9 October 2026

The Honorable Lee Zeldin Administrator
Environmental Protection Agency
1200 Pennsylvania Ave NW
Washington, D.C. 20460

The Honorable Adam Telle
Assistant Secretary of the Army for Civil Works
U.S. Army Corps of Engineers
108 Army Pentagon, Room 3E446
Washington, DC 20310-0108

Via Regulations.gov

Re: Updated Definition of ‘‘Waters of the United States”, Docket No. EPA-HQ-OW-2025-0322

Dear Mr. Zeldin and Mr. Telle,

The American Fisheries Society (AFS) and the Coastal and Estuarine Research Federation (CERF) respectfully submit the following comments in response to supplemental notice of proposed rulemaking, “Updated Definition of ‘Waters of the United States,’” Docket No. EPA-HQ-OW-2025-0322, published in the Federal Register on September 9, 2026 (SNPRM). This SNPRM seeks to provide regulatory alternatives to the 2025 proposed rule published in the Federal Register on November 20, 2025 (NPRM). We urge the agencies to keep in place the conforming 2023 rule, which appropriately modifies the long-standing, Reagan-era definition of “waters of the United States” with the findings by the Supreme Court in *Sackett v. EPA*.

Introduction
AFS is the world’s oldest and largest professional society of fishery and aquatic scientists and managers. AFS seeks to improve the conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science, promoting the development of fisheries professionals, and advocating for the use of the best available science in policy-making. CERF is a not-for-profit and non-partisan organization whose mission is to advance research, knowledge, and stewardship of coasts and estuaries and sustain the education and professional development of a diverse and inclusive community.

We are a multidisciplinary scientific society of more than 1,300 members who study and manage coastal and estuarine systems worldwide. Collectively, AFS and CERF represent nearly 10,000 students, researchers, resource managers, policy makers, and educators representing academic and research institutions, government, industry and consulting, and non-governmental organizations. Many of our members are experts in the study and management of aquatic systems regulated under the Clean Water Act (CWA), including wetlands and tributaries. AFS and CERF have long supported a science-based definition of ‘‘Waters of the United States’’ (WOTUS). We appreciate the opportunity to comment on the Proposed Rule and submit the following comments for your consideration.

Background

With the passage of the CWA in 1972, Congress aimed “to restore and maintain the chemical, physical, and biological integrity of the nation's waters” to ensure that our nation’s waters are fishable and swimmable. To achieve these goals, the CWA regulates pollutant discharges and the dredging and filling of our nation’s waters, including wetlands, to ensure water quality that sustains fisheries and wildlife and the many associated economic benefits.

According to the U.S. Geological Survey (USGS), wetlands are among the most productive and economically valuable ecosystems in the world (USGS 2026). Aquatic ecosystems depend on the exchange of chemical components, organisms, sediment, and organic matter between wetlands and abutting water bodies to sustain life in and around their shores. The interconnections between headwater streams, intermittent streams, and freshwater wetlands with underground connections are critical to estuarine waters and wetlands – whatever happens within a watershed has impacts on the associated estuary and coasts. These interconnections are supported by extensive and rigorous scientific literature, including a synthesis report by the U.S. Environmental Protection Agency (USEPA 2015). This science underpins the current U.S. Army Corps of Engineers (USACE) definition of wetlands (USACE 2025). Dredging or filling wetlands and water bodies undermines the services they provide, including their ability to filter contaminants and excess nutrients that drive eutrophication and harmful algal blooms; provide food, habitat and migration pathways for fish and other wildlife; and serve as drainage and storage systems for floodwaters.

The 2023 U.S. Supreme Court decision in *Sackett v. EPA*, defined wetlands “adjacent” to a traditionally navigable water, and thus under the jurisdiction of the CWA, as being relatively permanent and having a continuous surface connection with the traditionally navigable water, making it difficult to determine where the 'water' ends and the 'wetland' begins. The court did acknowledge that “temporary interruptions in surface connection may sometimes occur because of phenomena like low tides or dry spells." As a result of this decision, approximately two-thirds of the nation’s remaining wetlands and up to 5 million miles of streams are no longer protected by the CWA. The NPRM sought to clarify the definitions in the court decision, including “continuous surface connection” and “relatively permanent waters.” Under the most restrictive interpretation of WOTUS in the November 2025 NPRM, it was estimated the vast majority of wetlands previously covered by the CWA would not be subject to federal permitting for dredging or filling. In addition, as acknowledged by the agencies, it would result in “reducing the number of 404 permits issued and acres of wetland impacts mitigated.” Previous projections showed that 84 percent of wetlands that previously required a federal permit to dredge or fill would no longer be covered under the CWA (NRDC 2025). The new definitions in the SNPRM would further eliminate protections, with some estimates that they could remove protections from 94 percent of wetlands and 79 percent of the

streams in the continental United States (NRDC 2026). The agencies' own analysis notes that they "anticipate that the Clean Water Act section 404 program would likely see the most programmatic changes under the options in the SNPRM, with projected reductions in the number of permits and required mitigation relative to the baseline." A recent analysis indicates that currently 50 percent of the nation's WOTUS waters are impaired and do not meet CWA standards (Environmental Integrity Project 2022). Small, headwater streams, which would be largely removed from CWA protections under the SNPRM, make up 79 percent of downstream flow (Colvin et al. 2019).

In January 2026, AFS and CERF submitted public comments on the NPRM in which we highlighted our concerns that the definitions in the NPRM would introduce more uncertainty, contradict well-established science on the connectivity of aquatic systems, and contravene the purpose of the Clean Water Act (CWA) to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." We appreciate the attempt by the Environmental Protection Agency and U.S. Army Corps of Engineers to address some of these concerns through updated definitions in this SNPRM. The scope of CWA protections has already been severely curtailed as a result of the 2023 Supreme Court decision in *Sackett v. EPA*. The agencies proposed further changes in 2025, by introducing a new, confusing test for determining jurisdiction to further limit protections to only streams and wetlands that had flow or water during a region's "wet season." The approach proposed in the SNPRM will unnecessarily erode protections in a manner not required by *Sackett v. EPA*, move further away from the science, contravene the purpose of the CWA to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[1] It will result in even more loss of protections of critical aquatic systems, with cascading consequences for our nation's waters as well as the associated public health and economic benefits, including poorer water quality, increased flooding and pollution, loss of fish and wildlife habitat, reduced drinking water supplies, and impaired blue carbon storage.

The SNPRM would replace the previously proposed "wet season" test with a "perennial" standard and proposes definitions for "relatively permanent" and "continuous surface connection" that, with very limited exceptions, effectively mean the federal CWA will only protect wetlands that are permanently flooded, and waters that flow continuously, year-round, without interruption. The only exception is an interruption in standing or flowing water no more than a single period of up to 30 consecutive days in a given year. It would eliminate protections for all wetlands, streams, and rivers that do not have continuous flow or standing surface water for at least 11 continuous months in a year and are not considered navigable in fact. This comprises virtually all such waterbodies in many parts of the arid West and even a substantial amount of wetlands, streams, and rivers in wetter places of the country. The agencies themselves acknowledge that they "expect the greatest impact would be in regions where intermittent streams drive much of the hydrology, particularly in the arid West."[2]

It is critical—and contemplated by *Sackett*—that non-perennial waterbodies, including intermittent streams, receive protection. Non-perennial waters are a vital part of the hydrological and ecological fabric of watersheds across the country. Though they may appear dry for parts of the year, they play essential roles in improving water quality, sustaining fisheries, managing floods, and maintaining the overall

[1] 33 U.S.C. §1251
[2] https://www.federalregister.gov/documents/2026/09/09/2026-18317/updated-definition-of-waters-of-the-united-states

integrity of downstream waters. As such, we strongly oppose any alternative that would limit protections to perennial waters only.

The proposed definitions are not science-based and are not practical to implement.
In the NPRM, the agencies previously proposed to define "relatively permanent" to mean "standing or continuously flowing bodies of surface water that are standing or continuously flowing year-round or at least during the wet season." The supplemental notice updates the definition of "relatively permanent" to mean "perennial bodies of water."

The SNPRM defines "perennial" in the regulatory text to mean "having standing or continuously flowing water every day of the year during ordinary conditions" or, alternatively, to mean "surface water flowing continuously year-round." This definition underpins the new definition of "relatively permanent" in the SNPRM in that jurisdictional waters would now be limited to perennial bodies of water and would allow exceptions only for a single interruption of up to 30 consecutive days per year due to "non-anomalous events" such as low tide or a regularly occurring dry spell, or for drying caused by "anomalous events such as drought."

The NPRM previously proposed to define "continuous surface connection" as "having surface water at least during the wet season and abutting (i.e., touching) a jurisdictional water." The agencies are also seeking comment on replacing the current terms "adjacent" and "abutting" with "indistinguishable." This would mean deleting the term "adjacent" from the definition in paragraph (c)(2) and revising paragraph (a)(4) of the regulations to read: "Wetlands that are indistinguishably part of a body of water that itself is jurisdictional under (a)(1) through (3) of this section. This occurs when surface water in a wetland is continuously connected with the surface water in the jurisdictional water such that it is difficult to determine where the jurisdictional water ends and the wetland begins. Only the portion of the wetland that is indistinguishably part of the jurisdictional water, due to the presence of surface water, is itself jurisdictional. The requisite surface water connection is not broken by a temporary interruption in surface connection that may sometimes occur because of phenomena like low tide or a regularly occurring dry spell."

These proposed definitions contradict the agencies' own definitions of wetlands and waters connected to downstream navigable waters, which acknowledge that connectivity does not require continuously flowing or standing waters:

- The *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) has used hydrology, soil, and perennial vegetation as indicators of consistent inundation because these aspects require the presence of relatively permanent water in most years and over many years to develop. These indicators are a much more consistent and reliable indicator of a waterbody's status as a wetland than the presence of surface water.
- The USEPA and USACE joint definition of wetlands as defined and identified under CWA Section 404 is "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (USEPA 2026a).

This definition acknowledges that many wetlands fluctuate in frequency and duration of surface water that does not conform to the 30-day exception noted in the SNPRM.

- The USEPA *Connectivity of Streams and Wetlands To Downstream Waters: A Review and Synthesis of the Scientific Evidence* Report (2015), which synthesized more than 1,200 publications, found that streams, regardless of their size or frequency of flow, are connected to downstream waters and strongly influence their function; wetlands and open waters in riparian areas and floodplains are physically, chemically, and biologically integrated with rivers via functions that improve downstream water quality; and many wetlands and open waters located outside of riparian areas and floodplains, even when lacking surface water connections, provide physical, chemical, and biological functions that could affect the integrity of downstream waters.

The agencies received many comments on their proposed definition of "relatively permanent" to mean "standing or continuously flowing bodies of surface water that are standing or continuously flowing year-round or at least during the wet season." Specifically, various concerns were expressed on the term "wet season," which AFS and CERF also expressed in our NPRM comments. The SNPRM seeks to clarify this approach; however, in practicality, these proposed definitions would also be difficult to implement because anomalous events are, by their very nature, impossible to predict. A water body that is not considered perennial in one year because of drought may become perennial the next year when there is no drought. Therefore, these waters would continue to come in and out of the purview of the CWA, which would not align with the agencies' intent to propose a rule that provides certainty and clarity for landowners and is easy for the implementing agencies to administer. The USACE and others contemplated many of these issues when the methods for wetland delineation were being evaluated: rather than focusing on a single parameter, such as "continuous surface connection," the three parameter method integrates conditions and variability of flooding (especially with soil parameters that identify anaerobic conditions that are so critical to biogeochemical wetland functions). Therefore, as previously noted, a better indicator of a relatively permanent wetland is the prevalence of wetland plant species, hydrology, and hydric soils as already used in the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987).

Daily, seasonal, and annual fluctuations are the rule in the vast majority of wetlands, and predictable continuous flooding is the exception (Day et al. 2008). Visible standing or continuously flowing water over a single year is not as reliable as characteristics that develop over years and decades. The *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) delineates wetlands on the criteria: presence of specific types of vegetation, the presence of hydric soils, and hydrology not confined to perennial surface water. The manual has been fine-tuned to reflect regional variation in vegetation and local soil types and has been used since 1987 to determine whether an area qualifies as a wetland:

- *Hydrology:* Connections between water bodies and wetlands are documented in the settled science of wetland development and function, which underpins the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987). Cowardin et al. (1979) classify wetland flooding into four types in tidal wetlands and seven types in non-tidal wetlands (see Table 1 below). The permanently flooded type is only one of the types in tidal and non-tidal wetlands because the hydroperiod, or the hydrological signature of wetlands, differs dramatically among wetland types (see Fig 1 below), and within a wetland type varies drastically daily (especially in tidal wetlands),

seasonally, annually (depending on previous year's weather and climatological cycles such as El Niño/La Niña, and the North Atlantic and Pacific Decadal Oscillations), and unpredictably (especially in low-order streams and coastal wetlands with wind-driven tides). In fact, wetlands exhibiting the greatest extremes between high and low water levels are most often riverine wetlands (Mitsch et al. 1979) or tidal wetlands (Christian et al. 2000) where standing water is present less than a third of the time based on an annual hydrograph (continuous record of water level).

- *Hydric Soils:* The manual defines "hydric soils" as those "inundated or saturated soil conditions resulting from permanent or periodic inundation by ground water or surface water." Because soils take time to change, they are a key, long-term indicator of water's presence. These hydric soils demonstrate that an area maintains a hydrologic connection, not just for a single wet season, but for multiple, successive wet seasons (Richardson et al. 2016). Hydric soils hold and filter our waters, two critical elements in the biological and chemical integrity of our nation's waters. For example, the soils under isolated prairie potholes record the years of inundation and, despite often drying out seasonally, retain the hydric characteristics that are evidence of their function as water storage and filtration systems (Chizen and Bedard-Haughn 2025).
- *Vegetation:* Hydrophytic (wetland-adapted) vegetation takes many years to become established and therefore provides substantial, persistent evidence of the presence of water, even if it is NOT present on the day when a site is inspected. In fact, in a salt marsh on the Eastern Shore of Virginia, the *Spartina patens* plant community, a typical wetland species (Pierce 1977), was flooded during the growing season only 13.4 percent of the time while during the dormant season this plant community was flooded 31.0 percent of the time (Hmieleski 1994). This wetland, like most others, experiences "pulses" of flooding that occur seasonally or irregularly and are some of the most productive wetlands. Wetlands that pulse are the ones most favorable for exporting materials, energy, and biota to adjacent ecosystems (Odum et al.1995) and provide beneficial ecosystem services including water storage that decreases flooding and pollutant contamination of rivers and coasts, and enhances the value of fisheries, wildlife habitat, and local economy (USEPA 2026b). Thus there is ample evidence that wetland functions persist even when the surface connection is not present (Cohen et al. 2016, Lane et al. 2018).

Table 1. Wetland hydrological classifications from Cowardin et al. 1979.

Tidal vs Non-Tidal	**Hydrological Classification**	**Description**
Tidal	Subtidal	The substrate is permanently flooded with tidal water.
Tidal	Regularly flooded	Tidal water alternately floods and exposes the land surface at least once daily.
Tidal	Irregularly flooded	Tidal water floods the land surface less often than daily (e.g., during spring tides or storm surges).
Tidal	Irregularly exposed	The land surface is exposed by tides less often than daily (only during extreme low tides).
Non-Tidal	Permanently flooded	Water covers the land surface throughout the year in all years. Vegetation is composed of obligate hydrophytes
Non-Tidal	Intermittently exposed	Surface water is present throughout the year except in years of extreme drought.
Non-Tidal	Semipermanently flooded	Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.
Non-Tidal	Seasonally flooded	Surface water is present for extended periods, especially early in the growing season, but is absent by the end of the season in most years. When surface water is absent, the water table is highly variable.
Non-Tidal	Staturated	The substrate is saturated to the surface for extended periods during the growing season, but surface water is seldom present.
Non-Tidal	Temporarily flooded	Surface water is present for brief periods during the growing season, but the water table otherwise lies well below the soil surface.
Non-Tidal	Intermittently flooded	The substrate is usually exposed, but surface water can be present for variable periods without a predictable seasonal pattern.

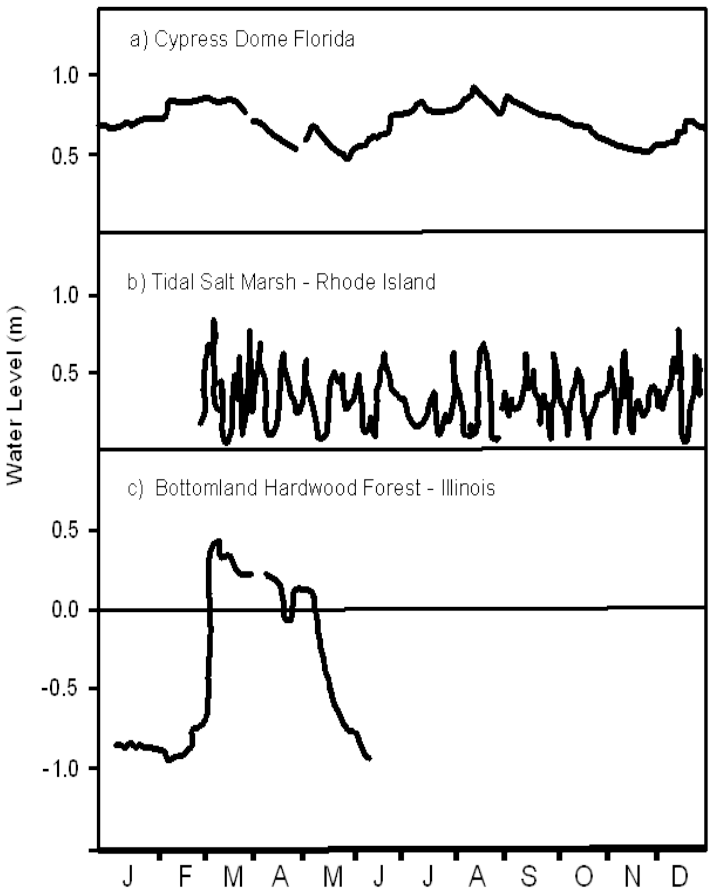

Fig 1. Annual hydroperiods for three different wetland types: a) cypress dome in northcentral Florida (Mitsch and Ewel 1979); b) New England salt marsh (Nixon and Oviatt 1973); c) bottomland hardwood forest along the Kankakee River in northeastern Illinois (Mitsch et al. 1979). Vertical scale indicates water depth relative to soil surface. Figure revised from Mitsch, W.J. and J.G. Gosselink. 1993. *Wetlands*: 2nd edition. Van Nostrand Feinhold, New York, NY. 722 p. ISBN 0-442-00805-8.

If the goal is to have durable, easily confirmed indicators of hydrologic connectivity, the 1987 Manual has established soil and vegetation indicators that are far more robust than the proposed definitions in the SNPRM.

In addition, the requirement for an indistinguishable connection ignores the functionality of large wetland complexes such as prairie potholes, the playas of the Southwestern United States, Nebraska's rainwater basin, and other hydrologically connected, but geographically isolated wetlands. These wetland complexes are often non-perennial but are critical to the biological integrity and surface water storage capacity of otherwise seasonally arid regions (Tiner 2003). While surface water is rarely present year-round, their seasonal presence is key to migratory waterfowl, amphibian reproduction, wildlife habitat, and aquifer recharge. The main failing of the definition in the SNPRM is that it attempts to define WOTUS simplistically as an area of wet land rather than acknowledging the complexity that the CWA encompasses in its purpose statement. The chemical, physical, and biological integrity of the nation's waters does not rely solely on the presence of surface water. It relies on the interactions all along each hydrologic basin from the headwaters to where they meet the sea. Streams and rivers function via

connectivity, but not just at the surface. Subsurface connections are why some portions of rivers remain cool enough for trout spawning during hot summers and why some areas of lakes do not freeze in the winter despite frigid air temperatures (Reid et al. 2025, Franssen et al 2013, Baxter et al. 1999). The waters of our nation support biological systems in all kinds of geographic and seasonal variations, and in some areas they do it despite there not being much water at all during much of the year. Any resident of an arid state can tell you that a seasonal lack of water only increases that waterbody's importance to the integrity of a basin. It is profoundly inaccurate to devalue such waters because they do not fit with what "looks like a river" to someone from a region with several times the amount of annual precipitation. This is why a science-based definition is imperative.

The agencies have also not considered Congress' goals for the CWA "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters," or subsidiary goal **"**of water quality which provides for the protection and propagation of fish, shellfish, and wildlife." Fish, shellfish, and wildlife are not mentioned in the SNPRM, though it acknowledges that recreational sectors such as hunting, fishing, and bird watching—which the CWA seeks to protect—will be impacted by these new definitions.

There are many fish species that return each year to spawn in streams where they have olfactory imprints. Based on the tracking of tagged fish and from repeat photography, we know that some of these streams regularly dry for periods longer than 30 continuous days (such as being dry the majority of the year) but are still used by fish to spawn at times when the streams have flowing water (Colvin et al. 2019; Hooley-Underwood et al. 2019). Thus, streams that support important commercial and recreational fisheries may fall outside of the definition of "relatively permanent" and could remove these important habitats from CWA protection.

Recommendations

We strongly recommend that the agencies keep in place the conforming 2023 rule which appropriately modifies the long-standing, Reagan-era definition of WOTUS with the findings of the Supreme Court in *Sackett v. EPA*. At a minimum, with respect to the definitions addressed in the SNPRM, we recommend that the agencies:

1. Withdraw the proposed "every day of the year" standard for "perennial" and the accompanying 30-day interruption and anomalous-events exceptions;
2. Reject the definition of "relatively permanent" to mean "perennial bodies of water" as proposed in the SNPRM and maintain protections for intermittent streams; and
3. Reject the alternative definition of "continuous surface connection" and instead use a science-based definition of connectivity as noted in the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987), which delineates wetlands based on three factors: 1) specific types of vegetation, 2) hydric soils, and 3) hydrology, or water presence. In particular, the presence of hydric soils – those "inundated or saturated soil conditions resulting from permanent or periodic inundation by ground water or surface water," suggests the agencies recognize that jurisdictional waters need not be connected by continuous surface waters.

Conclusions

Over the last 50 years, with the safeguards of a science-based law, our nation has enjoyed improvements in water quality and ecosystem function that have allowed fishable and swimmable waters and supported much of our nation's economic productivity The NRPM and the new definitions in the SNRPM undermine these gains and threaten the health of streams and wetlands and all associated societal benefits for those while increasing risks of flooding and increasing costs for municipal and industrial treatment of water polluted from upstream sources.

Thank you for considering our science-based recommendations.

Sincerely,

Jeff Kopaska
Executive Director
American Fisheries Society

Susan Park
Executive Director
Coastal and Estuarine Research Federation

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