

## H2OHIO PROJECT GROUNDBREAKING

In April, ENSOAQ and its partner Three Valley Conservation Trust were thrilled to participate in the H2Ohio initiative's groundbreaking ceremony at the Hoffmann Wetland and Stream Restoration Project in the Beals Run-Indian Creek Watershed in Butler County. The project will stabilize severely eroded stream banks and restore 12 acres of forested wetland and riparian buffers. When complete, the project will reduce nutrients entering Indian Creek and provide habitat for a wide variety of wildlife. This project was one of the first Ohio River Watershed projects approved for funding by the Ohio Department of Natural Resources' H2Ohio Initiative. The landowner had previously preserved the farm through an agricultural easement, held by Three Valley Conservation Trust.



We are pleased to share that ENSOAQ has opened an office in metropolitan Cincinnati. As part of our desire to serve regional clients more efficiently, ENSOAQ is leasing a small office near the Interstate 71 Pfeiffer Road exit. Our new address is 4701 Creek Road, Suite 100A, Blue Ash, Ohio 45242.

## LEARN MORE AT ENSOAQ.COM

*Environmental Solutions AQ, LLC is a woman- and minority-owned small business providing comprehensive environmental consulting services in areas of geology, hydrology, mineralogy and land protection in Ohio, Indiana, Michigan, and Illinois. We have 25+ years of experience in governmental, commercial, and academic sectors.*



# Environmental Solutions AQ



Fall 2022

Blue Ash, OH

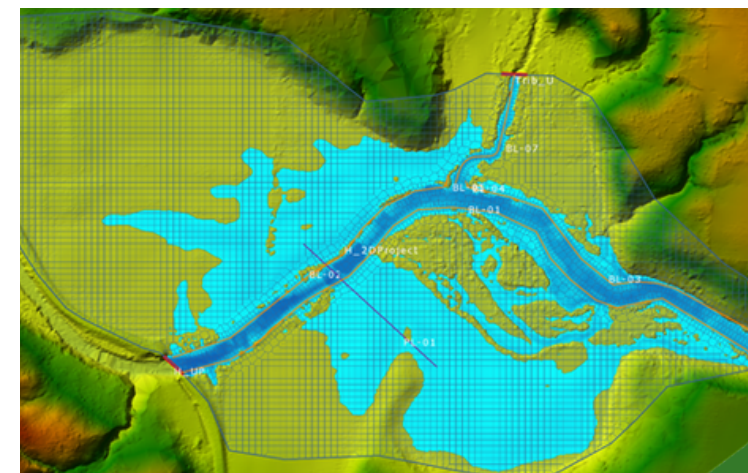
## H&H MODELING FOR EMERGENCY PREPAREDNESS

ENSOAQ is currently supporting several hydrologic and hydraulic (H&H) modeling projects for dam assessments and stream restoration projects in Ohio.

During the past several years, ENSOAQ has been a team member performing H&H for Ohio Department of Natural Resources-owned and operated Class I High Hazard dams. H&H modeling involves developing the hydrologic model of the drainage basin watershed and determining discharge capacities for existing hydraulic structures. ENSOAQ staff developed and evaluated flood routing using floods of 24-hour duration with frequencies of 2-, 10-, 50-, and 100-year events, as well as the Probable Maximum Flood.

The computed results are compared with State of Ohio standards for dam safety. Ultimately, the information is required to plan and prepare for weather-related emergencies. Such fore planning results in a stronger, more resilient Ohio.

For stream restoration projects, the H&H modeling is used to simulate existing conditions and conditions that would result following the proposed restoration project.



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Fourth NPS-IS Plan approved

## NEW CERTIFICATION AND NEW STAFF

The City of Cincinnati certified ENSOAQ as a Minority- and Woman-Owned Business (MWBE) in August of 2022. ENSOAQ was already certified as a Minority-Owned Business, Woman-Owned Business, and Encouraging Diversity, Growth, and Equity (EDGE) Business with the State of Ohio. Hiring ENSOAQ helps organizations meet their diversity, equity, and inclusion goals – along with receiving excellent service from the highly qualified team. In September, the team exhibited at the City of Cincinnati's inaugural DEI Business Enterprise EXPO at the Duke Energy Center.



Speaking of the ENSOAQ team, Dr. Amélie Davis and Angela Manuszak are new employees helping meet client needs.

Amélie is a Geographic Information Staff Professional (GISP), as well as Envision Sustainability Professional (ENV-SP) and is Small Unmanned Aircraft System (sUAS) certified. She loves solving environmental problems that have a spatial aspect to them and doing GIS work that enables the conservation of natural resources. Angela brings nearly 30 years of environmental collaboration experience to ENSOAQ, including 21 years at The Miami Conservancy District.

## HEAR FROM THE EXPERTS

Who are the experts to present on the Nine-Element Nonpoint Source Implementation process? ENSOAQ showcased their success with the planning process at the Water Management Association of Ohio's 50th Annual Conference in Columbus, Ohio.

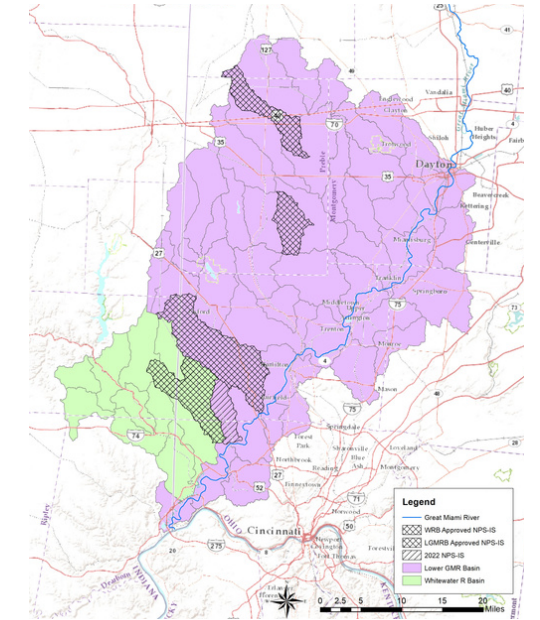
Monica Rakovan and Agnes Marchlewska presented "Development of NPS-IS for agricultural watersheds in the Great Miami River Basin," showcasing the value of the GIS-based Agricultural Conservation Planning Framework (ACPF) tool as a way to prioritize conservation effectiveness and motivate regional stakeholders to carry out the NPS-IS plan.

The session also included presentations about nonpoint source pollution funding from the Ohio Environmental Protection Agency and the Ohio Department of Agriculture.



## ONE SMALL WATERSHED AT A TIME: NPS-IS PLANNING

ENSOAQ is a leader in developing Nine-Element Nonpoint Source Implementation Strategies (NPS-IS) in southwest Ohio, especially in the Great Miami River Watershed. This watershed is a high-priority for developing NPS-IS in the Ohio River Basin Watershed. The NPS-IS provides a road map to address the excess nutrient loads, sediments and other nonpoint sources of pollution, which impair water quality in this watershed and contribute to downstream impairment in the Great Miami River, Ohio River and consequently the Mississippi River and the Gulf of Mexico. The plan also supports the Mississippi River/Gulf of Mexico Hypoxia Task Force efforts to reduce nutrients in the basin.



ENSOAQ'S approved plans, identified by the hatched areas on the right, allow identified projects to meet eligibility criteria for Clean Water Act Section 319 Grants (319 Grants) and other federal and state resources designated to address nonpoint source impairments. Stream and wetland restoration projects are underway as a result.

In 2022, ENSOAQ developed two plans that received approval from the State of Ohio: Price's Creek and Howard Creek-Dry Fork.



Price's Creek watershed is in northern Preble and southern Darke counties in Ohio. It is a tributary of Twin Creek, one of the state's most biologically diverse waterways. Preble Soil & Water Conservation District hired ENSOAQ to write the plan, which was submitted and approved in August.

Howard Creek-Dry Fork NPS-IS also has recently received approval from the State. Accomplishing a NPS-IS Plan that crosses state boundaries is no simple task, which is why a group of local partners reached out to ENSOAQ. Three Valley Conservation Trust in Oxford, Ohio hired the experienced company to complete the effort -- led by Agnes Marchlewska, ENSOAQ Project Manager.

Agnes says, "Aligning interests and strong communication between stakeholders and the communities, although challenging, is a crucial task necessary to ensure success of the NPS-IS. ENSOAQ helped facilitate multiple public meetings and encouraged collaboration between stakeholder organizations and members of the local communities. The stakeholders not only helped to develop restoration and protection strategies to improve water quality and habitats in the Howard Creek-Dry Fork Whitewater River watershed, but are also committed to start implementing these strategies."

Howard Creek-Dry Fork Whitewater River watershed is located in southwest Ohio in Butler and Hamilton counties and extends to Franklin County in southeast Indiana. It contains the Dry Fork, which flows into the Whitewater River in western Hamilton County, Ohio. The Whitewater River is a major tributary of the Great Miami River, though its watershed is primarily in Indiana.