

November 6, 2013, **updated and resubmitted December 6, 2013**

Science Advisory Board Review Panel
Attn: Dr. Thomas Armitage, Designated Federal Officer (DFO)
EPA Science Advisory Board Staff Office (1400 R)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

**Re: Comments on *Connectivity of Streams and Wetlands to
Downstream Waters*: Docket ID No. EPA-HQ-OA-2013-0582**

Dear Dr. Armitage,

On behalf of our millions of members and supporters, we applaud the Environmental Protection Agency (EPA) for collecting scientific evidence to evaluate in detail how wetlands and headwater streams have physical, chemical, or biological linkages to downstream waters and therefore impact the integrity of our rivers, lakes, and bays.

This new report, "Connectivity of Streams and Wetlands to Downstream Waters," affirms the well-established scientific principle that the network of small interconnected wetlands and headwater streams in our watersheds are critically important to the health of our larger waters downstream. If pollutants enter wetlands and headwaters up in the mountains, they can harm aquatic life and water quality all the way down the watershed. Similarly, waters more remote from larger waterbodies can prevent downstream harm by capturing flow and waterborne pollutants.

The science review is an important first step and we hope that EPA and the Army Corps of Engineers are able to build on the Connectivity Report and ensure that it accurately reflects the functions and connections of streams and wetlands in watersheds. The universe of data and studies on small streams and wetlands is vast and the report should attempt to include as much pertinent information as possible. The strength of the report's science and conclusions may well be essential to ensuring that Clean Water Act protections cover smaller waters that influence the health of our nation's rivers, estuaries, and drinking water supplies. The report should also recognize that science, and our understanding of our nation's water resources, evolves over time, and there should be room to include new information in the future.

Our organizations were pleased to see two important principles regarding aquatic resources identified in the EPA report. First, the report lays out the case for using a watershed as the primary unit by which to determine connections and relationships between waters. Second, the report speaks to the importance of the principle of aggregation. What the scientific report shows is that while one small stream may not have a big impact on a larger downstream water, the combined effect of many small headwater streams or small wetlands can have a significant impact on the larger downstream waterbody. These two principles are very important when it comes to thinking about the complete landscape of watersheds and the aggregate effects that the loss of some waters can have on larger waterbodies.

Last, our organizations request clarification on one important point regarding so-called “unidirectional” wetlands and open waters. The scientific report correctly concludes that wetlands in unidirectional landscape settings can benefit downstream water quality and integrity, in spite of lacking bidirectional hydrologic connections with downstream waters. However, the report then includes a statement that there is not sufficient evidence, based on the literature, to evaluate the degree of connectivity or the downstream effects of wetlands in unidirectional landscapes.

In our opinion, the report includes more than enough scientific literature to establish the connectivity and downstream effects of unidirectional wetlands, at least in certain unidirectional landscape settings on a regional or watershed basis. Specifically, the science can at least be summarized as establishing that unidirectional wetlands outside of riparian/floodplain areas, when considered as a class, have a more than insubstantial aggregate effect on the chemical, physical, and biological integrity of downstream waters. Moreover, the several categories of unidirectional waters discussed in the report have an even more substantial collective impact.

We ask that the final report clarify this point.

We strongly support the administration using this science report as it develops a rulemaking to clarify the scope of the Clean Water Act’s coverage. At a minimum, this rule must protect those waters science shows to be important in our nation’s aquatic systems and strengthens protections for these wetlands and headwaters as "Waters of the United States" under the Clean Water Act. Please feel free to contact Navis Bermudez at nbermudez@selcdc.org or 202-828-8382 if you need additional information from any of the signatories below.

Sincerely,

Alabama Rivers Alliance
Alliance for Sustainable Communities
American Canoe Association (ACA)
American Rivers
American Whitewater
Amigos Bravos
Anacostia Watershed Society
AquAlliance
Arkansas Public Policy Panel
Arkansas Wildlife Federation
Assateague Coastal Trust/Assateague
COASTKEEPER
Association of Northwest Steelheaders
Association of State Floodplain Managers
Audubon Chapter of Minneapolis
Audubon Minnesota
Audubon Missouri
Audubon Naturalist Society
Bastrop County Environmental Network
Berkshire Environmental Action Team

Big Blackfoot Riverkeeper, Inc.
BlueGreen Alliance
Buckeye All-State Chapter, Izaak Walton League
Buffalo Niagara Riverkeeper
Cahaba Riverkeeper
Caloosahatchee River Citizen’s Association
(RiverWatch)
Cannon River Watershed Partnership
Cass County Minnesota Chapter, Izaak Walton
League
Cedar Prairie Sierra Group
Chattahoochee Riverkeeper
Chesapeake Bay Foundation
Chester Riverkeeper
Choctawhatchee Riverkeeper, Inc.
Citizens Campaign for the Environment
Citizens Committee to Complete the Refuge
Citizens for Pennsylvania’s Future
Clean Up the River Environment (CURE)
Clean Water Action

Columbia River Crab Fisherman's Association
Conservancy of Southwest Florida
Congaree Riverkeeper
Conservation Council of Hawai'i
Conservation Federation of Missouri
Conservation Pennsylvania
Conservation Voters of Pennsylvania
Copper River Watershed Project
Cypress Chapter, Izaak Walton League of America
Delaware Nature Society
Dwight Lydell Chapter, Izaak Walton League
Earthjustice
Endangered Habitats League
Environment America
Environment Arizona
Environment California
Environment Colorado
Environment Connecticut
Environment Florida
Environment Georgia
Environment Illinois
Environment Iowa
Environment Maine
Environment Maryland
Environment Massachusetts
Environment Michigan
Environment Minnesota
Environment Missouri
Environment Montana
Environment Nevada
Environment New Hampshire
Environment New Jersey
Environment New Mexico
Environment New York
Environment North Carolina
Environment Ohio
Environment Oregon
Environment Rhode Island
Environment Texas
Environment Virginia
Environment Washington
Environmental Law & Policy Center
Farmington River Watershed Association
Florida Division, Izaak Walton League
Florida Keys Chapter, Izaak Walton League
Florida Wildlife Federation
Foothill Conservancy
Friends of Clear Creek
Friends of Grays Harbor
Friends of the Cheat, Inc
Friends of the Cloquet Valley State Forest
Friends of the Locust Fork River

Friends of the Mississippi River
Friends of the Rivers of Virginia
Friends of the Upper Delaware
Friends of the Weskeag
Galveston Baykeeper
Georgia Wildlife Federation
Grand Traverse Baykeeper
Grays Harbor Audubon Society
Greenfleet Monitoring Expeditions
Gulf Restoration Network
Hackensack Riverkeeper
Hudson Riverkeeper
Idaho Rivers United
Idaho Wildlife Federation
Indiana Wildlife Federation
Interfaith Partners for the Chesapeake
Iowa Environmental Council
Iowa Wildlife Federation
Izaak Walton League of America
Jaques Chapter, MN Division, Izaak Walton
League
Kansas Wildlife Federation
Kentucky Resources Council, Inc.
Kentucky Waterways Alliance
Key Environmental Solutions, LLC
Labadie Environmental Organization
Lake Erie Waterkeeper Inc.
Lake Erie Region Conservancy
Lake Pend Oreille Waterkeeper
League of Conservation Voters
Louisiana Audubon Council
Louisiana Environmental Action Network
Lower Mississippi Riverkeeper
Lower Susquehanna Riverkeeper
The Maryland Conservation Council
Massachusetts Baykeeper, Inc.
Mid-Atlantic Council, Trout Unlimited
Mid-shore Chapter, Izaak Walton League
Midwest Environmental Advocates
Milwaukee Riverkeeper
Minnesota Center for Environmental Advocacy
Minnesota Conservation Federation
Minnesota Trout Unlimited
Mississippi Wildlife Federation
Missouri Coalition for the Environment
MnDak Upstream Coalition
Montana Wildlife Federation
Mountain Watershed Association
National Audubon Society
National Committee for the New
River
National Garden Club, Deep South Region

National Parks Conservation Association
National Wildlife Federation
Natural Resources Defense Council
Nature Abounds
Neighbors of the Northwest Branch of the
Anacostia River
Neuse Riverkeeper Foundation
Nebraska Wildlife Federation
Nevada Wildlife Federation
New Jersey Audubon
New Mexico Wildlife Federation
New York/New Jersey Baykeeper
North Carolina Wildlife Federation
North Dakota Wildlife Federation
Northwest Environmental Advocates
Northwest Environmental Defense Center
Ohio Environmental Council
Ohio River Foundation
Olympic Forest Coalition
Pacific County Marine Resources Committee
Palm Beach County Reef Rescue
Pamlico-Tar River Foundation
PennEnvironment
Pennsylvania Chapter, Sierra Club
The Port Tobacco River Conservancy
Potomac Riverkeeper
Prairie Rivers Network
Prince William Conservation Alliance
Puget Soundkeeper Alliance
Quad Cities WATERKEEPER, INC
Raritan Riverkeeper
Renewable Resources Coalition and Foundation
The Rivanna Conservation Society
River Network
The River Project
River Source
Rogue Riverkeeper
Russian Riverkeeper
Safe Alternatives for our Forest Environment
St Louis River Alliance
San Diego Coastkeeper
San Francisco Baykeeper
San Juan Citizens Alliance
San Luis Obispo COASTKEEPER®
Save Lake Superior Association
Save Our Sky Blue Waters
Save Our Saugahatchee Inc.
Save the Poudre: Poudre Waterkeeper
Save the River
Shenandoah Riverkeeper
Sierra Club
Silver Valley Waterkeeper

South Carolina Wildlife Federation
South Dakota Wildlife Federation
South Fork Trinity Up-River Friends
Southeast Alaska Conservation Council
Southern Environmental Law Center
Tennessee Chapter, Sierra Club
Tennessee Clean Water Network
Tip of the Mitt Watershed Council
Toe River Valley Watch
Tualatin Riverkeepers
Virginia Conservation Network
Waccamaw Riverkeeper
Water-Culture Institute
WaterWatch of Oregon
Waterkeeper Alliance
Waterkeepers Chesapeake
West/Rhode Riverkeeper
West Virginia Highlands Conservancy
West Virginia Rivers Coalition
Western Nebraska Resources Council
Western Reserve Chapter, Izaak Walton League
Wetlands Watch
Wild Virginia
Wisconsin Environment
Wisconsin Wetlands Association
Wisconsin Wildlife Federation
World Temperate Rainforest Network
Wyoming Wildlife Federation
Yadkin Riverkeeper
Yell County Wildlife Federation
Youghiogheny Riverkeeper