

Selected Highlights of Progress in Ohio Areas of Concern Page 1

Area of Concern/Major Known Impairments	Background	Fiscal Year 1992 Activities in AOC	Fiscal Year 1993 Activities in AOC	Long-Term Agenda
<p><b>LAKE ERIE Black River</b></p> <p>This AOC is identified as the main stem, East and West Branches, French Creek, and those stretches of the upper basin and tributaries where use impairments exist. The AOC contains the nearshore area from the public swimming beaches at Lakeview Park (west side of Lorain) to Century Park (east side). This includes the inner and outer harbors and the areas surrounding the drinking water intakes of Elyria and Lorain.</p> <p>Previous water quality problems due to metals, ammonia, phenol, bacteria, and cyanide; sediments heavily polluted with metals, oil and grease, and PAHs; fish consumption advisories for all species; bacteriological contamination of water column; fish tumors, degraded biological communities, eutrophication, dredging restrictions, habitat destruction.</p>	<p>In 1979, USEPA sued USX for alleged Clean Air Act violations at its Lorain facility. In 1980, USEPA and USX filed a Consent Decree under which USX was to spend \$4 M during 4 years to suppress dust.</p> <p>In 1983, USX closed coke plant operations, eliminating coking wastewater discharges to the river.</p> <p>In 1985, EPA and USX filed an amendment to the 1980 Consent Decree under which USX agreed to dredge sediments contaminated with PAHs and cadmium from the Black River around a USX outfall, reduce nitrogen oxide emissions, reduce thermal pollution to the Black River, and pay a \$200 K penalty.</p> <p>West Side Lorain WWTP began operation in 1988, and upgrades completed in Oberlin, Wellington, and Lodi.</p> <p>Stanadyne eliminated its major river discharge by connecting to Elyria sanitary sewers.</p> <p>Elyria WWTP upgrade completed in 1989 under a Consent Judgement. GMC Lorain Plant closed, eliminating major industrial discharge.</p>	<p>Public workshop held to solicit the public perception of the environmental status of the Black River.</p> <p>The Black River RAP Coordinating Committee conducted a tour of the river to enhance their knowledge of the AOC and its concerns.</p> <p>Preliminary beneficial use impairment assessment completed.</p> <p>Ohio EPA conducted an intensive survey of the Black River, investigating water chemistry, fish tissue, fish and macro-invertebrate populations, sediment chemistry and habitat at 40 sites throughout the basin. Volunteers from the Black River RAP Committee and the Friends of the Black River are utilized in conducting the survey and sampling.</p> <p>The Friends of the Black River began a Volunteer River Sampling network using Hach kits to provide additional data to the OEPA survey and to promote interest in the health of the river.</p> <p>A Riparian Wildlife census project conducted using funds from planning and local health agencies. Further funding being sought for future RAP projects and investigations.</p>	<p>Ohio EPA to complete report on 1992 intensive survey results. This report to be utilized by Black River RAP Coordinating Committee as basis for completing use impairment identification for Stage 1 report.</p> <p>Drafting of Stage 1 report to be conducted by Study Team and approved by Coordinating Committee. Stage 1 report expected to be completed and submitted to IJC by end of 1993.</p> <p>RAP Committee to participate in Lorain Port Awareness Days and to conduct public participation/Stage 1 report review meetings.</p> <p>Funding/resources being sought to conduct creel survey, habitat investigations, wildlife surveys, and continuation of Volunteer River Monitoring program with Friends of the Black River.</p> <p>Elyria will not be able to complete relief sewer construction by end of 1993 as required under USEPA Consent Order. The City has undertaken an aggressive sewer rehabilitation program to reduce overflows from CSOs/SS'Os.</p>	<p>Ohio EPA to provide Stage 2 RAP report to IJC in 1995.</p> <p>Ohio EPA to issue renewal NPIDES permits for dischargers in Black River basin in FY 94.</p> <p>Development of biocriteria for the harbor and nearshore as a baseline for tracking progress in restoration of beneficial use.</p> <p>Continued improvements to Elyria sewer system.</p>

Selected Highlights of Progress in Ohio Areas of Concern Page 2

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LAKE ERIE Black River	<p>In 1990, USX completed dredging about 32,000 cubic meters of contaminated sediments pursuant to the 1985 Consent Decree at a cost of \$1.5 M to USX. The dredged material was placed in a containment cell on USX property. In 1991, Ohio EPA established a local advisory board and began the public involvement process for the RAP. Oberlin College received a grant from the Nord Family Foundation to produce public information materials and to compile available data (1991). The Friends of the Black River, a citizens environmental action group, formed (1991).</p>		Lorain to initiate monitoring of SSOs as required by NPDES permit.	

Selected Highlights of Progress in Ohio Areas of Concern Page 3

Area of Concern/Major Known Impairments	Background	Fiscal Year 1992 Activities in ACIC	Fiscal Year 1993 Activities in AOC	Long-Term Agenda
<p>LAKE ERIE Cuyahoga River</p> <p>AOC identified as lower 45 miles of the river with basin upstream identified as a source.</p> <p>Most of the significant impairments occur in the navigation channel (lower 5 miles).</p> <p>Major impairments include: impoverished fish populations, elevated incidence of fish tumors/deformities, beaches and river impacted by high bacteria levels following wet weather, dredging restrictions, lowered aesthetics and habitat in the navigation channel.</p>	<p>Ohio EPA began the RAP process by forming a 35 member Cuyahoga Coordinating Committee in 1988. Numerous stakeholders became involved in the development of the plan.</p> <p>In 1989 RAP stakeholders began a 3-year fish tissue sampling program.</p> <p>Stakeholders conducted a study of bacterial contamination of the river downstream of Akron: the findings were that water quality standards are met during dry weather conditions.</p> <p>Stakeholders formed a non-profit corporation to provide funding support to the RAP.</p> <p>In 1990, stakeholders monitored bacterial conditions in river near Cleveland: the findings were significantly improved water quality.</p> <p>Fish tissue results from Akron area indicated no exceedences of FDA action levels. LTV Steel took steps that have cut contaminant loadings from their coking operations by 50%</p> <p>At a cost of \$200 K, the City of Akron reinforced the river bank near "Old City Landfill" to prevent debris entering river.</p>	<p>Cuyahoga Coordinating Committee approved the release of the Stage 1 RAP for public hearing in early 1992. The RAP was submitted to Ohio EPA 7/92.</p> <p>Stage 1 is to be submitted to the IJC 10/92.</p> <p>Promote and participate in River Sweep '92.</p> <p>Complete intensive water quality survey with report due late 1992. Findings indicate a general achievement of chemical water quality standards except for D.O. in the ship channel, recovery of benthic community in flowing portions of river, and impoverished fish community.</p> <p>2-year modeling effort indicates low D.O. in the navigation channel cannot be resolved by reductions in loadings.</p> <p>Completion of public opinion poll to assess attitudes, knowledge and priorities of cleanup. RAP process was utilized to obtain a community supported water quality standard use designation for the navigation channel.</p> <p>Will complete third year of fish tissue collection to assess safety for consumption.</p>	<p>Stage 1 Report reviewed and approved by 1JC.</p> <p>Update of Stage 1 Report to be compiled.</p> <p>Initiate development of Stage 2 with emphasis on developing lists of remedial alternatives.</p> <p>Work groups established to address wildlife habitat, education and pollution prevention, land use and institutional management, and recreation/access issues for Stage 2.</p> <p>Proposed standards rule-making for Cuyahoga Ship Channel recognize "shipping interests" in the Cleveland area partially responsible for attaining the new standards. The RAP process will continue to play a key role as the responsibilities of the "shipping interests" are delineated in the proposed rule.</p> <p>Begin activities/surveys to develop biocriteria for the harbor/nearshore area.</p>	<p>Continue studies and education projects for nonpoint source (NPS), stormwater, and combined sewer overflow sources; produce NIPS video.</p> <p>Assess benefits of remedial alternatives using a contingent evaluation.</p> <p>Public hearing on Stage 2 and submittal to Ohio EPA in 1994.</p> <p>Seek grants to support public education and awareness programs.</p> <p>Seek funding to continue investigation of nearshore biological community status.</p> <p>Seek funding to create challenge grants to fund priority research items.</p> <p>Complete NEORSID Master Plan for CSO Control (93-94).</p>

Selected Highlights of Progress, in Ohio Areas of Concern Page 4

Area of Concern/Major Known Impairments	Background	Fiscal Year 1992 Activities in AOC	Fiscal Year 1993 Activities in AOC	Long-Term Agenda
<p>LAKE ERIE Cuyahoga River</p>	<p>Stakeholders agreed to the type of model of navigation channel. Ohio EPA started a 2-year study with support from stakeholders; estimated cost is \$200 K. Ohio EPA conducted intensive water quality surveys on Cuyahoga, including surveys of fish and benthic populations. Stakeholders identified 2 bacterial sources in the Cuyahoga Falls-Akron area. The City of Cuyahoga Falls effected an \$80 K repair to a section of sewer, and Akron effected a \$70 K repair to its source. NE Ohio Regional Sewer District and City of Akron started CSO studies to characterize contaminant loads The USEPA issued public notice that it intended to promulgate water quality standards for the Cuyahoga channel if Ohio EPA does not do so. Stakeholders recommended waiting for the results of Ohio EPA's intensive 2-year quality survey.</p>	<p>Developing work plan for Stage 2 process.</p>		

Selected Highlights of Progress in Ohio Areas of Concern Page 5

Area of Concern/Major Known Impairments	Background	Fiscal Year 1992 Activities in AOC	Fiscal Year 1993 Activities in AOC	Long-Term Agenda
<p><b>LAKE ERIE</b> Ashtabula River</p> <p>The AOC includes the lower 2 miles of the river, the harbor, adjacent shore, and Fields Brook, a tributary. Sediments heavily polluted with metals and PCBs, fish consumption advisories for all species, fish with tumors, loss of habitat, degraded benthic communities; dredging has been delayed due to issues of siting a disposal facility for polluted sediments, and the cost and responsibility for dredging.</p>	<p>Fields Brook was designated a Superfund NPL site in 1981. A RI/FS was conducted between 1983 and 1986. A ROD was issued in 1986 which included the removal of contaminated sediments.</p> <p>A RAP Advisory Council and subcommittees were formed in 1988.</p> <p>In 1989, the Ohio EPA conducted a biological study of the river as part of a natural resource damage assessment.</p> <p>USEPA issued Administrative Order for PRPs at Fields Brook Superfund site.</p> <p>The City of Ashtabula levied a boat dock tax to obtain revenue to improve the river (est. \$25 K per year).</p> <p>The river has not been dredged since 1962. Increased sedimentation has impaired full recreational use/enjoyment of the popular boating area.</p> <p>There are 20 NPDES dischargers to the Ashtabula AOC, 13 of which have had toxic substances in their discharge. Of these 13, 12 are now required to biomonitor their effluents. Due to the NPDES program, water quality has significantly improved.</p>	<p>Investigation on Fields Brook continues.</p> <p>Stage 1 RAP approved by IJC.</p> <p>ARCS conducted pilot-scale field demonstration of a thermal stripping process on contaminated sediments.</p> <p>Survey findings under USEPA's ARCS program indicate high incidence of tumors in brown bullheads in river.</p> <p>Superfund is currently investigating design of remediation for Fields Brook. Ecological assessment of floodplains begun.</p> <p>Human health risk assessment of river by GLNPO-ARCS.</p> <p>USEPA restrictions in place on COE open-lake disposal of harbor sediments (&gt; 1 ppm PCB).</p> <p>COE begins planning CDF for harbor maintenance dredging.</p>	<p>Corps of Engineers will conduct interim dredging of non-toxic sediments from the river to relieve navigation problems. Sediments will be deposited in rehabilitated CDF on adjacent Conrail property.</p> <p>RAP Council to develop a Stage 2 program.</p> <p>Further assessment of sediments in outer harbor to determine PCB concentrations and options for harbor maintenance until CDF is constructed.</p> <p>RAP Council to place more emphasis on development of environmental education programs.</p> <p>Improve communication coordination between Fields Brook and river cleanup programs.</p> <p>ARCS program is conducting cost feasibility studies for potential application of thermal stripping technology process to remediate river sediments.</p>	<p>Human Health and ecological risk assessment of river (SF).</p> <p>Further negotiations with PRPs for brook cleanup (SF) 1993 and beyond.</p> <p>Remediation of Fields Brook NPL site; final cleanup projected to begin in 1994.</p> <p>Dredging and disposal of toxic and heavily polluted river sediments or alternative options.</p> <p>Siting and construction of CDF to contain heavily polluted sediments from outer harbor/commercial navigation channel by 1998.</p> <p>Submit Stage 2 Report to IJC in 1994.</p>

Selected Highlights of Progress in Ohio Areas of Concern Page 6

Area of Concern/Major Known Impairments	Background	Fiscal Year 1992 Activities in AOC	Fiscal Year 1993 Activities in AOC	Long-Term Agenda
LAKE ERIE Ashtabula River	<p>Ohio EPA found the biological community of the river is the most improved among all major Ohio tributaries to Lake Erie. Nearshore water has become clearer and contaminants have declined in fish. Since 1985, recreational boat dockage has increased from 175 to 1,300.</p> <p>Results of PRPs intensive river study document TSCA regulated PCB contaminated sediments are buried deep and covered by less polluted sediments. Indicates no active sources of PCB.</p> <p>Ohio EPA has committed \$7 M towards removal and disposal of the contaminated Ashtabula River sediments contingent on matching federal funds.</p> <p>Oxychem Corporation completed a project to collect and treat stormwater runoff and ground water prior to discharge to Fields Brook. Estimated cost was \$3.5 M.</p> <p>Oxychem also contributed \$7,500 to the RAP process.</p> <p>Detrex Chemical Company constructed a system to collect and treat runoff from its property.</p>			

Selected Highlights of Progress In Ohio Areas of Concern Page 7

Area of Concern/Major Known Impairments	Background	Fiscal Year 1992 Activities in AOC	Fiscal Year 1993 Activities in AOC	Long-Term Agenda
<p><b>LAKE ERIE</b> Maumee River</p> <p>AOC is the lower 22.8 miles of river and Maumee Bay . Water quality problem due to ammonia, metals, pesticides, arsenic, low dissolved oxygen, nitrates and bacteria ; sediments moderately to heavily - polluted with metals, PCBs, and PAHs; fish advisories for, carp and catfish in Lake Erie; fish advisory for all species due to PCBs in lower 5.7 miles of Ottawa River which empties into north Maumee Bay; restrictions on swimming; Duck, Swan and Otter creeks have poor water quality, impaired fish and wildlife populations, habitat change and loss.</p>	<p>In 1984, Maumee began a 4 -phase program to separate its combined sewers by 1996 at an estimated cost of \$6 M. Toledo, which has 34 CSO points, began a 9-phase abatement program in 1985 to be completed in 1996 at an estimated cost of \$48 M. Perrysburg plans to expand its treatment plant and abate CSOs.</p> <p>The King Road Landfill (owned by Lucas County) and the Dura and Stickney landfills (owned by Toledo) are potential sources of pollution to the Ottawa River. The jurisdictions began remedial investigations.</p> <p>In 1986, Ohio EPA contracted with Toledo Metropolitan Area Council of Governments to develop RAP process (ongoing).</p> <p>In 1986, Dura and Stickney landfills were investigated.</p> <p>In 1987, Toledo dredged lime sludge from Duck Creek (87/88).</p> <p>Upgrades of Toledo WWTP completed.</p> <p>In 1989, NPS and CSO control measures were instituted; RI and actions at several dumpsites and landfills in river basin.</p>	<p>Stage 1 was approved by IJC 03/92.</p> <p>USEPA/OEPA/ODNR/SCS continued NPS project to educate local land users on pollution prevention methods.</p> <p>Began joint development of long-term dredged materials management plan among ACOE, OEPA, City of Toledo, USEPA, Toledo Port Authority, ODNR, USFWS and SCS.</p> <p>Dredging contracts (FY92) continued in accordance with the water quality certification.</p> <p>\$600 K awarded through USEPA's 319 program for agricultural equipment buy-down land use management.</p> <p>\$1.3 M in Congressional add-on was appropriated for a Maumee River and Bay basin-wide water quality assessment with focus on impacts landfills.</p> <p>Maumee RAP Advisory Council reorganized as the Implementation Committee.</p> <p>Education/monitoring program development with local high schools.</p> <p>RAP group proposes expansion of AOC to address more agricultural NIPS.</p>	<p>Develop priorities for focus of Stage 2.</p> <p>Analyze results of 1992 field investigations.</p> <p>\$1.2 M additional to Congressional add-on to continue investigation of landfills and Maumee AOC water quality.</p> <p>Implement sediment screening of Ottawa River via coordinated effort with GLNPO.</p> <p>Expand public education awareness projects.</p>	<p>Upgrade various municipal WW TPs at an estimated cost of \$27 M.</p> <p>Correct CSOs at an estimated investment of \$420 M.</p> <p>Abate agricultural and urban nonpoint source pollution in watershed.</p> <p>Address contaminated sediment problems in Swan Creek, Ottawa River and Maumee River; preserve Maumee Bay from further filling; protect wetlands and restore lost wetlands.</p> <p>River investigation to document impacts on environment and potential problems associated with landfill runoff.</p> <p>Negotiate for solution to sediments dredged from Toledo Harbor.</p> <p>Completion of Stage 2 RAP by June 1994.</p>

Selected Highlights Of Progress in Ohio Areas Of Concern Page 8

Area of Concern/Major Known Impairments	Background	Fiscal Year 1992 Activities in AOC	Fiscal Year 1993 Activities in AOC	Long-Term Agenda
<p>LAKE ERIE Maumee River</p>	<p>Libbey Owens Ford (LOF) installed collection system to capture leachate from its plant #6 and has eliminated previous discharge of arsenic to the Maumee River. LOF diverted Otter Creek so it does not flow under a contaminated lagoon at its plants, 4 and #8, and is de-watering this lagoon. The Village of Whitehouse was connected to the Lucas County sewage system in order to provide improved treatment. Cost was \$1.4 M. In 1990, Ohio EPA continued RAP development activities. Stage 1 RAP was drafted. The Maumee River RAP Advisory Committee (RAPAC) has 9 subcommittees. Swan Creek cleanup drew 779 volunteers who removed 164 tons of trash along the creek. 1990-1991 USEPA/Ohio EPA/ODNR/SCS nonpoint source project educated local land users on how to prevent pollution. Perrysburg completed a 5--year upgrade to its WWTP, doubling its treatment capacity.</p>			

Selected Highlights of Progress in Ohio Areas of Concern Page 9

Z

Area of Concern/Major Known Impairments	Background	Fiscal Year 1992 Activities in AOC	Fiscal Year 1993 Activities in AOC	Long-Term Agenda
LAKE ERIE Maumee River  <small>ALU,HAFTUS J1</small>	Toledo continued construction of two downtown tunnels to store stormwater at a cost of \$12.5 M (phases 1 and 2 of CSO plan). Smaller tunnels are also being built along Swan Creek in phases 3 and 4.			

## APPENDIX N (Continued)

The table in Appendix N provides a basic history of each AOC and progress through 1993. The following narrative updates the table and focuses on the some of the primary initiatives currently underway in each AOC.

### **Black River**

The **Black River RAP** has expanded to include the entire basin and has recognized that nonpoint sources have the greatest impact on the watershed. The Black River RAP group is currently organizing a major initiative to address restoration of the Black River Riparian Corridor as a priority activity to improve the river quality. Organizational efforts and outreach to develop a proposal and seek grant funding is underway. Several habitat restoration projects have been implemented, mainly focusing on stabilizing streambanks with willow postings.

Both Elyria and Lorain continue to address problems with combined and separate sewer overflows. The Clean Water Section 319 program funded a low-cost loan equipment buydown to encourage farmers to adopt conservation tillage practices. Follow-up monitoring after the removal of PAH contaminated sediments near the USS/KOBE Steel outfall indicated an initial rise in tumor incidence in brown bullhead. Recent monitoring indicates the incidence is progressively decreasing. An agricultural wetland-habitat restoration project is underway in the upper watershed.

### **Cuyahoga River**

Through the efforts of the many stakeholders in the Cuyahoga RAP, considerable resources, technical support, and volunteer participation have been amassed for RAP development and implementation. Some recent highlights are presented as follows:

Several habitat restoration projects have been implemented and several more are planned. An ad hoc group of health officials and wastewater treatment managers developed a brochure to advise beach-goers of potential health risks from elevated bacteria levels. The Northeast Ohio Regional Sewer District and the City of Akron have completed studies of their CSOs and are reviewing Master Plans. The Cuyahoga County Board of Health created an annual fee to be collected from homeowners with septic systems. This fee is used to support an aggressive inspection and management process for these systems. The RAP also sponsored a workshop on stormwater controls that promoted a model ordinance for stormwater control and sediment erosion, conducted an intensive analysis of contaminants in fish tissue that for the first time provided enough information to justify the issuance of a fish advisory for the lower Cuyahoga River, and conducted numerous public outreach events.

### **Ashtabula River**

The Ashtabula River Partnership (ARP) has been established to address the main RAP issue of dredging the river to remove all contaminated sediments and restore beneficial uses. Additional sediment sampling has been conducted to better determine exactly what areas of the river need to be dredged and how deep to go. This effort has significantly elevated the level of local interest in the river restoration and brought together federal, state and local groups as equal partners. Extensive outreach and awareness efforts are underway to keep the public informed during every stage of the

process. Several upland sites have been identified as potential disposal sites for the dredged sediment, and environmental assessments are underway. An interim dredging project to remove nontoxic lightly-contaminated sediments to maintain recreational navigation was conducted in 1993. The RAP is exploring other options for river restoration beyond the removal of contaminated sediments, and continues an active public outreach effort.

### **Maumee River**

The Maumee River is in the middle of a four-year multi-million-dollar effort to further investigate contamination at the numerous abandoned hazardous waste disposal sites in the AOC and their potential impact on the environmental quality of the river. Additional sediment sampling is being conducted under a supplemental effort for the mainstem Maumee River and Maumee Bay. Several landfills along the Ottawa River are in the midst of cleanup efforts. CSOs on Swan Creek have been eliminated, and additional CSO control programs are underway. Funds from the Clean Water Act 319 program supported a highly successful effort in the AOC to encourage farmers to adopt conservation tillage practices. A workshop was held to assist local officials in dealing with urban runoff issues. A number of public outreach efforts were implemented. A student monitoring program involves more than 300 students in monitoring of local streams and an annual student congress. A habitat restoration project was completed early in 1996.