

# NORTHEAST OHIO WATER QUALITY

## FUTURE WATER QUALITY PLANNING

NOACA's Water Quality Program focuses on building the capacity of local jurisdictions and agencies to respond to future threats to the region's rivers, lakes and streams. It will do this by the following:

- Assisting local communities with state of the art planning tools, including the analysis of water quality impacts of land use change by using planning methods such as Geographic Information Systems, sediment modeling, hydrologic modeling, water quality modeling, and enhanced water quality databases.
- Continued planning support to the region's watershed organizations, with NOACA providing technical assistance to watershed organizations to enhance local community actions that support water resource protection.
- Assisting local communities comply with Ohio EPA's Total Maximum Daily Load (TMDL) process by translating broad requirements for regional reductions in nonpoint source pollution to equitable and cost-effective local goals.
- Convening environmental program workshops of local communities and agencies to collectively address new state and/or federal environmental mandates with recommendations for efficient local government response.
- Developing tools to protect headwaters streams and other sensitive areas, including protecting critical biological resources and assisting in setting restoration goals for urban streams.
- Assessing public water resource infrastructure needs and communicating them to the state and federal executive and legislative branches.
- Conducting the Transportation Water Quality Advisory Council (TRANSWAC) environmental review as part of the regional process for getting certain transportation projects approved.
- Performing special studies focusing on regional environmental needs, including the importance of water resources as a driver for the region's economic sustainability. Part of the special studies focus will be on obtaining grant funding for expanded special study efforts.

### For More Information, Contact:

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Visit our Web site at [www.noaca.org](http://www.noaca.org)

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## WHY NORTHEAST OHIO NEEDS NOACA'S WATER QUALITY PROGRAM

MAY 2, 2006

### Dear NOACA Governing Board Member:

A need exists for a regional approach to the protection of Northeast Ohio's water resources. Northeast Ohio's major rivers traverse multiple counties. For example, the Cuyahoga River rises in Geauga County, runs through Summit and Portage Counties, before completing its course in Cuyahoga County and the City of Cleveland. Substantial upstream portions of the Rocky River lie in Medina County and Lorain County and the downstream portions lie in western Cuyahoga County. Similarly the Black, Chagrin and Grand Rivers are multi-county in dimension. Of course our most valued water resource, Lake Erie, is affected by decisions made in all of the five NOACA counties.

NOACA's water quality program focuses on managing and protecting this critical resource that is vital to sustain northeast Ohio both economically and environmentally. Our comprehensive program addresses water quality on a regional scale, within individual communities, and on a watershed level.

Regionally, NOACA is the one place where all the region's water quality management agencies come together to discuss state and federal regulations, to compare program strategies and outcomes, to assess mutual progress and to coordinate programs and policies. NOACA develops and maintains regional plans and models in response to federal mandates, and provides leadership in various water quality forums.

On the community level, NOACA consults with local jurisdictions on such water quality issues as wastewater management and storm water permit requirements. For example, NOACA staff has mediated potential conflicts regarding plans for sewer service expansion or consolidation, and offered guidance on how to implement watershed protection policies such as riparian setback ordinances.

On the watershed level, NOACA has helped to incubate a number of organizations that address environmental concerns in the region over the past two decades. These include the Cuyahoga River Remedial Action Plan (RAP), the Black River RAP, the Euclid Creek Watershed Partners and the Rocky River Watershed Council.

Although we have come a long way toward improving endangered waterways and preserving our water resources, we cannot afford to relax our efforts. One ongoing concern has been the sustainability of these efforts and organizations in the absence of state and federal funding commitments. NOACA has helped to fill this gap with technical support to watershed planning efforts, but we can't do it alone. We need your support to keep up the good work that is being done.

This publication highlights how NOACA's Water Quality Program enables better planning for a cleaner environment to benefit both local communities and the region at large.

Sincerely,

*Stephen D. Hambley*

Medina County Commissioner  
and NOACA Board President

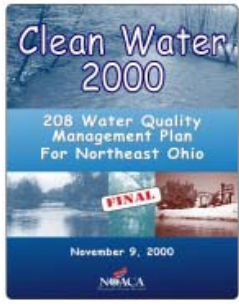
*Howard R. Maier*







Executive Director



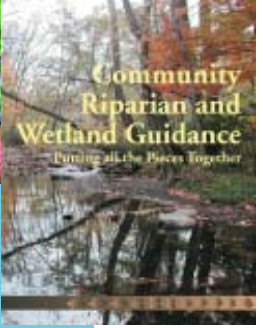
## NOACA PLANNING IMPROVES REGIONAL WATER QUALITY




NOACA develops and maintains regional plans and models in response to federal mandates and local needs. The following plans and studies are a sample of the work NOACA has done recently, working with our partners, to enhance the water quality in northeast Ohio.

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 **Clean Water 2000 Plan** is required by Section 208 of the Clean Water Act and addresses issues of planned sewer expansions in suburban counties, better management of home sewage treatment systems, more vigorous attention to nonpoint source and storm water pollution, protection of the region's critical water resources and coordinated planning at the watershed level.
-  **Regional Storm Water Task Force Model Plan** provides guidance to communities subject to USEPA's Phase II Storm Water Permit Requirements.
-  **Seven County Home Sewage Study**, produced in collaboration with the region's seven county health departments, analyzes the factors contributing to unsatisfactory performance of home sewage systems in northeast Ohio.
-  **Lower Big Creek Study** assesses environmental conditions and presents a concept plan and action strategy to redevelop the Lower Big Creek Valley in the Old Brooklyn neighborhood of Cleveland, Ohio.
-  **Rocky River Watershed Action Plan** sets goals for the Rocky River in three areas: 1) protecting and restoring the riparian corridor, 2) reducing in-stream bacteria levels and nutrient loadings, and 3) increasing public awareness and stewardship.
-  **MAGIC 2001 Map and Geographic Information Collection** includes environmental, land feature and natural resource data for 18 counties in northeast Ohio.





NOACA worked with partner organizations to produce the following material and community guidance for improved stream-side protection:

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 **Community Riparian and Wetland Guidance: Putting all of the Pieces Together**
-  **Consider Conservation Easements: Information for Southern Lake Erie Property Owners**
-  **Life at the Water's Edge: Living in Harmony with Your Backyard Stream**
-  **Rain Garden Manual For Homeowners: Protecting Our Water, One Yard at a Time**

## Northeast Ohio's Rivers and Streams






### THEN

-  The Black River and the Cuyahoga River were in such a degraded state that the Great Lakes Commission identified them as serious threats to the health of Lake Erie.
-  The Rocky River was heavily impacted in all stretches below major wastewater treatment plants.
-  The Chagrin River was doing well but was threatened by heavy development pressure being exerted on the watershed.
-  The Grand River was "Wild and Scenic" over most of its length but the heavily industrialized lower mainstem was suffering severe toxic problems.









### Now





The passage of the National Clean Water Act set off a flurry of water quality control measures:

-  Industrial discharges meet high levels of pollution reduction.
-  Numerous wastewater treatment plants that were obsolete were eliminated and the remaining plants have realized targeted pollution reduction.
-  The toxic hotspots in the lower reaches of the Black, Cuyahoga, and Grand Rivers have been largely eliminated.
-  Dissolved oxygen levels in almost all of our waterways meet water quality standards on a regular basis.
-  Fish and macroinvertebrate communities have significantly rebounded in all stream reaches where wastewater treatment plants used to heavily degrade local water quality.






Storm water management has improved significantly in recent years:

-  Geauga, Medina and Lake Counties, and most communities in northeast Ohio, have implemented Urban Storm Water and Sediment Control Legislation.
-  Communities are now actively implementing the Phase II Storm Water Program across the Region.
-  Storm water management ponds are now used as the central focus of landscaping and provide park-like settings in many new developments.
-  Low impact design considerations are being implemented across the region, leaving much greenspace undisturbed by development and connecting more residents to natural settings.
-  New subdivisions are advertising the greenspace amenities of their projects.
-  Stream restoration projects have been accomplished or are being implemented in the Black River, the Cuyahoga River and its tributaries, the Chagrin River and Doan Brook.

Greenspace is being added and protected by expanding our park system holdings across the Region including:

-  Black River Reservation and the Columbia Reservation in Lorain County.
-  The Rising Valley Park in Hinckley and Richfield Townships that used to be the Army's Tank Testing Ground.
-  The Ohio and Erie Canal Reservation, the West Creek Reservation and the Mill Creek Reservation in Cuyahoga County.
-  The West Woods Park on Silver Creek in Geauga County.

### Issues For The Future

-  The Black River navigation channel sediment quality still needs to be improved, stream and riparian habitat need to be fully restored, and bacteria levels and nutrient loadings need to be further reduced.
-  The Rocky River needs to meet Total Maximum Daily Load reductions for bacteria and nutrients, needs to protect sensitive areas and waterways from the effects of continued development, and needs to restore disturbed stream and riparian habitat.
-  The Lower Cuyahoga River navigation channel sediment quality still needs improvement, bacteria and nutrient loadings need to be reduced, and stream habitat improvements are needed along the mainstem and many of its tributaries.
-  The Chagrin River remains affected by increased flooding and water quality concerns associated with advancing development that poses a substantial threat to the continued health of its headwater streams and tributaries.
-  Several unnecessary dams in the region that block important aquatic migration need to be modified or removed, and channelized stream sections need to be further remediated.

# WHAT'S AT STAKE: IMPROVING THE REGION'S WATER QUALITY

## Lake Erie Water Quality

### THEN

- 💧 Lake Erie was considered to be dead by many analysts in the 1970s.
- 💧 Drinking water-supplies from the lake were plagued by algal taste and odor problems throughout warm weather periods.
- 💧 There was concern that harmful chemicals could be contaminating the water supply.
- 💧 Phosphorus reduction budgets were developed that held the potential for serious economic impacts on farmers, home sewage treatment system owners, and wastewater treatment plants.



### Now

- 💧 Farmers have widely adopted improved conservation measures.
- 💧 Thousands of failing home sewage treatment systems have been repaired or replaced.
- 💧 Wastewater treatment plant efficiencies have been markedly improved.
- 💧 Phosphorus has been removed from laundry detergent.
- 💧 Industrial pollutant loads have been dramatically reduced.
- 💧 Many heavily contaminated sites have been totally remediated.



### ISSUES FOR THE FUTURE

The Council of Great Lakes Governors through its Great Lakes Priorities Initiative has established nine priorities to guide the restoration and protection of the largest single source of fresh water in the world, the Great Lakes:

- 💧 Ensure the sustainable use of our water resources while confirming that the states retain authority over water use and diversions of Great Lakes waters.
- 💧 Promote programs to protect human health against adverse effects of pollution in the Great Lakes ecosystem.
- 💧 Control pollution from diffuse sources into water, land and air.
- 💧 Continue to reduce the introduction of persistent bioaccumulative toxics into the Great Lakes ecosystem.
- 💧 Stop the introduction and spread of invasive non-native aquatic species.
- 💧 Enhance fish and wildlife by restoring and protecting coastal wetlands, fish and wildlife habitats.
- 💧 Restore to environmental health the Areas of Concern identified by the International Joint Commission as needing remediation.
- 💧 Standardize and enhance the methods by which information is collected, recorded and shared within the region.
- 💧 Adopt sustainable use practices that protect environmental resources and may enhance the recreational and commercial value of our Great Lakes.

## FOSTERING REGIONAL COLLABORATION

NOACA sponsors regional collaboration among its member communities and agencies. Below are just some of NOACA's joint efforts:

- 💧 Seven county health departments collaborated on NOACA Seven County Home Sewage Study.
- 💧 More than 30 municipalities, county agencies and watershed organizations collaborated on the NOACA Regional Phase II Storm Water Task Force.
- 💧 Thirty-eight municipalities, counties, and agencies from seven counties collaborated on NOACA 208 Plan Update Task Force conducted jointly with NEFCO.
- 💧 Ten agencies collaborated on GIS Task Force that produced the MAGIC 2001 GIS Collection.



## MEDIATING SEWER EXTENSION CONFLICTS

NOACA helped the following communities avoid litigation costs and unnecessary engineering design investments by working with affected parties to resolve potential conflicts when sewers are being extended into new areas:

- 💧 Lake County and the City of Painesville
- 💧 LORCO, Oberlin, and Lorain County
- 💧 Amherst area, City of Lorain, City of Elyria, Carlisle and Eaton Townships, and the LaGrange area
- 💧 City of North Olmsted, Cuyahoga County, and the Northeast Ohio Regional Sewer District
- 💧 Bainbridge Township in Geauga County

## STORM WATER PERMIT ASSISTANCE

NOACA formed a regional task force to help local communities meet Phase II Storm Water Permit Requirements by developing a model storm water management plan for the region. NOACA distributed this comprehensive plan to 100 communities and has held informational meetings and workshops to help local officials and developers understand the NOACA model plan.

NOACA also:

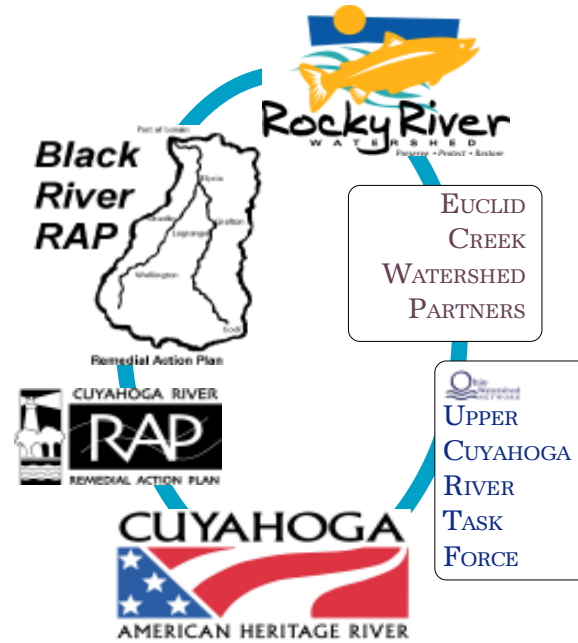
- 💧 Organized a work group to identify scientifically justified setback distances that would protect the function of riparian and wetland areas while minimizing the impact on the landowner.
- 💧 Drafted and distributed model legislation that would enable communities to implement these setbacks.
- 💧 Chaired a work group that prepared a guidance document to help local officials understand the setback ordinances.
- 💧 Educates communities about the cost impacts of irreversible land-use decisions made by local communities and about programs to help minimize these impacts.
- 💧 Leads the effort to educate officials in developing communities to take steps to minimize the costs of streambank maintenance, culvert cleaning, flood damage mitigation, lake and pond dredging, and stream stabilization projects in the future by implementing appropriate storm water controls now.



# WATERSHED PLANNING

NOACA sponsored or cosponsored the formation of the following watershed organizations:

- 💧 Cuyahoga River Remedial Action Plan Coordinating Committee and Cuyahoga River Community Planning Organization
- 💧 Cuyahoga River American Heritage River Partners
- 💧 Black River Remedial Action Plan Coordinating Committee
- 💧 Euclid Creek Watershed Partners
- 💧 Upper Cuyahoga River Task Force
- 💧 Rocky River Watershed Council



NOACA coordinates or assists watershed-level planning grants and activities among local jurisdictions:

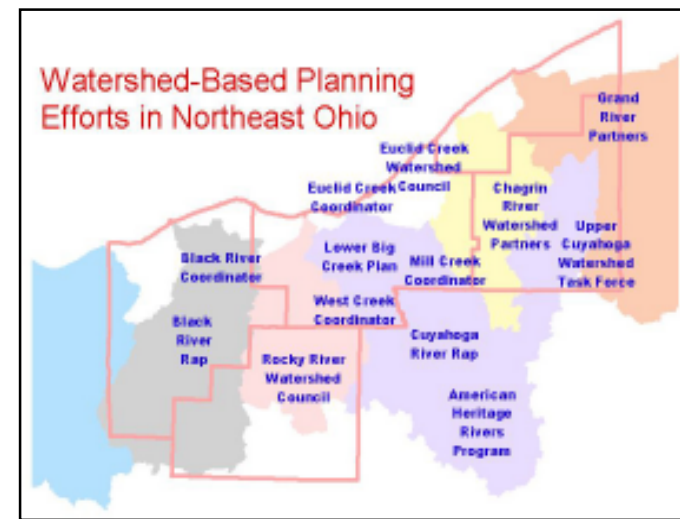
- 💧 Rocky River Watershed Plan 319 Grant and formation of the Rocky River Watershed Council
- 💧 Upper Black River, the Rocky River East Branch, and Big Creek 319 Nonpoint Source Demonstration Grants
- 💧 Wolf Creek Watershed 319 Grant under NEFCO's direction



ROCKY RIVER WATERSHED COUNCIL BOARD OF TRUSTEES 2005

NOACA helped to initiate or foster water quality staff positions in the following partner organizations:

- 💧 Watershed coordinators for the Black River, West Creek, Mill Creek, Wolf Creek, Euclid Creek, and the Chagrin River
- 💧 Urban Conservationist positions in local Soil and Water Conservation Districts (SWCD) in Lorain, Medina, Cuyahoga, Lake, and Geauga Counties



## FACILITATING GRANT OPPORTUNITIES

Here are examples where NOACA has fostered community access to and technical assistance for grant opportunities:

- 💧 Receipt of Section 319 Nonpoint Source Management grants to multiple agencies including Cuyahoga County Board of Health
- 💧 Receipt of Ohio Lake Erie Office grants to multiple agencies including Cuyahoga River RAP
- 💧 Receipt of Coastal Management grants by multiple agencies including Chagrin River Watershed Partners
- 💧 Receipt of Ohio Environmental Education grants by the Cuyahoga and Geauga Health Departments, the Seventh Generation (Black River RAP), and Lake County Engineer
- 💧 Lorain County receipt of Great Lakes Commission grants
- 💧 Northeast Ohio Regional Sewer District receipt of National Risk Management Research Laboratory grants
- 💧 Receipt of discretionary USEPA funds to region for products such as:
  - Community Riparian and Wetland Guidance: Putting all of the Pieces Together,
  - Consider Conservation Easements: Information for Southern Lake Erie Property Owners
  - Life at the Water's Edge: Living in Harmony with Your Backyard Stream
  - MAGIC 2001 GIS Project
  - NEO PIPE's Stream Stewardship Project

## PROVIDING CRITICAL INPUT FOR STATE REGULATIONS

NOACA has been instrumental in the passage of the following state water quality regulations:

- 💧 NOACA's Seven County Home Sewage Study was input to state legislation for improved management of home sewage treatment.
- 💧 NOACA provided input to state legislation banning phosphorus in laundry detergents.
- 💧 NOACA's Brine Management Task Force provided input to state legislation for environmental regulation of oil and gas production.

## INVOLVEMENT WITH ENVIRONMENTAL AGENCIES

NOACA helped to initiate or foster the establishment of the following statewide environmental agencies:

