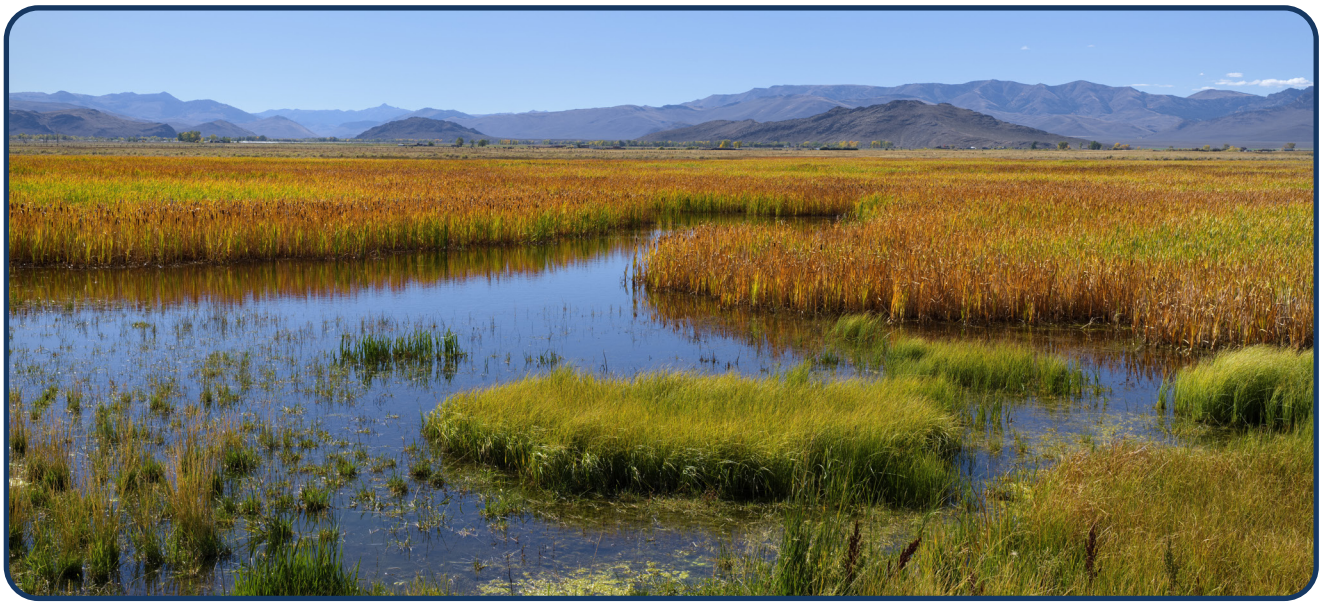
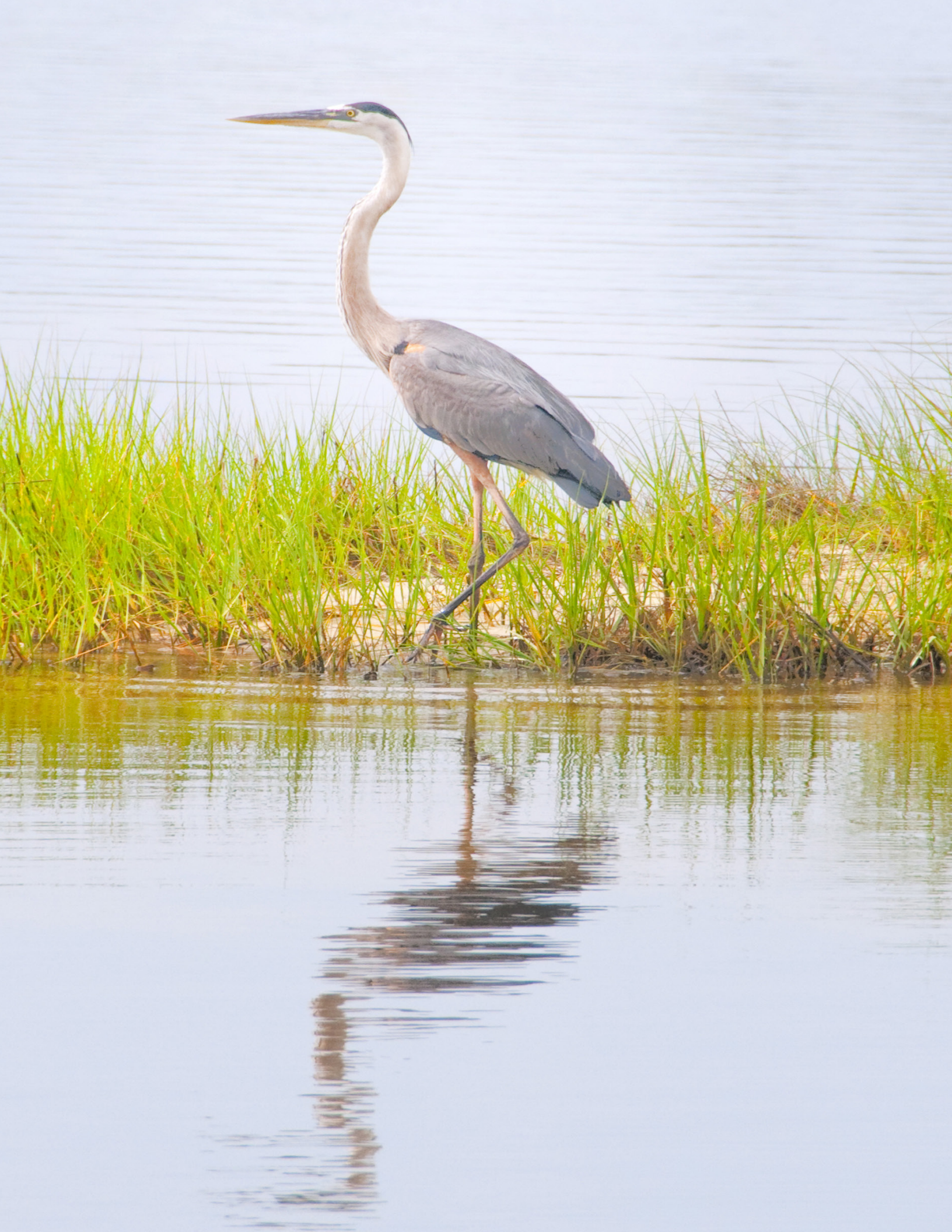


Principles for Ecological Restoration & Compensatory Mitigation

Prepared by the Ecological Restoration Business Association, *May 2021*
Growth through resilient environmental solutions.



Preface

This report is a restatement of the "Seven Universal Principles of Mitigation," published by the National Mitigation Banking Association (NMBA) in 2015. The Association, now known as the Ecological Restoration Business Association (ERBA), remains committed to the promotion of best practices for compensatory mitigation. But, ERBA is also growing to champion a more comprehensive advocacy portfolio that reflects members' business across multiple environmental markets. In response, ERBA sees an opportunity to reframe the principles in the broader context of ecological restoration, while still honoring the unique aspects of compensatory mitigation. Indeed, many of the elements underpinning successful mitigation are instructive on the delivery of effective ecological restoration.

The Principles and all of ERBA's policy positions are grounded in our mission "to support private investment in durable environmental results that enable responsible economic growth." We believe that incentivizing private investment in ecological services is essential to our country's ability to answer urgent environmental and infrastructure challenges.

Private capital mobilizes at scale when market signals are clear and government policy is applied consistently and equivalently. Sustainable environmental markets rely on predictable government regulations and enforcement. Otherwise, market participants will logically pursue the lowest cost option, undercutting the intent of our environmental policies. The reality of these regulatory and market dynamics led ERBA to devote a section of this report to "Incentivizing Investments."

ERBA's commitment to high and consistent standards for all forms of ecological restoration is reflected in these Principles. Policymakers and restoration providers' adherence to the Principles will advance environmental markets, ensure high quality and cost-effective offsets are available for permittees, and incentivize investment in resilient and permanent green infrastructure.

Overview

As the nation's leading restoration practitioners, we have been at the heart of the evolution of the restoration market into what it is today – a mature, highly skilled field that supports $25B in annual economic output and 225,000 jobs. Companies in the business of ecological restoration comprise a growing sector of sophisticated firms backed by substantial capital, from green investors to pension funds. This growth was catalyzed by the adoption of federal and state policies that clearly outline the requirements for environmental outcomes. Notably, the 2008 Compensatory Mitigation Rule (the "Rule") laid out the framework for delivery of permissible wetland and stream mitigation to offset the unavoidable impacts of development in accordance with Section 404 of the Clean Water Act (CWA).

Permittees and restoration providers alike benefit from the durability, consistency, and transparency provided by stable regulation. However, these benefits are lost without effective implementation. The past decade has shown that the mitigation market suffers when regulations are not enforced equivalently across regions and projects. At the same time, we've seen that markets can thrive when a regulatory program is well developed, fully funded, and providers and government adopt a partnership approach.

From this reflective perspective, ERBA presents the Principles as enduring guidance and the foundation for successful delivery of ecological restoration. The Principles are applicable across project types and government programs, including compensatory mitigation for wetlands or streams, water quality, protected species habitat, coastal resiliency, flood mitigation, and turn-key conservation and restoration projects. We identify that Three Foundational Concepts are essential in any of these contexts:

i) Durability: Perpetual Land Protection & Stewardship,
ii) Science-Based Design & Success Criteria, and
iii) Risk Reduction Mechanisms.

In the first part of this report, "Incentivizing Investment in Ecological Restoration," we outline the principles that are critical to market growth and sustainability. In the second part, we reorganize several of the prior principles into the framework of the Three Foundational Concepts. Within both sections, we highlight elements that are specific to compensatory mitigation, but also instructive on the development of broader environmental programs and policies. Pertinent to restoration developed for permittee compliance, ERBA notes that these Principles apply once the regulator decision is made to proceed with mitigation as the best ecological option, after evaluation of avoidance and minimization measures.

Part I: Incentivizing Investment in Ecological Restoration

The demand for ecological restoration is pressing across the board: escalating natural disasters call for more resilient natural defenses, infrastructure seeks efficient and accountable environmental offsets, and public need grows for clean water, clean air, and protected natural spaces. But these environmental challenges cannot be met by public funds and actions alone. Meaningful progress requires engagement of all potential resources, including private capital, towards ecological restoration and resiliency results. Private capital flows to environmental markets when market signals are clear, standards are predictable and consistent, and government implementation is equivalent and fair across market players.

Fundamental Policies for the Mitigation Marketplace: Advance & Additionality

Mitigation completed and monitored in advance of impacts reduces the temporal loss of ecological services and ecological performance risk. Accordingly, advance mitigation is the environmentally preferable option. The Rule grants mitigation bank credits a preference over other mitigation forms because banks must accomplish site identification and approvals, construction, and attainment of some ecological performance standards in advance of permitted impacts. The same preference is granted to released In-Lieu Fee (ILF) credits on the basis that these credits represent mitigation benchmarks completed in advance of impacts. Government policy should distinguish between the project planning stage versus the construction, monitoring, and performance stages, and then incentivize the latter in both policy and implementation. Failure to consistently give preference to advance mitigation forms discourages high standards and investment in the best environmental outcome.

While banks are the common form of mitigation used to deliver ecological outcomes in advance of impacts, well-designed ILF and Permittee-Responsible Mitigation (PRM) projects can deliver comparable robust environmental outcomes. For example, ILF programs can direct offsets to locations that will most effectively support large-scale conservation outcomes. Availability of these other mitigation forms is particularly important for permittees in markets where bank credits are limited or non-existent. Through their review and oversight authority, regulators should consistently hold all forms of mitigation to high standards for project planning and performance to ensure all mitigation forms achieve the desired environmental outcomes.

To effectively achieve "no net loss" of ecological benefits, mitigation must add quantifiable ecological function to the landscape beyond the identified baseline. When regulators approve a mitigation project that proposes to merely preserve or minimally enhance the landscape, it undercuts investment in more expensive mitigation endeavors to restore, connect or create new landscapes that generate ecological uplift. Consequently, preservation and minimal enhancement should be reserved for rare and unique mitigation circumstances and accounted for with greater mitigation-to-impact ratios. As agencies trend towards multi-benefit mitigation policies, additionality concerns should also underscore the importance of intelligible crediting methodologies that clearly distinguish restoration values and avoid double counting mitigation measures.

Equivalency and Fairness in Government Implementation

Since promulgation of the 2008 Compensatory Mitigation Rule, the mitigation market has enjoyed an investment influx and the number of mitigation banks and ILF Programs has more than doubled. The corresponding increase in third-party credits benefits infrastructure projects because Clean Water Act permit processing time is typically 50% faster when readily available, third-party credits are used versus other mitigation forms. But, while the Rule established a foundation for regulatory certainty, market potential is hampered by inconsistent application of the Rule's requirements and standards. In some regions, investment in banks and ILF programs is chilled due to unequal enforcement of the Rule's standards across all forms of mitigation.

This equivalency issue is not just disruptive in the mitigation sector but provides a lesson for incentivizing investment in other environmental markets as well. Regulators must hold all restoration forms under a program to equivalent compliance standards, otherwise market demand will shift to the lowest cost option permissible under the lowest enforced standard. Ultimately, investors are looking for marketplace fairness where all restoration sponsors and project forms are treated with equal application of law and policy for predictable outcomes.

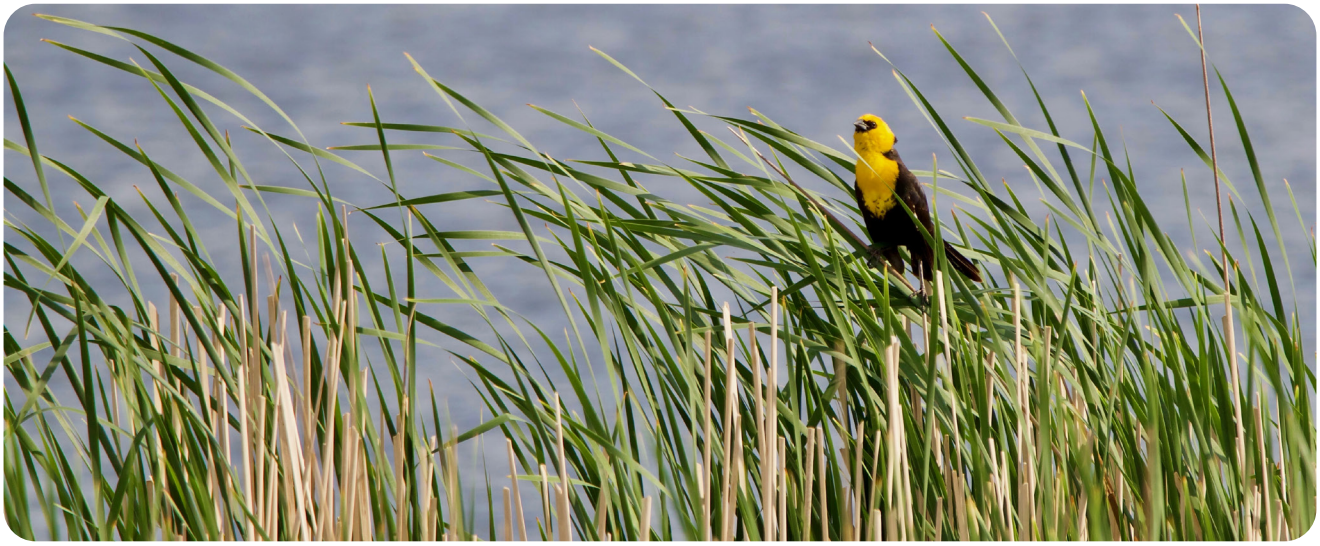
Viewed in another context, equivalency or parity is also essential for accountability in mitigation and other offsetting programs. The amount of mitigation or offset required must be commensurate to the scale of the impact and loss of ecological function to actually achieve a "no net loss" or complete offset goal. This is often implemented through the specific methodologies and ratios established for impacts to the resource. Parity between impact and offset is another fundamental element of restoration that is fulfilled by a commitment to the scientific principle.

Part II: Principles for All Ecological Restoration Projects

I. Durability: Perpetual Land Protection & Stewardship

Ecological restoration projects must be durable and designed with permanency in mind. Offsets must endure for the life of a project's impacts to achieve conservation goals, such as the CWA's "no net loss" goal. In most instances, impacts result in a permanent loss of ecological function and services and thus necessitate an offset of permanent ecological uplift. Even outside of the offsetting context, public mandates for environmental outcomes often seek to achieve ecological benefits in perpetuity.

Practitioners' experience finds that a single project element does not deliver "durability," but rather multiple factors working together are necessary. At a minimum, the restoration site must be legally protected through a site protection instrument, such as a conservation easement or deed covenant if the land is under private ownership, or, if the land is under public ownership, a functionally equivalent protection mechanism as governed by state law. In addition to land use restrictions, there must be adequate funding for long-term stewardship and adaptive management to ensure durability. Initial project planning and design set a restoration project on a path for success, but monitoring, regular maintenance, and use of adaptive measures, as included in the site's management plan, are necessary to reach long-term sustainable success. This long-term management plan is only effective if financial resources are in place through an endowment or trust to implement the plan for the life of the project, or in many cases for perpetuity.



The natural world is dynamic and healthy ecosystems have evolved to respond to environmental changes and extreme events with resiliency. Regulators, practitioners, and land stewards benefit from a shared mindset of flexibility to address environmental challenges at restoration sites through the best available science. This is particularly true as our country faces a rise in natural disasters and the impacts of climate change. While the risk profile has changed in some regions, ecological restoration sites should not be expected to perform superiorly to naturally occurring features. Current scientific understandings of durability and site resiliency should afford restoration projects realistic expectations to respond to and adjust course after a disrupting natural event.

Note that implementation of two durability elements – the site protection instrument and financial endowment – may be more complex for restoration sited on public lands than restoration under private ownership. In many instances, public lands are not eligible for the same level of land protection as private lands, and financing for long-term management may be subject to the political process of appropriations. For these reasons, policymakers should carefully review restoration proposed on public lands and evaluate if the project meets the same durability standards required for restoration on private lands. Whether on public or private lands, site and financial protection instruments should be transparent, readily available and verifiable to ensure the restoration is permanent.

II. Science-Based Design and Success Criteria

A scientific understanding of a site's potential ecological functional value is foundational to any restoration project. Science informs every major decision, from initial site selection to the hydrology and plantings to ecological performance standards. While relevant at each stage, science is particularly important in project siting and design planning for success and tracking site performance.

Restoring a tract of land to reintegrate and uplift watershed or habitat functions requires looking beyond the specific tract of land to the broader landscape. A landscape approach uses data to analyze how a specific restoration project could most contribute to the sustainability and resource health of the overall watershed or habitat. This approach leads to better restoration positioning at a scale that accounts for changing watershed or habitat conditions and builds resiliency into an ecosystem.

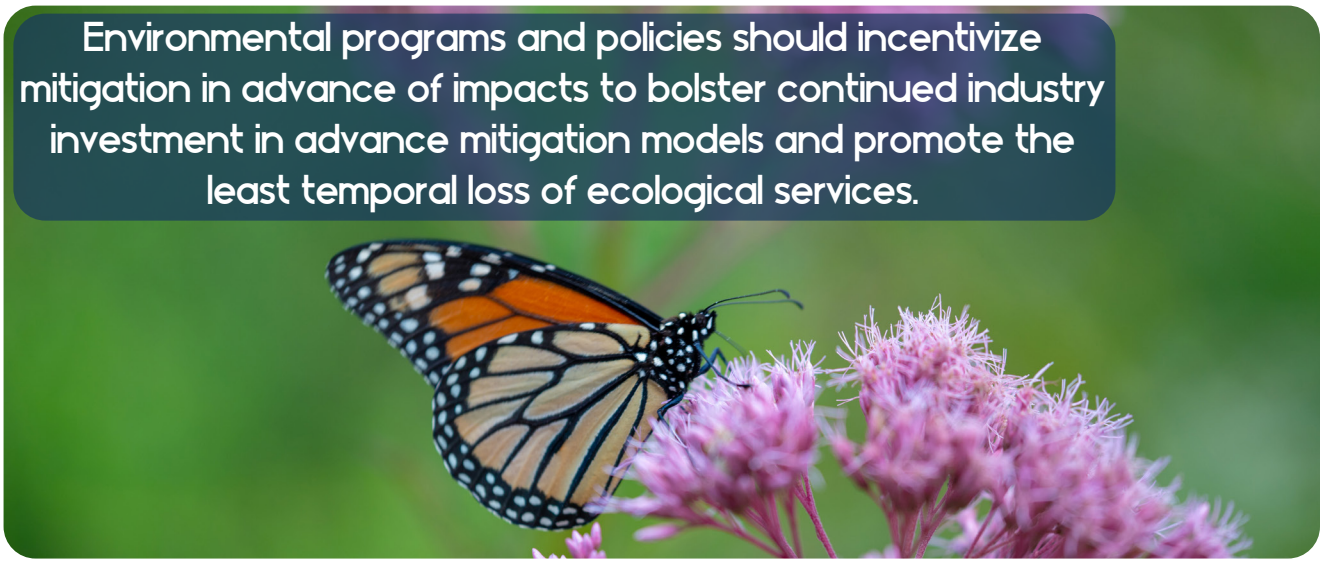
Scientific assessments, data, and metrics should underpin a restoration or mitigation project's ecological performance standards. While some flexibility may be built into performance standards, general terms like "trending towards success" are subjective and not clearly defined for purposes of evaluating performance. Science-based metrics are objectively measurable and create a transparent record of ecological performance. A site's baseline data should be compared against progressive monitoring reports to demonstrate the delta of change and progression toward ecological uplift targets. This record creates accountability, builds trust in the project's success, and ensures the project contributes additional ecological benefits to the landscape beyond those that would have been otherwise generated in the absence of restoration.

In the offsetting context, mitigation bank and ILF projects constructed in advance of impacts can most maximize the benefits of science because they have the time to use baseline data in site selection and to conduct robust scientific analyses that inform the site's restoration plan. Compensatory mitigation projects in the monitoring and performance stages can best use science to evaluate and correct course on ecological performance in advance of permitted impacts.

III. Risk Reduction Mechanisms

Ecological restoration requires substantial upfront resource and capital investment in the project planning, construction, and establishment stages. At each project stage, there are varying degrees of uncertainties and unknowns that influence whether a project will meet milestones and adapt to new challenges. Fortunately, multiple mechanisms are available and proven to reduce these risks and keep projects on track with restoration targets through the transition to long-term stewardship. When used in varying combinations these mechanisms, including adaptive management, implementation financial assurances, and credit release schedules, provide risk reduction both to the regulator and the ecological restoration practitioner.

Periodic monitoring reports typically offer the first indication that a project may need adaptive management measures to meet performance standards. Even at the most well-designed sites, some level of adaptive management is often necessary due to the inherently complex and evolving nature of biological and physical systems. Adaptive management mobilizes the project sponsor or land manager to modify restoration activities in accordance with the approved mitigation plan or agreed upon restoration outcome. The flexible approach of adaptive management allows a project to stay on course without changing the performance standard or causing regulatory delays through a compliance action.



Implementation or short-term financial assurances guarantee the construction and establishment of a restoration project, up to the project's transition to long-term management. These financial assurances safeguard against the risks of site performance failure that cannot be addressed by adaptive management or a project sponsor being unable to complete the project. Typical financial mechanisms include letters of credit, escrow accounts, surety bonds and casualty insurance. Key considerations on the best financial assurance for a project are the adequacy of funds to address foreseeable failures and the ease of accessing funds in a timely manner, particularly for advance mitigation projects designed to reduce or eliminate temporal loss.

During project planning, the restoration sponsor and regulator should identify the triggering events for use of financial assurances, exactly how the assurance may be called upon if needed, timeline for doing so, and responsible parties to act on the assurances and correct the performance issue. As the project proceeds through the construction and establishment stages, performance risk reduces and the potential costs to correct a project failure are lower. Implementation financial assurances should be structured as commensurate with a project's perceived risk, and thus should step down as the project moves closer to long-term management.

Credit release schedules are another mechanism to reduce risk and establish trust between the ecological restoration practitioner and regulators. Credit releases are tied to specific performance actions such as approval of the mitigation plan or mitigation banking instrument, establishment of the long term land protection controls, completion of construction, and demonstrated achievement of ecological performance milestones. This tool incentivizes ecological restoration practitioners to complete actions towards the restoration outcome in exchange for the release of credits that can be sold to recoup the sponsor's investment. If a project does not meet a certain milestone, the regulator can withhold the credit release and prompt the sponsor to pursue adaptive management or other corrective action.

Finally, again in the offsetting context, mitigation achieving performance standards in advance of impacts presents the lowest risk to a regulatory program when compared to offsets developed concurrent to or after an impact occurs. Mitigation in advance of impacts allows for robust scientific due diligence that maximizes the likelihood of success and reduces or eliminates temporal loss of ecological services. Advance mitigation also affords time for a project sponsor and regulator to collaboratively address changing ecological conditions, whether through adaptive management or financial assurances, and still meet project milestones.

Environmental programs and policies should incentivize mitigation in advance of impacts to bolster continued industry investment in advance mitigation models and promote the least temporal loss of ecological services. All forms of mitigation and the environment benefit from oversight and monitoring to ensure implementation is timely and in advance of impacts as often as possible. When mitigation projects do not timely apply funds or otherwise fail to take action towards restoration outcomes, then advance mitigation goals are hindered and risk increases for all parties in the mitigation program. Regulators and mitigation providers should collaborate to reduce this risk by utilizing market-based strategies and innovative partnerships to timely implement mitigation.