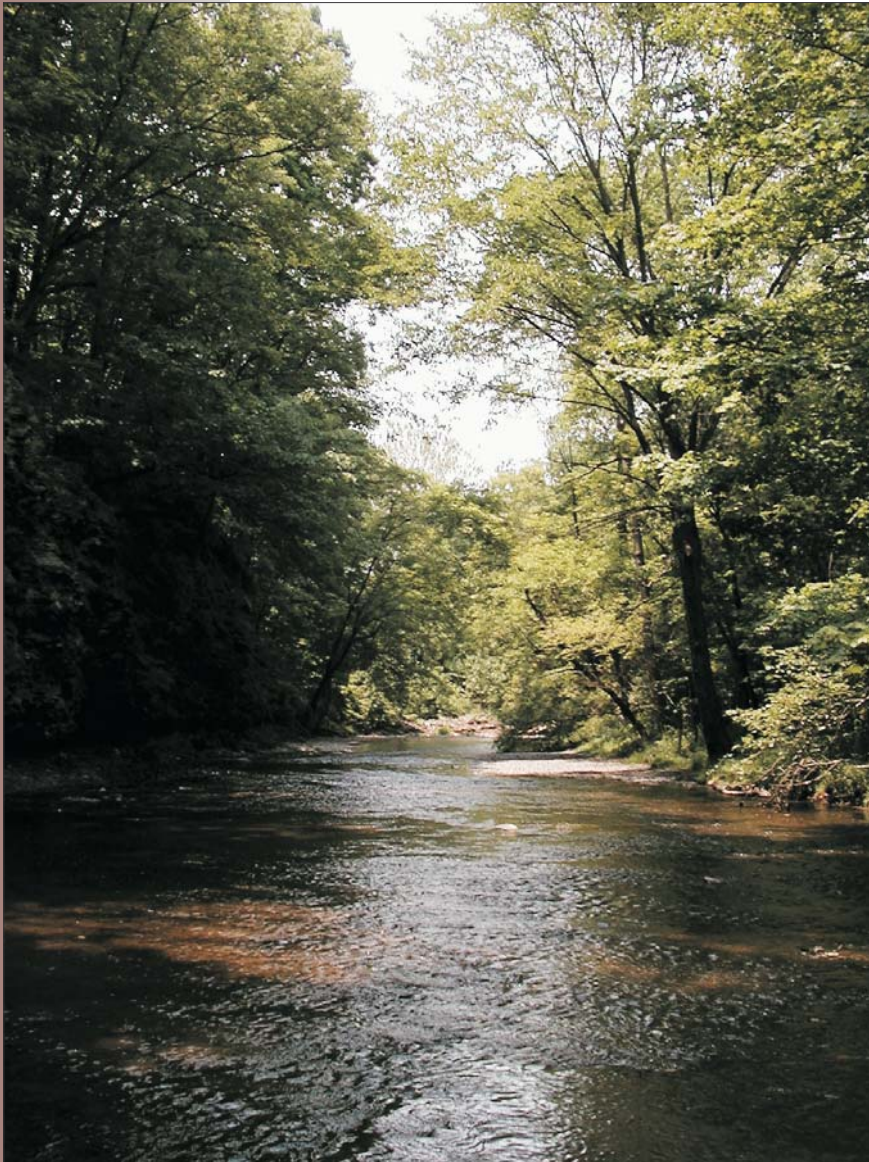


# **2004 Annual Update**

# **Black River Remedial Action Plan**



**July 2005**

The purpose of this Annual Report is to inform the watershed community on progress made by the Black River RAP in restoring Beneficial Use Impairments. It provides background information on many of the projects being undertaken. If you would like more detailed information on any of these topics, feel free to contact the watershed stakeholders referenced on the back of this report.



Photos courtesy of 1. Ohio EPA 2. Lorain SWCD  
3. Jon Ion, ODH 4. Lorain Port Authority 5. USDA

## BENEFICIAL USE IMPAIRMENTS (BUIs)

The Great Lakes Water Quality Agreement calls for Remedial Action Plans (RAPs) to restore and protect 14 beneficial uses in Areas of Concern. An impaired beneficial use means a change in the chemical, physical or biological integrity of the Great Lakes system sufficient to cause any of the following:

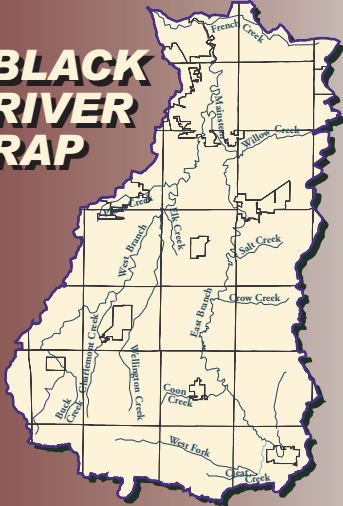
1. Restrictions on fish and wildlife consumption \*
2. Tainting of fish and wildlife flavor +
3. Degradation of fish wildlife populations \*
4. Fish tumors or other deformities \*
5. Bird or animal deformities or reproduction problems \*\*
6. Degradation of benthos \*
7. Restrictions on dredging activities \*
8. Eutrophication or undesirable algae \*
9. Restrictions on drinking water consumption, or taste and odor problems +
10. Beach closings \*
11. Degradation of aesthetics \*
12. Added costs to agriculture or industry +
13. Degradation of phytoplankton and zooplankton populations \*\*
14. Loss of fish and wildlife habitat \*

+ Not impaired

\* Impaired in the Black River Area of Concern

\*\* Unknown but impairment not specified

# BLACK RIVER RAP



Black River Remedial Action Plan  
OUR RIVER, OUR RESPONSIBILITY

Prepared by  
**Black River Remedial Action Plan  
Coordinating Committee**

**Ken Pearce, Chair**  
Lorain County Health Commissioner

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# 2004 Annual Update

## Table of Contents

Message from the Chair	2
The Black River RAP Subwatershed Initiative	3
The French Creek Subwatershed Study	4
The Black River Watershed Project	5
A Cleaner Black River – 21 Year Old Dermal Contact Advisory Lifted	6
Black River RAP Receives 2004 Ohio Lake Erie Award	7
PCBs, Mercury = Fish Consumption Advisories	8-9
Update on the Elyria Mercury Collection Program	10
Working to Protect & Restore the Black River Watershed – Lorain SWCD	11
Riparian Zones and Storm Water Management	12-13
The Confined Disposal Facility – A 58 Acre Waterfront Development Site	14
Lorain’s Plans to Move the Black River WWTP	15
ENVS 490 Introduction to the Black River Watershed	16
2004 Black River RAP Coordinating Committee	Inside Back Cover
Black River RAP Contacts	Back Cover

# Message From The Chair



## **Ken Pearce**

Chairman, Black River RAP  
Coordinating Committee

Lorain County General Health  
District Commissioner

The Black River RAP Coordinating Committee has worked endlessly over the last thirteen years to protect and restore the Black River watershed. This Annual Report highlights individual efforts, as well as the Committee's collective efforts, as illustrated in many of the articles.

In an effort to restore the Black River's Beneficial Uses, the Committee has continued to work on restoring the impaired uses through a subwatershed approach. The Committee believes that focusing on the subwatersheds of the Black River will result in more local community and stakeholder involvement, which will in turn serve to protect and restore the Black River. Subwatershed efforts have focused on the French Creek tributary and the southern West Branch along with work on Mainstem.

I would like to encourage every watershed stakeholder to get actively involved in local efforts to protect their watershed.

The Committee's efforts have paid off. A 21-year old contact advisory was lifted for the Mainstem based on the health data of Brown Bullhead Catfish and sediment studies. The Black River RAP was awarded the

2004 Ohio Lake Erie Award for "the work of an outstanding organization working toward the protection and restoration of Ohio's Great Lake." We still have work to do, however. More fish consumption advisories are being issued due to mercury levels in fish. Every community in the Black River watershed needs to adopt riparian zone setbacks to protect the river, maintain property values and to help relieve downstream flooding.

We also need to follow through on our visions for a better river – the City of Lorain is considering moving the Black River Wastewater Treatment Plant from the mouth of the river to an upriver location, while the Lorain Port Authority is actively planning for potential reuses of the Confined Disposal Facility.

I would like to personally acknowledge the work of Ted Conlin, the Ohio EPA Black River RAP Coordinator for his efforts on behalf to the Black River watershed. I would also like to take this opportunity to thank all of the individuals who have served on the Black River Coordinating Committee over the years.

# The Black River RAP Subwatershed Initiative

Contributing Author: Ted Conlin, Ohio EPA Black River RAP Coordinator

The Black River RAP is charged with the restoration of up to 14 beneficial use impairments in the Area of Concern (AOC) and is working to restore these uses on a subwatershed level.

For the Black River, the AOC encompasses the entire watershed which is 470 mi<sup>2</sup> and includes parts of 4 counties, 31 townships and 12 municipalities. The land use in the watershed varies widely, from the urban and industrial north to the rural and agricultural south. Even from east to west, the land is changing as development pressures from the east increase.

Recognizing the fact that the problems associated in the Black River AOC are varied and somewhat associated along subwatersheds, the Black River RAP has started to look at the smaller portions of the basin. The RAP Coordinating Committee is assessing the impairments for each subwatershed and has divided the AOC watershed into six smaller segments: the Mainstem, French Creek, the West Branch, Plum Creek, the Northern East Branch and the Southern East Branch.

Studies have been initiated on the Mainstem, French Creek, and the Northern East Branch. In addition, the Southern East Branch, through efforts started by the Black River RAP, has profited by an extensive restoration project around the City of Lodi which included the de-channelization of miles of stream, the reconnection of streams to their flood plains, riparian corridor restoration and protection and the establishment of aquatic and terrestrial habitats. An extensive dissolved oxygen study on the Mainstem began in 2001 and was highlighted in the 2001 Black River RAP Annual Report.

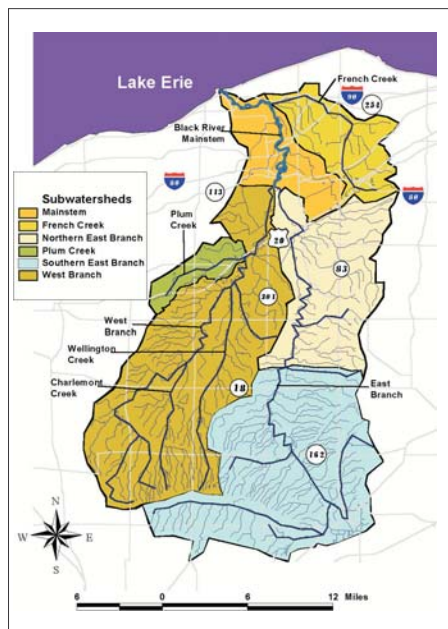
In 2004, the Black River RAP continued its subwatershed efforts with the

completion of an environmental survey of French Creek subwatershed, commencement of survey work on the Northern East Branch subwatershed and the establishment of a West Branch subwatershed coordinator.

A recent change in federal policy for the restoration of Great Lakes Areas of Concern allows a RAP organization to ascertain impairments by stream segments or subwatersheds. This change allows the RAP organization to list or de-list beneficial use impairments by subwatersheds and will allow for the celebration of incremental improvements in the restoration process.

Looking more closely at each smaller subwatershed, the RAP will be able to understand the problems specific to each subwatershed and design efforts to alleviate those problems. At the smaller level, the RAP feels it can develop local homeowner pride and a citizen's sense of place within their respective subwatershed. It is hoped small subwatershed friendly groups will be formed to help the remediation process.

The data gained in these subwatershed studies, and the resulting local support developed, will assist municipal Storm Water Phase II efforts. Finally, the subwatersheds approach will more closely align with the upcoming Total Maximum Daily Load (TMDL) study planned for the Black River basin. The TMDL will look at the Black River by its subwatersheds, determine if those subwatersheds are in attainment for their designated water quality uses and if not propose efforts to return those subwatersheds to attainment status.



# The French Creek Subwatershed Study

Contributing Author: Ted Conlin, Ohio EPA Black River RAP Coordinator



As part of the Black River RAP's Subwatershed Initiative, the U.S. Army Corps of Engineers-Buffalo District conducted a walkover study of the French Creek subwatershed in 2002. A report of their study is currently in the draft stage, but a brief outline of the report was included in the Living Along French Creek, a brochure produced for the residents, businesses and decision makers of the French Creek subwatershed. The brochure includes valuable information about living in an environmentally-sound manner and is available. A copy can be found on Ohio EPA's Black River RAP web page or NOACA's Black River web page.

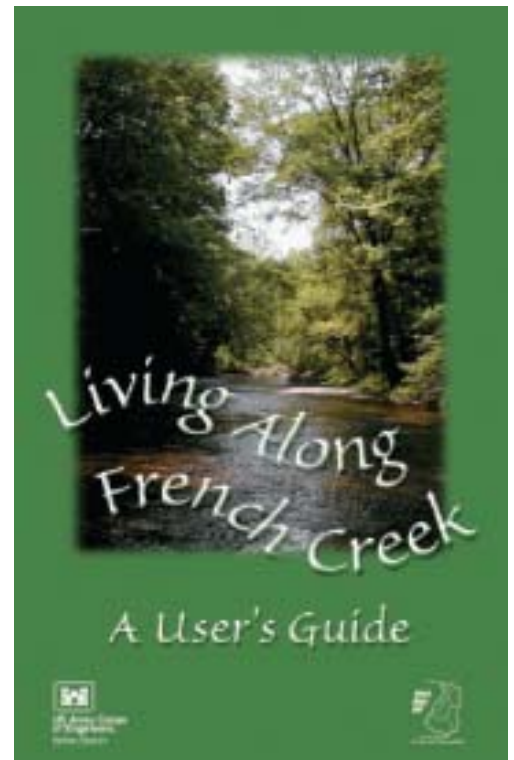
[http://www.epa.state.oh.us/dsw/rap/blk\\_home.html](http://www.epa.state.oh.us/dsw/rap/blk_home.html) (clicking the link for RAP publications and documents and selecting the link to download the "Living Along French Creek" pdf). This report can also be download from NOACA's Black River web page at <http://www.noaca.org/blkrp.html> and clicking the brochure graphic.

In their report, the Corps found many of the problems facing all rivers and streams throughout the region and nation. The Corps personnel documented a widespread encroachment or disruption of the riparian corridors and wetlands, possible off-lot discharges of improperly maintained and/or aging home sewage treatment systems, a lack of respect for the streams with the dumping of automobiles and automotive parts and household appliances, and in some areas a lack of the required best management practices designed to keep sediments from entering the streams from construction sites. In addition, they found some instances where stream courses were altered or dammed.

*Problems in the French Creek.... attributed to the widespread lack of riparian corridor integrity*

Quantitative habitat assessments conducted by the Corps revealed only 25% of the sites surveyed attained a status that could be considered to be in habitat attainment for streams of this area of Ohio. Water quality problems were noted by the Corps in a supplemental sampling of the waters of the French Creek basin. They found low dissolved oxygen levels, elevated turbidity readings and high nutrient concentrations.

The Corps report attributed most of the problems in the French Creek watershed to the widespread lack of riparian corridor integrity. A continued disruption of riparian corridor integrity will lead to increased urban and residential runoff and allow more sediments and nutrients to freely enter the streams. In addition,



as French Creek continues to develop, it is feared more land will be placed under impervious surfaces and this can cause flashier flows, increased erosion and more sediment getting to the streams.

# The Black River Watershed Project

**Contributing Author: Stephanie Kutsko, Lorain County Community Development Department**

The Black River Watershed Project was initiated by the Lake Erie Binational Public Forum in January 2004. The Forum implemented two “local” projects in Lake Erie - the Black River and Kettle Creek (Ontario) to promote the goals of the Lake Erie Lakewide Management Plan (LaMP). The Forum developed two community-based watershed strategies to build local partnerships among watershed stakeholders to identify local environmental concerns, develop action plans to address these concerns, and to establish a permanent local watershed group to continue to implement action strategies

The Black River Watershed Project was focused on the West Branch of the Black River. The project area included the City of Oberlin and the Villages of Rochester, Wellington and Lagrange; along with 14 townships (Russia, Carlisle, Camden, Pittsfield, Lagrange, Clarksfield, Brighton, Wellington, Penfield, New London, Rochester, Huntington, Troy and Sullivan; and three counties, Lorain Huron and Ashland.

The majority of the subwatershed project was located in Lorain County. The watershed strategy for the West Branch involved a process for gathering technical information through inventory work and getting community input into the prioritization of actions through public meetings, dialogues with stakeholders and guidance from local project partners (through a steering group process).

The objectives of this project included prioritizing community environmental concerns, identifying activities to address those concerns, incorporating those activities into a watershed strategy, and

identifying resources for ongoing implementation of the watershed strategy.

This one-year project was funded by a grant from US EPA, with additional funds provided by the Lorain County Commissioners and the Lake Erie Forum. Funding has been secured to continue this project for an additional year through the US EPA Great Lakes National Program Office.

## **Lake Erie Binational Public Forum**

The Forum is a committee of around 40 watershed stakeholders, including farmers, fishermen, elected officials, environmentalists, educators, tribal, business/industry and health professionals. The Forum provides input to USEPA and Environment Canada on the Lake Erie Lakewide Management Plan (LaMP)

## **Lake Erie Lakewide Management Plan**

The LaMP is intended to identify critical impaired beneficial uses in the lake and to develop strategies, recommendations and options to restore these.

<http://www.epa.gov/greatlakes/lakeerie/2004updatedex.html>

**Community Action = Watershed Health**

# A Cleaner Black River - 21-Year Old Dermal Contact Advisory Lifted

Earth Day 2004 proved to be very significant for the Black River. Ohio Governor Bob Taft celebrated Earth Day on April 23, 2004 by announcing the lifting of a 21-year old dermal contact advisory that had been issued for a five mile stretch of the Black River Mainstem.

Governor Taft also announced the redesignation of the Fish Tumors and Other Deformities beneficial use from a status of "Impaired" to a state of "In Recovery."

In 1983, the Ohio Department of Health originally issued the dermal contact advisory for the Black

River Mainstem from the 31st Street Bridge in Lorain to the mouth of the river due to river sediments contaminated by polynuclear aromatic hydrocarbons (PAHs). The contact advisory warned against swimming, wading or water skiing due to high levels of PAH in river sediments. In addition, studies conducted

by Dr. Paul Baumann of USGS and Ohio EPA beginning in the early 1980s had established a link between high PAHs in the sediment of the Black River

mainstem and liver cancers in bullhead and external deformities in other fish populations. As a result, Fish Tumors and Other Deformities were listed as an impaired Beneficial Use in the Black River Area of Concern.

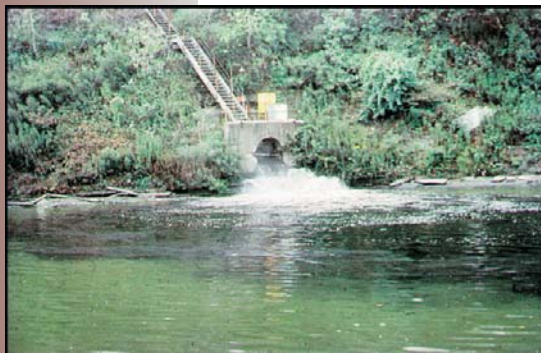
The PAH contamination was caused by discharges from a coking plant that closed in the early 1980s. Sediments were heavily polluted with the metals zinc, cadmium, iron, lead, chromium and arsenic in the mainstem and a PAH (benzo (b)

flouranthene), and heavy metals arsenic and iron in the harbor area. Remedial dredging of the most contaminated sites on the river occurred in 1989-1990. The contaminated sediments dredged in the vicinity of the closed USS/KOBE coking facility were dredged and placed into a confined hazardous waste landfill on USS/KOBE property.

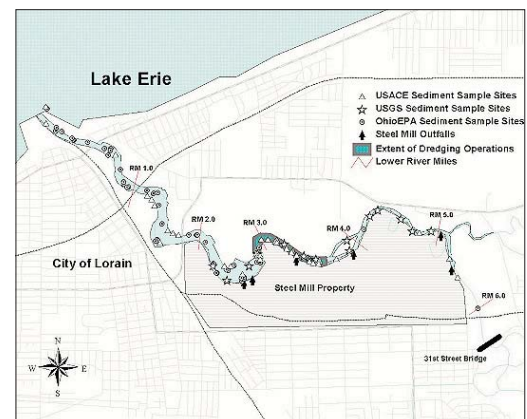
In early 2004, the Ohio Department of Health released the results of a study which examined historical data on PAHs levels in sediments, examined published data on tumor levels in fish (brown bullhead catfish), and performed a quantitative cancer risk assessment for dermal exposure to PAHs. Ohio EPA and the United State Army Corp of Engineers collected sediment samples in 1983, 1984, 1988, 1992, 1993, 1996, 1997, 1998, and 2001. Most of these samples were "grab samples" with core samples taken in 1984 and 1997. 16 priority PAHs were analyzed as part of the study. As of 2001, PAH levels in Black River sediments were about 1 order of magnitude above those in reference sites; comparable to levels in other industrialized Ohio rivers and above threshold effect levels (TELs) but below probable effect levels (PELs). A summary of Dr. Baumann's findings can be found in the Black River RAP's 2003 Annual Report, which can be downloaded from <http://www.noaca.org/blkrp.html> or in more detail at USEPA's Great Lakes Contaminated Sediments website <http://www.epa.gov/glnpo/sediment/Bullhead/index.html>



*Extent of PAH Dredging*



*Republic Technologies Outfall*



*Sediment Sampling Sites*



## Black River RAP Receives 2004 Ohio Lake Erie Award

On September 15, 2004, the Black River Remedial Action Plan (RAP) was awarded the 2004 Ohio Lake Erie Award for the work of an outstanding organization. The Ohio Lake Erie Commission created the Ohio Lake Erie Award as a means to recognize the outstanding work of individuals and organizations who are working towards the protection and restoration of Ohio's Great Lake.

The Black River RAP was recognized for its role in "working tirelessly to promote and protect Lake Erie and to improve the Black River's beneficial use impairments (BUIs)." The Black River RAP was nominated for its work which resulted in the lifting of the 21-year old "avoid contact" advisory for the Mainstem of the river from the 31st Bridge in Lorain to its mouth and redesignation of the Fish Tumors and Other Deformities BUI from Impaired to a state of "In Recovery."



*Ted Conlin, Ohio EPA Black River RAP Coordinator and Ken Pearce, Black River RAP Coordinating Committee Chair*



*Marblehead Light House Award*



# PCBs, Mercury = Fish Consumption Advisories

Contributing Author: Ted Conlin, Ohio EPA RAP Coordinator

The State of Ohio has issued Consumption Advisories for fish found in the Black River due to harmful levels of Polychlorinated Biphenyls (PCBs) and mercury found in the tissues of fish.

## State Consumption Advisories

The State of Ohio, through a cooperative effort of the Ohio Environmental Protection Agency (Ohio EPA), the Ohio Department of Natural Resources (ODNR) and the Ohio Department of Health (ODH), began issuing fish consumption advisories for Ohio's sport fish. These sport fish advisories provide guidelines to anglers so they and their families can limit consumption of fish that are likely to contain unacceptable levels of contaminants, such as PCBs and mercury.

The advisories emphasize the health benefits of eating fish, which contain protein, valuable vitamins and minerals, and omega-3 polyunsaturated fatty acids that can help lower the risk of heart disease. The purpose of the advisories is to help people choose fish that are most nutritious and least contaminated. The ODH advisory is available at <http://www.epa.state.oh.us/dsw/fishadvisory/index.html>

## “No More Than ONE MEAL per WEEK”

The Ohio Department of Health advises that all persons limit consumption of sport fish caught from all waterbodies in Ohio to one meal per week, unless there is a more restrictive advisory.

This statewide advisory protects sensitive populations, including women of childbearing age and children under age

15. The advisory was extended to all persons in 2003 because of:

- the statewide/nationwide mercury advisory for sensitive populations and
- the increasing number of location specific one meal per week advisories.

The entire Black River watershed is included in this general statewide recommendation, plus the Black River's Area Of Concern (AOC) does have more restrictive advisories.

Consumption Advisories result in an impairment to the Black River's Beneficial Uses. The advisories, and resulting impairment status, are due to historical use of polychlorinated biphenyls (PCBs) and more recently due to levels of mercury found in fish.

PCBs break down very slowly in the environment. Mercury is an element that does not break down, but can be converted by environmental bacteria, to a more toxic form, methylmercury. Although the levels of these contaminants in fish tissues are not high enough to cause an immediate illness, they remain in the body and can build up (bio-accumulate) in the tissues of fish and humans.

If the concentrations in the body become high enough, health problems may arise that could include birth defects, mental and physical retardation in newborns, and children with a slower capacity to learn and develop. It can take six years or more to rid the body of PCBs and up to a year for mercury.

PCBs and mercury are a huge national and global environmental problem. They can impact the environment some distance from their source as both contaminants can volatilize, or turn into a gas, and be carried by the currents of air. PCBs have even been found in polar ice. Mercury can travel up to 600 miles in the air. In 2002, a single chlorine

**Mercury unlike PCBs, is still widely used. Some industrial and medical products contain mercury compounds, as do dental filling amalgams, home thermostats, old batteries, older fluorescent lights and the little switches in your car that turn on a light when you lift the trunk lid.**

**Mercury is a naturally occurring element in the environment and is also released into the air through industrial pollution. Mercury that falls from the air can accumulate in streams and oceans.**

manufacturing facility in Ohio released an estimated 1400 pounds of mercury. It was also estimated that mercury emissions from Ohio's coal-fired power plants totaled just less than 4 tons.

PCBs still impact the environment by way of spills from transformer yards, from illegally dumped transformers and from runoff and groundwater contamination from old landfills. In 2004, a landfill study was begun in the Black River AOC in an attempt to pinpoint the source of the contamination. Locally, the general public can do little about the PCB contamination problem, but people who work with transformers should make sure they are maintained and disposed of properly.

Although efforts are being made around the country to replace mercury and mercury compounds with alternative devices and compounds, mercury contamination continues to plague the environment. Locally, the general public can support programs like the City of Elyria's Mercury Reduction Program that works to replace, collect and properly dispose of mercury through an educational program

## PCB Consumption Advisories

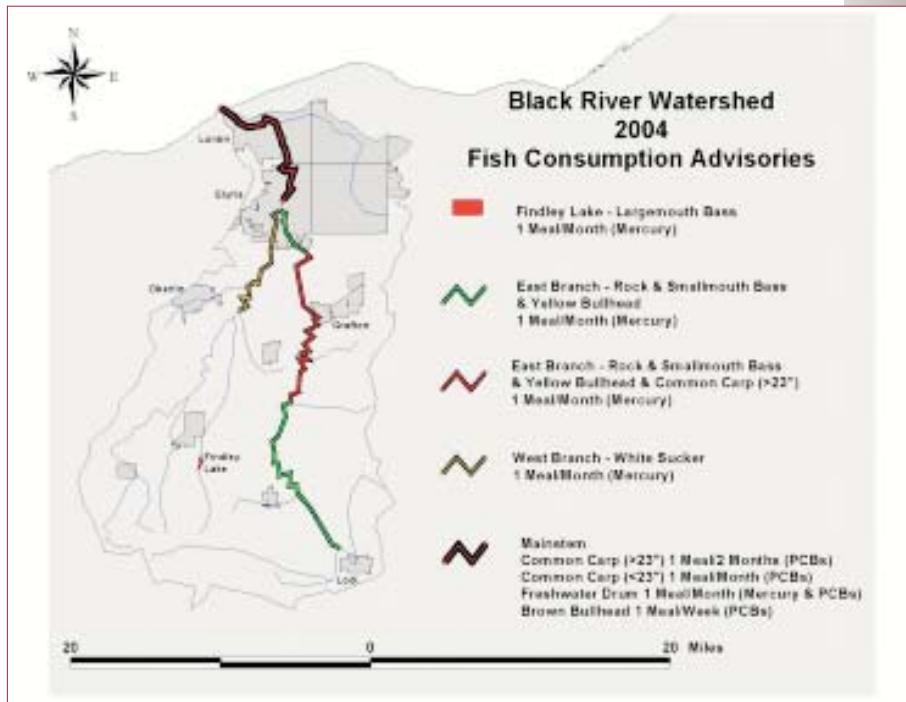
The Black River's PCB fish consumption advisory is limited to a 14-mile stretch of the Mainstem - from Interstate 80 to the mouth of the river in Lorain. A PCB Consumption Advisory has been issued for the following fish:

- Common Carp
- Freshwater Drum
- Brown Bullhead Catfish

The advisory for Brown Bullhead Catfish consumption is covered by the current statewide one meal per week advisory so it is not specifically posted on web page mentioned above.

## Mercury Consumption Advisories

- **Mainstem** Snapping Turtles and Freshwater Drum
- **West Branch** White Suckers
- **East Branch** Rock Bass, Smallmouth Bass, Yellow Bullhead Catfish and Common Carp
- **Findley Lake** Largemouth Bass



# Update On The Elyria Mercury Collection Program

**Contributing author: Terry Korzan, Elyria WWTP**

The City of Elyria and its Wastewater Treatment Plant have been actively promoting a joint Mercury Reduction Program. Since August 2003, the following have been collected:

- 772 thermometers
- 77 thermostats
- 17 barometers
- 32 blood pressure monometers
- 43 vials of liquid mercury  
*(2 ml to 10 lbs!)*

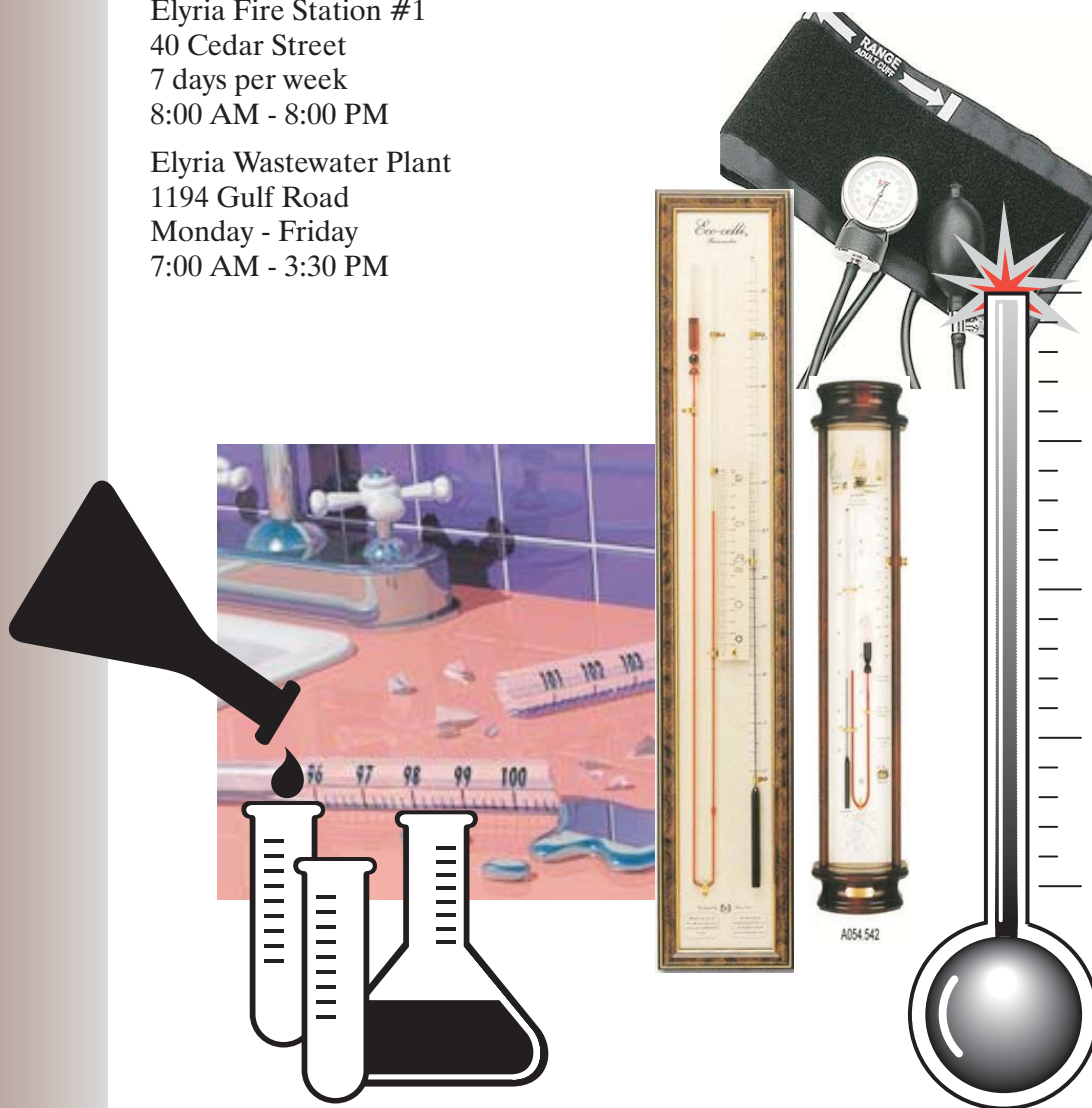
## Collection Days

In addition, the City of Elyria hosts 3-4 community mercury recycling days per year at the Washington Avenue Parking lot. These events are advertised in the local newspaper and on the local government cable television channel. Please contact Terry Korzan at the Elyria Wastewater Pollution Control Plant at 440-366-2211, Ext. 130 for more information.

## Collection Sites

Elyria Fire Station #1  
40 Cedar Street  
7 days per week  
8:00 AM - 8:00 PM

Elyria Wastewater Plant  
1194 Gulf Road  
Monday - Friday  
7:00 AM - 3:30 PM



# Working to Protect and Restore the Black River Watershed

Contributing Author: Mickey Tipple, Lorain County SWCD

Lorain Soil and Water Conservation District (SWCD), in cooperation with the Natural Resources Conservation Service (NRCS) - United States Department of Agriculture (USDA), assisted in the design and construction of 32,000 feet of grass buffer strips throughout the Black River watershed. These grass buffer strips reduce erosion and filter nutrient loads from runoff while providing wildlife habitat.

Lorain SWCD has also assisted in the design and construction of 16,500 feet of grass waterways on area farms. These grass waterways help prevent erosion and reduce the sediment loads to area streams and waterways. The 16,500 feet of grass waterways eliminate at least 2,326 tons of silt from the area's waterways annually.

This year the Lorain SWCD annual tree sale provided 27,000 tree and shrub seedlings to area residents at a reasonable price. The quantity sold is enough to plant 145 acres.

Over 10,700 feet of ditch cleaning projects were constructed this past year. Karl Schneider, District Conservationist for NRCS, and the Lorain SWCD developed and used an environmentally sensitive cleaning method. One side of the ditch is minimally cleared so obstructions and silt build up can be removed from the ditch bottom. This lower cost method greatly improves the flow while minimizing the environmental impact on the ditch.

The Lorain SWCD has existed for 56 years. The Lorain SWCD, with the assistance and cooperation of the Natural Resources Conservation Service and the United States Department of Agriculture, has made a positive impact on the Black River Watershed. They have sold over 1,100,000 trees and shrubs seedlings, enough to plant approximately 5,500 acres. Many of the pine trees and windbreaks you see in the county are a result of these sales. They have constructed 457 acres of buffer strips. At 30

feet wide they would be 125 miles long.

The grass waterways constructed in those 56 years stretch out to 297 miles and prevent thousands of tons of erosion.

They significantly reduce the sediment load to the Black River watershed. Using NRCS erosion formulas to calculate erosion rates these waterways prevent 221,295 tons of sediment from entering the watershed's streams annually.

The Lorain SWCD has been proactive in the watershed since it's inception. Through it's conservation practices, and USDA programs, the Lorain SWCD has had a positive effect on the watershed. This has been accomplished through the voluntary cooperation of area farmers, assisted by the Lorain SWCD, and the NRCS. District Conservationists and the USDA.

The Lorain SWCD has been quietly working at improving the quality of the runoff from the one hundred million dollar farming business of Lorain County for the past five and a half decades.



Kolb North ditch, Pittfield Township. One of three completed drainage projects as part of low-impact drainage demonstration completed by Lorain SWCD, October, 2004. Woody vegetation, stream banks and bottom have been maintained as much as possible. Project objective sought to maintain a balance between flood control, channel stability and habitat. Project funded in conjunction with a grant from USEPA.



SWCD Technicians Robert Pandey and Marshall Simms erect sign to advertise Lorain SWCD annual tree seedling sale. SWCD has been conducting spring sale for over 30 years as a means to promote reforestation, wildlife habitat and beautification in the county. Over one million tree seedlings have been distributed to local landowners.



Completed grassed waterway project on private lands in Brighton Township. Agricultural producer constructed 3200 feet of waterway to control gully erosion as a result of concentrated storm water flow. Project funded through the USDA, Conservation Reserve Program. Rock rip-rap is installed at end of waterway to control subsidence where water enters main stream channel.

# Riparian Zones and Storm Water Management

Contributing Author: Andy Vidra, NOACA

## Functions of the Riparian Zone

The system of streams and natural watercourses within the Black River watershed contributes to the health, safety, and general welfare of its residents and their communities. Storm Water Best Management Practices include regulations to protect riparian zones. Riparian zones:

- ✓ Reduce flood impacts by absorbing peak flows, slowing the velocity of floodwaters, and regulating base flow.
- ✓ Assist in stabilizing the banks of watercourses to reduce bank erosion and the downstream transport of sediments eroded from watercourse banks.
- ✓ Reduce pollutants in watercourses during periods of high flows by filtering, settling, and transforming pollutants already present in watercourses.

- ✓ Provide habitat to a wide array of wildlife by maintaining diverse and connected riparian vegetation.
- ✓ Benefit the Black River watershed economically by minimizing encroachment on watercourse channels and the need for costly engineering solutions such as dams, retention basins, and rip rap to protect structures. They also reduce property damage and threats to the safety of watershed residents. By contributing to the scenic beauty of the Black River watershed, they preserve the quality of life for its residents and protect property values.

## Principles of Riparian Zone Protection

**Principle 1: Support of the Environment:** Protection of the riparian zone is widely recognized as one of the most important things that we can do to maintain our local environment. Riparian protection is conservation in action.

**Principle 2: The Danger Zone:** Every building that suffers flood damage or is in danger of being undermined by stream bank erosion is located in the Riparian Zone. As a result of the “Buyer Beware” policy in effect in Ohio, this means that all damage to such buildings and all protection or remediation costs are usually the sole responsibility of the landowner.

**Principle 3: Protection of Property Values:** Nobody’s property values are maintained if their house or garage is in danger of being flooded or is about to collapse into a stream channel due to streambank erosion. “Green” properties with a water view from a safe distance are the properties with the highest values. The communities in Northeast Ohio that

## 5 Reasons to Use Setbacks

1. Help the Environment
2. Protect Property Owners
3. Maintain Property Values
4. Avoid Downstream Liability
5. Comply with Your Community’s Storm Water Permit Requirements

- ✓ Reduce pollutants in watercourses by filtering, settling, and transforming pollutants in runoff before they enter watercourses.
- ✓ Provide watercourse habitats with shade and food.
- ✓ Reduce the presence of aquatic nuisance species to maintain a diverse aquatic system.

have the most park like settings are the communities with the highest property values.

**Principle 4: Downstream Liability:** The loss of riparian zone function increases stream flow and erosive forces in downstream areas. The Storm Water Phase II Program is one mechanism that clearly communicates this fact to communities. In this new era, failure to avoid riparian zone function losses, after being duly warned of the consequences, exposes a community to damage claims from downstream landowners.

**Principle 5: Compliance with Ohio EPA's Storm Water Permits Program:**

**Permit Requirement (Section 3.2.5.1.3)**  
Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law.

**Permit Requirement (Section 3.2.5.2.3.1)**  
Policies and ordinances that provide requirements and standards to direct growth to identified areas, **protect sensitive areas such as wetlands and riparian areas**, maintain and/or increase open space (including a dedicated funding source for open space acquisition), **provide buffers along sensitive water bodies**, minimize impervious surfaces, and minimize disturbance of soils and vegetation.

**Riparian setbacks help to accomplish this directive.**



*Photo courtesy of United States Department of Agriculture*

# The Confined Disposal Facility - A 58-Acre Waterfront Development Site

Contributing Author: Vanessa C. Volak, Lorain Port Authority

The Lorain Port Authority, the Lorain County MetroParks, and the City of Lorain have combined efforts to develop an



overall master plan for reuse of the 58-acre diked confined disposal facility (CDF) located on the lakefront.

Lorain CDF was developed to hold all of the dredged materials from the Black River shipping channel that were too polluted to be redeposited in Lake Erie. Shipping

channels throughout the Great Lakes, including the Black River channel, require dredging of sediments to maintain navigation depths. Until the mid-1960's, much of the Great Lakes dredged material was redeposited offshore away from the navigation channels. Some of the dredged

materials were used as fill and in some cases to replenish beach sands. Rising concerns about water quality and the possible connection to polluted sediments resulted in the passage of the River and Harbor Act in 1970. This Act authorized the construction of 43



confined disposal facilities around the Great Lakes as a means to manage dredged material not suitable for open water disposal.

The Army Corps of Engineers dredges the Black River shipping channel about every two years, pulling

Lorain CDF, which, located adjacent to the East Breakwater Shorearm of Lorain Harbor, is now at capacity.

As a means to plan for the reuse of the CDF and to plan for continued dredging for navigational purposes, the Lorain Port Authority, Lorain County MetroParks, and the City of Lorain created the Diked Disposal Task Force Committee in February of 2003.

A Taskforce consisting of members of the community, business leaders, and elected officials, was created to oversee the planning process. The Taskforce is comprised of three committees: economic development, planning and closure. The detailed planning, economic feasibility determinations, and so forth will be accomplished primarily at this committee level. Several hearings and work sessions have been held by the Taskforce over the past year to receive public input regarding the site's overall development.

The primary goals of the Taskforce are as follows:

- 1 Develop a comprehensive plan that provides for year-round usage of the facilities;
2. Initiate a comprehensive planning process;
- 3 Develop a plan that coordinates development opportunities with the U.S. Army Corps of Engineers' dredging requirements; and
- 4 Work toward the ultimate closure of the site as a disposal area.

With 58 acres of land, there are many options for usage on the site - all of which will be reviewed to determine economic feasibility and potential impact on the City of Lorain and Lorain County. Any projects that are ultimately developed on the site

will be of countywide significance. Possible projects may include an amphitheatre, aquarium, or metropark.

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approximately 160,000 cubic yards of sediment from the harbor and ship channel. The dredged sediments are routinely sampled and analyzed for pollutant levels. Historically, all dredged sediments have had to be disposed of in the





# Lorain's Plans To Move The Black River WWTP

Contributing Author: Corey Timko, Lorain Utilities Department

Since June of 2003, the City of Lorain has been working towards moving the Black River WWTP to an upriver location. In late 2003, the City was informed that Republic Technologies Inc. was interested in possibly donating land to the city as part of its bankruptcy. In January of 2004, the city toured the donation site and found that it was previously used as a coking facility and for storing the waste products, including slag, generated during the steel making process. The City of Lorain determined that the site was of the proper size and location to house a new wastewater treatment plant.

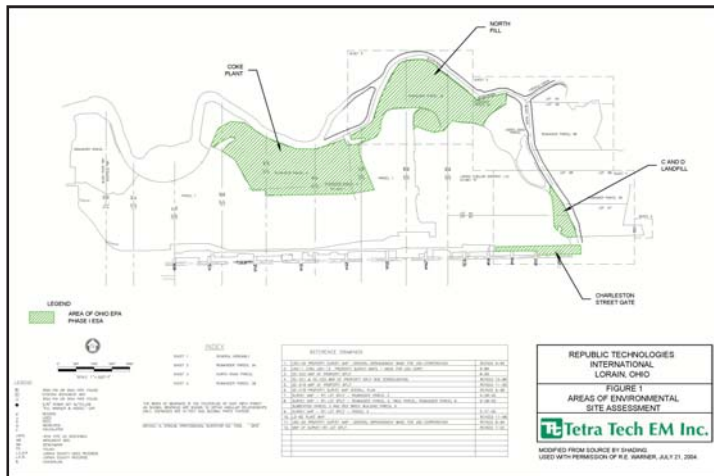
The site is located along the western shore of the Black River around river mile 1.3. It consists of approximately 290 acres and extends from the Turning Basin almost to French Creek. Only about 80 of the 290 acres is needed to house a new wastewater treatment plant; the remaining acreage will be used for economic development and ecological restoration opportunities.

environmental remediation.

Ohio's Voluntary Action Program was created in 1994 to give property owners a way to investigate possible environmental contamination, clean it up if necessary and to receive a promise from the State of Ohio that no more clean up was needed. By creating this program, Ohio recognized the need to remove the environmental and legal barriers that have limited redevelopment and reuse of contaminated properties. More information on Ohio's VAP can be found by visiting Ohio EPA's website [www.epa.state.oh.us](http://www.epa.state.oh.us) and using the search tool (search for VAP).



Republic Technologies Property



## VAP Assessment

In November of 2004, the City of Lorain hired Tetra Tech Inc., an engineering firm out of Columbus, to perform Phase I and Phase II assessments of the property before Lorain would accept the land through donation. It was decided that environmental analysis of the land was needed and prudent to protect the City of Lorain in the case of liability. The analyses allowed the city to obtain assistance from Ohio EPA under their Voluntary Action Program (VAP) for

To date the City of Lorain has completed a Phase I report of the property, is pursuing funding, and will soon commence work on a Phase II analysis of the site. In addition to funding from the Federal EPA and Ohio EPA, the City of Lorain also received a \$150,000 grant with the help of Senator Voinovich, Senator DeWine and Representative Sherrod Brown to assist in a feasibility study to investigate the details of moving the treatment plant.

In short, Lorain has embarked a very large and exciting project that will not only provide state of the art wastewater services to the citizens of northeast Ohio, but will also have positive impacts both environmentally and economically on a regional basis. Our hope is to have the site remediated and a functional wastewater treatment plant in operation by 2015.

# ENVS 490 Introduction to the Black River Watershed

Contributing Authors: Cheryl Wolfe-Cragin and Brad Masi, Oberlin College

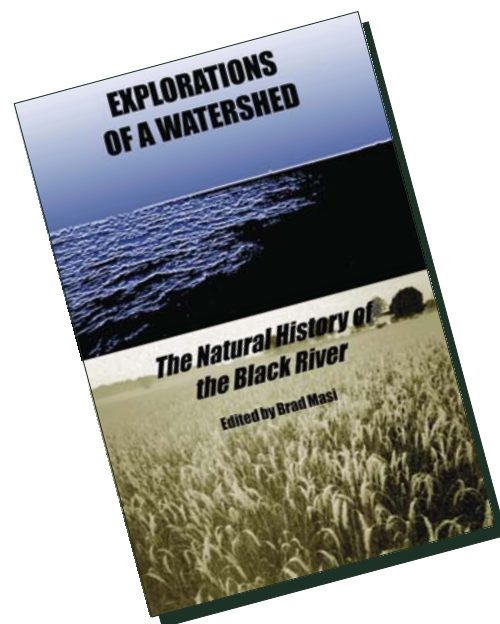
In 1993, Oberlin College first offered a class entitled *Introduction to the Black River Watershed*. Dr. David Orr and Cheryl Wolfe-Cragin originally designed the course to foster the development of future watershed stakeholders by offering this first class to Oberlin College students.

In 1996, Oberlin College's Environmental Studies Program, partnered with Seventh Generation, a Lorain County nonprofit environmental organization, and local schools to initiate the Watershed Education Partnership Project (WEPP). The purpose of this initiative was to pilot "watershed education partnerships" with local schools. Through partnerships, Oberlin's faculty and student resources of the college were combined with the energies of local teachers and grade school students to create a dynamic approach to environmental learning.

Today's version of the class provides an interdisciplinary examination of the Black River Watershed. Course objectives include introducing students and local teachers to the principles of "place-based environmental education" where they can trade their local knowledge regarding the watershed for more classic textbook information. The course is also intended to "foster a sense of place" by providing a deeper understanding of the Black River

Watershed through a combination of lectures, field trips, discussions and journal writing that focuses on geology, ecology, archaeology, natural and social history, landscape and poetry.

The course utilizes several textbooks including *Explorations of a Watershed: The Natural History of the Black River* edited by Brad Masi, Oberlin Ecological Design Innovation Center (EDIC). For more information on the class, Cheryl Wolfe-Cragin can be contacted at [cheryl.wolfe@oberlin.edu](mailto:cheryl.wolfe@oberlin.edu).



# 2004 Black River RAP Coordinating Committee Members

## Local Jurisdictions

Lorain County General Health  
District  
Chairman, Black River RAP  
Coordinating Committee  
**Ken Pearce**

Lorain County Board of  
Commissioners  
**Commissioner Betty Blair**

Lorain County Community  
Development Department  
**Ron Twining**

City of Lorain  
**Mayor Craig Foltin**

City of Elyria  
**Greg Worcester**

Lorain Soil and Water  
Conservation District  
**Robert Ternes**

USDA/Natural Resource  
Conservation Service (NRCS)  
**Karl Schneider**

Lorain County Metro Parks  
**Daniel Martin**

NOACA  
**Pamela Davis**, Secretary

## State/Federal Agencies

Ohio EPA  
**Ted Conlin**

ODNR  
**Jeff VanLoon**

OSU Sea Grant  
**David Kelch**

U.S. EPA  
**Anne Marie Vincent**

## Industry/Commercial

Lorain Chamber of Commerce  
**Michael Challenger**

Lorain County Port Authority  
**Rick Novak**

Lorain County Farm Bureau  
**Julie Hruby**

Lorain County Community  
Alliance  
**Rebecca Gray**

## Community Representatives

**Cheryl Wolfe-Cragin**

**Charles "Eddie" Herdendorf**

**Brad Masi**

**Jennifer Wasilk**

# Black River RAP Contacts

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## **Lorain County General Health District**

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Elyria, Ohio 44035  
440-322-6367

## **Lorain County Metro Parks**

12882 Diagonal Road  
LaGrange, Ohio 44050  
440-458-5121

## **Lorain Soil & Water Conservation District**

42110 Russia Road  
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## **Lorain County Community Alliance, Public Services Institute**

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1005 North Abbe Road  
Elyria, Ohio 44035  
440-366-4160

## **Medina County Soil & Water Conservation District**

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Medina, Ohio 44256  
330-722-2628

## **Northeast Ohio Areawide Coordinating Agency**

1299 Superior Avenue  
Cleveland, Ohio 44114  
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## **Ohio Environmental Protection Agency**

### **Northeast District Office**

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## **United States Environmental Protection Agency**

### **Region V - Cleveland Office**

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