

February 7, 2022

Attn: Environmental Protection Agency and Department of the Army, Corps of Engineers, Department of Defense

Re: Comments on Revised Definition of “Waters of the United States,” 86 Fed. Reg. 69,372 (Dec. 7, 2021) (EPA-HQ-OW-2021-0602; FRL-6027.4-03-OW)

The Institute for Policy Integrity at New York University School of Law (“Policy Integrity”)¹ respectfully submits this comment letter in response to the request for recommendations regarding the Environmental Protection Agency (the “EPA”) and the Army Corps of Engineers (the “Corps”) (together, the “agencies”) proposal to return to the pre-2015 definition of the term “waters of the United States” under the Clean Water Act (the “CWA”) (the “Proposed Revised Definition Rule”).² Policy Integrity is a nonpartisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy, focusing primarily on environmental issues.

As the agencies explain, the Navigable Waters Protection Rule (“NWPR”)³ did not “appropriately consider the water quality impacts of its approach to defining ‘waters of the United States,’” or adequately weigh the rule’s “potentially extensive and adverse impact on the nation’s waters.”⁴ Indeed, as shown in the agencies’ economic analysis for the Proposed Revised Definition Rule, a more expansive definition of “waters of the United States” is likely to have significant net benefits from greater watershed protections, including increased wetland protections under Section 404.⁵ **Despite these persuasive findings, there remain several ways in which the agencies could more fully elucidate the benefits from redefining “waters of the United States.”** This comment offers the following recommendations:

- The agencies do not assess the **potential benefits in states that legally define protected waters more broadly than would be required under the Proposed Revised Definition Rule.** The agencies should examine whether federal protections could add value given that these legal definitions may not represent actual regulatory protections.

¹ This document does not purport to present the views, if any, of New York University School of Law.

² Revised Definition of “Waters of the United States,” 86 Fed. Reg. 69,372 (Dec. 7, 2021).

³ Navigable Waters Protection Rule, 85 Fed. Reg. 22,250 (Apr. 21, 2020) (remanded with vacatur in *Pascua Yaqui Tribe v. EPA*, No. 4:20-cv-00266, 2021 WL 385977 (D. Ariz. Aug. 30, 2021)).

⁴ Revised Definition of “Waters of the United States,” 86 Fed. Reg. at 69,372–73.

⁵ *Id.* at 69,446 (“Comparatively, under the secondary NWPR baseline, quantified benefits for the 404 program are estimated to be between \$376 and \$590 million annually, while costs are estimated to be between \$109 and \$276 million annually.”).

- While the agencies have taken important steps to document benefits that cross state borders in the alternative approach detailed in Appendix H, **these interstate benefits are absent from the main economic analysis**. Furthermore, **both the main analysis and the alternative approach in Appendix H ignore significant benefits that do not fall neatly within state boundaries**, such as certain recreational and existence values.
- In Appendix H, the agencies’ attempt to value the unique benefits wetlands and watersheds provide to local residents incorporates additional studies that improve the baseline acreage. However, there are continued issues of scaling these benefits, particularly for large states like California and Texas. The agencies should seek to **incorporate more studies to improve the geographical range and consider using an empirically determined decay function in their model** to further improve the baseline.
- The agencies make a number of assumptions in their analysis without a full explanation. In the final economic analysis, the agencies should **more clearly explain the reasons behind these approaches**, such as how they determined the selection criteria for the studies used in the benefits calculations and how the inner and outer boundary distances were chosen in Appendix H.
- The Economic Analysis **provides little information on the expected effects from expanded watershed protection outside Section 404**. To the extent feasible, the agencies should attempt to more fully assess potential benefits from jurisdictional changes resulting from the Proposed Revised Definition Rule in programs governed by Sections 311, 401 and 402 of the Clean Water Act.

I. The Agencies Should Not Assume that Federal Regulations Do Not Add Any Value in States with a Broader Legal Definition of Protected Waters

As Policy Integrity noted in prior comments on the NWPR,⁶ the agencies should not assume that federal regulations will have no benefits in states that legally define protected waters “more broadly” than the federal government.⁷ Such an assumption is not supported in the economic analysis accompanying the proposal and has been contradicted by recent state behavior in response to federal regulations.

The first issue is that the agencies inaccurately assessed which states have more stringent protections. The agencies determined which states purportedly regulate more broadly than the federal government by reviewing legal reports on how states define their jurisdiction over water

⁶ See Inst. for Pol’y Integrity, Comments on Revised Definition of “Waters of the United States,” 84 Fed. Reg. 4154 (proposed Feb. 14, 2019) (Apr. 15, 2019),

https://policyintegrity.org/documents/Clean_Water_Rule_Revisions_Comment_2019.4.15-final.pdf.

⁷ ENV’T PROT. AGENCY & DEP’T OF THE ARMY, ECONOMIC ANALYSIS FOR THE PROPOSED “REVISED DEFINITION OF ‘WATERS OF THE UNITED STATES’” RULE 46 (Nov. 17, 2021) (hereinafter “2021 ECONOMIC ANALYSIS”) (“For this secondary baseline analysis, the agencies have attempted to identify which states already regulate as broadly as intended by this rule because those states will not experience benefits or costs from the rule.”).

resources.⁸ While this is a relevant data point in establishing which states are likely to experience benefits from expanded federal regulations, it ignores a myriad of other factors that determine whether a state, in practice, is protecting waters more robustly than would be required under the Proposed Revised Definition Rule. For example, simply because a state has the statutory authority to cover a greater number of waters in their regulations does not mean that those regulations are in place.⁹ And should a state need (and be willing) to undertake a rulemaking process, it will have to incur additional costs that could be avoided from stronger federal regulations.¹⁰ To develop a better, more accurate baseline of which states will benefit from the Proposed Revised Definition Rule, the agencies should 1) perform a more expansive analysis of the regulations implementing states' statutory authority, and 2) not assume that states will promulgate regulations to fill gaps in protection.¹¹

Developments after the agencies promulgated the NWPR further underscore the problems with assuming no benefits in states that have broader legal definitions of protected waters. As the agencies acknowledge, following issuance of the NWPR, two states – Indiana and Ohio – reduced their protections for aquatic resources.¹² This was in contrast to the agencies' assumption that less stringent federal protections would lead states to fill the gap.¹³ These states' decision to roll back protections underscores that certain state water laws may be vulnerable to legislative or regulatory revision, particularly given the incentives to favor local industry¹⁴ and not to regulate cross-border externalities with respect to interstate waters.¹⁵ The agencies should conduct a sensitivity analysis to examine the risk of states repealing laws that more broadly define protected waters.

⁸ See *id.* at 47.

⁹ See Inst. for Pol'y Integrity, Comments on Revised Definition of "Waters of the United States," *supra* note 6, at 14.

¹⁰ See Jason A. Schwartz, *52 Experiments with Regulatory Review: The Political and Economic Inputs into State Rulemakings*, Institute for Policy Integrity, Report No. 6 (2010) at iii–iv (noting that states need to devote considerable resources to undertaking cost-benefit analyses for rulemakings).

¹¹ See Inst. for Pol'y Integrity, Comments on Revised Definition of "Waters of the United States," *supra* note 6, at 10, 14–16.

¹² See 2021 ECONOMIC ANALYSIS, *supra* note 7, at 49.

¹³ See ENV'T PROT. AGENCY & DEP'T OF THE ARMY, ECONOMIC ANALYSIS FOR THE PROPOSED REVISED DEFINITION OF "WATERS OF THE UNITED STATES" 56–59 (2018), https://www.epa.gov/sites/default/files/2018-12/documents/wotusproposedrule_ea_final_2018-12-14.pdf.

¹⁴ See Mark Atlas, *Enforcement Principles & Environmental Agencies: Principal-Agent Relationships in a Delegated Environmental Program*, 41 LAW & SOC'Y REV. 939, 942 (2007); see also Eric Helland, *The Revealed Preferences of State EPAs: Stringency, Enforcement, and Substitutes*, 35 ENV'T ECON. & MGMT. 242, 243 (1998) ("The stringency of the [CWA's] enforcement by state agencies is not a function merely of budgets, but also of interests group politics.").

¹⁵ See, e.g., David A. Dana, *One Green America: Continuities and Discontinuities in Environmental Federalism in the United States*, 24 FORDHAM ENV'T L. REV. 103, 105 (2013) ("The emissions of pollutants crossing state boundaries or polluted water travelling downstream is the paradigmatic case on which there is the broadest normative agreement for a leading role for federal environmental law and governance. Indeed, obvious, readily identifiable cross-boundary transport of indisputably harmful pollutants via water and air is an area where even those theorists and commentators who are highly critical of the federalization of environmental governance see an appropriate role for the federal government.").

In addition, state programs may not promise the same level of benefits as federal protections because of resource constraints, which can lead to underenforcement.¹⁶ For instance, states may not be enforcing the “tighter standards they have on the books because the federal government is doing the enforcement of the federal baseline.”¹⁷ As numerous states themselves have explained, more stringent federal protections would thus result in benefits to states who do not have to expend resources on ensuring compliance.¹⁸ Because of economies of scale and state budget constraints, these costs may not be a simple transfer from the federal government to the states.¹⁹ The agencies should consider these potential costs to states, either from resource expenditures or environmental harms from under-enforcement, before concluding that increased federal protections offer no benefits where state law more expansively defines protected waters.

II. The Agencies Overlook Significant Categories of Interstate Benefits in the Analysis

Since many wetlands and watersheds cross state boundaries, the agencies should more fully consider the interstate benefits of federal protections. The main economic analysis accompanying the Proposed Revised Definition Rule continues the agencies’ prior and incomplete practice of valuing wetlands benefits only within the states where those wetlands are located.²⁰ In a sensitivity analysis described in Appendix H, the agencies propose using a “radius” approach so that estimates of the regulation’s benefits do not “arbitrarily stop at state borders.”²¹ Such an approach would be a significant improvement in assessing the net benefits of the rule,²² and the agencies should at a minimum incorporate a radius-based method into their main analysis. As seen below in Figure 1, under the NWPR, many of the most recent permit applications for projects near wetlands would have had effects on watersheds that flow into neighboring downstream states.

¹⁶ See INST. FOR POL’Y INTEGRITY, *BENEATH THE SURFACE: THE CONCEALED COSTS OF THE CLEAN WATER RULE ROLLBACK* 13 (Apr. 2020).

¹⁷ Catherine L. Kling, Ph.D., Expert Review of the Economic Analysis for the Proposed Revised Definition of “Waters of the United States” (2019), Attachment B, at 7.

¹⁸ See Attorneys General of New York et al., Comment Letter to Revised Definition of “Waters of the United States” (Apr. 15, 2019), Attachment A, at 4 (explaining that the NWPR would have required “additional resources and administrative reorganization on a scale that would be exceedingly difficult to execute” in California).

¹⁹ See Inst. for Pol’y Integrity, Comments on Revised Definition of “Waters of the United States,” *supra* note 6, at 16.

²⁰ See 2021 ECONOMIC ANALYSIS, *supra* note 7, at 169 (acknowledging that “two key shortcomings of state-level approaches are that wetland benefits arbitrarily stop at state borders and that the measurement of additional benefits from immediately local wetlands is not straightforward”).

²¹ *Id.*

²² For instance, the radius method alleviates the problem of estimating the baseline acreage in each state. See Institute for Policy Integrity, Comments on Revised Definition of “Waters of the United States,” *supra* note 6, at 21.

Sample NWPR Non-Jurisdictional Determinations (NJDs)*

Locations of 563 NWPR NJDs mapped based on flow into intrastate or interstate waters

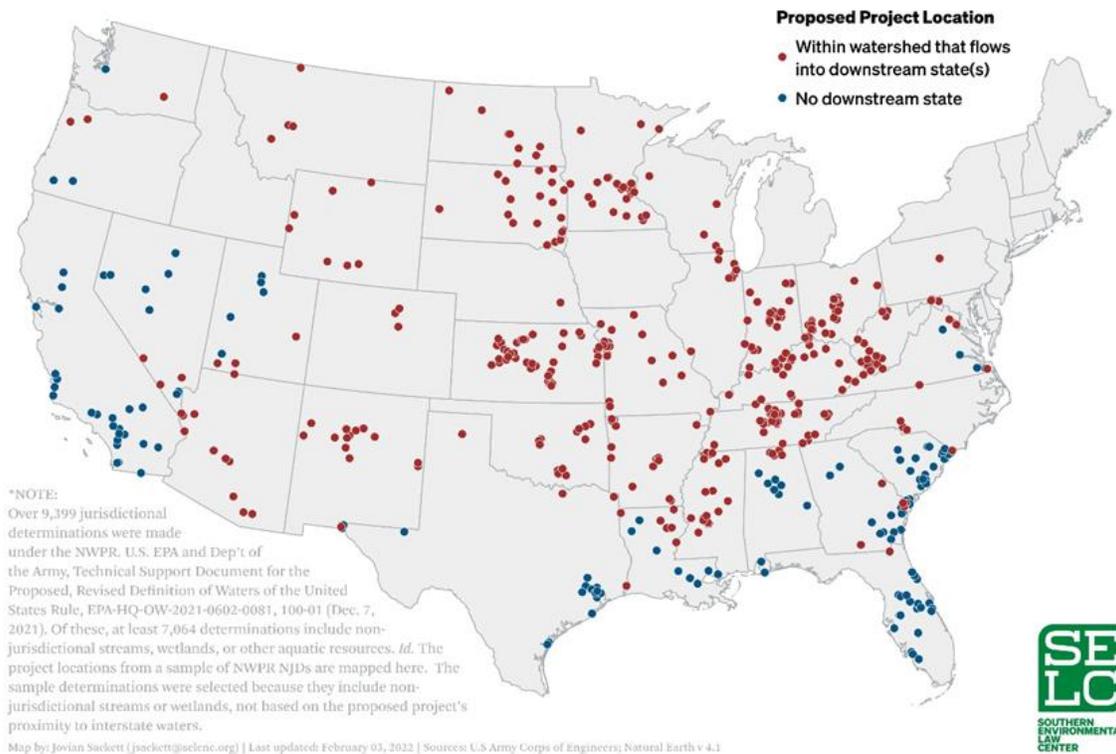


Figure 1: Sample of NWPR Non-Jurisdictional Determinations, prepared by the Southern Environmental Law Center.²³

Despite these improvements in Appendix H, the analysis continues to omit key benefits and, as discussed more fully below, lacks empirical underpinning of the radii. Several categories of benefits remain undervalued because the method does not capture them for out-of-state residents. They include recreational use and nonuse values such as cultural heritage, resources for future generations, existence of species, and existence of wild places.²⁴ Recent research has documented that ecological and recreational benefits often constitute the bulk of overall benefits from water protections,²⁵ and these benefits may reflect a wider range than considered by the government. For example, non-use values, such as existence values, do not necessarily depend on proximity to covered areas but reflect the desire to preserve natural areas simply for their own sake.²⁶

²³ See Jovian Sackett, *Map: Sample of NWPR Non-Jurisdictional Determinations*, SOUTHERN ENV'T L. CTR. (2022).

²⁴ See NAT'L RSCH. COUNCIL, *VALUING ECOSYSTEM SERVICES: TOWARD BETTER ENVIRONMENTAL DECISION-MAKING* 46, 80 (2005).

²⁵ See Sheila M. Olmstead, *The Economics of Water Quality*, 4 REV. ENV'T ECON. & POL'Y 44 (2009)

²⁶ See NAT'L RSCH. COUNCIL, *supra* note 24, at 72 (noting in the aftermath of the Exxon Valdez spill that many Americans valued preservation of the Alaskan Wildlife Refuge even though they never intended to visit the location).

As the radius method still assumes that there are no benefits outside of the outer boundary, this suggests that incorporating non-use benefits beyond the outer boundary would improve the agencies' benefit assessment. Similarly, in the case of recreational values, people may travel to enjoy the protected resource, so the benefits would dissipate more slowly over wider distances than local-use values. Yet Appendix H does not account for the benefits from recreational use or nonuse preservation that may result from the rule beyond the outer boundary, but simply expands the calculated benefits to nearby residents who live across state lines. The agencies continue to ignore benefits from more distant individuals who may nonetheless place value on wetlands preservation for the various reasons discussed above.²⁷ The 200-mile outer boundary used in the illustrative analysis also overlooks how ecosystem services may cover significant distances due to wetlands feeding into watersheds as well as animal migration.²⁸

Furthermore, the radius approach could be problematic for large states such as California, Texas, and Alaska, as the 200-mile outer boundary does not encompass their entire landmass.²⁹ This could especially underestimate the rule's benefits in these areas.³⁰ The agencies should therefore undertake several steps to ascertain the appropriate outer boundary: 1) rerun the analysis to determine if the size of the state matters for households' willingness-to-pay and adjust the analysis accordingly (ideally estimating a decay function, as discussed further below), and 2) review the relevant literature to assess whether a different radius distance would more appropriately capture the regulation's benefits.

III. The Agencies Should Incorporate Additional Literature to Improve Their Assessment of Unique Wetlands Benefits for Local Residents

The agencies have improved the main economic analysis of wetlands benefits by valuing the unique wetlands benefits that accrue to local populations.³¹ Nonetheless, the agencies could refine their assessment in several respects to more fully capture these benefits. First, should they shift to a radius-based approach, the agencies must ensure that the local function is based on available empirical evidence. In Appendix H, the agencies state that they "do not have a preferred set" of local radius lengths and acknowledge that the selection of this distance is somewhat subjective.³² To more precisely ascertain the appropriate distance, they should examine the relevant economic literature to see how these studies have defined local boundaries.

²⁷ See 2021 ECONOMIC ANALYSIS, *supra* note 7, at 170.

²⁸ See ENV'T PROT. AGENCY, CONNECTIVITY OF STREAMS & WETLANDS TO DOWNSTREAM WATERS: A REVIEW & SYNTHESIS OF THE SCIENTIFIC EVIDENCE 2-2-2-8, 2-26-2-27(2015), <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=296414> (explaining the role of wetlands in supporting watersheds and facilitating species migration).

²⁹ See *id.* at 172.

³⁰ For instance, one of the studies used in the Moeltner meta-analysis includes all California households. See John Loomis et al., *Willingness to Pay to Protect Wetlands and Reduce Wildlife Contamination from Agricultural Drainage*, in *THE ECONOMICS AND MANAGEMENT OF WATER AND DRAINAGE IN AGRICULTURE* 411 (Ariel Dinar & David Zilberman, eds., 1991).

³¹ See 2021 ECONOMIC ANALYSIS, *supra* note 7, at 79, 124.

³² See *id.* at 172.

Ideally, the agencies would identify a methodology to provide an empirical basis for the boundaries. It would also be worthwhile to run a sensitivity analysis to assess whether each study's local variable interacts with other parameters, such as total distance. Moreover, the agencies should not assume that the appropriate distance for the local variable will necessarily be the same in each state, given variations in size, total population, density, and other differences.

One potential solution is to estimate a continuous decay function in order to extrapolate willingness-to-pay values across space. An appropriate decay function would ensure that the agencies provide an empirical foundation for the selection of these boundaries and estimate changes in benefits as distance increases from wetlands and/or watersheds.³³ One recently published study (Johnston et al., 2019) contains an approach “to directly model the effect of distance . . . using a method that approximates the spatial characteristics of the sample in each primary study.”³⁴ The agencies should review this work and other recent literature to examine whether the economic analysis should take a linear, rather than step, approach to distance decay. This approach would also replace the local variable, thus requiring a re-estimation of the Moelter et al. (2018) model with the appropriate modification. Critically, interactions of the decay function with local variables are possible. As the various ecological services from wetlands dissipate at differing rates, the Johnston et al. (2019) methodology is still only a linear approximation of the decay function, so sensitivity analysis and/or additional qualitative and quantitative methods may be necessary to address the full set of wetland benefits. In particular, any non-use and recreational benefits omitted by the state willingness-to-pay studies discussed in section II should be accounted for in the analysis separately.

IV. The Agencies Should Better Explain Their Underlying Assumptions and Their Selection of Studies for the Analysis

In numerous instances throughout the economic analysis, the agencies do not provide an entirely clear rationale for the analytical choices they made in estimating the benefits and costs of the proposal. These include the cessation of benefits at state lines in the main analysis as well as the definitions of the local and outer boundaries in Appendix H, as noted above. When the agencies finalize the rule, they should ensure that the economic analysis provides well-reasoned explanations for all underlying assumptions, ideally with an empirical basis, as well as the selection criteria for studies used to justify the regulation.

The agencies may wish to focus on explaining why they included or excluded certain studies.³⁵ For example, the meta-analysis has been improved by the addition of two Canadian

³³ The agencies should acknowledge that a decay function is not likely to be identical for each type of resource, and so the selection function will inevitably approximate the relationship between willingness-to-pay and distance from the resource.

³⁴ Robert J. Johnston, Elena Y. Besedin & Benedict M. Holland, *Modeling Distance Decay Within Valuation Meta-Analysis*, 72 ENV'T RES. ECON. 657 (2019).

³⁵ See OFF. OF MGMT. & BUDGET, CIRCULAR A-4: REGULATORY ANALYSIS 23 (2003), <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf> (hereinafter “CIRCULAR A-4”) (explaining that “there is no mechanical formula that can be used to determine whether a particular study is of

studies,³⁶ which has helped rectify the unreasonably low estimate for baseline acreage in each state in the economic analysis for the NWPR.³⁷ However, the agencies do not explain how the other underlying studies were selected, merely pointing to an EPA memorandum that “details reasons for selecting or excluding specific wetland valuation studies.”³⁸ They also exclude a number of potentially relevant studies without specific explanation, including recent analyses that could help the agencies refine their benefit transfer analysis.³⁹ Prior to finalizing the rule, the agencies should conduct another literature review for relevant research, and the economic analysis should explicitly lay out why certain studies were chosen for the meta-analysis and why others were excluded.

V. The Agencies Should More Fully Assess Benefits under Sections 311, 401 and 402 of the Clean Water Act

Although the Proposed Revised Definition Rule is likely to affect the scope of protections under Sections 311, 401 and 402 of the Clean Water Act, the agencies provide only an abbreviated discussion of potential benefits under these programs because of “data limitations and expectations that these impacts would be small.”⁴⁰ As there are potential avenues for more fully assessing these impacts, the agencies should undertake them if feasible.⁴¹

For example, in the economic analysis accompanying the 2015 Clean Water Rule, the agencies randomly sampled jurisdictional determination files to evaluate the regulation’s effects on streams and other waters.⁴² They were therefore able to assess the effects on programs administered under Sections 311, 401 and 402 of the Act.⁴³ While the NWPR was in place for only a short period of time,⁴⁴ it should be possible to similarly sample jurisdictional decisions in

sufficient quality to justify use in regulatory analysis”); *see also* Peter Howard & Jeffrey Shrader, *Expert Report: An Evaluation of the Revised Definition of “Waters of the United States,”* INST. FOR POL’Y INTEGRITY (2019)

³⁶ *See* 2021 ECONOMIC ANALYSIS, *supra* note 7, at 79, 121.

³⁷ *See* Inst. for Pol’y Integrity, Comments on Revised Definition of “Waters of the United States,” *supra* note 6, at 21.

³⁸ 2021 ECONOMIC ANALYSIS, *supra* note 7, at 120 n.80.

³⁹ *See, e.g.,* Rajendra Poudel et al., *Benefit Transfer Estimation of Willingness-to-Pay for US Wetlands Conservation*, 115 FOREST POL’Y & ECON. 102157 (2020) (conducting a meta-analysis based on a number of studies excluded from the Moeltner et al. study that forms the basis for the agencies’ benefits calculations, and including a transfer error correction that could assist the agencies in revising the economic analysis).

⁴⁰ 2021 ECONOMIC ANALYSIS, *supra* note 7, at 52. *See also id.* at 56 (asserting that “[t]he agencies do not have sufficient data to quantify the benefits of the change in CWA jurisdiction at this time” under Section 311).

⁴¹ *See generally* CIRCULAR A-4, *supra* note 35, at 27 (advising agencies to present relevant “quantitative information” about a rule’s impacts when monetization is not possible, such as the number of “stream miles of [affected] water quality”).

⁴² *See* ENV’T PROT. AGENCY, ECONOMIC ANALYSIS OF THE EPA-ARMY CLEAN WATER RULE vi (2015).

⁴³ *See id.* at x.

⁴⁴ *See* 2021 ECONOMIC ANALYSIS, *supra* note 7, at 62, 64, 71 (citing the short time period the NWPR was in place as the reason for assuming benefits under these sections are small and can be discussed only qualitatively).

programs governed by these provisions.⁴⁵ This would allow the agencies to better assess the likely benefits under these programs compared to the NWPR baseline.

Conclusion

In the Proposed Revised Definition Rule, the agencies substantially improve on their economic analysis methodology from prior regulations in a number of important respects. Nonetheless, there remains room for the agencies to further improve their methods. In particular, the agencies should provide a more robust documentation of the regulation’s benefits and ensure that their analytical approach is clearly articulated.

Sincerely,

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Rachel Rothschild, Legal Fellow

Enclosures

INST. FOR POL’Y INTEGRITY, *BENEATH THE SURFACE: THE CONCEALED COSTS OF THE CLEAN WATER RULE ROLLBACK* (Apr. 2020),
https://policyintegrity.org/files/publications/Clean_Water_Rule_Policy_Report.pdf.

Inst. for Pol’y Integrity, Comments on Revised Definition of “Waters of the United States,” 84 Fed. Reg. 4,154 (proposed Feb. 14, 2019), Apr. 15, 2019,
https://policyintegrity.org/documents/Clean_Water_Rule_Revisions_Comment_2019.4.15-final.pdf.

Peter Howard & Jeffrey Shrader, *Expert Report: An Evaluation of the Revised Definition of “Waters of the United States,”* INST. FOR POL’Y INTEGRITY (2019)

Robert J. Johnston, Elena Y. Besedin & Benedict M. Holland, *Modeling Distance Decay Within Valuation Meta-Analysis*, ENV’T RES. ECON. 657 (2019).

⁴⁵ For instance, in the 2021 economic analysis, the agencies surveyed jurisdictional decisions under section 404, finding hundreds of cases where waters were excluded from protections under the NWPR out of 9,000 jurisdictional decisions. A similar survey could be done to assess the effects of the NWPR on sections 311, 401 and 402. See ENV’T PROT. AGENCY & DEP’T OF THE ARMY, TECHNICAL SUPPORT DOCUMENT FOR THE PROPOSED “REVISED DEFINITION OF ‘WATERS OF THE UNITED STATES’” RULE 94–102 (Nov. 18, 2021).