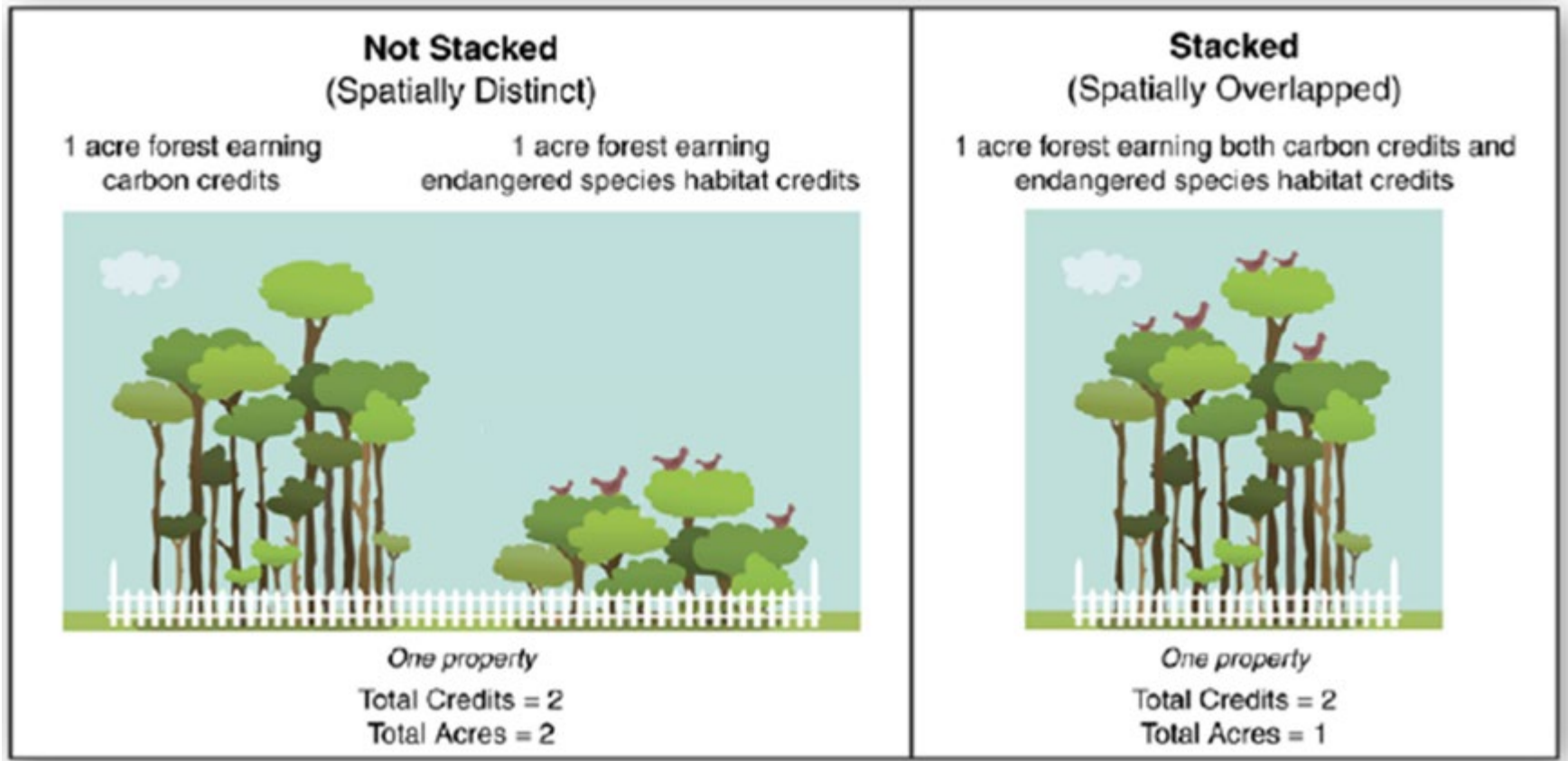


Aligning Carbon and Biodiversity Offsets: A Perspective from the United States



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Acid Rain Program Laws and Regulations

Title IV of the Clean Air Act – Acid Deposition Control

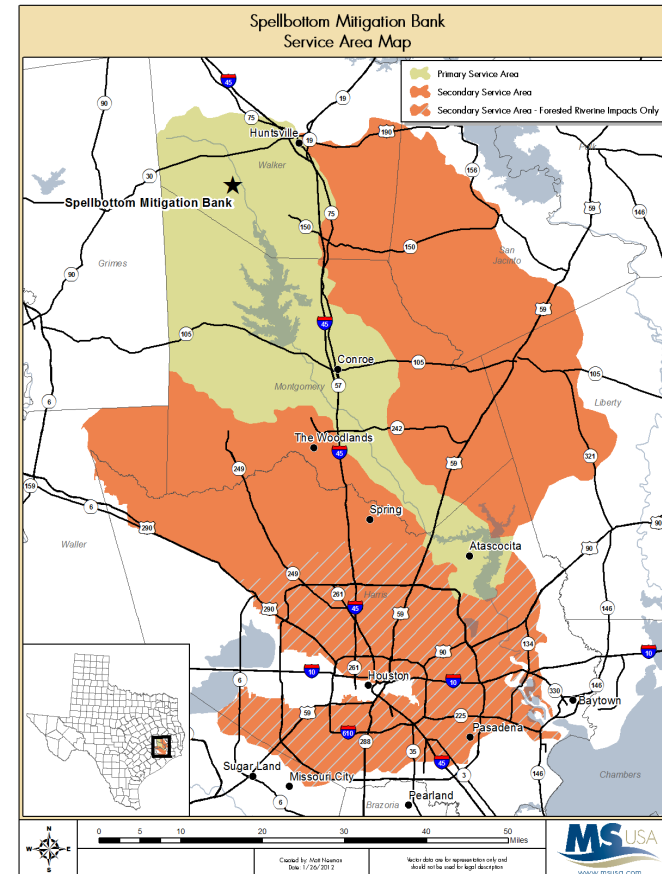
Title IV of the 1990 Amendments to the Clean Air Act (CAA) mandates requirements for the control of acid deposition—also known as acid rain. The full document is available at [Title IV – Acid Deposition Control](#). To view the entire Clean Air Act (CAA), visit EPA's [Clean Air Act page](#).



STETSON LAW

Wetland credits: to bundle or unbundle functions?

- Temporary Storage of Surface Water (TSSW)
- Maintenance of Plant and Animal Communities (MPAC)
- Removal and Sequestration of Elements and Compounds (RSEC)



Source: Mitigation Solutions USA

http://www.msusa.com/banks/texas/SpellbottomMitigationBank_Map.html



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Department of Environment and Natural Resources Mitigation Credit Determinations

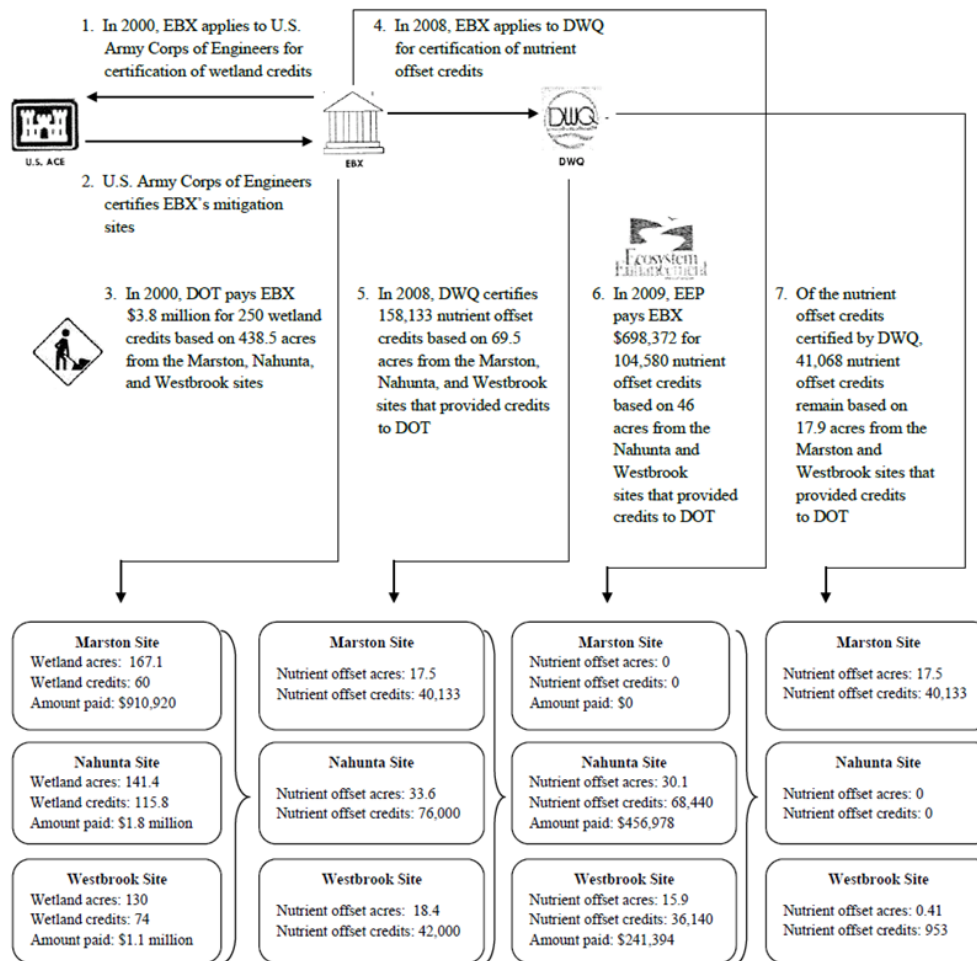


Special Report to the General Assembly

Report Number 2009-04

December 16, 2009

The Certification and Purchase of Overlapping Wetland and Nutrient Offset Credits from EBX Mitigation Sites



Notes: Calculations for credits vary by the type of credit, but the number of acres to derive credits is constant. DOT paid a total of \$7.1 million to EBX for wetland credits, \$3.8 million of which was based on credits that overlapped with EEP's 2009 purchase of nutrient offset credits.

Source: Program Evaluation Division based on data from the Division of Water Quality and the Ecosystem Enhancement Program.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAIL CODE 401-07B
P.O. Box 420
Trenton, New Jersey 08625-0402

BOB MARTIN
Commissioner

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

JUL 14 2017

Dan Montella
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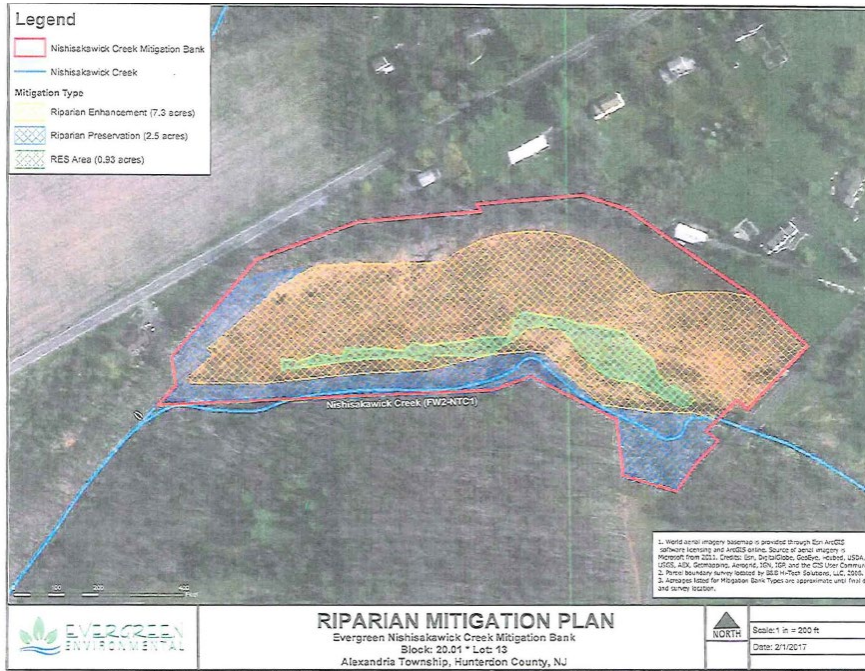
Dear Mr. Montella,

During our meeting on March 9, 2016, we discussed the Department's newly established riparian zone banking program. Specifically, we discussed the US Army Corps of Engineers' (USACE) belief that the Department's program is inconsistent with the 2008 Federal Mitigation Rules.

The Department's authority for regulating development within flood hazard areas and riparian zones comes solely from State statute, specifically N.J.S.A. 58:16A-50 et seq., 58:10A-1 et seq., 58:11A-1 et seq., and 13:1D-1 et seq. The Flood Hazard Area Control (FHACA) Rules are not promulgated under the authority of, or in order to implement, comply with, or participate in any program established under Federal law or under a State statute that incorporates or refers to Federal laws, Federal standards, or Federal requirements. The Federal Emergency Management Agency (FEMA) delineates flood hazard areas in the State for the purposes of the National Flood Insurance Program (NFIP). However, there is no Federal agency or program that directly regulates activities in flood prone areas based on their potential flooding impacts. The Code of Federal Regulations, at 44 CFR Part 60, enables FEMA to require municipalities who participate in the NFIP to adopt certain flood hazard reduction standards for construction and development in 100-year flood plains. However, a community's participation in the NFIP is voluntary, and FEMA does not otherwise regulate land uses in flood hazard areas. Furthermore, the Federal flood reduction standards at 44 CFR Part 60 are administered by local governments.

The Department believes that areas where freshwater wetlands and riparian zones overlap have a higher ecological function and value than areas that are either a wetland or riparian zone only. The Department is not selling credits twice. Once a wetland credit is sold, it is debited from the bank's wetland ledger. Similarly, where a riparian zone credit is sold, it is debited from the riparian zone ledger. A wetland or a riparian credit is not resold. Accordingly, the freshwater wetlands rules and permitting program remain stringent as the 2008 Federal Mitigation Rules.

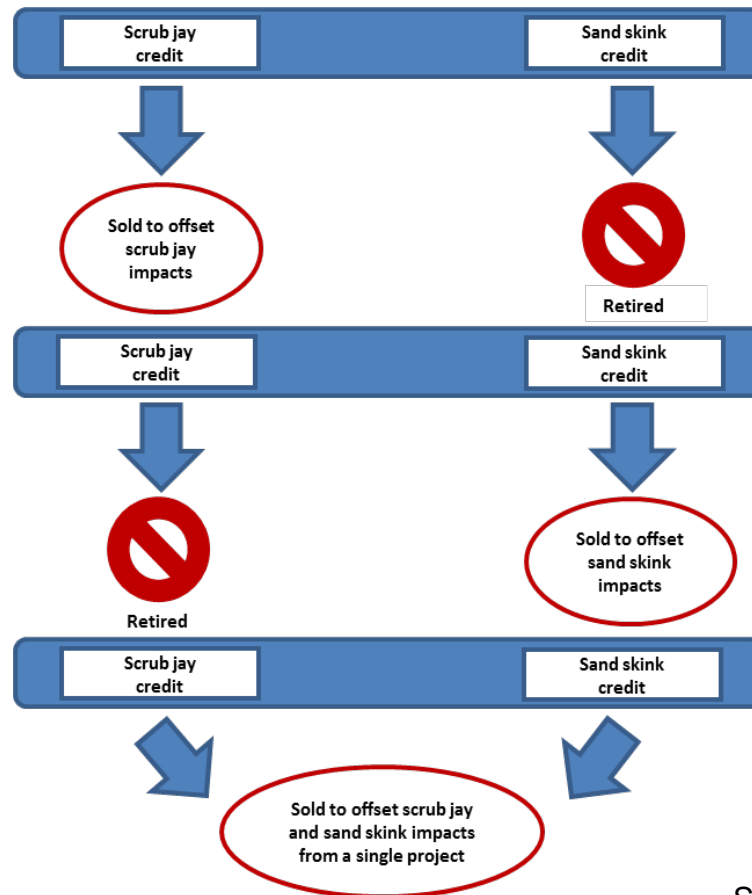
Letter from Virginia Kopkach
Assistant Commissioner
Land Use Management



| Mitigation Category | Ratio | Acres | Credits |
|----------------------------------|-------|--------------|-------------|
| Wetland Enhancement | 3:1 | 7.01 | 2.337 |
| Wetland Creation/Restoration | 2:1 | 0.611 | 0.306 |
| Upland Buffer Enhancement | 13:1 | 0.813 | 0.063 |
| Upland Enhancement | 13:1 | 0.752 | 0.058 |
| Preservation | 27:1 | 3.074 | 0.114 |
| Wetland Enhancement Supplemental | 7:1 | 0.932 | 0.133 |
| Total | | 13.19 | 3.01 |

| Mitigation Category | Ratio | Acres | Credits |
|--|-------|--------------|-------------|
| Riparian Enhancement | 3:1 | 7.30 | 2.43 |
| Riparian Preservation | 8:1 | 2.5 | 0.31 |
| Riparian Enhancement Supplemental Area | 5:1 | 0.93 | 0.19 |
| Total | | 10.79 | 2.93 |

ESA credits: to bundle or unbundle different species credits?



Source: R. Gardner & J. Fox (2013)



ESA credits: to bundle or unbundle different species credits?



Source: Volusia County Florida, www.volusia.org



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Unbundling carbon credits?



The Real Trees Delivering Fake Corporate Climate Progress

GreenTrees says it's fighting climate change by reforesting thousands of acres. But it's taking credit for other people's trees.

By **Ben Elgin** and **Zachary Mider**

December 17, 2020, 5:00 AM EST



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Most recent U.S. guidance on stacking

Approved by CWP/PRA Task Force 29 January 2020

Guidelines for Environmental Banking in Coastal Louisiana

I. Introduction

A. Purpose and Scope

These Guidelines were developed pursuant to the Water Infrastructure Improvements for the Nation Act of 2016 (WIIN 2016)¹ for the establishment, use, and operation of environmental banks in coastal Louisiana.

For the purposes of these Guidelines, “environmental bank” means a project, project increment, or projects conducted for purposes of restoring, establishing (i.e., creating), enhancing, or preserving natural resources at a designated site to establish credits designed to offset certain environmental impacts. An environmental bank is a type of bank that provides credits designed to satisfy the environmental requirements of more than one federal or state program such as the Clean Water Act section 404 permitting program, the Louisiana Oil Spill Prevention and Response Act program, and others. “Multi-purpose bank” and “joint bank” are terms also used for banks that provide credits for more than one purpose, but these Guidelines will use the term “environmental bank” because that is the term used in WIIN 2016. Banks that provide credits for only one federal or state program should be established under the appropriate existing regulations and guidance (see section I.B. for applicable existing regulations and guidance) and these Guidelines do not apply to single purpose banks.

For the purposes of these Guidelines, “credit” means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the accrual or attainment of ecological functions at an environmental bank site. The measure of ecological functions is based on the resources restored, established, enhanced, or preserved. Credits generated by approved environmental banks may be used to address the environmental requirements of multiple federal and state environmental programs subject to the approval of the appropriate federal or state agencies responsible for implementing these programs.²

These Guidelines apply to environmental banks established in coastal Louisiana. “Coastal area” in Louisiana is defined in L.A.R.S. 49:214.2(4) as “the Louisiana Coastal Zone and contiguous areas subject to storm or tidal surge and the area comprising the Louisiana Coastal Ecosystem as defined in section 7001 of P.L. 110-114.” To be eligible for consideration as an environmental

¹ WIIN 2016 is also known as the Water Resources Development Act of 2016 (Public Law 114-322). WIIN 2016 amended the Coastal Wetlands Planning, Protection and Restoration Act (Public Law 101-646; 16 U.S.C. 3951 et seq.) by adding section 309 (16 U.S.C. 3957).

² These guidelines and mitigation carried out through an environmental bank established pursuant to these guidelines shall comply with all applicable requirements of Federal law (including regulations). See 16 U.S.C. 3957(d).

“If multiple credit types are produced on the same unit of land within the bank (a practice called bundling or stacking), it is appropriate to use them as a bundled or stacked unit to offset a single project that needs both credit types. These bundled or stacked credits may be thought of as having multiple attributes such as flood water attenuation, habitat for at risk species, carbon sequestration, or water quality improvement. However, because ecosystem functions are interdependent and integrated, it is not appropriate to unbundle or unstack spatially-overlapping credits and use them to offset two different projects as this would constitute double-dipping.”



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Thank you for your attention, and I look forward to the discussion!



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