Ecological Restoration Business Association

Growth Through Resilient Environmental Solutions

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To: Department of the Army, U.S. Corps of Engineers
From: Ecological Restoration Business Association
Docket No. COE-2020-0002
Date: November 16, 2020

RE: Proposal to Reissue and Modify the Nationwide Permits

The Ecological Restoration Business Association (ERBA) is pleased to provide comments to the U.S. Army Corps of Engineers (the Corps) regarding the Proposal to Reissue and Modify the Nationwide Permits (the Proposal). Nationwide permits (NWPs) are an essential tool for balancing national infrastructure development and environmental protections. Predictable, transparent and workable NWP conditions enable reliable construction planning across the country for numerous major industry sectors in their everyday business operations.

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 regional markets, an ERBA member company's services rendered as a result of NWP consultations with permittees can constitute up to eighty percent of the company's regional business demand. Beyond servicing permittees, ERBA members are also themselves permittees that avail NWP benefits, particularly NWP 27 on Aquatic Habitat Restoration, Establishment and Enhancement, and thus value speedy and reliable permitting for their own project operations.

Based on these direct experiences, ERBA members understand the Administration's and Corps' desire to shift as many permitting actions as possible to the more efficient 45-day NWP timeline versus the average 264-day timeline for an Individual Permit (IP). While there are undoubtedly process improvements to be had, any NWP modifications should still ensure protection for vulnerable aquatic resources and hedge against likely litigation challenges. ERBA is concerned that the Proposal, including modifications to fundamental aspects of the NWPs like the numeric limit on losses of stream bed, arguably lacks sufficient justification that the NWPs will authorize "no more than minimal individual and cumulative adverse environment effects." As proposed, multiple NWPs may be subject to tedious litigation, which would create uncertainty and costly delays for industries across the country, as we have most recently seen with NWP 12.

ERBA believes the efficiency goals of the Corps can be balanced with the environmental purpose of the NWP program. To that end, the following comments provide perspective and recommendations on five main topics: i) Numeric Limit on Impacts to Stream Beds, ii) NWP-12 PCN on Forested Wetlands, iii) Process Concerns, iv) NWPs 27 and 53 opportunities, and the v) Regulatory Impact Analysis.

I. **Numeric Limit on Impacts to Stream Beds.**

ERBA does not support elimination of the NWPs' 300 linear foot (LF) numeric limit for stream bed losses as presented in the Proposal. The NWP program has operated with a numeric limit on stream bed losses of 300 LF for the past 20 years.[1] Prior to 2000, the NWPs' numeric limits on impacts to waters of the U.S. were only expressed in acres and did not differentiate between types of non-tidal waters. The acre limits permitted substantial impacts to streams that went either unmitigated or were mitigated ineffectively by out-of-kind credits, i.e. ponds offsetting loss of headwater stream functions. Following a series of lawsuits and recognition of the need for "in-kind" mitigation to fulfill the CWA, the Corps modified the NWPs to add a separate linear numeric limit for stream bed impacts.[2] Elimination of 300 LF as a threshold for scrutiny of stream bed impacts would represent a notable regression for the NWP program and stream restoration policy.

The Corps discusses out-of-kind mitigation as a concern motivating the Proposal to eliminate the 300 LF numeric limit for stream beds and instead rely on the existing ½ acre limit for all waters.[3] ERBA shares that concern and our restoration practitioners are committed to working with the Corps to more precisely offset impacts on large order streams and rivers with commensurate scale mitigation. But, the NWPs, a regulatory program focused on the impact side and subject to reissuance every five years, is not the appropriate or necessary vehicle to abruptly institute change in philosophy on stream restoration. While some of the Corps' presented rationale is well-intentioned, the goal of incentivizing large scale river restoration projects is more complex than a shift to an area based numeric limit in the NWPs and such goal should not be achieved at the detriment of millions of headwater stream resources.

As stream science, including restoration-focused research, has advanced in recent decades, the linear-foot metric continues to prevail as the most appropriate and widely used unit of measure when quantifying ecological processes and functions. As drainage networks are linear in their orientation—i.e., material and energy are transported in a singular direction, downslope—their ecological properties are less functions of channel area at a single location, and more a function of upstream and catchment area condition. In other words, a stream's ecologic character is effectively imported from upstream sources. Thus, water quality, water temperature, channel integrity, in-channel habitat, and other factors are produced over long periods of time as water and materials are repeatedly transported through a channel, which is dependent on its particular landscape setting.[4] Given such landscape connectivity and the role

[1] *See* Final Notice of Issuance and Modification of Nationwide Permits, 65 Fed. Reg. 12818 (March 9, 2000).
[2] *Id; see also* 61 Fed. Reg. 65874. Initially expressed as 500 LF in 1996, this limit was subsequently lowered in 2000 to the current 300 LF following comments urging a 100, 200 or 250 LF limit. The Corps determined that 300 LF limit was workable across multiple NWPs while offering streams the requisite level of protection from a variety of permitted activities.
[3] Proposal to Reissue and Modify the Nationwide Permits, 85 Fed. Reg. 179, 57317 (Sept. 15, 2020).
[4] *See* U.S. EPA, CONNECTIVITY OF STREAMS AND WETLANDS TO DOWNSTREAM WATERS: A REVIEW AND SYNTHESIS OF THE SCIENTIFIC EVIDENCE (2015) (hereinafter CONNECTIVITY OF STREAMS AND WETLANDS TO DOWNSTREAM WATERS); COMM. ON REDUCING STORMWATER DISCHARGE CONTRIBUTIONS TO WATER POLLUTION, NAT'L RESEARCH COUNCIL, URBAN STORMWATER MANAGEMENT IN THE UNITED STATES 151–153 (2009).

streams play in the conveyance of material and energy from and across landscapes, and ultimately to the world's oceans, these are fundamentally linear systems, and the use of an acreage metric when quantifying ecological properties is not appropriate and is counter to established scientific convention.

In the regulatory context of the CWA §404 program where offsets are generated to achieve "no net loss" of aquatic resources, use of a linear metric is especially appropriate since years of permit data and studies show that the vast majority of permitted stream impacts are on lower order streams, i.e. 1st, 2nd, or 3rd order under the Strahler Method. This comports with expectations for the following reasons: 1) headwaters account for 94.9% of streams and 73.2% of length in the U.S.;[5] and 2) there are numerous incentives for development to avoid larger order streams.[6] These smaller, often headwater streams, have a low width average and are inherently linear in their hydrogeomorphic characteristics.[7] Impacts occur more frequently to these small streams rather than higher order streams because development is deterred from impacting larger stream or river features by multiple factors: (i) state and local requirements protect larger perennial streams/rivers with buffers and other regulatory protections, and (ii) the CWA §404(b)(1) avoidance, minimization, and compensation hierarchy often leads to avoidance or the bridging over or boring under of larger river systems to reach a level of only de minimis impacts on those systems. Thus, within the §404 program, the majority of stream mitigation offsets needed are to service lower order stream impacts, which science and restoration practice indicate are best measured by a linear metric (as discussed above).

The ecological restoration industry is responding to this demand with steady investment of millions of dollars in stream restoration projects across the country.[8] Recent interviews revealed that the industry invested more than $1 billion over the past five years in mitigation projects, with a significant portion of that capital invested in stream restoration.[9] Corps Districts are also incentivizing stream restoration with the development of multiple district level stream crediting methodologies that provide practitioners more regulatory certainty and clarity on the requirements for stream mitigation. This includes the development of regional "Stream Quantification Tools," which have largely been funded by the EPA and the Corps over the last several years. Linear feet is the prevailing metric underpinning these District level methodologies and, correspondingly, also underpinning restoration practitioners' project

[5] Leopold, L.B., M.G. Wolman and J.P. Miller. 1964. *Fluvial Processes in Geomorphology.* Dover Publications, Inc. New York, p. 522.

[6] 404(b)(1) Guidelines; There are often practicable alternatives; FEMA floodplain CLOMR and LOMR requirements, and the hydraulic and hydrologic requirements of impacting large systems require considerable investment related to flood management.

[7] *See generally* CONNECTIVITY OF STREAMS AND WETLANDS TO DOWNSTREAM WATERS; U.S. EPA, THE ECOLOGICAL AND HYDROLOGICAL SIGNIFICANCE OF EPHEMERAL AND INTERMITTENT STREAMS IN THE ARID AND SEMI-ARID AMERICAN SOUTHWEST 5 (2008); J.L. Meyer & J.B. Wallace, Lost Linkages and Lotic Ecology: Rediscovering Small Streams, in ECOLOGY: ACHIEVEMENT AND CHALLENGE 295, 304 (Malcolm C. Press et al. eds., 2001); U.S. EPA, "Headwater Streams – what are they and what do they do?" May 24 2011, available at https://www.epa.gov/sites/production/files/2015-07/documents/headwater_streams_-_what_are_they_and_what_do_they_do.pdf

[8] Hough and Harrington. "Ten Years of the Compensatory Mitigation Rule: Reflections on Progress and Opportunities" 49 ELR 10018, 10022-23, January 2019.

[9] Doyle, Martin. "This Little Known Industry Restores Our Environment and Bolsters Our Economy." Inside Sources, Sept. 10, 2020. Available at: https://www.insidesources.com/this-little-known-industry-restores-our-environment-and-bolsters-our-economy/.

designs and credit determinations for numerous stream restoration projects, many of which are governed by Corps-approved and executed mitigation banking instruments (MBIs).[10]

Consequently, a sudden change in this fundamental metric will create regulatory and economic uncertainty across our industry. The Corps' proposed shift from linear feet to acres will directly affect existing credit inventories, which will require extensive negotiations between bankers and districts in order to convert credits from linear feet to acres. Of further concern, it is reasonable to expect that credit sales would have to cease during these negotiations, affecting Corps' permitting decisions, the ability for applicants to utilize mitigation banks and bankers' revenues. In addition to credit supply adjustments, the new acre metric, as proposed, will significantly lower future demand for most stream mitigation banks. Lower revenues for mitigation banks will not only deter future investment in headwater stream restoration, leaving permittees and regulators with fewer in-kind mitigation options, it is also likely to complicate sponsors' financial capacity to meet performance standards required by their respective MBIs.

Experience tells us that such a dynamic will most often result in more out-of-kind credits offsetting stream impacts, i.e. a wetland credit may be used to offset an impact to a headwater stream, as occurred prior to growth in the stream market. For example, when area-based metrics were previously used under the NWP program, wetlands, ponds and other open water mitigation projects were often permitted to offset impacts to flowing, low order streams, which disincentivized mitigation sponsors from headwater stream restoration. Industry and restoration science have matured since then, and the industry is in a position to continue substantial investments in needed in-kind mitigation projects, but can only do so with stable regulatory policy signals.

Besides these industry market concerns with the Proposal, current science does not support the Corps' determination that elimination of the 300 LF numeric limit for stream bed impacts will result in no more than minimal adverse environmental effects. To the contrary, impact data and science indicate that replacement of the 300 LF numeric limit with a 1/10th acre mitigation threshold will result in widespread and unmitigated impacts to small order streams that provide critical ecological functions.[11] As discussed above, impacts to headwater streams are more prevalent than impacts on higher order systems, with permittees typically designing their projects' stream bed impacts up to the regulatory maximum established by NWP numeric limits.[12] An individual impact to a smaller stream may arguably cause no more than a minimal adverse environmental effect. However, when considered cumulatively, such impacts lead to a "death by a thousand cuts" scenario, whereby compounding effects degrade watersheds to an extent that clearly rises above any defensible characterization of "minimal" adverse effects.

In the Corps' analysis of the environmental impact of their Proposal, they frequently cite to data from a 2012 study by Professor John Downing et. al. ("Downing Study"), including the finding that the mean width of a first order stream is 6.3 feet.[13] However, use of this statistic is inappropriate for the Corps'

[10] *See* Texas Rapid Assessment Method (TXRAM), WY and CO Stream Quantification Tools (SQTs), NC Stream Mitigation Guidelines, Galveston Stream Condition Assessment, Norfolk Unified Stream Methodology (USM).
[11] *See discussion in* Owen, Dave (2017) *"Little Streams and Legal Transformations,"* Utah Law Review: Vol. 2017 : No. 1 , Article 1, p. 7-14. Available at: http://dc.law.utah.edu/ulr/vol2017/iss1/1; South Carolina Dept. of Natural Resources, Comment ID COE-2020-0002-0170. Submitted to the Fed. Reg. Nov. 5, 2020. *See discussion that Proposal would eliminate protection and mitigation requirements for 1st and 2nd order streams, which are the majority of stream orders impacted in SC.*
[12] *Doyle et al.,* 2015.
[13] 85 Fed. Reg. 179, 57316, 57321.

purposes of analyzing potential impacts on U.S. streams. The Downing Study found that the *global* mean width for first order streams is 6.3 feet, which average includes all mapped streams across the world, including Africa and other regions with arid geographies that notably contrast with the majority of the U.S.' domestic terrain and watersheds. When reviewing the Downing Study on the whole, including the supplemental report data, researchers actually found that the U.S. domestic average for first order stream width is around 2.9 feet, over 50% narrower than the global average used to inform the Corps' proposal.[14] Further, the Downing Study and several other publications note that mapping of first order and headwater streams is not widely available since these smaller features are often overlooked in mapping efforts and thus are not reliably documented and quantified.[15] Prevailing academic consensus is that these smaller features are widely undercounted and, without data otherwise, legal protections should be broad enough to account for the scale, sensitivity, and ecological importance of small streams.[16]

The Corps misapplies existing research to other aspects of the proposal as well. One of the Corps' main rationales for replacing the 300 LF numeric limit with a 1/10th acre threshold triggering mitigation is that acres are a more accurate approach to quantifying stream bed losses and serve as a better surrogate for losses of stream function.[17] In discussing this rationale, the Corps misinterprets multiple studies by leading academics as supportive of its Proposal. Notably, Professor Martin Doyle, Professor Rebecca Lave, and Professor Todd BenDor publicly submitted comments refuting use of their research for the proposition that an acre based metric would better measure impacts to stream resources.[18] The Corps lacks scientific grounds to justify its rationale in the absence of the cited studies' support. Without the emergence of other scientific reports since the 2017 reissuance of the NWPs, the Corps fails to present new data or cite to other compelling studies in support of their proposed change—a change that deviates from the 20-year record of the 300 LF numeric limit and documented need for headwater stream protection to maintain no more than minimal adverse effects under the NWP program.

The Corps claims that despite elimination of the 300 LF numeric limit, NWP permitted activities will still result in no more than minimal individual and cumulative adverse environmental effects because they are proposing to modify General Condition 23 to require mitigation for impacts to stream beds exceeding 1/10th of an acre. However, there is no scientific or environmental data given to indicate that a 1/10th acre threshold will provide a comparable level of protection and scrutiny for stream bed resources as the 300 LF numeric limit. A few simple examples in the table below illustrate that the proposed change would certainly expose frequently impacted lower order stream features to greater impacts. The Corps ignores common scenarios like these in their Proposal.

Average Stream Width[19]	**1/10th Acre Converted to LF**	**# LF > than 300 LF Limit**
2.9 feet (U.S. 1st Order Avg)	~1,556 LF	1,256 LF Unprotected
4 feet	1,089 LF	800 LF Unprotected
6.3 feet	~691 LF	~391LF Unprotected
8.6 feet	~506 LF	~206 LF Unprotected

[14] Supplementary electronic material to: JA Downing et al. (2012). Inland Waters 2, pp. 229-236, DOI: 10.5268/IW-2.4.502.
[15] *Downing; Owen*.
[16] *Owen, p.12-14.*
[17] 85 Fed. Reg. 179, 57313.
[18] Doyle and Lave. Comment ID COE-2020-0002-0188. Submitted to the Fed. Reg. Nov. 11, 2020.
[19] Width values were selected from Downing et al. (2012) supplemental materials for U.S. streams representing 1st order and 2nd order streams.

Rather, the only justification offered by the Corps for the appropriateness of the 1/10th acre threshold is that the same threshold protects wetlands under the NWPs and its use would provide consistency in metrics between streams and wetlands for ease of NWP administration. Metric consistency alone is not sufficient justification and could already be achieved nationally through a reporting requirement. If metric consistency is the goal and given the 20-year precedent of the 300-LF threshold, it would be more appropriate to retain the limit in LF and add a reporting requirement to convert LF into acres, as opposed to adopting the threshold applied to wetlands as the new stream numeric limit. This approach is more likely to preserve existing protections for streams. Indeed, many ERBA members note that certain Districts or states already require conversion from linear feet to acres and vice versa, so formulas are readily available to assist mitigation providers, Corps staff, and permittees.

While the Corps reaches for consistency between streams and wetlands, they are distinct aquatic features with unique ecological functions. As stated by Professors Doyle and Lave: "streams are fundamentally different from wetlands, lakes, and other aquatic systems. Homogenizing only across the broad range of streams, but also among vastly different aquatic ecosystem types, may make the NWPs more internally consistent, but it certainly does not make them more accurate, nor does this approach provide more equivalent protections."[20] The Corps asks whether there is a legal, regulatory, policy or scientific basis for treating stream bed losses different than non-tidal wetlands and waters. The documented inherent scientific differences between streams and non-tidal waters, plus the documented importance of headwater stream functions, provide the basis for difference in treatment. As a logical result, meeting the legal and regulatory standard of "no more than minimal adverse environmental effects" for certain stream features requires the Corps' utilization of different and, in this instance, more restrictive, conditions and numeric limits than those established for non-tidal wetlands.

The past two decades prove the 300 LF numeric limit is a successful tool to appropriately protect stream resources under the NWP program. The Corps has not presented any basis to support the proposition that requiring mitigation for stream bed impacts exceeding 1/10th acre will protect streams in a manner equivalent to the current 300 LF numeric limit. Considering the scientific consensus and the Corps' legal requirement to permit "no more than minimal adverse environmental effects," ERBA recommends that the Corps retain use of a 300 LF threshold for stream bed impacts, but apply it through the mitigation requirements of General Condition 23, rather than a numeric limit.

Recommendations:

ERBA recommends: i) proceeding with the proposed elimination of the 300 LF numeric limit for stream bed impacts from the NWPs, ii) revising (d) of General Condition "23. Mitigation" to state that:

> *"Compensatory mitigation will be required for all losses of stream bed that exceed 300 linear feet and require pre-construction notification, unless the district engineer determines in writing that either some other form of compensatory wetland and/or stream mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For losses of stream bed of 300 linear feet or less that require preconstruction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for*

[20] Doyle and Lave, 2020.

losses of streams should be provided, if practicable, through stream channel in-kind rehabilitation, enhancement, or, in limited cases, preservation since streams are difficult to replace resources (see 33 CFR 332.3(e)(3)). The district engineer should give first preference to restoration for the reasons detailed in 33 CFR 332.3(a)(2) and preference to available advance mitigation options in accordance with 33 CFR 332.3(b)."

iii) further revising General Condition 23 (c) and (d) to state a preference for advance mitigation, and iv) clearly incorporating reference to General Condition 23 in NWPs 21, 29, 39, 40, 42, 43, 44, 50, and 52 to replace elimination of the 300 LF numeric limit.

We highlight that ERBA's recommended language for General Condition 23 (c) clarifies that if the DE permits "other form of mitigation" those forms should still be at the standards required for compensatory mitigation. ERBA does not agree with the Corps that "best management practices (BMPs) and other minimization measures" are more environmentally preferable forms of mitigation.[21] BMPs and minimization measures should be implemented during the planning, construction and operations stages to minimize impacts, and under 33 CFR 332 are not acceptable as forms of compensatory mitigation.

This recommendation will achieve the Corps' efficiency and administrative goals, while maintaining necessary environmental protections for stream impacts. Under ERBA's approach, projects impacting more than 300 LF of stream bed would no longer be required to pursue the protracted ~264-day IP track. Instead, DEs would require mitigation for impacts over 300 LF up to ½ acre of stream bed, just as DEs currently do under the NWP 45-day track for wetland impacts over 1/10th acre and up to ½ acre of non-tidal waters. Both stream beds and wetlands would be subject to an equivalent quantitative limit, ½ acre, but would have different "floors" for triggering the mitigation General Condition, which is justified because of the fundamental differences between streams and wetlands. Our recommendation would also reiterate the preference for advance mitigation options, i.e. bank credits or released ILF credits, to offset impacts permitted under the NWPs. Since already approved, constructed, and performing, advance mitigation is a logical match for the Corps' need to issue an expedient but confident decision on sufficient mitigation for the permitted impact within a 45-day timeline. ERBA's approach better leverages mitigation as a tool for the Corps' administration of the NWP program and recognizes advances in the mitigation stream market since the 2008 Compensatory Mitigation Rule. Importantly, the recommendation offers the Corps a better path forward by moving many actions currently permitted under an IP over to the NWP track, which will save regulators' and permittees' time and expense.

Beyond GC 23(d), ERBA also encourages the Corps to consider modifications to GC 23(e) to advance the goal of in-kind mitigation.[22] As it currently reads, 23(e) allows NWP activity impacts "in or near streams" to be offset with compensatory mitigation measures solely in riparian areas. Offsetting via restoration or maintenance/protection of riparian areas does not replace the unique and specific functions of stream bed channels or floodplain wetlands. The goals of the CWA require that both riparian and wetland resources are mitigated for with in-kind mitigation, when available and practicable, in amounts proportional to their presence at the impact site. Practice and science indicate that in-kind mitigation most often comprises a linear foot approach for stream assessment and associated mitigation

[21] 85 Fed. Reg. 179, 57351.

[22] We recognize that strict in-kind mitigation is not always readily available to permittees and Corps Districts across the country. ERBA acknowledges this reality by including the qualifiers when "available and practicable" for in-kind mitigation. In these instances, the Corps and permittees should work with the region's mitigation providers to identify other satisfactory compensatory mitigation, preferably a form of advance mitigation at landscape scale, like mitigation banks.

and an acreage approach for wetland assessment and associated mitigation. To address, ERBA recommends adding language to GC 23(e) to clarify that restoration or enhancement of riparian areas may only satisfy mitigation requirements when other in-kind mitigation options are not available or practicable. For example, the Corps might replace the second sentence "in some cases" with "in circumstances where in-kind restoration is not practicable," and add "limited" to state "in limited cases" for the opening qualifying clause of the section's last sentence.

Also related to GC 23(e), we recommend the Corps reconsider their proposal to revise the third sentence to "If restoring or enhancing riparian areas involves planting vegetation, only native species should be planted," from the current language stating that restored riparian areas should consist of native species.[23] An important ecological standard for compensatory mitigation is ensuring the performance success of native plant communities, implemented via a robust interim management plan. Diligent interim management of the riparian area is a hallmark of compensatory mitigation when compared to other mitigation measures. ERBA recommends that the Corps either retain the current language or consider other revisions that do not undermine the importance of site management, including the removal of invasive species that hamper performance standard achievement.

Additional Considerations:
Note on ERBA's Commitment to Work with Corps HQ on Process-Based Stream Restoration Policies

ERBA reiterates its support, also expressed at the beginning of this Section I, for the goal of incentivizing more large-scale stream and river restoration. We applaud the Corps' recognition that streams and rivers are dynamic systems and in certain instances use of an area metric is warranted. Several ERBA members have successfully invested in these larger restoration projects, particularly in the arid West and through dam removal and culvert modifications, which received a policy boost in recent years with RGL 18-01. While we appreciate the Proposal's attempt to incentivize further investment in these restoration endeavors, for the detailed reasons presented above, we do not support using the NWPs' national baselines for numeric impact limits and mitigation conditions to enact this change. We strongly believe that large scale river restoration is best incentivized through development of crediting methodologies that account for multiple factors informing stream or rivers' functions, including stream bed and bank square footage, drainage area, water quality and habitat contributions. ***ERBA welcomes the opportunity to work with Corps HQ and Districts on these multi-faceted methodologies focused on the mitigation, rather than impact, side of the §404 program.***

To address the in-kind mitigation challenge in the current NWP reissuance, ERBA recommends the Corps consider use of an area metric via: i) regional conditions and ii) in NWPs where data indicates that most permitted impacts are to larger streams and rivers. For example, Corps' Districts in western regions where large streams and rivers feature more prominently may want to adopt numeric limits expressed in an acre fraction as part of their Regional Conditions. Similarly, Corps HQ might conduct a review of permit data to determine which NWPs' permitted activities commonly impact large streams or rivers, and for those specific NWPs implement an area based numeric limit on impacts. Based on some ERBA members' experiences, we believe that NWPs 31 and 39 might be potential candidates for this approach since they deal with large water infrastructure activities.

Also, we understand that the Corps and U.S. Environmental Protection Agency are currently collaborating on a peer-reviewed study analyzing the environmental and policy consequences of stream

[23] 85 Fed. Reg. 179, 57351-52.

restoration metrics. We believe this study would appropriately inform future changes to the NWPs. Since the current NWPs do not expire until 2022, it seems prudent to wait for the study's results before proceeding with the current reissuance effort.

II. Retain the PCN for mechanized clearing of forested wetlands under NWP-12.

The Pre-Construction Notification (PCN) process is a "critical tool," as characterized by the Corps, that facilitates tailored analysis by the District Engineers (DE) of a permit applicant's proposed impacts in the specific watershed.[24] PCNs enable the Corps to establish NWPs for activities that might otherwise necessitate the use of an IP 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.[25]

Under current practice, a permit applicant is prompted by the PCN process to incorporate minimization, avoidance and mitigation measures early on in their project design process 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 will 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 benefit, we expect permittees will design project impacts up to the NWP numeric limit when there is no preemptive analysis trigger or DE oversight making it worthwhile to design otherwise. Cumulatively, this will lead to an increase in adverse environmental effects authorized under the NWPs.

To illustrate this issue, consider a common construction scenario for linear infrastructure projects. Wetlands often occur adjacent to large streams and are typically avoided near those streams via horizontal direction drill (HDD) construction methodologies. HDD is the preferred construction methodology when installing a utility line in large waterbodies, rather than the open cut methodology, because HDD delivers the important benefit of wetland avoidance. For example, most pipeline permanent easements are 50 feet wide, and a 1,000-foot drill could contain upwards of 1.15 acres of wetlands between the drill. Most applicants will show avoidance via this drill and comply with General Condition 23, both by avoiding a stream and its adjacent wetlands, thus, reducing impacts by over one acre. However, post-construction operations prefer for the applicant/utility line operator to clear and maintain the permanent easement between the HDD. Without a PCN trigger for mechanized land clearing, these once avoided forested wetlands would be cleared for the ease of maintenance review during post-construction pipeline operation; it is easier to operate a utility line with a clear line of sight and it lowers permittee expenses for pipeline operation. Unfortunately, such a result does not comply with the avoidance and minimization efforts outlined in NWP General Condition 23.

Considering the utility of PCNs and our expertise in wetlands' benefits, ERBA is especially concerned by the Proposal's elimination of the NWP-12 PCN for mechanized land clearing in a forested wetland, highlighted in the example above. This PCN has been successfully used by the Corps to monitor utility line impacts to wetlands for the past 24 years and was the original PCN threshold added to NWP-12 when the NWP was reissued in 1996. Over those 24 years, development has come to anticipate and plan projects to comply with the PCN and the ecological restoration industry has responded to permittee

[24] 85 Fed. Reg. 179, 57314-15.

[25] 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.

demand by investing in the creation of forested wetland offsets, particularly in Gulf and Southeast regions. Removal of the PCN represents a substantial change with implications for market growth within a sector of the ecological restoration industry. Such a substantial change should only be made if new legal or scientific justifications have arisen between the last reissuance of the NWPs in 2017 and now; however, that is not the case here.

The Corps' main justification for elimination of this PCN and four others from NWP-12 is conclusory ("to simplify") and implies 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 past 24 years. The Corps goes on to state that land clearing activities "usually" result in temporary impacts to wetlands and again implies that wetland functions are not disturbed by land clearing at a level that amounts to more than minimal adverse effects, despite the fact that the activity does result in permanent impacts and changes to the plant community and soils. The Corps offers this justification without citing to any scientific studies confirming that these impacts do not alter a wetland's functions and does 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, with multiple studies and practice indicating that mechanized clearing results in irreversible and permanent alteration of forested wetland's functions.[26] Allowing pipeline construction to occur through forested wetlands without the need for preconstruction notification and without the need for compensatory mitigation plans to be reviewed and approved by the Corps would result in a tremendous loss of wetland resources and functions, particularly along the Gulf Coast, 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%.[27]

Forested wetlands provide a myriad of benefits and important ecosystem functions.[28] We refer to the comments of our peer organizations specializing in wetland science for further details, but we are compelled to highlight a few ecological facts here. Forested wetlands are vital stopover areas for migrating birds (Partners in Flight 2008): 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. Due to their high productivity, structurally heterogeneous layered system, and topographic diversity, forested wetlands also provide critical habitat for wildlife and protection through cover and corridor/pathways for wildlife (Ernst and Brown 1988) which in turn facilitates the dispersal of wildlife and genetic diversity (Coastal Ecology Inst. 2020). In association of the topographic diversity and hydrology, these wetlands are able to produce a

[26] *See* 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; 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.

[27] 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.

[28] 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*.

large continuum of plant communities distributed along the flooding gradient which in turn creates a variety of niches to host diverse wildlife inhabitants (Fredickson 1979; Wharton et al. 1982; Pashley and Barrow 1993). Also, the complex interactions of the colonized microbes of forested wetlands allow for forested wetlands to act as sinks, sources, and transformers of materials (Fredickson 1997). 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 (Coastal Ecology Inst. 2020; EPA 2008; Richardson 1989). In consequence, the wetlands can reduce pollution sources associated with agriculture, decrease soil bulk density, and increase soil organic matter (Jordan et al. 2003; Collins and Kuehl 2001). Forested wetlands also can act as temporary reservoirs during floods, reduce surface water sheet flow velocities and erosion, and influencing the timing, magnitude of discharge, and stage of a stream (Coastal Ecology Inst. 2020).

These multiple functions add up to notable economic benefits - the Corps' own analysis includes estimates that forested wetlands have a value of $10,401 per acre per year.[29] These ecological services and their public value warrant District Engineer 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.

Lastly, the mitigation general condition at 1/10th of an acre will not account for these impacts in the same manner as 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, even if those impacts are less than 1/10th acre, warranting the PCN and corresponding review by the District Engineer.

Recommendation:

ERBA strongly recommends the Corps retain the NWP-12 PCN for mechanized land clearing of forested wetlands to stay in compliance with 404(b)(1) Guidelines and the environmental directive of the NWP Program laid out by Congress in §404(g).

III. Process Concerns.

i. *Request for Extension of 60-Day Comment Period.*

ERBA requests an extension of the 60-day public comment period to a 180-day comment period. During past NWP Reissuance review periods, the public had multiple months (even up to a year) to review proposed changes. This extended review period is warranted considering the importance of the NWPs and substantial modifications presented in the current Proposal. Public review must take into consideration major changes in multiple NWP permits, multiple changes to General Conditions, the addition of five new permits, and the need to determine cumulative and interconnecting impacts from other recent federal rulemaking actions. By any measure the 60-day review and comment period is woefully inadequate for this volume of review and analysis.

ERBA also echoes the concerns of peer organization Association for State Wetland Managers (ASWM) on the deficiency of a 60-day review period for effective state review. ERBA members work closely with several state agencies on their mitigation and CWA permitting needs. Sixty days is too tight a timeline for most states to effectively review the sheer volume of changes. Additionally, the NWP Rule

[29] 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"].

review period was on an expected schedule, which allowed states and tribes to plan additional time before the review period to initiate both internal and external coordination and planning in preparation for the review process. However, despite expectations of the next NWP Rule review process beginning in 2021 and culminating in a new rule in 2022, an off-cycle process was imposed and opportunity for advanced planning and coordination has been eliminated. This abbreviated and unexpected timeline directly undermines and limits state and public input.

ERBA also flags that there is a fundamental disconnect created in the Proposal by the separate requirements for the §401 waters quality certification review process and the Coastal Zone Management (CZM) review process, which must be conducted within each coastal state. The current discrepancy between the 60-day timeline for §401 review and the 90-day timeline for coastal zone review creates an unnecessarily cumbersome, bifurcated review process. While a longer timeline is needed for review for a variety of reasons, at a minimum the public comment period deadline should be extended to allow for a joint review process with CZM at the 90-day mark.

Recommendation:

ERBA recommends the Corps extend the time for public comment to a 180-day period to provide adequate time to review the Proposal and associated draft permits.

ii. *Reduction in Regional Conditions.*

As acknowledged in the Proposal, District imposed Regional Conditions are an established and important tool to adapt the baseline conditions established in NWPs to the unique and varied environments and threatened resources found across the country. ERBA understands that Corps HQ has issued a directive to the Division and District levels to scrutinize regional conditions and eliminate any conditions potentially unnecessary to meet the "minimal adverse environmental effects" standard. Anecdotally and as evidenced in certain proposed Regional Conditions, ERBA members are seeing that many Districts have substantially reduced their Regional Conditions, even those that have been in common practice for the past several years. While we acknowledge that Districts have substantial deference in the discretionary authority they exercise to implement Regional Conditions, we fear that the proposed changes to Regional Conditions will expose District decisions on NWPs to potential litigation claims that certain permit actions per se allow more than "minimal adverse environmental effects."[30]

For example, Regional Conditions are an adept tool for the Corps to anticipate challenges with the Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act. Districts can incorporate Regional Conditions specific to endangered or special status species in their watersheds from the outset, and thus demonstrate programmatic compliance with these Acts to defend against litigation threats that slow the Corps and industry. Maintaining compliance with these Acts should be top of mind for the Corps following recent NWP-12 litigation that slows business for permittees and leaves regulators with uncertain direction.

ERBA urges Corps HQ to stress the value of Regional Conditions to Divisions and Districts and provide further guidance on when Regional Conditions are still warranted and necessary. In particular and in light of the current Proposal, Corps HQ should offer direction to Districts on how Regional Conditions

[30] *Sierra Club v. U.S. Army Corps of Engineers*, 464 F. Supp. 2d 1171, 1198-202 (November 2006); *Coalition to Protect Puget Sound Habitat v. U.S. Army Corps of Engineers*, 417 F. Supp. 3d 1354, 1366-67 (October 2019).

can be 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 endemic aquatic features.

iii. *Consolidation of Pre-Construction Notifications.*

The Proposal includes several consolidations or eliminations of PCNs and other compliance mechanisms. For NWPs 21, 49, and 50, the Corps also proposes to eliminate the requirement for permittees to obtain a written determination from the DE that the proposed activity qualifies for NWP authorization. This is particularly concerning for these three NWPs because they authorize coal mining activities that historically often impact vulnerable headwater stream systems. Reasoning given throughout the Proposal for these changes are the fact that multiple other NWP Program tools exist, particularly the Regional Conditions that allow DEs to adopt regional specific requirements and make permit decisions on a case by case basis to fulfill §404(e).

The Proposal's heavy reliance on Regional Conditions, at the same time there is a HQ directive undercutting Regional Condition adoption, puts the Corps in a vulnerable position for legal challenges. Recent litigation found that the Corps' impact analyses do not satisfy the statutory requirement when "they are based in large part on the hope that district engineers will mitigate any adverse environmental effects by revoking the NWP, imposing regional or project based-condition, and/or requiring an applicant to seek an individual permit" and again that the "Corps may not rely solely on post-issuance procedures to make its pre-issuance minimal impact determinations."[31] The proposed wide-ranging elimination of PCNs and reliance on diminished Regional Conditions and other tools to provide the same level of DE scrutiny is naïve and could be characterized as reliance on "post-issuance" procedures, which was found inappropriate in prior litigation. As such, ERBA is concerned the Corps' PCN proposals pose a significant risk to the durability of the NWP program.

iv. *Elimination of Pre-Construction Notifications for Federal Permittees.*

ERBA does not support elimination of PCN requirements for federal permittees, including state DOTs with NEPA authority, as currently proposed without any Corps review prior to impacts. Some independent government oversight of the permit conditions, whether mitigation or other measures, required by federal permittees would seem necessary to ensure permittees are complying with CWA §404(e) and to transparently track application of mitigation credits. The Corps is in the best position to provide this oversight because they are experts in mitigation as administrators of the 404 program, and the Corps' IWR manages RIBITS, the prevailing public database for tracking debits and credits from mitigation requirements. In the context of mitigation and permitting, other federal agencies do not compare and are not realistically up to the task.

Even with some level of Corps oversight, ERBA doubts whether elimination of PCN requirements for federal permittees is legally permissible and fair to nonfederal permittees. The proposal would essentially act as a delegation of the Corps' statutory responsibility to federal permittees to self-regulate NWPs implementation for federal projects where the permittee presumably has a conflict of interest to see the project fulfilled with as few permitting hurdles as possible. Indeed, as the Proposal admits, many nonfederal permittees enlisting the services of private environmental consultants may feel they are just as qualified to self-regulate and should also be able to decide their own mitigation requirements without any Corps oversight. However, potentially more problematic, is the fact that Congress specifically authorized the "Secretary of the Army," the Corps, with the function of issuing the NWPs for activities

[31] *Puget Sound*, p. 1367.

that the Secretary has determined will only cause minimal adverse environmental effects.[32] Congress tasked the Corps with the responsibility, and does not discuss or contemplate the Corps delegating their oversight to another federal agency.[33] Legal commentary and case law suggest that such delegation of an agency's adjudication authority is impermissible, especially in the absence of a memorandum of agreement between the agencies.[34] Again, ERBA is concerned that litigation on these issues could disrupt consistent and predictable application of the reissued NWPs.

Beyond these legal issues, ERBA is concerned that federal permittees, especially the resource strained state DOTs included within that definition, lack the knowledge and capacity to effectively assume the task of NWP mitigation and compliance oversight. Just as "Federal agencies may employ staff who are environmental experts," they also *may not* employ staff who are environmental experts. Many federal permittees are not equipped to oversee the NWP program; they often only have limited (and already overextended) staff with expertise at the requisite level for this new administrative task. ERBA urges the Corps to retain their necessary oversight of Federal Permittee NWP actions through the PCN mechanism.

Recommendation:

ERBA recommends that the Corps focus on how to improve staff training and the mechanics of the PCN process at the District level so that the PCN process is completed in a reliable, transparent and effective manner within the designated time frame.

IV. Opportunity to Expand NWPs 53 & 27 and "Cut Green Tape."

NWP 27 authorizes activities related to aquatic habitat restoration, enhancement, and establishment. Considering the NWP's intent to authorize activities that result in a net increase of aquatic resource functions and services, the NWP should affirmatively apply to the activities of ecological restoration providers. However, under current practice, NWP 27 is not consistently applied in this manner. ERBA recommends the Corps add language to NWP 27 clarifying that the NWP authorizes actions by a third-party ecological restoration provider in connection with a mitigation, restoration or resiliency focused project that generates net ecological uplift. Revisions should also address any outstanding inconsistencies in application of NWP 27's impact thresholds triggering mitigation requirements.

Additional detail on the scope of NWP 27's application will expedite the permitting and review process for much needed restoration projects across the country, particularly in coastal and flood prone communities. In turn, these projects will support the growing $25 billon ecological restoration industry and fuel skilled job opportunities in rural regions for economic recovery. Broad application of NWP 27 will also support proactive state planning efforts on resiliency and flooding master plans. For example, consider Louisiana's Coastal Master Plan: if a third-party provider implementing a project identified as high priority under the Master Plan applies for NWP 27 treatment, and their application documents how the project, as designed and implemented, will result in a net increase of aquatic resource functions and services and will not result in individual or cumulative significant adverse impacts to the environment, then the proposed project should be permitted to the maximum extent applicable under NWP 27.

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[32] CWA 404(e)(1).

[33] The idea of eliminating PCNs for Federal Permittees was first presented in the Trump Administration's Legislative Outline for Rebuilding Infrastructure in America, issued February 12, 2018, as a legislative, rather than regulatory, priority. ERBA believes this issue is best addressed through Congressional action.

[34] Bijal Shah, Interagency Transfers of Adjudication Authority, 34 Yale J. on Reg. p.320-322 (2017). Available at: https://digitalcommons.law.yale.edu/yjreg/vol34/iss1/5.

Clarification to NWP 53 also offers an opportunity for the Corps to support expansion of restoration projects and their corresponding environmental and economic benefits. NWP 53 authorizes removal of low-head dams that fit the NWP's eligibility criteria. However, NWP 53 is not consistently applied in cases where the low-head dam removal project is proposed as a method for generation of stream mitigation credits. This is despite the fact that NWP 53 does not expressly prohibit mitigation projects from being authorized under the permit. Eligible low-head dam removal projects, including those proposed for stream mitigation credits, should be permitted to the maximum extent practicable under NWP 53. Again, these dam removal and stream restoration projects will spur economic activity in rural regions, improve water quality, and deliver resiliency benefits to communities.

Recommendation:

ERBA recommends the Corps revise NWPs 27 and 53 to ensure their respective language clearly authorizes approvals for restoration projects, particularly those that will provide a documented net ecological uplift, have already undergone federal and/or state scrutiny through integrated and advance planning, and removal of low-head dams/culverts for stream mitigation credits.

V. Regulatory Impact Analysis Deficiencies:

For economically significant rules, federal agencies must conduct a regulatory impact analysis (RIA) of a proposed rule's economic impact using the best reasonably obtainable scientific, technical, and economic information available.[35] Analysis should include a reasoned determination that the benefits of the intended regulatory action justify its costs.[36] Notably, the RIA must demonstrate that the preferred option proposed has the highest net benefits, including consideration of potential economic, environmental, and other advantages.[37]

The RIA developed by the Corps for the Proposal primarily focuses on cost savings to permittees and the Corps as a result of moving more permit actions from the longer IP track to the faster NWP track, with fewer PCN requirements. The Corps estimates cost-savings between $12.1 to $27.5 million per year, with 68% of those savings attributable to the removal of the 300 LF numeric limit on stream bed impacts.[38] Overall, the Corps estimates that compliance costs for the public will decrease by approximately $8 million per year under the proposed changes.[39]

While the Corps devotes a section to "Environmental Benefits and Disbenefits" that includes a chart on the estimated value of ecosystem services, this section's analysis does not provide cost estimates readily comparable to the figures provided in the cost savings section, i.e. $X million per year. As a result of the RIA's analysis discrepancy between permittees' cost savings and new costs imposed on the public due to the loss of ecosystem services, the RIA discounts and fails to clearly demonstrate that the Proposal will result in net cost saving benefits. ERBA recommends that the Corps re-evaluate existing studies and available data to more precisely estimate the public cost resulting from loss of stream and wetland functions. Considering that flooding—the nation's costliest form of natural disaster—is exacerbated by development in and around stream and wetland habitats, these ecosystem valuations should surely

[35] *See* EO 12866 and OMB Circular A-4.
[36] EO 12866, Section 1(b)(6).
[37] EO 12866, Section 1(a).
[38] RIA, p. 6
[39] 85 Fed. Reg. 179, 57364.

include reasonably anticipated disaster response and recovery costs.[40] Valuations should also account for increased sedimentation and turbidity in downstream receiving waters as a result of less protection for headwater streams.[41] Not only will this result degrade public water quality, the sedimentation will equate to an increased need to dredge waterways and potentially increase the Corps' Operation and Maintenance costs.

ERBA's own analysis of publicly available ORM data reveals that the proposed metric change could result in a loss of 130,000 linear feet of streams annually, and ERBA practitioners believe this number could be much higher.[42] Looking at ORM impact data from 2013 to 2019 and assuming an average stream width of 4 feet, the metric change will likely double the prior total average of non-compensated stream impacts.[43] This stream loss is particularly consequential considering these are primarily headwater streams, which form the foundation for our watersheds and thus have a great impact on downstream features, from the ecosystem health of large rivers to our built infrastructure and community facilities.[44] Based on review of ORM data and current stream markets, ERBA practitioners fear that the proposed change could disproportionately impact watersheds that benefit the most from meaningful Clean Water Act compliance, for example the Chesapeake Bay region where healthy lower order streams contribute to overall health of the estuary, biologically and economically significant aquatic species, and water quality goals.[45]

Additionally, ERBA recommends that the RIA include an analysis of the economic impacts to the ecological restoration industry, which supports $25 billion in annual economic output and 225,000 jobs.[46] As stated above, agencies must look to net benefits, including potential economic impacts, in their RIA, and this Proposal stands to significantly alter regulatory demand drivers for mitigation in certain regions of the country. Initial analyses by ERBA member companies are concerning. The elimination of a PCN for mechanized land clearing from NWP-12 will reduce up to 70% of demand for certain mitigation banks in Texas. Amongst some of the largest companies within the industry, credit sales from stream restoration projects comprise up to 80-85% of a company's revenue in certain regions, with offsets specifically for lower order streams comprising around a quarter to one-fifth of total revenue. A sudden loss of a quarter of revenue will surely impact current business operations, companies' job growth, and future investment decisions in the stream market.

Recommendation:

Considering the significance of the initial numbers presented here, ERBA recommends the RIA should incorporate a section that factors in the proposal's impacts on mitigation markets across the

[40] *See* Government Accountability Office. (2001). Flood Insurance: Information on the Financial Condition of the National Flood Insurance Program. (GAO-01-992T). Washington, D.C.: U.S. Government Printing Office.
[41] *See* USDA Natural Resources Conservation Service, *Effects of Sediment on the Aquatic Environment: Potential NRCS Actions to Improve Aquatic Habitat – Working Paper No. 6* (August 1995), available at: https://www.nrcs.usda.gov/wps/portal/nrcs/detail/?cid=nrcs143_014201#streams.
[42] *Based on an analysis of NWP mitigation for impacts to streams between 300 and 1000 LF over 2013-2019.*
[43] *ORM impacts from 2013-2019 between 300-1000 LF aggregate to a total of ~4,405,039 LF, which is slightly over double the total number of impacts occurring less than 300 LF, ~4,384,203 LF. This analysis was conducted with the assumption of 4 feet as the average width of impacted streams, based on ERBA practitioners' experience.*
[44] *See generally* CONNECTIVITY OF STREAMS AND WETLANDS TO DOWNSTREAM WATERS; THE ECOLOGICAL AND HYDROLOGICAL SIGNIFICANCE OF EPHEMERAL AND INTERMITTENT STREAMS; Meyer & Wallace; Owen.
[45] *Id.*
[46] BenDor, T et al. 2015. *Estimating the size and impact of the ecological restoration economy*. Available at https://doi.org/10.1371/journal.pone.0128339.

ecological restoration industry. At a minimum, the Corps could work with ERBA and other industry groups to facilitate distribution and responses to an industry-wide survey as a measure to reasonably obtain economic data on the Proposal's projected impacts.

ERBA Recommendations in Summary

To comply with Congress' direction in 404(e), the 404(b)(1) Guidelines, and avoid tedious litigation challenges, ERBA recommends that the Corps reconsider many of the proposed NWP modifications. ERBA acknowledges the merits of the Corps' goal to advance in-kind mitigation through better stream restoration policies but urges the Corps to consider other mitigation focused policies, rather than the NWPs governing impacts, as the more precise mechanisms to institute these desired changes. In summary, ERBA recommends:

i. Proceeding with elimination of the 300 LF numeric limit only if the 300 LF limit is incorporated as the threshold for mitigation in GC 23 "Mitigation," as detailed by ERBA above;

ii. Retain NWP-12 PCN for mechanized land clearing of forested wetlands;

iii. Extend the 60-day comment period to a 180-day comment period;

iv. Retain Regional Conditions and PCNs, including PCN requirements for federal permittees;

v. Consider opportunities with NWPs 27 and 53 to facilitate permitting of restoration and dam removal projects with net ecological uplift; and

vi. Update the RIA to fully account for ecosystem valuations and economic impacts to the growing ecological restoration industry.

Thank you for your consideration of ERBA's comments. This letter was developed through close consultation and deliberation with ERBA's Board and 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.

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