

## STATE OF THE WATERSHEDS REPORT – SOMERSET COUNTY 2011

By the Somerset Conservation District

Somerset County watersheds are very diverse. Some watersheds in the county are pristine and contain diverse fish and insect populations, while other waterways are severely degraded by pollutants from the past, present and possibly the future. Thanks to the efforts of volunteer watershed groups and non-profits working in concert with state and federal agencies millions of dollars in pollution abatement projects have allowed for the watersheds to partially recover from the pollutants of the past.

Many Somerset County waterways now support fisheries that did not exist 20 years ago



Melissa Reckner with a healthy Rainbow Trout caught in the middle reaches of the Stonycreek River. Photo by Len Lichvar

With the completion of the Somerset County Benthic Entomological Survey and other assessments that have been performed on Somerset County waters the Somerset Conservation District can now assess the state of the county's watersheds. The ability of the District to assess the present state of the county's watersheds will allow for more and

better pollution abatement projects to be implemented as well as protection from future pollutants.

### **Stonycreek River Watershed Status**

The Stonycreek River watershed has felt the impacts of abandoned mine drainage (AMD) for decades. In the early 1990's the Somerset Conservation District and Cambria County Conservation District initiated an effort to create public-private partnerships that resulted in the creation of passive treatment systems with technical assistance and funding from state and federal sources. The result has been water quality improvement and the reestablishment of fisheries in the Stonycreek River and its tributaries.

The 2007 Stonycreek Reassessment determined that the Stonycreek River mainstem supported a fishery from the Borough of Shanksville to the village of Foustwell. The mine drainage abatement efforts have decreased the acid impairment of the river in this area enough to support a put and grow trout fishery and a healthy small mouth bass population. The abatement projects also brought to light the organic loading impacts, and riparian buffer absence in the head waters of the Stonycreek from Shanksville upstream to its origins. Several growing greener projects are being implemented in the upper watershed to improve the water quality. However, at this time the upper Stonycreek River lacks a diverse fish and insect community.

The Stonycreek River has achieved a net alkaline chemistry in its middle section. The alkalinity allows for the river to buffer the AMD impacts of Shade Creek but the impact of the low pH of Shade Creek diminishes the acid buffer of the Stonycreek to the point that the impact of Paint Creek almost turns the river lifeless again. The AMD impacts of Shade and Paint Creeks are the last remaining major life inhibiting mine drainage impacts to the mainstem of the Stonycreek River.

The Stonycreek River boasts of healthy population of Stoneflies.



Photo by Len Lichvar

## **The Casselman River Watershed Status**

The Casselman River suffered a major acid mine discharge in 1993. This discharge killed the Casselman River from Boyton to its confluence with the Youghiogheny River. Since the episode treatments have been applied to the river that has resulted in the resurgence of life from Boyton downstream to Meyersdale. This section of the Casselman River supports a stocked trout and smallmouth bass fishery. It also provides many hatches of aquatic insects that fly-fisherman can enjoy.

In Meyersdale the Shaw Mines discharge enters the river. This large discharge inhibits the life in the Casselman River downstream of the Borough of Rockwood. Coxes Creek, a tributary of the Casselman that enters the river in Rockwood, contributes organics and conductivity to the Casselman River. The Casselman River recovers from the impacts downstream of Rockwood enough to sustain a good smallmouth bass fishery, but the insect community remains impacted throughout the course of the river.

The tributaries of the Casselman River provide the greatest diversity of fish and insects. The majority of the tributaries are pristine infertile, high gradient, head water streams. These streams support wild trout populations, endangered sucker species, and diverse insect communities. These tributaries have very little acid buffering capacity and very little tolerance to siltation. These streams are being investigated further by the district to determine where protection efforts are needed.

The Casselman River has recovered significantly from historic AMD pollution.



Photo by Len Lichvar

## **The Laurel Hill Creek Watershed Status**

The Laurel Hill Creek watershed has achieved a recent center of attention of all the Somerset County watersheds. The stream was declared a Critical Area Resource Planning watershed by the state of Pennsylvania. The yet to be completed Water Resources Management Plan for Laurel Hill Creek will provide decision makers with the information required to balance development against over exploitation of water resources. The Plan has already documented water quantity issues in the watershed. Even though the watershed has been suffering from the water quantity issues, it still supports a very diverse fish and insect population.

The upper reaches of Laurel Hill Creek (upstream of Laurel Hill Lake) suffer from bank destabilization and chloride input which impair water quality. Bank stabilization projects are needed and may occur from combined efforts of the Chestnut Ridge Chapter of Trout Unlimited, PennDot, Laurel Hill State Park, and the Somerset Conservation District.

## **The Wills Creek Watershed Status**

The Wills Creek watershed in Somerset County exemplifies the true qualities of a pristine fishery. This watershed contains wild trout, smallmouth bass, and American Eels. Wills Creek ranks as the number one watershed for good water quality in Somerset County.

An American Eel from the Wills Creek watershed confirms its excellent water quality.



Photo by Eric Null

## **THE FUTURE**

All of the county's watersheds are faced with the possibility of impacts from the Marcellus Shale gas industry. Water withdrawals, possible spills of flowback water, and increased sedimentation from the development of the gas industry are possible impacts to

the water of Somerset County. The Somerset Conservation District has started the Somerset County Joint Water Quality Monitoring Venture to monitor the county's watersheds by using technologically advanced data in stream data loggers to provide real time current water quality data.

Another potential issue is the operation and maintenance of the county's AMD abatement passive treatment systems. These systems have already required upkeep and maintenance and funding to continue this essential component is becoming much more difficult to acquire. Without this maintenance the AMD recovered watersheds will revert back to their pre-recovery status.

Monitoring of these treatment systems is also an important component. The District does not have the manpower to collect the data in the time and frequency required. The District partners with other organizations to gather all the data possible, but a more defined method needs to be implemented.

The county has seen an increased level of earth disturbance activity. Through the District's Erosion and Sedimentation Pollution Control program soil loss into waterways is significantly minimized as long as Best Management Practices (BMP's) are followed under voluntary compliance. Issues have arisen where non-compliance has occurred and these instances have had detrimental impacts. Additional educational awareness is needed to increase the public's understanding of the impacts of maintaining and creating streamside buffer areas.

Although millions of dollars have been secured through the District, watershed organizations and nonprofits that have led to improved water quality the level of available funding has now dropped off significantly.

The AMD abatement in the Stonycreek and Casselman River watersheds is not yet completed. However, the funding to finish the work is no longer available to effectively do so. Despite the reauthorization of the federal AML Fund little of it will go toward Somerset County waterways for years to come. At the state level Growing Greener is no longer funded to the level to be effective at addressing the remaining needs.

Unless additional or innovative methods of future funding are found the water quality improvement work already completed is at risk and the ability to continue the successful efforts of the past are in jeopardy.

### **FOR MORE INFORMATION**

For more details and specific projects and data that has been used to create this report visit the Somerset Conservation District's web site at [www.somersetcd.org](http://www.somersetcd.org), the Stonycreek-Conemaugh River Improvement Project web site at [www.scrippa.org](http://www.scrippa.org), the Casselman River Watershed Association web site at [Casselmanriver.weebly.com](http://Casselmanriver.weebly.com), the Somerset County Conservancy web site at [www.somersetcountyconservancy.org](http://www.somersetcountyconservancy.org) and the Kiski-Conemaugh Stream Team web site at [Conemaughvalleyconservancy.org/conservation/kcst.html](http://Conemaughvalleyconservancy.org/conservation/kcst.html).

