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United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

RYAN JACKSON, MAJORITY STAFF DIRECTOR
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July 6, 2015

Mr. Ken Kopocis
Deputy Assistant Administrator
Office of Water
U.S. Environmental Protection Agency
Mail code 4101M
1200 Pennsylvania Avenue NW
Washington, DC 20460

Dear Mr. Kopocis,

On June 29, 2015, the Environmental Protection Agency (EPA) and the Army published a final rule to revise the definition of the term “waters of the United States” (WOTUS) in regulations issued by both agencies. 80 Fed. Reg. 37054 (Jun. 29, 2015).

In order to understand the basis for the decisions made by EPA in promulgating this rule, please respond to the following requests.

Scientific basis

It is my understanding that EPA offices developed the scientific rationale for the rule.

Please provide me with copies of the following studies, including a reference to the page on which the requested information is found. If no such study was relied upon by EPA, please state that. Do not create *post hoc* rationalizations for the final rule.

1. All scientific studies relied upon by EPA that identify the water that was the subject of the study as navigable water.
2. All scientific studies relied upon by EPA that discuss the water quality of water identified as navigable.
3. All scientific studies relied upon by EPA that specify that the stream studied was ephemeral (i.e., only flowing during or shortly following a precipitation event) and demonstrate that such stream provides flow to a navigable water. Please specify, with page references, with respect to the ephemeral streams addressed by the study, whether the flow to navigable water is provided through a surface connection, a shallow subsurface connection, or an aquifer, and whether there is any evidence in the study of the impact of that flow on the water quality of a navigable water.

4. All scientific studies relied upon by EPA that purport to find a connection between an ephemeral stream and navigable water through the movement of water through an aquifer, any determination in such studies that the base flow of the navigable water came from the ephemeral stream, and any discussion in such studies on the impact on the quality of the navigable water.
5. All scientific studies relied upon by EPA that purport to find a connection between a geographically isolated body of water and navigable water through the movement of water through an aquifer, any determination in such studies that the base flow of the navigable water came from the geographically isolated body of water, and any discussion in such studies on the impact on the quality of the navigable water.
6. All scientific studies relied upon by EPA to support the conclusion that all waters located within 100 feet of the ordinary high water mark of a water identified in §328.3(a)(1) through (5) of the WOTUS definition have a significant nexus to navigable water. Please identify which studies specifically address distance. 80 Fed. Reg. at 37085.
7. All scientific studies relied upon by EPA to support the conclusion that all waters located in the 100-year floodplain of a water identified in § 328.3(a)(1) through (5) of the WOTUS definition and not more than 1,500 feet from the ordinary high water mark of such water have a significant nexus to navigable water. Please identify which studies specifically address distance. 80 Fed. Reg. at 37085.
8. All scientific studies relied upon by EPA to support the conclusion that all waters located within 1,500 feet of the high tide line of a water identified in §328.3(a)(1) through (3) of the WOTUS definition and all waters within 1,500 feet of the ordinary high water mark of the Great Lakes have a significant nexus to navigable water. Please identify which studies specifically address distance. 80 Fed. Reg. at 37085.
9. All scientific studies relied upon by EPA to support the conclusion that “all water” in the 100-year flood plain of a navigable or interstate water or a territorial sea and “all water” within 4,000 of the ordinary high water mark of any jurisdictional water, including a tributary as defined above, potentially have a significant effect on navigable water. Please identify which studies specifically address distance. In particular, please provide the scientific studies that support the following statement: “the agencies’ experience and expertise indicate that there are many waters within the 100-year floodplain of a traditional navigable water, interstate water, or the territorial seas or out to 4,000 feet *where the science demonstrates that they have a significant effect on downstream waters.*” 80 Fed. Reg. at 37059 (emphasis added).
10. All scientific studies relied upon by EPA to support the assertion that dispersal of invertebrate eggs or plant seeds can establish a “significant nexus” between a geographically isolated water and a navigable water. Please provide page numbers for the references in the study to the status of water as navigable, the type of impact on the navigable water, and the significance of the impact on navigable water.

Scope of the rule

1. It is my understanding that EPA performed the economic analysis of the final rule. That analysis includes the following statement:

The agencies have determined that the *vast majority of the nation's water features* are located within 4,000 feet of a covered tributary, traditional navigable water, interstate water, or territorial sea. Economic Analysis of the EPA-Army Clean Water Rule (May 2015), U.S. Environmental Protection Agency, at 11 (emphasis added).

Please provide me with the information EPA relied on to make that determination.

2. Please provide me with all analyses prepared by EPA or its contractors of the extent of waters that are various distances from navigable waters or tributaries.
 - a. Include the information delivered to EPA under Task 2 of the Statement of Work for Vulnerable Waters II National Hydrography Dataset (NHD) Analysis (Contract No: C_DOCCM130105CT0027 EP-G11H-00057), dated August 15, 2012, including tables and maps pertaining to:
 - i. Digital copies of maps at the medium resolution National Hydrology Dataset.
 - ii. Spreadsheets of the data on both the medium resolution and the high resolution maps, *i.e.* two spreadsheets (one for medium resolution, one for high resolution) with national numbers, state breakdowns, and county breakdowns of total miles of streams by the three (two for med-res) flowline categories, including headwater streams (start reaches).
 - iii. The miles of different stream types (e.g. intermittent, ephemeral, connector, ditch, perennial, etc., including a subcategorization for headwaters) in NHD at medium resolution that both flow to (are upstream of/are tributaries of) the mapped TNWs and are within 25, 40, 60, or more than 60 miles upstream of the TNW.
 - iv. The acreage of NWI wetlands (separated by categories) that are either within the mapped Federal Emergency Management Agency (FEMA) 100-year floodplain or within 5, 60, and 250 meters, or more than 250 meters of a mapped stream in NHD in medium resolution. The acreage will not only be tabulated by wetland category but also by NHD stream type (TNW, perennial, intermittent, ditch, etc.), including by headwater, and also by distance from the TNW (25, 40, and 60 miles).
 - v. The acres of wetlands that are within the FEMA 100-year floodplain of a TNW or within 60 meters of any TNWs (see above), as well as the acreage of wetlands that are more than 5, 60, and 250 meters from or outside of the floodplain of any TNW or any tributary stream or waterbody of a TNW.

- vi. The acres of wetlands that are within 60 meters from any waterbody that is within 5 m of tributary streams of TNWs, but only those wetlands that are outside of the floodplain of the TNW or tributary stream and are not within 5, 60, or 250 meters of the stream.
 - vii. The acreage of all perennial lakes/ponds mapped in NHD that are within 5 m of a TNW or a tributary to a TNW (e.g. part of the tributary system to a TNW) and all non-wetland waterbodies mapped in NWI that were not eliminated in the overlap analysis that are within 5 meters of NHD streams that are either perennial tributaries to TNWs or TNWs themselves.
 - viii. The acreage of intermittent or unclassified NHD lake/ponds mapped in NHD that are within 5 meters of a TNW or a tributary of TNW that is within 40 miles of the TNW and all Lacustrine (and other waterbodies) in NWI (that were not eliminated in the overlap analysis) that fall are within 5 m of NHD non-perennial tributaries to TNWs and are within 60 miles of TNW.
 - ix. The acreage of waterbodies mapped in NHD and NWI (using only those that do not overlap) that are more than 5 meters from any TNWs or tributary of TNWs, parsing the data by distance from TNW or tributary by 60, 250, and more than 250 m. The contractor will provide a table for each state (including DC) (on a county level), as well a table for the United States (on a state level).
 - x. A GIS dataset of "Interstate Waters" using the NHD. To create this dataset, the contractor will map all streams, waterbodies, and wetlands (for waterbodies and wetlands, the dataset created by the overlap analysis will be used) that cross or serve as state, tribal (using recognized tribal boundaries), or international lines (e.g. U.S.-Canada border).
 - xi. The miles of stream types (FCodes, broken up by headwaters and non-headwaters, TNWs, interstate waters) that flow to a interstate water. Similar to the wetland and waterbody analysis described above, the analysis will estimate the acres of wetlands and waterbodies (using those from the overlap analysis) that are mapped in the 100-floodplain of or within 250 meters from an interstate water or tributaries of interstate waters, as well as wetlands that are more than 250 meters from and outside the floodplain of any interstate water or tributary of an interstate water.
 - xii. Analysis and map the location of waters that have been determined by the U.S. Army Corps of Engineers to be non-jurisdictional post-Rapanos due to either a lack of significant nexus or to a determination that the waters are isolated, intrastate waters that lack sufficient connections to interstate commerce.
3. Please explain why Nancy Stoner's July 28, 2014 letter to Congressman Lamar Smith, Chairman of the House Science Committee failed to acknowledge that, according to the Statement of Work referenced above, "This project is in support of continuing administrative to clarify the scope of Clean Water Act jurisdiction and to assist day-to-day implementation of Clean Water Act programs."

4. Please provide any other analyses and mapping of stream types and wetlands performed by INDUS in support of EPA's efforts "to clarify the scope of Clean Water Act jurisdiction," including work performed under any modifications to or extensions of the statement of work, or a new statement of work.
5. Please provide any other analyses and mapping of stream types and wetlands performed by EPA staff themselves in support of EPA's efforts "to clarify the scope of Clean Water Act jurisdiction."
6. Please explain the rationale for the distances analyzed under Task 2 of the INDUS Statement of Work referenced above.
7. Please explain the discrepancy between the statement in Nancy Stoner's July 28, 2014 letter to Congressman Lamar Smith, Chairman of the House Science Committee, that "[t]o develop maps of jurisdictional waters requires site-specific knowledge of the physical features of water bodies, and these data are not available and are not shown on any EPA maps" and the statement in the final rule that "[a]mong the types of remote sensing or mapping information that can assist in establishing the presence of water are USGS topographic data, the USGS National Hydrography Dataset (NHD), Natural Resources Conservation Service (NRCS) Soil Surveys, and State or local stream maps" and that "[t]hese sources of information can sometimes be used independently to infer the presence of a bed and banks and another indicator of ordinary high water mark" [which establishes jurisdiction]. 80 Fed. Reg. at 37076-77.
8. Please provide all other analyses requested by EPA staff or EPA management relating to alternative options for defining "adjacent" waters and relating to the scope of waters that are subject to case-by-case jurisdictional determinations, including the options selected in the final rule and other options considered.
9. Please provide the results of all the analyses by contractors or EPA staff of alternative distances to navigable water or interstate water and distances to tributaries; alternative estimates of the extent of tributaries, and alternative geographic limits established in the final rule and alternative options considered, including the geographic scope of areas that are covered under section (a)(7) of the new definition of waters of the United States, and the geographic scope of areas that are covered under section (a)(8) of the new definition, and any maps depicting these scopes.
10. Please provide all documents discussing alternative geographic scopes of WOTUS rule alternatives, including any presentations and briefing materials on the results of any analyses of such geographic scope. Please indicate which documents were shared within EPA, shared between EPA and the Army, or shown to persons external to EPA and the Army. Please specify which documents were shared with whom.
11. Please provide a summary of information discussed at the meetings conducted by EPA Headquarters after the close of the comment period with Ducks Unlimited on January 15,

2015, February 27, 2015, March 16, 2015, April 2, 2015, and April 13, 2015; with “Green and Conservation Groups” on January 30, 2015, March 16, 2015, and April 13, 2015; with “Green Groups” on April 21, 2015, with the Theodore Roosevelt Conservation Partnership on December 17, 201, February 18, 2015, and April 16, 2015.

- b. Include a the summary information relating to any discussion of alternative approaches for establishing the geographic scope of federal jurisdiction and state whether the results of any analyses of geographic scope were shared with these groups either before or after the close of the comment period for the final rule.
- c. If results were shared (even if *in camera* or with an oral description), please include copies of the information shared with your response.

Significant nexus

Under the final rule, a significant nexus can be established by any one of the following functions:

- (i) Sediment trapping,
- (ii) Nutrient recycling,
- (iii) Pollutant trapping, transformation, filtering, and transport,
- (iv) Retention and attenuation of flood waters,
- (v) Runoff storage,
- (vi) Contribution of flow,
- (vii) Export of organic matter,
- (viii) Export of food resources, and
- (ix) Provision of life cycle dependent aquatic habitat (such as foraging, feeding, nesting, breeding, spawning, or use as a nursery area) for species located in a water identified in paragraphs (a)(1) through (3) of this section.

The preamble to the final rule says “non-aquatic species or species such as non-resident migratory birds do not demonstrate a life cycle dependency on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule.” 80 Fed. Reg. at 37094.

However, use of water as habitat by “resident” birds and other animals and the movement of insects and seeds via any kind of bird (referred to as “dispersal”) can establish jurisdiction. *Id.*

According to the Connectivity Report “[p]lants and invertebrates disperse to and from prairie potholes via ‘hitchhiking’ on waterfowl.” Connectivity Report at 5-5. Further, according to the Technical Support Document, any bird, even a migratory bird, can establish jurisdiction by dispersing seeds and insects. “Migratory birds can be an important vector of long-distance dispersal of plants and invertebrates between non-floodplain wetlands and the river network, although their influence has not been quantified.” TSD, at 112.

The Technical Support Document refers 30 times to dispersal by organisms such as birds and mammals of plants (as seeds) and invertebrates (as eggs), including the following statement:

“Plants and invertebrates can also travel by becoming attached to or *consumed and excreted by waterfowl*. Id. (citing Amezaga et al. 2002). Dispersal via waterfowl can occur over long distances. Id. (citing Mueller and van der Valk 2002).” TSD, at 334 (emphasis added).

According to the Technical Support Document, groundwater is a “hydrologic flowpath.” See TSD at 129, 132, 148. Similarly, overland flow of water and shallow subsurface flow is considered a connection. 80 Fed. Reg. at 37063, 37070-72, 37085-86, 37089-90, 37093-94. For example, according to the discussion of vernal pools in the Technical Support Document, these pools “typically lack permanent inflows from or outflows to streams and other water bodies,” they can be “connected temporarily to such waters via surface or shallow subsurface flow (flow through) or groundwater exchange (recharge).” TSD, at 344. Finally, water storage is a connection. See, e.g., TSD, at 99, 177. According to the Technical Support Document:

Wetlands and open waters in non-floodplain landscape settings (hereafter called “non-floodplain wetlands”) provide numerous functions that benefit downstream water integrity. These functions include storage of floodwater; recharge of ground water that sustains river baseflow; retention and transformation of nutrients, metals, and pesticides; export of organisms or reproductive propagules (e.g., seeds, eggs, spores) to downstream waters; and habitats needed for stream species. This diverse group of wetlands (e.g., many prairie potholes, vernal pools, playa lakes) can be connected to downstream waters through surface-water, shallow subsurface-water, and groundwater flows and through biological and chemical connections. TSD, at 98.

1. Please explain the difference between a resident and non-resident migratory bird.
2. Is it your position that ingestion of plant seeds by a bird or mammal, and excretion of that seed in or near a navigable water constitutes a connection that could support jurisdiction under the CWA? What function does this support?
 - a. Does dispersal support an argument that a non-floodplain wetland provides life-cycle dependent aquatic habitat for the invertebrates and plants? Must the invertebrates and plants be aquatic species?
 - b. Alternatively, do you consider export of organic matter be a function supported by a geographically isolated body of water via this dispersal theory?
 - c. If the bird is the mechanism for dispersal, how does an isolated water provide the function?
 - d. Must the seeds and eggs move to a navigable water or is movement from a navigable water also a basis for jurisdiction?
3. Does the “contribution of flow” function include flow through groundwater?
4. Does the “contribution of flow” function include sheet flow of rainwater or snow melt over the land between two bodies of water?

Mr. Ken Kopocis

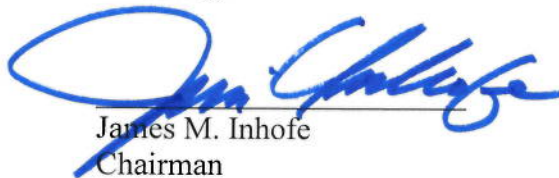
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5. Is there any water within 4000 feet of a water identified in §328.3(a)(1) through (5) that could not provide at least one of the listed functions?
6. What makes a nexus provided by a function significant?
7. Have you performed an aggregate significant nexus analysis for any wetlands in the categories identified under §328.3(a)(7)? Please provide a copy of the analysis when it is complete.
8. If the significant nexus analysis is not yet complete, please provide a copy of all the studies that EPA relied upon to conclude that the wetlands in the categories identified under §328.3(a)(7) may have a significant nexus to navigable water.
 - a. If dispersal of invertebrates or plants by birds is a function relied upon, please identify the studies showing that invertebrates or plants came from a wetland in a category identified under §328.3(a)(7).
 - b. If contribution of flow through groundwater is a function, please identify the studies showing that water in a navigable water came from a wetland in a category identified under §328.3(a)(7).
 - c. If overland flow is a function relied upon, please identify the studies showing an impact on water quality of a navigable water from that overland flow.
 - d. If retention of flood water is a function relied upon, please identify the studies showing an impact on water quality of a navigable water from retention.
9. Please provide a map or maps identifying locations that are may be the subject of the aggregate significant nexus analysis for the wetlands in the categories identified under §328.3(a)(7) and §328.3(a)(8).
10. Please explain whether and how EPA intends to use the April 2013 map of Level III Ecoregions of the Continental United States that is in the docket.

Given that the final rule is complete, the information requested all pertains to decisions made in the final rule, we are only requesting existing documents (or a statement that no such document exists), and we are not at this time requesting an search of emails, we expect the information requested to be readily available. For that reason, please provide the requested information within 30 days.

Sincerely,



James M. Inhofe
Chairman

Committee on Environment and Public Works