Northeast Ohio Regional Sewer District
Protecting Your Health and Environment

FACTS ABOUT THE SEWER DISTRICT

3900 Euclid Avenue | Cleveland, Ohio 44115 | www.neorsd.org

WHO WE ARE

The Northeast Ohio Regional Sewer District is responsible for collecting and treating wastewater and managing stormwater to contribute to a healthy clean-water environment. The Sewer District serves approximately one million people in all or portions of 62 Northeast Ohio communities.

WHAT WE DO

District facilities transport and treat wastewater in the Greater Cleveland area.

The District **cleans** and treats wastewater from nearly one million people in the region. In addition, our facilities receive and treat a significant amount of stormwater entering into the collection system.

The District **protects** communities in the service area through detailed monitoring and enforcing of industrial discharge limits, water-quality sampling, and combined sewer overflow (CSO) monitoring and notification.

The District **assures** clean water and a healthy environment by developing community partnerships, advocating for clean water on a national level, designing and constructing clean-water projects, and providing a high-quality service to member communities. We support public safety during crises through partnerships and training with emergency support.

WHO GOVERNS CLEAN WATER

The District is governed by a seven-member Board of Trustees. Three members are appointed by the City of Cleveland, three by the Suburban Council of Governments, and one by the Cuyahoga County Board of Commissioners.

Cleaning, protecting, and assuring a healthy region

- Darnell Brown, *President*
- Mayor Gary W. Starr, *Vice President*
- Mayor Dean DePiero, *Secretary*
- Mayor Jack Bacci
- Sheila J. Kelly
- Walter O'Malley
- Ronald D. Sulik

WHERE WE'RE LOCATED

Easterly Wastewater Treatment Plant
14021 Lakeshore Blvd. in Cleveland
Westerly Wastewater Treatment Center
5800 Cleveland Memorial Shwy. in Cleveland
Southerly Wastewater Treatment Center
6000 Canal Road in Cuyahoga Heights
Environmental & Maintenance Services Center (EMSC)
4747 East 49th St. in Cuyahoga Heights
George McMonagle Administration Building
3900 Euclid Avenue in Cleveland

continued

The Northeast Ohio Regional Sewer District serves customers by leading effective wastewater and stormwater management that protects the health and environment of our region while enhancing quality of life.

HOW WE EDUCATE

The District's community outreach efforts promote an understanding of the organization as a major contributor to the economic, social, and environmental vitality of Greater Cleveland. We educate students, officials, and residents about our clean-water services by participating in numerous community outreach events and by providing materials to motivate and lead discussion.

Through these efforts, we connect the District's work with regional efforts focused on improving quality of life. For more information, visit ***neorsd.org***.

STORMWATER MANAGEMENT

Stormwater is a major contributor to pollution. Water quality issues cross geographic boundaries. Problems such as flooding and stream erosion must be managed watershed by watershed. Until now, no one has taken responsibility for solving these stormwater-related problems. Some of our work over the last two years includes:

- Conducted 300+ meetings with member communities and other affected parties
- Stormwater Advisory Committee (SWAC) met five times in 2008; included a variety of stakeholders: non-profits, developers, city personnel
- Continue to meet with other stakeholders (such as churches and school districts)

We will offer credits to reduce stormwater fees for property improvements including:

- Retention or detention methods
- Stormwater quality improvements
- Low-impact development *Improves quality, quantity*
- Providing educational resources

COMBINED SEWER OVERFLOWS

A combined sewer is a pipe that carries both stormwater and sewage. During heavy rains, stormwater can fill combined sewers to capacity. To prevent flooding, the combination of stormwater and sewage was designed to discharge to the environment. This discharge is called a Combined Sewer Overflow.

The US Environmental Protection Agency (EPA) requires cities around the country to control CSOs and we are working to make the required improvements.

We are negotiating with the US EPA to adopt a combined sewer overflow control plan, which would reduce CSOs in the District's service area while minimizing the financial burden to our customers.

For more information, visit our website ***cso.neorsd.org***

RATE-SAVING PROGRAMS

To learn more about our rate-saving programs for elderly or disabled customers, or lower rates for summer usage, visit ***neorsd.org/save***, or contact our Customer Service department at (216) 881-8247.

2010-2011 RATE SCHEDULE *per mcf* *

	Cleveland		Suburbs	
	REGULAR	HOMESTEAD	REGULAR	HOMESTEAD
2010	$40.75	$27.35	$44.25	$29.70
2011	$44.75	$30.05	$48.00	$32.25

*1,000 cubic feet = 7,480 gallons

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COMBINED SEWER OVERFLOWS (CSOs)

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What are combined sewers?

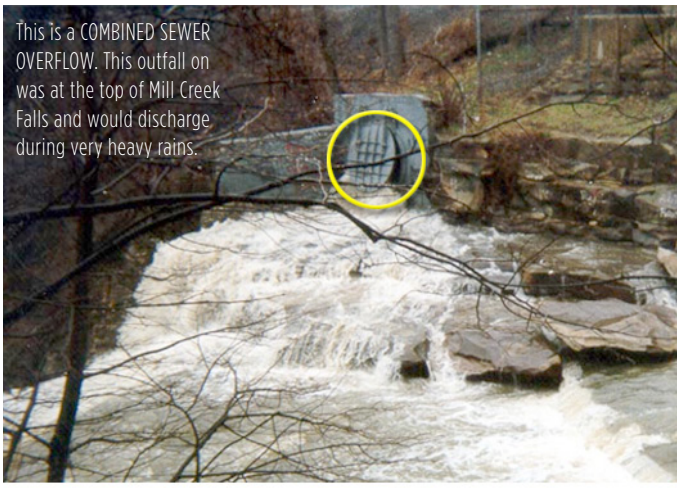
In older neighborhoods, combined sewers are the norm. They collect a combination of sanitary waste (like the water from your homes' sinks, showers and toilets) and stormwater runoff from street drains and downspouts. The combined sewer network beneath Cleveland includes stretches that date back to the late 1800s.

Suburbs, however, sit atop a system of separate sewers, where sanitary flow and stormwater travel in separate pipes; the sanitary waste flows to a treatment facility while stormwater may be discharged directly to a nearby lake or stream.

What are Combined Sewer Overflows?

When heavy flows of stormwater runoff enter into the combined sewers, control devices may allow some of the flow—a combination of stormwater and sewage—to overflow into area waterways preventing combined sewer and residential backups. This release is

COMBINED SEWER OVERFLOWS result in the discharge of bacteria and floatable debris into the environment.



This is a COMBINED SEWER OVERFLOW. This outfall on was at the top of Mill Creek Falls and would discharge during very heavy rains.

The outfall was removed in 2005, improving water quality in the creek.

continued on reverse

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The Mill Creek Tunnel, shown here under construction 300 feet underground in 2005, will help to capture combined sewage and stormwater and reduce overflows to the environment. It is scheduled for completion in 2008.

known as a combined sewer overflow (CSO). There are approximately 116 points (known as outfalls) remaining in our service area where combined sewers can overflow into the environment during heavy storms.

What are the environmental impacts?

Although CSOs can discharge floating matter and debris, a more significant problem is the harmful bacteria carried in the overflow. This is why after a CSO event or periods of heavy rain, individuals—particularly children and elderly—are advised to avoid contact with recreational waters.

What should I do if I see water discharging from a combined sewer outfall?

Our combined sewer overflow pipes, or outfalls, are marked with signage to inform residents of these pipes' purpose. If you should see one of these marked outfalls discharging to the environment during dry weather, contact (216) 432-7333.

Where can I find more information?

For up-to-date information on our CSO control activities, visit our website **cso.neorsd.org**.

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OUR CLEAN-WATER FACILITIES

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OVERVIEW

The Northeast Ohio Regional Sewer District operates three wastewater treatment plants, treating approximately 90 billion gallons of wastewater yearly. The District also operates one Environmental & Maintenance Services Center (EMSC) for its maintenance, laboratory, and industrial surveillance departments. Public meetings are held at the George J. McMonagle (GJM) administration building, located in Cleveland. In total, our clean-water facilities serve an estimated population of one million throughout 62 communities in the region.

TREATMENT PLANTS

The Federal Water Pollution Control Act of 1972, amended by the Clean Water Act of 1977 and subsequent amendments through 1982, states that wastewater treatment is to be accomplished by publicly-owned treatment works operating in a consistent and reliable manner.

In accordance with these amendments, the District's wastewater treatment facilities collect and treat wastewater in order to attain a national goal of *"water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and provides for the recreation in and on the water."* (Clean Water Act)

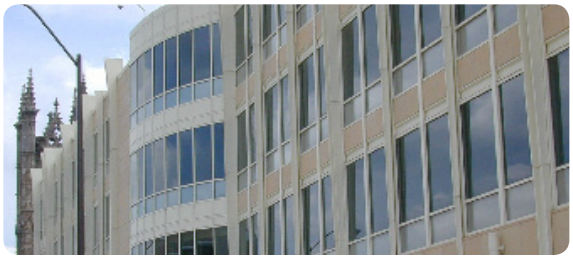
All of the water treated by the District—known as effluent—is released back into area waterways, specifically Lake Erie and the Cuyahoga River. Our effluent must comply with stringent environmental regulations identified in a permit issued to each treatment plant under the National Pollutant Discharge Elimination System (NPDES). Because the discharge of pollutants in excess of the permits' effluent limitations is prohibited, it is essential that each plant effectively treat wastewater in compliance with these permits. Proper equipment and related maintenance are critical in meeting these requirements.

EASTERLY in Cleveland

SOUTHERLY in Cuyahoga Heights

WESTERLY in Cleveland

EMSC in Cuyahoga Heights



McMONAGLE BUILDING in Cleveland

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EASTERLY
WASTEWATER TREATMENT PLANT

3900 Euclid Avenue | Cleveland, Ohio 44115 | www.neorsd.org

LOCATION

14021 Lakeshore Boulevard

PLANT DESIGN CAPACITY

155 million gallons per day (mgd)

AVERAGE DAILY FLOW

94 mgd

EFFLUENT DISCHARGE POINT

Lake Erie

COMMUNITIES SERVED

Easterly serves approximately 334,000 people in Beachwood, Bratenahl, Cleveland, Cleveland Heights, East Cleveland, Euclid, Gates Mills, Highland Heights, Lyndhurst, Mayfield Heights, Mayfield Village, Pepper Pike, Richmond Heights, Shaker Heights, South Euclid, University Heights, and Willoughby Hills.

Wastewater from homes and businesses flow to the plant through three major sewer pipelines: the Collinwood Interceptor (northeast portions of Cleveland), the Easterly Interceptor (greater downtown Cleveland), and the Heights Hilltop Interceptor (Cleveland's eastern suburbs).

TYPE OF PLANT

Easterly provides treatment at an advanced level using primary and secondary treatment (activated sludge, step aeration) to clean water. Each year, the plant pumps approximately 1.3 billion gallons of sludge through the Southerly Force Main—a 13 mile pipe connected to the Southerly Wastewater Treatment Plant—for further treatment. Grease skimmings collected from all District wastewater treatment plants is disposed of in Easterly's fluidized bed grease incinerator. The plant processes 281,700 gallons, or 545 dry tons annually.


Easterly Wastewater Treatment Plant

ACHIEVEMENTS

Easterly consistently operates within its National Pollutant Discharge Elimination System (NPDES) permit limits, and in doing so has received awards from the National Association of Clean Water Agencies (NACWA) for permit compliance every year since 1993. The plant has received numerous awards including:

Ohio Pollution Control Association Safety Awards ('91-'92)

NACWA Peak Performance Platinum Award ('97)

U.S. EPA Excellence Award, First Place Winner ('97)

NACWA Peak Performance Gold Award ('98-'00, '06)

NACWA Peak Performance Silver Award ('01-'05)

NACWA Excellence in Management ('03-'05)

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HISTORY

1905 Easterly Interceptor with coarse bar screen complete from W. 9 to E. 140th. Flow is discharged through a one-half mile, 63" steel pipe into Lake Erie

1912 Testing station at Easterly determined process and level of treatment for all city treatment plants

1913 Easterly became the site of an experimental treatment facility

1917 Activated sludge demonstration plant served as basis of design for Easterly

1919 Design and construction of the facilities including preliminary treatment and effluent chlorination begins

1922 Easterly primary treatment works in service

1938 Easterly secondary treatment plant on line

1972 District assumed operation and continued Cleveland's program to expand capacity and refurbish the plant to meet stricter discharge limitations. The original process was retained and the plant now operates with a considerable amount of functional, older equipment

1982 Placed new effluent pump station into service

1990s Continued additional equipment improvements which represent a total investment of over $60 million through 1993

1997 Easterly's Biosolids Pumping facility rehabilitiation complete, including a new 13-mile force main to transport solids to the Southerly Plant

2003 Completed Easterly wet-weather facility upgrade

2006 Upgrades completed to date include: six new Fulton low-emission boilers, effluent-monitoring station, and gas-monitoring detection system

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SOUTHERLY
WASTEWATER TREATMENT CENTER

3900 Euclid Avenue | Cleveland, Ohio 44115 | www.neorsd.org

LOCATION

6000 Canal Road, Cuyahoga Heights, OH 44125-1075

PLANT DESIGN CAPACITY

175 million gallons per day (mgd)

AVERAGE DAILY FLOW

125.45 million gallons per day

EFFLUENT DISCHARGE POINT

Cuyahoga River

COMMUNITIES SERVED

Southerly serves a population of approximately 601,000 people in Beachwood, Berea, Boston Heights Village, Brecksville, Broadview Heights, Brook Park, Brooklyn, Brooklyn Heights, southern Cleveland, Columbia Township, Cuyahoga Heights, Garfield Heights, Highland Hills, Hudson, Independence, Linndale, Macedonia, Maple Heights, Middleburg Heights, Newburgh Heights, North Randall, North Royalton, Northfield Center Township, Northfield, Oakwood, Olmsted Falls, Olmsted Township, Orange, Parma, Parma Heights, Richfield, Sagamore Hills, Seven Hills, Shaker Heights, Solon, Strongsville, Twinsburg, Valley View, Walton Hills, and Warrensville Heights.

Wastewater from homes and businesses flow to the plant through the Southwest-West Leg Interceptor, Cuyahoga Valley Interceptor, Big Creek Interceptor, Southerly Interceptor, and the Mill Creek Interceptor.


Southerly Wastewater Treatment Center

TYPE OF PLANT

The largest of the District's three wastewater treatment plants, Southerly provides treatment at an advanced level by utilizing a two-stage biological treatment process. The plant operates using preliminary and primary treatment, along with the first stage biological process for the removal of carbonaceous oxygen demand (CBOD) and the second stage biological process for the removal of ammonia and organic nitrogen.

Southerly also handles solids treatment, processing both sludge—and septage on-site. The plant processes sludge generated from the Easterly Wastewater Treatment Plant. In 2006, the plant processed approximately 11.8 million gallons of septage from across the State.

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ACHIEVEMENTS

Southerly consistently operates within its National Pollutant Discharge Elimination System (NPDES) permit limits, and in doing so has received awards from the National Association of Clean Water Agencies (NACWA) for permit compliance every year since 1997.

NACWA Peak Performance Silver Award
('87, '89, '91, '94, '97, '06)

NACWA Peak Performance Gold Award
('88, '90, '92, '93, '95, '96, '98–'02)

NACWA Peak Performance Platinum Award
('02)

HISTORY

1927 Southerly plant built by the City of Cleveland

1975 Plant rehabilitation begins

1997 Mill Creek Tunnel (MCT) began construction, ties into Southerly

1997 Major dewatering system improvements

2004-2005 Skimmings handing system improvements

2005 Construction of Southerly wetlands at northside of plant

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3/2010

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WESTERLY
WASTEWATER TREATMENT CENTER

3900 Euclid Avenue | Cleveland, Ohio 44115 | www.neorsd.org

LOCATION

5800 Cleveland Memorial Shoreway

PLANT DESIGN CAPACITY

35 million gallons per day (mgd)

AVERAGE DAILY FLOW

26 million gallons per day

EFFLUENT DISCHARGE POINT

Lake Erie

COMMUNITIES SERVED

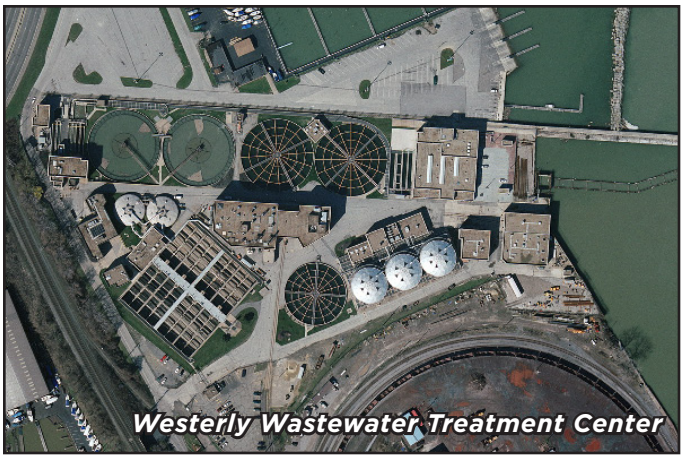
Westerly serves approximately 103,000 people in
Brooklyn and the City of Cleveland.

Wastewater from homes and business flow to the plant through the Westerly Interceptor, Walworth Run Interceptor, Low Level Interceptor, and the Northwest Interceptor.

TYPE OF PLANT

Westerly uses primary and secondary treatment (a biological process using trickling filters and solids contact) to clean water in the region. Biosolids generated from the wastewater are processed through gravity thickeners, dewatering centrifuges, and incineration.

Westerly is the only plant with a Combined Sewer Overflow Treatment Facility (CSOTF).


Westerly Wastewater Treatment Center

This facility provides screening and primary settling for combined sewer overflows and has a six million gallon storage capacity.

ACHIEVEMENTS

Westerly consistently operates within its National Pollutant Discharge Elimination System (NPDES) permit limits, and in doing so has received awards from the National Association of Clean Water Agencies (NACWA) for permit compliance. Throughout the years, the plant has received numerous awards including:

NACWA Peak Performance Gold Awards
('96-'97, '99, '01-'02, '04-'05)

NACWA Peak Performance Silver Awards
('98, '00, '03, '06)

NACWA Excellence in Management
('03-'05)

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HISTORY

1922 City of Cleveland constructed Westerly WWTP as a primary treatment facility

1932 Plant added a detritus tank, an aerated grease separation tank, two 50-foot diameter sludge digesters, a sludge filter, and a high temperature garbage incinerator

1930s Plant added prechlorination facilities, detritus tanks, digesters, an incinerator, gas storage, and vacuum filters to the treatment process

1950s Constructed preaeration tanks, detritus tanks, bar screens, and grinders

1970s Wastewater experts promote a new technology consisting of a physical/chemical process

1972 Sewer District assumes responsibility of Westerly

1984 Construction of physical/chemical process complete

1993 Westerly begins conversion to biological treatment facility

1995 Biological treatment process goes online

2005 Westerly outfall extended farther into Lake Erie

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EMSC
ENVIRONMENTAL & MAINTENANCE SERVICES CENTER

3900 Euclid Avenue | Cleveland, Ohio 44115 | www.neorsd.org

HISTORY

Our Environmental & Maintenance Services Center, or EMSC, opened in 1990 to relocate several departments which had been operating on Broadway Avenue. The 114,820-square-foot complex contains office, garage and laboratory space. Seven departments operate within this facility, which serves organizational, environmental, and community needs.

ANALYTICAL SERVICES

This department analyzes over 30,000 samples of wastewater, industrial waste, chemicals, and surface water each year. This department is equipped with the most modern and advanced instrumentation for monitoring water quality and performing effluent-toxicity testing.

SEWER SYSTEM MAINTENANCE & OPERATION (SSMO)

SSMO operates and maintains the District's collection system infrastructure, such as interceptor sewers, pumping stations, manholes, odor control facilities, and much more. SSMO also surveys property and inspects new service connections and operates a Combined Sewer Overflow (CSO) control system.

WATER QUALITY & INDUSTRIAL SURVEILLANCE (WQIS)

WQIS is responsible for enforcement of the United States Environmental Protection Agency's industrial pretreatment program within the District's service area. WQIS

investigators inspect and sample more than1,000 industrial users' discharges to the wastewater system. They also respond to chemical spills and other emergencies to protect the collection system, treatment plants, area water bodies, and the public. Throughout the year, personnel conduct sampling for macroinvertebrate and fish community surveys (shown above), stream habitat assessments, and chemical water quality assessments.

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INVENTORY CONTROL

This department stores, purchases, controls, and delivers maintenance parts and supplies required for all of the District's water pollution control facilities.

VEHICLE MAINTENANCE

Vehicle Maintenance services 130 District-owned vehicles, and 19 stationary power units, including gas and diesel powered equipment used in the plants. The department is also responsible for maintaining 434 pieces of motorized equipment, from generators to forklifts.

BUILDING MAINTENANCE

Building Maintenance is responsible for the District's buildings and grounds, including all heating, ventilation, and air conditioning equipment. Building Maintenance also makes recommendations to the other District departments for general upkeep of facilities and grounds.

PLANT AUTOMATION

Plant Automation monitors the automated control system used at all three treatment plants, for operating efficiency and effluent quality through the use of specialized industry software.

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WQIS
WATER QUALITY & INDUSTRIAL SURVEILLANCE

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PURPOSE

Water Quality and Industrial Surveillance (WQIS) monitors and protects the District's collection system infrastructure. In addition, WQIS performs the following:

- Monitor industrial discharges to the collection system
- Monitor water quality in area water bodies
- Comply with pretreatment program requirements in the District's National Pollution Discharge Elimination System (NPDES) permits

Investigator Mo Zachariah responds to an oil spill

ENFORCEMENT

WQIS investigators inspect and sample approximately 175 Significant Industrial Users within the service area to monitor compliance with Federal Categorical Pretreatment Standards and the District's Code of Regulations. WQIS initiates enforcement action on behalf of the District against facilities that are found not to be in compliance with these regulations.

SURCHARGE

Industrial sewerage service rates are based not only on the volume of wastewater used, but also on the strength of the wastewater as measured by the total suspended solids concentration and biochemical or chemical oxygen demand. WQIS investigators inspect and sample industrial facilities in order to calculate industrial sewerage service rates appropriate for the level of treatment required.

POLLUTION PREVENTION

Pollution prevention is defined as source reduction and other practices which reduce or eliminate the creation of pollutants. WQIS investigators identify pollutants within the sewage collection system that have the potential to be reduced through pollution-prevention measures, and work with the District's industrial customers to achieve pollution prevention goals. Efforts to identify and eliminate sources of mercury provide an example of this type of work. The department routinely assists with area Household Hazardous Waste Collection events, including a Household Mercury Item Disposal program which is offered weekdays to the public during business hours.

continued

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Sewer District personnel also participate in emergency response training, as seen in this 2007 event, a cooperative effort with local first-responders.

ENVIRONMENTAL ASSESSMENT

WQIS monitors water quality on area water bodies, including Lake Erie and the Cuyahoga River. This is done through the collection and evaluation of chemicals, bacteriological, aquatic habitat, macroinvertebrate, and fish community data. Investigators also assist member communities by identifying dry-weather discharges, such as sanitary sewage to the environment and locating the sources of those discharges. Additionally, WQIS reviews and provides comments on proposed water-quality regulations and permits that have the potential to affect District operations.

BUSINESS GROUP

Business investigators work with the District's Customer Service and Finance Departments to ensure that new customers are placed on District billing. Personnel also investigate customer water leaks, conduct inspections related to the disposal of septic tank wastes and sludges at all District facilities, and issue temporary discharge permits. WQIS administers the District's Sewer Service Charge Based on Usage of the System and No Charge Status programs.

EMERGENCY RESPONSE

WQIS investigators are on call 24 hours a day to respond to spills and other releases of pollutants which threaten the wastewater collection and treatment plants, area waterways, and public health.

SAFETY AND TRAINING

WQIS participates in confined-space training, confined-space rescue training, Right-to-know training for District personnel, and general safety consultation to the District's treatment facilities.

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INDUSTRIAL PRETREATMENT

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PURPOSE

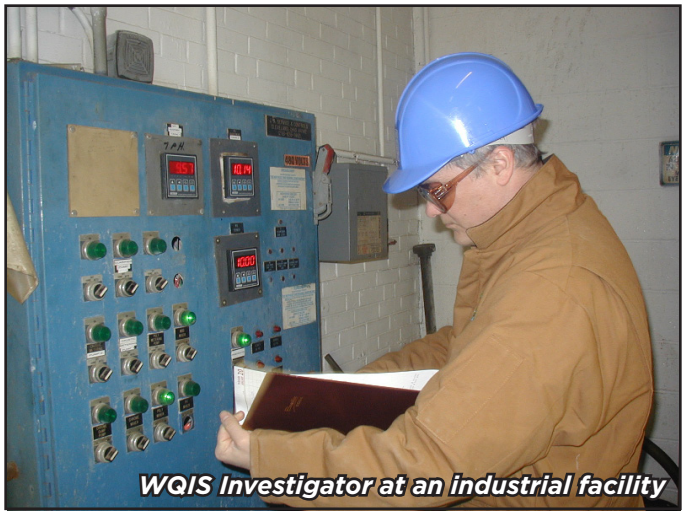
The District's Water Quality & Industrial Surveillance (WQIS) department is delegated the authority to enforce the Clean Water Act through an approved Industrial Pretreatment Program and the National Pollution Discharge Elimination System (NPDES) permits. Strategic objectives include:

- Prevent pollutants from entering into Publicly Owned Treatment Works (POTW) that will pass through the treatment process, or be incompatible with such works.
- Prevent the introduction of pollutants into POTW that will interfere with the operation of the POTW, including interference with the use or disposal of municipal sludge.
- Improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges.

THE FACTS

Although some companies try to save money by bypassing treatment, the majority of industrial users are very conscientious about complying with discharge requirements.

The electroplating and metal finishing industry is the largest industrial group affected by discharge regulations in our area. These industries have spent millions of dollars on the installation of equipment to remove pollutants (cyanides, metals, acids, and organic solvents) from their wastewater.



WQIS Investigator at an industrial facility

Similar to the District, industries invest large amounts annually for the operation and maintenance of treatment equipment, as well as for the proper disposal of hazardous or nonhazardous sludges created while complying with discharge limits.

WHY THE DISTRICT CONTROLS INDUSTRIAL DISCHARGES

Because treatment plants are designed to remove solids and treat organic wastes, some industrial wastes may interfere with the biological process utilized at our plants, preventing the complete treatment process to take place.

continued

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WQIS Investigator at an industrial facility

Certain industrial wastes can also cause damage to plant equipment. In addition, some pollutants can pass through our plants untreated and enter the environment.

INDUSTRIAL CONTROLS

Established in the 1970s, industrial controls require certain pollutants to be destroyed or removed at the industrial source. The USEPA established general pretreatment program guidelines in 1978, which mandated treatment agencies' obligations under the Clean Water Act.

These regulations require the District to further control industries through enforcement of *categorical standards* (technology-based discharge limits for specific pollutants established by the USEPA for certain industrial processes).

ENFORCEMENT

Although industries are obligated to monitor their industrial discharge carefully, the District is also required to sample industrial discharges and take enforcement action against violating industries.

The highest levels of enforcement—known as the Show Cause Hearings and Emergency Terminations of Service — are accomplished with the assistance of the District's Legal department. Industries are well aware of these actions as they are an effective deterrent to those who consider improperly disposing of waste.

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SEWER SYSTEM MAINTENANCE & OPERATION

3900 Euclid Avenue | Cleveland, Ohio 44115 | www.neorsd.org

PURPOSE

SSMO operates and maintains the District's collection system infrastructure. Objectives include:

- Maximize storage in the collection system
- Maximize flow to the plants
- Minimize overflows to the environment

SYSTEM INFRASTRUCTURE

SSMO operates and maintains over 280 miles of interceptor sewers throughout the District's service area. These interceptors are located primarily within the boundaries of Cuyahoga County and convey member community flows to the District's wastewater treatment facilities.

- A majority of these interceptors are constructed of brick or reinforced concrete
- A majority of these interceptors are greater than four feet in diameter
- Manhole depths vary from five to 300 feet

ADDITIONAL SERVICES

- Respond to customer requests
- Perform minor masonry repairs
- Assist District Engineering department and consultants
- Assist other governmental agencies
- Perform special investigations
- Maintain the District's portable gas detectors
- Evaluate and maintain all Combined Sewer Overflow (CSO) equipment

SSMO crews in the community

- Inspect and manage the District's emergency repairs to the collection system
- Use of portable flow monitoring equipment to measure sewer flows on a temporary basis
- Operation of the Ohio Utility Protection Services Program

FACILITIES

The department regularly inspects and maintains other sewer-related structures throughout the greater Cleveland area:

- Approximately 500 fixed weir regulators
- 25 automated regulators
- 25 rain gauges
- 130 level and flow monitoring sites
- Ten floatable control facilities
- Eight odor control facilities
- Seven pump stations
- Seven generators
- Two tunnel control structures
- One stormwater control dam

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ANALYTICAL SERVICES

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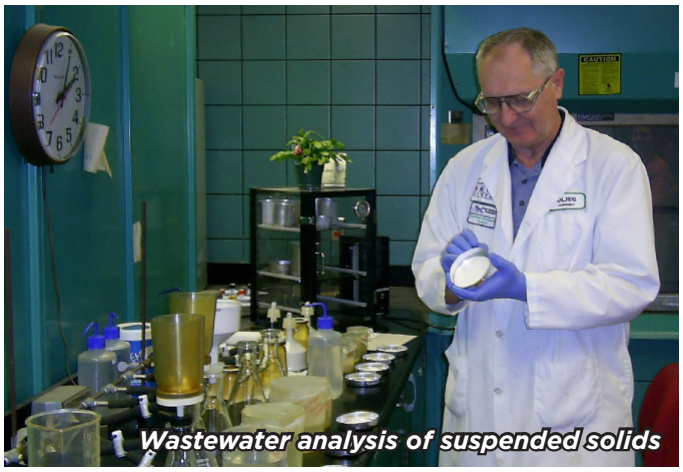
PURPOSE

To protect the environment and public health by providing quality data using advanced technologies. This full service laboratory maintains the following objectives:

- Assist the Districts's three wastewater treatment plants with daily operation and compliance by analyzing routine samples for specific analytical parameters
- Provide technical support regarding internal and external analytical capabilities to all District departments
- Maintain standard operating procedures for collection and delivery of all samples and continuous laboratory development

RESPONSIBILITIES

- Wastewater analysis
- Whole-effluent toxicity (WET) testing
- Microbiological analysis and examination
- Trace level mercury sampling and analysis
- Support and training for trace level chlorine analysis
- Generation and electronic submission of the District's National Pollution Discharge Elimination System (NPDES) report
- Assist the Ohio Department of Health with water quality monitoring
- Heavy metal monitoring
- Data trending of wastewater samples



Wastewater analysis of suspended solids

GROUPS

Analytical Services tests samples for substances categorized within three distinct groups:

- **Inorganics :** *solids, sludge, total cyanide, chemical oxygen demand, bulk analysis, titrations, calorimetry, conductivity, turbidity, and oil and grease*
- **Organics :** *microscopic and bacterial analysis, biochemical oxygen demand (BOD), whole effluent toxicity (WET), and coliform*
- **Instrumentation :** *trace metals, metals, trace mercury, mercury, arsenic, selenium, alkalinity, phenol, phosphorus, sulfate, hexavalent chromium, nitrates, nitrites, ammonia, and trace cyanide*

COMPLIANCE

- National Pollution Discharge Elimination System (NPDES) permits
- US Environmental Protection Agency (USEPA) water quality parameters

The Northeast Ohio Regional Sewer District serves customers by leading effective wastewater and stormwater management that protects the health and environment of our region while enhancing quality of life.

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COMPLIANCE *continued from reverse*

- Pennsylvania Department of Environmental Protection Chapter 252 Title 25 Standards
- Process control standards

EQUIPMENT

- Two Automated Mercury Analyzers
- One Automated Cyanide Analyzer
- Two Inductively Coupled Argon Plasma (ICAP) Spectrophotometers
- Three Lachat Automated Chemistry Analyzers
- One Total Organic Carbon (TOC) Analyzer

ACHIEVEMENTS

- 2007-2009 National Environmental Laboratory Accreditation Program (NELAP) Accredited Laboratory
- 97% of staff members are certified Wastewater Analysts through the Lab Analyst Committee of the OWEA
- Successful completion Discharge Monitoring Report Quality Assurance (DMR-QA) Proficiency Testing for 10 consecutive years
- Involvement at the Committee and Director Level with the Lab Analyst Committee of the Ohio Water Environment Association (OWEA) for the past 12 years
- Involvement in the Student Technical Enrichment Program (STEP)

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