

Reservoir dam project muddies local waters

Silt, sediment released into Roaring Brook, Lackawanna River; environmental advocates fear ecological impact



JIM LOCKWOOD / STAFF PHOTO

The confluence of Roaring Brook and the Lackawanna River is seen Friday in South Scranton. The brown water is flowing in from Roaring Brook and the clear water is the Lackawanna River just upstream of the confluence.

BY JIM LOCKWOOD AND FRANK WILKES LESNEFSKY
STAFF WRITERS

A Pennsylvania American Water project to upgrade a 152-year-old dam on the No. 7 Reservoir in Dunmore released large quantities of silt and sediment into Roaring Brook and the Lackawanna River, muddying their waters and turning them into a brownish gray color for miles, authorities said.

Environmental advocates of clean waterways fear that ecological damage from the sediment will significantly impair them and their aquatic wildlife of macroinvertebrates and fish for some time, perhaps years.

The release began as early as Sunday and apparently continued through the week,

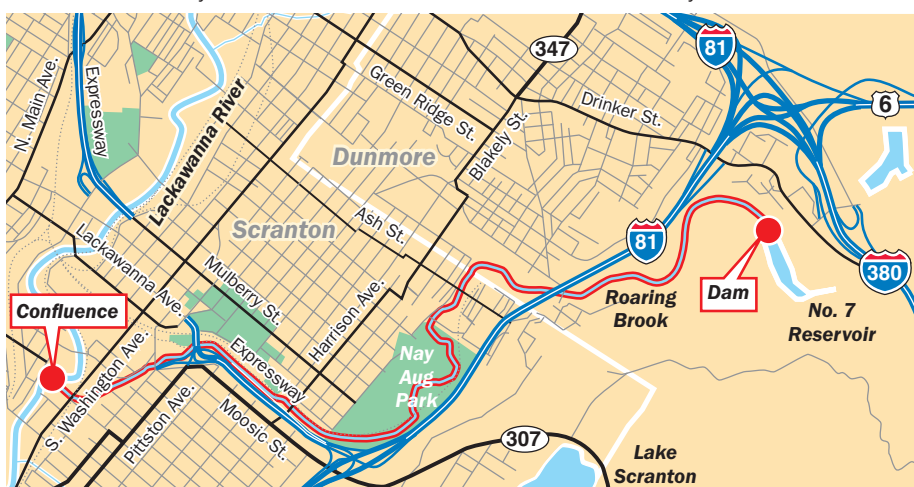
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Watch videos of the muddy Roaring Brook and a drone's view of the area on our website.

Dam maintenance muddies Roaring Brook

As Pennsylvania American Water Co. was performing maintenance on the dam at the No. 7 Reservoir in Dunmore, enough silt was released into Roaring Brook to discolor it all the way to the confluence with the Lackawanna River and beyond.



KEVIN O'NEILL / STAFF ARTIST

REACTION: Scranton, Dunmore leaders comment on the muddied waters. **A4**



RESERVOIR: Water company working on \$17M rehabilitation project

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with Roaring Brook flowing through Dunmore and Scranton continuing to have a muddy brown color on Friday. The discoloration and sediment is starkly obvious where Roaring Brook flows into the clear Lackawanna River in South Scranton, and turns the river brown from that point on and farther downstream. The waterway flows into the Susquehanna River above Pittston in Luzerne County.

The release of sediment occurred as the water company was working on a \$17 million rehabilitation project of the reservoir to upgrade the dam structure for stability and to continue to meet state regulations under the state Department of Environmental Protection, water company spokeswoman Susan Turcmanovich said in emails, in response to The Times-Tribune inquiring about the situation.

The dam was originally constructed in 1872 for the 100 million-gallon reservoir.

The project, which began in October and is targeted for completion in the fall, involves installation of new post-tensioned anchors in the dam, additional concrete buttresses for stability, a new concrete spillway crest and selective demolition of the existing structure.

"Two large-diameter valves were opened to lower the reservoir level, allowing the neces-

Scranton, Dunmore leaders react

Scranton Mayor Paige Gebhardt Cognetti:

"Our understanding is that PAWC and DEP are working on a solution which will be publicized soon, and that there is no current hazard to humans. There is of course a hazard to aquatic life and this is a serious setback for conservation efforts for the Lackawanna River and Roaring Brook. We will monitor the situation and thank LRCA for their continued efforts to improve our city's main waterway."

Dunmore Borough Council President Janet Brier:

"I'm expressing a concern about a possible setback to the well-being of the Lackawanna River and the aquatic and plant life who depend on the clean water. ... We need to know more about how it happened so they can prevent it in the future. We're relying on DEP and PAWC to rectify the situation. Hopefully the damage will be minimal."

sary work to be done. A large amount of sediment had collected upstream of the valves. Recent heavy rain, along with lowering the water levels, have caused the upstream sediment to flow through the valved outlets, causing the issue," Turcmanovich said.

The DEP received a complaint Sunday about sediment and silt in Roaring Brook in the Scranton/Dunmore area and a DEP emergency response team member checked into it and found sediment in the waterway, DEP spokeswoman Colleen Connolly said in an email.

DEP preliminarily determined Monday the muddy Roaring Brook was caused by PAW's dam rehabilitation project at the No. 7 Reservoir, where work was underway to "dewater" the reservoir to rehabilitate the dam, as required by the DEP's Division

of Dam Safety, Connolly said.

"That work is likely causing sediment from the reservoir to flow downstream and into Roaring Brook Creek. The DEP is continuing its investigation," Connolly said.

PAW said one valve will be closed and containment structures installed to reduce sediment.

"We are currently working with PA DEP to address the issue and reduce flow from the outlets," Turcmanovich said. "In addition to smaller rock dams that were installed to hold sediment back, contractors will be onsite this weekend to construct a larger riprap dam, four-feet high, across Roaring Brook. This will be located downstream of one of the outlet valves. The other valve will be closed. This will help reduce the migration of sediment downstream."

Bernie McGurl, the recently retired executive director of the Lackawanna River Conservation Association who is now an LRCA senior project manager, has never seen an incident like this in his 37 years working on the river.

"This is probably the biggest erosion problem we've ever seen here on the Lackawanna, aside from periods when there's a hurricane," said McGurl, a longtime champion of the Lackawanna River and its watershed and feeder streams.

It's unnerving to see and a reminder of the impacts the river once endured on a daily basis a century ago from the coal mining industry, he said. The river will recover as it has in the past, but it will take years, he said.

Roaring Brook is a trout-stocked fishery, and sediment impacts the trout's ability to both eat and breathe, McGurl said.

"It's a pretty profound adverse impact to the fishery down Roaring Brook and then down the Lackawanna from Roaring Brook," McGurl said.

As sediment settles to the bottom, it essentially acts as a mud or cement, filling in the nooks and crannies between the riverbed cobblestones that serve as the habitat of the macroinvertebrate food sources for trout and other wildlife in the water, he said.

Those food sources include stoneflies, mayflies, caddisflies

and dragonflies.

"It's eliminating or severely impacting the food supply for fish," McGurl said. "It's like somebody opens your kitchen window and brings a chute from the concrete truck and drops it into your house."

The sediment also suppresses the dissolved oxygen in the water that fish filter through their gills, McGurl said.

"They're going to be basically choking," he said, comparing it to a human spending time in a smoke-filled room.

While inspecting the damage to Roaring Brook on Friday, McGurl saw 4 to 8 inches of newly deposited sediment on gravel bars.

McGurl was told the discoloration from the sediment is visible into the Susquehanna River, and by Friday night, the sediment had likely traveled downstream into the Harrisburg area, he said.

Little can be done to repair the damage at this point, so they need to ensure the water company and its contractors are doing their utmost to limit it, he said.

"They're going to try to rectify the situation with preventing it from getting any worse, which is welcome, but the cows are already out of the barn," McGurl said. "The ecological damage downstream is pretty profound, and I think it's going to be a number of years for recovery in some of these downstream locations."

The silt entering Roaring

Brook and the Lackawanna River is very concerning, said Michael Kashuba, a member of the board of directors at the Lackawanna Valley Chapter of Trout Unlimited — a conservation organization focused on the cold water habitat of trout.

Kashuba described the broad impacts it could have on the food chain in the waterways. The silt interferes with the food sources and the reproduction of macroinvertebrates by impacting the algae they eat and smothering the tiny eggs they lay. The affected macroinvertebrates impact the fish and amphibians that feed on them, which then impacts the aquatic mammals like minks and otters that eat the fish, Kashuba said.

"This is really potentially a bad situation," he said.

McGurl plans to spend the weekend investigating the damage to the Lackawanna River. The LRCA is looking to work with biologists to assess the impact to macroinvertebrates, as well as contacting the Pennsylvania Fish and Boat Commission to determine the impacts to the fishery downstream into the Lackawanna River.

"The more I look into it, the sadder I get," McGurl said.

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