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Office of Information and Regulatory Affairs
Office of Management and Budget
1800 F Street, NW
Washington, DC 20405

VIA EMAIL

Statistical Policy Directive No. 8 North American Industry Classification System (NAICS)—Request for Comments on Possible Revisions for 2027

The Ecological Restoration Business Association (ERBA) is pleased to submit a proposal to the Office of Management and Budget (OMB) and Economic Classification Policy Committee (ECPC) for three industry codes related to ecological restoration businesses for adoption in the 2027 NAICS update. ERBA is a national trade association representing private companies and organizations across the U.S. who deliver ecological restoration under a broad range of programs: from direct contracts with government for natural resource outcomes like floodplain connectivity, coastal resiliency, and restoration of degraded habitats to compensatory mitigation for efficient regulatory compliance.

Ecological restoration is a highly specialized field in which companies and organizations develop a plan and design for ecological uplift, acquire and/or entitle property with easements and permits for specific restoration activities, construct and monitor the restoration, manage endowments and long-term management obligations, and/or other specialties pertaining to aquatic and terrestrial habitat uplift. These services span a broad range of businesses: fully vertically integrated firms; construction contractors; consulting firms with biologists, ecologists, and permit specialists; attorneys; banks, bonds, and insurance providers tailored to the industry; nurseries and other supply vendors; conservation corps; land trusts, and more. The collective industry has steadily grown over the past few decades, as reflected in the statistics provided in Section III below, and now surpasses several peer traditional industries classified within the NAICS. The industry's maturity and unique business models are also evident from the growth of peer state associations specific to ecological restoration businesses, with twelve state-level groups now formed and more on the way.

To cover the full spectrum of companies within the broader ecological restoration industry, ERBA proposes revisions to add three new six-digit NAICS codes, listed below. This approach will allow companies to select a primary and secondary code specific to their business model from the new set of three codes.

I. **541390 – Ecological Restoration Services**

II. **237410 – Ecological Restoration Heavy and Civil Engineering Construction**

III. **115311 – Support Activities for Ecological Restoration**

ARGUMENT FOR THREE NEW 6-DIGIT CODES IN THE 2027 NAICS REISSUANCE

I. **Economic Activities Covered by the New Industry Codes.**

i. 237410 – *Ecological Restoration Heavy and Civil Engineering Construction*. This industry code would apply to businesses and organizations that uniquely specialize in land manipulation to improve ecological functions. These activities may include the identification, siting, entitlement (including several rounds of unique regulatory approvals and permitting), development plans, and construction on land and tidal properties specifically for production of ecological restoration outcomes and may be performed under a compensatory mitigation or other natural resource offset program. This specialization typically requires a unique blend of graduate degrees and company workforce experience, including knowledgeable operators of specialty equipment (e.g. low ground pressure and marine construction equipment). Please see the enclosed Appendix A for a description of the types of ecological restoration land management skills that are representative of this industry, including the subset of skills specific to mitigation. To acknowledge mitigation as a subset, ERBA also recommends consideration of a five-digit code 23741 "Ecological Restoration Engineering Construction" and then two related six-digit codes: 237410 for Ecological Restoration Heavy and Civil Engineering Construction and 237411 for Mitigation Engineering and Construction. We welcome the opportunity to further discuss the best organizational structure with the ECPC.

ii. 541390 – *Ecological Restoration Services*. This industry code would apply to businesses that consult on the real estate, entitlement, and construction activities covered by the newly established 237410. They may provide technical, scientific, or regulatory/legal consulting services. Some businesses that identify with 237410 as their primary code may use this consulting code as their secondary code to cover business endeavors when they advise on different components of a restoration or mitigation project but are not the landowner or otherwise wholly responsible for all project aspects. As discussed in the next section, many businesses that currently identify as 541620 should be reclassified to this new code.

iii. 115311 – *Support Activities for Ecological Restoration*. This industry code would apply to businesses and organizations that conduct the adaptive management and long-term management support activities, which span from regular land and invasive species maintenance to long-term management, and/or financing. These are typically land trusts, for-profit, or non-profit partners with a specialty in holding conservation easements, managing conserved lands, and/or managing related financing. The land management activities usually require a uniquely trained workforce certified in the identification and removal of non-native species. We defer to the comments of our peer organizations

representing the interests of conservation workforce groups for additional details on this proposed industry code.

II. Relationship of the Proposed Codes to Existing Six-Digit Industries.

i. 237410 – *Ecological Restoration Heavy and Civil Engineering Construction*. Currently these industry companies are filing under 237990 for "Other Heavy and Civil Engineering." This broad catch-all category includes many public infrastructure projects for human or recreational uses and does not acknowledge the unique specialization of real estate development and construction for ecological restoration outcomes, essentially engineering with nature, in sensitive ecological environments, which requires a blend of construction, engineering, biological, and ecological expertise. Steady growth in the industry, summarized in the next section, justifies establishment of a separate six-digit code within construction that is distinct from the "other" category. The "other" 237990 category would continue to be the appropriate six-digit code for companies focused on dam construction (note that ecological restoration projects are sometimes dam removal projects, restoring dammed features to their original hydrology), land drainage, marine and dock construction, etc.

ii. 541390 – *Ecological Restoration Services*. Out of necessity many of our industry companies currently classify as 541620 "Environmental Consulting Firms," despite most of them not being traditional consulting firms, because of 541620's index references to ecological restoration consulting services and wetland restoration planning services.[1] However, these two services are specialized enough and support a level of economic output and jobs that warrants their own six-digit code. We recommend reserving 541620 for the traditional subject matter focus of environmental consulting services, i.e. site remediation from pollutants and contaminants, hazardous waste removal, building and site inspections, air quality advising, etc. Because of the lack of industry specific options in the current NAISC version, we also see some companies providing ecological restoration services identify under 562910, "Remediation Services." Ecological restoration is not remediation of hazardous or otherwise unwanted material but rather working with natural processes to restore historical ecological functions. Our industry is categorically distinct from remediation. This distinction should be reflected in the establishment of the new 541390 code, plus clarified industry descriptions for existing codes 541620 and 562910. We also support the detailed comments from Professor Todd

[1] ERBA members analyzing federal business opportunities for the industry found that contracts scoped for mitigation planning, wetland and aquatic habitat restoration planning and design, ecosystem services analysis, coastal resilience, ecosystem monitoring, hydraulic & hydrology studies, and regulatory strategy development have historically been coded under 541620, which is inappropriate since 541620 broadly captures a range of industries adjacent to our growing industry. These federal opportunities should be reclassified to our recommended new NAICS codes 541390 for "Ecological Restoration Services" and 237410 for "Ecological Restoration Heavy and Civil Engineering Construction," depending on the nature of the desired work.

BenDor on the topic of the ecological restoration industry's distinctness from remediation code 562910.

iii. 115311 – *Support Activities for Ecological Restoration*. Companies and organizations currently providing these services currently file under 115310, "Support Activities for Forestry," which is intended to cover forest maintenance for timber production or healthy forest maintenance. Ecological restoration land management focuses more broadly on practices that, while they may overlap some with the activities performed by those in the forestry industry, are performed to support overall ecological health and conservation of ecosystems for the life of the restoration project. We defer to our conservation workforce peers for additional details on how the new code will relate to the existing 115310.

III. Documentation of the Industry Size and Recent and Projected Growth

A decade ago, a 2014 study found that the broader ecological restoration industry, which would encompass all three of the proposed six-digit codes supported direct employment of 126,000, with indirect and induced employment of 95,000 more individuals (totally 221,000 jobs).[2] The study also found direct economic impacts of $9.5 billion, and total impacts of $24.9 billion (USD2015).[3] A follow up study, published in 2023 and based on data collected from 2019, focused specifically on the mitigation industry subset of ecological restoration and found that sub industry alone supports $3.5 billion in direct economic output and employs ~21,000 individuals, with total output (direct, indirect, and induce) of over $9.6 billion and support for over 53,000 jobs.[4] Comparing the figures of the two studies, they demonstrate a 2014–2019 employment growth of 24.7 percent and economic output growth of 32.6 percent, and a compound annual growth rate (CAGR) of 5.25 percent in labor income.[5] A third study that will compare the broader ecological restoration industry today to the results of the 2014 study is currently forthcoming.

IV. Size and Importance of the industry in Mexico and Canada

Notably, the largest annual conference for the industry, the Environmental Markets Conference,[6] now regularly attracts industry stakeholders from North and South America and Europe to compare the policies and practices of our unique industry, learn from each other, and ultimately identify opportunities for leapfrogging. ERBA and peer organization the Environmental Policy Innovation Center (EPIC) are currently in communication with Canadian industry peers to track

[2] BenDor T, Lester TW, Livengood A, Davis A, Yonavjak L (2015) Estimating the Size and Impact of the Ecological Restoration Economy. PLoS ONE 10(6): e0128339. https://doi.org/10.1371/journal.pone.0128339
[3] *Id.*
[4] BenDor TK, Kwon J, Lester TW (2023) Assessing the size and growth of the US wetland and stream compensatory mitigation industry. PLoS ONE 18(9): e0285139. https://doi.org/10.1371/journal.pone.0285139
[5] *Id.*
[6] https://environmentalmarketsconference.com/

industry growth and developments across North America.[7] Please reach out to us for further information and contacts on this topic.

Thank You

Thank you for consideration of ERBA's comments and the distinct technical services, construction, and landscape conservation industries driven by the broader ecological restoration economy. As support for our proposal, we also refer to the comments of our peers - academics and workforce organizations - which are referenced with this letter.[8] Please do not hesitate to contact Sara Johnson at sjohnson@ecologicalrestoration.org or 301-247-0408 with any questions, comments, or requests for further information.

Sincerely,

Sara L. Johnson

Sara Johnson Executive Director
Ecological Restoration Business Association

Enclosures: APPENDIX A

[7] *See here for a few initial studies on ecological restoration in Canada:* Tim Alamenciak, Dorian Pomezanski, Nancy Shackelford, Stephen D. Murphy, Steven J. Cooke, Line Rochefort, Sonia Voicescu, and Eric Higgs. 2023. Ecological restoration research in Canada: who, what, where, when, why, and how?. FACETS. 8: 1-11. https://doi.org/10.1139/facets-2022-0157; Sonia A. Voicescu, John-Francis Lane, Steven J. Cooke, Eric Higgs, Alina C. Fisher, Line Rochefort, Nancy Shackelford, Stephen Murphy. September 12, 2022. Awareness and use of the Society for Ecological Restoration's International Principles and Standards for the Practice of Ecological Restoration in Canada. RESTORATION ECOLOGY. 31: 1. https://doi.org/10.1111/rec.13789

[8] See also comments submitted by the University of North Carolina, Environmental Policy Innovation Center, Rural Voices for Conservation Coalition, and other conservation group peers.

APPENDIX A

1.1 Ecological Restoration

Ecosystems are dynamic amalgamations of plant and animal communities. Ecological restoration is often an attempt to stabilize the relationship among these communities in the face of perturbations – both natural and man-made. When, for instance, an invasive exotic plant or animal is introduced into a natural ecosystem, restoration is attempting to eradicate it before it pushes the native communities out. Sometimes after an invasive intruder has been removed, native plants must be re-introduced by planting or seeding. After strong storms plant communities may need to be established on newly created beaches, or it may be desirable to alter existing plant communities for stabilization or aesthetics.

Man-made perturbations are often hard to reverse, and ecosystems must be managed to a new equilibrium. Wildfire suppression, for example, cannot be abandoned, yet many natural plant communities have adapted to fire such that the absence of fire causes profound adverse changes. In such cases, controlled burns or mechanical vegetation reduction is required.

1.1.1 Planting

When new physical substrates are created, for example, through beach renourishment or creation of shallow ponds, planting is advised to establish the desired vegetative community. Plant material is brought to the planting site from a harvesting area or, more commonly, from native plant nurseries. Planting services may also involve fertilization, irrigation, and protection from herbivores.

Following beach renourishment with new sand, beach planting is usually prescribed to accelerate dune building by the accumulation of wind-blown sand from the flat surface of the renourished beach. Accumulating sand creates dunes that buffer landward structures from storms are considered a critical part of nearly all renourishment projects.

Planting restoration projects is often required to re-establish a natural community in meaningful timeframes. When nothing is planted, pioneer plants colonize a disturbed site and may establish a very long-term equilibrium in conjunction with other perturbations, like drainage or elevated nutrients. While natural, these persistent pioneer communities often do not provide the full range of habitat desired. Solid cattails in a man-made pond are a good example.

1.1.2 Vegetation Management

1.1.2.1 Invasive and nuisance vegetation control

When invasive or nuisance vegetation colonizes a natural area, good habitat can be destroyed and replaced with depauperate landscapes. The restoration of these areas often requires physical or chemical removal of undesirable vegetation.

1.1.2.2 Managing land for protected species

Many natural habitats have been altered in ways that are detrimental to protected species. Sage brush lands protected from fire allow the colonization of Juniper trees, for instance, and the trees provide perches for sage grouse predators. In this instance, removing the trees is part of ecosystem restoration.

1.1.2.3 Stabilization and aesthetic management

People live in ecosystems and since they pay for the restoration, there are both safety and aesthetic considerations. When safety and aesthetic demands are met in the context of managing natural systems, it is part of ecosystem restoration.

1.1.2.4 Controlled burning

Just as there are many ecosystems dependent on excess water, there are many dependent on fire. Fire suppression is a major perturbation to natural ecosystems and can eventually lead to catastrophic fire. Controlled burning is an ecological restoration tool to mimic the more frequent appearance of natural fire before settlement.

1.1.3 Native Seed Collection and Dispersal

In some cases, important components of a plant community have been extirpated and restoration involves reintroduction of the extirpated species on a large scale. Wire grass is such a species in the South and prairie grasses are an example in the Midwest. Using equipment developed in prairie restoration, grass seed is collected and distributed over relatively large areas for reintroduction.

2.1 Mitigation

Mitigation is a process by which regulatory requirements to offset impacts to the environment are met. Under contractual or other entrepreneurial methods, private sector companies and other entities will fulfill these regulatory obligations through an interrelated suite of activities, defined below. The mitigation addressed through these activities is most often referred to as 'compensatory mitigation' to distinguish it from the types of mitigation involving impact avoidance and minimization that entail changes to the impact project itself. For example, the following definition is from the 2008 Compensatory Mitigation for Losses of Aquatic Resources Rule at 33 CFR 332:

> *Compensatory mitigation means the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.*

Compensatory Mitigation requirements may arise from the federal Clean Water Act, the federal Endangered Species Act, or other federal laws and regulations. State and local laws and policies may also require mitigation. In some cases, and often internationally, compensatory mitigation may be referred to as simply 'offsets."

2.1.1 Real Estate Rights.

Current law and policy will typically require that compensatory mitigation takes place on a parcel of land that can be legally protected in the condition that provides the offset to the original impact(s). This may entail public or private land. In the case of public land, property protection may be in the form of land management stipulations. In the case of private land, the

mitigation provider will secure reliable control of the land in the form of land use rights or fee title acquisition. The mitigation provider will typically locate and purchase these rights, or land title, through the efforts of ecologists, land use planners, real estate professionals and attorneys.

2.1.1.1 Arrangements for Site Protection.

An inherent part of most mitigation projects is making specific plans to legally protect the property on which the mitigation is taking place. This will often involve drafting legal documents, such as conservation easements, and negotiating agreements with conservation easement holders. This will often involve setting aside monies in endowments and trusts for conservation easement oversite and for long term stewardship of the property.

2.1.2 Agreements with Regulatory Agencies.

Various regulatory agencies have an important role in reviewing and approving compensatory mitigation projects to make sure that regulatory obligations will have a high likelihood of being met. The mitigation provider will prepare proposed mitigation agreements, restoration designs, construction drawings, performance standards, site protection documents, and land management plans to the agencies for approval. This bundle of diverse activities is for one purpose: to secure the rights to proceed with the mitigation project and to receive mitigation credit(s) for having done so. The review and negotiation process can be a multi-year effort.

2.1.3 Financial Assurances.

The mitigation provider will often be required to establish bonds, letters of credit, insurance or other financial guarantee that will help manage the risk of constructing and managing a successful mitigation project. This will entail the participation of financial managers, banks, and insurance/ bond providers.

2.1.4 Ecological restoration and Management.

The mitigation provider will need to undertake the physical work needed to restore and/ or manage the appropriate ecological condition of the property. This will most often involve the activities outlined in Section 1.1, above. In other situations, the property may be conserved and managed in the same condition as it was when purchased or otherwise secured. Construction will involve specialized personnel and construction equipment. Land conservation and management will involve less intense stewardship activities over a much longer period of time.

2.1.5 Management of Institutional Obligations.

As stated previously, the mitigation project will be governed by an agreement between the mitigation provider and the regulatory agency(ies). These agreements have a suite of institutional requirements, such as the posting of required financial assurances, construction management and monitoring, property maintenance and monitoring, mitigation credit sales accounting in select cases, ecological monitoring, and annual reporting. The exact nature of these institutional requirements will be determined, in part, by the type of mitigation project,

sometimes referred to as mitigation mechanism. There are three types of mitigation mechanisms: 1. Permittee responsible mitigation, in which the entity that is causing the impact to the environment, performs its own mitigation; 2. In-lieu-fee programs, in which a third party implements a (typically) multi-site program and collects mitigation fees from permittees; and 3. Mitigation banks which develops and sells mitigation credits from one or multiple sites. The management of these three mitigation mechanisms will have similar, though sometimes divergent activities, surrounding property development, monitoring, and reporting.