducting Implementation Activities** - The CCC and CRCPO have taken numerous actions to address issues identified in the *Stage One Report*. These include assisting in the development of the "Understanding Beach Warnings" pamphlet, providing funds for the fish tissue study (leading to the current Fish Consumption Advisory), facilitation and planning efforts in support of acquisition of a debris harvester, coordinating stream bank stabilization/restoration projects, and promoting soil bioengineering techniques, and public education activities. See Appendix D.
- ! **Planning and Conducting Research Studies** - The CCC has received funding via the CRCPO to undertake a variety of studies to increase our understanding of the beneficial use impairments, to aid in the development and refinement of educational programs, and to focus on "unknowns" identified in the *Stage One Report*. These studies include the Navigation Channel Reaeration Feasibility Study, the Fisheries Advisory Panel Findings on the Reaeration of the Navigation Channel, a Cuyahoga River Creel Survey, a Community Preference Poll, a Review of Methods for Estimating Benefits from Environmental Amenities, and a Stewardship Program Benefits Assessment (planned). The CCC and CRCPO have also assisted in providing funds and/or assistance for a Cuyahoga River and Lake Erie Bacteria Survey, Fish Tissue Study, Phytoplankton Study, Larval Fish Survey, USGS studies of bacteria decay phenomena in the Cuyahoga River, and several bioengineering demonstration projects. See Appendix D.
- ! **Developing and Conducting a Community Awareness and Education Program** - The CRCPO, on behalf of the CCC, has received funding for and conducts public outreach/education activities which are focused on building awareness of watershed issues, RAP goals, and enlisting public involvement and support. Some activities, programs, and projects include the development and distribution of informational brochures, fact sheets, and the RAP-UP newsletter assisting in the development of the Teachers River Guide and Water Quality Handbook developing and coordinating the Big Creek and Yellow Creek

Stream Stewardship Programs; and coordinating a wide variety of hands-on public involvement activities designed to raise the awareness of area residents on pollution issues, stream protection, and restoration initiatives. See Appendix D.

- ! **Supporting and Maintaining Partnerships** - Many CCC member organizations and others are conducting activities compatible with the RAP agenda to identify and address the beneficial use impairments. The RAP encourages and supports such projects and programs which include the City of Akron Combined Sewer Overflow Studies and Facilities Plan; the Northeast Ohio Regional Sewer District Combined Sewer Overflow Studies and Repairs; the Cleveland Metroparks Ohio & Erie Canal Reservation; the Ohio & Erie Canal National Heritage Corridor; the American Heritage River Partnership Initiative; the Flats Oxbow Association public access planning effort; the Friends of the Crooked River Home Septic System Maintenance Video; the Cuyahoga and Summit Soil and Water Conservation Districts Urban Stream Specialist Programs; and the Cuyahoga County Board of Health Home Sewage Disposal System Maintenance & Monitoring Program; the Northeast Ohio Regional Sewer District Mill Creek Watershed and Doan Brook Watershed planning efforts; the Nature Center at Shaker Lakes Doan Brook Watershed planning effort; the NOACA and NEFCO 208 Water Quality Plan development; and the Ohio EPA Surface Water Programs See Appendix D.

Over the past ten years the Cuyahoga RAP has matured as a watershed organization. It encourages local stakeholders to directly participate in the ongoing process of planning and implementing river restoration activities. Our experiences, including those that are listed as implementation activities, research studies, community awareness and education programs, and partnerships (See Appendix D), shed light on how such a process can be sustained long term.

We have learned that community recognition and support of this long-term RAP effort is essential. Long-term progress is facilitated through a process of building informed consent of all potentially affected interests. It is important that clearly defined RAP problems, goals, objectives, needs and strategies (i.e., projects with associated activities) are not only thoroughly discussed with the public, but that the proposed strategies are effectively “sold” as the best course of action, i.e., better than the “do nothing” or null alternatives. This long-term process necessitates sustaining a long-term stakeholder organization. This type of organization is contingent upon such factors as: sustaining an active leadership that encompasses many of the potentially affected interests within the “umbrella” stakeholder organization (and welcomes input and feedback from those potentially affected interests not actively involved within the organization); continuing financial support from a variety of internal and external sources; and a professional staff that serves the collective whole.

We have also learned that a stakeholder organization needs to be flexible in the capacity to respond to dynamic challenges and opportunities.

Three powerful ideas have enhanced our focus and effectiveness. The first idea is the concept of a watershed approach. This puts important issues into context so that biases associated with the institutional responsibilities of management agencies, other

stakeholder organizations, and other potentially affected interests can be overcome. The second idea is that ecosystem management and economic development will be concurrent with clean-up efforts. The third idea is that restoration of the beneficial uses within the Cuyahoga River Area of Concern will contribute to the betterment of the Great Lakes and the betterment of the quality of life for people living in or visiting the area.

Chapter Three **Program Strategies, 1999-2003**

The program strategies presented in this document are for the five-year period from 1999 through 2003. Separate strategies are presented for remedial action planning, gaining community support, implementing selected remedial measures, and carrying out the program. Goals, objectives, and actions are presented for each strategy.

Goals are general statements of direction and apply both during and beyond the five-year period. **Objectives** are more specific and are to be achieved within the next five years. **Actions** are some ideas, to which others may be added, for specific ways to achieve the related objective.

Because this is intended to be a living document, it will be appropriate from time to time, subject to approval by the Coordinating Committee, to supplement or otherwise amend its provisions in order to keep them representative of our current priorities. This is particularly true for the actions which are presented herein to which, as noted above, others may be added; it is less true of goals which are more enduring and objectives which are more broadly inclusive.

For example, at the “retreat” held by the Coordinating Committee on March 11, 1999, outcomes and actions were identified and preferences were expressed which are anticipated to be fully evaluated and developed by work groups for approval by the Coordinating Committee into prioritized actions to be added to our program strategies. It would be useful periodically, perhaps every other year, to hold such “retreats” which, in addition to the activities of standing committees, task forces, and work groups, would serve to update, prioritize, and re-focus our efforts.

1 Strategy for Remedial Action Planning

As the name of our organization suggests, our core function is remedial action planning.

The term is taken from the Great Lakes Water Quality Agreement (GLWQA) between the United States and Canada, which calls for reports of progress in the preparation and implementation of remedial action plans for Areas of Concern (AOCs).

The CCC was formed to help fulfill this agreement for the Cuyahoga River AOC.

The agreement provides that progress be reported in three stages which, simply stated, are (1) when problems are defined, implying identification of goals; (2) when solutions are selected, implying evaluation of alternatives; and (3) when problems are solved, implying successful implementation of solutions. The agreement spells out detailed guidelines of what is to be reported in each stage, and these are cited in Chapter One of this document.

The first two reporting stages reflect a fundamental planning, or problem-solving, process. It may be performed in a variety of ways depending on conditions in each AOC. In our area, these conditions include (1) a watershed ecosystem with a highly complicated and constantly changing interaction of natural and cultural forces; (2) a large number of stakeholders with a wide diversity of interests and resources; and (3) our role as a voluntary community-based organization with only the power which can be exerted through the influence of sound information, consensus-building, planning, and persuasive communication. These conditions shape the characteristics of how we can perform remedial action planning.

First, our remedial action planning process must be **iterative and continuing**. Our conditions are not so simple as to permit a linear process of learning all that needs to be known about the problems, then fully evaluating all present and future alternative solutions, before preparing a remedial action plan. Rather, each of the elements of our remedial action plan will need to be periodically updated on the basis of any new information or insights.

Second, our remedial action plan will be **comprehensive**. The full range of problems will be addressed as well as the full range of alternative solutions in order to gain a useful perspective of what remedial actions have priority or remain to be done.

Third, the process will be **collaborative**. Because our resources are limited, we will depend upon, support, or work with other organizations or individuals for information, analysis, and evaluation in developing our remedial action plan. Consequently, some elements of the plan will be less grounded than others in full information, in-depth analysis, or detailed evaluation, and will require the exercise of best judgment. This will be necessary to be comprehensive and will be corrected in recurring updates.

<p>1.1 Goal: Prepare and periodically update a remedial action plan for achievement of our community's goals for uses of waters in the Area of Concern.</p>
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Our remedial action plan will serve several purposes: (a) to inform the stakeholders and other members of our community of the range and priority of actions which are needed to achieve our community's goals; (b) to provide a common and comprehensive understanding among our program participants of how individual efforts are related to our overall task and; and (c) to identify topics and issues which need

further study and decision.

We already have made substantial progress toward preparation of a remedial action plan. On the basis of then available data and defined standards, we determined the degree and extent of impairments, and to a lesser degree their causes and sources, which we first presented in our 1992 *Stage One Report* and updated in 1995. This work served to identify some of the priority topics for further action-oriented steps in the planning process; and to reveal other topics which, because of the lack of available data or defined standards, would require further study.

1.1.1 Objective: In 1999, set goals in terms of positive and tangible outcomes to be achieved.

In our work to date we have focused on the fourteen impairments of beneficial uses (see Appendix B) which are defined in the Great Lakes Water Quality Agreement between the United States and Canada. We will continue to employ these definitions not only to support this agreement but also to be consistent with our previous work and the work in other Areas of Concern in the Great Lakes Basin. Also, restoring and protecting these beneficial uses, as so defined, continues to be our mission.

Additionally, we will set goals in terms of positive and tangible outcomes to be achieved.

1.1.1.1 *Action: Conduct one or more brainstorming sessions of members of the Coordinating Committee to identify outcomes and to choose topics appropriate for work groups. (See Strategy for Program Operations.)*

1.1.2 Objective: In 1999-2000, confirm, modify, or expand our determination of problems to be solved for achievement of goals.

In the absence of adequate information about each impairment to make a fully documented determination, we will make a judgment on the basis of available information in order to progress to the next step in the planning process and, also, to identify needed research.

1.1.2.1 *Action: Inventory and assess sources of toxic and other pollutants affecting human health.*

The effects of degraded water quality on human health are of utmost concern to our community and deserve special attention.

1.1.2.2 *Action: Gather information on the percent of impervious surfaces in communities in the AOC.*

1.1.2.3 *Action: Develop indicators of progress for each impairment.*

Such indicators will provide for consistency in future research and permit periodic reporting of any significant progress. Consider the indicators which have been

developed by the Great Lakes Science Advisory Board.

1.1.3 Objective: In 2000-01, identify and evaluate alternative solutions to determined problems.

This evaluation should include estimates of technical feasibility, cost, and community support in order to determine the reasonableness of alternatives.

- 1.1.3.1 *Action: Update the 1995 institutional inventory to identify the stated purpose and responsibilities of stakeholder agencies and organizations.*
- 1.1.3.2 *Action: Update the 1995 Early Implementation Report.*
- 1.1.3.3 *Action: Evaluate the effectiveness of streambank stabilization and restoration techniques and projects.*
- 1.1.3.4 *Action: Evaluate the effectiveness of our stream stewardship programs.*
- 1.1.3.5 *Action: Continue to investigate methods of restoring water quality and habitat in the navigation channel.*

1.1.4 Objective: In 2001, formulate a remedial action plan

A remedial action plan, either as first formulated or periodically updated, will be a synthesis of the previous steps in the planning process. It will report the significant findings from earlier steps but will be oriented to directions for remedial measures to be undertaken to realize our community's goals for water quality in the Area of Concern.

1.2 Goal: Periodically report our remedial action planning progress in accord with IJC guidelines.

- 1.2.1 *Objective: By the end of 2000, prepare an updated Stage One Report.*
- 1.2.2 *Objective: By the end of 2001, prepare a Stage Two Report, including a review of progress to date.*

2 Strategy for Implementation of Remedial Measures

2.1 Goal: Encourage, support, and assist the implementation of

selected remedial measures for restoring beneficial uses and preventing future impairments.

Stakeholder organizations are those represented by our Caucus Groups, namely, state and federal agencies, local governments, business and industry, and community interest groups. A function of the remedial action planning process, itself, is to encourage and assist implementation of remedial measures. Additionally, we can and should provide encouragement and assistance to projects and programs undertaken for that purpose and focus on priority remedial measures. See "Partnerships" in Appendix D.

2.1.1 Objective: On a continuing basis, act as a catalyst or facilitate implementation of remedial measures by stakeholders.

- 2.1.1.1 *Action: Investigate and evaluate alternative methods of restoring fish and wildlife habitat in the navigation channel, work with appropriate agencies to implement selected remedial measures, and seek needed funding for implementation.*
- 2.1.1.2 *Action: Work with appropriate organizations to fund, develop, and conduct a wildlife population survey in the AOC.*
- 2.1.1.3 *Action: Develop a clear and concise goal for the need and desired outcome of upland wildlife habitat restoration.*
- 2.1.1.4 *Action: Officially accept the IJC's list of sentinel species of wildlife or create our own list.*
- 2.1.1.5 *Action: Conduct a comprehensive evaluation of levels of contaminants in selected consumptive use wildlife species except fish.*
- 2.1.1.6 *Action: Work with appropriate organizations to fund, develop, and conduct a comprehensive assessment and survey of the status of the riparian zone in the AOC, and develop goals and indicators for measuring success toward improving the quality and quantity of riparian habitat.*
- 2.1.1.7 *Action: Develop riparian zone protection regulations for adoption by local governments.*
- 2.1.1.8 *Action: Support and encourage projects that increase public use of and access to the river and its tributaries.*

2.1.2 Objective: On a continuing basis, support and assist the implementation of remedial measures which are being initiated by stakeholders and which are consistent with RAP

goals and objectives.

2.1.2.1 *Action: Support debris harvester planning and implementation in the navigation channel by Ohio EPA, NEORSD, the Cleveland Port Authority, and marine industry groups.*

2.1.2.2 *Action: Develop a series of model stream protection regulations for adoption by local governments.*

A model ordinance for local storm water management prepared by the Cuyahoga Soil & Water Conservation District and published with guidelines by the Cuyahoga Valley Communities Council in May 1994 is a point of beginning.

2.1.2.3 *Action: Support and encourage stream bank stabilization and restoration projects including the demonstration use of bioengineering techniques to address soil erosion, stream bank stabilization, and loss of fish and wildlife habitat, as well as community workshops to inform local planners and engineers about these techniques.*

3 Strategy for Gaining Public Support

There are several elements of this strategy. They include (a) facilitation of the involvement of the community in review of plans as they are developing, not after completion; (b) providing information to various identified target audiences and participants; (c) arranging for education, including the development and organizing of materials and educational opportunities (information and education will be closely linked); and (d) a marketing plan to increase public recognition of the RAP program, its mission, and its significance for the health of the community and the watershed.

3.1 Goal: Maximize citizen participation in the development of the remedial action plan with special focus on identified groups.

3.1.1 *Objective: Plan and organize one or more workshops in the watershed to facilitate public review and comment on updated Stage One and Stage Two reports.*

3.1.2 *Objective: Revise plans based on public comment and provide a feedback report to the publics involved.*

3.2 Goal: Encourage and support community involvement in activities which address water quality issues and their resolution.

Hands-on” involvement of citizens working together in community or neighborhood groups, particularly those with a focus on local streams, will be an even more effective means of building public support of needed remedial measures than general public information.

3.2.1 Objective: In 1999-2003, continue to promote and support sustainable stream stewardship programs in the Area of Concern.

3.2.1.1 *Action: Complete the Big Creek and Yellow Creek stewardship programs.*

3.2.1.2 *Action: Evaluate the techniques, successes and failures of these programs.*

3.2.1.3 *Action: Based on lessons learned, write a model stream stewardship development plan.*

3.2.1.4 *Action: Initiate and support stream stewardship programs for other Cuyahoga River tributaries.*

3.3 Goal: Conduct an effective public information program to increase awareness of RAP progress, appreciation of the importance of restoring and maintaining beneficial uses, and support for what remains to be done.

In addition to publicizing our Remedial Action Plan, the dissemination of public information in all steps of the remedial action planning process is an important means of building public support for implementation of remedial measures, including measures to be taken by individuals and households.

Our current public information program includes publication of a newsletter, distribution of informational brochures, group presentations by staff and members of a speakers’ bureau, and co-sponsorship of special events, among many other activities.

3.3.1 Objective: Develop a clear and concise goal for the need and desired outcome of a public information program.

3.3.2 Objective: Identify and define “RAP publics” and the responsibilities of the RAP for involvement with each target group.

3.3.3 Objective: Foster public appreciation for the environmental, economic and social benefits of a clean river and a healthy ecosystem; increase public awareness of the effect of certain consumer practices which degrade water quality, and the consumer’s role in implementing remedial measures.

3.3.4 Objective: Identify communication strategy objectives, relating them

to specified target audiences.

3.3.5 Objective: Prepare an annual report to the public on the State of the Cuyahoga River AOC, the actions of the RAP program, and any improvements accomplished in the preceding year.

3.3.6 Objective: Establish a special newsletter and/or fact sheet for local government officials and the CCC membership to provide background information and “progress reports” to these key target groups.

3.3.7 Objective: Identify and acquire copies of all water quality publications and other resources available from agencies and non-profit organizations for the general public.

3.3.8 Objective: Use existing published material to respond to public inquiries.

3.3.9 Objective: In 1999, evaluate our current public information program to determine how it may be made more effective.

3.4 Goal: Evaluate our current environmental education program and develop a written plan for the next several years, including youth and adult target audiences.

3.4.1 Objective: Develop clear and concise goals for the need and desired outcome of an environmental education program.

3.4.2 Objective: Promote and assist consideration of water quality issues in the schools and school curriculums.

3.4.3 Objective: Evaluate our current school/youth education program to determine how it may be made more effective.

3.4.3.1 Action: Survey teachers and other youth leaders to ascertain their “wish list” of water quality educational materials.

3.5 Goal: Adopt and implement a marketing plan for the RAP program.

3.5.1 Objective: Review, revise as necessary and adopt the marketing plan prepared in 1996.

3.5.2 Objective: Review current media relation practices and relate to an

adopted marketing program.

3.5.3 Objective: Expand internal communications efforts by sharing information and data among CCC members.

3.5.4 Objective: Plan for greater use of internet opportunities.

4 Strategy for Program Operations

4.1 Goal: Maintain the Coordinating Committee as a strong, active, and representative body for deliberation and decision-making.

The role of the Coordinating Committee should be proactive rather than reactive, i.e., our remedial action planning process should be committee driven.

4.1.1 Objective: Review in 1999 the participation and representation of current members of the Coordinating Committee and recommend to Ohio EPA any appropriate additions or adjustments.

4.1.1.1 Action: Request the Caucus Groups to conduct this review of their respective members and suggest additions or replacements.

4.1.2 Objective: Prepare and adopt in 1999 a user-friendly set of written procedures and protocols for the Coordinating Committee which confirm its decision-making role and the operational role of its Steering Committee, and for the Board of Trustees of the CRCPO.

4.1.3 Objective: In 1999, begin an annual procedure of self-evaluation by the Coordinating Committee, its Steering Committee, and the CRCPO Board of Directors.

4.1.4 Objective: Beginning in 2000, prepare an annual report of progress in relation to our program goals and objectives.

Members of the Coordinating Committee and other participants in our program can contribute more knowledgeably and effectively with a clear perspective and understanding of our program activities. The goals and objectives presented in this strategic plan provide a perspective of our program and a framework for reporting progress which will serve this purpose.

4.2 Goal: Clarify the role of the Steering Committee as a coordinating body.

4.2.1 Objective: Assign to the Steering Committee the functions of setting the agenda and arranging for meetings of the Coordinating Committee; coordinating the activities of Standing Committees, Task Forces and Work Groups; and, generally, making recommendations of policies, programs, and projects for approval by the Coordinating Committee.

4.2.2 Objective: Beginning in 1999, annually request the Caucus Groups to review their representation on the Steering Committee.

The purposes of this objective are to allow and encourage more members of the Coordinating Committee over a period of time to be involved in the work of the Steering Committee and to avoid any sense of dominance by a few members.

4.3 Goal: Recruit and assign Standing Committees to undertake assignments of an ongoing nature.

4.3.1 Objective: Reconstitute the Community Involvement Committee in 1999 to review and evaluate current public involvement efforts and to recommend a comprehensive and coordinated strategy for information, education, marketing and public involvement devoted to completion of the RAP process.

4.3.2 Objective: Maintain the Technical Advisory Committee to provide technical assistance to RAP projects on an as needed basis.

4.3.3 Objective: Appoint a Remedial Action Plan Drafting Committee in 1999 to prepare and periodically update the Remedial Action Plan.

4.4 Goal: Recruit and assign task forces to undertake assignments of a limited time duration.

4.4.1 Objective: In 1999, charge a Task Force with drafting written procedures for the CCC and its Steering Committee, and their relationships with the Board of Directors of the CRCPO.

4.4.2 Objective: Bi-annually appoint a Task Force to prepare a State of the River AOC report.

4.4.3 Objective: At the beginning of 2003, charge a Task Force with updating program strategies for the ensuing five years.

4.5 Goal: Create and charge Work Groups of Coordinating Committee members and other resource persons with formulating the steps in the remedial action planning process in relation to beneficial use impairments.

All members of the CCC should be encouraged to participate in one of the work groups. Other resource persons in the community should also be recruited in order to bring their skills and knowledge to the work group and, also, to increase participation in the remedial action planning process.

4.5.1 Objective: In 1999, form work groups of members of the Coordinating Committee and other resource persons in the community to conduct in-depth evaluations of problems and recommendations of remedial measures.

4.5.1.1 *Action: Choose topics for Work Groups. See Strategy for Remedial Action Planning.*

4.5.1.2 *Action: Adopt guidelines for Work Groups.*

While each Work Group will work at its own pace, such guidelines could include a) list and adequately define the problems they are working on with reference to desired outcomes; b) list the sources of contamination, damage, or use impairment contributing to the problems; c) characterize sources by location (community, river segment, tributary, etc.) by volume or extent, and assess other possible sources; d) identify and define secondary relationships to other land, water and air contamination or damage issues (ecosystem perspectives); e) review desired outcome for the particular problems and identify indicators for measuring progress toward that goal; f) identify societal causes (public and private sector activities), demographics, development, technological change, etc., and their contributions to sources and use impairments being reviewed; g) identify existing agencies with a mission and/or responsibility for managing all or part of the identified problems; h) review existing remedial and preventative programs and identify gaps and unmanaged aspects; i) identify and characterize all possible alternative preventative and remedial options for problems (sources) under review; j) identify secondary impacts of the various remedial and preventative measures being reviewed; and k) select alternatives for action and recommend to the Coordinating Committee.

4.6 Goal: Employ the Caucus Groups as channels of communication with their respective constituencies.

Each Caucus Group should identify their extended constituency and continue to (a) provide information on remedial action plan design and progress; (b) elicit comment on plans and proposals; (c) encourage participation in the planning process; and (d) work with constituents to promote implementation of agreed upon remedial measures.

4.6.1 Objective: Expand internal communication efforts to inform members of the Coordinating Committee of background data and information on issues and developments from other AOCs and lakes; facilitate sharing of information among members and committees.

4.7 Goal: Engage in strategic partnerships with other organizations to support high priority programs or projects.

In a broad sense, our program is built almost entirely on partnerships. Thus, through representation on the Coordinating Committee, membership on committees and work groups, provision of technical information, contributions of funds, etc., other organizations and individuals are partners in all phases of our operations. Generally, these partnerships are long-term relationships with the ongoing and established activities of other organizations which contribute to our program.

Strategic partnerships are those relationships with other organizations to carry out a new program or project which is pursuant to our program objectives, for which either we or others have taken the initiative, and in which our role will be instrumental to its success either in a start-up capacity or over a continuing period. See "Partnerships" in Appendix D.

4.7.1 Objective: During 1999-2003, participate as a partner in the American Heritage River (AHR) Initiative.

4.7.1.1 *Action: Until September 1999, serve as the lead organization in the partnership and as a single point of contact for the designated AHR River Navigator.*

4.7.1.2 *Action: In September 1999, review our role as the lead organization with respect to our resources and those of the other partners.*

4.7.2 Objective: During 1999-2003, participate as a partner in the Lakewide Management Plan (LaMP) for Lake Erie.

4.8 Goal: Secure adequate and ongoing funding for completion of the RAP program.

4.8.1 Objective: Explore and secure potential funding from diverse sources including Federal, State, and local governments, foundations, major donors, corporations, and memberships.

4.8.2 Objective: Engage Coordinating Committee members in direct and indirect fund raising activities.

4.8.3 Objective: Increase the number of contributors and contributions from additional stakeholders.

Statements of Mission and Scope of Remedial Action Plan Appendix A

Source: Cuyahoga River RAP Coordinating Committee Work Program, December 1989.

Statement of Mission

To prepare and recommend a Remedial Action Plan for the Cuyahoga River Basin and Lake Erie near shore areas, which will enhance their environmental quality and restore beneficial uses and value to the Northeast Ohio community in accordance with the Great Lakes Water Quality Agreement.

Statement of Scope of Remedial Action Plan

The plan will be shaped to:

- a) *incorporate the principles of the Great Lakes Water Quality Agreement.*
- b) *support the continuation of multiple uses of the Cuyahoga River.*
- c) *take into account that the character and potential uses of the river and adjacent area may vary throughout stretches of the river.*
- d) *take into account the issues of water quality standards in the Cuyahoga River.*
- e) *consider point and non-point sources of contaminants within the entire Cuyahoga River watershed which degrade water quality in the area of concern.*
- f) *consider all structural remedial actions (bricks and mortar) and non-structural remedial actions (management processes, regulations and education) to improve water quality in the area of concern.*
- g) *be an important step toward virtual elimination of persistent toxic substances.*
- h) *take into account feasibility, affordability and socio-economic impacts.*
- i) *incorporate an ecosystem approach.*
- j) *use a consensus building process to develop a supportable plan.*
- k) *incorporate a strategy of implementation staged over time.*

Beneficial Use Impairments*

Appendix B

1. Restrictions on (a) fish and (b) wildlife consumption.
2. Tainting of fish and wildlife flavor.
3. Degraded (a) fish and (b) wildlife populations.
4. Fish tumors and other deformities.
5. Bird or animal deformities or reproductive problems.
6. Degradation of benthos.
7. Restrictions on dredging activities.
8. Eutrophication or undesirable algae.
9. Restrictions on drinking water consumption or taste and odor problems.
10. Restrictions on recreational activities from (a) bacterial levels or (b) limitations on access (added).
11. Degradation of aesthetics, including recreation.
12. Added costs to agriculture or industry.
13. Degraded (a) phytoplankton or (b) zooplankton populations.
14. Loss of (a) fish or (b) wildlife habitat.

* From Great Lakes Water Quality Agreement with subdivisions (a) and (b) made or added by Cuyahoga River RAP.

Map of Area of Concern (AOC)

Appendix C

Cuyahoga River RAP Accomplishments, 1988-1998

Appendix D

Note: Roman numerals in parentheses after each activity/program/project refer to beneficial use impairment category groups being addressed: I = Human Health; II = Fish; III = Wildlife; IV = Aquatic Organisms other than fish; V = Recreational Uses; VI = Socio-Economic Uses

Implementation Activities

1. *Debris Harvester Planning* (VI)
Ongoing activity, started with 1995 report on debris sources, funded by CRCPO and RAP members. NEORS and OEPA are currently pursuing boat purchase and operational funding to address degradation of aesthetics.
2. *"Understanding Beach Warnings" pamphlet* (V, VI)
Joint project completed by ODNR, Cleveland Health Department, Cleveland Water Pollution Control, ODH, Cuyahoga County Health Department, Ohio EPA, NOACA, and NEORS to educate public about elevated bacteria levels and beach closings.
3. *Fish Consumption Advisory* (I, II, V, VI)
Issued by ODH in 1994, based on fish tissue study conducted by RAP.
4. *Bioengineering Workshops* (II, III, IV, VI) (in progress)
Series of workshops held in 1998 on stream assessment, restoration and bioengineering techniques aimed at educating local engineers, designers and other individuals working to stabilize, restore and rehabilitate streams. Co-sponsored by a wide variety of river stakeholders, regulatory agencies and community interest groups, including the Cuyahoga RAP, with funding from USEPA and other sources.
5. *Stream Bank Stabilization/Restoration Projects* (II, III, IV, VI) (in progress)
Four projects currently underway within the Area of Concern. Funded by CRCPO via grant from USEPA's Great Lakes National Program Office to educate local stakeholders and demonstrate use of soil bioengineering techniques to address soil erosion, stream bank stabilization, and loss of habitat impairments.
6. *Stream Stewardship Programs* (VI)
Ongoing programs funded by ODNR Section 319, GAR Foundation, and Lake Erie Protection Fund being conducted by CRCPO, NOACA, NEFCO, and Ohio EPA staff in Big Creek and Yellow Creek watersheds to educate and involve local citizens and officials in nonpoint source reduction and environmental stewardship as long term solutions to address all identified use impairments.
7. *Public Involvement & Education Program* (VI)
Ongoing programs funded by foundation grants and conducted by CRCPO staff and RAP members to educate local citizens and officials about RAP activities and to involve them in nonpoint source reduction and environmental stewardship projects and/or programs to address long term solutions to address all identified use impairments.

Research Studies

1. *Cuyahoga Navigation Channel Reaeration Feasibility Study*. (II)
Completed in December, 1996, by Montgomery Watson, Inc. Funded by

CRCPO with a grant from Ohio Water Development Authority and matching funds from local stakeholders. Evaluates technical feasibility of maintaining minimum dissolved oxygen (DO) concentration of 1.5 mg/l in the Navigation Channel using artificial reaeration techniques and develops planning-level costs for feasible alternatives. Concludes that artificial reaeration technology is feasible, that sites for artificial reaeration could be found, and estimates costs for both site acquisition and technology implementation and operation. Information is to be used in subsequent discussions by the RAP CCC to compare costs and technical feasibility of reaeration with other means of meeting the state's DO criteria.

2. *Report on the Findings of the Fisheries Advisory Panel Examining the Issue of Reaeration of the Cuyahoga River Shipping Channel. (II)*

Completed in November, 1996, by EnviroScience, Inc. Funded by CRCPO with a grant from Ohio Water Development Authority and matching funds from local stakeholders. Summarizes findings and recommendations from a panel of fisheries experts commissioned to evaluate the potential for fish population improvement in the lower 20 miles of the river under different management strategies, including artificial reaeration. Concludes that achieving a minimum goal of 1.5 mg/l DO will have negligible value in improving fish communities unless habitat is also improved. Increasing DO to at least 4 mg/l, coupled with continuous habitat improvements within the navigation channel, would significantly improve the fishery. Consideration of fry mortality through entrainment must be considered when selecting a reaeration system for the channel. Some future research needs identified were: a) Evaluate whether present water quality conditions and resident fish populations would deteriorate without implementation of artificial reaeration; b) Evaluate whether implementation of artificial reaeration to achieve a DO standard of 1.5 mg/l is necessary to preserve progress made in restoration of beneficial uses of the River to this point in time; and c) Continue to investigate feasible methods of restoring habitat and achieving appropriate water quality standards for the Navigation Channel.

3. *Creel Survey (I, II)*

Conducted in 1993 by the RAP CCC and an intern, funded by the CRCPO with a grant from USEPA. Purpose was to gather data on the type and quantity of fish caught and consumed from the Cuyahoga River and Cleveland lakefront; to ascertain existence of socio-demographic patterns among subsistence anglers; and to evaluate angler's overall awareness of fish consumption advisories. Study can be used to identify anglers who may be at risk due to their consumption habits and in issuing fish consumption advisories.

4. *Stream Bank Stabilization/Bioengineering Projects (II, III, IV, VI) (in progress)*

Four projects currently underway within the Area of Concern. Funded by CRCPO via grant from USEPA's Great Lakes National Program Office to educate local stakeholders and demonstrate use of soil bioengineering techniques to address soil erosion and loss of habitat impairments.

5. *Review of Methods for Estimating Benefits from Environmental Amenities (VI)*

Report conducted by the Center for Regional Economic Issues, Weatherhead School of Management, Case Western Reserve University, 1991. Purpose of report was to assist in the evaluation and refinement of remedial alternatives by assessing their respective economic and environmental benefits, to provide a tool for developing a remedial action plan, and to provide a basis for public and leadership support of plan implementation.

6. *Community Preference Poll of Cuyahoga and Summit County Ohio Residents (VI)*
Survey conducted by Decision Research Corporation, with funding provided to CRCPO by The Cleveland Foundation, June, 1992. Purpose was to aid the RAP CCC in developing remedial strategies to restore impaired beneficial uses by assessing residents' concern for the environment, perceptions of condition of the river and lake and sources they believe are contributing to water pollution, who they think should be responsible for clean up, how they currently use the river and lake and how they would like to, potential reasons for cleaning up the river and lake, and what they are willing to do to help.
7. *Stewardship Program Benefits Assessment (VI)*
(Future project). Evaluation of national and local Stream Stewardship programs to assess benefits achieved from these programs in terms of community awareness and participation in improving water quality. Funding available from The Cleveland Foundation; awaiting concurrence to proceed.
8. *River and Lake Bacteria Studies (V)*
Several studies completed by USGS, Cuyahoga County Health Department and NEORS to determine location, time of travel, severity, and impact to recreational uses by high bacteria levels.
9. *1989-1992 Fish Tissue Collection and Analysis (I, II)*
Report completed in 1994, funded by RAP members and conducted by Fish Consumption Technical Committee and Ohio EPA to determine appropriate fish consumption advisory.
10. *Phytoplankton Study (IV)*
Funded by Lake Erie Protection Fund, conducted by John Carroll University in 1994. Report entitled "Ecology and Assessment of the Algae of Four Lake Erie Estuaries" provided data to determine impairment to benthos.
11. *Larval Fish Study (II)*
Currently underway, funded by CRCPO with grant from OWDA. Conducted by Ohio EPA to determine fish species spawning upstream of navigation channel in order to further define potential impact/benefit from implementation of habitat restoration and reaeration in navigation channel.

Community Awareness & Education Programs

1. *Informational Brochures and Fact Sheets (VI)*
A variety of brochures and fact sheets produced by the RAP include: "Restoring the Cuyahoga River: A Remedial Action Plan" (a full-color brochure and map explaining the RAP process), "Taking Action to Save Our Streams" (a directory of numbers to call for immediate response to water quality problems), "A Household Guide to Cleaner Water," "7 Ways You Can Help Restore Habitat and Improve Water Quality", "The Yellow Creek Watershed," and eight fact sheets on pollution prevention, nonpoint source pollution, storm water management, habitat, combined sewer overflows, fish consumption advisory, sewage disposal systems, and illicit and malfunctioning sewer connections.
2. *RAP-UP Newsletter (VI)*
An eight-page newsletter providing timely information on the progress of RAP programs; published at least twice per year and mailed to over 6,000 constituents.
3. *Video "Take Care of Our Planet: Eight Solutions to Pollution We Generate at Home" &*

Teachers Guide (VI)

Eight video vignettes covering several topics such as household hazardous waste, lawn care, trash and litter, road salt, composting, and septic systems. Accompanying Teacher's Guide helps teachers provide an engaging learning experience.

4. *Stream Stewardship Programs (VI)*

Public outreach and involvement programs to increase community knowledge and awareness of the stream "in your backyard" and to empower local citizens with the necessary tools to carry out their own stream protection and restoration efforts. Two programs are currently underway in Big Creek and Yellow Creek, two major tributaries of the Cuyahoga River. Activities include community workshops, slide show presentations, stream clean ups, storm drain stenciling, willow and tree planting, water quality monitoring, community festivals, and other events. Funding provided to CRCPO by USEPA, 1525 Foundation, and the G.A.R. Foundation.

5. *Public Involvement Activities (VI)*

Hands-on activities designed to get people out and working in or near streams to raise their awareness of pollution issues and to teach them how to carry out their own stream protection and restoration initiatives. Activities include:

- Adopt-A-Spot Program (VI)
- Stream Clean-Ups (VI)
- Willow & Tree Planting (II, III, VI)
- Storm Drain Stenciling (VI)
- Stream Monitoring (II, VI)
- Speakers' Bureau/Slide shows (VI)
- Festivals, Caravans and other Community Events (VI)

Partnerships1. *City of Akron Combined Sewer Overflow Studies and Facilities Plan (V)*

To be completed by 1999, addresses and identifies control measures to be implemented to reduce CSO impacts. Oversight provided by stakeholder committee, including a RAP representative.

2. *Northeast Ohio Regional Sewer District:*a. *Combined Sewer Overflow Control Program (I,V)*

Long term effort of planning and construction to reduce CSOs. Construction of a CSO storage tunnel for protection of the Mill Creek watershed is currently underway. Facility planning studies underway in several other drainage areas including Doan Brook. The Doan Brook study is also addressing stormwater drainage issues.

b. *Regional Plan for Sewerage and Drainage (I,II,IV,VI)*

Planning effort to look at issues of stormwater management for Cuyahoga County and the surrounding NEORSD service area. Problems of flooding, erosion, debris, etc. have been identified. Technical plans to address some of the major outstanding stormwater drainage issues are to be developed. Institutional gaps in the current structure for management of stormwater are being assessed. A current demonstration project is working with multiple jurisdictions to solve issues of stormwater management in the Chevrolet branch of Big Creek.

- c. *Debris management (V,VI)*
 Planning studies and control efforts to capture, contain, or collect debris which escapes to the lower Cuyahoga River and near shore areas of Lake Erie from CSOs. Additionally, NEORSD has completed a detailed planning study in support of the concept of a stakeholder partnership for the operation of a debris harvester boat that would collect debris from a wide range of sources.
3. *Cleveland Metroparks' Ohio & Erie Canal Reservation (V)*
 Currently under construction, provides recreational access to river by general public.
4. *Ohio & Erie Canal National Heritage Corridor (V)*
 Ongoing programs/projects funded by federal grants and local matching funds, some providing greater recreational access and understanding of area from Cleveland to Zoar. Master Planning effort to be initiated late 1998.
5. *Cuyahoga Valley National Recreation Area (V)*
 National Park Service provides recreational access and educational programs, erosion control plans/projects incorporate habitat rehabilitation where possible.
6. *Flats Oxbow Association (V)*
 Currently coordinating public access planning effort in Flats area.
7. *Friends of Crooked River - Septic Tank Video (I, V)*
 Completed in 1997, supported by RAP members, and distributed throughout Ohio, provides information to homeowners in effort to reduce septic system failure and potential impact on streams.
8. *SWCD - Urban Streams Programs (II, III, VI)*
 Initiated in 1998, provides staff to coordinate stream protection/education/stewardship activities to supplement and in conjunction with RAP and CRCPO sponsored activities.
9. *Cuyahoga Bd. Of Health - Home Sewage Disposal System Maintenance & Monitoring Program (I, V, VI)*
 Ongoing program funded by a fee system, aimed at reducing potential stream contamination by failing home septic systems.
10. *Mill Creek Watershed Protection Committee (II,III,IV,V,VI)*
 Community based stakeholder group originally formed to advise NEORSD during facility planning studies for the control of CSOs in Mill Creek. Current mission of the group is to encourage a wide range of protection and restoration efforts to restore the ecological integrity of Mill Creek. Presently working to restore a stormwater management facility by Kerruish Park in Cleveland. The project also hopes to create additional wet lands. Support to the group is provided by a number of agencies with environmental missions.
11. *Nature Center at Shaker Lakes - Doan Brook Watershed planning (II,III,IV,V,VI)*
 Ongoing studies of Doan Brook to identify sources and impacts to stream, in conjunction with NEORSD planning effort. RAP members and CRCPO staff participate on committees and assist with planning and events.
12. *NOACA/NEFCO 208 Water Quality Planning (II, III, IV, V, VI)*
 Currently updating previous 208 plan, expanding focus beyond sanitary system service areas to include identification of critical areas, storm water control

measures, local ordinance enactment, and other protective mechanisms.

13. *Ohio EPA Surface Water Programs (I, II, III, IV, V, VI)*

Regulate and enforce permit program for point source and storm water dischargers, provide full-time RAP coordinator to assist in RAP efforts/programs/projects, provide funding for NOACA and NEFCO RAP- related activities, provide special funding for RAP activities, monitor biological and water quality of Cuyahoga River watershed every 5 years providing information for determination of degree of use impairments.

14. *American Heritage River Initiative (VI)*

Presidential designation of Cuyahoga River on July 30, 1998, provides enhanced coordination between major partnership organizations throughout entire Cuyahoga River watershed to leverage additional resources to protect and restore natural, historic, and cultural resources and to foster sustainable economic development.

15. *Lake Erie LaMP (I, II, III, IV, VI)*

Participate in development of Lakewide Management Plan for Lake Erie, a major partnership between the Great Lakes States and the Province of Ontario.