On December 30, the Environmental Protection Agency (EPA) and the Army Corps of Engineers (Corps) announced a final rule, Revised Definition of "Waters of the United States" (WOTUS). The rule amends two sections of the Code of Federal Regulations (CFR), 33 CFR §328.3 and 40 CFR §120.2. Paragraph (a) of the rule defines WOTUS with respect to traditional navigable waters, impoundments, tributaries, wetlands, and other intrastate lakes, ponds and streams that meet either the relatively permanent or significant nexus standards. Paragraph (b) contains longstanding exclusions from the pre-2015 regulations, including prior converted cropland and waste treatment systems, as well as additional exclusions based on long-standing practice. Paragraph (c) provides definitions for other terms used in the rule.

WOTUS

The waters defined as jurisdictional under the Clean Water Act (CWA) include:

(1) traditional navigable waters, the territorial seas, and interstate waters ("paragraph (a)(1) waters");

(2) impoundments of waters that would otherwise be considered WOTUS under paragraphs (a)(1), (3), or (4) ("paragraph (a)(2) waters");

(3) tributaries to paragraph (a)(1) waters, and those tributaries to paragraph (a)(2) impoundments that meet the relatively permanent or significant nexus standard;

(4) wetlands adjacent to paragraph (a)(1) waters, wetlands adjacent to and with a continuous surface connection to a relatively permanent (a)(2) impoundment, wetlands adjacent to tributaries that meet the relatively permanent standard, and wetlands adjacent to (a)(2) impoundments or jurisdictional tributaries when the wetlands meet the significant nexus standard; and

(5) intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) that meet either the relatively permanent or significant nexus standard ("paragraph (a)(5) waters").

The agencies noted in the preamble of the rule that they "find it appropriate to assert federal jurisdiction over waters meeting the relatively permanent standard in addition to waters meeting the significant nexus standard…." They assert that the significant nexus standard has a clear basis in the text of the CWA and its objective to protect the chemical, physical, and biological integrity of traditional navigable waters, territorial seas, and interstate waters. They argue that, conversely, the relatively permanent standard lacks grounding in the text, structure, or history of the CWA, but that "it provides important efficiencies and additional clarity for regulators and the public by more readily identifying a subset of waters that will virtually always significantly affect paragraph (a)(1) waters; *i.e.*, those waters for which the Federal interest is indisputable."

The new WOTUS definition modifies the pre-2015 regulations in several respects. Impoundments of jurisdictional paragraph (a)(5) waters do not necessarily retain their jurisdictional status. Tributaries of territorial seas have been added. The rule deletes the pre-2015 regulatory provision regarding the non-exclusive list of "other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds" that could affect interstate commerce. The agencies determined that "it is not appropriate to assert jurisdiction over non-navigable, intrastate waters based solely on whether the use, degradation, or destruction of the water could affect interstate or foreign commerce…. This rule replaces the interstate commerce test with the relatively permanent standard and the significant nexus standard." However, the preamble also notes that the paragraph (a)(5) waters could still include prairie potholes, playa lakes, vernal pools, and other waters that provide important functions to protect the integrity of paragraph (a)(1) waters. The rule does not conclude that they categorically meet the significant nexus standard, but allows for an evaluation of those waters that is distinct from the general scientific conclusion that they are important.

Exclusions

The new section (b) consolidates eight exclusions to the paragraph (a)(2) through (5) waters. Notably, it does not include or affect the statutory exemptions in CWA §404(f) for normal farming, silviculture, and ranching activities, including seeding, harvesting, cultivating, planting, and soil and water conservation practices. Further, it will "not affect the existing statutory or regulatory exemptions or exclusions from section 402 NPDES permitting requirements, such as for agricultural stormwater discharges and return flows from irrigated agriculture, or the status of water transfers." Paragraph (a)(1) waters may not be excluded, even if they otherwise meet the following exclusion criteria:

(1) waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the CWA;

(2) prior converted cropland currently designated by the Secretary of Agriculture;

(3) ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

Definitions

Paragraph (c) provides further definitions for terms used in the rule. Definitions for “wetlands,” “adjacent,” “high tide line,” “ordinary high water mark,” and “tidal water” are unchanged from the pre-2015 regulations. Paragraph (c)(6) provides a lengthy definition for the term, “significantly affect.” The rule's preamble said: “This rule defines the term 'significantly affect' for purposes of determining whether a water meets the significant nexus standard to mean 'a material influence on the chemical, physical, or biological integrity of' a paragraph (a)(1) water. Under this rule, waters, including wetlands, are evaluated either alone, or in combination with other similarly situated waters in the region, based on the functions the evaluated waters perform. This rule identifies specific functions that will be assessed and identifies specific factors that will be considered when determining whether the functions provided by the water, either alone or in combination, have a material influence on the integrity of a traditional navigable water, the territorial seas, or an interstate water. These factors include the distance from a paragraph (a)(1) water; hydrologic factors, such as the frequency, duration, magnitude, timing, and rate of hydrologic connections, including shallow subsurface flow; the size, density, or number of waters that have been determined to be similarly situated; landscape position and geomorphology; and climatological variables such as temperature, rainfall, and snowpack. The functions in this rule are indicators that are tied to the chemical, physical, or biological integrity of paragraph (a)(1) waters, including contribution of flow; trapping, transformation, filtering, and transport of materials (including nutrients, sediment, and other pollutants); retention and attenuation of floodwaters and runoff; modulation of temperature in paragraph (a)(1) waters; or provision of habitat and food resources for aquatic species located in paragraph (a)(1) waters.”

The agencies noted that the “material influence” must be more than speculative or insubstantial, and that “the agencies will provide qualitative and/or quantitative information and articulate a reasoned basis for determining that a significant nexus exists, consistent with longstanding practice. The phrase “material influence” thus reflects the agencies' longstanding position that significant nexus determinations should be supported by the factual record, relevant scientific data and information, and available tools. And that record, data and information, and tools must show, either quantitively or qualitatively based on the five factors, that the subject waterbody provides functions that materially influence the chemical, physical, or biological integrity of a paragraph (a)(1) water.”

The agencies declined to provide other definitions for “navigable,” “similarly situated,” “tributary,” and “physical, chemical, and biological integrity,” noting that they didn't want to be “overly detailed or prescriptive, as interpretations of some of these terms could vary depending on the region or evolve over time with scientific advances.”

Federalism

The agencies stated in the preamble that the provisions of this rule will avoid assertions of their jurisdiction that raise federalism concerns. They argued that Congress granted the authority to the agencies to draw the boundaries of federal jurisdiction over regulable waters, to ensure they are advancing the CWA objectives while preserving and protecting the responsibilities and rights of the States, and that the relatively permanent and significant nexus standards appropriately draw this boundary. The agencies noted that where “waters do not significantly affect the integrity of waters for which the Federal interest is indisputable” they are “leaving regulatory authority over all the waters that do not have the requisite connection to paragraph (a)(1) waters exclusively to the Tribes and States.”

They said that the final rule “enhances States' ability to protect waters within their borders, such as by participating in the section 401 certification process and by providing input during the permitting process for out-of-state section 402 and 404 permits that may affect their waters. Indeed, in implementing and participating in the [CWA’s] regulatory requirements and framework, States can have more powerful and holistic tools for addressing water quality than they would have in implementing state-only laws and regulations.” The preamble later notes that a narrow definition of WOTUS “would not uniformly boost state authority as that definition is foundational to the scope of all the [CWA] programs, including those in which the States are assigned authority.” The preamble then references the §401 certifications and out-of-state §402 and §404 permits. The agencies said: “Nationwide pollution controls are critical to protecting water quality in downstream States because downstream States have limited ability to control water pollution sources in upstream States.”

Additionally, “Tribes and States retain authority to implement their own programs to protect the waters in their jurisdiction more broadly and more stringently than the Federal government…. For example, many Tribes and States regulate groundwater, and some others protect vital wetlands that may be outside the scope of the [CWA].” The preamble also emphasized several times that not all waters have significant effects on paragraph (a)(1) waters, perhaps due to their distance, landscape position outside a riparian area or floodplain, lack of shallow subsurface hydrologic connection, climatological variables, or other factors, and that the agencies regularly determine that waters do not have the requisite significant nexus. Such waters “fall exclusively within Tribal or States regulatory authority should they choose to exercise it.”

The agencies took great pains to explain in detail why CWA §101(a), which sets forth the CWA's objective and foundational purpose, carried much greater weight than any other subsection of 101, particularly §101(b). Section 101(b) states: “It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this Act. It is the policy of Congress that the States manage the construction grant program under this Act and implement the permit programs under sections 402 and 404 of this Act. It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution, and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.”

They pointed out that although States may provide their own environmental protections, “Congress enacted the [CWA] precisely because of the failures of a statutory scheme that relied primarily on State water quality standards.” They asserted that §101(b) “does not reflect a general policy of deference to state regulation to the exclusion of Federal regulation,” and that it is “actually a recognition of States' authority to 'prevent, reduce, and eliminate pollution' and provide support for the Administrator's exercise of his or her authority to advance the objective of the [CWA].” The agencies claimed that sections 101 (b), (c), (f), and (g) are policies that do not play a central role in defining the scope of the CWA.

Section 101(g) states: “It is the policy of Congress that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this Act. It is the further policy of Congress that nothing in this Act shall be construed to supersede or abrogate rights to quantities of water which have been established by any State. Federal agencies shall co-operate with State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources.”

The agencies said: “The prominently placed and single expression of the [CWA’s] overarching objective in section 101(a) merits greater weight in the agencies' decision-making than any of the four congressional policies expressed in section 101 which, while important, appear subordinate to the objective - particularly given the statutory text and structure. To the extent there is ambiguity, the agencies have been delegated the authority to define 'waters of the United States' and again conclude based on the statutory text and structure, and confirmed by the legislative history, that the overarching objective of the Act merits greater weight.”

Perennial, Intermittent, and Ephemeral Streams

While the science indicates that all perennial, intermittent, and ephemeral streams are connected to larger downstream waters, the agencies do not conclude that all such streams categorically meet the significant nexus standard. However, the agencies pointed out that all such streams can be quite significant. “Streams, even where seasonally dry, are the dominant source of water in most rivers, rather than direct precipitation or groundwater input to mainstem river segments. Within stream and river networks, headwater streams make up most of the total channel length. The smallest streams represent an estimated three-quarters of the total length of stream and river channels in the United States [based on estimates using the USGS National Hydrography Dataset, which does not include all headwater streams]. Because of their abundance and location in the watershed, small streams offer the greatest opportunity for exchange between the water and the terrestrial environment.”

The agencies noted that water resources are vulnerable to climate change, but maintaining their interconnectedness allows streams and wetlands to perform functions that contribute to climate resiliency by mitigating negative effects on traditional navigable waters, such as reducing flood peaks and filtering mobilized sediment, nutrients, and other pollutants. “Aquatic systems comprised largely of ephemeral streams are increasingly critical to protecting and maintaining the integrity of paragraph (a)(1) waters, for example by contributing streamflow and organic matter to those larger waters. This is especially true in the Southwestern United States, where climate change is expanding the spatial extent of arid conditions and increasing the risks of more extreme drought. Some portions of the arid West are experiencing altered monsoon seasons that have fewer but more intense storms that contribute to so-called “flashy” stream hydrology (i.e., higher runoff volume, leading to more rapidly rising and falling streamflow over shorter periods of time).”

Arid regions contain far more intermittent and ephemeral streams than the humid regions of the country, the agencies acknowledged. “The functions that streams provide to benefit downstream waters occur even when streams do not flow constantly. For example, ephemeral headwater streams shape larger downstream river channels by accumulating and gradually or episodically releasing stored materials such as sediment and large woody debris. Due to the episodic nature of flow in ephemeral and intermittent channels, sediment and organic matter can be deposited some distance downstream in the arid Southwest in particular, and then moved farther downstream by subsequent precipitation events. Over time, sediment and organic matter continue to move downstream and influence larger downstream waters. These materials help structure downstream river channels by slowing the flow of water through channels and providing substrate and habitat for aquatic organisms.” The preamble included examples in footnote 55 with links to four videos of ephemeral streams in Arizona, New Mexico, and Utah, flowing with significant volumes of water and debris following flash flood rain events in 1990, 2011, 2013, and 2019.

Small streams also provide value in reducing harmful algal blooms. “Stream and wetland ecosystems also process natural and human sources of nutrients, such as those found in leaves that fall into streams and those that may flow into creeks from agricultural fields. Some of this processing converts the nutrients into more biologically useful forms. Other aspects of the processing store nutrients, thereby allowing their slow and steady release and preventing the kind of short-term glut of nutrients that can cause algal blooms in downstream rivers or lakes. Small streams and their associated wetlands play a key role in both storing and modifying potential pollutants, ranging from chemical fertilizers to rotting salmon carcasses, in ways that maintain downstream water quality. Inorganic nitrogen and phosphorus, the main chemicals in agricultural fertilizers, are essential nutrients not just for plants, but for all living organisms. However, in excess or in the wrong proportions, these chemicals can harm natural systems and humans. Larger rivers process excess nutrients much more slowly than smaller streams. Loss of nutrient retention capacity in headwater streams is known to cause higher concentrations and loads of nitrogen and phosphorus in downstream waterbodies. In freshwater ecosystems, eutrophication, the enriching of waters by excess nitrogen and phosphorus, sets off a chain reaction of events that reduces water quality in streams, lakes, estuaries, and other downstream waterbodies. The excess nutrients lead to the overabundance of algae and aquatic plants. Too much algae clouds previously clear streams, such as those favored by trout. Algal blooms not only reduce water column visibility, but the microbial decay of algal blooms reduces the amount of oxygen dissolved in the water, and therefore the amount available to aquatic life, sometimes to a degree that causes fish kills. Fish are not the only organisms harmed by eutrophication: some of the algae species that grow in eutrophic waters generate tastes and odors or are toxic - a clear problem for stream systems, reservoirs, and lakes that supply drinking water for municipalities or that are used for swimming and other contact-recreational purposes. Algal blooms driven by excess nutrients also can injure people and animals, as toxins can kill native fish and other wildlife, and endanger human health. Algal blooms can also lead to beach closures. The overabundance of plant growth and alterations in water chemistry that occur in eutrophic waters also changes the composition of natural communities of aquatic ecosystems.”

Science, Tools, and Mapping

The agencies noted that, throughout the preamble, when they referred to being informed by the best available science, they meant foundational principles of biology, hydrology, geology, chemistry, and soil science; the 2015 report on *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*; and the *Technical Support Document for the Final Rule: Revised Definition of the “Waters of the United States.”* They said that science alone cannot dictate the scope of WOTUS, but it is critical to understanding whether the scope chosen will further the Congressional objective to restore and maintain the chemical, physical, and biological integrity of the nation's waters.

They also reviewed advancements in implementation resources and tools in an effort to address past concerns about the timeliness and consistency of jurisdictional determinations under the CWA. The agencies acknowledged that the need for case-specific analysis will continue under this rule, and will likely increase in number as they assess paragraph (a)(5) waters under the significant nexus standard. However, they do not expect a corresponding increase in positive jurisdictional determinations. Historically, approximately only 12% of the water resources assessed for approved jurisdictional determinations required a significant nexus analysis.

The agencies have worked to make jurisdictional determinations available to the public. The Corps' website, https://permits.ops.usace.army.mil/orm-public, “allows users to search and view basic information on approved jurisdictional determinations and permit decisions (including latitude and longitude) and to filter the determinations using different parameters like Corps District and year.” The EPA's website, https://watersgeo.epa.gov/cwa/CWA-JDs/, “allows users to search, sort, map, view, filter, and download information on approved jurisdictional determinations using different search parameters (e.g., by year, location, State, watershed, regulatory regime). The website includes a map viewer that shows where waters have been determined to be jurisdictional or non-jurisdictional based on the approved jurisdictional determinations available on the site.”

EPA also maintains information on section 402 permits, “including Permit Compliance System and Integrated Compliance Information System database, available at https://www.epa.gov/enviro/pcs-icis-overview, as well as the

EnviroMapper, available at https://enviro.epa.gov/enviro/em4ef.home, and How's My Waterway, available at https://www.epa.gov/waterdata/hows-my-waterway."

The preamble noted: "EPA and the Army have also been working with other Federal agencies on improving aquatic resource mapping and modeling, including working with the Department of Interior (DOI). EPA, USGS, and FWS have a long history of working together to map the nation's aquatic resources. The agencies will continue to collaborate with DOI to enhance the NHD, NWI, and other products to better map the nation's water resources while enhancing the utility and availability of such geospatial products for implementation of Clean Water Act programs."

The agencies have been working to develop regionalized streamflow duration assessment methods (SDAMs) to classify streamflow duration and assist in determining whether tributaries are relatively permanent. "The agencies have previously used existing SDAMs developed by Federal and state agencies to identify perennial, intermittent, or ephemeral streams. The agencies will continue to use these tools whenever they are determined to be a reliable source of information for the specific water feature of interest. The agencies are currently working to develop region-specific SDAMs for nationwide coverage, which will promote consistent implementation across the United States in a manner that accounts for differences between each ecoregion. The region-specific SDAMs will be publicly available, with user manuals that will guide not only the agencies, but also other practitioners, in applying the methods to assess aquatic resources. Additional information on the agencies' efforts to develop SDAMs is available on the Regional Streamflow Duration Assessment Methods webpage, available at https://www.epa.gov/streamflow-duration-assessment. Consistent with longstanding practice, the agencies will make decisions based on the best available information."