Ohio EPA 25 Years of Protecting Ohio's Environment

In the beginning...

In 1972, "Alone Again (Naturally)" by Gilbert O'Sullivan was a popular hit on the radio, and Americans were watching "Sanford and Son" and "All in the Family" on television. Richard M. Nixon was president, and John J. Gilligan was governor of Ohio.

That year also marked the beginning of the Ohio Environmental Protection Agency, following the 1970 founding of the United States Environmental Protection Agency and the first Earth Day on April 22, 1970. As Ohio EPA marks its 25th anniversary, it's time to look at how far we've come and at the challenges that remain.

At the time of the Agency's founding, Youngstown, Cleveland and Steubenville had some of the dirtiest air in the nation. Air alerts were common. The state's waterways were not faring much better: a spark from a cutting torch ignited an oil slick on the Cuyahoga River. Most garbage in Ohio was disposed in unlined dumpsites that were only minimally regulated.

The need for environmental restoration and protection was clear.

Gov. Gilligan assembled a task force to analyze Ohio's situation and make recommendations for correcting environmental ills. Col. John Glenn chaired the task force, which included a diverse group of Ohio citizens. The group recommended creation of a single state agency to administer all environmental programs, which at the time were scattered among several entities with limited power.

Senate Bill 397 created Ohio EPA. Gov. Gilligan named Ira Whitman, an environmental engineer and member of the original task force, to head the Agency. On Oct. 23, 1972, Ohio EPA began regulating Ohio's environment with about 230 employees.

Air

Air quality in Ohio in the early 1970s was reputed to be some of the worst in the nation. In 1975, there were 44 air pollution alerts, 32 of them in Steubenville. Factories churned out thick, black smoke and roads were crowded with gas-guzzling cars and trucks. Something had to be done. With the passage of the 1970 Clean Air Act, air quality standards were established for six pollutants: sulfur dioxide, particulates, carbon monoxide, lead, nitrogen oxide and ozone. These standards were the first step in the move toward cleaning up our air.

Between 1976 and 1995, Ohio experienced a significant drop in the amount of certain air pollutants. The average amount of lead dropped by 97 percent. Carbon monoxide levels decreased 55 percent, based on monitors in Cleveland, Toledo, Canton and Dayton. Also, the average amount of particulates in the air dropped by 79 percent in the past 20 years, while nitrogen dioxide levels have fallen by 11 percent. The average amount of ozone has decreased by 25 percent.

Ohio EPA has a network of almost 400 air monitors showing air quality has improved in every major urban area.

Land

In 1970, most garbage in Ohio was disposed in unlined dumpsites that were only minimally regulated. At the time of the first Earth Day celebration, efforts were made to promote recycling and waste reduction, but these did not result in widespread behavior changes. As the economy grew and lifestyles changed, Ohioans like Americans everywhere began to generate more trash.

During the 1980s, Ohio disposal facilities reported receiving a million tons more trash each year than the year before. At the same time, public health officials were documenting problems of disease transmission, drinking water contamination, explosive gas migration, and runoff of polluted water from many dumpsites. As older sites ran out of room or were forced to close because of problems, fewer and fewer disposal sites were available. At the same time, Ohio began to receive increasing amounts of trash from out-of-state, as East Coast states experienced many of the same problems.

Since that time, conditions have changed dramatically. Ohio passed a comprehensive solid waste law (House Bill 592) in 1988, which upgraded the standards for all disposal facilities and set in motion a local and statewide planning process to promote recycling and ensure that enough environmentally sound disposal options will be available to meet our needs in the future.

State landfill regulations were upgraded in 1990, followed by federal regulations in 1993. Modern sanitary landfills are highly engineered facilities that are required to have composite liners, leachate collection systems, ground water monitoring, runoff controls, and explosive gas monitoring and collection systems. Facility operators are responsible for 30 years of monitoring and care after the facility closes, so that local communities are not left with significant cleanup costs if a problem is discovered years later.

Another area of progress since the first Earth Day is the regulation of hazardous waste. The federal Resource Conservation and Recovery Act (RCRA), passed in 1976, created guidelines for those who generate, transport, treat, store and dispose hazardous waste. In 1981, Ohio became the first state to issue hazardous waste permits. Ohio EPA's Division of Hazardous Waste Management (DHWM) has overseen several major RCRA cleanups, such as GSX, CECOS and the Cozart Landfill. Cleanup of hazardous waste management units (partial closures) has been accomplished at Stark Ceramics and Chemical Waste Management/Vickery. DHWM also has a compliance assurance program, which allows various environmental credit project and pollution prevention programs to be applied toward penalties.

In an effort to ensure the health and safety of the public and the environment, Ohio EPA created the Office of Federal Facilities Oversight (OFFO) in 1994 to oversee investigation and remediation activities at federal cleanup sites operated by the federal government.

Water

When the nation celebrated the first Earth Day, the quality of many of Ohio's waterways was poor. Ohio was not alone. So in 1972, Congress enacted the Federal Water Pollution Control Act Amendments, now commonly referred to as the Clean Water Act.

Stream and river surveys conducted in the 1970s by Ohio EPA revealed that only 34 percent of these waters fully supported aquatic life uses, which are a measure of stream quality. Since 1972, more than $6 billion of public and private funds have been spent in Ohio on the control of industrial and municipal wastewater pollution. Because of the substantial investment made to control industrial and municipal discharges, studies show that 50 percent of Ohio's waterways now fully support aquatic life uses.

The Western Basin of Lake Erie was considered dead two decades ago because during summer, large areas of the basin and parts of the Central Basin were devoid of oxygen. An overabundance of nutrients such as phosphorus stimulated algae growth, and large algae mats could be observed floating on the lake. The algae would die off and decompose, utilizing the oxygen in the lake or wash up on beaches where it would combine with dead fish to decompose and cause odors. Tributary streams such as the Maumee were carrying such wasteloads that the water would be green with algae, contributing to taste and odor problems in drinking water.

Since those days, there has been substantial improvement in wastewater treatment. Municipal and industrial dischargers no longer dispose of high strength organic wastes -- a direct result of Ohio EPA regulating their discharges. Today, Lake Erie supports a multi-million dollar sport fishing industry and supplies drinking water for 11 million people. To continue to improve water quality in Lake Erie, Ohio EPA has established remedial action plans for four Lake Erie tributaries: the Ashtabula, Cuyahoga, Black and Maumee rivers.

Ground water serves as a source of drinking water for approximately 40 percent of Ohioans. From the turn of the century to the 1950s and 1960s, the practice in Ohio was to utilize old quarries or sand and gravel pits solid waste disposal areas. It turned out that those quarries and pits were the worst places as far as potential for ground water contamination. Now, all landfills must have ground water monitoring to ensure contamination doesn't occur. Wellfield protection programs also make a big impact on ground water protection efforts. Dayton's wellfield protection ordinance has been touted as a national model.

The water quality of the Cuyahoga River, from Kent through Akron to its mouth at Lake Erie, is greatly improved compared to a quarter century ago. Fire erupted on the Cuyahoga in 1969 when a spark from a cutting torch ignited oil and debris floating on the river. Now, nearly all violations of Ohio's chemical water quality standards, which plagued the river in the 1960s and 1970s, have been eliminated.

In Southwest Ohio, the Little Miami and Great Miami rivers have significantly improved. The Little Miami is considered an exceptional warmwater habitat for many aquatic species. Only 10 percent of the state's total stream miles have this designation. The Little Miami also has the distinction of being Ohio's first State and National Scenic River.

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Ohio is a water-rich state, with more than 29,000 miles of streams and rivers, a 451-mile border on the Ohio River, more than 5,000 lakes, ponds, and reservoirs (>1 acre), and 236 miles of Lake Erie shoreline. Ohio has 10 scenic rivers comprising more than 629 river miles, the fourth largest total of any state in the nation. Over the past 25 years, Ohio has moved from a lagging position to that of leader in water quality assessment, recognized nationally for our stream sampling methodology and standards. Through chemical and biological analyses of surface, ground and drinking waters, Ohio EPA is able to ensure the quality of our water into the next century and beyond.

Environmental Happenings 1970s-present

1970

- Clean Air Act; amended in 1977 and 1990

1972

- Ohio EPA created
- Water Pollution Control Act
- First air alert issued in Steubenville
- Open burning regulations become effective

1973

- First air and wastewater permits issued

1974

- Safe Drinking Water Act
- First Ohio EPA district office (CDO) created

1975

- 44 air pollution alerts issued (32 in Steubenville)

1976

- First Ohio EPA Inland Spills Conference (held annually)
- New solid waste regulations adopted
- Resource Conservation and Recovery Act (RCRA); amended in 1984 and 1986
- Toxic Substances Control Act

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1977

- Clean Water Act (an amendment to the 1972 Water Pollution Control Act); reauthorized in 1987

1978

- More than a dozen air alerts issued for ozone, now considered Ohio's most pressing air pollution problem

1979

- More than $1 billion spent on air pollution control equipment since 1975

1980

- Director McAvoy was interviewed by ABC World News Tonight for a special segment about acid rain (mid-June)
- State adopts significant public water system rules
- Comprehensive Environmental Response Compensation and Liability Act (CERCLA) established Superfund to clean up contaminated sites

1981

- Down to 225 landfills from 640 dumps or landfills in 1968
- Ohio is first state in U.S. to issue hazardous waste permits

1983

- First criminal conviction under Ohio hazardous waste regulations

1985

- First computerized system of air pollution control monitors, largest in the U.S. with more than 400 sites

1986

- Emergency Planning and Community Right to Know Act
- Miamisburg train derailment forces evacuation of thousands
- 63 percent of stream miles monitored met designated uses
- Ground water strategy is adopted
- Superfund Amendments and Reauthorization Act; reauthorized CERCLA

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1987

- Automobile Inspection & Maintenance (AIM) program begins in five counties
- Water quality standards revised to emphasize monitoring and controlling toxics

1988

- Comprehensive solid waste rules passed (H.B. 592); improved upon 1967 regulations

1990

- Pollution Prevention Act
- Ohio Environmental Education Fund established

1994

- Ohio Comparative Risk Project begins
- Voluntary Action Program begins

1995

- Cessation of Regulated Operations (CRO) Program begins

1996

- Safe Drinking Water Act reauthorized
- Office of Environmental Education Created

Interesting Facts

Ohio EPA started with about 230 employees and now has more than 1,400.

The Ohio Environmental Education Fund uses monies collected for violations of air and water pollution control regulations to award grants for projects that expand awareness and understanding of environmental issues. Nearly $6 million has been awarded to date.

Ohio was the first state to issue hazardous waste permits.

Environmental protection is a big job. Ohio EPA issues approximately 20,000 permits a year and responds to more than 1,000 spills. In 1994, we responded to approximately 175,000 requests for help, ranging from a letter to a phone call to an on-site visit.

Ohio EPA samples more than 700 miles of streams annually.

Solid waste reduction and recycling in Ohio increased from 4.4 million tons in 1990 to 8.5 million tons in 1995. This means Ohio had an average recycling rate of 31.7 percent in 1995, up from 25.6 percent in 1990.

There are 1,600 community public water systems in Ohio, and about 75 percent of them rely on ground water for all or a portion of their supply. Overall, about 40 percent of Ohioans receive their drinking water from ground water sources.

In 1996, 5,318 spills were reported to Ohio EPA.

In the early 1970s, Ohio had no cleanup program for landfills or other sites where hazardous waste was improperly disposed. Today, Southeast District Office (SEDO) is working on cleanups of 12 Superfund sites and has nearly 200 other sites listed as possibly needing some type of cleanup. SEDO is working on about 50 of these state lead sites, many of them impacting public water systems.

H.B. 98 established the Cessation of Regulated Operations (CRO) program. The program is designed to prevent the unsafe abandonment of property where chemicals were used, stored or treated. ORC Chapter 3752 requires businesses to notify Ohio EPA within 30 days after they cease operating a facility and submit a plan for removing regulated substances.

Into the Future

As we move into the 21st century, Ohio EPA has sets its sights on a new way of managing environmental problems. Instead of dividing the environment into the separate media, air, land and water, we now use an integrated management approach. Integrated management means looking at the total picture and trying to address all factors involved instead of focusing on individual problems. It also means paying close attention so that a solution doesn't create a problem in another area. Ohio EPA adopted this integrated approach in the 1990s and plans to continue integrating our environmental protection efforts in the future.

The Division of Surface Water (DSW) is one of the Agency's best examples of integrated environmental management. Instead of studying only one stream in an area and its problems, DSW staff look at the watershed as a whole, enabling them to find underlying problems and prevent future contamination. The goal of Ohio's surface water program, restoration and maintenance of Ohio's water resources, reflects the national water quality objective as contained in the federal Clean Water Act (CWA), which is "... to restore and maintain the chemical, physical, and biological integrity of the nation's waters." The CWA objective is often referred to as the "fishable/swimmable goal." DSW has set a target of achieving full attainment of fishable/swimmable goals in 75 percent of Ohio's waters by the year 2000. Presently, nearly 50 percent of Ohio's water meet the fishable/swimmable goal.

The fishable/swimmable goal is different from the popular idea of clean water as being water that is chemically pure. Instead, fishable/swimmable waters are resources that support stable,

balanced populations of aquatic organisms which are ecologically "healthy," and provide safe water to the people of Ohio for public and industrial water supplies and recreation.

The Office of Pollution Prevention (OPP) works to develop and implement pollution prevention initiatives that effectively reduce pollutants in Ohio through source reduction, and as a second preference, environmentally sound recycling. OPP, which became a separate office in 1993, works with all of Ohio EPA's divisions to integrate pollution prevention into permitting, enforcement and decision making. OPP also administers several voluntary programs that have resulted in a significant reduction in industrial pollution, including the Prevention First initiative, in which 80 of the top 100 toxic emitters in Ohio have pledged to cut pollution.

Ohio EPA's Small Business Assistance Office is a two-year pilot project aimed at helping small businesses understand and comply with the environmental regulations that apply to them. This project uses a multimedia approach so businesses can have a "one-stop shop" for service.