Title: Improvements in the fish populations of Cheat Lake and Cheat River in response to reductions in acid mine drainage pollution from AML reclamation work and mine drainage treatment.

Oral Presentation

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Over a century of coal mining in the Cheat River watershed in northern West Virginia resulted in abandoned coal mines that have generated massive amounts of acid mine drainage (AMD) and depressed or eliminated fish populations in Cheat River and Cheat Lake. However, at least 200 land reclamation and water treatment projects have been completed since 1994 in order to reduce AMD in the Cheat watershed and restore fish populations.

A rotary drum neutralization station was constructed on Blackwater River in the upper Cheat watershed in 1994. This restored 4 miles of trout water on the Blackwater River and provides some alkalinity to the Cheat River. Fish surveys at Seven Islands on Cheat River downstream of the Blackwater in 1959, 1973, 1980, and 1999 produced standing crops (SC) of 60, 27, 21, and 58 lbs/acre. Historic AMD input from Blackwater River and improvements from neutralization in 1994 are reflected in this data. Three additional surveys over a 26-mile reach downstream of Seven Islands in 1999 documented a 69% decrease in SC from AMD. Farther downstream, a sport fishery had been non-existent since 1970. This 14-mile reach upstream of Cheat Lake is inaccessible for traditional survey techniques, but can be characterized by angling. One angler's float trip in this lower reach during 1997 produced one yellow perch (Perca flavescens). Four similar trips in 2005 produced 132 fish of seven species (76% smallmouth bass, Micropterus dolomieu) that substantiated improvements in water quality. Smallmouth bass now constitute the sport fishery in most of the Cheat River mainstem.

Fishing in Cheat Lake, which is located at the bottom of the Cheat watershed, has improved over the last 23 years. From the 1960s to the late 1980s, Cheat Lake's sport fishery was essentially non-existent due to AMD. Fish monitoring since 1997 indicates that species composition once dominated by acid-tolerant bullheads (Ameiurus species) has shifted and is now more diverse. Thirty-eight species have been collected and channel catfish (Ictalurus punctatus), black bass (Micropterus punctulatus, M. salmoides, M. dolomieu), and yellow perch are abundant. A walleye stocking and telemetry project is now in progress. Consequently, Cheat Lake is now a destination for bass tournaments and recreational anglers. Improved fish populations and angling success is directly related to AMD reduction in the watershed.

In 2006, Congress reauthorized the AML program under the 1977 Surface Mining Control and Reclamation Act. The reauthorization provided increases in the amount of money released to states for reclaiming abandoned coal mines and for AMD amelioration projects. Without adequate funding for continuing AMD treatment, fish populations and angling opportunities in Cheat River and Cheat Lake will decline, potentially to pre-AMD treatment levels. This program has been and will continue to be the major factor in maintaining and enhancing fish populations in the Cheat watershed. Without congressional intervention, the AML program is now set to expire in approximately 9 years.