

Lisa L. Smith
Ecological Consultant
286 Stoneylonesome Rd.
Stahlstown, PA 15687
(724) 593-5220
wildflower@laurelweb.net

October 23, 2007

Dennis G. Rice
Office of Surface Mining Reclamation and Enforcement
Administrative Record
Room 252 SIB
1951 Constitution Ave., NW
Washington, DC 20240

In re: Comments on Docket Number RIN – 1029-AC04; Excess Spoil, Coal Mine Waste, and Buffers for Waters of the United States; Proposed Rule

Dear Mr. Rice:

My name is Lisa Smith. I am an Consulting Ecologist with 17 years experience working on the landscape, rivers and streams of western Pennsylvania. My experience includes 11 years with the Western Pennsylvania Conservancy as a heritage ecologist and director of stewardship and 6 years as a professional consultant. I currently serve as president of the board of directors of the Mountain Watershed Association, vice president of the board of the Natural Areas Association, board member of the Mid-Atlantic Exotic Pest Plant Council and member of the land stewardship committee of the Allegheny Land Trust for which I am a former vice president of the board.

I am providing these comments on behalf of my family who live and work in the coal fields of western PA, the Mountain Watershed Association, and streams and rivers throughout the United States. As an organization that works tirelessly to clean-up stream pollution caused by mine drainage and agricultural run-off we, the Mountain Watershed Association, find this proposed rule ill-considered and overbearing. Any idea that there could be a positive outcome by allowing the removal of stream buffers is hugely mislead and down right irresponsible. I oppose any language that would weaken the Stream Buffer Zone Rule. On the contrary, I support OSM's full enforcement of this law that was put in to place to protect our precious water resources.

I don't think that I need to define what a stream buffer is for you or your audience. What I would like to focus on is the importance of these areas and the resulting problems that are created when stream buffers are eliminated.

The importance of stream buffers has been documented in numerous scientific based documents with one of the most recently compelling being a publication supported by American Rivers and the Sierra Club, entitled "*Where Rivers are Born: the Scientific Imperative for Defending Small Streams and Wetlands*" (September, 2003, www.sierraclub.org/cleanwater/reports_factsheets/). This publication is authored by numerous scientists who are experts in the field of environmental science.

Stream buffers have special physical and biological characteristics that provide both direct and indirect benefit to humans. Scientists often refer to these benefits to humans as **ecosystem services**. Note: these services become even more critical in light of a warming climate which

consequences to our streams and rivers beyond our ability to predict these consequences. Some of these services include:

- **flood control** – the vegetation and soils found in stream buffers absorb significant amounts of rainwater, runoff and snowmelt. Downstream flooding can result when stream buffers are eliminated.
- **sediment, nutrient and pollution filtering** – again, intact vegetation and soils in stream buffers capture and filter out everything from runoff from agricultural fields and animal pastures, acid mine drainage to industrial pollutants before they make it to the stream. Wetlands are often associated with stream buffers and are well known for their ability to act as a filter. Elimination of stream buffers and their associated wetlands can result in polluted water for all life... human, plant and animal.
- **nutrient recycling** – Here again, the dense growth of woody and herbaceous vegetation in a forest creates a massive demand for nutrients, thus once the nutrients are trapped, they are rapidly used by the vegetation, as well as the microbial community (bacteria, small insects, etc.) living in the soil of the forest floor. Elimination of stream buffers results in these nutrients running directly into adjacent streams thus creating eutrophic conditions that create unsuitable conditions for most aquatic life.
- **bank stabilization**– the dense root mass provided by an intact forest community along the stream edge provides a natural defense against erosion as it stabilizes soils. Removing trees and thus, their roots, along the stream edge allows moving water to cut away at the stream bank causing serious erosion, sedimentation and potential flooding. Cutting away at the stream bank can also result in a change in the course of the stream which can often threaten peoples properties or homes.
- **critical habitat for wildlife** – stream buffers and their associated wetlands play a critical role in providing food, shelter and nesting habitat for animals and plants, many of which are specialists and are most abundant or restricted to these areas for survival. Of equal importance is the ability for trees along the stream edge to maintain cool water temperatures critical for fish and macroinvertebrate survival as well as provide organic matter in the form of (fallen leaves) to the stream, which is the organic matter that serves as the base of the food web in an aquatic. Removal of stream buffers results in the elimination of thousands of living organisms, some of which are found in such limited numbers that the species may become endangered, if not extinct.

Without going in to detail about each of these services, suffice it to say that when forested stream buffers are eliminated the impacts include everything from downstream flooding, water pollution in the form of sedimentation, nutrient loading and industrial waste, to the elimination of thousands of living organisms from both the terrestrial and aquatic ecosystems. In addition to these impacts I would like to point out a very important problem that occurs when these fragile landscapes are disturbed and that is the rapid invasion and establishment of species that are not native to the area. These plants or animals are commonly referred to as **invasive exotic species**... species that have been introduced from other places where they have evolved largely free of natural controls such as predators (in the case of animals), herbivores (in the case of plants), or disease that keep them in check. Areas of the landscape that have been highly disturbed provide prime habitat for invasive exotics to get a foothold. Once established, they grow and reproduce aggressively while out-competing native species and ultimately changing the natural character and processes of a place. The food and shelter that native birds, insects, animals and plants have

evolved to depend on is eliminated, as are the ecosystem services mentioned above since these exotic species are not adapted to function the same as our native species in these situations.

Japanese knotweed (*Polygonum cuspidatum*) is a classic example of a horrible invasive plant that establishes easily in stream buffer areas that have been disturbed. We have observed this happening in the Kiski-Conemaugh Watershed, as well as streams across the Mid-Atlantic region, where the plant becomes established after a forest buffer has been disturbed. The Kiski-Conemaugh watershed is a focus of an expensive knotweed eradication program, one of many in the country. There are numerous other invasive exotic plants that have been documented threats to forest buffers in the region. Some of these include Japanese stiltgrass (*Microstegium vimineum*), purple loosestrife (*Lythrum salicaria*) and Japanese spiraea (*Spiraea japonica*). Millions of dollars are being spent by federal, state and local programs to control and manage invasive exotic species in this country. Healthy, intact forest buffers are critical to helping prevent the introduction of these species along our streams and rivers.

In conclusion, I'd like to reiterate that stream buffers are necessary to maintain the integrity of our stream and forest ecosystems. Evidence of their importance lies in the multitude of federal, state and local programs that are currently providing funding to protect existing stream buffers and to restore those that have been lost to thoughtless land-use activities. I include a list of some of these programs below. In the past 15 years, Pennsylvania, and other states I presume, have experienced the formation of a large number of watershed associations...organizations that form as a result of local citizens desires to protect the streams in their watershed. These organizations focus, in part, on maintaining and promoting healthy forest stream buffers and they receive significant funding to do this work.

It makes absolutely no sense that we, as a society, give any consideration to an effort that intends to eliminate something that we are working hard and paying dearly to protect and restore. Furthermore, while efforts to restore riparian buffers along streams is noble and, in fact, does create an improved situation, it is by no means a remedy for the ongoing damage from other uses. Based on extensive experience with abandoned mine drainage remediation projects, the Mountain Watershed Association's position is that you do not experiment with or risk our water resources because once the hydrologic balance and integrity are compromised, it is not a simple matter or even a possible matter to restore the system to a functioning level.

This proposed ruling has obvious unintended consequences. We are concerned about the overreaching nature of this proposed decision and the seeming lack of forethought that went into its crafting. Our environmental laws are intended to protect streams, including headwater streams, and guarantee our communities a safe, reliable source of clean water. The authors of the Clean Water Act and SMCRA never intended for our streams to become landfills.

Lisa Smith

Funding programs recognizing the importance of stream buffers.

U.S.D.A. Animal and Plant Health Inspection Service (APHIS)
U.S.D.A. Natural Resource Conservation Service – National Plants Material Center
U.S.D.A. Forest Service – Urban and Community Forestry Program
USDA – NRCS - CREP – Conservation - farmers and landowners
USDA – NRCS - Wildlife Habitat Incentive program – farmers and landowners
DOI – NPS – CB Gateways Project – Bay specific
DOI – NPS – Watershed Planning grants. Spearheading thru the Bay program.

DOI – USFWS – doing lots of buffer protection on FWS lands.

EPA - Program money to Bay Program funneled through National Fish and Wildlife Foundation (NFWF) Small Watershed Grant

EPA – Office of Wetlands, Oceans and Watersheds – funding watershed restoration, buffer restoration is a big piece of it. \$15M allocated this year.

Chesapeake Bay Program

PA- DCNR – Growing Greener Funding

PA-DEP

The Foundation for PA Watersheds (formerly Western PA Watershed Program)

Conservation Districts

Cooperative Extension (Maryland)

National Fish and Wildlife Foundation has a partnership with DOI- OSM – priorities include planting of riparian forest buffers, restoration of wetlands