Consortium of Aquatic Science Societies

American Fisheries Society • Association for the Sciences of Limnology and Oceanography • Coastal and Estuarine Research Federation • Freshwater Mollusk Conservation Society • International Association for Great Lakes Research • North American Lake Management Society • Phycological Society of America • Society for Freshwater Science • Society of Wetland Scientists

September 3, 2021

Mr. Micheal S. Regan
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue NW,
Washington, DC 20460

Mr. Jaime A. Pinkham
Acting Assistant Secretary of the Army for Civil Works
Department of the Army
108 Army Pentagon, Washington, DC 20310-0104

Re: Waters of the U.S. Docket ID No. EPA-HQ-OW-2021-0328

Dear Administrator Regan and Assistant Secretary Pinkham:

Thank you for your commitment to crafting a reasonable, effective, and durable definition of Waters of the U.S. (WOTUS) that protects public health, the environment, and downstream communities. We applaud your intent to rescind the harmful 2020 Navigable Waters Protection Rule (NWPR)[1] and we urge you to quickly re-establish a science-based definition of WOTUS that will allow the Clean Water Act (CWA) to fulfill its mandate to restore and maintain the chemical, physical, and biological integrity of the nation's waters.

The Consortium of Aquatic Science Societies (CASS) is on the record supporting a science-based definition of WOTUS for its importance to fish, fisheries, wildlife, watersheds, water quality and supply, flood control, as well as the people and economies that rely on them.[2] The NWPR significantly deviates from previous interpretations of the CWA and largely ignores and oversimplifies science.[3] CASS fully supports the definition of WOTUS in the 2015 Clean Water Rule (CWR)[4], which was overwhelmingly supported by peer-reviewed science.

CASS is composed of nine professional societies representing almost 20,000 individuals with diverse knowledge of the aquatic sciences. Our members work in the private sector, academia, nongovernmental organizations, and various tribal, state, and federal agencies. We support the

[1] U.S. Environmental Protection Agency and U.S. Army Corps of Engineers. 2020. The navigable waters protection rule: definition of "waters of the United States." Federal Register 85:77(21 April 2020):22250.
[2] Letter from the Consortium of Aquatic Sciences to Administrator Wheeler and Assistant Secretary James re: scientific societies' comments on proposed rule – revised definition of "waters of the United States" (84 FR 4154; Docket ID No. EPA-HQOW-2018-0149). Available: https://www.esa.org/wp-content/uploads/2019/04/2019_4_10-Science-Societies-WOTUS-Letter-Final.pdf. (February 2021).
[3] Sullivan, S. M. P., M. C. Rains, A. D. Rodewald, W. W. Buzbee, and A. D Rosemond. 2020. Distorting science, putting water at risk. Science 369:766–768.
[4] U.S. Army Corps of Engineers and U.S. Environmental Protection Agency. 2015. Clean water rule: definition of "waters of the United States." Federal Register 80(29 June 2015):37054.

development and use of the best-available science to sustainably manage our freshwater, estuarine, coastal, and ocean resources for the benefit of the U.S. economy, environment, and public health and safety.

The NWPR is inconsistent with more than a half century of scientific research that demonstrates that the integrity of "traditionally navigable" waters fundamentally depends on ephemeral (i.e., flow only after precipitation events), intermittent (i.e., flow seasonally), and perennial (flow year-round) streams, as well as on wetlands located both within (i.e., floodplain wetlands) and outside (i.e., non-floodplain or geographically isolated wetlands) of floodplains.[2] The very narrow definition of WOTUS in the NWPR resulted in the loss of protections for millions of stream miles and acres of wetlands, including five types of isolated wetlands with ecological value disproportionate to their area.

The comprehensive Environmental Protection Agency scientific report that accompanied the 2015 CWR, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence,"[5] synthesized more than 1,200 peer-reviewed publications. Along with input from 49 experts and a 25-member panel of the EPA's Scientific Advisory Board (SAB), this report provided the technical basis for the 2015 CWR. Substantial additional literature has emerged that reaffirms the report and the 2015 CWR. [6] [7] [8] [9, 10] [11, 12] We stand by this science.

The loss of protections for our nation's waters under the NWPR threatens fish, fisheries, wildlife, aquatic ecosystems, and the human populations that rely on them and places the highly valued ecosystem services that are derived from these systems in great peril.[7, 13]

Unlike the 2015 definition of WOTUS that established protection based on the connectivity of waters, the NWPR defines a WOTUS in terms of its direct, consistent surface flows with traditionally navigable waters. This is inconsistent with the full mandate of the CWA and is a critical shortcoming of the NWPR since many waters that play an important part in maintaining ecological integrity flow ephemerally or intermittently and fluctuate substantially throughout any typical year.

In the face of climate change, it has never been more important to protect streams and wetlands that store carbon, provide critical habitat for fish and wildlife, provide flood storage, and maintain

[5] U.S. Environmental Protection Agency. 2015. Connectivity of streams and wetlands to downstream waters: a review and synthesis of the scientific evidence (final report). U.S. Environmental Protection Agency, EPA/600/R-14/475F, Washington, D.C.

[6] Cohen, M. J., I. F. Creed, L. Alexander, N. B. Basu, A. J. K. Calhoun, C. Craft, E. D'Amico, E. DeKeyser, L. Fowler, H. E. Golden, J. W. Jawitz, P. Kalla, L. K. Kirkman, C. R. Lane, M. Lang, S. G. Leibowitz, D. B. Lewis, J. Marton, D. L. McLaughlin, D. M. Mushet, H. Raanan-Kiperwas, M. C. Rains, L. Smith, and S. C. Walls. 2016. Do geographically isolated wetlands influence landscape functions? Proceedings of the National Academy of Sciences of the United States of America 113:1978–1986.

[7] Colvin, S. A. R., S. M. P. Sullivan, P. D. Shirey, R. W. Colvin, K. O. Winemiller, R. M. Hughes, K. D. Fausch, D. M. Infante, J. D. Olden, K. R. Bestgen, R. J. Danehy, and L. Eby. 2019. Headwater streams and wetlands are critical for sustaining fish, fisheries, and ecosystem services. Fisheries 2:73–91.

[8] Fritz, K. M., K. A. Schofield, L. C. Alexander, M. G. McManus, H. E. Golden, C. R. Lane, W. G. Kepner, S. D. LeDuc, J. E. DeMeester, and A. I. Pollard. 2018. Physical and chemical connectivity of streams and riparian wetlands to downstream waters: a synthesis. JAWRA (Journal of the American Water Resources Association) 54:323–345.

[9] Harvey, J., J. Gomez-Velez, N. Schmadel, D. Scott, E. Boyer, R. Alexander, K. Eng, H. Golden, A. Kettner, C. Konrad, R. Moore, J. Pizzuto, G. Schwartz, C. Soulsby, and J. Choi. 2018. How hydrologic connectivity regulates water quality in river corridors. JAWRA (Journal of the American Water Resources Association) 54:369–381.

[10] Leibowitz, S. G., P. J. Wigington, Jr., K. A. Schofield, L. C. Alexander, M. K. Vanderhoof, and H. E. Golden. 2018. Connectivity of streams and wetlands to downstream waters: an integrated systems framework. JAWRA (Journal of the American Water Resources Association) 54:298–322.

[11] Rains, M. C., S. G. Leibowitz, M. J. Cohen, I. F. Creed, H. E. Golden, J. W. Jawitz, P. Kalla, C. R. Lane, M. W. Lang, and D. L. McLaughlin. 2016. Geographically isolated wetlands are part of the hydrological landscape. Hydrological Processes 30:153–160.

[12] Schofield, K. A., L. C. Alexander, C. E. Ridley, M. K. Vanderhoof, K. M. Fritz, B. C. Autrey, J. E. DeMeester, W. G. Kepner, C. R. Lane, S. G. Leibowitz, and A. I. Pollard. 2018. Biota connect aquatic habitats throughout freshwater ecosystem mosaics. JAWRA (Journal of the American Water Resources Association) 54:372–399.

[13] Declaration of Dr. S. Mažeika Patricio Sullivan, California v. Wheeler (N.D. Cal.), Case 3:20-cv-03005-RS, Document 30-18.

downstream water quality and quantity.[14,15,16, 17] Science-based Clean Water Act protections can help to protect the integrity of aquatic ecosystems, maintain crucial ecosystem services for sequestration and storage of carbon, improve climate resilience, and promote our progress towards the drawdown of carbon from the atmosphere.[18] Rather than protecting our waters' integrity, the NWPR intensifies their vulnerability to climate change and extensive and intensive land uses such as agriculture, livestock grazing, forestry, mining, and urbanization.[3,13]

Climate change is warming rivers, lakes, streams, and wetlands and significantly altering precipitation patterns (both increasing and decreasing precipitation depending on season and location) throughout America and is accelerating and intensifying water-quality problems, altering the functions of aquatic ecosystems, and impacting species' ranges and survival.[18] These impacts to our nation's waters extend from small lakes and streams to large rivers like the once perennial Gila, lower Colorado, and Río Grande rivers. These changes are not just theoretical; scientists are already seeing massive shifts in seasonal flows, stream length, and surface flows from climate change and land use shifts, water withdrawal, and groundwater pumping.[17, 7]

By length, approximately half of stream channels in the conterminous United States are ephemeral, and 50% of these are no longer protected under the NWPR; thus, at least 25% of the nation's stream channels have now lost protection.[19] Removing previous protections from millions of miles of these ephemeral headwater streams will only exacerbate the transformation of historically perennial streams and rivers into highly vulnerable intermittent and ephemeral streams and rivers. The NWPR reduces protections across the nation, with some of the strongest impacts in arid areas of the country, such as in many states in the Southwest and Southern Plains. As such, the loss of CWA protections will be most acute where water quantity and quality issues already threaten the sustainability of watersheds and communities.

The NWPR also abandons the bipartisan and long-standing "No Net Loss of Wetlands" national policy, first established by President George H. W. Bush, by excluding nonfloodplain wetlands, or wetlands that are not connected at the surface to navigable waters, from CWA protection. Relying on a surface connection of a wetland to navigable waters to establish CWA jurisdiction ignores the important biological and chemical connections with navigable waters that allow these wetlands to play an outsized role in protecting water quality, reducing flooding and pollution, providing fish and wildlife habitat, and storing carbon.[3]

We urge you to quickly establish a science-based definition of WOTUS that will allow the CWA to fulfill its mandate to restore and maintain the chemical, physical, and biological integrity of the nation's waters.

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[15] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). 2019. Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany.

[16] Ripple, W. J., C. Wolf, T. M. Newsome, P. Barnard, and W. R. Moomaw. 2020. World scientists' warning of a climate emergency. Bioscience 7:8–12.

[17] American Fisheries Society, American Institute of Fishery Research Biologists, American Society of Ichthyologists and Herpetologists, American Water Resources Association, Asian Fisheries Society, Asociación de Oceanólogos de Mexico, A. C., Asociación Internacional de Hidrogeologos – Mexico Chapter et al. 2020. Statement of world aquatic scientific societies on the need to take urgent action against human-caused climate change, based on scientific evidence. Available: https://climate.fisheries.org/world-climate-statement/. (February 2021).

[18] Moomaw, W. R., G. L. Chmura, G. T. Davies, C. M. Finlayson, B. A. Middleton, S. M. Natali, J. E. Perry, N. Roulet, and A. E. Sutton-Grier. 2018. Wetlands in a changing climate: science, policy and management. Wetlands 38:183–205.

[19] Fesenmyer, K. A., S. J. Wenger, D. S. Leigh, and H. M. Neville. In press. Large portion of USA streams lose protection with new interpretation of Clean Water Act. Freshwater Science, doi.org/10.1086/713084.

Thank you for your consideration.

Sincerely,

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Coastal and Estuarine Research Federation
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