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 LA 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

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\(^2\) 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).
bank, proposed environmental banks should be consistent with the goals and objectives of the currently applicable Louisiana Coastal Master Plan (CMP). Developed using the best available science and engineering, the CMP focuses efforts and guides the actions needed to sustain Louisiana’s coastal ecosystem, safeguard coastal populations, and protect vital economic and cultural resources. Environmental banks should strive to achieve one or more of the CMP’s objectives and should not be detrimental to or conflict with any of the projects contained in the CMP.

Environmental banks are “subject to the approval of the heads of the appropriate federal agencies responsible for implementation of federal environmental laws for which mitigation credits may be used.” 16 U.S.C. § 3957(b)(1). These Guidelines and mitigation through an environmental bank shall comply with all applicable federal laws and regulations. Finally, these Guidelines shall not be construed to affect any authority, regulatory determination, or legal obligation or the obligations or requirements of any federal environmental law.

B. Background

These Guidelines are based on existing federal and state regulations and guidance applicable to banks that provide credits for various purposes and are designed to facilitate the development of environmental banks consistent with the existing regulations and guidance for these credit types. Relevant existing regulations and guidance for banking include:

1. **U.S. Army Corps of Engineers (the Corps) and U.S. Environmental Protection Agency (EPA) Compensatory Mitigation Regulations.** In 2008, the Corps and EPA revised and clarified federal regulations governing how impacts to wetlands, streams, and other aquatic resources authorized under section 404 of the Clean Water Act (CWA) and sections 9 and 10 of the Rivers and Harbors Appropriation Act of 1899 (RHA) are offset – an action known as compensatory mitigation. Under these regulations, one mechanism for satisfying compensatory mitigation requirements is the purchase of CWA/RHA credits from a mitigation bank. These regulations include procedures and criteria for the establishment, use, and operation of mitigation banks designed to produce CWA/RHA credits.

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3 For more information regarding the CMP see: http://coastal.la.gov/our-plan/.
4 The objectives of the CMP are: (1) Flood Protection; (2) Natural Processes; (3) Coastal Habitats; (4) Cultural Heritage; and (5) Working Coast. The objectives seek to improve flood protection for families and businesses, recreate the natural processes that built Louisiana’s delta and ensure that Louisiana’s coast continues to be both a Sportsman’s Paradise and a hub for commerce and industry.
5 Information on CRPA projects can be found at: http://coastal.la.gov/our-work/projects/
2. **Louisiana Natural Resource Damage (NRD) Banking Regulations.** In 2017, Louisiana finalized regulations for its NRD Banking Program that describe when and how certain restoration projects can generate NRD credits that responsible parties can purchase to fully or partially resolve NRD liabilities from oil spills under the Oil Pollution Act (OPA) and the Louisiana Oil Spill Prevention and Response Act. These regulations include procedures and criteria for the establishment, use, and operation of restoration banks designed to produce NRD credits.

3. **U.S. Fish and Wildlife (FWS) Conservation Banking Guidance.** In 2003, FWS issued guidance on the establishment, use, and operation of conservation banks for the purpose of providing a tool for mitigating adverse impacts to species listed as threatened or endangered under the Endangered Species Act (ESA). This guidance also outlines key components for inclusion in agreements establishing conservation banks designed to produce ESA credits.

In general, banks that generate a single credit type can provide a number of benefits over traditional approaches to impact mitigation, some of which are listed below:

- When ecologically appropriate, banks can consolidate compensatory mitigation into a single large parcel that provides greater landscape-level environmental benefits than smaller individual projects;
- Banks are implemented in advance of impacts, thereby reducing temporal losses of impacted resources and uncertainty over whether the mitigation will be successful in offsetting impacts;
- Use of banks can reduce permit/regulatory processing times and provide more cost-effective mitigation solutions for permit applicants/responsible parties;
- Establishment of a bank can bring together financial resources, planning, and scientific expertise not practicable to many project-specific mitigation proposals;
- Use of banks attracts private sector investment in environmental restoration and conservation projects; and
- Consolidation of mitigation within a bank increases the efficiency of limited agency resources in the review and compliance monitoring of mitigation projects.

In addition, banks are generally overseen by a multi-agency team (commonly called an Interagency Review Team or IRT) that coordinates federal and state agency reviews and recommendations during all stages of bank development, substantially reducing the time and efforts bankers would otherwise have to spend going to each agency separately. IRTs also assist federal and state agencies in sharing information and developing consistent recommendations.

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7 L.A.C. 43 Part XXXI.
Since environmental banks are designed to generate multiple types of credits, they could expand on the benefits of single-credit banks by promoting a more holistic approach to ecosystem restoration and creating additional financial incentives for conservation projects, including revenue streams from more than one credit type. Generating multiple credit types may also create challenges for environmental banks including how to address potentially different or conflicting directives for bank establishment, operation, and use from the agencies responsible for the different credit types produced by the bank; potentially different goals, performance standards, credit release schedules, and acceptable financial assurances or site protection instruments; and potentially different approaches to credit determination. Effectively addressing these challenges will require close coordination among the relevant federal and state agencies and between that team of agencies and the environmental bank sponsor (see section II.A. Interagency Coordination on Banks).

If demand for new credit types is created, for example by the issuance of new regulations or guidance, the agencies responsible for that credit type would need to be a part of any interagency team overseeing the establishment, use, and operation of an environmental bank designed to produce that credit type. Similarly, if an existing bank (e.g., existing mitigation bank with undebited CWA/RHA credits) is to be revised to include additional credit types, the existing interagency team responsible for that bank would need to be engaged as well as the agency responsible for the new credit type if it is not already a part of that team.

Pursuant to section 5014 of WIIN 2016, these Guidelines are being issued by the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) Task Force which includes the Corps, the EPA, the FWS (U.S. Department of the Interior), the National Marine Fisheries Service (U.S. Department of Commerce, National Oceanic and Atmospheric Administration), the Natural Resources Conservation Service (U.S. Department of Agriculture), and the Governor’s Office of the State of Louisiana. However, since the authorities that support the establishment and operation of environmental banks rest with individual federal and state agencies and not with the CWPPRA Task Force, the CWPPRA Task Force will not play a role in implementing these Guidelines or establishing or overseeing environmental banks. Federal and state member agencies of the CWPPRA Task Force who have responsibility for credit types produced by environmental banks should be responsible for implementing these Guidelines as part of an interagency team overseeing the establishment, use, and operation of any environmental bank (see section II.A. Interagency Coordination on Banks).

C. Authorities

These Guidelines are established in accordance with section 5014 of WIIN 2016 and the following statutes, regulations, and policies.
4. Department of the Army, Section 404 Permit Regulations (33 CFR Parts 320-332). Policies for evaluating permit applications to discharge dredged or fill material.
6. Title XII of the Food Security Act of 1985 as amended by the Agriculture Improvement Act of 2018 (16 U.S.C. 3801 et seq.)
8. Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).
12. Oil Pollution Act (OPA) (33 U.S.C. 2701 et seq.).
15. Louisiana Coastal Protection and Restoration Authority, Guidance for Certification and Use of New and Existing Banks in Louisiana’s Natural Resource Damage Restoration Banking Program (April 9, 2018).
Approved by CWPPRA Task Force 29 January 2020

The legal authorities described in this document contain binding requirements. This document does not substitute for those requirements, does not create legally binding requirements, nor is it a regulation itself. This guidance is not intended, nor can it be relied upon, to create any rights enforceable by any party in litigation with the United States or the State of Louisiana. This guidance does not establish or affect legal rights or obligations, establish a binding norm on any party, and it is not finally determinative of the issues addressed. Any regulatory decisions made by the agencies in any particular matter addressed by this guidance will be made by applying the governing law and regulations to the relevant facts.

II. Banking Principles

This section describes a set of common banking principles and requirements that are based on the existing banking regulations and guidance discussed in section I.B. The establishment, use, and operation of environmental banks in coastal Louisiana should be consistent with these principles and requirements.

A. Interagency Coordination on Banks

Banks designed to generate credits for use in offsetting environmental impacts often involve complex, large-scale ecosystem restoration and protection projects. A multi-disciplinary team of federal and state resource and regulatory agencies is necessary to effectively review such projects. Existing regulations and guidance for banking (see section I.B), recognize the importance of these interagency teams and include provisions outlining the purpose, composition, and operation of these teams. For example, banks that produce CWA/RHA credits have an Interagency Review Team (IRT) (see 33 CFR 332.8(b)/40 CFR 230.98(b)) and banks that produce NRD credits for Louisiana’s NRD Banking Program have a Banking Review Team (BRT) (see L.A.C. 43 Part XXXI § 109). Similarly, banks that provide ESA credits can have a review team called a Conservation Bank Review Team (CBRT) (see FWS Conservation Banking Guidance section II.C.6.) or they may use the term IRT. Regardless of the name given to the interagency team, their purpose is the same.

These interagency teams are typically chaired by the agency with responsibility for deciding if and how the credit type generated by the bank can be used to satisfy the requirements of a specific federal or state program. Sometimes two or more co-chairs are necessary to accommodate the responsibilities of multiple decision-making agencies. Examples of such co-chairing relationships exist in other states and could serve as useful models. For example, in Florida, Oregon, and Virginia, interagency teams co-chaired by the Corps and the state oversee the establishment, use, and operation of banks designed to provide both CWA/RHA and state regulatory program credits (consistent with 33 CFR 332.3(j)(1)/40 CFR 230.93(j)(1)). Similarly, in California, Oregon, and Washington, interagency teams co-chaired by the Corps and FWS
oversee the establishment, use, and operation of banks designed to provide both CWA/RHA and ESA credits (consistent with 33 CFR 332.8(b)(1)/40 CFR 230.98(b)(1)).

An IRT currently operates in Louisiana for federal and state coordination on the establishment, use, and operation of CWA 404 banks. This IRT is the most appropriate entity to oversee the establishment, use, and operation of environmental banks in coastal Louisiana. Additional members may need to be added to the IRT depending on the types of credits an environmental bank proposes to create. Furthermore, IRT Chairmanship responsibilities, which currently rest with the Corps, will need to be shared, on a case-by-case basis, with other agencies that have decision-making authority over bank credits (e.g., the State of Louisiana should co-chair any meetings concerning banks that propose generating credits to be used in the Louisiana Oil Spill Prevention and Response Act program). The IRT will also need to establish timelines for each step in the review, approval, and oversight of environmental banks by synchronizing timelines established in existing regulations (see section II.B) and could develop guidance on assessment methodology(ies) for the various credit types to be produced at the environmental bank.

B. Bank Establishment

Existing regulations and guidance for banking also outline procedures for bank establishment. These generally involve development of a banking proposal or prospectus; opportunity for public review and comment of the banking proposal; and development of a draft followed by a final, more detailed banking agreement or instrument signed by the bank sponsor and one or more of the members of the interagency review team.

1. **Prospectus.** The prospectus provides a summary of the information regarding the proposed bank, at a sufficient level of detail to support informed public and interagency review and comment. For example, the regulations governing a prospectus for a bank that provides CWA/RHA credits identify eight information elements necessary for a complete prospectus, including, objectives of the proposed bank, description of how the bank will be established and operated, proposed service area, and proposed ownership arrangements (see 33 CFR 332.8(d)(2)/40 CFR 230.98(d)(2)). The regulations governing a prospectus for a new bank that provides NRD credits for Louisiana’s NRD Banking Program identify a similar list of nine information elements necessary for a complete prospectus (see L.A.C. 43 Part XXXI § 115(B)). Information requirements for a prospectus are generally a subset of the information requirements for bank instruments discussed below.

2. **Public Review and Comment.** Existing regulations and guidance for banking include provisions for seeking public comment on the draft banking proposal or prospectus. These provisions generally note that the public will, at a minimum, be provided with a
summary of the draft plan/prospectus (and be informed that the full draft plan/prospectus is available to the public for review upon request) and 30 days to provide comment. Public comments are shared with the bank sponsor and the interagency team following the close of the public comment period (see 33 CFR 332.8(d)(4)/40 CFR 230.98(d)(4); L.A.C. 43 Part XXXI § 117(C); and FWS Conservation Banking Guidance section II.C.7.). For environmental banks, co-chairs should coordinate to ensure that this public review and comment step is addressed with a single joint-agency public notice. If the bank is providing credits for CWA compensatory mitigation, then the Corps will be a co-chair of the interagency team and the Corps Public Notice process should be used for seeking public comment. If the Corps is not involved in the bank, another notice and comment process should be used.

3. **Bank Instrument.** According to existing regulations and guidance for banking, a bank instrument or agreement is the legal document for the establishment, use, and operation of a bank. These existing regulations and guidance also identify the specific information elements necessary for a complete bank instrument/agreement (see 33 CFR 332.8(d)(6)/40 CFR 230.98(d)(6); L.A.C. 43 Part XXXI § 119(A); FWS Conservation Banking Guidance section II.E.2. and NOAA NRDA Banking Guidance page 5, number 8 and Appendix B). These generally include the elements below. One of the responsibilities of the IRT is to ensure that these elements are developed to satisfy all relevant federal and state regulations, which may have different requirements for one or more of these elements.

   a. **Objectives.** A description of the resource type and amount that will be provided, the method of compensation (restoration, establishment, preservation etc.), and how the anticipated improvements in ecological functions at the bank will address environmental needs. To be eligible for consideration as an environmental bank, the proposed bank should be consistent with the goals and objectives of the currently applicable Louisiana CMP. To be considered consistent with the goals and objectives of the CMP, the proposed environmental bank should strive to achieve one or more of the CMP’s objectives and should not be detrimental to or conflict with any of the projects contained in the CMP.

   b. **Site selection.** A description of the factors considered during the bank site selection process. This should include consideration of watershed/landscape needs, the practicability of establishing an ecologically self-sustaining project site, and how the site would enhance the resilience of coastal resources to inundation and coastal erosion in high priority areas, as identified within federal or state restoration plans.
c. **Site protection.** A description of the legal arrangements and documentation of site control or ownership, and demonstration of arrangements for the long-term protection of the bank site.

d. **Baseline information.** A description of the pre-project ecological characteristics of the proposed bank site. This may include descriptions of historic and existing plant and animal communities, historic and existing hydrology, soil conditions, and a map showing the location of the bank site.

e. **Determination of credits.** A description of the number and type of credits to be provided including a brief explanation of the rationale for this determination. The number of credits generated should reflect the difference between pre- and post-project site conditions, as determined by a functional or condition assessment or other suitable metric. Ideally the same methodology should be used to assess project impacts or damages and bank credits, but if that is not possible a conversion method should be agreed upon. Care must be taken in planning environmental banks to ensure that the same ecosystem function or service credit, however defined, is not debited from the bank more than once, a practice known as double-dipping.\(^9\) Since ecosystem functions are interdependent and integrated, the most effective approach to avoiding potential concerns regarding double-dipping in the design of environmental banks (and other mitigation projects that generate more than one credit type) is to ensure that the different credit types are produced on different units of land within the bank (i.e., not spatially-overlapping). 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.\(^{10}\) 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 (see Appendix A for examples).

f. **Bank work plan.** Detailed written specifications and work descriptions for the bank project, including: construction methods, timing, and sequence; source(s) of water; source(s) of borrow material; methods for establishing the desired plant community; plans to control invasive plant species; proposed grading plan; soil management; and erosion control measures.

g. **Maintenance plan.** A description and schedule of maintenance requirements to ensure the continued viability of the bank once initial construction is completed.

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\(^9\) Such actions are prohibited under 33 CFR 332.3(j)(1)(ii)/40 CFR 230.93(j)(1)(ii).

\(^{10}\) If a project only needs one of the credit types in the bundle/stack, that credit can be used but the remaining credits in the bundle/stack must also be retired.
h. **Performance standards.** Ecologically-based standards that will be used to determine whether the bank is achieving its objectives. These should be tailored to the specific credit types proposed to be generated at the bank site.

i. **Monitoring requirements.** A description of parameters monitored to determine whether the bank is on track to meet performance standards, and if adaptive management is needed. A schedule for monitoring and reporting monitoring results should be included.

j. **Long-term management plan.** A description of how the bank will be managed after performance standards have been achieved, and all credits sold, to ensure the long-term sustainability of the site, including long-term financing mechanisms and identification of the party responsible for long-term management.

k. **Adaptive management plan.** A management strategy to address unforeseen changes in site conditions or other components of the bank.

l. **Financial assurances.** A description of financial assurances that will be provided, and how they are sufficient to ensure a high level of confidence that work at the bank will be successfully completed in accordance with its performance standards. Co-chairs of interagency teams involved in the review of environmental banks should clearly identify how the documentation associated with financial assurances will be tracked and managed, as these will likely be subject to regular renewal until they are phased out once the bank has been determined to be successful in accordance with its performance standards. Each co-chair will be responsible for meeting financial assurance oversight responsibilities for their respective programs.

m. **Credit release schedule(s).** A schedule for release of credits (for sale or use by the bank) that is tied to achievement of specific milestones (e.g., attainment of specific ecological performance standards). There may be separate credit release schedules for the different credit types proposed to be generated at the bank site.

n. **Service Area(s).** The geographic area within which impacts can be offset at the environmental bank. There may be different service areas for the different credit types proposed to be generated at the bank site.

o. **Accounting procedures.** Provisions requiring the bank sponsor to establish and maintain a ledger to account for all credit transactions.

p. **Assumption of compensation responsibility.** A provision stating that legal responsibility for providing the required compensation lies with the bank sponsor once a permittee secures credits from the sponsor consistent with a federal or state permit/authorization.

q. **Default and closure provisions.** Provisions describing bank closure when all credits have been released and sold or in the event of default.
r. **Reporting protocols.** Provisions describing protocols for meeting reporting requirements including monitoring reports, financial assurance reports and long-term management funding reports.

**C. Use of Existing Banks as Environmental Banks**

Existing single-credit-type (e.g., CWA/RHA) banks with un-debited credits can be converted to environmental banks by amending the original bank instrument to include the new credit type and the new regulatory authority. Only banks with un-debited credits can be converted to environmental banks. A new function or condition assessment should be performed to establish the amount of environmental credits available. The banking instrument amendment should undergo the same review process as the original banking instrument (or in accordance with regulations and guidance in effect at the time the amendment is proposed), with the addition of review by the regulating authority responsible for the new credit type and the addition of this regulating authority to the IRT (if not already a member).

Implementation of Louisiana’s CMP will require significant funding from multiple sources over a sustained period of time. Louisiana’s NRD Banking Program is designed and intended to provide a mechanism to bring funding from the private sector through public-private partnerships to implement new restoration projects in coastal Louisiana. Louisiana’s “Guidance for Certification and Use of New and Existing Banks in Louisiana’s Natural Resource Damage Restoration Banking Program” (see Authorities section) defines an “existing bank” as a bank that has been certified under another regulatory program (i.e., CWA 404 Compensatory Mitigation Program), and was constructed prior to submission of the Prospectus for consideration in Louisiana’s NRD Restoration Banking Program. This Guidance further states that if an existing bank is submitted for consideration under the Louisiana NRD Program, the bank sponsor must also propose to construct “significant additional restoration” within the original footprint of and/or adjacent to the existing bank in order to be considered under this Program. The proposed “significant additional restoration” will be evaluated on a case-by-case basis by the Bank Review Team in consultation with the Bank Sponsor to determine whether the proposed action or actions yield significant additional ecological uplift or some other significant additional restoration benefit over and above what was previously constructed sufficient to meet the “significant additional restoration” threshold to qualify for consideration under the Louisiana NRD Program.

**D. Federally Funded Restoration Projects and Environmental Banks**

Federally funded restoration projects undertaken for purposes other than compensatory mitigation (e.g., Ecosystem Restoration projects, Partners for Wildlife projects, etc.) must not be used for the development of environmental banks. Doing so is counter to current regulation (see
33 CFR 332.3(j)(2)/40 CFR 230.93(j)(2)) and would constitute an inappropriate federal subsidy of compensatory mitigation.

III. Bank Tracking

Banks established under CWA 404 and/or the ESA are currently tracked in the publicly available Regulatory In-lieu fee and Bank Information Tracking System (RIBITS) administered by the Corps. RIBITS allows users to access information on the types, numbers, and locations of CWA/RHA mitigation banks and ESA conservation banks proposed and approved nationwide, as well as associated documentation, bank credit ledgers, service areas, and information on national and local policies and procedures. To ensure transparency and accountability, the IRT for environmental banks in coastal Louisiana could establish a similar system for tracking environmental banks, or the IRT could explore with the Corps whether environmental banks could be added to RIBITS.

IV. Stipulations Included in WIIN 2016

Pursuant to section 5014 of WIIN 2016:

A. These Guidelines must be approved by the heads of the appropriate federal agencies responsible for implementation of federal environmental laws for which environmental bank credits may be used.

B. Credits from environmental banks may not be used for mitigation of impacts required under CWA section 404 or the ESA where the service area of an existing mitigation or conservation bank approved pursuant to such laws before December 16, 2021 has appropriate credits available.

C. No new environmental bank may be created or approved pursuant to section 5014 of WIIN 2016 after December 16, 2026.

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11 RIBITS was developed by the Corps with support from EPA, FWS, NOAA, and Federal Highway Administration and is available at https://ribits.usace.army.mil/.
12 A pilot effort is underway to track nutrient offsets (i.e., water quality trading) in Iowa and Virginia in RIBITS. A pilot effort is also expected to begin in 2019 to use RIBITS to track NRDA credits for one of NOAA’s NRDA banks (Portland Harbor, Oregon).
13 While not required by WIIN 2016, approval by the appropriate state agencies is also desirable.
Appendix A. Examples of Multi-purpose Bank Crediting

Geographically distinct credits:

- A bank is established in a degraded stream system. Both the main stem of the river and the tributaries are included in the bank.
- The banker wants to provide stream habitat credits and water quality improvement credits.
- The banker establishes two geographically distinct sources for credits: 1) the main stem of the river, and 2) the tributaries.
- Restoration of the main stem of the river generates riverine habitat credits, and restoration of the tributaries generates water quality improvement credits.
- The credits are tracked separately and are not transferable, thereby ensuring credits cannot be debited more than once.

Geographically overlapping credits:

- A bank is established in an area containing degraded wetlands. There are two types of wetlands: 1) vernal pools that are habitat for ESA species, and 2) wetlands that are not habitat for ESA species.
- The banker wants to provide ESA vernal pool credits and 404 wetland credits.
- The credits generated by the wetlands can be used only for 404 wetland debits. The credits generated by the vernal pools can be used for a single project that needs both ESA and 404 or for a project that needs either ESA-only or 404-only wetland debits, but when one of these vernal credits is used for only one purpose, the corresponding credit must be retired. For example, if one of these vernal pool ESA/404 credits is used to offset an ESA-only impact, the corresponding 404 portion of this credit must be retired; it cannot be used for another purpose.
- In other words, assume a bank has the following credit balances:
  - Vernal pool credits (ESA/404) – 20 credits.
  - Wetland credits (404 only) – 5 credits.
- A client purchases ten 404 credits.
  - Five of the credits come from the wetland credit balance, which is reduced to 0 (5-5).
  - Five of the credits come from the vernal pool credit balance, which is reduced to 15 (20-5).
- The bank is left with 15 vernal pool credits to sell for a single project that needs both ESA and 404 or for either ESA-only or 404-only use.
Appendix B. Definitions

Credit - 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 (i.e., created), enhanced, or preserved.

Credit stacking or bundling - producing more than one credit type on the same unit of land within a bank or other mitigation project. Stacked/bundled credits are useful as a means to offset a single project that needs both credit types. If a project only needs one of the credit types in the bundle/stack, that credit can be used but the remaining credits in the bundle/stack must also be retired.

Credit unstacking or unbundling - using stacked/bundled credits to offset two different projects. Because ecosystem functions are interdependent and integrated, this practice is not appropriate since it results in the same ecosystem function being debited more than once from a bank or other mitigation projects (i.e., double-dipping).

Double-dipping - debiting the same ecosystem function or service credit, however defined, more than once from a bank or other mitigation project.

Environmental bank - 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 programs, such as the Clean Water Act section 404 permitting program, the Louisiana Oil Spill Prevention and Response Act program, and others. Banks that provide credits for more than one program are also called multi-purpose banks and joint banks.

Debit - a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the loss of ecological functions at an impact or project site. The measure of ecological functions is based on the resources impacted by the authorized activity.

Enhancement - the manipulation of the physical, chemical, or biological characteristics of an ecological resource to heighten, intensify, or improve a specific ecological resource function(s). Enhancement results in the gain of selected ecological resource function(s) but may also lead to a decline in other ecological resource function(s).
Establishment (creation) - the manipulation of the physical, chemical, or biological characteristics present to develop a specific ecological resource that did not previously exist at a site. Establishment results in a gain in ecological resource area and functions.

Preservation - the removal of a threat to, or preventing the decline of, ecological resources by an action in or near those ecological resources. This term includes activities commonly associated with the protection and maintenance of ecological resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of ecological resource area or functions.

Re-establishment - the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former ecological resource. Reestablishment results in rebuilding a former ecological resource and results in a gain in ecological resource area and functions.

Rehabilitation - the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded ecological resource. Rehabilitation results in a gain in ecological resource function but does not result in a gain in ecological resource area.

Restoration - the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded ecological resource. For the purpose of tracking net gains in ecological resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Note: The terms “rehabilitation” and “enhancement” are often confused. The following additional explanation should assist with distinguishing between them. For the purpose of this explanation, LA coastal wetlands are used as an example.

The starting point for rehabilitation is always a degraded wetland, and the endpoint is always a more fully functioning wetland. The purpose of the project is to repair the wetland. There is a gain in overall wetland function, but not in wetland area. Examples include:

- Removing a tide gate that is preventing full flooding of a tidal marsh.
- Removing invasive salt cedar from the banks of a perennial stream and planting native cottonwood and willow.
- Removing culverts (drains) from a cypress-tupelo swamp.
  - Note: if the swamp was entirely drained and no longer a wetland, this type of restoration would be “reestablishment”.

The essential difference between rehabilitation and enhancement is the goal of the project. If the goal is to repair a degraded wetland, that project is “rehabilitation”. If the goal is to increase one specific function of the wetland without regard to the overall functioning of the wetland, that project is “enhancement.”
The starting point for enhancement can be a healthy or degraded wetland. The endpoint is a similar wetland with one specific function increased to provide a specific service. There is a gain in a specific wetland function, but almost always this results in a decrease in other functions. Examples include:

- Installing predator exclusion fencing (increase ground nesting bird habitat function, decrease fox foraging habitat function).
- Diverting additional water to a seasonal wetland, making it semi-permanent (increase waterfowl habitat function, decrease winter wildlife food supply function).
- Following timber harvest in a bottomland hardwood forest, planting fast-growing native hardwoods (cottonwood, sycamore) to accelerate site recovery (increase bird habitat function, decrease forage function associated with slower-growing oaks).