**Discovering Brookies in Previously Unassessed Tributaries**

While our 64,000 waterways in Pennsylvania are an important ecological and economic resource for the Commonwealth, the Pennsylvania Fish and Boat Commission has data on only about 6,500 of these waters. That means only 9 percent of the streams in the Commonwealth are being actively and properly managed.

Of the waters remaining, many likely support wild trout populations. Trout whether it be rainbow trout, brown trout, or native brook trout are important economic resources for the Commonwealth as our fisheries generate over a billion dollars of economic activity across the state each year.

Trout are also the key indicator species in coldwater streams across the state. Brook trout in particular are found only in the highest quality streams. The native brook trout needs clean, highly oxygenated water of the highest purity. They have a narrow range of pH tolerance, and are sensitive to low oxygen, pollution, pH changes, temperature, and other human induced environmental effects such as sedimentation.

The Pennsylvania Fish and Boat Commission’s Unassessed Waters Initiative is a collaboration between the Pennsylvania Fish and Boat Commission and Pennsylvania colleges to visit headwater tributaries that have never been assessed to determine the presence and status of wild trout populations.

The goals of this program are to proactively identify and properly classify the most at-risk streams which support naturally reproducing trout populations in order to protect, conserve and enhance those waters as wild trout streams.

Data collected from the Unassessed Waters Initiative is used by the Fish and Boat Commission to help correctly classify and protect high quality trout streams from environmental alterations and degradation. The primary threat to undocumented wild trout populations is inadequate water quality protection.

Proper stream classification and protection is vital, as it is likely that streams will be impacted by human caused stressors with additional pressure for resource extraction.

Since 2011,  340 previously unassessed waters have been surveyed as part of this project. These streams have been across most of north central Pennsylvania in Snyder, Union, Centre, Mifflin, Northumberland, Montour, Lycoming, and Sullivan counties.

Trout were found in over 55% of the streams that were sampled. We have worked with watershed associations like the Loyalsock Creek Watershed Association who have provided in kind volunteer hours and donated many nights of overnight accommodations for our crews. Many private landowners, hunting clubs, and private companies like Dwight Lewis Lumber have allowed us access to sample streams on their property.

Un-named tributaries, the thin blue line streams on USGS topographic maps, drain to the larger named streams. They represent the largest number of unassessed waters across the state with over 54,000 un-named tributaries still remaining to be assessed. During the summer of 2013 we sampled 168 un-Named tributaries across several watersheds including Loyalsock Creek, Lycoming Creek, Buffalo Creek, and White Deer Creek.

We found that 88 un-named tributaries had trout present with brook trout being present in 85 of those streams. Finding brook trout in 50.5% of the 168 un-named tributaries we sampled was surprising and shows that these un-named tributaries are important clean water resources. Our data indicated that 23 (26%) of these streams might even qualify for the best of the best qualification (Class A trout streams) from Pennsylvania Fish and Boat commission. That is a very high percentage of high quality waters which may indicate that these un-named tributaries are almost as important as larger named streams in terms of trout habitat and production.

For details of the 2014 stream sampling in southern Bradford County, see the full report at http://wildsonfrack.com/2014/08/16/discovering-pennsylvania-streams-and-their-unknown-fish-assemblages/

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