November 4, 2008

Mr. Stephen Johnson, Administrator
U.S. Environmental Protection Agency Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue NW
Mail Code: 1101A
Washington, DC 20460

Dear Administrator Johnson,

This letter is submitted on behalf of the American Fisheries Society (AFS). AFS is a scientific society with more than 9000 members whose research and professional activities focus on improving the conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science and promoting the development of fisheries professionals. With respect to governmental rule-making, the policy of AFS is to provide assistance to an extent consistent with the forgoing understanding of the aquatic world, its biological diversity, its fishery communities, and its ecological processes.

We are greatly concerned that the amendment to the stream buffer zone (SBZ) rule, as proposed in the Office of Surface Mining (OSM) draft OSM-EIS-34 entitled "Excess Spoil Minimization/Stream Buffer Zones", will reduce restrictions on stream-valley filling. There is ample scientific evidence that stream-valley filling degrades or eliminates headwater stream ecosystems, which are important to maintaining the physical, chemical, and biological aspects of water quality in stream networks of the United States. Based on our expert knowledge of the available scientific literature, we strongly recommend that the proposed changes be abandoned and the current SBZ rule be retained and enforced to regulate surface mining.

Despite their small size, intermittent and perennial headwater streams are important to the ecological and biological functioning of the entire stream and river network (Leopold 1994, Williams 1996, Dietrich and Anderson 2000, Labbe and Fausch 2000, USFWS 2000, Meyer et al. 2007, Wigington et al. 2007). Further, valley fills affect the downstream network by reducing both macro invertebrate and fish diversity as measured by indices of biotic integrity (Fulk et al. 2003). The U.S. EPA (2006) also reports that 55% of wadeable streams in the Southern Appalachian Ecoregion are in poor condition due to excess nutrients, excess sediments, and riparian disturbance. Thus, human activities, including surface mining, already have had great effects on streams in this region. Threats to stream ecosystem services made possible by the amendment to the SBZ rule increases the risk of extensive regional impairment.

Streams in the Appalachian region, where most mountaintop removal mining occurs, support the highest fish species diversity and the greatest number of endemic species in the country (Lee et al. 1980, Hocutt and Wiley 1986). They are also the world's

biodiversity centers for salamanders, mussels, and crayfish (Ricketts et al. 1999). Appalachian headwater streams also support a rich and unique macro invertebrate fauna (Stout and Wallace 2003). Reductions in the extent and quality of these headwater ecosystems clearly threaten these valued ecological attributes and their associated natural goods and services.

We are also concerned by the EIS premise that reduction in filled stream length can act to mitigate adverse functional impacts to streams. We are aware of no scientifically defensible evidence that lost headwater stream function (due to valley filling) can be mitigated to meet provisions of section 404 of the Clean Water Act. Thus, based on available science, we believe that the important functions of stream ecosystems are likely to be protected only by denying filling and by maintaining an adequate riparian buffer zone.

As a scientific society with a strong professional interest in ecologically effective water quality management, the AFS believes the U.S. Environmental Protection Agency (EPA) should work to strengthen protections of small headwater streams. And, given the ongoing loss of these ecosystems and their unique biological assemblages, we also encourage the EPA to promote new studies to evaluate the biological and ecological effects of SBZ of various widths, as well as the effectiveness of other stream protection measures.

Thank you for your consideration of this important issue.

Sincerely,

Gus Rassam
Executive Director
American Fisheries Society

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