

MEMORANDUM

TO: Members of the Chartered SAB and SAB Liaisons

FROM: Alison Cullen, Chair, SAB WOTUS Work Group */signed/*

DATE: May 15, 2019

SUBJECT: Preparation for Chartered Science Advisory Board (SAB) Discussion of EPA's Proposed Waters of the U.S. (WOTUS) Rule

The Chartered SAB will discuss whether SAB review of the scientific and technical basis of EPA's proposed WOTUS rule is warranted. To support this discussion, a SAB Work Group was charged with reviewing the proposed WOTUS rule and providing comments and recommendations to the chartered SAB. This memorandum provides background information and Work Group recommendations

Background

Definition of "Waters of the U.S." (RIN2040-AF75) was one of the planned actions included in EPA's Spring 2017 Unified Regulatory Agenda. At that time, the EPA indicated that this rulemaking action responded to a February 28, 2017, Presidential Executive Order: *Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the Waters of the United States' Rule*. At a public meeting held on May 31- June 1, 2018, the SAB considered whether the science supporting this planned action should be reviewed. In a June 21, 2018 letter to the EPA Administrator¹, the SAB stated that it was deferring a decision on reviewing this planned action until reviewable supporting documents or draft rule language was available. In its letter, the SAB noted that it had previously reviewed the proposed rule "Definition of 'Waters of the United States' Under the Clean Water Act" (published in 2014) and had found that the available science provided an adequate scientific basis for the key components of the proposed rule. The SAB requested that the EPA provide briefings on the science that would underlie the Agency's selection of new boundaries for waters of the U.S. and justify what is and is not jurisdictional under the revised WOTUS rule. On February 14, 2019, the EPA and the Department of the Army, Corps of Engineers published a new proposed rule defining the scope of waters federally regulated under the Clean Water Act (84 FR 4154)².

Process Used by the SAB Work Group

The SAB WOTUS Work Group consists of Drs. Alison Cullen (chair), Deborah Bennett, Joel Burken, Bob Blanz, Joseph Gardella, Robert Mace, Clyde Martin, Robert Merritt, Robert Puls, and Donald van der Vaart. The SAB Work Group reviewed EPA's new proposed rule, developed questions for EPA on the technical basis of the rule, and submitted the questions to EPA's Office of Water. On April 25, 2019 the Work Group held a fact-finding teleconference with the EPA Office of Water. A summary of the teleconference is provided in Attachment A. EPA's written responses to questions submitted by the Work Group are provided in Attachment B. Following the discussion with EPA Office of Water staff, Work Group members met separately on the teleconference and discussed comments and

¹ Available at:

[https://yosemite.epa.gov/sab/sabproduct.nsf/02ad90b136fc21ef85256eba00436459/CF4E90721EEBC4C0852582B3006F0FD6/\\$File/EPA-SAB-18-001+.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/02ad90b136fc21ef85256eba00436459/CF4E90721EEBC4C0852582B3006F0FD6/$File/EPA-SAB-18-001+.pdf)

² Available at: <https://www.govinfo.gov/content/pkg/FR-2019-02-14/pdf/2019-00791.pdf>

recommendations to the chartered SAB. After the teleconference, Work Group members concurred on the recommendations presented in this memorandum. One Work Group member, Dr. van der Vaart, did not concur with this memorandum. Dr. van der Vaart's dissenting statement is provided following the Work Group recommendations below.

Work Group Recommendations Regarding SAB Review of the Proposed Waters of the U.S. Rule

The Work Group bases the recommendations below on its review of EPA's proposed Waters of the U.S. Rule and information received from the Office of Water. The Work Group appreciates the helpfulness and responsiveness of the EPA Office of Water staff subsequent to these requests for information and discussing the proposed rule on the April 25, 2019 teleconference.

Work Group concerns about the proposed WOTUS rule focused on the following questions that were posed to the EPA.

- What is the scientific basis for the categorical exclusion of ephemeral streams from Clean Water Act jurisdiction, given their demonstrated importance to the chemical, physical, and biological integrity of the Nation's waters?
- Given the differing roles that ephemeral streams play in influencing the chemical, physical, and biological integrity of the Nation's waters, why not consider a regional approach to regulation of ephemeral streams (and perhaps other waters that have been excluded from Clean Water Act jurisdiction) or at least allow for specific exceptions to their exclusion from jurisdiction?
- What is the scientific basis for excluding from Clean Water Act jurisdiction adjacent wetlands that do not abut or have a direct hydrologic surface connection to otherwise jurisdictional waters?
- What is the scientific basis for excluding from Clean Water Act jurisdiction wetlands with shallow ground water connections to otherwise jurisdictional waters?
- What is the scientific basis for excluding upland ditches with perennial or intermittent flow from Clean Water Act jurisdiction?
- If water body has a "significant nexus" to jurisdictional waters, what is the scientific basis for excluding it from jurisdiction.
- What is the scientific basis for including very small tributaries in waters of the United States.

In responding to questions from the Work Group, the EPA indicated that the line between Federal and State waters, including the exclusion of ephemeral streams from Federal jurisdiction was informed, though not dictated, by science. EPA indicated that the proposed revised definition of "waters of the United States" was a legal and policy decision informed by the statute, its legislative history, Supreme Court interpretations, and the EPA's and the Department of the Army's respect for the traditional power of States to regulate their land and water resources. The EPA stated that limiting Clean Water Act jurisdiction to perennial and intermittent streams appropriately balanced the Federal government's interest in regulating the Nation's navigable waters while respecting State land use authority over features that were only episodically wet following precipitation events.

In response to some of the specific Work Group questions above, the EPA also indicated that:

- In developing the proposed rule EPA and the Department of the Army considered how best to balance the competing priorities of regulatory certainty and allowing for regional variation.

- Implementation methods and tools could be used to identify and distinguish perennial and intermittent flow regimes from ephemeral flow regimes as defined in the proposed rule.
- The proposed definition of jurisdictional adjacent wetlands is intended to establish a clear predictable regulatory framework that could be efficiently implemented and is consistent with Supreme Court interpretations.
- Ditches that are not traditional navigable waters and that are constructed in uplands are not “waters of the United States” because areas that are naturally dry land do not meet the ordinary meaning of the term.
- EPA and the Department of the Army propose to eliminate case-specific significant nexus analysis through categorical treatment of all adjacent wetlands, as defined by the proposed rule, as ‘waters of the United States.’”
- EPA and the Department of the Army never interpreted “waters of the United States” to include groundwater and would continue that practice through the proposed rule by explicitly excluding ground water.

The Work Group thanks the EPA for providing thorough responses to the questions. We recognize that the agency views the definition of “waters of the United States” as a legal and policy decision that is informed by the statute. However, in reviewing the proposed rule we find that there are some gaps between science and policy that warrant review and bridging. Therefore, we recommend further consideration of the following scientific and technical issues:

1. As indicated in EPA’s 2015 report *Connectivity of Streams and Wetlands to Downstream Waters*,³ ephemeral waters are critically important to the chemical, physical, and biological integrity of the Nation’s waters, particularly the southwestern region of the U.S. The scientific basis for categorical exclusion of these waters from Clean Water Act jurisdiction should be further considered.
2. Ground water contributes to intermittent flow of jurisdictional tributaries. Shallow ground water directly connects wetlands to adjacent major bodies of water. Aquifers are a major source of water. Therefore, the scientific importance of ground water protection and ground water connections in defining waters of the United States should be further considered. If spring fed creeks are considered to be waters of the United States, justification of the exclusion of ground water would require a sound and explicit scientific basis.
3. In some cases, the definition of jurisdictional waters in the new proposed WOTUS rule departs from the science supporting the 2015 WOTUS Rule. For example, adjacent wetlands that do not abut or have a direct hydrologic surface connection to otherwise jurisdictional waters are excluded from jurisdiction under the proposed WOTUS rule. The SAB previously found that the available science provided an adequate scientific basis for key components of the 2015 rule. Departures from the science supporting the 2015 rule should be further considered.

³ Available at: <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=296414>

4. Some very small water bodies that convey perennial or intermittent flow downstream are considered to be waters of the U.S. The scientific question of whether a water body could be too small to be jurisdictionally important should be considered.

Dissenting Statement from Work Group member Dr. Donald van der Vaart

I cannot concur with the memorandum from the Work Group to the SAB on EPA's proposed WOTUS rule.

The Clean Water Act (CWA) does not regulate waters of the United States based on the likelihood of their contributing pollution to actual navigable waters. Additionally, the legal experts at the EPA explained that, even if it did, the implementation of the CWA would be still be limited by the authority granted to the Federal Government by the States in the U. S. Constitution.

The question of what should be included as Waters of the United States (WOTUS) is not a scientific inquiry, but a legal one. It is one the U. S. Supreme Court has attempted to convey to the EPA in three separate decisions.

This does not mean that the SAB has no purpose in this area. First, if EPA needs additional science to implement their definition of WOTUS then the SAB is ready to provide its expertise. When asked, the agency explained it had the necessary tools but that it would seek SAB advice as these tools were amended. Secondly, the questions raised in the draft memorandum are important for the states in deciding whether to regulate waters beyond WOTUS. As such, there should be support for work to further elucidate those questions.

Attachment A: Summary of the Science Advisory Board Work Group Fact-Finding on EPA's Proposed Waters of the U.S. Rule, April 25, 2019.

Attachment B: EPA Responses to Science Advisory Board (SAB) Workgroup Questions

Attachment A

Summary of the Science Advisory Board Work Group Fact-Finding on EPA's Proposed Waters of the U.S. Rule

April 25, 2019

The Science Advisory Board (SAB) Waters of the U.S. (WOTUS) Work Group held a fact-finding teleconference on April 25, 2019. EPA's Office of Water was provided questions to clarify and seek additional information on the agency's proposed WOTUS rule. This attachment summarizes the Work Group fact-finding teleconference.

The Work Group submitted questions to the EPA Office of Water. The questions and responses are summarized below. Teleconference attendees were:

Members of the SAB Work Group

Dr. Deborah Bennett
Dr. Bob Blanz
Dr. Alison Cullen (chair)
Dr. Joseph Gardella
Dr. Clyde Martin
Mr. Robert Merritt
Dr. Robert Puls
Dr. Donald van der Vaart

SAB Office Staff

Thomas Armitage, Designated Federal Officer, SAB Staff Office
Thomas Brennan, Acting Director SAB Staff Office

EPA Representatives

Mindy Eisenberg, EPA OW
Sandy Evalenko, EPA OW
Lee Forsgren, EPA OW
Simma Kupchan, EPA OGC
Rose Kwok, EPA OW
Michael McDavit, EPA OW
Owen McDonough, EPA OW
Christine Ruff, EPA OW

Questions for the Office of Water

SAB members asked questions to EPA Office of Water representatives. Mr. Forsgren and Dr. McDonough responded to the questions.

Question: A Work Group member noted the following: The new proposed waters of the U.S. rule stated “Rivers and streams that contribute perennial or intermittent flow to downstream traditional navigable waters in typical year are jurisdictional under the proposal; no ephemeral features are considered jurisdictional under the proposal. Both the 2015 Rule and pre-2015 practice found some ephemeral streams jurisdictional.” This categorical exclusion is contrary to the EPA’s own review of established science in this area. The science presented to the SAB in 2014 supported the inclusion of ephemeral streams, and in fact supported an even broader definition of these streams than first proposed.

The Work Group member asked the following question. Considering the science presented to the SAB in 2014, what was the scientific basis for the categorical exclusion of ephemeral streams in the new WOTUS rule, given their demonstrated importance to the chemical, physical, and biological integrity of the Nation’s waters?

*EPA Response: EPA representatives indicated that the response to the question was fundamental to how the Agency had established the proposed definition of waters of the U.S. The proposed definition of waters of the U.S. is informed but not dictated by science. EPA representatives indicated that the EPA and the Department of the Army had acknowledged that science could not be used to draw the line between Federal and State waters as this was a legal distinction established within the framework and construct of the Clean Water Act. They noted that the proposed definition of waters of the U.S. was informed by the statute, its legislative history, Supreme Court interpretations, and the traditional power of States to regulate their land and water resources. EPA representatives further indicated that limiting Clean Water Act jurisdiction to waters with perennial and intermittent flow balanced the Federal government’s interest in regulating navigable waters with respect for State land use authority over features that were only episodically wet following precipitation events. EPA representatives noted that the proposed definition was informed by the Supreme Court decision in *Rapanos v. United States* wherein the plurality determined that “the waters of the United States include only relatively permanent, standing, or flowing bodies of waters”... “as opposed to ordinarily dry channels”... “or ephemeral flows of water.”*

Question: A Work Group member asked the following question. Given the differing roles that ephemeral streams play in influencing the chemical, physical, and biological integrity of the Nation’s waters throughout the U.S., why not consider a regional approach to regulation of ephemeral streams (and perhaps other excluded waters) or at least allow for specific exceptions to their exclusion.

EPA Response: EPA representatives indicated that the Agency had received many pre-proposal recommendations on this issue. Some commenters suggested specific timeframes for flow requirements to define a tributary, such as 185 days, others suggested a timeframe of three continuous months of flow per year. Some commenters suggested using regional manuals with examples of jurisdictional flow regimes or other mechanisms to recognize regional differences in waters. The EPA and the Department of the Army considered the recommendations received and decided that sufficient data were not available to establish flow metrics to define waters of the U.S. EPA representatives indicated that the definition of waters of the U.S. set forth in the proposed rule was applicable nationwide and that they believe establishing a specific flow volume requirement for all tributaries would be inappropriate given the wide spatial and temporal variability of flow volume in rivers and streams across the country. EPA representatives said the proposal requests comment on whether the tributary definition should include specific flow characteristics (e.g., timing, duration, frequency, or magnitude). EPA representatives indicated that in the proposed rule, a tributary needed to have either perennial or intermittent flow in a

typical year. They noted the importance of the definition of a typical year in the proposed rule (within the normal range of precipitation over a 30-year period for a particular geographic area) and indicated that the concept allowed for regionalization.

Question: A Work Group member asked EPA whether temporal variability could cause tributaries to “come in and out” of jurisdiction.

EPA Response: EPA representatives indicated that the U.S. Army Corps of Engineers was primarily responsible for making jurisdictional determinations. EPA representatives noted that permits had a five-year limit. At the end of the permit period, a new jurisdictional determination might produce a different result if climatological changes had occurred, thus waters could come in and out of jurisdiction.

Question: A member asked EPA to comment on how volumetric differences in flow should be addressed when defining waters of the U.S.

EPA Response: EPA representatives acknowledged that there could be great variability in flow duration and magnitude. EPA representatives indicated that an important consideration in defining waters of the U.S. was whether water found its way via surface flow to a navigable water and, therefore, that a water body could potentially be regulated under the Commerce Clause. EPA representatives stated that the EPA and the Department of the Army took into consideration the Rapanos Supreme Court opinion in recognizing that dry channels were not waters of the U.S., and that if waters did not reach navigable waters they should not be regulated under the Clean Water Act but could be under state law. EPA representatives indicated that EPA and the Department of the Army found that they did not have the data needed to regulate based on flow (in cubic feet per second). EPA representatives further noted that they had solicited comments in the proposal on flow characteristics that would constitute waters of the U.S.

Question: A Work Group member noted that EPA and the Army Corps of Engineers had identified several potential methods and tools to identify waters of the U.S. He asked EPA staff to comment on whether they had the scientific tools to make this determination.

EPA Response: EPA representatives indicated that tools were available to implement the proposed waters of the U.S. rule. Representatives mentioned several tools that could be improved with better data. They indicated that the SAB could play a helpful role in providing advice as tools were developed and improved.

Question: A Work Group member noted that the proposed rule redefined how adjacent waters were included in waters of the U.S. She noted that the SAB had supported a previous definition of adjacent waters and she asked what the scientific basis was for redefining the definition.

EPA Response: EPA representatives stated that the proposed definition of adjacent wetlands was consistent with Supreme Court decisions. Representatives noted that the regulatory definition of wetland had not changed in the proposed rule, but the definition of adjacent had changed. In the proposed rule adjacent wetlands were jurisdictional if they abutted waters of the U.S. or had a direct hydrologic surface connection to waters of the U.S. in a typical year. EPA representatives noted that a direct hydrologic surface connection occurred as a result of inundation from a jurisdictional water to a wetland or via perennial or intermittent flow between a wetland and a jurisdictional water. EPA

representatives indicated that this definition established a clear, predictable regulatory framework that could be efficiently implemented, and adhered to established legal principles.

Question: A Work Group member asked EPA to explain the scientific basis for excluding from jurisdiction waters that had a significant nexus with a traditional waterway.

EPA Response: EPA representatives indicated that the significant nexus test for wetlands adjacent to non-navigable tributaries was only required absent more specific regulations. In light of more specific regulations proposed in the revised definition of waters of the U.S., the EPA and the Department of the Army had proposed to eliminate the case-specific significant nexus analysis through categorical treatment of all adjacent wetlands, as defined by the proposal, as waters of the U.S.

Question: A Work Group member asked EPA whether, under the proposed waters of the U.S. rule, there could be waters that were not jurisdictional but did have a significant nexus to traditional waterways.

EPA Response: EPA representatives acknowledged that the revised definition was a new position and a modification of the prior agency position on Justice Kennedy's "significant nexus" opinion in the Rapanos Supreme Court case. However, EPA representatives indicated that the proposed rule provided better clarity while adhering to the principles articulated in Supreme Court cases. EPA representatives said they believe waters and wetlands covered by the proposal would satisfy the significant nexus standard as established by the Supreme Court in SWANCC and Rapanos and that waters not covered by the proposal were beyond the scope of the test.

Question: A Work Group member asked EPA why upland ditches with perennial or intermittent flow were excluded from jurisdiction under the proposed rule.

EPA Response: EPA representatives indicated that the line between Federal and State waters was a legal distinction, not a scientific one. They indicated that regulation of ditches was a policy decision and that previous decisions on this issue had caused confusion. EPA representatives indicated that the proposed rule added a new category to the definition of waters of the U.S. to provide regulatory clarity and predictability. Ditches that were not traditional navigable waters or were constructed in upland were not waters of the U.S. because areas that were naturally dry land did not meet the ordinary meaning of the term. EPA representatives indicated that if a pollutant were discharged into ditches and conveyed to waters of the U.S. discharge permits would be required.

Question: A Work Group member asked whether irrigation canals would be jurisdictional waters.

EPA response: EPA representatives indicated that if the canal were constructed in an upland area and was not navigable it would be excluded from Federal jurisdiction.

Question: A Work Group member noted that some very small water bodies could be difficult to regulate and asked whether thought had been given to excluding very small water bodies from jurisdiction.

EPA Response: EPA representatives responded that flow volume was not used to determine whether a water body was jurisdictional under the proposed rule, only duration. Rivers, streams, or similarly naturally occurring surface channels that contributed perennial or intermittent flow to traditional navigable waters in a typical year, either directly or indirectly through other jurisdictional waters or through excluded water features, would meet the definition of tributary under the proposed rule. EPA

representatives noted that site specific information may be needed to verify that such features would be jurisdictional as tributaries.

Question: A Work Group member asked why water bodies with shallow ground water connections to waters of the U.S. would be excluded from jurisdiction.

EPA Response: EPA representatives indicated that EPA and the Department of the Army have never interpreted “waters of the U.S.” to include groundwater. EPA representatives noted that the Agency had considered existing policy and the legislative history of the Clean Water Act and had concluded ground water should not be included in waters of the U.S.

Question: A Work Group member asked whether EPA expected a specific court case, County of Maui, Hawaii v. Hawaii Wildlife Fund to affect the proposed WOTUS rule.

EPA Response: EPA representatives indicated that they did not expect this to affect the proposed rule.

There were no further questions for EPA from Work Group members.

Attachment B
EPA Responses to Science Advisory Board
Work Group Questions

Science Advisory Board (SAB) Workgroup Questions for EPA
on the Proposed Waters of the U.S. Rule (84 FR 4154)

April 17, 2019

QUESTION 1

The new proposed WOTUS rule states “Rivers and streams that contribute perennial or intermittent flow to downstream traditional navigable waters in typical year are jurisdictional under the proposal; no ephemeral features are considered jurisdictional under the proposal. Both the 2015 Rule and pre-2015 practice found some ephemeral streams jurisdictional.” This categorical exclusion is contrary to the EPA’s own review of established science in this area. The science presented to the SAB in 2014 supported the inclusion of ephemeral streams, and in fact supported an even broader definition of these streams than first proposed.

The EPA’s 2015 *Connectivity of Streams and Wetlands to Downstream Waters* identifies ephemeral streams as an important component of headwater streams which “*are the cumulative source of approximately 60% of the total mean annual flow to all northeastern U.S. streams and rivers.*” It also documents the potential cumulative effect of ephemeral streams, specifically “*the amount of water ... contributed by a specific ephemeral stream in a given year might be small, but the aggregate contribution of that stream over multiple years, or by all ephemeral streams draining that watershed in a given year or over multiple years, can have substantial consequences on the integrity of the downstream waters.*”

Considering text above and the science presented to the SAB in 2014, what was the scientific basis for the categorical exclusion of ephemeral streams in the new WOTUS rule, given their demonstrated importance to the chemical, physical, and biological integrity of the Nation’s waters?

RESPONSE:

The line between Federal and State waters, including the exclusion of ephemeral streams from Federal jurisdiction, is informed by, though not dictated by, science. The agencies use the Connectivity Report to inform certain aspects of the proposed definition of “waters of the United States,” such as recognizing the “connectivity gradient” and potential consequences between perennial, intermittent, and ephemeral streams and downstream waters within a tributary system, but acknowledge that science cannot be used to draw the line between Federal and State waters, as those are legal distinctions that have been established within the overall framework and construct of the Clean Water Act (CWA).

The proposed revised definition of “waters of the United States” is a legal and policy decision informed by the statute, its legislative history, Supreme Court interpretations, and

the U.S. Environmental Protection Agency and the Department of the Army’s (“the agencies”) respect for the traditional power of States to regulate their land and water resources. The agencies believe that limiting jurisdiction to perennial and intermittent streams most appropriately balances the Federal government’s interest in regulating the nation’s navigable waters while respecting State land use authority over features that are only episodically wet following precipitation events. 84 Fed. Reg. 4174-75 (Feb. 14, 2019).

By proposing to define “tributaries” as rivers and streams that contribute perennial or intermittent flow to traditional navigable waters or the territorial seas, the agencies would establish that a mere hydrologic connection cannot provide the basis for CWA jurisdiction; the bodies of water must be “geographical features” (*i.e.*, rivers and streams) that are “relatively permanent” (*i.e.*, perennial or intermittent) and that contribute perennial or intermittent flow to a traditional navigable water. This proposed requirement is informed by *Rapanos v. United States*, 547 U.S. 715, 739 (2006) (*Rapanos*) wherein the plurality determined that “the waters of the United States’ include only relatively permanent, standing, or flowing bodies of waters” . . . “as opposed to ordinarily dry channels” . . . “or ephemeral flows of water.” Similarly, Justice Kennedy noted, “mere hydrologic connection should not suffice in all cases; the connection may be too insubstantial for the hydrologic linkage to establish the required nexus with navigable waters as traditionally understood.” The proposed requirement that a tributary be connected to a traditional navigable water by perennial or intermittent flow also reflects the plurality’s description of a “wate[r] of the United States” as “*i.e.*, a relatively permanent body of water connected to traditional interstate navigable waters.” 84 Fed. Reg. 4175 (Feb. 14, 2019) (internal citations omitted).

QUESTION 2

The categorical exclusion of ephemeral streams seems particularly insupportable regarding waterways of the U.S. Southwest. As Justice Kennedy in his *Rapanos* concurrence specifically illustrated regarding the illogic of exclusion of all ephemeral streams. “*The merest trickle, if continuous, would count as a “water” subject to federal regulation, while torrents thundering at irregular intervals through otherwise dry channels would not.*” He cited the example of “*Bouquet Creek Near Saugus, CA, [which flows directly into the Santa Clara River] carried no flow for much of the year but carried 122 cubic feet per second on a single day.*” This is a common occurrence in many significant water courses in the U.S. Southwest as documented in the *Connectivity* study.

Among the public comments received for the new rule were suggestions for regional standards to account for the vast geomorphological differences between the woodlands, plains, mountains, desert and coastal regions of the U.S.

Given the differing roles ephemeral streams play in influencing the chemical, physical, and biological integrity of the Nation’s waters throughout the U.S., why not consider a regional

approach to regulation of ephemeral streams (and perhaps other excluded waters) or at least allow for specific exceptions to their exclusion?

RESPONSE:

In developing the proposed rule, the agencies considered how best to balance the competing priorities of regulatory certainty and allowing for regional variation. Many pre-proposal commenters recommended the agencies propose a bright line to distinguish between intermittent and ephemeral flow regimes.¹ A few commenters suggested specific timeframes for the flow requirement to be a tributary, such as 185 days, with most recommending three continuous months of the year. Several States submitted comments during the Federalism consultations recommending a regionalized approach to flow regime, whereby the agencies could provide regional manuals with examples of jurisdictional flow regimes in various parts of the country or some other mechanism to recognize regional differences in waters. The agencies considered these comments and crafted proposed regulatory definitions designed to address a broad array of interests, while adhering to the legal principles articulated in the proposal and while providing a predictable, implementable regulatory framework. 84 Fed. Reg. 4174-75 (Feb. 14, 2019).

The agencies specifically solicited comment on whether the tributary definition should include streams that contribute less than intermittent flow to a traditional navigable water or territorial sea in a typical year. *Id.* at 4177. The agencies also asked for comment on alternative approaches to distinguishing between jurisdictional and nonjurisdictional tributaries based on flow regime. For example, the agencies solicited comment on whether the definition of “intermittent” should contain the requirement of continuous flow for a specific duration, such as at least one month or three months of the calendar year, instead of the phrase “during certain times of a typical year.” The agencies noted that such an approach would provide for national consistency but may not offer a more regionalized implementation of intermittent tributaries as some States recommended. *Id.* at 4178.

The agencies identified several potential implementation methods and tools that could be used to identify and distinguish perennial and intermittent flow regimes from ephemeral flow regimes as defined in the proposal. In conjunction with a field visit, such methods could

¹ Following the March 6, 2017 *Federal Register* notice announcing the agencies’ intent to review and rescind or revise the 2015 Rule, the agencies initiated an effort to engage the public to hear perspectives as to how the agencies could define “waters of the United States.” The agencies held public meetings in Fall 2017 to hear from stakeholders their recommendations to revise the definition of “waters of the United States” under the Clean Water Act (CWA). Concurrently, the agencies established an administrative docket to solicit pre-proposal recommendations for the Step 2 rulemaking to define “waters of the United States.” See EPA-HQ-OW-2017-0480. In addition, the EPA, in coordination with the Department of the Army, initiated formal consultations to solicit comments from state, local, and tribal governments regarding such a new definition in Spring 2017. 84 Fed. Reg. 4162-4163.

include remote and field-based tools, such as visual observations, photographs, data collection on flow, trapezoidal flumes and pressure transducers for measuring surface flow and comparing that to rainfall, StreamStats by the U.S. Geological Survey (USGS) (available at <https://streamstats.usgs.gov/ss/>), Natural Resources Conservation Service (NRCS) hydrologic tools and soil maps, desktop tools that provide for the hydrologic estimation of a discharge sufficient to generate intermittent or perennial flow, such as a regional regression analysis or hydrologic modeling, USGS topographic data, or modeling tools using drainage area, precipitation data, climate, topography, land use, vegetation cover, geology, and other publicly available information. There may be other methods which could be researched and developed by the agencies over time, including the identification of field indicators, such as vegetation and macroinvertebrates, which could be regionalized (for example, the Streamflow Duration Assessment Method for the Pacific Northwest, at <http://www.epa.gov/measurements/streamflow-durationassessment-method-pacific-northwest>, which could be expanded to other regions). 84 Fed. Reg. 4176.

QUESTION 3

One of the changes in the regulation is to no longer include adjacent wetlands. The science presented to the SAB in 2014 supported the inclusion of adjacent wetlands.

What is the scientific basis for no longer including adjacent wetlands in the new proposed WOTUS rule?

RESPONSE:

The question suggests that adjacent wetlands would no longer be federally jurisdictional according to the proposed rule. This is incorrect. Adjacent wetlands, as defined in the proposal, would be federally regulated as category (a)(6) waters. *See* 84 Fed. Reg. 4155 (“The agencies propose to interpret the term ‘waters of the United States’ to encompass: Traditional navigable waters, including the territorial seas; tributaries that contribute perennial or intermittent flow to such waters; certain ditches; certain lakes and ponds; impoundments of otherwise jurisdictional waters; *and wetlands adjacent to other jurisdictional waters.*”) (emphasis added).

As discussed in the response to Question 1, the line between Federal and State waters is a legal distinction, not a scientific one, that reflects the overall framework and construct of the CWA.

The agencies propose to define the term “adjacent wetlands” to mean wetlands that abut or have a direct hydrologic surface connection to other “waters of the United States” in a typical year. “Abut” is proposed to mean when a wetland touches a “water of the United States” at either a point or side. A “direct hydrologic surface connection” as proposed occurs as a result of inundation from a jurisdictional water to a wetland or via perennial or intermittent flow

between a wetland and a jurisdictional water. 84 Fed. Reg. 4184-85 (Feb. 14, 2019). Wetlands physically separated from other waters of the United States by upland or by dikes, barriers, or similar structures and also lacking a direct hydrologic surface connection to such waters are not adjacent under the proposal. *Id.* at 4155.

The proposed definition would draw the legal limit of federal jurisdiction as those wetlands that abut or have a direct hydrologic surface connection to otherwise jurisdictional waters, including tributaries as defined in the proposal, in a clear and implementable way that adheres to established legal principles while being informed by the policy choices and expertise of the executive branch agencies charged with administering the CWA.

Adjacent wetlands as proposed form part of the “waters of the United States”; otherwise they are isolated from “waters of the United States” and not jurisdictional under the proposal. The agencies’ proposed definition is consistent with the ordinary meaning of the term “waters” described in the Supreme Court cases opining on the definition and is intended to implement the CWA policy directive of preserving the ability of the States to regulate land and waters within their boundaries. The agencies view the proposed definition as establishing a clear, predictable regulatory framework that can be efficiently implemented in the field. The proposed definition is consistent with the holding in *United States v. Riverside Bayview Homes*, 474 U.S. 121 (1985) (*Riverside Bayview*) and with the Supreme Court’s subsequent interpretation of *Riverside Bayview* and the scope of CWA jurisdiction over wetlands in *Rapanos*, in which both the plurality and concurring opinions agreed that “waters of the United States” encompass wetlands closely connected to navigable waters. 84 Fed. Reg. 4185 (Feb. 14, 2019).

QUESTION 4

The SAB review in 2014 pointed out the importance of upland ditches with perennial or intermittent flow on water quality. These categories are now excluded from the definition of waters of the United States.

What is the scientific basis for excluding upland ditches with perennial or intermittent flow from the new proposed WOTUS rule?

RESPONSE:

As discussed in the response to Question 1, the line between Federal and State waters is a legal distinction, not a scientific one, that reflects the overall framework and construct of the CWA.

The regulatory status of ditches has long created confusion for farmers, ranchers, irrigation districts, municipalities, water supply and stormwater management agencies, and the transportation sector, among others. The agencies propose to add a new category to the

definition of “waters of the United States” to provide regulatory clarity and predictability regarding the regulation of ditches and similar artificial features. Features, including ditches, that are not traditional navigable waters and that are constructed in upland are not “waters of the United States” because areas that are naturally dry land do not meet the ordinary meaning of the term. “Waters of the United States” are waters within the ordinary meaning of the term, such as oceans, rivers, streams, lakes, ponds, and wetlands; ditches artificially excavated in upland do not fit into this category. 84 Fed. Reg. 4179-80.

QUESTION 5

If water has a “significant nexus” with a traditional waterway, what is the scientific basis for now excluding it from the new proposed WOTUS rule?

RESPONSE:

As discussed in the response to Question 1, the line between Federal and State waters is a legal distinction, not a scientific one, that reflects the overall framework and construct of the CWA.

Since the *Rapanos* decision, the Federal government has adopted a broad interpretation of Justice Kennedy’s concurring opinion, arguing that his “significant nexus” test provides an independent basis for establishing jurisdiction over certain “waters of the United States.” And rather than limiting the application of Justice Kennedy’s opinion to the specific facts and wetlands at issue in that case, the agencies have applied the rationale more broadly to include, for example, the application of the significant nexus test to determining jurisdiction over tributaries, not just wetlands. 84 Fed. Reg. 4168.

Justice Kennedy’s “significant nexus” test for wetlands adjacent to nonnavigable tributaries was only needed “absent more specific regulations,” because “the breadth of [the existing tributary] standard” . . . “seems to leave wide room for regulations of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water volumes towards it” and thus “precludes its adoption as a determinative measure of whether adjacent wetlands are likely to play an important role in the integrity of an aquatic system comprising navigable waters as traditionally understood.” 547 U.S. at 781. In light of the “more specific [tributary] regulations” proposed in the revised definition, the agencies propose to eliminate the case-specific significant nexus analysis through categorical treatment of all adjacent wetlands, as defined by the proposal, as “waters of the United States.” The agencies recognize that this is a new position and modification of prior agency positions on Justice Kennedy’s concurring opinion in *Rapanos*. The agencies believe, however, that the proposal provides better clarity for the regulators and the regulated community alike while adhering to the basic principles articulated in all three Supreme Court cases on point. 84 Fed. Reg. 4186.

QUESTION 6

This question concerns the definition of tributaries. In Western Arkansas there are water features that typically start at a naturally occurring spring or in a small wet area. They typically flow for a few hundred yards at most before entering a well-defined and larger creek. They typically flow the entire year, but the amount of flow is very small. They seem to meet the definition but would be incredibly expensive to document and control.

Are the water features described above intended to be tributaries under the new proposed WOTUS definitions?

RESPONSE:

As described, such water features would appear to meet the “tributary” definition under the proposed rule, so long as they are a river, stream, or similar naturally occurring surface water channel that contributes perennial or intermittent flow to a traditional navigable water in a typical year either directly or indirectly through other jurisdictional waters or through excluded water features so long as those water features convey perennial or intermittent flow downstream. The agencies would need site specific information, however, to verify that such features would be jurisdictional as “tributaries” under the proposal.

QUESTION 7

This question concerns ground water. I find the exclusion of ground waters in general to be too broad. There are known instances and regions where shallow ground water is in direct connection to wetlands adjacent to major water bodies (navigable rivers and lakes) and in direct connection to these same ‘waters of the US’).

Where ground water connections described above have been previously established, why would EPA exclude these as jurisdictional waters in the new proposed WOTUS definitions?

RESPONSE:

The agencies have never interpreted “waters of the United States” to include groundwater and would continue that practice through the proposed rule by explicitly excluding groundwater. 84 Fed. Reg. 4190.

As discussed in the response to Question 3, the agencies propose to define the term “adjacent wetlands” to mean wetlands that abut or have a direct hydrologic surface connection to other “waters of the United States” in a typical year. “Abut” is proposed to mean when a wetland touches a water of the United States at either a point or side. A “direct hydrologic surface

connection” as proposed occurs as a result of inundation from a jurisdictional water to a wetland or via perennial or intermittent flow between a wetland and a jurisdictional water.

Given the focus of the proposed adjacent wetlands definition is based on the ordinary meaning of the term “waters,” common principles from case law, and the limitations on federal authority embodied in section 101(b) of the Act, the proposed definition does not include subsurface hydrologic connectivity as a basis for determining adjacency. The agencies are concerned that the use of shallow subsurface connection could encroach on State and tribal authority over land and water resources and could be confusing and difficult to implement, including in determining whether a subsurface connection exists and to what extent. The categorical inclusion of all wetlands that abut other “waters of the United States” and all wetlands with a direct hydrologic surface connection to other jurisdictional waters will invariably include some wetlands that also connect to those waters through shallow subsurface flow. Physically remote wetlands and wetlands lacking a direct hydrologic surface connection would be reserved to regulation by States and Tribes as land and water resources of those States and Tribes. 84 Fed. Reg. 4189.

The proposed definition is consistent with the holding in *Riverside Bayview* and with the Supreme Court’s subsequent interpretation of *Riverside Bayview* and the scope of CWA jurisdiction over wetlands in *Rapanos*. The plurality characterized the scope of CWA jurisdiction over wetlands as encompassing wetlands, like those at issue in *Riverside Bayview*, with a “continuous surface connection” or a “continuous physical connection” to a relatively permanent body of water connected to traditional interstate navigable waters. *Rapanos*, 547 U.S. at 742, 751 n.13. The concepts of “abutting” and a “direct hydrologic surface connection” in the proposal are consistent with the *Rapanos* plurality’s continuous surface connection requirement. Because the concept of “abutting” in the proposal does not require the existence of a hydrologic connection between wetlands that physically touch jurisdictional waters, this concept is also consistent with Justice Kennedy’s statement that “[g]iven the role wetlands play in pollutant filtering, flood control, and runoff storage, it may well be the absence of hydrologic connection (in the sense of interchange of waters) that shows the wetlands’ significance for the aquatic system.” *Id.* at 786. The agencies’ proposed definition of adjacent will provide clear, understandable delineation between Federal waters and State land and water resources. 84 Fed. Reg. 4185

The limits to the proposed definition, *i.e.*, the categories of wetlands that the proposed definition would not encompass, are consistent with the principles articulated in the three key Supreme Court decisions. The inquiry as to where to draw the line between jurisdictional and non-jurisdictional wetlands is laid out in *Riverside Bayview*: “[i]n determining the limits of its power to regulate discharges under the Act, the Corps must necessarily choose some point at which water ends and land begins Where on this continuum to find the limit of ‘waters’ is far from obvious.” 474 U.S. at 132. While the Court in *Riverside Bayview*

identified this inquiry as a task for the Corps and deferred to the Corps' judgment under *Chevron* principles, the Supreme Court has subsequently recognized outer bounds for the scope of "waters of the United States." 84 Fed. Reg. 4185.

[NOTE: THE TEXT IMMEDIATELY BELOW IS NOT PART OF THE AGENCIES' RESPONSE TO QUESTION 7. IT WAS ORIGINAL TEXT WITHIN THE WORKGROUP'S QUESTIONS, AND THE AGENCIES HAVE LEFT IT IN ITS ORIGINAL LOCATION].

Such ground water and surface water interactions can directly affect the chemical, physical and biological integrity of the Nations waters. Where these connections have clearly been established, I see no difference between a major tributary and these established ground water and surface water connections. Perhaps a distance requirement could be established based on average flow rate of ground water to the adjacent 'waters of the U.S.' if such data exist (e.g. Superfund ground water investigations).

QUESTION 8

The proposed rule states that:

The agencies propose to define the term "perennial" to mean surface water flowing continuously year-round during a typical year. The proposed definition of "intermittent" is surface water flowing continuously during certain times of a typical year, not merely in direct response to precipitation, but when the groundwater table is elevated, for example, or when snowpack melts. Continuous surface flow during certain times of the year may occur seasonally such as in the spring when evapotranspiration is low and the groundwater table is elevated. Under these conditions, the groundwater table intersects the channel bed and groundwater provides continuous baseflow for weeks or months at a time even when it is not raining or has not very recently rained.

The above section lends credence to supporting our above statements regarding ground water inclusion and not exclusion.

How does EPA square the distinction of accepting the fact that ground water may contribute to intermittent flow of jurisdictional tributaries but not acknowledging the role of ground water in direct and verifiable connection to major rivers and navigable lakes?

RESPONSE:

The agencies do not disagree that groundwater is part of the water cycle and can contribute to both perennial and intermittent flow of jurisdictional tributaries. However, as discussed in the response to Question 7, the agencies have never interpreted "waters of the United States" to

include groundwater and would continue that practice through the proposed rule by explicitly excluding groundwater. 84 Fed. Reg. 4190.

In addition, as discussed in the response to Question 1, the line between Federal and State waters is a legal distinction, not a scientific one, that reflects the overall framework and construct of the CWA. The agencies believe that considering direct surface hydrologic connections for adjacency is appropriate in light of the three Supreme Court decisions, as discussed in the response to Question 7, and in light of the CWA policy directive of preserving the ability of the States to regulate land and waters within their boundaries.