



September 26, 2017

The Honorable Scott Pruitt
Administrator
U.S. Environmental Protection Agency
Office of Policy Regulatory Reform
Mail Code 1803A
1200 Pennsylvania Ave NW
Washington, DC 20460

The Honorable Douglas W. Lamont
Senior Official Performing the Duties of the
Assistant Secretary of the Army for Civil Works
Office of the Assistant Secretary of the Army for
Civil Works
Department of the Army
104 Army Pentagon
Washington, DC 20310-0104

Re: Docket ID No. EPA-HQ-OW-2017-0203; FRL-9962-34-OW; Definition of “Waters of the United States” - Recodification of Pre-existing Rules

Dear Administrator Pruitt and Deputy Assistant Secretary Lamont:

These comments are submitted regarding the proposed rule, Definition of “Waters of the United States” - Recodification of Pre-existing Rules, EPA-HQ-OW-2017-0203; FRL-9962-34-OW, published in the Federal Register on July 27, 2017. On behalf of the approximately 3,000+ members of the Society for Wetland Scientists (SWS). Our society ***strongly opposes the proposed rule to rescind*** the definition of “Waters of the United States” (WOTUS) as promulgated by the Agencies in 2015 (Clean Water Rule: Definition of Waters of the United States; 80 FR 37054, June 29, 2015) (2015 CWR).

The Society of Wetland Scientists (SWS) is an international scientific organization whose members study, manage, and restore wetlands. We are a science-based and non-profit organization. Our members have numerous areas of expertise in the ecological, chemical, geological and biological sciences, and they work in the private sector, academia, and tribal, state and federal agencies. SWS holds multiple scientific meetings each year focused on wetlands throughout the world and publishes the most important, peer-reviewed journal dealing with wetlands (*Wetlands*) in the world.

Wetlands have many significant attributes important to the national economy and citizen well-being. Wetlands play a disproportionately significant role in protecting our nation’s waters by retaining, degrading, or transforming contaminants from urban, mining, timber harvesting and agricultural runoff that would otherwise pollute downstream areas in a watershed. Bottomland hardwood forests, swamps, and pocosin wetlands can provide flood protection for communities by absorbing stormwater runoff, which slows the rate of rising floodwaters and may save human lives and property. Many forested wetlands retain floodwaters that recharge aquifers and export nutrients that fertilize poorer soils in drier upland areas. Wetlands can serve as retention basins of precipitation that recharge aquifers, including the

Ogallala Aquifer, which is a major source of groundwater for agricultural operations and drinking water for municipalities in the Great Plains and southern High Plains. Prairie potholes and playa lake wetlands provide nesting and wintering habitat for dozens of species and millions of migratory birds on the North American continent, which generates millions of dollars in waterfowl hunting and bird watching revenues. Wetlands provide vital habitat for thousands of species, including federally listed endangered plant and animal species.

Coastal wetlands directly provide nursery habitat for commercially important fish, crab, shrimp, and oysters that sustain the billion dollar U.S. seafood industry and thousands of American jobs. As the bumper sticker says: “no wetlands, no shrimp”. These wetlands can mitigate disaster costs by reducing the storm surge of tropical cyclones. Lovelace (1994), for example, documented a 1 m decrease in storm surge per 23 km over fairly continuous marsh during the second landfall of Hurricane Andrew. Similarly, a 2016 study (Narayan et al. 2016) found that coastal wetlands prevented \$625 million in property damages during Hurricane Sandy, and that coastal wetlands reduced annual property damages in Ocean County, New Jersey by nearly 20%.

The proposed repeal of the 2015 Clean Water Rule is unsupported by the peer-reviewed science and critical analysis that supported the 2015 Clean Water Rule. The proposed repeal has not been subjected to rigorous independent peer review, it has not undergone a robust public comment process, and it poses a significant threat to the integrity and security of our drinking water, public health, fisheries, and wildlife habitat - while significantly increasing the risks and costs associated with flood and storm damage. We submit the following comments for your consideration.

Comment #1: The Agencies should provide a body of peer-reviewed publications that has depth, breath and accuracy that is comparable to the literature analysis supporting the 2015 CWR.

The 2015 CWR is supported overwhelmingly by the scientific evidence, documented in the EPA *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* report (US EPA 2013), which underwent external peer review by the EPA Science Advisory Board, and incorporates results from over 1,200 peer-reviewed scientific publications. Further support for the 2015 CWR is provided by a Brief of the *Amici Curiae* in Support of Respondents and in Support of Upholding the Clean Water Rule (Brief, *Amici Curiae* 2017), filed with the U.S. Court of Appeals for the Sixth Circuit, as well as numerous peer-reviewed studies (e.g., Golden et al. 2017), Agency experience and U.S. Supreme Court precedent. The Agencies should provide peer-reviewed publications that contain robust scientific evidence demonstrating that the repeal of the 2015 CWR is desirable and will not exacerbate ongoing problems.

Here we discuss one watershed as an example of many – the Mississippi River basin - the largest in the US. This documentation should address how rescinding the 2015 CWA will avoid leading to financial losses resulting from deterioration of the associated wetland services of the Mississippi River watershed, as defined by the 2015 CWR.

The Mississippi River watershed drains 41 percent of the contiguous United States and includes waters from several major river systems, including the Missouri/Platte River Basin, the Ohio/Tennessee River Basin, and the Arkansas/Red/White River Basin. Interspersed among the headwater streams in these basins are thousands of hectares of isolated wetlands that retain floodwaters, recharge aquifers, provide wildlife habitat, and ameliorate drought conditions. The repeal of the 2015 CWR will remove protections for these wetlands and provide ‘*perverse incentives*’ for business, real estate, and agricultural interests, which will continue the practice of unequal costs and benefits between private and public entities. For instance, the price of agricultural products or real estate developments that are generated from wetland destruction do not reflect the full environmental costs of nonpoint pollution, lost wetland ecosystem

services, natural resource damage, and lost socioeconomic and ecological opportunity costs of communities downstream. *Opportunity costs* are the financial resources that are diverted to repair environmental damage, community infrastructure, and care for ailing residents as a result of pollution from upstream agricultural and commercial activity. (See Florida's ordeal with harmful algal blooms: <https://depnewsroom.wordpress.com/algal-bloom-monitoring-and-response/>).

Nutrient, herbicide, and pesticide loads (as well as other contaminants) emanate from agricultural, urban, and suburban areas of states that have sustained serious wetland losses; some states have even lost over 75% of their wetlands (Association of State Wetland Managers 2015). These toxicants are transported downstream and damage aquatic ecosystems largely because wetlands have been lost from the watershed.

Southern Louisiana, in particular, is still struggling to recover from Hurricane Katrina, the Deepwater Horizon disaster, the Flood of 2016, and Hurricane Harvey. Eighteen percent of the US petrochemical refining capacity, strategic oil reserves and 1.9 billion dollars of pipelines, are in southern Louisiana (<http://www.lmoga.com/industry-sectors/>). The port of New Orleans and five other ports therein are vital to interstate and international shipping, the nation's economy, and national defense. In this region, two wetland examples of restoration efforts aimed at ecological and economic recovery that would be undermined by repeal of the 2015 CWA are the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) and the Mississippi River – Gulf of Mexico Watershed Nutrient Task Force. These two restoration efforts have already spent billions of taxpayer dollars to combat and resolve these massive problems, which potentially could be wasted or significantly reduced in value if the 2015 CWA is repealed.

The repeal of the 2015 CWR will exacerbate and accelerate land loss and Dead Zone catastrophes by facilitating the destruction of wetlands and headwater streams in the upper Mississippi River watershed. These nutrient loads from upstream are responsible for the formation of the massive hypoxic or 'Dead Zone' that forms annually off the Louisiana and Texas coasts. This hypoxic zone kills marine life, including commercially valuable species, disrupts marine ecology, and affects the billion dollar Louisiana seafood industry. Louisiana has lost 4877 km² of land from 1932 to 2010, which is a direct threat to the industrial, commercial, and residential infrastructure, as well as to millions of American jobs in various sectors. The much higher nutrient loads since the 1960s is a driver of wetland loss (Deegan et al. 2012; Kearney et al. 2012). These higher nutrient loads can facilitate the loss of wetland vegetation by degrading the root biomass and making plants more susceptible to erosion. The belowground biomass of these wetland plants act in a manner similar to reinforcement bars in concrete, and contribute to the strength and stability of the soil. Without these plants, the landscape becomes vulnerable to erosion caused by large disturbances such as floods and storm surge.

Comment #2: Reduce uncertainty and unnecessary regulatory oversight. The Agencies should provide extensive, substantive and valid documentation to demonstrate how reverting to a case-by-case approach leads to greater certainty, consistency, clarity, and stability of regulation.

The enactment of the 2015 CWR created a regulatory framework with a greater certainty, consistency, clarity, and stability of regulation than previous WOTUS definitions and agency guidance documents. Reverting to case-by-case "significant nexus" evaluations will add to the financial and permitting burden for businesses and communities, and perpetuates unnecessary confusion and inconsistency for an unknown period of time. The lack of scientific, peer-reviewed studies to support repeal of the 2015 CWR will likely trigger costly and time-consuming court challenges and contribute further to regulatory uncertainty, instability, and costs to both private and public sectors. Reverting to previous definitions of WOTUS and prior Agency guidance documents will lead to incomplete achievement of the CWA mandate, and be accompanied by costly and significant negative consequences for American citizens, businesses, and communities, as they experience deteriorated water quality, more limited water supplies,

more severe flood and storm damage to properties and infrastructure, reduced fisheries, reduced recreational activities supporting American businesses, and degraded ecosystem and wildlife habitat conditions, etc. Compensating for these ecosystem service losses will incur significant additional financial losses.

Comment #3: The Agencies should provide a complete economic analysis that includes economic benefits associated with wetlands protected by the 2015 CWR, as well as the costs and lost revenues associated with rescinding the 2015 CWR. A revised economic analysis should be supported by peer-reviewed publications, and should provide peer-reviewed publications to support any removal of economic benefits or additions of economic costs associated with rescinding the 2015 CWR. This economic analysis should be subject to a robust and consequential peer review and public comment process.

The proposed rule to rescind is dependent upon, and largely justified by, a highly flawed, incomplete, and weak economic analysis (see: https://www.epa.gov/sites/production/files/2017-06/documents/economic_analysis_proposed_step1_rule.pdf). The Federal Agencies that drafted this rescission rely on an economic analysis conducted for the 2015 CWR, but with one major change—the Agencies removed the estimated \$313 to \$513 million in annual benefits that resulted from wetland protection under the 2015 CWR, and they failed to provide other means to estimate the economic value of wetlands protected by the 2015 CWR.

They justify this removal of benefits, in part, by stating that, “public attitudes towards nature protection *could* have changed” (paragraph 4 page 8 & 9, https://www.epa.gov/sites/production/files/2017-06/documents/economic_analysis_proposed_step1_rule.pdf) over time, but provide no documentation to support this assertion. According to survey results (among others, see <http://www.trcp.org/2017/06/28/new-national-poll-shows-hunter-angler-support-conservation-crosses-party-lines/>), Americans place greater value on clean water than on any other environmental factor, and *increasingly* value wetlands (Costanza et al. 2014). Further, the Agencies make the specious argument that they were unable to find updated studies of “willingness to pay” wetlands valuation studies, such as those that were part of the 2015 CWR economic analysis. Several contingent valuation studies were conducted between 2005 and 2014 (including Whitehead et al (2005), Whitehead et al (2009), Awondo et al (2011) and Petrolia et al (2014)). In addition, according to John Loomis, Colorado State University professor, and author of “Statistical Efficiency of Double-Bounded Dichotomous Choice Contingent Valuation”, which includes over 1,000 citations and received the Publication of Enduring Quality Award from the Agricultural and Applied Economics Association; there have been no major changes to the scientifically accepted methods for valuing clean water since the studies that support the 2015 CWR, and his seminal 1991 work continues to be used today (personal communication, 8/10/2017). OMB and USACE continue to utilize the “willingness to pay” approach, as do others. Two meta-analyses conducted by Brander et al. (2013) and Ghermandi et al. (2008) continue to support the conclusions of the studies in support of the 2015 CWR.

Further, many additional studies documenting the economic value of wetlands, as measured in a variety of ways, have been produced recently, and are included in the list of economic valuation studies (see reference list #2). The references appended to this letter include “willingness to pay” studies, as well as other methods for assessing the economic value of wetland ecosystem services. It should be further noted that each of the references appended to this letter includes additional citations of work related to the topic of the article.

The Agencies’ economic cost-benefit analyses should include estimates of the costs to property owners, communities, governments, taxpayers, and health care insurers associated with replacing the ecosystem services provided by wetlands and headwater streams that would be *unprotected* with the repeal of the

2015 CWR. These costs include those for: 1) construction and operation of additional water quality treatment, water storage, and flood control facilities and infrastructure, 2) increased health care costs, and increased reconstruction and repair costs associated with higher levels of flood and storm damage to properties, roads, and other infrastructure, and 3) insurance. Additionally, there would be a loss of revenues to private businesses, including many rural small businesses that benefit from fishing, hunting, boating, and other recreation industries that are dependent upon clean and plentiful waters and the wetlands that sustain them.

Comment #4: The Agencies should provide broadly-based, peer-reviewed, accurate and substantive documentation of the commitment of state agencies to take on wetland protection that would be lost if the 2015 CWR is rescinded. This documentation should be subject to a robust peer review and public comment process.

The reduction of federal financial support must also be considered when evaluating the capability of state programs to evaluate wetland permitting. The Agencies assert that rescinding the 2015 CWR is justified because states will protect wetlands through state wetland protection programs. States have had the option to assume responsibility for the Section 404 permit program since the Clean Water Act (CWA) passed in 1972, yet only two states have chosen to do so. An additional 21 states have some type of dredge-and-fill permit program, many of which rely on federal grant funding and collaboration (Association of Wetland Managers 2015). Furthermore, over two dozen states currently have budget deficits in 2017. These states and others face fiscal challenges such as health care, unfunded retirement obligations, and a backlog of repairs for aging infrastructure which makes taking on more wetland-related management issues problematic, if not prohibitive. The majority of states rely on the technical and financial support of the federal government in administering wetlands protection policies, and thus are not likely to have the capacity or the inclination to take on wetland protection in the absence of federal protection, which would lead to loss of the economic, ecological, and public health and safety benefits. Furthermore, the current US Administration has proposed drastic reductions to the EPA budget, which would result in diminished federal financial support of state wetland programs. A solely State-by-State regulation of wetlands makes the management of some migratory species that much more difficult, if not impossible.

Comment #5: The current 60-day comment period for the proposed rescinding of the 2015 CWR should be extended for another six months, so that our members, and other stakeholders directly impacted by the proposed rule to rescind, have sufficient time to submit comments.

There was a robust public participation to develop the 2015 CWR. The 2015 CWR underwent an extensive stakeholder process, involving over 400 meetings with small business owners, farmers, energy companies, states, counties, municipalities, other federal agencies, sportsmen, conservation groups and environmental organizations, and a public comment period that lasted for over 200 days. Americans submitted over 1.1 million comments on the 2015 CWR, and over 90% were in support of the 2015 CWR and protection of our nation's wetlands and waters. The broad public support for the 2015 CWR should not be overridden by an unduly foreshortened comment period and limited stakeholder process.

Our nation's wetlands and headwater streams provide a broad suite of direct and indirect ecosystem services to society. There are costs associated with replacing those ecosystem services (if they could be replaced); there are far-reaching implications for fish, wildlife, and their habitat from rescinding the 2015 CWR. We therefore urge the EPA and the Army Corps of Engineers to either **withdraw the proposed rule to rescind the 2015 CWR and reaffirm the 2015 CWR**, or, to develop a revised rule that is as scientifically, legally, and ecologically robust as the 2015 CWR, and that is supported by an economic analysis that incorporates a valuation of ecosystem services provided by WOTUS as defined in the 2015 CWR. Only in this way will the concerns and interests of American citizens, businesses, and communities be addressed in a responsible manner.

Sincerely,



Arnold van der Valk
President
Society of Wetland Scientists

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