"319" a Magic Number for Ohio EPA

"319" is more than the sum of its parts to environmentalists who love watersheds and wetlands. Instead, it's a precious source of funding for projects that are restoring our nation's surface waters.

In 1987, Section 319 of the federal Clean Water Act amendments created a national program to control **nonpoint source (NPS) pollution**, which is pollution that does not originate from a defined point, such as a pipe outlet. For example, as rainfall and snowmelt run off, they pick up pollutants and deposit them into ground water, lakes, rivers, streams and wetlands. NPS pollution is the leading cause of water quality impairment in the United States.

Ohio EPA's Division of Surface Water (DSW) administers the **Section 319 grant program** for U.S. EPA, distributing more than $3 million each year to projects proposed by local governments and community organizations like watershed improvement groups. To be eligible, recipients must bring at least 40 percent local matching funds to the table, which may consist of cash — from non-federal sources — or in-kind contributions of services or goods. In return, grants are awarded for as much as $500,000.

"Stream and riparian wetlands restorations are our top priorities," said Russ Gibson, DSW's nonpoint source section manager. "Our goal is to make 80 percent of Ohio's large rivers and small watersheds places where aquatic life can thrive by 2010."

319 Ohio - by the Numbers

- 45 active projects totaling $14.9 million
- $9.9 million in local matching funds
- Stabilized 5,900 linear feet of eroding stream bank
- Restored 18,450 linear feet of impaired streams
- Restored natural flow conditions to 34,000 linear feet of hydro-modified streams
- Removed 1,700 linear feet of impounding levees
- Load reduction:
  - Nitrogen - 481,500 pounds per year
  - Phosphorus - 192,414 pounds per year
  - Sediment - 137,131 tons per year
  - Untreated home sewage - 225,659 gallons per day

Early on in the 319 program, grants were often given for passive NPS pollution prevention projects. "When I graduated from college in 1979, installing grass filter strips was the way to go," remembers Gibson. "But today, we're more inclined to fund restoration projects that show quicker and more permanent results."

The chief of DSW, George Elmaraghy, agrees. "In the last two years, DSW has redirected our focus toward eliminating impairment of water bodies. We now give a higher priority to projects that result in improved water quality within a short timeframe."

Powderlick Run in Union County, Ohio was severely impaired by nutrient enrichment, low oxygen levels and habitat degradation.

Quick Fix for Powderlick

A good example of a successful quick fix is the Powderlick Run improvement project in Union County.

Powderlick Run, a small headwater stream to Bokes Creek watershed, was severely impaired by nutrient enrichment (which sounds like a good thing, but agricultural run-off can cause aquatic plant life to run rampant, clogging water-intake pipes, killing fish, and producing foul odors and bad-tasting water), low oxygen levels, and habitat degradation.

With a 319 grant of $189,000, along with local matching funds from DayLay Egg Farm, the City of Columbus (which receives raw drinking water from Bokes Creek), and Oxbow River and Stream Restoration, Inc., the Powderlick Run project restored the water to a meandering stream, replete with 10,200 tree seedlings and other native vegetation, and permanently protected the 26-acre site under new conservation easements.

In just two years, the Run is very close to attaining warmwater habitat aquatic life uses, and water quality measurements taken four years later downstream at the confluence of Powderlick Run

and Bokes Creek are already showing significant improvement.

Ohio EPA's **Division of Environmental and Financial Assistance (DEFA)** also got in on the act on this project. With $124,000 in funding through the **Water Resource Restoration Sponsor Program** — the sponsor in this case was the City of Columbus — they helped restore another 1,000 feet of the Run using natural

channel design techniques. The two funding programs perfectly complemented each other, producing winners all around.

Sandusky Watershed Wetlands Restored Wetlands provide important habitat for wildlife, and also help filter NPS pollutants. But the historic wetlands of the Sandusky and Toussaint watershed regions had been routinely drained and used for cropland for decades.

For this project, a diverse coalition of partners, including Ducks Unlimited, Ohio Department of Natural Resources, the Winnous Point March Conservancy and several others, received a 319 grant of $160,000. The highly successful project resulted in the restoration of nearly 105 acres of wetlands on six sites within the northern reaches of the two watersheds.

Thanks to the restoration project, Powderlick Run is now a meandering stream protected through conservation easements and lined with more than 10,000 tree seedlings and other native vegetation.

The Raccoon Unmasked

Acid mine drainage was the culprit for impacts to the Little Raccoon Creek in southeast Ohio. Until the 1970s, mining companies were not required to properly dispose of the vast amount of waste they generated. As a result, thousands of tons of toxic coal refuse lies scattered throughout the Raccoon Creek watershed. This contributed to increased erosion rates and the generation of **acid mine drainage (AMD)**. AMD leaches naturally occurring metals such as iron and aluminum from the surrounding coal wastes and bedrock, which drastically harmed the water quality of local streams and nearly devastated aquatic communities.

With a $500,000 319 grant and locally raised funding, the Vinton County Soil and Water Conservation District partnered with the Ohio Department of Natural Resources and the U.S. Department of Interior to complete a vast array of design and engineering improvements which resulted in an acid discharge reduction of 83,950 pounds in the first year alone. "This committed partnership of local groups, state and federal agencies literally took a dead stream and brought it back to life," said Gibson proudly.

Ohio EPA: It's More Than Just the Money

Besides administering the Section 319 grants, Ohio EPA also provides expertise and manpower to project recipients. Divisions that contribute to this important work include DSW, DEFA and the **Division of Drinking and Ground Waters**, along with NPS coordinators from each district. **Requests for 319 grants are now being actively solicited throughout Ohio for the 2008 season.** DSW hopes to find more projects that will lead to the achievement of that 80 percent aquatic life use attainment goal by 2010.

Is that possible? According to Jeff DeShon (DSW), "I believe we will meet the goal for the large river 'prong' of the goal. We reached 77 percent in 2004, an increase of 15 percent in just four years. The large river improvements over the last three decades are primarily tied to the investment of millions of dollars in better municipal and industrial wastewater treatment as regulated by our permitting program. However, the watershed goal is strongly tied to NPS concerns and will not likely be reached by 2010. This goal has always been recognized more as an aspiration, although we seem to be making some slow but incremental progress.

"Any improvements are contingent upon us and watershed stakeholders making commitments to modifying prevailing rural and urban land use practices. These can be notoriously slow to happen, as shown by 2004's score of 53 percent, only a five percent increase from 2000. So we're probably talking many years of dedicated effort by government agencies, watershed groups and landowners before we see real on-the-ground improvements in impaired watersheds. But I'm confident that we can do it."

For more information about nonpoint source pollution, the 319 program or grant application materials, **visit DSW's nonpoint source Web page**.