

Mitigation Banking Instrument

***MITIGATION BANK NAME
COUNTY, STATE***

NAME OF BANK SPONSOR

Submitted to:
Interagency Review Team

Representing:
U.S. Army Corps of Engineers, Charleston District
U.S. Environmental Protection Agency, Region 4
U.S. Fish and Wildlife Service, Charleston Ecological Services
National Oceanic and Atmospheric Administration, National Marine Fisheries Service
US Department of Agriculture, Natural Resource Conservation Service
S.C. Department of Natural Resources
S.C. Department of Health and Environmental Control
S.C. Department of Archives and History

PREPARED BY

SUBMISSION DATE

USACE approval of this Instrument constitutes the regulatory approval required for the *[INSERT NAME OF THE MITIGATION BANK OR IN-LIEU FEE PROGRAM]* to be used to provide compensatory mitigation for Department of the Army permits pursuant to 33 C.F.R. 332.8(a)(1). This Instrument is not a contract between the Sponsor or Property Owner and USACE or any other agency of the federal government. Any dispute arising under this Instrument will not give rise to any claim by the Sponsor or Property Owner for monetary damages. This provision is controlling notwithstanding any other provision or statement in the Instrument to the contrary.

I. PROJECT DESCRIPTION

- A. Type and Purpose: Whereas, the purpose of this Banking Instrument is to establish guidelines and responsibilities for the establishment, use, operation, and maintenance of *(Insert Bank Name)*. The Bank will provide compensatory mitigation for unavoidable adverse impacts to Waters of the United States, including wetlands, that result from activities authorized under Sections 401 and 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act, provided such activities have met all applicable requirements and are authorized by the appropriate authority.
- B. Size and Location of Proposed Bank Site and Associated Watershed: *Provide the total acreage of the proposed bank and detailed location including latitude/longitude, address or nearest intersection, city, county, eco-region, and 8-digit Hydrologic Unit Code (HUC).*
- C. Bank Size and Classes of Wetlands or Other Aquatic Resources: *Insert a chart with the length, order, classification, and buffer width for each stream reach; the classification, acreage, minimum/average buffer width and buffer acreage for each wetland area; and total acreage of the bank. You should provide a label for each stream reach/wetland area and separate resources into units based on resource type (stream, wetland) and treatment (restoration, enhancement, preservation).*
- D. Ownership:
1. Identity of Owner: *Provide the name, address, phone number, and e-mail address of owner or legal entity that owns bank site property and a statement of their responsibilities. You must provide a contact name if the owner is a corporation.*
 2. Identity of Sponsor: *Provide the name, address, phone number, and e-mail address for the bank sponsor and a statement of their responsibilities.*
 3. Identity of Long-Term Steward: *Provide the name, address, phone number and e-mail address for the long-term steward and a statement of their responsibilities.*
 4. Identity of Conservation Easement Holder: *Provide the name, address, phone number, and e-mail address for the conservation easement holder (including a contact name).*

II. ESTABLISHMENT OF THE BANK: MITIGATION PLAN

- A. Goals and Objectives: *This section should include a statement regarding your intent to preserve, enhance, restore and/or create wetlands and/or tributaries of (include name of nearest blue-line stream) while providing compensatory mitigation alternatives for impairments of wetlands and streams associated with authorized (permitted) impacts within the approved bank service area. Provide a description of each aquatic resource type and amount that will be provided, the method of compensation (i.e., restoration, establishment, enhancement, and/or*

preservation), and the manner in which the resource functions of the compensatory mitigation project will address the ecological needs of the watershed, ecoregion, physiographic province, or other geographic area of interest.

B. Site Selection: *Provide a description of the factors considered during the site selection process. This should include consideration of watershed needs and the practicability of accomplishing ecologically self- sustaining aquatic resource restoration, enhancement, and/or preservation at the mitigation bank site. In determining the ecological suitability of the mitigation site, consideration must be given to the factors listed below:*

- 1. Hydrological conditions, soil characteristics, and other physical and chemical characteristics of the mitigation site;*
- 2. Watershed-scale features, such as aquatic habitat diversity, habitat connectivity, and other landscape scale functions;*
- 3. The size and location of the compensatory mitigation site relative to hydrologic sources (including the availability of water rights) and other ecological features;*
- 4. Compatibility with adjacent land uses and watershed management plans;*
- 5. Reasonably foreseeable effects the compensatory mitigation project will have on ecologically important aquatic or terrestrial resources (e.g., shallow sub-tidal habitat, mature forests), cultural sites, or habitat for federal or state listed, threatened and endangered species; and*
- 6. Other relevant factors including, but not limited to, watershed development trends (8 and 10-digit HUCs), land use changes in the watershed (8 and 10-digit HUCs), habitat status and trends (8 and 10-digit HUCs), local or regional goals for the restoration or protection of particular habitat types or functions (e.g., re- establishment of habitat corridors or habitat for species of concern), water quality goals in the watershed (8 and 10-digit HUCs) , floodplain management goals, and the relative potential for chemical contamination of the on-site aquatic resources.*

C. Site Protection: *Long-term protection of privately owned compensatory mitigation sites may be provided through real estate instruments such as a conservation easement or the transfer of title to a federal, tribal, state, or local resource agency, or a non-profit conservation organization. For government property, a Memorandum of Agreement or similar mechanism must prohibit incompatible land uses and establish a third party right of enforcement to ensure sufficient protection to the compensatory mitigation site. The method of site protection and the identity of the conservation easement holder, the party that will hold title to the property, or the government agency responsible for managing the property must be included in this section.*

The legal description of the property, a copy of the real estate instrument or management plan, and a Property Assessment Warranty must be referenced and included in an appendix of this document. The Property Assessment and Warranty (PAW) consists of a summary of each recorded or unrecorded lien or encumbrance on, or interest in, the property that may affect the ability of the property owner protect the mitigation bank site. The PAW must clearly state that each lien, encumbrance or other exception to title has been subordinated to the site protection instrument.

The Charleston District's Model Conservation Easement and a sample Property Assessment

Warranty (PAW) are available on our website (<http://www.sac.usace.army.mil>). All proposed changes to the model documents must be clearly identified using track changes or a similar method to facilitate review of these legal documents. Failure to identify changes may result in the document being returned to the bank sponsor without review.

D. Baseline Conditions:

1. **Mitigation Site:** *In order to describe the existing condition of the mitigation site, the bank sponsor will need to research and describe historic conditions, any past modifications to the mitigation site, and any ongoing changes in response to natural disturbances or management practices. The following resources are examples of information that may be used to describe the mitigation site: maps showing the location and boundaries of the bank property, information on current soil conditions, historical and existing hydrologic conditions, historic and existing plant communities, historical and cultural information about the site including past, present and future uses of the property including impacts to resources, jurisdictional determination (provide copy of confirmation and reference appendix for associated data/maps), water quality (for impaired streams, please reference most recent 303D listing information and cause of impairment), and a description of each aquatic resource type (HGM, Cowardin classification, Rosgen stream type, etc. as appropriate) and upland habitat type for the bank site. The baseline information must be sufficient to support the development of the mitigation work plan. For example, a complete copy of longitudinal profile and cross-section data will be necessary to evaluate the existing condition of a stream. This information is required if stream restoration activities are proposed as part of the mitigation plan.*

2. **Reference Site:** *The baseline information gathered by the bank sponsor for the reference site and the mitigation site is used to identify the mitigation site potential and to assist in the development of appropriate performance standards. Therefore, a similar level of effort (see D1 above) is required to describe the existing condition of the reference site. The reference site should be located within the same watershed as the mitigation site. Since the reference site will be monitored throughout the life of the proposed project, it must be located in an area that will not be affected by the proposed restoration activities on the project site or future development of adjacent or nearby properties.*

E. Determination of Credits: *The sponsor should use the most recent version of the Charleston District Guidelines for Preparing a Compensatory Mitigation Plan (Appendix C and D) to estimate the number of mitigation credits that will be generated by the restoration, enhancement, and preservation activities. This section should include a copy of all worksheets and provide information to support the values that were used in the worksheets.*

F. Mitigation Work Plan: *This section should include (as applicable) detailed design plans for the restoration and enhancement units and a description of the proposed activities for each area including existing and proposed elevation and slopes, construction methods, construction schedules, construction sequence, source of water including connections to existing waters and uplands; hydroperiod (seasonal depth, duration, and timing of inundation and saturation), methods for establishing the desired plant community; plans to control invasive plant species; proposed native plant species composition, source of species, plant location map, plant spatial structure, expected natural regeneration, soil profile, source of soils, target soil characteristics, erosion and soil compaction control measures, planned habitat, planned buffer, interpretive signs and/or fences. For stream mitigation projects, the mitigation work plan may also include other relevant information such as watershed size, drainage area, impervious cover percentage, watershed hydrology calculations,*

base-mapping, identification and verification of bankfull stage and discharge, design criteria, conceptual channel alignment, typical bankfull cross-sections, typical in-stream structures, and draft planting plan including planting zones. For buffer enhancement, you must provide target vegetation composition, species list, cumulative density of plantings, and planting schedule. If removing impoundment structures or performing in-stream restoration, please provide detailed and specific information/design plans regarding proposed restoration techniques. Specific units should be determined based on the current status of the wetland or stream and the proposed mitigation treatment. Wetland areas and stream reaches with similar treatments (same assigned values in credit tables) should be included in one unit. All units should be clearly shown on a mitigation unit map.

G. Maintenance Plan: *You should provide a description and schedule of maintenance requirements that will be performed during the 5-year monitoring period to ensure the continued viability of the resource once the initial construction is completed. This may include measures to control predation of mitigation plantings, temporary irrigation to facilitate plant establishment, procedures for conducting supplemental plantings and/or maintenance and repair of structures.*

H. Performance Standards: *Performance standards should be based on the goals of the mitigation plan and must be detailed for each management unit. A management unit should not include more than one aquatic resource type (stream, wetland, etc.) or mitigation method (restoration, enhancement, establishment, or preservation). Performance standards should establish criteria for documenting the degree of success and whether the mitigation site has achieved the desired objectives. The following are typical examples of performance standards:*

Forested Wetland: For areas involving vegetative restoration, plantings should include a diversity of species similar to those found in the reference site at a target density of 210-300 stems/acre and 85% canopy coverage after five years. In addition to survival rate, vegetative success criteria should state that seedlings show a consistent increase in height, lateral growth and root collar diameter throughout the monitoring period.

Hydrology: Wetlands would be considered successfully restored or enhanced when monitoring demonstrates that the degree and duration of flooding has increased over the baseline and is comparable to a suitable reference wetland. In addition, draw down time and base saturation levels should be comparable to a suitable reference wetland. For effectively drained areas, success criteria should include quantitative criteria demonstrating the area meets jurisdictional criteria for vegetation and hydrology and that it is comparable to a reference area.

Stream Restoration: Following 5 years of monitoring and two bank full events, the quantitative data demonstrates that the restored stream is meeting functional performance standards, stream parameters are comparable to an appropriate reference reach, and baseline conditions for stream biology and water quality have been maintained or improved. For units requiring riparian buffer plantings, including buffer enhancement units, vegetative success criteria should indicate that seedlings show a consistent increase in height, lateral growth and root collar diameter throughout the monitoring period in addition to a minimum survival rate of 260 stems/acre and less than 1% invasive species.

This section of the MBI should also describe how the performance standards will be used to verify that the mitigation site is meeting interim success criteria and the objectives have been attained. The target values or range of values for the parameters specified in the performance standards should be calibrated with the reference site(s).

I. Credit Release Schedule: *Please see below for standardized credit release schedule:*

RELEASE	ACTION	PERCENTAGE	CREDITS
Release 1	Approval of MBI, recording of site protection instruments, documentation of signage, and execution of financial assurance documents.	15%	
Release 2	Completion of construction	15%	
Release 3	Interim success 1-year after completion of construction	10%	
Release 4	Interim success 2-years after completion of construction	10%	
Release 5	Interim success 3-years after completion of construction	15%	
Release 6	Interim success 4-years after completion of construction	15%	
Release 7	Determination that all performance standards have been met 5-years after completion of construction	20%	

J. Monitoring Requirements: (5-year minimum) *Monitoring reports should be concise and provide information to describe the site conditions and whether the mitigation project is meeting its performance standards. The report should include a narrative that provides an overview of site conditions and function; design drawings, maps, and photographs to illustrate site conditions, and functional assessments used to provide quantitative or qualitative measures of the functions provided by the mitigation project. Photographs should be formatted to print on a standard 8.5 x 11 sheet of paper, dated, and clearly labeled with the direction from which the photo was taken. Maps should show the location of the mitigation site, habitat types, locations of photographic reference points, transects, sampling data points, and/or other features pertinent to the mitigation site. Additional components of the narrative are:*

- 1. Name of party responsible for conducting the monitoring and the date(s) of the inspection.*
- 2. A brief description of the approved compensatory mitigation plan and the dates when specific mitigation activities were commenced and/or were completed.*
- 3. A paragraph describing whether the mitigation bank is developing as expected. This summary should be supported by a detailed description of each management unit, and whether or not each management unit is developing as expected and meeting the necessary performance standards.*
- 4. If one or more management units are not meeting the necessary performance standards, the bank sponsor must submit a description of the existing condition, identify the reason(s) that the management unit is not meeting performance standards, and submit a proposal to conduct remedial actions and bring the management unit into compliance with the approved MBI.*

5. *Dates of any corrective or maintenance activities conducted since the previous report submission.*

6. *A copy of all data collections and a brief analysis of each collection.*

Monitoring Parameters should include:

1. *For stream restoration, channel stability should be monitored at permanently established monitoring stations. Permanent monumented cross-sections should be installed at a frequency of one per 20 bankfull-widths (should include 50% pools and 50% riffles). A longitudinal profile is required for the entire length of the restored channel. You should provide a copy of all data collected. You should also provide photographic documentation.*

2. *Vegetative monitoring, for all units involving planting, should include measurements of height, lateral growth, and root collar diameter in addition to density of all trees by species; composition, density, DBH, and height of all planted trees to determine survivability and growth rate; density and/or estimated coverage of all exotic species; and composition and estimated coverage of shrub and herbaceous (dominant, 10% or greater coverage) species.*

3. *Benthic macroinvertebrates should be sampled in accordance with SCDHEC qualitative sampling protocols. This data should be collected and analyzed by a state certified lab at permanently established monitoring stations located at the most upstream and downstream limits of the bank and at additional stations within the bank located downstream of each restoration reach. Biotic index, abundance, diversity, and the species list for each station should be provided in the monitoring report.*

4. *Water quality data should include, but is not limited to, the following parameters: pH, dissolved oxygen, temperature, conductivity, hardness. This data should be collected and analyzed by a state certified lab at permanently established monitoring stations located at the most upstream and downstream limits of the bank and at additional stations within the bank located downstream of each restoration reach.*

5. *Hydrology data: Monitoring wells should have corresponding rain gauges to show duration of saturation. For guidance on the installation of monitoring wells for wetland hydrology, please reference ERDC standards:*

<http://el.erdc.usace.army.mil/elpubs/pdf/tnwrap06-2.pdf>

<http://www.wes.army.mil/el/wrap/pdf/tnwrap00-2.pdf>

K. **Long-term Management Plan:** *This section describes activities that are expected to occur after all of the compensatory mitigation activities are completed and the mitigation plan is determined to be successful. Unlike maintenance activities that facilitate the development of the mitigation site during the operation of the mitigation bank, the long-term management plan should address activities that are required to ensure that the mitigation site continues to provide aquatic resource functions and services in perpetuity.*

1. Ownership of the Mitigation Site: *The long-term management plan should state whether the existing property owner plans to convey the mitigation site to an appropriate conservation group or government agency, and the method for ensuring that the new property owner(s) understands their responsibility to protect the mitigation site in perpetuity (if applicable).*

2. Identity of Long-Term Steward: *Identify the name and contact information for the long-term steward and a statement of their responsibilities.*

3. Identification of Long Term Management Activities: *You must provide a list of the activities required to ensure that the mitigation site will continue to provide the desired aquatic resource functions and services.*

4. Funding Mechanism: *You must provide a detailed description of the funding mechanism that will be used to provide long-term management funds.*

5. Justification for Level of Funding: *The Long-Term Steward is responsible for conducting the long-term management activities described above. The long-term management fund must provide a secure funding source for future maintenance, repair, and monitoring requirements. This justification must be based on real world estimates of the money required to manage the site in perpetuity. Quotes gathered for the estimate of restoration/enhancement costs may be used to generate this number. The amount should include monies for habitat work, infrastructure, and monitoring along with any other requirements. The amount agreed upon between the Bank Sponsor and the IRT or the amount agreed upon between the Bank Sponsor and Long-Term Steward, WHICHEVER IS HIGHER, shall be used to fund the account.)*

L. Adaptive Management: In the event the mitigation bank, a phase of the bank, or a specific management unit fails to achieve the necessary performance standards as specified in the MBI, the bank sponsor shall notify the members of the IRT and work with the IRT to develop contingency plans and remedial actions for review and approval.

M. Financial Assurances: The sponsor shall provide financial assurances in the form of a Performance Bond, Letter of Credit, or Casualty Insurance for the mitigation banking activities. The financial assurance document shall assure performance of the Sponsor's obligation to complete the restoration and enhancement activities as described in MBI during the operational phase of the mitigation bank. The bond or credit amount shall be based on estimated construction costs including monitoring, and the Corps will release the financial assurances after documentation and approval of construction and monitoring success. Banker must notify Corps 120 days prior to termination of financial assurances.

You must identify the party responsible for establishing and managing the financial assurance, the specific type of financial instrument, the method used to estimate assurance amount, the date of establishment, and the release and forfeiture conditions. Documentation of estimated construction costs must be provided in a separate appendix of this document. All financial assurance documents must be reviewed and approved by the Corps prior to execution.

III. OPERATION OF THE BANK

A. Reporting Requirements: Once the MBI is approved, the bank sponsor is responsible for coordination with the IRT regarding the implementation of the approved mitigation plan. The bank sponsor should contact the Corps immediately if they are unable to implement all or a

portion of the approved mitigation plan in accordance with the approved MBI. *For example, the bank sponsor should notify the IRT if adverse weather conditions or site conditions result in delays to the overall project schedule and/or may result in a request to modify the approved mitigation plan.* Failure to comply with the MBI or the terms and conditions of the DA permit authorizing restoration activities associated with the mitigation bank will result in a notification of non-compliance and a requirement for corrective measures.

B. Provisions for the Release of Mitigation Credits: Once the MBI has been approved, and the sponsor has submitted documentation of signage, a copy of the approved and recorded site protection instruments, and the original copy of the approved and executed financial assurance documents, the bank sponsor may request an initial credit release for the mitigation bank to provide compensatory mitigation for projects authorized under Section 404 and 401 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. The bank sponsor may request additional credit releases as the mitigation site achieves the necessary interim performance standards.

C. Provisions for the Sale and Transfer of Credits: Once the Corps receives documentation from the bank sponsor stating that they agree to accept responsibility for a permittee's compensatory mitigation requirements, the bank sponsor is responsible for assuring that the appropriate number and resource type of credits are protected in perpetuity.

D. Accounting Procedures: The bank sponsor is responsible for providing the bank manager with a statement for each transaction at the time of the sale. The statement must include the values assigned to the kind and location factors in order to determine the acreage/linear feet used by the transaction. In addition, the bank sponsor must submit an annual ledger describing each action, the date of sale, the Corps permit number or other Federal, State or local action or permit number, the number of acres used and credits used from each unit of the mitigation bank, total credits released, total acres/LF and credits used and total acre/LF and credits remaining. The following is a sample ledger that may be used to track mitigation credit sales:

No.	Sale Date	Permit No.	Acres/LF Used	Credits Used	Total Acres Used	Total Acres/LF Used	Total Available Acres/LF	Total Available Credits
1								
2								
3								
4								
5								
6								
7								

E. Provisions Covering the Use of the Land: Use of the land will be restricted as detailed in the site protection instrument ([Appendix ___](#)).

F. Eminent Domain: In the event all or part of this property is taken by exercise of the power of Eminent Domain or acquired by purchase in lieu of condemnation, whether by public, corporate, or other authority, so as to terminate the conservation easement in whole or in part, the mitigation bank sponsor is responsible for replacing lost stream and/or wetland mitigation credits with in-kind mitigation credits.

G. Provisions for Deficit: If the Corps determines that the bank is operating at a deficit, debiting of credits by the sponsor shall immediately cease, and the authorizing agencies, in consultation with the IRT and the sponsor, will determine necessary remedial actions to correct the situation. As determined by the IRT and the sponsor, if conditions at the bank site do not improve or continue to deteriorate within one growing season from the date that the need for remediation was first identified in writing to the sponsor by the Corps, the agent responsible for the financial assurances may transfer, to an acceptable party, the amount necessary to undertake corrective measures to correct the deficiency.

H. Provisions For Bank Termination: If the Corps determines that the Sponsor is in material default of any provision of this Agreement, the Corps may notify the Sponsor that the sale or transfer of mitigation credits will be suspended on all banks owned by the Sponsor until the appropriate deficiencies have been remedied. Upon notice of such suspension, the Sponsor agrees to cease all sales or transfers of mitigation credits until the Corps informs the Sponsor that sales or transfers may be resumed. Failure of the Sponsor to remedy deficiencies in a timely manner may result in termination of the MBI and any subsequent Bank operations.

I. Force Majeure Clause: Nothing herein shall be construed to authorize proceedings against the bank sponsor for any damages to the bank property caused by acts of God such as earthquake, fire, flood, storm, war, civil disturbance, strike, or similar causes. In the event of a force majeure event, the bank sponsor will notify the members of the IRT and work with the IRT to resolve the damages, if any, caused by the event. However, if the acts of God do not preclude the bank sponsor from resuming bank operations without unreasonable expense, then it shall not be relieved of its obligations under this document. Any impact to future credit releases or numbers of credits available for sale shall be discussed and determined by the IRT at that time.

IV. OTHER INFORMATION

A. Table of Contents: *Provide a table of contents corresponding to the outline above listing all tables, figures, and appendixes, and the page numbers where this information is located within the document. Maps and figures should be included in Appendix 1. Tables and other Appendixes should be located in the rear of the document. When referencing a map, figure, table or other appendixes in the MBI, you must include the page number and Appendix number.*

B. Maps and Figures: *Provide a north arrow and the boundaries of the proposed bank (unless the map is of a specific area of the bank).*

1. Location Map: *Provide a map at lower magnification showing location of property at the county/state level and a map at higher magnification showing location at property at street level. Include street names.*
2. Watershed Map: *Outline watershed boundaries for 8-digit HUC.*
3. Photographs: *Include historic and recent aerials and representative photographs of the current site conditions.*
4. Delineation Map of on-site jurisdictional waters: *Must be verified by the Corps.*
5. NRCS Soils Map: *Include a list and description of the on-site soils.*
6. NWI Map: *National Wetlands Inventory.*

7. USGS 7.5 Topographical Map: *Include name of quad(s).*
8. Service Area Map
9. Map showing restoration, enhancement, preservation, and upland buffer areas: *Provide width of all buffer areas and include any on-site easements. Provide in large format.*
10. Map showing location of sampling sites, reference wells, monitoring wells, and rain gauges: *Provide latitude/longitude of locations.*
11. Reference Site Maps: *Provide numbers 1, 2, 3, 5, 6, 7, and 10 for all reference sites.*

C. Tables and/or other Appendixes:

1. Implementation Timeline
2. Wetland/Stream Functional Assessment: *Specify method used and provide assessment sheets notated with location and date of assessment*
3. Wetland/Stream Baseline and Reference Conditions: *Include physical, chemical, and biological data (by reach and/or wetland area)*
4. Wetland and/or Stream Credit Worksheets
5. Credit Release Schedule
6. Conservation Easement
7. Wetland Delineation
8. Financial Assurance documents
9. Cost Basis for Financial Assurances
10. FWS letter of concurrence
11. SHPO letter of concurrence
12. Data collections and analysis: *Mitigation and Reference Sites*
13. Design Plans