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U.S. Environmental Protection Agency
EPA Docket Center
Water Docket, Mail Code 28221T
1200 Pennsylvania Avenue NW, Washington, DC 20460

Attn: Docket ID No. EPA-HQ-OW-2025-0322

Re: Comment on the Proposed Rule, “Revised Definition of Waters of the United States”

To Whom It May Concern:

I. INTRODUCTION

The Swamp School, LLC submits this scientific–expert brief in support of reinstating the U.S. Army Corps of Engineers’ Wetland Delineator Certification Program (“WDCP”) to ensure the accurate, defensible, and scientifically rigorous implementation of the 2025 Proposed Rule redefining “Waters of the United States” (“WOTUS”). Our institution has, over more than twenty years, trained thousands of practitioners in wetland hydrology, hydric soil morphology, geomorphology, stream science, vegetation analysis, and federal delineation methodology. What we have observed across that time is a widening gap between the scientific sophistication required under modern Clean Water Act implementation and the training background of many delineators currently operating in the field.

The 2025 Proposed Rule, grounded in the Supreme Court’s holding in Sackett v. EPA, requires field scientists to generate observable, measurable, and scientifically defensible evidence of hydrologic connection and flow permanence [1][2]. This shift is not merely semantic—it imposes scientific burdens that require substantially greater technical capacity than earlier regulatory frameworks. These requirements exceed the training and competency of many practitioners currently performing delineations. Without a standardized national certification program, the Proposed Rule cannot achieve the clarity, consistency, or defensibility its authors intend.

The purpose of this brief is to demonstrate, through hydrological science, geomorphic analysis, soil morphology, and ecohydrological principles, why reinstating the WDCP is necessary to ensure that the highly technical field methodologies embedded in the Proposed Rule are applied in a manner consistent with both scientific best practices and the evidentiary requirements articulated by the Supreme Court.

II. LEGAL AND SCIENTIFIC CONTEXT: WHY THE SACKETT STANDARD DEMANDS TECHNICAL PRECISION

In Sackett v. EPA, the Supreme Court held that wetlands fall under federal jurisdiction only if they maintain a continuous surface connection with traditional navigable waters [2]. This physical continuity must be visibly and demonstrably present, not inferred from watershed processes, ecological gradients, or indirect hydrologic linkages. Simultaneously, the Court reaffirmed that tributaries must exhibit relatively permanent flow—a hydrologic standard that is inherently scientific and field-based [4].

These standards place technical determinations at the center of jurisdictional decisions, requiring precise identification of hydrologic indicators, flow regime classification, and boundary-defining geomorphic features. The legitimacy of a jurisdictional determination under Sackett hinges on the field scientist's ability to interpret data such as:

- flow permanence indicators
- stream channel morphology
- antecedent precipitation conditions
- soil reduction–oxidation morphology
- long-term hydrologic signatures preserved in soils
- spatial continuity of surface hydrology

Under the Administrative Procedure Act, federal agencies must demonstrate that their jurisdictional determinations rest on "substantial evidence" [3]. The scientific nature of this evidence requires practitioners to apply hydrology, geomorphology, and soil science methodologies discreetly, competently, and consistently.

The complex scientific analyses required under the Proposed Rule place the technical workforce—not merely the regulatory text—at the fulcrum of lawful implementation.

III. HYDROLOGY AND APT v3.0: WHY NORMALCY DETERMINATIONS REQUIRE CERTIFICATION

Hydrology is the foundation of most jurisdictional determinations under the Proposed Rule. Identifying water presence under normal conditions is crucial because both hydric soil formation and wetland hydrology indicators must be evaluated in the context of long-term climatic norms, not short-term weather anomalies. The Antecedent Precipitation Tool (APT) v3.0 provides this analysis, but its application demands formal training in climate science, statistical hydrology, and field data interpretation.

APT v3.0 employs 30-year precipitation normals to categorize recent weather as "normal," "wet," or "dry" [9]. Its outputs influence whether field-observed indicators are valid evidence of hydrology. A delineator who lacks training may misclassify a seasonally waterlogged site during a wet anomaly as a jurisdictional wetland, or fail to recognize hydrologic suppression during drought conditions. The tool also requires understanding the hydrologic lag between precipitation input



and groundwater response, a process governed by soil texture, porosity, hydraulic conductivity, and antecedent moisture content.

These interpretive steps are not self-explanatory. They require scientific training in hydroclimatic processes and ecohydrology—competency that WDCP certification was designed to ensure.

IV. GEOMORPHOLOGY AND THE NATIONAL OHWM MANUAL: IDENTIFYING PHYSICAL HYDROLOGIC CONTINUITY

The National Ordinary High Water Mark (OHWM) Manual (2025) demands advanced geomorphic expertise because the OHWM is the primary physical indicator of recurring hydrology in non-perennial streams. The Manual requires practitioners to evaluate features such as sediment sorting, bank scour, depositional benches, wrack lines, micro-erosional signatures, and channel geometry [12][13][14][15]. These features, when properly interpreted, identify whether a stream supports the recurring flow necessary to maintain a continuous surface connection to jurisdictional waters.

The scientific challenge arises from the fact that not all hydrologic signatures are easily distinguishable. A depositional bench might be formed by intermittent flow, overbank flooding, or anthropogenic disturbance. Only a trained geomorphologist can distinguish the subtle transitions in bedform composition, sediment cohesion, and vegetative scour patterns that reveal hydrologic permanency.

Stream channels exhibiting ambiguous geomorphology are common. Without a national certification requirement, practitioners may misidentify OHWM indicators, leading to inconsistent and legally vulnerable jurisdictional determinations.

V. SOIL MORPHOLOGY AND HYDRIC SOIL STANDARD 9.2: THE MOST TECHNICALLY DEMANDING PARAMETER

Hydric soils contain long-term chemical and morphological signatures of saturation or inundation, making them essential indicators when hydrology is difficult to observe directly. However, soil interpretation under the Hydric Soil Technical Standard Version 9.2 is scientifically complex and requires advanced knowledge of:

- redoximorphic feature development [20]
- gleying processes
- reduced matrices in anaerobic zones
- depleted zones and chroma thresholds [21]
- texture-driven differences in morphological expression [22][23][24]
- hydric soil mimicry in disturbed or drained landscapes [22]
- interaction between climatic normalcy and redox feature visibility [25]



Each of these requires a nuanced understanding of soil chemistry, mineralogy, hydrology, and pedogenic processes. The variability in soil expression across the United States makes local experience insufficient; national, standardized training is required.

Incorrect hydric soil interpretation can lead to:

- over-regulation (false positives), where non-hydric soils develop mottling due to fluctuating groundwater
- under-regulation (false negatives), where hydric features are masked by drought conditions

Both outcomes undermine the scientific integrity of the Proposed Rule and increase the risk of litigation.

VI. STREAMFLOW DURATION ASSESSMENT METHODS (SDAMs): SCIENCE AT THE CORE OF THE 'RELATIVELY PERMANENT' STANDARD

The Proposed Rule's reliance on relatively permanent flow makes the Streamflow Duration Assessment Methods (SDAMs) indispensable. SDAMs incorporate complex ecohydrological and geomorphic principles to determine whether a channel is perennial, intermittent, or ephemeral [30].

SDAMs require practitioners to evaluate:

- biological indicators such as benthic macroinvertebrates, algae, and moisture-dependent vegetation [34]
- geomorphic indicators including channel incision, sediment sorting, persistent scour marks, and depositional features [32]
- hydrologic indicators such as flow stains, mineral crusts, and pooling patterns [33]
- regional scoring systems calibrated through statistical modeling

The complexity of SDAM indicators is significant. Many biological indicators have specific ecological tolerances requiring identification skills beyond ordinary environmental training. Geomorphic indicators vary widely by ecoregion, geology, and land use. Hydrologic indicators depend on both current climate and long-term hydroperiod.

Without national certification, practitioners routinely misclassify flow duration. Such errors fundamentally undermine the Proposed Rule's jurisdictional standard.



VII. OPERATIONAL REALITIES: WHY WDCP REDUCES WORKLOAD AND INCREASES ACCURACY

From an operational perspective, USACE faces increasing jurisdictional complexity after Sackett. Each JD must include a more detailed evidentiary record reflecting observable hydrology and flow regime characteristics. This demands greater technical scrutiny from agency staff and increases the time required for review.

Reinstating WDCP improves operational efficiency by ensuring that delineators submit high-quality, scientifically robust reports. Certified delineators understand federal requirements and use standardized methods, reducing the frequency of incomplete submissions, erroneous data, and inconsistent interpretations. The result is a reduced burden on Corps staff, fewer site visits, and shortened review timelines.

Furthermore, the Regulatory Submittal System (RSS) can integrate certification identifiers to support automated QA/QC processes, track delineator accuracy over time, and flag problematic submissions.

VIII. ECONOMIC AND BUDGETARY CONSIDERATIONS: WDCP SUPPORTS ADMINISTRATION OBJECTIVES

The current Administration has emphasized reducing federal workforce demands, controlling regulatory costs, and leveraging public–private partnerships [32]. Reinstating WDCP directly supports these priorities. Certification transfers the scientific training burden to private-sector practitioners rather than federal agencies. It minimizes the need for additional staffing at USACE, reduces review burdens, and avoids expensive training programs for new agency hires.

A well-trained private workforce reduces taxpayer burden while improving the overall reliability and defensibility of jurisdictional determinations.

IX. POLICY BENEFITS: WDCP IS ESSENTIAL TO THE SUCCESS OF THE PROPOSED RULE

The Proposed Rule emphasizes clarity, predictability, scientific rigor, efficiency, and cooperative federalism [37]. Each of these goals depends on consistent scientific application in the field. WDCP ensures that hydrology, geomorphology, soil science, vegetation analysis, and stream ecology are applied uniformly across all jurisdictions. This prevents inter-district inconsistencies, reduces legal risk, and strengthens the scientific credibility of federal implementation.



X. CONCLUSION AND FORMAL REQUEST

Based on the scientific, legal, operational, and policy reasons presented in this expert brief, The Swamp School, LLC respectfully requests that the U.S. Army Corps of Engineers:

REINSTATE THE WETLAND DELINEATOR CERTIFICATION PROGRAM (WDCP)
and modernize it to incorporate:

- SDAM
- APT v3.0
- National OHWM Manual (2025)
- Hydric Soil Technical Standard Version 9.2
- USACOE Wetlands Delineation Manual
- USACOE Wetland Delineation Manual Regional Supplements
- ARDR Minimum Standards
- RSS integration

Certification is essential to ensure accurate, consistent, efficient, and legally defensible implementation of the 2025 Proposed Rule.

In conclusion, the Agencies' authority to reinstate the Wetland Delineator Certification Program during this rulemaking is both clear and immediately actionable. Because WDCP operates as an implementation mechanism rather than a regulatory requirement, it fits squarely within the scope of the Agencies' discretion to announce, update, or adopt supporting programs in the final rule's preamble or accompanying guidance. By reinstating WDCP alongside the 2025 WOTUS definition, the Agencies would ensure the scientific integrity, administrative consistency, and legal defensibility that the rule itself demands. This approach strengthens the regulatory framework without altering the definition of jurisdiction, providing the Corps with a practical and legally sound pathway to elevate technical competency nationwide while fully complying with the procedural limits of the current rulemaking.

Respectfully submitted,

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ENDNOTES

1. Updated Definition of “Waters of the United States,” Proposed Rule, EPA & USACE (2025).
2. *Sackett v. EPA*, 598 U.S. ___ (2023).
3. Administrative Procedure Act, 5 U.S.C. §706(2)(A).
4. *Rapanos v. United States*, 547 U.S. 715 (2006).
5. *SWANCC v. USACE*, 531 U.S. 159 (2001).
6. WRDA 1990, Pub. L. 101-640, §307(e).
7. USACE Draft Wetland Delineator Certification Program Training Package (1993).
8. 58 Fed. Reg. 45008 (Aug. 25, 1993).
9. APT Technical Documentation (USACE, 2024–2025).
10. USGS Hydrologic Normalcy Guidance (2023).
11. ERDC/CRREL Technical Notes on Hydrology (2024).
12. National Ordinary High Water Mark Field Delineation Manual (USACE, 2025).
13. Id., Chapter 3.
14. Id., Chapter 4.
15. Id., Chapter 5.
16. ARDR Minimum Standards (USACE, 2025).
17. Id., Section 2.
18. Id., Section 3.
19. NTCHS, Hydric Soil Technical Standard Version 9.2 (2025).
20. Id., Section 3.1.
21. Id., Section 4.0.
22. NTCHS Version 9.2, Appendix A.
23. Id., Appendix B.
24. Id., Section 2.6.
25. USACE Regional Supplements (Various).
26. USACE RGL 05-02.
27. GAO, “Federal Wetland Permitting: Opportunities for Improved Consistency,” GAO-20-503 (2020).
28. USACE WDCP Draft (1993).
29. ARDR Minimum Standards (2025).
30. EPA/USACE Streamflow Duration Assessment Method (NE–SE SDAM), Aug. 2025.
31. EPA SDAM National Portal (2025).
32. OMB, Analytical Perspectives, Budget of the U.S. Government (FY 2025).
33. GAO-20-503 (2020).
34. USACE WDCP Draft (1993).
35. EPA SDAM Portal (2025).
36. APT Technical Documentation (2024).
37. Updated Definition of WOTUS (2025).
38. OHWM Manual (2025).
39. NTCHS Version 9.2 (2025).
40. EPA/USACE SDAM (2025).

