

Kettle Creek Watershed Association April. 2018 Newsletter



A Recap on this Past Winter and the Welcoming of Spring

This past winter has been one for the record books in the Kettle Creek valley. The single digit high's in early 2018 followed by quickly warming temperatures and rainfall caused large ice jams and flooding along Kettle. Anchor ice was also a problem on the stream and many of its tributaries. Anchor ice occurs when the temperature gets so low that the rocks on the stream bottom begin to freeze, which can have adverse effects on aquatic insects. Additionally, the large ice jams scoured out much of the stream bottom in places

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causing some changes in the flow. I witnessed this phenomenon occur for the better just behind my camp, where ice deposited large gravel/rock bars that seem to be narrowing the flow. While the cold temperatures and snow may have been a nuisance to some, it was welcomed with open arms by others. Snowmobilers, cross country skiers, and hikers were provided with multiple opportunities to enjoy the snow and take in the beauty of winter.

While the valley experienced quite an eventful winter season, signs of spring are beginning to appear. Red-winged

blackbirds can be heard singing along the stream and aquatic insects are beginning to emerge in greater numbers.

Another sure signs of spring is the increased activity in the local camps, as camp owners begin to get their properties ready for the fast approaching angling, hiking, boating, and outdoors season. With longer days and more beautiful weather just around the corner I would like to wish you all an enjoyable season in Kettle Creek valley.

Doug Roberts







The Waters of Kettle Creek

Mike Klimkos

The Kettle Creek Watershed covers some 244 square miles in the northcentral portion of Pennsylvania. The watershed is in the shape of a "backwards comma" and flows from its headwaters near Germania to its confluence with the West Branch Susquehanna at Westport. It is primarily found in seven municipalities in three counties though a very small corner does creep into Grove Township, Cameron County. Kettle Creek itself is about 44 miles long and has three dams on it. The Lower Campground at Kettle Creek State Park, (originally constructed by the CCC) impounds about 7 acres of water. A few miles upstream the lake formed by the Alvin R. Bush Dam covers about 167 acres at normal pool level. The dam at Ole Bull State Park is a run of the river dam (also originally built by the CCC) and impounds about an acre of water.

Using free GIS Mapwindow software available <u>HERE</u> the watershed was analyzed in terms of stream designations. The data is available – again for free – at the <u>Pennsylvania</u> <u>Geospatial Data Clearinghouse</u>. The data is provided by the Department of Environmental Protection, the Pennsylvania Fish and Boat Commission, the Department of Conservation and Natural Resources and the Pennsylvania Department of Transportation. I make no claim to have produced or edited this data.

There are 195 small watersheds in the Kettle Creek watershed. Many are familiar to regular visitors of the area. Some are not. When looking at the names of the small drainages how some names came to be are rather apparent such as Sugar Camp Run. Others have more colorful names and it teases the imagination to wonder how they were arrived at. For example; there is Hogstock Run, Dump Hollow and Bohunk Hollow, to name a few.

According to DEP there are 459.68 miles of water. DEP classification is based on the regulations promulgated under the Clean Streams Law.

Streams can be designated as Cold Water Fishes (CWF), High Quality Coldwater Fishes (HQ-CWF), Exceptional Value (EV), and High Quality Trout Stocking (HQ-TSF).



According to Bob Schott, a longtime biologist with DEP who is now retired,

"Streams can be designated as HQ based on chemistry or biology. If biology it can either be based on macroinvertebrate scores or Class A fish designation. HQ streams do not have to hold a Class A trout fishery. EV streams have to meet the criteria for HQ plus meet one of the other requirements listed in Chapter 93.4b.

To find out more about classification and designations click <u>HERE</u>.

Table 1 shows the DEP stream designations.

Map 1 shows the DEF	designations i	in spatial	format
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Miles	Percentage	Designation	Color
419.82	91.33%	EV	Red
2.7	0.59%	HQ	Blue
6.38	1.39%	HQ-TSF	Green
30.78	6.70%	TSF	Purple



The Pennsylvania Fish and Boat Commission uses designations that are somewhat different that DEP's. It is because the PF&BC is charged with protecting fish and DEP is charged with protecting water quality.



The first category we will look at is waters capable of trout reproduction. This means exactly what it says. The waters may be capable of having trout spawn in them but trout may not be in the entire length of the stream. Some of the streams classified as such are pretty skinny near their sources. Some have a geologic impediment that has prevented trout moving into and out of the streams- such as a road crossing or waterfall. Some do not have food to support trout. In some the water chemistry or thermal problems may prevent trout from living and spawning there. The PF&BC tells us there are 327.75 miles of streams (71%) of all the streams meet this classification. Something of note is that 77% of these waters (252.8 miles) flow through public land.

Map 2 – Trout Reproduction



There are 50.72 miles of stocked water in the watershed on Kettle Creek, Little Kettle Creek and Cross Fork. For most this is the water they fish.

The PF&BC has a category of streams that is the antithesis of Stocked Water; It is Wilderness Trout Water. Wilderness trout stream management is based upon the



provision of a wild trout fishing experience in a remote, natural and unspoiled environment where man's disruptive activities are minimized. Established in 1969, this option was designed to protect and promote native (brook trout) fisheries, the ecological requirements necessary for natural reproduction of trout and wilderness aesthetics. The superior quality of these watersheds is considered an important part of the overall angling experience on wilderness trout streams. Therefore, all stream sections included in this program qualify for the Exceptional Value (EV) special protected water use classification, which represents the highest protection status provided by the Department of Environmental Protection (DEP).

http://www.fishandboat.com/Fish/PennsylvaniaFishes/Trout/Pages/TroutWaterClassific ations.aspx

Just about 11.4 miles of water meet the designation as Wilderness Trout Water and those streams are located in the Hammersley Fork and Trout Run watersheds.



Map 3 – Wilderness Trout vs Stocked Water

Next comes Class A waters. Class A Wild Trout Waters are the highest biomass class given to streams in Pennsylvania by the Pennsylvania Fish and Boat Commission. They are considered to contain the highest-quality naturally reproducing trout populations in Pennsylvania. The official definition of Class A Wild Trout Waters is "streams that



support a population of naturally produced trout of sufficient size and abundance to support a long-term and rewarding sport fishery." Class A Wild Trout Waters are virtually never stocked, although many have been. There are different total biomass criteria for different species and combinations of species, but for brook trout alone, the minimum is 30 kilograms per hectare (27 lb/acre), and for brown trout alone, the minimum is 40 kilograms per hectare (36 lb/acre). For brook trout, a biomass of 30 kilograms per hectare (27 lb/acre), including at least 0.1 kilograms per hectare (0.089 lb/acre) of brook trout less than 15 centimeters (5.9 in) long. Additionally, brook trout may not make up less than 75 percent of the total wild trout biomass.

Before we go any further I want to clarify a point. Scientists use the metric system. A Hectare is a metric unit of measurement abbreviated Ha. A hectare is 10,000 square meters and is based on the basic unit "Are" which is 100 square meters. It is pronounced "Heck – tare" not "Hectoacre" or "Hecktacre." An acre is an English unit of measurement and an acre is about 0.405 hectare and one hectare contains about 2.47 acres. If you can count to ten the metric system is easy; certainly more so than perches, rods, chains and feet. A unit of area is used rather than a unit of length because streams vary in width.

In the Kettle Creek Watershed 87.08 miles are listed as Class A, either for Brook Trout, Mixed Brook Trout/Brown Trout, or Wild Brook Trout. That equals about 19% of all the streams in the watershed. That's pretty good but it can be improved. Habitat repair, streambank planting, riparian protection and catch and release all play a major role in helping the waters of the Kettle Creek Valley meet its potential.



Map 4 – Class-A Brook and Class-A Brook/Brown

Kettle Creek Watershed Association Enhance, Preserve, Monitor, Protect

KCWA Working to Protect Against Invasive Species Doug Roberts

Invasive species are a hot topic of discussion in the world of coldwater conservation. Invasive species can be any type of living organism that is not native to a particular ecosystem and causes harm to that ecosystem. In some cases, these non-indigenous species pose little impact to stream health (i.e. brown trout), in other cases their effects can be devastating (i.e. didymo, japanese knotweed,, etc.). To prevent the introduction and minimize the impact of these invaders, the KCWA is teaming up increase with Trout Unlimited to education and awareness of these issues. Educating individuals of the threats to our streams and how to identify and prevent the spread of invasive species is our primary goal. This year on Kettle Creek and the surrounding tributaries you may begin to notice the appearance of signs containing information on the species that pose the biggest threat to the surrounding ecosystem. I encourage you to take a few minutes to read them and help us in our initiative to wage the fight against invasive species. With your help, we can work together to Enhance, Preserve, Monitor, and Protect this place that we love so much!



@KCWatershed

The KCWA is now on Facebook! In order to maintain a closer relationship with members and keep all of those that support us up to date with the latest information, we have decided to create a Facebook Page. This page will have regular posts regarding upcoming projects and improvement activities as well as updates on recreational activities in the valley (i.e. hiking, fishing, snowmobiling, etc).



Kettle Creek Watershed Association Enhance, Preserve, Monitor, Protect

In Memory of Fred Carragher

Frederick J. Carragher, of Pittsburgh, said "It's About Time" and passed on January 24, 2018. Fred was a frequent visitor to the Kettle Creek area and he would sit around the campfire telling stories that will live on forever. Memorial donations were requested to be made to the **Kettle Creek Watershed** Association. To date several thousand dollars has been received by the association. The large amount of money donated speaks highly of Fred's character. The money will be used to support the various activities conducted by KCWA.



KCWA Meetings and Sponsored Events

KCWA Board Meeting June 3, 2018 @ 9:30 Cross Fork Fire Hall KCWA Board Meeting Sept. 2, 2018 @ 9:30 Cross Fork Fire Hall



Project Healing Waters 2018

The Kettle Creek Watershed Association (KCWA) is honored to partner with, and sponsor The Third Annual Project Healing Waters Fly Fishing weekend in Cross Fork, PA and <u>Kettle Creek Adventures Lodge</u> <u>B&B</u> May 4th-6th, 2018!

Project Healing Waters Fly Fishing (PHWFF) began in 2005 serving wounded military service members at Walter Reed Army Medical Center returning from combat in Iraq and Afghanistan. PHWFF brings a high-quality, full-spectrum fly fishing program to an ever-expanding number of disabled active military service personnel across the Veterans Affairs Healthcare System, in Military Hospitals and the Warrior Transition Command. PHWFF has become recognized as an innovative leader and model in the field of therapeutic outdoor recreation for the disabled, through its successful application of the sport of fly fishing as a rehabilitation tool.

Howard West, Desert Storm Army Veteran and attendee of KCWA's Project Healing Waters weekend, had this to say about his experience "I haven't felt this type of fellowship since I actually served with my fellow soldiers. It's been incredible, the people, the professionalism, the outpouring of the community. Everything everyone does to support this organization is unbelievable."

On behalf of the KCWA, I encourage you to stop in Cross Fork Friday night to help stock, or come by Saturday or Sunday to talk to the veterans and watch some great fishing. Together, let's make these men and women feel welcome in the Kettle Creek Valley and show our appreciation for their service and sacrifice.





Spotted Salamanders – A Sure Sign of Water Quality Doug Roberts

Amphibians are an excellent bio-indicator of water quality. In areas where there is clean water, things like frogs, salamanders, and newts are found in abundance. As the weather begins to warm, the Kettle Creek valley will start to come alive with the sound of spring peepers and wood frogs and the emergence of salamanders that inhabit the vernal ponds and wetlands in the area. If you are lucky enough, and the conditions are right, you may just come across one of my favorite amphibians the spotted salamander. Spotted salamanders yellow-spotted (or salamander) are a fossorial salamander, meaning they spend most their life underground. Fully grown adults can reach sizes of up to 5 to 9 inches, are black in color, and exhibit two uneven rows of yellow spots that run along its back. In late March/early April after a good rain, they begin to come to the



surface and migrate to vernal pools to breed and lay their eggs. The spotted salamander, like most other salamanders exhibits great regenerative abilities. If one of these salamanders manages to lose a limb or even parts of their head or organs, they can oftentimes grow back new ones, however this takes very large amounts of energy. Just last week my dad and I were lucky enough to come upon a mass exodus migrating across the road from the woods to some vernal pools. We stopped the car, turned on the flashers, and helped a few cross the road. Every opportunity I get to observe these salamanders is one that I very much enjoy, as their numbers are in decline due to water contamination and pollution. Because of the great water quality, the Kettle Creek watershed is still an area where the spotted salamander can be found in abundance and grow to its full potential. This is something worth saving.





KCWA Outreach Committee



Doug Roberts

Doug was born in December of 1992 and has been coming up to his camp on Kettle Creek since the spring of 1993. Being a lifelong visitor to Kettle Creek, he has developed a deep love for the watershed. Doug's background in conservation began while pursuing his bachelors in biology from the University of Pittsburgh, where he conducted research on acid-mine drainage reclamation and its effect on freshwater macroinvertebrates. He currently possesses а Masters dearee in Bioengineering and works as an Engineer for a medical device company. In his free time, Doug is an avid fly fisherman, archery hunter, hiker, and runs a YouTube channel with his brother featuring their fly fishing pursuits.



Mike Klimkos

Mike Klimkos is retired from Pennsylvania's DEP where he worked in the mining programs and later ran the Dirt and Gravel Road Maintenance Program. He has authored, *A History of Trout Unlimited and the Environmental Movement:* 1959 – 2000, (2003), and compiled and edited *The Letort: A Limestone Legacy*, (2015) and *The Fires of Penn's Woods* (2017). He is the past editor of *Mid Atlantic Fly Fishing Guide* magazine. Mike is a member of the Pennsylvania Outdoor Writers Association and the Mason-Dixon Outdoor Writers Association.

When not sitting at a keyboard, Mike can be found in the woods and along the streams of Pennsylvania, which he describes in his blog: <u>www.miklimkos.com</u> He writes from his home in Carlisle, Pennsylvania and is a lifelong visitor to the Kettle Creek area.