



# Maryland

## Department of the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

September 3, 2021

Radhika Fox  
Assistant Administrator  
Office of Water  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Jaime A. Pinkham  
Acting Assistant Secretary of the Army (Civil Works)  
108 Army/Pentagon  
Washington DC 20310-0108

**Re: Docket EPA-HQ-OW-2021-0328-001, Pre-Proposal Request for Recommendations,  
Waters of the United States**

Dear Administrator Fox and Secretary Pinkham:

The Maryland Department of the Environment (MDE) is submitting comments to the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) in response to docket EPA-HQ-OW-2021-0328-001, published in the *Federal Register* on August 4, 2021, regarding pre-publication solicitation of changes to the definition of “Waters of the United States” (WOTUS). MDE appreciates the opportunity to provide perspectives on the definition of waters to be protected under the Clean Water Act (CWA) and also appreciates your intent to improve clarity and balance in current federal regulations and policies.

Maryland has comprehensive state laws in place to protect and restore waterways and wetlands within state boundaries. Currently, ephemeral streams (i.e., streams that have a bed and bank, but no perennial flow and no contact with groundwater) are the only waterways which, as a matter of practice, Maryland has generally not considered jurisdictional under certain provisions of state law and which, under the current WOTUS definition, are also not considered jurisdictional under the CWA. While changes in the federal rule will have limited direct effect on protecting Maryland’s water and wetland resources, we are concerned that any potential rollback of environmental protections would have a negative impact on the progress that has been made in Maryland to protect and restore our waters, including the Chesapeake Bay. We are also sensitive to the concerns expressed by the agricultural community regarding the previous administration's WOTUS policy. However, the changes in definition may restore protections for waters in upstream states, which may lack comparable authority to Maryland. In these cases, having a broader federal definition of CWA jurisdiction could help avoid complex interstate conflicts that might otherwise arise if the federal definition were too narrow. It is important that flowing waters that cross state borders (e.g.,

Susquehanna River) be adequately protected from pollution under the upstream state's law (with provisions for the downstream state to weigh-in on discharge permits and standards) or, if not, be subject to federal jurisdiction so that the downstream state can, if need be, participate as a downstream state in the process of permitting discharges and the establishment of water quality standards for such a stream.

A revised definition would benefit Maryland if it will re-establish certain protections in upstream states with rivers and streams that drain into Maryland's streams, rivers, reservoirs, and the Chesapeake Bay and Coastal Bays, thus helping to ensure efforts to meet Total Maximum Daily load (TMDL) requirements for these vital waters. We hope that the reversion to the pre-2015 definitions and ultimately, a new definition, will better ensure more uniform and consistent regulation of interstate waters, headwaters and other small upstream waters and wetlands.

While the protections of waters in Maryland would not greatly change, there are administrative issues that do affect Maryland's regulatory efforts and have an impact on Maryland citizens. The Navigable Waters Protection Rule (NWPR) creates additional steps and analysis in determining which waters are jurisdictional, thus delaying review of many applications. Maryland has a State Programmatic General Permit from the Corps for many categories of activities, but MDE must still wait on determinations from the Corps over jurisdiction in order to relay jurisdictional information or advise our applicants regarding the status of their project. We are also aware of areas where existing federal- and state-approved nontidal wetland mitigation banks are no longer considered "wetlands" due to the NWPR implementation and thus now ineligible for credit sales to meet federal compensatory mitigation requirements. We also note that there were delays under previous rules that required a "significant nexus" determination, although not as pronounced. Furthermore, delays for what may be associated with federal licenses or permits impact MDE's implementation and commencement of review for Section 401, Clean Water Act, Water Quality Certification and Section 307, Coastal Zone Management Act consistency determinations. We hope the proposed change will focus on creating a more efficient jurisdictional determination process and not result in increased federal delays or jurisdiction over waters in Maryland.

MDE strongly supports a science-based definition for jurisdictional waters and their linkages to chemical, physical, and biological integrity of other waters. Protection of drinking water sources is of particular importance in this regard particularly as it relates to salt water intrusion and other climate sensitive impacts to water quality and quantity.

A change in the federal definition of WOTUS, which might, for example, reduce the scope of federal jurisdiction to protect only wetlands that have a continuous surface connection with a relatively permanent, standing, or continuously flowing body of water would, for wetlands in Maryland, only change the extent to which a CWA Section 404 permit from the Corps for dredge or fill activities would be required in addition to a state permit, but may inadvertently be dismissing the groundwater interactions. We recognize the need for, and strongly recommend, regional guidance for field determinations of jurisdictional waters. Maryland would welcome thoughtful efforts to eliminate duplicative permitting requirements for wetlands within state boundaries with scientific basis.

Radhika Fox  
Jaime A. Pinkham  
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MDE is providing detailed responses to the specific questions raised by EPA and the Corps in Attachment A. We have also enclosed Attachment B, which contains specific references published since 2015, as requested in the publication, as well as references describing the effects wetlands have on reducing effects of climate change. While wetlands can have an ameliorating effect on climate change and its impacts, all wetlands are vulnerable to adverse effects of climate change themselves, and may need additional conservation and restoration measures to sustain them.

Thank you again for the opportunity to offer perspectives on these important issues. Maryland looks forward to working with EPA and the Corps in the true spirit of Cooperative Federalism.

Sincerely,



Ben Grumbles  
Secretary

Enclosure

(by electronic mail)

cc: Jeannie Haddaway-Riccio, Secretary, Maryland Department of Natural Resources  
Joseph Bartenfelder, Secretary, Maryland Department of Agriculture  
Ariel Judah, Senior Advisor & Director, Federal Relations

## ATTACHMENT A

### MDE Responses to Specific Questions and Request for Comments

- 1) *Implementation.* The agencies seek input on co-regulator and stakeholder experiences with implementing the various regulatory regimes. In particular, the agencies would like feedback on significant nexus analyses under the pre-2015 regulatory regime and the 2015 Clean Water Rule, as well as the typical year analysis under the NWPR. Are there implementation successes and challenges in assessing specific types of sites? If there are challenges, what types of implementation assistance would be helpful? Are there ways in which these assessments could be more efficient? Are there tools that have been, or could be, developed to assist in determining jurisdiction?

**Response:** There were some delays associated with the significant nexus review, though this diminished as Corps staff became more accustomed to the procedures. Effects on MDE's process through its State Programmatic General Permit (SPGP) from the Corps were related to conveying federal processing information (e.g., Corps would send authorization, or MDE would attach to its authorization). For example, delays related to the Corps making its jurisdictional determination or decision on federal authorization type. The typical year analysis, while not directly affecting MDE's review, does result in an initial review step and analysis which did not previously exist, both for the Corps and applicants. MDE does not regulate ephemeral streams, and had to direct applicants to the Corps prior to the NWPR for them to advise applicants on jurisdiction. The development of the definition is the first step in jurisdictional determinations. However, the words in a definition must then be interpreted for field use to determine if necessary characteristics are present in an area to meet the definition. Moving forward, region-specific field guidance and procedures, developed in consultation with State/tribal agencies, is essential. Field guidance must also accommodate changes in seasonal conditions.

- 2) *Regional, State, and Tribal interests.* The agencies request feedback on how or whether states and tribes have taken any actions in response to changes in the jurisdictional scope of "waters of the United States" under the NWPR. In addition, the agencies request recommendations regarding whether there are certain waters that could be addressed by regionalized approaches. The agencies are committed to listening to specific tribal interests that should be considered in any revised definition. The agencies are also seeking input on the use and value of the jurisdictional category for interstate waters.

**Response:** Most waters and wetlands, including isolated wetlands, are regulated in Maryland and no changes in state-level jurisdiction were made. MDE does have concerns on interstate waters due to Chesapeake Bay restoration efforts, which may suffer if upstream states lack similar authority and at least comparable standards to those of Maryland. Interstate waters are an important category for regulation due to this concern. This could potentially be addressed through regional interstate efforts and clear CWA Section 401(a)(2) guidance for establishing neighboring jurisdiction effects. Regionalized approaches are critical for implementation.

MDE favors a scientifically defensible definition of waters and recognizes that some waters (e.g., ephemeral waters) are more critical in other parts of the country, like the arid west, and thus may merit a different level of scrutiny. However, since the waters convey storm flow, which in many areas will increase, it is even more important to regulate the ephemeral waters. Their influence includes sustaining other waters and other users, supporting infiltration to groundwater, and preventing erosive discharge in more permanently flowing waters. We do believe that states and tribes, working with regional offices of federal agencies, can identify the appropriate levels of review, protection, and regulation, as well as the appropriate tools for regional determinations of “significant nexus.”

- 3) *Science*. Consistent with Executive Order 13990, the agencies request identification of relevant science related to how streams, wetlands, lakes, and ponds restore and maintain the chemical, physical, and biological integrity of the nation’s waters, including relevant literature that has been published since EPA’s 2015 Report *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*.

**Response:** See the references in Attachment B.

- 4) *Environmental justice interests*. Consistent with Executive Order 13990, the agencies request feedback on how to better engage to ensure input is received from communities with environmental justice interests. How does the jurisdictional status of waters affect communities that are overburdened with environmental pollution? How is the implementation of NWPR impacting low-income communities, and other disadvantaged communities? Can the jurisdictional status of waters be linked to environmental justice concerns, and, if so, what is the basis?

**Response:** MDE implements environmental laws and programs to protect and restore the environment for the health and well-being of Marylanders. MDE is aware of national studies that show Environmental Justice (EJ) communities bear a disproportionate share of the negative environmental consequences resulting from industrial activities, land-use planning and zoning, municipal and commercial operations and the execution of federal, state, and local programs and policies. MDE supports the goal of achieving environmental equity for all Maryland residents. As MDE implements state laws and programs to protect and restore the environment, it is the policy of MDE to implement environmental laws and programs wherever possible in a manner that reduces existing inequities and avoids the creation of additional inequities in EJ communities.

MDE has no specific information on the effects of the NWPR on low-income or disadvantaged communities. Community civic and regional faith-based organizations have been helpful in facilitating engagement and input from underserved communities.

The WOTUS definition should remain foundationally based on science, with additional regional considerations on how the waters are regulated. An approach to regulation that advances environmental justice may consider as part of permitting review, potentially different thresholds of impact, mitigation and restoration that are adjusted to address past impacts to these overburdened communities, based on regional conditions to meet a national standard. As pollutants also travel by shallow groundwater, including those found in hydric soils, connectivity based on groundwater should be included in the proposed definition as this water often enters surface water as baseflow first, then enters the surface water and public drinking water systems.

Impacts to underserved communities may be used to document the need to restore the chemical, physical, and biological integrity of the waters, and meet basic uses for contact and drinking water. Underserved communities should also be included as considerations when setting priorities for restoration and protection so that environmental justice concerns can be addressed.

- 5) *Climate implications.* Consistent with Executive Order 13990, the agencies request feedback on how climate change affects the chemical, physical, and biological integrity of the nation's waters. How should the agencies account for the effects of a changing climate in identifying jurisdictional waters? Are there particular types of waters that are especially important in protecting the nation's waters in the face of a changing climate, and, if so, what scientific evidence supports these conclusions?

**Response:** Identification of jurisdictional waters is typically made for a specific point in time, most often when an application is submitted for a regulated activity. Jurisdictional determinations made without an application may, over time, be invalid because an area no longer is considered a WOTUS, or change in some cases as a consequence of climate change. MDE envisions a process change in this area to account for climate change. MDE recommends that applications in areas subject to high vulnerability from inundation, salt water intrusion or other landscape change on a 20-to-30-year time frame should be evaluated with predictive tools. Where models and other tools can, with reasonable accuracy, determine the future landscape then permitting should accommodate development or changes that limit increased vulnerability and enhance adaptation to climate change.

MDE is providing some examples below of wetlands important for moderating climate change and its impacts. However, we emphasize that wetlands themselves are vulnerable to climate change, suffering from increased or reduced water levels, erosion from frequent high intensity storms, sea level rise, and tidal storm surges. Affected areas and contributing watersheds will need additional protection and restoration measures to sustain their condition and function.

In addition to their importance in the arid west, ephemeral waters may become more critical in other parts of the country. As stated previously, since the waters convey storm flow, which in many areas will increase, it is even more important to regulate the ephemeral waters. Their influence includes sustaining other waters and other users, supporting

infiltration to groundwater, and preventing erosive discharge in more permanently flowing waters.

MDE supports regulation of ephemeral waters as WOTUS as a general category, but believes regional considerations should apply, and allow for exemptions for certain activities or general permits when minor impacts are anticipated. In the rule, there should be clarifying language that ephemeral waters have varying importance and functions across the country, and their regulation should be reflected in various types of review and authorization considering both the water and the scope of the activity, and include regionally-appropriate exemptions and general permits.

Surface water connections between wetlands and other waters vary in duration, time, and space. Depressional wetlands, which are often considered “isolated” but are not in fact (see Attachment B references) are critical for capturing surface flow before it enters the tributary system. This aids in reducing damages from flooding.

Floodplain wetlands, if lacking vegetation, will re-build and store carbon in the soil (as well as in vegetation) if re-planted or allowed to revegetate naturally. Carbon accumulation is highest in early stages of succession until reaching an equilibrium. Riparian vegetation including forests, can provide shade over the channels which reduces local climate change effects by cooling temperatures.

Wetlands adjacent to streams are also vulnerable to climate effects, as more frequent intense storms may result in channel erosion and incision, so that there is less connection to the floodplain area. Headwater wetlands function as discharge areas to small streams, providing cool groundwater as essential baseflow to streams. Vegetated tidal wetlands are important for moderating effects of storm surges, and storing carbon. These areas are however vulnerable to climate impacts and disappearing due to sea level rise. In order to remain natural buffers, tidal wetlands must be able to keep pace with sea level rise by accumulating more sediment or organic matter to rise in elevation. Tidal wetlands may also migrate farther inland, but this may result in undesirable loss of forest, forested wetlands, agricultural areas, infrastructure, or other buildings without planning.

Vernal pools are vital for amphibians, yet are particularly susceptible to stresses from increased drought expected from climate change. Wetlands may also release greenhouse gases (e.g., methane) during prolonged periods of inundation or seasonally in various amounts. Bogs build up extensive organic soil which store carbon.

See supporting references in Attachment B.

- 6) *The scope of jurisdictional tributaries.* Multiple rules, judicial decisions, and longstanding practice protected ephemeral, intermittent, and perennial streams that met applicable criteria for jurisdiction as tributaries that are “waters of the United States.” Ephemeral streams were then categorically excluded from jurisdiction in the NWPR, and some intermittent streams and even some perennial streams are no longer jurisdictional under the NWPR. The agencies

seek feedback on whether certain characteristics, such as indicators of channelization; physical indicators such as indicators of ordinary high-water mark; flow regime; flow duration; watershed size; landscape position; stream network density; or distance from a traditional navigable water, territorial sea, or interstate water should inform determinations about which tributaries could be considered jurisdictional as a class, and which decisions are best left to individual, case-specific significant nexus determinations similar to the agencies' practice from 2007 through 2015. The agencies are particularly interested in feedback regarding how to identify ephemeral streams that should be jurisdictional as tributaries, as they are the dominant stream type in the arid West and in many headwater regions. The agencies are interested in understanding the impacts of their exclusion from the regulations under the Clean Water Act by the NWPR.

**Response:** Intermittent and perennial streams as a class should remain jurisdictional waters. Indicators such as ordinary high-water marks, flow regime, and flow duration can be useful indicators. However, these indicators do not necessarily include features such as spring flow, which does convey groundwater discharged to the surface, and which may lack defined bed and banks in a channel prior to the flow entering the downstream network. These waters are often essential for base flow downstream and moderating stream temperatures. Springs conveying flow should be included as jurisdictional waters.

Appropriate characteristics are best identified regionally. The determination of WOTUS should not be based on how it can be used to limit jurisdiction and the level of review. This determination is also best accomplished regionally based upon the resource and activity type, with thresholds of disturbance and extent of impact determining the federal regulatory requirements. These may range from exemptions, general permits, and individual permits.

We recognize the importance of ephemeral rivers and streams in the arid West and that they should be regulated in a national rule. In others areas, they may become more important as they convey storm flow, and may have greater effects on connected downstream tributaries due to more frequent, intense rainfall events occurring through climate change and the effects this discharge has on downstream waters. While ephemeral streams are less significant in Maryland and often human influenced, they may be increasingly important in managing climate change impacts, as the ephemeral streams convey storm flow, which is expected to be more intense over shorter durations. We do not want unregulated discharges in these waters to result in more erosive and concentrated discharges entering the intermittent or perennial stream network. We believe that a significant nexus review may be regionally appropriate to ensure that certain connected ephemeral streams do not convey more damaging storm flows resulting from an unregulated discharge. State/tribal input should be considered for regional conditions, characteristics, exemptions, general permits, and limitations on jurisdiction, if justified.

- 7) *The scope of jurisdictional ditches.* Historically, the agencies have recognized that ditches that reroute otherwise jurisdictional tributaries are themselves jurisdictional as tributaries. In addition, in practice, many other ditches have been considered generally *not* jurisdictional.



The 2015 Clean Water Rule and later the NWPR, for the first time, excluded many ditches explicitly in rule language. The agencies solicit feedback on whether flow regime, physical features, excavation in aquatic resources versus uplands, type or use of the ditch (e.g., irrigation and drainage), biological indicators like presence of fish, or other characteristics could provide clear and implementable distinctions between jurisdictional and non-jurisdictional ditches.

**Response:** There is a great need to develop regional procedures for identifying jurisdictional ditches, particularly those that were previously considered natural tributaries. Human-made ditches which originate in uplands, which have flow or other physical characteristics of WOTUS, which are connected to other WOTUS and may convey pollutants and pollution to WOTUS should also be considered jurisdictional on a case-by-case basis. There is a great need to develop regional procedures for both identifying jurisdictional vs. non-jurisdictional ditches and determining how they should be regulated. In these cases, there should be additional criteria for identification and potential general permits or exemptions for minor activities to be developed regionally based on general national guidelines. Regional guidance, protocols, and information sources will have to be developed., and suggest exemptions or general permits to reduce regulation over ditch maintenance or repair even for these areas which meet the WOTUS definition.

Maryland supports ditches as WOTUS when:

- 1) The ditch was previously a natural tributary;
- 2) The human-made ditch originated in uplands or another WOTUS (e.g., wetland), and:
  - a. Has flow or other physical characteristics of a WOTUS; and
  - b. Is connected to other WOTUS so that it may convey pollutants and pollution to the other WOTUS; or
- 3) The ditch conveys tidal flow.

Maryland has areas which are low-lying and support, or formerly supported, extensive wetland areas. Rising sea level and saltwater intrusion along with ditching for forestry and agriculture, have modified this landscape and present, a challenge in distinguishing between wetlands from uplands. Ditches constructed in natural streams or other WOTUS, including wetlands, should remain jurisdictional, after consideration of other physical criteria as listed above (flow regime, physical features, biological indicators like presence of fish, or other characteristics for WOTUS). Ditches which have tidal flow should also still be regulated, as should those ditches which serve as a connection between other jurisdictional waters and where discharges may have an adverse effect. It will remain a challenge in some areas to determine where in the field the line should be drawn, even for staff with years of experience. Tools such as soil surveys or aerial photographs to identify the natural streams will be helpful. Ditches may occur in tidal wetlands and extend into nontidal wetlands/waters and connect to a grid system of ditches in farm fields. We also recognize that many ditches were constructed to protect infrastructure. We are uncertain that language in the national rule can adequately describe all of the factors and criteria to determine which ditches will not affect the chemical, physical, and biological quality of the Nation's waters. We reiterate that

regional guidance is essential and should consider the role of climate change, and the recommendations of State/tribal programs who also work in these areas.

- 8) *The scope of adjacency.* Each regulatory definition of “waters of the United States” has taken a different approach to determining adjacency for purposes of jurisdiction under the Act and to the jurisdiction of non-adjacent waters:
- a) Wetlands that may have been considered adjacent under some but not all definitions of “waters of the United States” include wetlands behind artificial berms, which were considered adjacent under the pre-2015 regulatory regime and the 2015 Clean Water Rule regardless of the presence or absence of a hydrologic surface connection, but required a surface water connection under the NWPR. The pre-2015 regulatory regime and the 2015 Clean Water Rule also included “neighboring” wetlands within the definition of “adjacent,” while the NWPR generally did not.
  - b) Adjacent lakes and ponds that were not jurisdictional as tributaries were covered under the other waters category in the pre-2015 regulations if they met certain criteria. Adjacent lakes and ponds were included with adjacent wetlands in an adjacent waters category in the 2015 Clean Water Rule. Lakes and ponds with certain surface water connections are jurisdictional under the NWPR.
  - c) Another category of waters includes non-adjacent, intrastate, non-navigable waters, such as certain prairie potholes, playa lakes, Carolina Bays, and more, that are not proximate (reasonably close) to jurisdictional waters or lack natural tributary connections or ditching to connect them to a tributary network. These waters are typically non-jurisdictional under the NWPR and, as a matter of practice, following Supreme Court decisions the agencies did not assert jurisdiction over them under the pre-2015 regulatory regime. These waters would have been jurisdictional under the 2015 Clean Water Rule where they met specific criteria and were found to have a significant nexus to downstream traditional navigable waters, interstate waters, or territorial seas.

The agencies are interested in identifying characteristics that could allow for clarity, implementability, and/or regionalization in defining adjacency and identifying jurisdictional waters, including whether there are appropriate distances or other factors to limit adjacency, whether there are certain situations where case-specific significant nexus determinations would more appropriately determine jurisdiction, and whether there are certain types of waters with particular features or characteristics that could provide clear and implementable distinctions between jurisdictional and non-jurisdictional waters. The agencies are also interested in recommendations for implementation approaches to address any of these types of waters.

**Response:** MDE recommends various forms of adjacency, and retaining neighboring, bordering, contiguous as used prior to the Navigable Waters Rule. Artificial breaks such as berms should not sever adjacency, provided there is a connection through overbank flooding, hydric soil beneath the structure. Importantly, there will be groundwater exchange from the water in the channel to the wetland. This may be identified by the presence of a hydric soil or

other shallow groundwater measures. Ground penetrating radar has identified the shallow groundwater connections between what were considered to be isolated wetlands, (e.g., Delmarva Bays) and which eventually connect to surface tributaries regional guidance should be developed.

A distance category may be appropriate for ease of implementation, if developed regionally with accompanying rationale and justification. Location within a mapped or modelled 100-year floodplain may also be appropriate regionally to indicate adjacency and a hydrological connection. MDE further recommends that any changes identify areas actively impacted by climate change and that predictive tools are used to recognize how to adapt to changes in at least a 30-year time frame.

- 9) *Exclusions from the definition.* The agencies request feedback on the implementability and clarity of exclusions present in the NWPR and identified in the 2015 Clean Water Rule or the pre-2015 regulations and the preambles to those regulations. Was the scope of these exclusions appropriate under the Clean Water Act, easy to understand, and implementable? Are the NWPR definitions of prior converted cropland and waste treatment systems appropriate under the Clean Water Act, easy to understand, and implementable? Did the exclusions have any benefits or harmful impacts? Are there regional differences with these features and/or systems that should be considered?

**Response:** MDE regulates most waters and wetlands through its independent authorities. Therefore, there have not been harmful impacts in Maryland due to federal exclusions at this time. However, if only the federal criteria were applied in upstream States, absent comprehensive independent State programs, there could be harmful impacts to Maryland and undermine its efforts in Chesapeake Bay restoration.

MDE draws a distinction between areas which should not be jurisdictional waters and those which meet the definition of WOTUS but may have associated activities which merit exemptions or authorization through general permits. We believe that efforts to reduce unnecessary regulations should be addressed via regionally-appropriate exemptions and general permits rather than by excluding areas by limiting what should be a scientifically defensible definition. Regional differences should always be considered and developed in coordination with appropriate States and tribes.

Regarding impacts in Maryland from NWPR definitions, there have been administrative challenges when the State has had to wait on a federal decision for coordinated mitigation or an individual water quality certification as we review proposed activities under our authorities and a State Programmatic General Permit. For example, the need to evaluate “typical year” of precipitation for 30-year rolling averages to determine flow in streams adds an unnecessary step in review.

While not identifying all potential exclusions, MDE believes that the following exclusions are appropriate from the NWPR, or adapted from the NWPR with additional qualifying language:

- a) Groundwater, including groundwater drained through subsurface drainage systems;
- b) Ephemeral features, excluding ephemeral streams and vernal pools. Regional guidance and exemptions or general permits are highly recommended where appropriate for jurisdictional ephemeral streams;
- c) Diffuse stormwater run-off and directional sheet flow over upland;
- d) Ditches in agricultural fields for surface drainage;
- e) Ditches not constructed in natural streams, including:
  - i) Roadside ditches not constructed in WOTUS, or
  - ii) Ditches not connecting to tributaries,
- f) Prior converted cropland in areas used for agriculture. Prior converted cropland meeting the wetland definition when there is a change in land use from agriculture or agricultural set aside to non-agriculture land use should be subject to jurisdictional requirements.
- g) Artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease;
- h) Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in non-jurisdictional waters, so long as those artificial lakes and ponds are not impoundments of jurisdictional waters;
  - i) Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel. We recommend that these be exempt unless meet a significant nexus test and they are:
    - a) Planned to remain as part of an approved reclamation plan;
    - b) Are not reclaimed and pre-date reclamation requirements and have developed wetland characteristics; or
    - c) Connected to other regulated waters so that discharges may have an adverse effect on designated uses and chemical, physical, or biological integrity of other waters of the United States.
- j) Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;
- k) Groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention, and infiltration basins and ponds, constructed or excavated in upland or in non-jurisdictional waters; and
- l) Waste treatment systems.

ATTACHMENT B

WETLAND REFERENCES SINCE 2015

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