

**PREMIERE ISSUE includes our 2006 annual report • Immerse yourself**

# CLEAN WATER

Highlighting the importance of clean water • PREMIERE ISSUE 2007

## *matters*

### **Clean water education in the community**

It all starts here

### **Clean water and innovation**

Can they join forces on  
Cleveland's lakefront to  
make an economic impact?

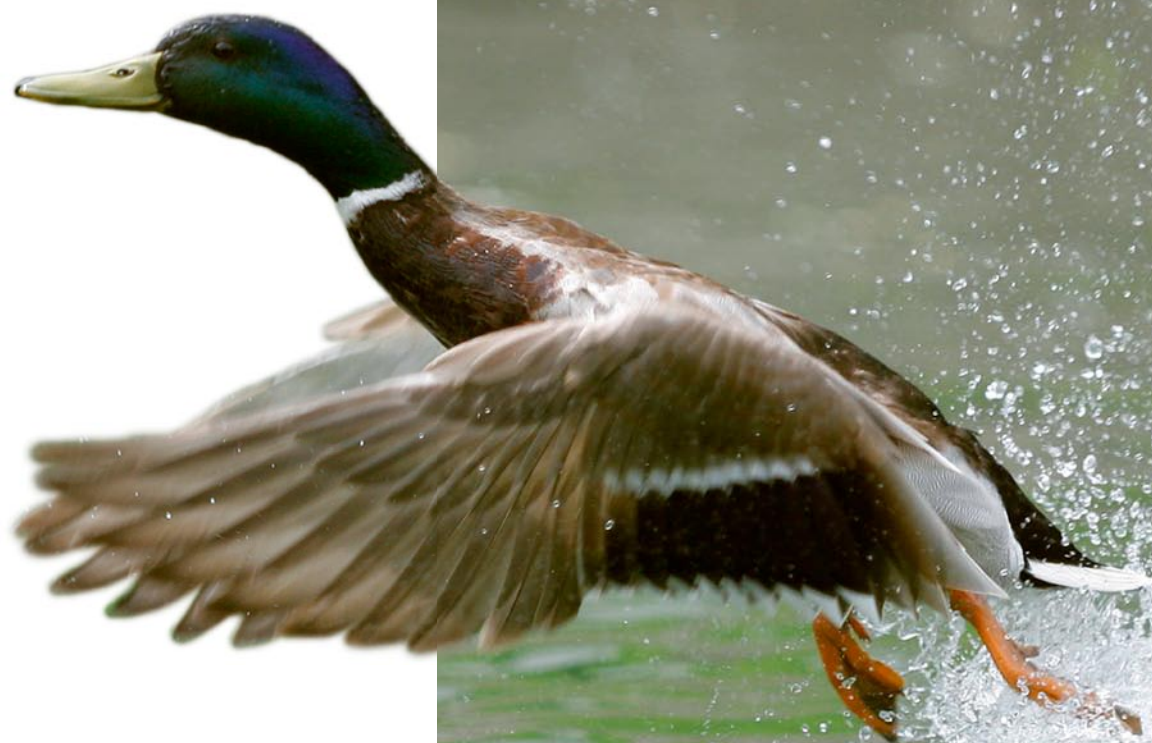
# **GREATEST MEDICAL BREAKTHROUGH?**

**Could this be the best medicine  
since 1840? Sanitation, clean  
water top recent poll**

**BY KIM JONES**

2006 annual report • Northeast Ohio Regional Sewer District





clean water



Visit us on the world wide web [www.NEORSD.org](http://www.NEORSD.org)

# Clean water: Can't live without it

Some say that the heart of Cleveland can be found in sports, while others are drawn to our museums. But open up any visitors guide and you will almost always see a common theme poised as the backdrop to one of the nation's most underrated cities: clean water.



*Ronald D. Sulik*

**Ronald D. Sulik**  
Board President



*Erwin J. Odeal*

**Erwin J. Odeal**  
Executive Director

**A**fter decades of neglect and decay, Cleveland's waterways are vastly improved due in large part to the Northeast Ohio Regional Sewer District. Residents across the region are able to take advantage of the benefits clean water has to offer, and by improving water quality, we hope to encourage our region to further explore the possibilities of these beautiful resources.

The significance of clean water in our region strongly contrasts its absence in third-world countries. Approximately one billion people around the world do not have access to clean water, and roughly 135 million people will die from water-borne diseases by 2020. Yet due to the District's work, nearly one million in Northeast Ohio alone are protected from these harsh realities.

For 35 years, we have protected and improved area water resources throughout

greater Cleveland. Our commitment to excellence is visible throughout the community as economic opportunities reliant upon water have become the new focus of Cleveland's potential business market. Furthermore, we have embarked upon a journey to educate the public on the importance of *clean water matters*.

So we ask you to start your journey with this publication. Although our work remains an essential component of daily life, we must not forget the investments that must continuously be made in order to preserve the quality and safety of clean water in our region, and perhaps in yours, too. **CWN**

**THIS YEAR'S ANNUAL:** As our 2006 report, we hope this publication takes a creative look at clean water matters. From brief articles to the "parody" ads that draw attention to our efforts, the message is as critical as the value of clean water itself.

## CLEANWATERmatters 2007

### COVER STORY

#### **2 Clean water a wonder drug?**

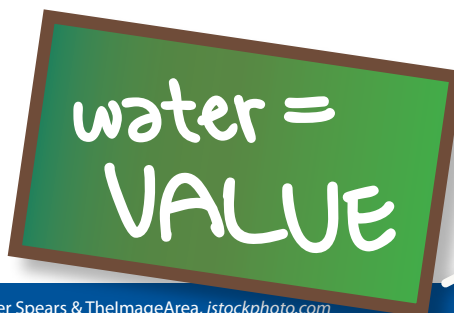
A recent poll shows sewage disposal as the greatest medical advance since 1840. See how our services are helping to promote a healthy region and ensure a brighter future.

#### **7 Clean water Econ 101 ▶**

Can Greater Cleveland take better advantage of our lake's economic value?

#### **4 Immerse yourself**

How can you take better advantage of the region's number one clean water resource?



**3** 2006 financial and treatment plant performance data



COVER: Photo illustration by John Gonzalez, images © Dieter Spears & ThelmaImageArea, istockphoto.com  
Communications & Community Relations, NEORS D, 3900 Euclid Ave., Cleveland, Ohio 44115

*When ranking medical  
breakthroughs, recent  
poll results placed clean  
water at the top of its list.  
And for a city on the lake,  
an organization like the  
Regional Sewer District is  
a prescription for an even  
better future.*

# WATER

by KIM JONES

**W**astewater treatment topped a recent international poll conducted by the British Medical Journal as the greatest medical breakthrough since 1840. The process trumped a shortlist of medical discoveries that included antibiotics, anesthesia, vaccines and DNA.

Although some of the 11,000 voters (which included doctors and members of the public) felt the discoveries of anesthesia and antibiotics were more significant, other voters considered sanitation and wastewater treatment a deserving winner.

“Consider that in the 18th century, infectious diseases led to huge numbers of deaths, including those from cholera, tuberculosis, diphtheria, measles, smallpox and typhoid” explained Professor Johan Mackenbach of Erasmus University Medical Center. “The general lesson still holds that passive protection against health hazards is often the best way to improve population health.”

University College in London’s medical historian Ann Hardy said sanitation has provided “the key building block for public health.”

On this side of the Atlantic, wastewater treatment dates back to the mid-1800s when homes began replacing outhouses with water closets; but early sewers simply transported wastewater away from cities, rather than towards treatment. This was true in northeast Ohio, as well.

As a result, a cholera epidemic struck Cleveland in 1849 and again in 1852. People first attributed the outbreaks to sin, then with the advance of medical knowledge, recognized filthy water as the culprit.

This realization led to the city’s first attempt at wastewater treatment in the early 1900s. It was around this time that the City of Cleveland’s Easterly treatment facility began capturing floating debris from sewers discharging into Lake Erie. In a few short decades, the treatment process expanded to include surface skimming, sediment removal, the introduction of living organisms to consume harmful bacteria, and disinfection.

Not surprisingly, each improvement in wastewater treatment produced a notable drop in the incidents of water-borne diseases. That development provides the foundation for the results of this poll.

After reading the findings, a number of Regional Sewer District employees admitted that they felt the importance of their work had been publicly validated. “People often forget that clean water is vital to public health,” said Executive Director Erwin J. Odeal. “Sometimes it takes something surprising, like these unexpected survey results, to point out the obvious.”

CW/m

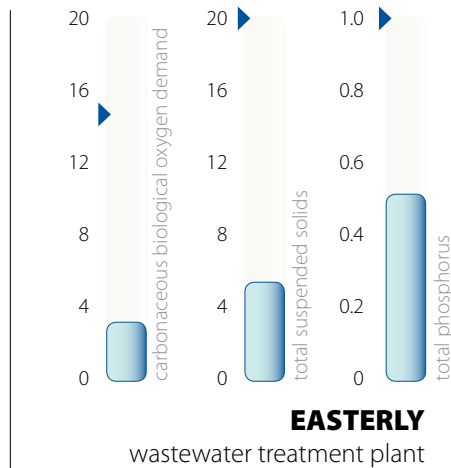


# 2006 annual report

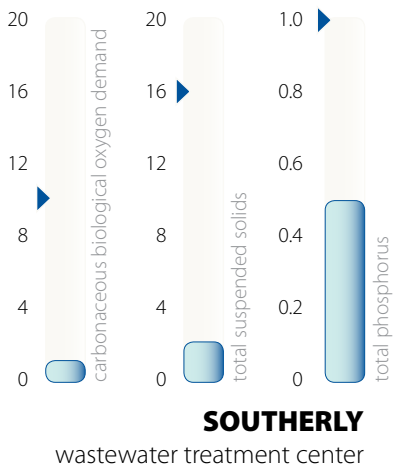
## Treatment plant performance data

### From dirty work to clean water

Treatment plants have permit limits that indicate the acceptable criteria for clean water to re-enter the environment. The **blue arrows** below are those upper limits for these criteria; any readings above those limits is bad, and anything below those arrows is good. The **blue bar** is our actual 2006 performance.



Located on the Lake Erie shore, our Easterly plant treated 94 million gallons per day in 2006.



Southerly sits atop a 288-acre swath of Cuyahoga Heights and treated more than 125 million gallons per day last year.



Edgewater Beach is the home of Westerly's efforts, which include more than 26 million gallons of treated flow per day returning to Lake Erie.

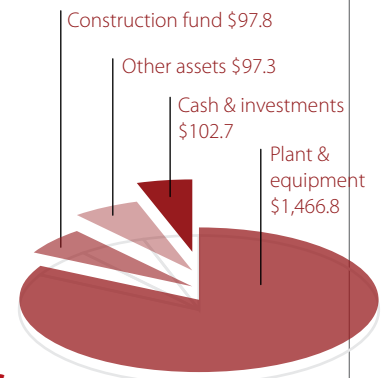
### Knowing what the numbers mean

**CARBONACEOUS BIOCHEMICAL OXYGEN DEMAND (CBOD)** is a measurement of the amount of dissolved oxygen needed to break down carbon-containing compounds in the water. High levels of CBOD deprive aquatic life of oxygen.

**TOTAL SUSPENDED SOLIDS** measures the amount of insoluble solids floating or suspended in water.

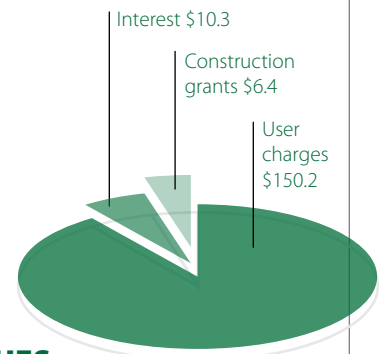
**TOTAL PHOSPHORUS** is the sum of all forms of phosphorus, an essential nutrient for aquatic life. But large amounts may stimulate growth of harmful quantities of algae, which can negatively affect the aquatic environment.

## Financial data



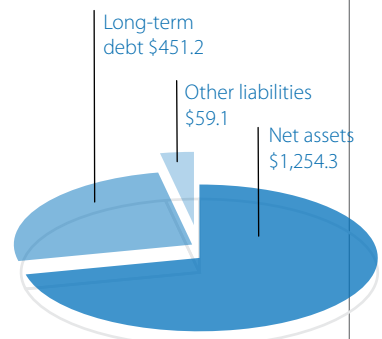
### ASSETS

as of 12.31.06 in millions **\$1,764.6**



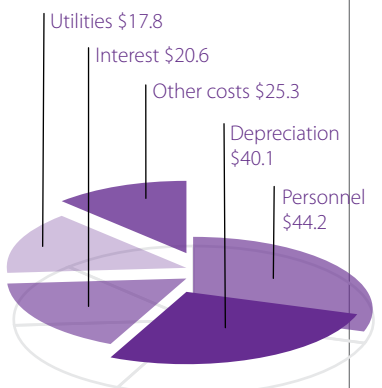
### REVENUES

as of 12.31.06 in millions **\$166.9**



### LIABILITIES & NET ASSETS

as of 12.31.06 in millions **\$1,764.6**



### EXPENSES

as of 12.31.06 in millions **\$148.0**

# IMMERSE YOURSELF.

What do Cleveland's clean-water resources have to offer? Discover the adventure in these local natural attractions

**BY JAMIE DANELISHEN**

**JUMP IN:**

Lake Erie and the Cuyahoga River have been reborn, thanks in part to the efforts of the Regional Sewer District. *photo courtesy ntzlov / www.istockphoto.com*

**V**isit a beach, walk a stream-side trail, cast a line and immerse yourself. You can enjoy all of these pleasures and more in the clean-water resources throughout northeast Ohio. While protecting your health and environment, the Northeast Ohio Regional Sewer District positively impacts many aspects of nature. Allow us to feature a few of the locations that even locals take for granted.

**Edgewater Beach** Lake Erie  
*Cleveland, Ohio*

*Lake Erie is one of the largest freshwater bodies in the world.*

Located within the Cleveland Lakefront State Park, Edgewater Beach is nestled on the northern border of the historic Lake Erie shoreline. A recreational haven—especially for fishermen—visitors of all ages travel from across the country to catch the region's most prominent fish species, including perch, walleye, and bass.



## DISTRICT CONTRIBUTIONS:

Our Westerly Wastewater Treatment Plant releases nearly 26 million gallons of treated water directly to Lake Erie every day of the year .

### Mill Creek Falls Garfield Heights

*Cleveland Metroparks, Garfield Park*

*A historic landmark, the falls originally served as a power source to early residents*

Whether you're an explorer at heart or just a passerby, you'll enjoy the serenity of Mill Creek Falls, located on Cleveland's east side. The tallest of its kind in Cuyahoga County, the falls—also known as Cataract Falls—stands 45 feet high and feeds directly into Mill Creek, a tributary of the Cuyahoga River.

## DISTRICT CONTRIBUTIONS:

In 2002, the District rerouted and sealed a 52" combined sewer overflow (CSO) pipe, originally mantled atop the falls, as part of a modernization and combined sewer overflow control program. The Mill Creek Tunnel—a large wastewater and stormwater storage tunnel under construction since 1997—will prevent approximately 500 million gallons of CSO from reaching Mill Creek once complete in 2008. Under this project, the District has already alleviated CSOs to Mill Creek at 19 locations.

### Doan Brook University Circle

*Rockefeller Park, Cleveland*

A culmination of history and city-life combined, Rockefeller Park is one of five parks in the region with the perfect setting for a walk around the meandering Doan Brook. Encompassed by urbanized development, the park proudly sustains the region's Cultural Gardens—approximately twenty in all—landscaped in the early 1900s, as well as the Rockefeller Park Lagoon.

## DISTRICT CONTRIBUTIONS:

In 1998, with the help of a US EPA grant, the District conducted a watershed study of Doan Brook to look at numerous issues impacting the stream and its biological communities, including pollution, flooding, bank erosion, and man-made changes to the natural habitat.

*Continued on page 6*

## Great lake, great places

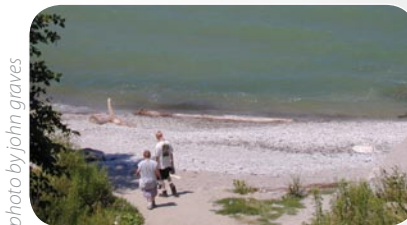


photo by john graves

### ACTIVITIES

- Fishing
- Boating, swimming
- Bicycling
- Picnicking
- Sunbathing, sand-castle building

### EDGEWATER BEACH

Lake Erie has become a national hot spot for fishing. Three international tournaments have been held in Cleveland since '04.



NEORS file photo

### ACTIVITIES

- Hiking trail, biking path
- Mill Creek Falls scenic overlook
- Visitors center
- Picnicking, gazebo

### MILL CREEK FALLS

A scenic overlook gives visitors a natural view of the 45-foot waterfall, also known as Cataract Falls, one of the tallest in Ohio.



NCSL archives

### ACTIVITIES

- Nature Center
- Cultural gardens
- Proximity to art and history museums, Botanical Gardens, Western Reserve Historical Society

### DOAN BROOK

Running through Cleveland's University Circle, Doan Brook is surrounded by cultural gardens, museums, and a rich history.



www.dnirstate.oh.us

### ACTIVITIES

- Onshore fishing platforms
- Boating
- Swimming
- Bicycling, picnicking

### GORDON PARK

Perch, walleye and bass make Gordon Park a draw for fishing enthusiasts. Six boat launch ramps, onshore fishing platforms.



# Immerse yourself in nature, culture

*Continued from page 5*

Four management plans were strategically developed for the communities located in Doan Brook. These plans include managing wastewater, monitoring the watershed's biotic community, addressing channel and floodplain issues, and reducing stormwater runoff. The study also led to the development of a Doan Brook Watershed Partnership—a collaboration of communities, local and national experts, and researchers—to develop and implement a practical watershed action plan.

Since the study, the District has also taken numerous steps to address community-based concerns. The CSO control program, including the construction of the Heights-Hilltop Interceptor, has already reduced CSOs entering Doan Brook.

## Gordon Park, Lake Erie

*Cleveland, Ohio*

Also located within the Cleveland Lakefront State Park, Gordon Park is nestled on the northeast border of the historic shoreline. Much like Edgewater Park, fishermen love the area, which can also be a great spot for wintertime fishing: enthusiasts find steelhead and salmon in these waters.

### DISTRICT CONTRIBUTIONS:

The District keeps Lake Erie free of debris and floatable materials through the use of ten netting facilities throughout the Northeast Ohio region.

One of these netting facilities is located at Gordon Park, where netting equipment, with a 90% capture rate, helps reduce litter and debris from entering the waterways during a combined sewer overflow event.

While protecting Lake Erie and the surrounding environment, netting facilities also guard fish species and wildlife from debris destructive to aquatic habitats.

The District's netting facilities captured approximately 12 tons (24,000 pounds) of debris in 2006 that would have otherwise entered the waterways.

**CW**



**Walk.**

**Swim.**

**Watch.**

**Breathe.**

**Feel.**

***Enjoy the outdoors again.***

Go ahead. Don't be afraid to get the most out of the environment. The Northeast Ohio Regional Sewer District has been improving the environment and protecting public health since 1972, and **WATER®** has been making these improvements possible.

**Water** Liquid & vapor  
(dihydrogen monoxide)

Ask your doctor about the benefits of **WATER®**.  
Or visit us online at [www.neorsd.org/water](http://www.neorsd.org/water)

THIS AD IS A PARODY, BUT CLEAN WATER ISN'T. OUR EFFORTS PROTECT PUBLIC HEALTH AND THE ENVIRONMENT, AND WE ENCOURAGE YOU TO MAKE THE MOST OF CLEVELAND'S NATURAL RESOURCES. photo courtesy amy kimball / www.stockphoto.com



SO NATURAL,  
NO ONE WILL  
EVEN KNOW  
YOU WEAR IT.

*h2o*

FOR MEN AND WOMEN

*pure.*



[www.neorsd.org/h2o](http://www.neorsd.org/h2o)

## Economics of clean water

*Lake Erie and the Cuyahoga made Cleveland possible. What else may be possible tomorrow because of clean water resources?*

**L**ake Erie and the Cuyahoga River lured early settlers with the promise of travel and commerce. After leveraging the industrial capacity of our waterways to the point of exhaustion, the District has spent the past 35 years restoring our waterways to environmental health.

Now as luck and hard work would have it, Greater Cleveland has renewed opportunities to tap into the entrepreneurial capacity of our most precious natural resource. However, this time we can do it while keeping our environmental integrity intact.

A late-2006 report urged Ohio officials to harness Lake Erie's winds as a homegrown energy source. Wind energy would create jobs, protect farmland and add to the growing need of energy independence, the report stated. Overall, Ohio has the chance to gain 22,000 new manufacturing jobs if we pursue this promising new technology – many of those here in northeast Ohio.

Ohio's manufacturing base could serve as a foundation for this technology's development. Wind turbine manufacturers want to install the machines close to their assembly sites to avoid huge transportation costs; that motivation could jump-start a unique manufacturing base in Northeast Ohio and along the Lake Erie shoreline.

The physical reality that wind speeds are greatest over bodies of water doesn't hurt our prospects either. Of course as with any new technology, there are obstacles we must first overcome. For example, windmills tend to generate most of their power during fall and spring, when demand is low. But the potential pay off for pursuing wind turbine technology is well worth the effort.

**KIM JONES**

**CW**



THIS WINDMILL WAS ERECTED IN FRONT OF CLEVELAND'S GREAT LAKES SCIENCE CENTER. PHOTO: KIM JONES

clean water. healthy region. cleaner environment. better future.

# It all starts here.

**C**onnecting with neighbors from across the region—and the globe—the Northeast Ohio Regional Sewer District takes education, outreach, and partnerships as seriously as we take our clean-water work.

We continue to identify and evaluate community-involvement opportunities that connect with our mission to protect public health and our environment.

The District would like to thank all 2006 Community Outreach participants. For an up-to-date list of community outreach events for 2007, visit [www.neorsd.org](http://www.neorsd.org) **CW/m**

Students.

Teachers.

Residents.

Neighbors.

Organizations.

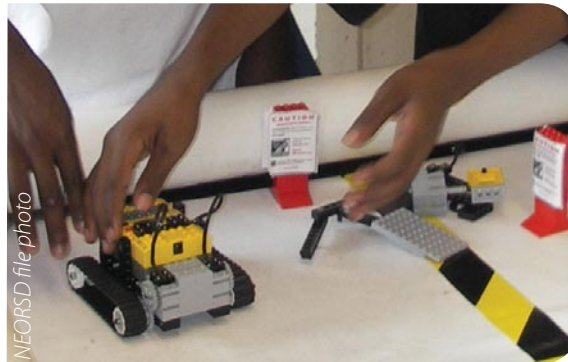
Communities.

Employees.

Political leaders.

Media.

Businesses.



**W**e helped establish several **partnerships** critical to the region last year, including a robotics pilot program at one Cleveland school. Volunteer employees helped seventh-graders by promoting math, science, and communication skills in a robot-building competition known as *Aquabots*.



**A**s a contributor to Cleveland's economy, the District offered more than 60 students the chance to acquire on-the-job **work experience** last year. A *Success at Work* workshop for all of its summer students and co-ops provided basic guidelines for students to follow as they enter the professional workforce.



**T**ours and special **presentations** help communicate our message: In 2006, we hosted more than 20 facility tours, including a 300-foot-underground tunnel tour for Cleveland City Council's Public Utilities Committee.



**C**ommunity involvement during the 2006 National Clean Beaches Week brought city leaders and community environmental groups together for the betterment of Greater Cleveland and our Great Lake.

**CW/m**



Ronald D. Sulik, Board President

Sheila J. Kelly, Vice President

Mayor Thomas J. Longo, Secretary



Darnell Brown



Mayor Dean DePiero



Anthony Liberatore, Jr.



Mayor Gary W. Starr

The Sewer District  
employs more than  
600 men and women  
across northeast Ohio,  
and those are the faces  
of clean water in our  
region. With a vision for

# Facing the clean-water facts

Erwin J. Odeal, Executive Director

Michael Bucci, Deputy Executive Director

William B. Schatz, Legal Counsel



Charles Vasulka, Director of  
Engineering & Construction



Timothy Tighe, Director of  
Operations & Maintenance



Constance Haqq, Director of Communications  
& Community Relations



Frank Greenland, Director of  
Capital Programs



Jennifer Demmerle, Acting  
Director of Finance



David McNeeley, Acting  
Director of Human Resources



Ana Maldonado, Director  
of Information Technology

future opportunities  
and challenges, our  
team of Trustees and  
Senior Staff members  
will continue to work  
with staff and our  
neighbors to assure  
clean water for a  
Greater Cleveland.



**Northeast Ohio  
Regional Sewer District**

# clean water is beautiful.

From a burning river to lakefront development, from an environmental disaster to a recreational destination, The Northeast Ohio Regional Sewer District has helped rejuvenate Cleveland's Lake Erie and Cuyahoga River, and the progress continues. We are proud of our contributions to this rebirth, and will continue to promote our natural water resources as places of healthy water quality, beauty and promise.



Visit us on the world wide web [www.NEORS D.org](http://www.NEORS D.org)