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Conservationists at Work

Pat McElhenny
Director of Stewardship

Chris Arnott
Freshwater Project Manager

When our chapter is faced with big challenges—like removing an aging dam at the Dick and Nancy Eales Preserve—we rely on the skills and expertise of numerous staff to be successful. Teamwork has been key for this multi-faceted project to advance at a quick pace, adapting to the ever-changing conditions on the ground.

Pat McElhenny is responsible for leading the stewardship team's management of TNC preserves across Pennsylvania and Delaware. Since problems with the O'Conner Dam first arose in 2020, Pat has led a team to carefully monitor water levels and arduously lower them, as needed after heavy rain events, to reduce pressure on the dam.

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Members of the PA/DE chapter's stewardship team supervise the removal of the O'Conner Reservoir Dam located on the Dick and Nancy Eales Preserve at Moosic Mountain. © Andrea Campbell/Natural Light Films

Dam Removal and Stream Restoration Under Way

Last fall, heavy and sustained rain events caused damage to the O'Conner Reservoir Dam located on The Nature Conservancy's Dick and Nancy Eales Preserves at Moosic Mountain. The aging dam required immediate short-term repairs and necessitated the lowering of water levels in the reservoir—a difficult and time-consuming task for our stewardship staff.

Ongoing concerns about the safety and potential liability of the 128-year-old dam led TNC to remove the central section of dam this past winter. The dam removal also creates an opportunity to restore the original stream channel and floodplain at the bottom of the reservoir, which will create a more natural headwater habitat for Sterry Creek.

When TNC acquires a parcel of land, we commit—both legally and ethically—to steward that land in perpetuity.

For TNC preserves that are open for recreation, public safety is the top stewardship priority. TNC often acquires land that includes legacy infrastructure like homes, barns, bridges or dams. Like all infrastructure, the O'Conner Dam has an expiration date, which has now passed.

With the design, permitting and construction phases of the project completed this past winter, the chapter's freshwater conservation team has now turned its attention to the stream restoration. This phase of the project will include a combination of human intervention, while simply letting nature take its course as the landscape recovers to a more natural state.

To stay informed of this project, check for regular updates at:
nature.org/moosicmountain

TNC is working with agribusinesses and farms like Susquehanna Orchards to implement best practices that help improve water quality in the Chesapeake Bay. © Gates Rhodes

TNC Acts to Improve Chesapeake Bay Water Quality

Two freshwater experts hired to support Chesapeake Bay program

Every day, 51 billion gallons of freshwater flow into the Chesapeake Bay, with half of that coming from the Susquehanna River alone. More than two-thirds of the Susquehanna River's watershed is located in Pennsylvania, making the state ground zero for improving Chesapeake Bay water quality. For this reason, The Nature Conservancy has recently brought on Regenerative Agriculture Specialist Brian Campbell and Restoration Specialist Dr. Jonathan Niles to work with local farmers and partners to improve the health of Pennsylvania's and Delaware's waterways.

Agriculture is the single largest contributor of nutrient pollution to the Chesapeake Bay, but thanks to sustained efforts by farmers, conservation groups and others, that source of pollution is on the decline. To build on existing progress, TNC works directly with farmers and farm advisers to expand the adoption of best practices in conservation agriculture. In collaboration with the Pennsylvania 4R Alliance, Brian is raising awareness among farmers and farm advisers of agricultural practices and technologies that reduce nutrient pollution, improve soil health and help farmers' bottom lines.

Meanwhile, Jonathan will help enroll farmers and landowners in programs to restore wetlands and floodplains on their properties. When storms carry water off fields, wetlands and floodplains filter and trap excess nutrients and sediment before they flow into local waterways. These restoration efforts not only improve water quality, they provide critical habitat for wildlife, while also slowing and storing flood waters.

The improvements we make to Pennsylvania's and Delaware's waterways can not only provide benefits to the people and nature that live there, but also export those benefits downstream to the Chesapeake Bay. Brian and Jonathan will help make sure that our on-the-ground efforts to improve in-field agriculture and edge-of-field streams and wetlands do exactly that.

Pat McElhenny supervises efforts to reduce water levels after a heavy storm. © Andrea Campbell

"Conservationists," continued

The reservoir site is difficult to access and required Pat and his team to be clever in their efforts to maintain the structural integrity of the dam while plans were being made for its removal.

"I enjoy seeing the positive change that we can make to our preserves or landscape projects through active land management, like stewardship and prescribed fire," says Pat. "This dam removal project is a first for our chapter, and it's exciting to imagine what the site will look like after the stream restoration."

Chris Arnott, Ph.D., works on projects aimed at protecting, restoring and managing our freshwater resources in the Susquehanna and Delaware River watersheds. She helps manage various partnerships aimed at restoring and reconnecting rivers, improving stream resilience, managing dam releases for ecological flows, and reducing nutrient runoff from agricultural lands.

The breadth of knowledge that Chris has brought to the dam removal project has been invaluable. "I enjoy my work because I am a mission-driven person and TNC's mission aligns with my passion for protecting natural resources and clean water" says Chris. "TNC's conservation strategies are grounded in science and partnership, and I strongly believe that science-based decision making will ultimately be the most successful."

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