



FOCUS: NANTICOKE CREEK WATERSHED

EC's Next Big Initiative

Tucked back in the woods off Middle Road in Hanover Township is a small, stone arch bridge. Part of the old Front Street, historically, it would have straddled the Nanticoke Creek. Currently, however, the creek bed sits empty. Truesdale Bank, about a quarter-mile to the south, blocks one branch of the stream as it makes its way down Wilkes-Barre Mountain. On a second tributary, Leuder Creek, a concrete flume lining the channel has broken apart and collapsed. Both of these branches lose their flow as they disappear underground into the mine pool complexes, re-emerging downstream at the Askam borehole. There, the creek is orange, polluted by acid mine drainage (AMD).

Just two years ago, another stream in the watershed faced a similar fate. Espy Run also had vanished into a mining void. However, over the course of seven years, EC reconstructed the missing stream channel. The project served as a pilot for EC, validating its approach of tackling the AMD problem at the root by preventing contamination from occurring in the first place. Based on the success of this model, EC applied for two grants to continue restoration of the watershed. In June 2023, EC was notified it had received a \$1.96 million Brownfields Cleanup grant from the US Environmental *(continued next page)*



Headwaters of the Nanticoke Creek in Warrior Run Borough



US EPA Region 3 Administrator Adam Ortiz speaks during a press event at Truesdale Bank in June 2023



Team from USGS visiting Askam borehole AMD treatment system in October 2023

Protection Agency (US EPA). It was followed by a \$17.5 million grant from the PA Department of Environmental Protection (PA DEP), one of the largest grants in EC's history. With the funding, EC can tackle the stream comprehensively in one go, unlike the lengthy, phased approach with Espy Run.

Initial planning for the project began in 2020, with EC self-funding design and permitting work. The project, which involves nearly 15,000LF of channel improvements, has garnered national attention. It also has spawned additional projects, for example, the US Geological Service (USGS) will conduct hydrological and ecological studies to determine best practices for mine land reclamation. The project is anticipated to begin in 2024 and will take 3 to 5 years to complete. 🌱

PROJECT OVERVIEW

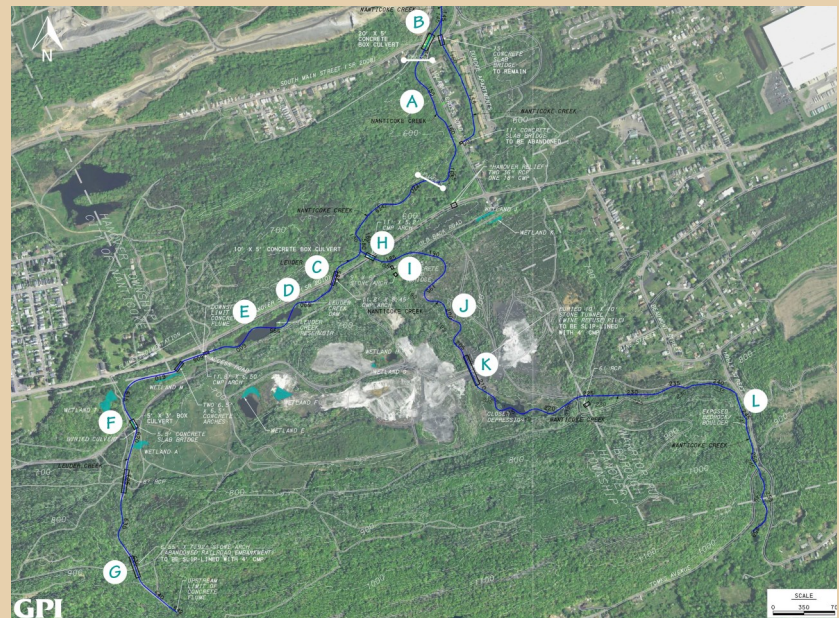
In total, the Nanticoke Creek watershed project will entail nearly 15,000LF of stream and floodway improvements. In addition to grading, channel lining and stabilization, reconstruction using natural channel design, and planting of a riparian buffer, restoration activities will include:

NANTICOKE CREEK – MAIN STEM

- A. New alignment for Nanticoke Creek at Clarks Cross Road
- B. New water conveyance structure at South Main Street

LEUDER CREEK

- C. New culvert at Hanover Street
- D. Removal of Leuder Creek dam
- E. Replacement of reservoir with natural channel and shallow overflow ponds
- F. Replacement of buried culvert and deteriorated bridge with new culvert
- G. Restoration of deteriorated masonry arch with slip lining



NANTICOKE CREEK – UPPER REACH

- H. Replacement of culvert on Hanover Street
- I. Elimination of existing obstruction and replacement with open channel
- J. Removal of bridge and stone arch from path of stream
- K. Re-establishment of channel based on historic alignment to reconnect upper and lower watersheds
- L. Buried railroad tunnel to be reopened and lined with smaller culvert



View of the Hanover Reservoir, looking north

In October, EC marked an enormous milestone with the transfer of 1,400 acres of its property into the Pinchot State Forest. The tract, which runs along Wilkes-Barre Mountain between Sugar Notch Gap and Alden Mountain Road, provides habitat for threatened and endangered species like the Indiana Bat and the Northern Long-eared Bat, and includes a cold-water fishery, scenic mountain highlands, and, the gem in those woods, the Hanover Reservoir. EC knows it's a place much-loved by many! EC's President, Terry Ostrowski, noted, "Wild areas like these are integral to the character of the Lower South Valley. By transferring ownership to the Commonwealth, we help safeguard the region's natural beauty and its ecosystems and improve its quality of life."

With this sale, EC is less than 1,000 acres away of meeting its goal to commit 10,000 acres of former coal-company land to recreation and greenspace. This achievement was reached in collaboration with North Branch Land Trust and the PA Department of Conservation and Natural Resources (PA DCNR).

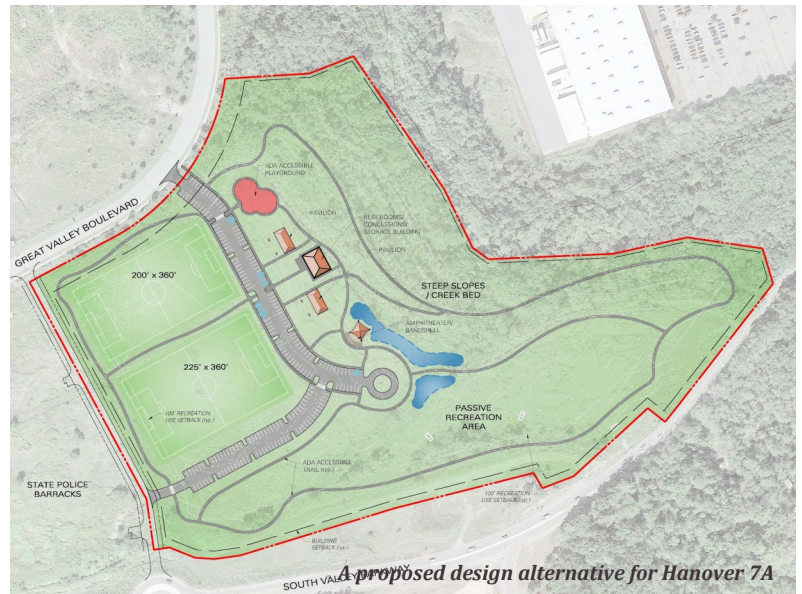
2023 Northeast Pennsylvania Environmental Partnership Award | EC was proud to be recognized for the successful completion of its Espy Run Stream Restoration Project with a 2023 NEPA Environmental Partners Award, presented during an annual event hosted by the Pennsylvania



Environmental Council's Northeast Region. This award reflects the dedication of our team and the support of our community, including partners like the PA Department of Environmental Protection, North Branch Land Trust, the Luzerne Conservation District, and EPCAMR. Thank you to everyone who has been a part of this journey. Looking forward to continuing the work for healthier watersheds in the region together! Pictured, from left to right, the EC team: Nick Kratz, Geoff Shaw, Karen Warho, Terry Ostrowski, Elizabeth Hughes, Jason Tarnowski, and Joe English.

4 HANOVER 7A RECREATION AREA

EC has made significant progress in transforming its Hanover 7A property – a former debris dump from the Agnes flood – into a future recreational gem for the community with the completion of a master site development plan. Funded in part by a grant from PA DCNR, the project incorporated extensive site analysis, as well as considerable input from stakeholders and the public. Consultant K&W Engineers then developed and priced several design options, each with varying levels of passive amenities and more formal recreational features like sports fields and playground equipment. Public comment suggested a mixture of the two was preferred. With a clear vision in hand, the next step is securing funding for continued site reclamation. Stay tuned for updates as we work to bring this community asset to life.



NorthPoint Development Celebrates \$1B Investment in Lower South Valley

EC joined local officials and leaders on its former Bliss Bank site to celebrate NorthPoint Development's remarkable investment of \$1 billion in the Lower South Valley. NorthPoint's efforts have attracted 14 new companies to the region, creating over 10,000 jobs. Speakers included two members of EC's Board of Directors: Joe Hillan and John Yudichak. It was said during the event the Lower South Valley is a place "that gets things done." We're extremely proud to be part of that success.

EC Supports Newport Twp. Miner Statue

EC gathered with the Newport Township community in November to dedicate a new statue honoring the area's coal miners. The event, hosted by Newport United and Newport Township, featured speakers who shared a dual message with the crowd. On one hand, they underscored the sacrifices of the miners and the arduous conditions they faced. On the other hand, they spoke of the miners' resiliency and desire for a better future. The statue will serve as a reminder of these traits, and as an inspiration going forward. EC provided major support for the project, part of Newport Township's ongoing celebration of its 250th anniversary.



As you'll read in our annual report, EC had much to celebrate and inspire us in 2023, starting with completion of several planning studies to inform future work on the remaining Blue Coal lands. They included assessing our properties for solar potential; evaluating housing needs and demands in the Lower South Valley; and developing preliminary plans for a 30-acre recreation area in Hanover Township. Additionally, we appraised our AMD treatment facility at Askam to ascertain the aging system's needs.



Another significant win: EC received full funding for its Nanticoke Creek watershed restoration project. Grants from US EPA and PA DEP will allow EC to repair over 15,000 linear feet of stream, plus floodways and infrastructure. Like was done with Espy Run, the project will restore surface flow to damaged sections of the stream, and prevent those waters from entering the subsurface mine pool complex. Separately, EC transferred of 1,400 forested acres to PA DCNR. This critical tract, which includes the headwaters of the Nanticoke Creek, will now be permanently protected within the Pinchot State Forest.

EC also took a step back into the past, piloting a project with the Industrial Archives & Library (IAL) of Bethlehem, PA, to archive the large document collection left behind by the Glen Alden and Blue Coal companies. The team started with old equipment catalogs. Their work proved so successful, we've now entered into a formal agreement to preserve some 20,000 linear feet of materials currently stored in our office, which includes everything from maps and drawings to bookkeeping and accounting records. Through the IAL, the records will now be accessible to researchers and the general public.

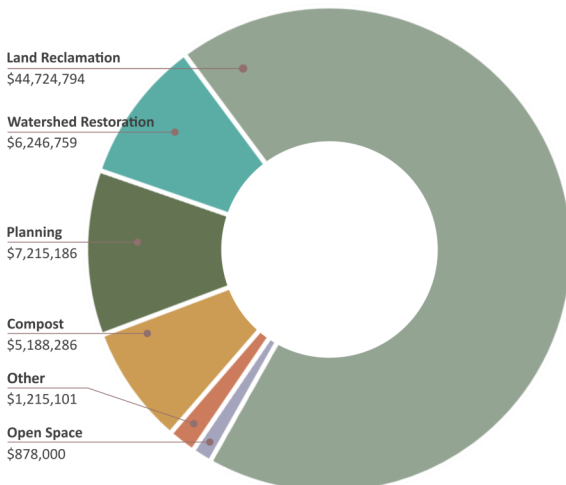
Finally, looking towards the future, EC partnered with the afterschool SHINE Program to develop WeReclaim!, an innovative program that incorporates science, art, and hands-on activities to educate elementary school students about our area's coal mining past, its environmental challenges, and EC's ongoing restoration efforts. WeReclaim! aims to inspire a new generation of environmental stewards for our community. Together, these achievements showcase EC's dedication both to correcting past environmental damages, and to planting the seeds for a more prosperous future for the region.

EC is a 501(c)(3) nonprofit organization dedicated to addressing the legacy impacts of anthracite mining in northeastern Pennsylvania. EC seeks to lead our communities in the reclamation of mine-scarred lands and streams, returning strong economic, environmental, and social value to the region by creating a well-planned, vibrant valley, protected by green ridgetops. To this end, EC develops sustainable land-use plans; leads reclamation efforts of damaged minelands and watersheds, and guides their reuse; commits to provide 10,000 acres for recreation and open space; partners with local communities to achieve our mission; and educates the community on our work.

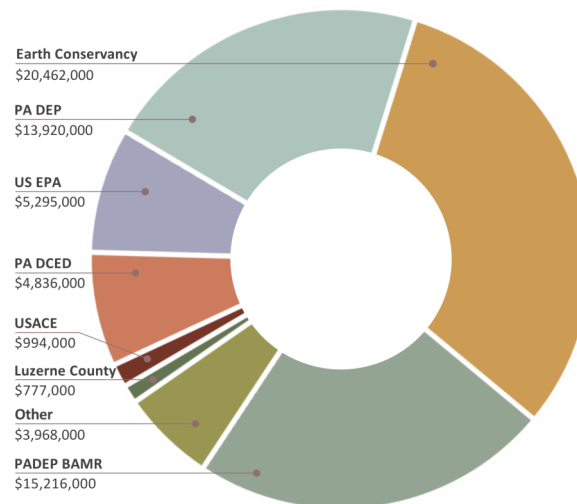
Financial statements are audited annually by an independent accounting firm. Overviews of EC's project expenses and funding sources since inception are provided in the charts below.

Project Expenses through 2023

Total Investment: \$65,468,000



Sources of Project Funding through 2023





We're celebrating the one year anniversary of WeReclaim!, EC's new educational program done in partnership with the SHINE After School Program of Luzerne County. The initiative introduces elementary students to the unique ecosystems and industrial past of our region, as well as to EC's reclamation efforts. It then asks students to envision a sustainable future for the area using collage art. Artworks are showcased twice: first during a Family Night at their schools; and then at the annual Interdependence Hexagon Project in Scranton, gaining recognition on an international scale. EC kicked off WeReclaim! with K-5 students in the Greater Nanticoke Area and Hanover Area school districts. Over 50 inspiring pieces were created and three talented students received awards for their work. WeReclaim! LSV was also honored with the Hexagon Project's 2023 Outstanding Partnership Award.



\$65.5
million
invested



2,061
acres
reclaimed



9,185
green acres
preserved

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reclaim | conserve | revitalize