## Three Fork Creek is sustaining life

GRAFTON – Back in April of 2011, steps were taken to breathe new life in a dead stream. On Thursday, August 30, the West Virginia Department of Environmental Protection (WVDEP) surveyed Three Fork Creek, and found that the efforts paid off.

Back in 2011, a new system was unveiled at the mouth of Three Fork Creek, on Pell School Road in Preston County that would help restore life-sustaining status.

Dead for over fifty years, Three Fork Creek was once a thriving stream that provided for numerous living species. Once known as a pristine trout stream, Three Fork Creek lost the ability to sustain aquatic life due to acid mine drainage from pre-law mining operations.

"They said that it couldn't be done," stated Save The Tygart Watershed Association (STTWA) President, Leroy Stanley. "They said that Three Fork Creek would be dead forever. Now it's coming back."

The watershed association has been working in conjunction with the WVDEP to install lime doser machines at strategic access points on the stream, that dump acid-neutralizing alkaline materials into Three Fork's tributaries. Four machines were installed at South Fork of Birds Creek; North Fork of Birds Creek; Squires Creek; and Raccoon Creek.

The sites contain a large concrete pad, a lime doser, a hopper and a housing unit. Water is fed through 36-inch pipes upstream of the machine, and sloped down through apparatus. The doser then ads the acid-neutralizing alkaline materials to the water, as it passes through and back into the stream.

At the time, it was noted that a small difference could be noted in the stream in as little as 30 days. Last Thursday, a significant difference was noted.

As I approached the access point to the stream, behind the West Virginia Department of Health and Human Services (DHHR) in Grafton, I noted that WVDEP representatives were gathered under the Bridge Street Bridge, looking down into Three Fork Creek. They quickly pointed out what they were looking at. Four large Golden Trout were swimming in a large pool in the stream, and several other fish could be seen.

It was determined that the trout had made their way up the stream after being stocked in the Tygart Valley River. Although these fish did not originate in Three Fork Creek, it was a good indication that the efforts from 2011 have made the stream able to sustain life.

Paul Baker, biologist for Save The Tygart Watershed Association, shared his observations of the WVDEP survey. The department surveyed four separate sites along the creek, and living species were found at every site.

"The consensus was that this survey showed outstanding recovery of Three Fork Creek considering the relatively short, 18 months, of treatment," Baker stated in an email to the

Mountain Statesman. "The professional fisheries scientists at WVDEP were very positively impressed with the recovery. Of course, Save The Tygart is very pleased with the results of the survey with the caveats that much work remains to be done and full recovery still lies ahead."

The WVDEP shocked the stream at the four sites, and counted fish and determined the different species living in those sections. Chemical analysis was performed on the water flowing through these four sites, and, at some time in the near future, a comprehensive "official " report will be issued by WVDEP, the report will provide an assessment of the overall health of the stream. Site one, was a 400-meter run of the stream beginning directly behind the DHHR building. Baker provided the Mountain Statesman with his assessment of the survey at this, and the other three sites.

Over 400 fish were collected in this run. Fifteen different species were identified including 131 Smallmouth Bass, 24 Creek Chubs, 30 Green Sunfish, and 30 Rock Bass. Other species included Hog Sucker, River Chub, Green Sided Dace, Fan Tail Dace, Johnny Dace, Rosy Faced Shiner, Spot Fin Shiner, Sand Shiner, Bull Head Catfish, Perch and Stone Roller.

The site also yielded Caddis, stone fly and may fly nymphs, as well as, several other species of benthic macro invertebrates.

The invasive species, Japanese Knot Weed, was prolific along this stretch of stream.

The pH at this site was 7.7, conductivity was a little high 550 uS (micro Siemens) due to low water flow in stream.

Site two, was a 300-meter run of the stream behind the Thornton Volunteer Fire Department. Over 200 fish were counted at this site, including 46 Green Sun Fish, 13 Rock Bass, seven Smallmouth Bass and six Green Sided Sunfish.

A population of benthic macro invertebrates similar to those at site one was found, and the water chemistry was similar to site one.

Site three, was a stretch upstream of the Irontown Bridge.

About 85 fish were collected including a 13 inch Sauger. Fewer benthic macro invertebrates were collected here compared to the previous two sites.

The pH was 7.39 and conductivity was 749 uS, streambed condition was more impacted by sludge.

"This site is directly below the mouth of Raccoon Creek, whose doser has been giving us some problems," Baker stated. "The thinking is that inadequate treatment on Raccoon Creek is the cause of the lowering of water quality indicators at this site. WVDEP is in the process of correcting the doser problem, work should be completed in a few weeks."

Site four, was a 200-meter run about a mile and a half below the confluence of Fields Creek,

Birds Creek and Squires Run, the three forks of Three Fork Creek. Over 500 fish were collected at this site !

Most of the fish collected were Creek Chubs, but, there were also some Dace and one other species. Benthic macro invertebrates were found, although, in less variety of species than at other sites. The pH at this site was 7.74 and the conductivity was 1058 uS.

"As I understand it, as one proceeds up stream one typically finds fewer species of fish and insects," Baker stated.

"I hope that the citizens of the area, who use Three Fork Creek for recreation, realize that the creek is still in recovery and needs to be treated gently," Baker stated. "Practicing catch and release fishing, avoiding littering, and respecting land owner rights are important actions that those, who use the creek can take. Also, anyone who sees anything that that might negatively impact the stream should inform Save The Tygart Watershed Association by calling 304-265-8047, or myself at 304-363-7338."

The WVDEP's Abandoned Mine Lands (AML) program funded the \$750,000 project, which aims to restore 21 miles of the trout stream in Preston and Taylor counties. Three Fork Creek is the largest source of acid mine drainage entering the Tygart Valley River, and it has been the goal of STTWA to help restore this stream since the groups inception ten years ago.

Biologists from the West Virginia Department of Environmental Protection, and Save The Tygart Watershed Association, conducted a survey on Three Fork Creek. The stream, once thought dead, now sustains the life of numerous fish species. Golden Trout that swan upstream from the Tygart Valley River, can be seen in the inset.