

Posted on Sun, Jul. 16, 2006

Sinnemahoning Portage Creek

Our area is blessed with beautiful and productive streams and rivers -- ribbons of blue holding trout, bass and other species. We fish, we canoe, we swim, or we just enjoy the relaxing whisper of their gurgling waters. Most of all, we pretty much take these bountiful flowing waters for granted.

Can't fish today? No problem, the trout will be there tomorrow, or so we would like to believe.

It is easy to forget that it only takes one second for an accident or mistake to cascade into a sad series of events that, like a hangman's noose, strangle all the life in a stream. I have been unfortunate enough to live through many such deadly events. Some are just news items but, when it destroys a stream that I have fished or hope to fish, the carnage really hits home.

A chlorinated swimming pool drained into Cold Stream, concrete dumped into Tea Creek, farm chemicals seeping into Sparrow Run, a manure spill on Warriors Mark Run and Spruce Creek -- while the causes are different, the results are the same: Dead aquatic life.

Other streams with big fishkills have included Letort Spring, Tipton and Buffalo runs and, of course, the Little Juniata River, Spring Creek and the Logan Branch. The most recent assault was a massive spill of sodium hydroxide, also known as caustic soda, into Sinnemahoning Portage Creek near the Cameron/McKean County line.

While this might seem silly to those not connected to the land and water, I actually get depressed when a favorite stream runs low from a drought. I ponder what might happen if it does not rain tomorrow, next week or next month. If a drought causes depression, then you might imagine that a ruptured tank car full of poison is a sharp knife to the heart.

What follows is a description of the tragic events that occurred on Friday, June 30.

Jim Zoschg, a very dedicated watershed specialist for the Cameron County Conservation District, spent many long hours following a path of destruction as it moved downstream from the site of a train wreck. I would like to thank Zoschg for sharing a first-hand account of the destruction and most of the included details.

At 9 a.m., a Norfolk Southern train carrying mixed freight derailed near Gardeau, just north of the Cameron County line. Among the 29 freight cars that derailed were three tank cars filled with pure sodium hydroxide, a strong base used in oven and drain cleaners, and at least one car filled with chlorine. According to Zoschg, one car ruptured on impact, spilling approximately 16,000 gallons of sodium hydroxide into a small stream and wetland in Big Fill Hollow. Two other sodium hydroxide tankers developed slow leaks. The chlorine tanker was damaged, but did not leak. The cause of the derailment is still unknown and under investigation at the time of this writing.

The caustic soda traveled about 700 feet, overwhelming Sinnemahoning Portage Creek. Although most central Pennsylvania anglers probably have never heard of this stream, it was listed as an "Exceptional Value" waterway by the Pennsylvania Department of Environmental Protection and as a "Class A Wild Trout Stream" by the Pennsylvania Fish and Boat Commission. This made Sinnemahoning Portage Creek a very special waterway in terms of water quality and aquatic life. Sodium hydroxide is water-soluble and extremely corrosive, with a pH factor of 14.

The pollution traveled downstream, killing all fish in the Sinnemahoning Portage Creek. At the confluence with Cowley Run, Sinn. Portage Creek is stocked with trout downstream approximately six miles to the confluence with the Driftwood Branch at the Emporium. The fishkill along this section of stream was probably 100 percent.

As Zoschg described it, "It took about eight hours for the sodium hydroxide to reach the Driftwood Branch at Emporium. The Driftwood Branch is a stocked trout fishery and a favorite destination for both trout and smallmouth bass anglers. At 7 p.m., Friday, I personally witnessed the pollution for the first time at the Route 120 bridge over Sinn. Portage Creek in Emporium. The water was brown, but not a muddy brown, a tea-colored brown, and it was foaming."

"I had hoped that things would be diluted by the time it was this far downstream," Zoschg continued. "Dead fish lay on the banks under the bridge. The concentration of sodium hydroxide was still so strong that it could be smelled standing on the bridge. With this concentration, there was sure to be a heavy fish kill on Driftwood Branch and farther downstream."

"By midnight, the pollution had traveled below the village of Cameron. At this time, I traveled to the Driftwood Branch just upstream from the mouth of Hunts Run in Cameron and, with a flashlight, observed fish dying underneath the railroad bridge. The stream was tea-brown colored. Out in the dark in the main flow of the stream, I could hear fish jumping, trying to get out of the pollution."

Zoschg went back to the Driftwood Branch in Cameron the following morning. He witnessed dead fish washed up on the shore and collected at the bottom of the stream in the slow moving water. Trout, smallmouth bass, rock bass, stone catfish, carp, suckers, darters and various minnow species were among the dead.

"At 9 a.m., I traveled downstream to Sterling Run and took a water sample," Zoschg said. "Then I traveled 10 miles farther downstream to the town of Driftwood, just upstream from the confluence with the Bennett Branch of the Sinnemahoning Creek, and took another water sample."

According to Zoschg, eyewitnesses claimed the pollution reached Driftwood at about 8 a.m. on Saturday morning. Despite being 30.7 miles downstream from the train wreck, the stream still ran brown with pollution.

"At Driftwood, the Driftwood Branch and Bennett Branch form the Sinnemahoning Creek," Zoschg said. "I traveled downstream to Sinnemahoning. Mayflies were hatching on the stream and the water just looked beautiful. All of that was soon to end. The pollution hit Sinnemahoning around 11 a.m., Saturday, July 1.

"By 2 p.m., I watched dead fish float past on the Sinnemahoning Creek underneath the Wykoff Run Road Bridge by the Willows Restaurant. Bass, stone catfish, and various minnows floated by. Many fish were still alive, but were slowly dying as the extreme basic conditions took their toll. I grabbed another water sample for later analysis.

"At 4 p.m., I traveled back up to Emporium. Pollution was still coming down the Sinn. Portage Creek from the wreck site even though it was almost 24 hours after the pollution had first reached Emporium.

Zoschg returned to Sinnemahoning at 7 p.m. with friends.

"In the shallows, we found dead brown and rainbow trout, smallmouth bass, a catfish and numerous minnows," he said. "It boggled my mind to see this mortality nearly 35 miles downstream from the wreck.

"On Sunday morning, I woke early and walked down to the Driftwood Branch in Cameron. The pollution had mostly cleared up and the stream was basically clear. Dead fish lay up and down the bank. Every fish imaginable was lying dead. They had collected at the edge of the stream, on gravel bars, and in the slow-moving sections as they settled out to the bottom. Everywhere I looked, there were dead fish. As a sportsman, it made me sick to the stomach.

"The Driftwood branch was dead," Zoschg continued. "A stream that had been teeming with life two days earlier was dead. One of the healthiest streams in Pennsylvania had been killed. I walked past my favorite stretch of stream and thought that I should be swinging a pair of wet flies through the riffle. Instead, I was counting dead fish."

Recovery

Dams were built to contain the caustic soda, the wetland near the spill was treated with powdered citric acid and extra water was released from the Stevenson Dam (on the First Fork of the Sinnemahoning Creek) to dilute the pollution below the village of Sinnemahoning. These measures helped lessen the damage, but much of the killing on Sinn. Portage Creek occurred so quickly that there was nothing anyone could do except watch.

Some fish and aquatic insects undoubtedly moved to clean water flowing in from tributaries and survived the pollution, but hundreds of thousands of organisms are dead. Experience learned from other chemical spills would indicate that these streams could recover in one to five years, depending on the severity of the damage. For Sinnemahoning Portage Creek, it will be at least three years.

Any stream close to a highway, pipeline or railroad line could suffer the same fate as these Northcentral waters. We can be thankful that it does not occur more often. Newer Interstate highways have pollution containment structures in their design, but railroads, pipelines and minor roadways do not.

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