# UNIVERSAL PRINCIPLES
OF
# COMPENSATORY MITIGATION

National Environmental Banking Association

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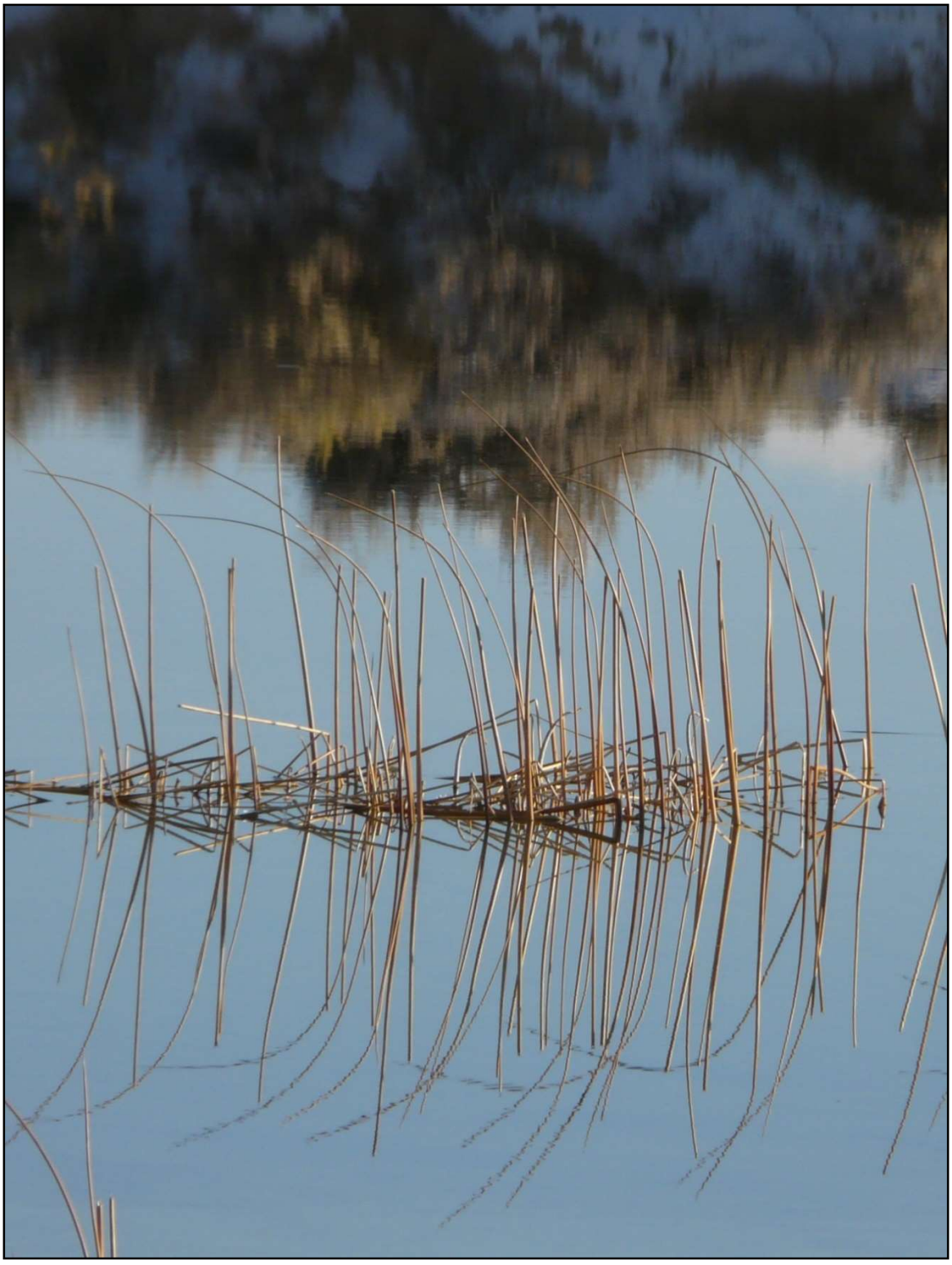


# Preface

This report highlights seven universal principles of compensatory mitigation. These principles should be applied to all mitigation projects irrespective of the regulatory agency or the particular impact.

These principles were compiled from the best management practices of the most respected mitigation bankers in the U.S. The National Environmental Banking Association (NEBA) considers these effective policies the bedrock of effective mitigation banking.

NEBA represents small businesses committed to high standards for environmental restoration and preservation of our wetlands and natural habitats through the use of ecosystem service banks. The Association's members have established and operated mitigation, conservation and other banks throughout the United States since the early 1990's. NEBA members know that under consistent, common sense government policy, private investment offers the most effective avenue to address the growing number of environmentally damaged resources, resulting in a net gain for the environment in many cases.

NEBA advocates for private sector solutions and involvement in implementing environmental and habitat conservation in a manner that supports economic growth.

Private funding sources including private pension funds (currently valued at $18 trillion), have ballooned to be enormous. If these, and additional long-term private savings funds, could be used to fuel ecological restoration projects, it would go a long way to address shrinking federal budgets straining to keep up with environmental challenges.

Restoration and conservation investments need consistency to attract innovative third-party capital sources while providing certainty to consumers of compensatory mitigation credits.

NEBA is committed to the highest standards for compensatory mitigation, and believes that only by strictly adhering to these seven principles will compensatory mitigation of all types be built to the highest standards while simultaneously streamlining permitting.

Market-based solutions to environmental issues involve mutually willing buyers and sellers of compensatory mitigation credits. Understandably, absent a consistency of high standard projects, consumers of credits will opt for the cheapest available credits, irrespective of any true ecological value, just to meet their compliance.

Studies have shown that advance compensation projects, most commonly mitigation and conservation banks, are consistently the most efficient means for enabling compliance.

History has shown that inconsistent quality standards for different forms of mitigation offsets has allowed significantly ecologically inferior projects, often the cheapest option, to be used as offsets. It is no surprise then that those lower quality projects simply add to cumulative losses instead of offsetting them with genuine, high quality restoration.

# Introduction

Compensatory mitigation is environmental improvement specifically undertaken to offset unavoidable impacts created after all reasonable avoidance and minimization have been achieved. Project impacts range widely not only from different resource types, but to different impact types ranging from cultural to biological to physical.

Even though offsets can be as varied as the impacts in question, consistent high compensatory mitigation standards are necessary to ensure that offset projects fully achieve the necessary ecological functions in perpetuity.

Compensatory mitigation needs arise from many different government programs including some that are non-regulatory. Wetland compensatory mitigation is sometimes a requirement for agriculture-related programs while the mitigation of scenic views sometimes is a required land management goal. The vast majority of mitigation however is regulation driven. As a condition of receiving a project permit, applicants are required to offset any ecological damage the project will cause. Where regulations require offsets, the compensatory mitigation must be reasonably proportionate to the impact. Compensatory mitigation costs can significantly impact the economic feasibility of a project.

The constraints on both regulatory agencies and project applicants can cause permitting delays. Statistics show that these delays could be significantly shortened by quality, uniform mitigation standards applied to advance mitigation projects. Lengthy and expensive project-specific offset deliberations could also be avoided.

# Universal Principles of Mitigation

The following compensatory mitigation principles endorsed by NEBA are considered universal. They apply regardless of which regulatory authority is requiring mitigation or what form of mitigation is being applied.

# Equivalency

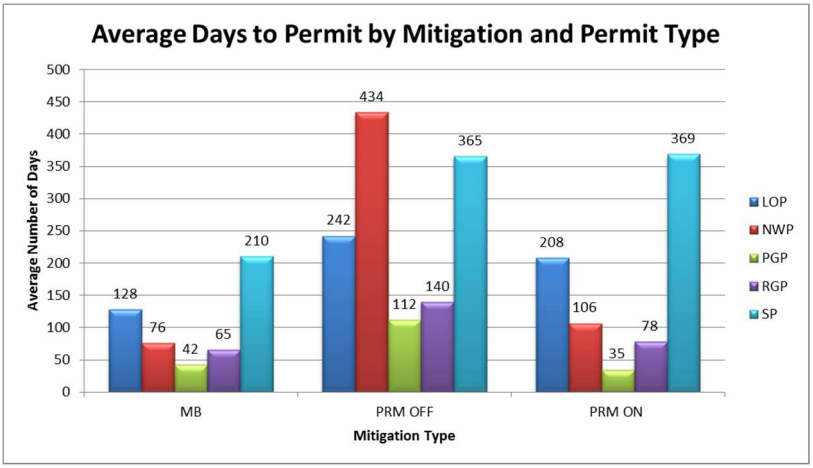
All compensatory mitigation, whether on private or public lands, should adhere to equivalent standards.

Project proponents responsible for environmental impacts are usually in highly competitive markets forcing them to seek the least expensive mitigation alternative. Only when regulators insist upon meaningful and uniform mitigation standards can consistent quality and pricing across different mitigation options be achieved. Equivalency eliminates demand for substandard, less expansive offsets options.

When compensatory mitigation is less negotiable, permitting is streamlined. The U.S. Army Corps of Engineers

***Regardless of the source, all compensatory mitigation should be held to equivalent standards***

Clean Water Act permit processing data from 2011– 2014 was analyzed and showed that when projects use mitigation bank credits, they are approved twice as fast as projects that do not. Conversely, projects proposing after-the-fact compensatory mitigation pose uncertainty and often face permitting delays not experienced by projects that use quality, advance mitigation as an offset.




***Graph showing the average number of days to permit for different mitigation types MB = Mitigation bank; PRM OFF = Offsite Permittee-Responsible Mitigation; PRM ON = Onsite Permittee Responsible Mitigation) and by permit types (LOP = Letter of Permission; NWP = Nationwide* Permit; PGP = Programmatic General Permit; RGP = Regional General Permit; SP = Standard Permit).**

# Durability

While common sense would dictate that the offset should have a life span at least equal to that of the impact, making that match can be problematic, particularly for permanent impacts. Permanent mitigation projects require ongoing maintenance and monitoring to be durable. These activities need to be funded by a long-term trust account. A big portion of the cost of mitigation and conservation banks is funding the bank's long-term trust.

Mitigation projects not required to maintain a long-term trust fund have a distinct, lower cost advantage over better guaranteed advance mitigation.

When permissible, once again, the cheaper, less guaranteed mitigation option is more attractive.

***Compensatory mitigation should be durable for the life of the impact***

Tools used to protect mitigation sites including deed covenants, title conveyance, and conservation easements are all available to private owners. However, when development occurs on public land, leased land, and

land where the developer only owns subsurface rights, the protection tools mentioned may be less available. Mitigation and conservation banks are usually required to establish an ownership interest in the mitigation site to protect it. When competing mitigation projects are not required to do so, those projects once again are more attractive because they cost significantly less to produce credits.

# Assurance

Financial assurance is a vital prerequisite for all compensatory mitigation. Without it there is great risk with all mitigation projects.

Financial assurances provide a monetary guarantee that the mitigation project will not fail to be completed should the bank sponsor become either unable or unwilling to complete the project.

Financial assurances are "risk insurance" for compensatory mitigation and to have true value, need to be payable immediately upon agency demand. Financial assurance may be provided via letters of credit, performance bonds, casualty insurance, or other cash-on-demand instruments.

Financial assurances that are only backed by sound budgeting or the financial health of the project sponsor, including government agencies, are less reliable project guarantees. If any "risk insurance" funds are not immediately available to complete the project, the project may deteriorate while the project lays incomplete or fails altogether.

True financial assurance requires timely access to any funds guaranteeing the project's completion.

Projects with sound financial assurances enjoy streamlined project approval because they reduce regulatory risk. Financial assurances hold mitigation project providers committed to the long-term success and performance of their project.

***Financial assurances are recommended to ensure providers don't default on mitigation projects***

Mitigation providers with little or no remaining financial risk, however, have little or no incentive to guarantee the successful completion of their project, or to avoid project failure.

While some agencies and project sponsors have traditionally chosen to address compensatory mitigation failure risk by requiring additional mitigation instead of financial assurances, this approach has failed.

Increasing mitigation acreage to offset risk makes no sense, as the conditions that cause the project to fail are just as likely to affect the additional acreage, simply creating a bigger failed project.

# Advance Mitigation

A thorough examination of the 2001 National Research Council (NRC) report[1] shows that incentive-based wetland mitigation banking performed better than both permittee-responsible mitigation and in-lieu fee banking. The reasons are obvious: wetland banks not only performed their function in advance of impacts, they also had the added security of financial assurance mechanisms attached to ensure that project sponsors were motivated to see the projects succeed.

The NRC only looked at wetland banks, but it stands to reason that advance mitigation conservation banks would offer the same advantages.

***Compensatory mitigation performs best when created in advance of impacts***

Mitigation should demonstrate success before being allowed to offset impacts. This greatly reduces the chances of an offset project failing. Permanent, advance mitigation, with strict financial assurances assigned, has been proven over time to be the most reliable and effective method to offset impacts.

# Additionality

Because compensatory mitigation was designed to offset actual resource loss, it is imperative that the compensatory offsets perform functions that would not have naturally occurred. This **additionality standard** prevents mitigation from being used to replace a natural function that would have occurred anyway. Additionality measures are most often easy to recognize on private land projects but can be much harder to identify on public land projects.

When compensatory mitigation projects are created on public lands it is important that they demonstrate outcomes that are clearly above and beyond those outcomes from any public

[1] National Research Council, 2001. *Compensating for Wetland Losses under the Clean Water Act.* National Academy of Sciences. Washington, D.C.

programs already planned or completed.

Agencies tasked with public land management are required to make sustainable and positive long-term land steward decisions. As long as these agencies demonstrate that any mitigation on public lands provides environmental benefits and outcomes significantly better than what would have been created by normal land management, additionality should be easily identified.

### *Mitigation should demonstrate additionality: restoration activities above those normally expected*

Normal land management practices should include traditional sustainable use activities and outcomes.

Projects that exceed normal management actions should have significant capital investment that restores some features of the resource to levels sustainable by nature. While structural repairs to hydrology qualify as "additional", exotic plant removal fails to meet the additionality test as exotic plant removal programs are already common on public lands.

## Scientific

Mitigation projects should be designed, assessed, and managed with a thorough scientific foundation. This process starts with collection of baseline data and analysis to establish site conditions. Only then can an adaptive management, restoration, and financial assurance plan be created. This method allows probable unknowns to be identified, accounted for, and shown transparently to any interested parties.

Any lack of transparency leaves room for suspicion that the science behind the project is in doubt or was compromised. This suspicion can lead to project delays including litigation.

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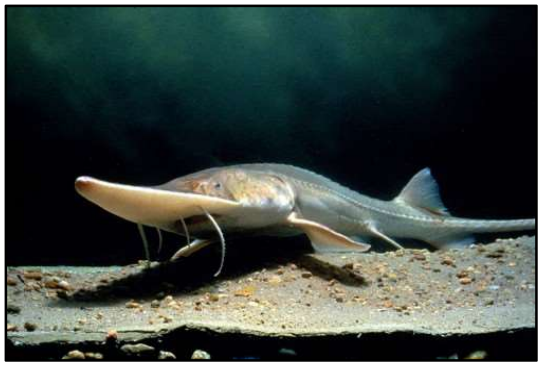
***Compensatory mitigation should be based on scientific data with success monitoring and transparent reporting***

Advance mitigation projects are best suited to demonstrate the scientific foundation of ecological improvement from baseline to present-day conditions. Advance mitigation project sponsors usually have both the time and financial resources to document positive environmental outcomes as the release of their mitigation credits are predicated on demonstrating the improvement of the resource.

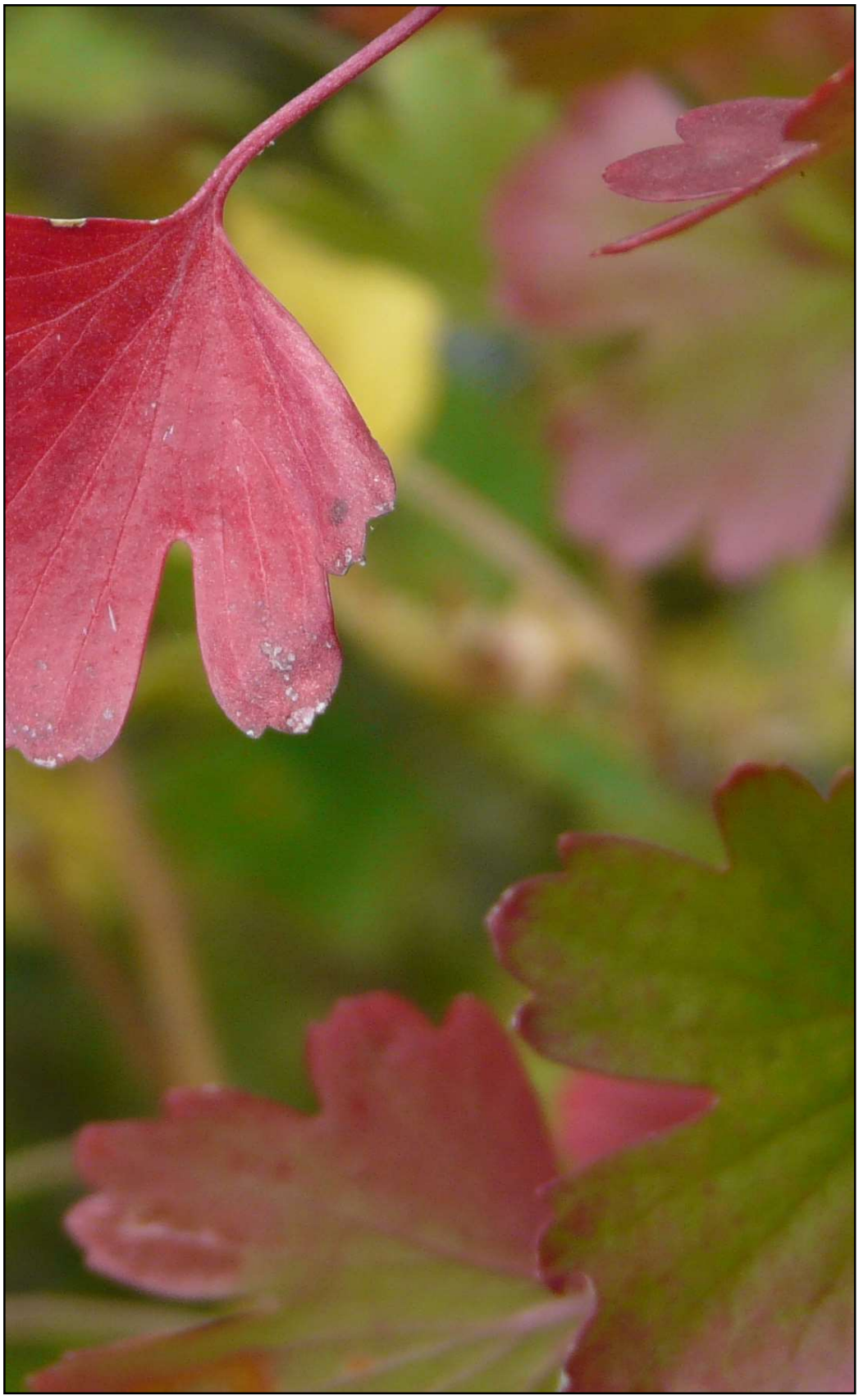
# Adaptive

Because of the complexity of many biological and physical systems, accurately predicting outcomes is difficult. This is why an adaptive management plan is so important. It allows project sponsors to adjust and respond to the specific project needs as the project matures. This adaptive plan should be included in the initial mitigation plan and should detail how the plan and parties will react when new information dictates a change in the plan.



Advance mitigation will have already employed adaptive management to demonstrate environmental outcomes and successes. This is just another reason why advance mitigation, with strict financial assurances and associated incentives to complete the project, is the best choice to ensure effective ecological offsets.

***Compensatory mitigation plans should include adaptive management to anticipate likely unknowns***



# Publication Credits:

*Clement, Joel P., et al. 2014. A Strategy for Improving the Mitigation Policies and Practices of The Department of the Interior: A Report to the Secretary of the Interior from The Energy and Climate Change Task Force. The Department of the Interior, Washington, D.C.*

*Clewell, Andre F. and James Aronson. 2007. Ecological Restoration: Principles, Values, and Structure of an Emerging Profession. Society for Ecological Restoration. Island Press, Washington, D.C.*

*Denisoff, Craig and David Urban. 2012. Evaluating the Success of Wetland Mitigation Banks. National Wetlands Newsletter, Vol 34., No. 4, Environmental Law Institute, Washington, D.C.*

*Gardner, Royal C. 2011. Lawyers, Swamps, and Money: U.S. Water Law, Policy, and Politics. Island Press Washington , D.C.*

*Guillon, Ben. 2012. Risk and Investment Decision in Mitigation Banking. National Mitigation and Ecosystem Banking Conference. Sacramento, CA.*

*Hook, Patrick and Spenser Shadle. 2013. Navigating Wetland Mitigation Markets: A Study of Risks Facing Entrepreneurs and Regulators. Ecosystem Marketplace.*

*McKenney, Bruce and Jessica Wilkinson. 2015. Achieving Conservation and Development: 10 Principles for Applying the Mitigation Hierarchy. Development by Design Program, The Nature Conservancy.*

*National Research Council. 2001. Compensating for Wetland Losses under the Clean Water Act. National Academy of Sciences. Washington, D.C.*

*U.S. Army Corps of Engineers. 2008. Compensatory Mitigation for Losses of Aquatic Resources: Final Rule 33CFR Part 332.*

*Wilkinson, Jessica B. et al. 2009. The Next Generation of Mitigation: Linking Current and Future Mitigation Programs with State Wildlife Action Plans and Other State and Regional Plans. The Environmental Law Institute and The Nature Conservancy with funding from the Wildlife Habitat Policy Research Program. Washington, D.C.*

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