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To: Department of the Army, U.S. Corps of Engineers
From: Ecological Restoration Business Association
Docket No. COE-2022-0003
Date: May 27, 2022

Re: Review of Nationwide Permit 12 and Request for Input

The Ecological Restoration Business Association (ERBA) appreciates the opportunity to provide comments to the U.S. Army Corps of Engineers (the Corps) during their review of the 2021 Nationwide Permit 12 for Oil or Natural Gas Pipeline Activities (NWP-12). ERBA members are in the business of restoring wetlands, streams, and other critical protected habitats under both environmental market offset programs as a well as direct contracts with public agencies for environmental outcomes. Our industry has delivered hundreds of thousands of acres of wetlands and stream compensatory mitigation under the Clean Water Act's § 404 program.[1] Our association advocates for durable regulatory policies that incentivize increased private investment towards environmental markets and high quality restoration offsets.

ERBA members support the Nationwide Permits (NWPs) as an essential tool for balancing national infrastructure development and environmental protections. Predictable, transparent, and workable NWP conditions enable reliable construction planning and business operations across the country for numerous major industry sectors. ERBA member companies work closely with permittees and Corps District Engineers (DEs) to satisfy NWP conditions, predominantly by providing mitigation or other compliance solutions in response to impact limits and pre-construction notifications (PCNs). In some markets, an ERBA member company's services rendered as a result of NWP coordination with permittees can constitute up to eighty percent of the company's regional business demand.

Specific to NWP-12, ERBA members have a history of providing offset compliance solutions to the oil and gas industry, nationally and particularly in the Gulf region where pipeline operations converge with sensitive habitats and aquatic features. Based on this experience, ERBA's comments focus on concerns with the 2021 removal from NWP-12 of the longstanding PCN for mechanized clearing of forested wetlands. This concern extends to NWP-57 as well since NWP-12 was modified in 2021 to cover only oil and gas pipeline activity, with electric transmission lines permitted under the new NWP-57. While we understand the Corps' desire in the latest reissuance of the NWPs to create process improvements, NWP modifications should still ensure protection for vulnerable aquatic resources and hedge against likely litigation challenges that lead to uncertainty for all industries. To ensure NWP-12 and NWP-57 permit "no more than minimal individual and cumulative adverse environment effects," and to advance Executive Order (EO) 13990 initiatives on climate change and environmental justice, ERBA recommends that the Corps modify NWP-12 and NWP-57 to reinstate the long-standing PCN for mechanized clearing of forested wetlands.

[1] *See* https://ribits.ops.usace.army.mil

I. Reinstate the PCN for mechanized clearing of forested wetlands under NWP-12 and NWP-57.

i. Importance of the Eliminated PCN.

PCNs are a critical tool for NWPs that facilitate tailored analysis by the District Engineer (DE) of a permit applicant's proposed impacts in the specific watershed.[2] PCNs enable the Corps to verify NWPs for activities that might otherwise necessitate the use of the more arduous Individual Permit to meet the statutory requirement of §404(e). PCNs, by establishing touchpoints of review, also ensure that the NWPs are administered in accordance with §404(b)(1) Guidelines, which require avoidance, minimization, and then compensatory mitigation for impacts.[3]

The PCN process prompts a permit applicant to incorporate minimization, avoidance, and mitigation measures early on in their project design to facilitate speedy approval once under a DE's PCN review. In the absence of a PCN process, this incentive for better environmental design is removed and permittees pursue the least costly design option for construction and long-term maintenance. Based on ERBA members' decades of experience and the realities of permittees' analyses on construction cost-benefits, we have seen and expect permittees to continue to design project impacts up to the NWP threshold limit when there is no preemptive analysis trigger or DE oversight making it worthwhile to design otherwise. Cumulatively, this change in environmentally conscious design leads to an increase in adverse environmental effects authorized under the NWPs.

Considering the utility of PCNs and our expertise in wetlands' benefits, ERBA is especially concerned by the 2021 elimination of the PCN for mechanized land clearing in a forested wetland. Prior to the 2021 reissuance, this PCN was successfully used by the Corps for 24 years to monitor utility line impacts to wetlands and was the original PCN threshold added to NWP-12 when the NWP was reissued in 1996. Over those 24 years, development came to anticipate and plan projects to comply with the PCN. In response, the ecological restoration industry invested in the creation of forested wetland offsets, particularly in the Gulf and Southeast regions. ERBA members are aware of large scale conversions of Southern forested wetlands that are now occurring unchecked in the absence of the PCN; specifically, members have seen 50 acres converted due to an oil and gas pipeline development and 5 acres converted due to electric transmission line clearing, both of which would otherwise require Corps' analysis under NWP 12 or NWP 57 if the PCN were in place. These are only a few examples of impacts likely occurring without oversight across the region and cumulatively amounting to adverse environmental effects. For the mitigation industry, removal of the PCN represents a substantial change that has impacted mitigation sales in key markets. Such a substantial change should have only been made in response to new legal or scientific justifications between the NWP's 2017 and 2021 reissuance; however, that was not the case.

ii. Permanent, not Temporary, Impact Changes to Forested Wetlands' Ecosystem Services.

The Corps' main justification for elimination of the PCN was to simplify the NWP and, anticipating environmental concerns, the Corps stated that mechanized land clearing does not have "substantive potential to result in more than minimal adverse environmental effects," despite the Corps' record of determining otherwise for the prior 24 years. The Corps went on to state that land clearing activities "usually" result in temporary impacts to wetlands and that land clearing does not disturb wetland

[2] 85 Fed. Reg. 179, 57314-15.

[3] 40 CFR 230.10 (https://www.lrc.usace.army.mil/Portals/36/docs/regulatory/pdf/404B1guidelines.pdf); see also https://www.epa.gov/cwa-404/memorandum-agreemement-regarding-mitigation-under-cwa-section-404b1-guidelines-text.

functions at a level amounting to more than minimal adverse effects, despite the fact that land clearing is documented as causing permanent impacts and changes to the wetland plant community, hydrologic regimes, and soils.[4] The Corps offered their justification without citing to any scientific studies confirming that these impacts do not alter a wetland's functions and did not cite to any industry practice data for the claim that impacts are "usually" temporary. In fact, the consensus in scientific literature is the opposite of the Corps' assertion and the regulatory requirements for pipeline operations prevent impacted wetlands from returning to their prior forested state.[5]

First, consider that for a non-FERC regulated pipeline's operations, companies typically maintain a 50 foot right-of-way (ROW) and, per Pipeline Hazardous Materials Safety Administration (PHMSA), the lines must be physically walked or aerially inspected via a line of sight at least 26 times a year.[6] Oil and gas companies typically do not spend the resources to have the lines walked; thus, they maintain the ROW so it can be seen from a plane or helicopter for aerial inspection. Consequently, the impacted trees of the forested wetland are never given the chance to grow back in the permanent 50-foot easement since the ROW is routinely cleared through either mechanical or chemical means to allow for the line of sight. Further exacerbating the issue, related temporary workspaces for pipeline operations are maintained by landowners or companies that mow/clear frequently and routinely. This results in temporary workspaces often never recovering to their prior ecological state or requiring decades to return to their prior state, which is a substantial period to characterize as a "temporary" impact.

For a FERC pipeline, operators typically maintain 10-foot ROW clearing over pipelines located in forested wetland, which translates to mowing at least once a year. These landowners/operators can also remove trees an additional 15-feet on each side of the pipeline (30 feet total) in order to maintain integrity of the ROW.[7] This often results in mowing or applying herbicides to the ROW clearing every few years to prevent large established tree growth, essentially resulting in the long-term conversion to a shrubby wetland. Once clearing/operation activities do lessen in these ROWs, it again takes multiple decades for the impacted forested wetland to return to its prior state, if ever, and nuisance vegetation permitted to grow up during the operating years often hinders full recovery.

Second, multiple studies indicate that mechanized clearing results in irreversible and permanent alteration of forested wetland's functions, especially when looking at the cumulative adverse effects on a wetland or watershed.[8] These analyses also point to the value of a project-by-project evaluation on

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[4] See forthcoming footnotes 8, 11, 13, and 14.

[5] *Id.*

[6] 49 CFR 195.412.

[7] Federal Energy Regulatory Commission (FERC). Wetland and Waterbody Construction Mitigation Procedures: Office of Energy Projects, May 2013. Available at: https://www.ferc.gov/sites/default/files/2020-04/wetland-waterbody-construction-mitigation-procedures.pdf

[8] *See List of Potential Environmental Impacts from Major Oil and Gas Projects* from Tim Van Hinte, Thomas I. Gunton & J. C. Day (2007). Evaluation of the assessment process for major projects: a case study of oil and gas pipelines in Canada, Impact Assessment and Project Appraisal, 25:2, 123-137, DOI: 10.3152/146155107X204491. Downloaded from: https://doi.org/10.3152/146155107X20449; Goodale, Wing, PhD., *The Cumulative Adverse Effects of Gas Pipeline Development on Wetlands*, Association of State Wetland Managers Pipeline Permitting Project. Last revised: November 2018. Available at: https://www.nawm.org/pdf_lib/pipeline/white_paper_cumulative_adverse_effects_gas_pipeline_development_wetlands.pdf; The Delaware Riverkeeper Network, *The Effects of Converting Forest or Scrub Wetlands into Herbaceous Wetlands in Pennsylvania*, June 2014, available at: https://www.delawareriverkeeper.org/sites/default/files/Documents/Wetland%20Conversion%20Report.pdf;Zene

needed mitigation measures, such as a process like the PCN, stating: "Ultimately, in the absence of region-wide strategic planning efforts, the only way to reduce cumulative adverse effects is to reduce the adverse effects of each individual project to ensure there is no net loss."[9] Allowing pipeline construction to occur through forested wetlands without a PCN and the subsequent need for compensatory mitigation plans to be reviewed and approved by the Corps results in a significant cumulative loss of wetland resources and functions. The lost forested wetland functions and services increase habitat fragmentation for forest interior species, negatively alter biogeochemical processes (especially carbon, nitrogen and phosphorus sequestration), and reduce flood flow resistance. The environmental repercussions of these losses are particularly felt along the sensitive Gulf and Atlantic coasts, where forested wetlands perform critical ecosystem services. ERBA practitioners familiar with the hydrogeomorphic method (used by several Districts to quantify wetland impacts and offsets) note that the conversion of forested wetland to herbaceous wetland often reduces biological function by 40% and chemical and physical functions by 10-20%.[10]

Forested wetlands provide a myriad of benefits and important ecosystem functions.[11] We refer to the comments of our peer organizations specializing in wetland science (e.g., National Association of Wetland Managers) for further details, but we are compelled to highlight a few ecological facts here. Forested wetlands are vital stopover areas for migrating birds;[12] they are the first stop in the fall and last stop in the spring before and after trans-gulf migration, providing much needed lipid replenishment. Large unfragmented tracts of forested wetlands provide important habitat for forest interior migratory bird, amphibian, and reptile species.[13] Due to their high productivity, structurally heterogeneous layered system, and topographic diversity, forested wetlands also provide critical habitat for wildlife and

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s, Nicole K., The Delaware Riverkeeper Network, *Effects of Pipeline Construction Clear-Cutting on Water Quality in Northeastern Headwater Streams*, May 2015, available at: https://www.delawareriverkeeper.org/sites/default/files/Nicole%20Zenes%20Senior%20Thesis.Nutrients%20and%20Clear%20Cuts.pdf; Conner, W., Day, J., Slater, W. (1993). Bottomland Hardwood Productivity: case study in a rapidly subsiding, Louisiana, USA, watershed. Wetlands Ecology and Management Vol. 2 No. 4, pp.189-90; *see also* "Webinar #2: Cumulative Adverse Effects of Pipeline Development on Wetlands and Other Aquatic Resources." Association of State Wetlands Managers, originally held July 24, 2018; recording available at: https://www.nawm.org/nawm/nawm-webinarscalls/4142-past-energy-project-webinars-series#pipelinedevelopment

[9] Goodale, Section 5.

[10] Districts using HGM as a primary assessment tool or to supplement other methods include: Galveston, Savannah, Vicksburg. Calculations based on ERBA members 14 years of experience implementing the HGM method. Note that Savannah's SOP Appendix 11.10 even classifies "mechanized land clearing" as an adverse impact. The Corps would be inconsistent to now treat mechanized land clearing as a non-adverse impact activity when historical practice and current SOPs treat clearing as an adverse impact often necessitating mitigation.

[11] Messina, M. and Conner, W (1998). *Southern Forested Wetlands: Ecology and Management* (1st ed.) *See in-depth discussion in Part II on the functions provided;* Brinson, M. and Rheinhardt, R. (1997). *Wetland Functions and Relations to Societal Values* (Research Gate) *see Chapter II*. Also see generally U.S. Forest Service, Southern Research Station, Center for Forested Wetlands Research (RWU-4353), available at: https://www.srs.fs.usda.gov/charleston/research/

[12] Partners in Flight Landbird Conservation Plan, 2016 Revision, available at: https://www.partnersinflight.org/wp-content/uploads/2016/07/pif-continental-plan-final-spread-7-27-16.pdf; Cohen, Emily B. et al. A place to land: spatiotemporal drivers of stopover habitat use by migrating birds., Ecology Letters, October 7, 2020. https://doi.org/10.1111/ele.13618.

[13] Schroeder, R. L. (1996). Wildlife community habitat evaluation: A model for deciduous palustrine forested wetlands in Maryland, Technical Report WRP-DE-14, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

protection through cover and corridor/pathways for wildlife, which in turn facilitates the dispersal of wildlife and genetic diversity.[14] In association of the topographic diversity and hydrology, these wetlands are able to produce a large continuum of plant communities distributed along the flooding gradient which in turn creates a variety of niches to host diverse wildlife inhabitants.[15] Also, the complex interactions of the colonized microbes of forested wetlands allow for forested wetlands to act as sinks, sources, and transformers of materials.[16] This system is able to remove sediment, accumulate nutrients, and transform toxic or dissolved inorganic forms to non-toxic or organic compounds that contributes to food source for other organisms.[17] In consequence, the wetlands can reduce pollution sources associated with agriculture, decrease soil bulk density, sequester carbon, and increase soil organic matter.[18] Forested wetlands also can act as temporary reservoirs during floods, reduce surface water sheet flow velocities and erosion, and influence the timing, magnitude of discharge, and stage of a stream.[19]

These multiple functions add up to notable economic benefits; the Corps' own economic analysis estimated that forested wetlands have a value of $10,401 per acre per year.[20] These ecological services and their public value warrant DE analysis of proposed impacts to determine when activities will truly only result in temporary impacts versus impacts substantive enough to surpass the statutory standard of minimal adverse environmental effects.

To further illustrate our concerns, we share one more common construction scenario for pipeline projects. Forested wetlands often occur adjacent to large streams, which both present construction challenges for pipeline permittees. Permittees typically avoid impacts to these forested wetlands via horizontal direction drill (HDD) construction methodologies. Despite generally higher construction costs, HDD is often preferred as the construction methodology when installing a utility line near waterbodies,

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[14] Ernst, J. P. and V. Brown. 1989. Conserving endangered species on southern forested wetlands. p. 135–145.*In* D. D. Hook and R. Lea (eds.) Proceedings of the symposium: the forested wetlands of the southern United States. USDA Forest Service, Southeastern Forest Experiment Station, Asheville, NC, USA. GTR-SE-50.; Verry, E.. (2018). Hydrological Processes of Natural, Northern Forested Wetlands: Ecology and Management. 10.1201/9780203745380-13.;

[15] Fredrickson, L. H. 1979. Floral and faunal changes in lowland hardwood forests in Missouri resulting from channelization, drainage, and impoundment. FWS/OBS-78/91, U.S. Fish and Wildlife Service, Office of Biological Services, Washington, DC; Wharton, C-H., Kitchens, W.M. and Sipe, T.W. 1982. The ecology of bottomland hardwood swamps of the Southeast: A community profile. US Fish and Wildlife Service, Biological Services Program, Washington, D.C. FWS/OBS-81/37. 133 pp.; Pashley, D. N. and W. C. Barrow. 1993. Effects of land use practices on neotropical migratory birds in bottomland hardwood forests. p. 315–20. *In* D. M. Finch and P. W. Stangel (eds.) Status and management of Neotropical migratory birds. USDA Forest Service General Technical Report RM-229.

[16] Fredrickson.

[17] Richardson, C.J. 1989. Freshwater wetlands: transformers, filters, or sinks? pp. 25-46, In Freshwater Wetlands and Wildlife, 1989, CONF-8603101, DOE Symposium Series No. 61, R. R. Sharitz and J. W. Gibbons (Eds.), USDOE Office of Scientific and Technical Information, Oak Ridge, TN, USA; and see footnote 11.

[18] Jordan, T. E., D. F. Whigham, K. H. Hockmockel, M. A. Pitteck. 2003. Nutrient and Sediment Removal by a Restored Wetland Receiving Agricultural Runoff. J. Environ. Qual. 32:1534–1547; Collins, M.E., Kuehl, R.J., 2001. Organic matter accumulation and organic soils. In: Richardson, J.L., Vepraskas, M.J. (Eds.), Wetland Soils: Genesis, Hydrology, Landscapes and Classification. CRC Press, Boca Raton, FL, USA, pp. 137–162.

[19] See footnote 11; Welsch, David J.; Smart, David L.; Boyer, James N.; Minken, Paul; Smith, Howard C.; McCandless, Tamara L. 1995. *Forested Wetlands*. NA-PR-01-95. [Radnor, PA:] U.S. Dept. of Agriculture, Forest Service, Northern Area State & Private Forestry.

[20] U.S. Army Corps of Engineers, Regulatory Impact Analysis for the Proposed 2020 Nationwide Permits (July 30 2020) pp. 36-37 [hereinafter referenced as "RIA"].

versus the more destructive but less expensive open cut methodology. For example, most pipeline permanent right-of-way easements are 50 feet wide, and a 1,000-foot drill could contain upwards of 1.15 acres of forested wetlands between the drill within that right-of-way. To comply with General Condition 23 (and to avoid the need to submit a PCN) most permittees will show avoidance via this HDD approach, both by avoiding a stream and its adjacent forested wetlands and thus reducing impacts by over one acre. Without a PCN trigger for mechanized land clearing, the incentive to use the more expensive HDD method—and thereby avoid and minimize forested wetland impacts—is weakened, and more permittees will consider the open cut methodology.

Lastly, General Condition 23 requiring mitigation for impacts greater than 1/10th of an acre does not replace the protections for forested wetlands provided by the PCN. The 24-year record of permit decisions using the PCN indicates that in many instances mechanized land clearing causes significant and permanent impacts to forested wetlands, even if those impacts are less than 1/10th acre. Thus a PCN triggering DE review is warranted for pipeline projects covered by NWP-12 and NWP-57.

iii. Implications for Climate Change and Environmental Justice.

Forested wetlands, and all wetlands, are one of the most important natural defenses available to mitigate both the impacts and cause of climate change due to their resiliency and carbon sequestration benefits.[21] The established vegetation unique to forested wetlands helps retain soil function to absorb runoff water and storm surges during peak flood flows.[22] This benefit is increasingly important in the face of escalating natural disasters as a result of climate change, which are well documented as disproportionately impacting disadvantaged communities.[23] ERBA again refers to peer organizations with advocacy missions centered on climate change science and environmental justice to provide further justification on this point, but felt compelled to acknowledge the clear connection between protection and mitigation of forested wetlands and EO 13990's national goals on climate change and environmental justice.

Main Recommendation:

ERBA recommends that the Corps modify both NWP-12 for oil and gas pipelines and NWP-57 for electric transmission lines to reinstate the PCN for mechanized land clearing of forested wetlands. These modifications to reinstate the PCN will ensure the NWPs are in compliance with 404(b)(1) Guidelines, the environmental directive of the NWP Program laid out by Congress in §404(g), and EO 13990.

II. Encourage Districts with Forested Wetlands Geographies to Adopt the PCN as a Regional Condition.

District imposed Regional Conditions are an established and targeted tool to adapt the baseline conditions established in NWPs to the unique, varied environments and threatened resources found across the country. ERBA understands that during the latest NWP reissuance Corps HQ issued a directive

[21] *Wetlands and Climate Change: Considerations for Wetland Program Mangers*, Association of State Wetland Managers, July 2015, available at: https://www.nawm.org/pdf_lib/wetlands_and_climate_change_consideratons_for_wetland_program_managers_0715.pdf

[22] Welsch et. al.

[23] EPA. 2021. Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts. U.S. Environmental Protection Agency, EPA 430-R-21-003.

to the Division and District levels to scrutinize regional conditions and eliminate any conditions potentially unnecessary to meet the "minimal adverse environmental effects" standard. This directive was influential in altering the scope of regional conditions proposed and those ultimately finalized by Districts following issuance of the 2021 NWPs. For example, the Fort Worth District's public notice on proposed Regional Conditions issued in October 2020 included a PCN for impacts to forested wetlands, among several other PCNs[24] However, Fort Worth's final 2021 issued Regional Conditions only included two conditions and eliminated the proposed PCN for forested wetland impacts.[25]

At a minimum, ERBA urges Corps HQ to encourage Divisions and Districts with forested wetland ecosystems within their jurisdiction to reassess their 2021 Regional Conditions and modify the conditions to include a PCN for forested wetlands. The adoption of this PCN is particularly important in Districts throughout the Southeast and Gulf regions where utility and pipeline development frequently intersect with forested wetland geographies endemic to the region. Corps HQ should also remind Districts that Regional Conditions are a critical tool to advance the goal of "in-kind" mitigation by adopting numeric limits and mitigation thresholds that use a metric or methodology tailored to that District's aquatic features.

Conclusion

To comply with Congress' direction in 404(e), the 404(b)(1) Guidelines, and EO 13990, ERBA recommends that the Corps modify NWP-12 and NWP-57 to reinstate the longstanding PCN for mechanized clearing of forested wetlands. Mechanized clearing for those NWPs' permitted industry activities typically results in permanent or long term, rather than short term, impacts to a forested wetland's ecological services, and thus warrants analysis by the DE to ensure the NWP does not permit more than minimal adverse environmental effects. Forested wetlands also provide documented flood resiliency benefits for communities prone to increasing natural disasters as a result of climate change. Considering these benefits of forested wetlands for vulnerable regions, Corps HQ should, at a minimum, encourage Districts to reassess and modify their Regional Conditions to include a PCN for impacts to forested wetlands.

Thank you for your consideration of ERBA's comments. This letter was developed through close consultation with ERBA's NWP Committee. Please do not hesitate to reach out to sjohnson@ecologicalrestoration.org with any questions or comments. ERBA welcomes the opportunity for further discussion on the recommendations presented here.

[24] *See* Item 4 of the Proposed 2020 Nationwide Permit (NWP) Reissuance Regional Conditions for the State of Texas, Public Notice issued October 1, 2020 by the USACE Fort Worth District.
[25] 2021-A Nationwide Permit (NWP) Regional Conditions for the State of Texas, USACE Fort Worth District, available here.

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