

## APPENDIX A: DEFINITIONS:

### 1. GENERAL TERMS

**Aggradation:** The geologic process by which stream beds, floodplains, and the bottom of other water bodies are raised in elevation by the deposition of sediment. The opposite of degradation.

**Baseline information:** Information (contained in the site plan or application) pertaining to the mitigation or impact site as it is prior to any alterations. The site plan should include a written statement that defines the location of the proposed mitigation site in relation to the aquatic resource area to be impacted, size, type, and functions.

**Braided Channel:** A stream that is characterized by random interconnected channels divided by islands or bars. Sand bars, which divide the stream into separate channels at low flows, are often submerged at high flow.

**Buffer Zone:** A transitional zone that provides a vegetated area between the mitigation site and the adjacent developed land.

**Channel Stabilization:** A stable channel is neither progressively aggrading nor degrading, or changing its cross-sectional area through time. It could aggrade (deposition of sediment) or degrade slightly, but over the period of a year, the channel would remain similar in shape and dimensions and position to previous times. Unstable channels are depositing or eroding in response to some exterior conditions.

**Compensatory Mitigation:** For purposes of Section 10/404 compensatory mitigation is the restoration, creation, enhancement, or in exceptional circumstances, protection/maintenance (when used in conjunction with other mitigation forms) of wetlands and/or other aquatic resources for the purpose of compensating for unavoidable adverse impacts that remain after all appropriate and practicable avoidance and minimization has been achieved. (33 CFR 330)

**Conservation easement:** A non-possessory interest of a holder in real property imposing limitations or affirmative obligations the purposes of which include retaining or protecting natural, scenic, or open-space values of real property, assuring its availability for agricultural, forest, recreational, or open-space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving the historical, architectural, archaeological, or cultural aspects of real property. This being to protect, preserve, maintain, and manage Waters of the US, riparian buffers, and associated uplands for their ecological functions.

**Credit:** A unit of measurement, e.g., a functional capacity unit in the Hydrogeomorphic Assessment Method, representing the gain of aquatic function at a compensatory mitigation site; the measure of function is typically indexed to the number of acres or linear feet of resources restored, established, enhanced, or protected as compensatory mitigation.

**Cross section:** Depicts the shape of the channel in which a stream flows. Measured by surveying the streambed elevation across the stream on a line perpendicular to the flow.

**Debit:** A unit of measure, e.g., a functional capacity unit in the Hydrogeomorphic Assessment Method, representing the loss of aquatic function at a project site; the measure of function is typically indexed to the number of acres or linear feet impacted by issuance of the permit.

**Deed restriction:** A limitation placed on the use or enjoyment of property. A written statement made part of a deed, which prohibits specified activities on a mitigation site. Legal mechanisms by which to impose deed restrictions are conservation easements and restricted covenants. The deed restriction serves notice to potential purchasers, offerers, or grantees, that certain activities are restricted on the mitigation site that may alter the ecological integrity of the site.

**Degradation:** The geologic process by which stream beds, floodplains, and the bottoms of other water bodies are lowered in elevation by the removal of sediment. The opposite of aggradation.

**Demonstrable threat:** The loss or substantial degradation of the wetland or stream due to human activities that might not otherwise be expected.

**Department of the Army Permit:** The required authorization for the discharge of dredged or fill material into waters of the United States, including wetlands, issued by the Army Corps of Engineers, pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899.

**Deposition:** The mechanical or chemical processes through which sediment accumulate in a (temporary) resting place. The raising of the stream bed by settlement of moving sediment that may be due to local changes in the flow, or during a single flood event.

**Discharge:** The volume of fluid or solid passing a cross section of a stream per unit of time. Also, the placement of dredged or fill material into Waters of the US, including wetlands.

**Duration:** The amount of time an impact is expected to last.

**Temporary:** Impacts that will occur only for a short time, typically less than 6 months, and the system's integrity is expected to recover once the permitted activity has been completed.

**Permanent:** Impacts that will occur longer than 6 months or will occur during spawning/growth periods for Federal and State protected species.

**Enhancement:** The manipulation of the physical, chemical, or biological characteristics of a wetland or stream (relatively undisturbed) site to heighten, intensify, or improve specific function(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for a specified purpose(s) such as water quality improvement, flood water retention, or wildlife habitat. Enhancement results in a change in wetland or stream function(s) and can lead to a decline in other wetland functions, but does not result in a gain in wetland acreage or linear feet of streams. This term includes activities commonly associated with enhancement, management, manipulation, and directed alteration. The most favorable types of enhancement are:

- Improving the wetland or stream hydrology at sites that have been significantly modified through tile drainage or ditch drainage (channelization), increased sediment load, and other forms of man-made alteration.
- Improving the diverse native plant communities where the original plant community has been totally destroyed, and the site is currently farmed or has re-vegetated with invasive and/or exotic species such as reed canarygrass, cattails, purple loosestrife, etc.
- Improving deep marsh habitat, (i.e. PEMF), through shallow impoundments, where the purpose is to create hemi-marsh conditions. This approach is appropriate at sites that

have been significantly altered through partial drainage, and consist largely of dense monotypic stands of cattails or other aggressive species.

*NOTE:* The site plan/ banking instrument must specify which aspects of wetland functions would be increased as a result of the enhancement actions, the level to which they would be increased, and the scientific basis for expecting the increase.

**Erosion:** The process by which the surface of the earth is worn away by the action of water, glaciers, winds, waves, etc.

**Establishment:** (Formally called creation). The manipulation of the physical, chemical, or biological characteristics present to develop a wetland or stream on an upland or deepwater site, where a wetland or stream did not previously exist. Establishment results in a gain in wetland acres or linear feet of stream

**Financial Assurances:** Sufficient funds or other financial assurances needed to be present to cover contingency actions in the event of default by the applicant or bank sponsor for failure to meet success criteria. Accordingly, projects posing a greater risk of failure should have comparatively higher financial sureties in place. Financial assurances may be in the form of performance bonds, irrevocable trusts, escrow accounts, casualty insurance, letters of credit, legislatively enacted dedicated funds for government operated banks or other approved instruments. Such assurances may be phased out or reduced, once it has been demonstrated that the project is functionally mature and/or self-sustaining in accordance with success criteria.

**Floodplains:** The land next to a stream where water overflows during floods. Floodplains can spread out and slow flood waters to reduce erosion, to allow for water to seep into the ground water, and to filter sediment from the water.

**Force Majeure:** Unexpected and disruptive forces of nature that are beyond the control of the sponsor and could excuse the sponsor from certain responsibilities (not all responsibilities) of the mitigation/bank. The appropriate COE representative (project manager or banking chair) will make the final determination in consultation with the State program manager, District Mitigation Coordinator, and/or the Mitigation Banking Review Team. Typically damages caused by floods, droughts, muskrat/geese and storms are not considered disruptive forces.

**Functional Assessment Methodology:** The descriptive method used to evaluate the self-sustaining functions of a wetland or stream ecosystem that exist in the absence of society. Functions result from both living and non-living components of a specific wetland or stream. Functional assessment is measured by changes in indicators such as acres/linear feet of habitat, water chemistry, or river cross-section. The purpose of a functional assessment is to measure the level of performance in the hydrological, chemical, and biological properties and processes occurring in wetland or stream ecosystems.

**Functions:** The ecological (physical, chemical and biological) processes or attributes of a wetland or stream without regard for their importance to society or for the values society places on them. Functions include hydrologic flux and storage, biological productivity, biogeochemical cycling and storage, decomposition, community/wildlife habitat, etc.

**Goals of the mitigation:** The mitigation plan should include a written statement of environmental goals and objectives. The goals should discuss the aquatic resource type (e.g. Cowardin

classification, Hydrogeomorphic (HGM) class of wetlands or Rosgen class for streams) and the function of the aquatic resources anticipated to be impacted and to be developed at the mitigation sites.

**Growing Season:** The period at which plants actively grow and the threat of freezing temperatures is unlikely.

**Hemi-marsh:** A wetland stage that contains equal amounts of emergent vegetation to open water. For wildlife, this stage usually creates the highest species diversity and density.

**In-Kind Mitigation:** Impacted wetland/stream functions replaced with the same or similar wetland/stream functions within the same subclass classification and within the same water regime modifier.

**Minimum Evaluation Criteria:** These are the set of basic criteria ranges created to assist the Project Manager or MBRT in determining success criteria.

**Mitigation:** Council for Environmental Quality (CEQ) defines mitigation as (1) avoiding the impact altogether by not taking certain actions; (2) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (3) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating the impact over time by preservation and maintenance operation during the life of the action; and (5) compensating for the impact by replacing or providing substitute resources or environments (40 C.F.R. Sec. 1508.20 [1989]). Also see Regulatory Guidance Letter 01-2 (24 Dec 2002).

**Mitigation Work Plan:** See Site Plan

**Monitoring:** A specific program of annual data collection which documents the physical, chemical, and biological characteristics of the mitigation/bank, for the purpose of determining compliance with success criteria contained in the mitigation bank instrument/permit conditions. Typical monitoring periods for wetland and stream mitigation sites are five to ten years (depending on the type of wetland/stream class/system). (See Appendix G)

**Morphologic change (streams):** To channelize, dredge, or otherwise alter the established or natural dimensions, depths, or limits of a stream corridor.

**Out-of-Kind Mitigation:** Impacted wetland/stream functions replaced with functions from a mitigation project that does not replace the same wetland/stream functions. The replacement wetland/stream functions possess different physical and biological characteristics. Usually not within the same subclass and/or water regime modifier.

**Pools:** Feature located on the outside bends of meanders or between riffles. The pool has a flat slope and is much deeper than the average channel depth.

**Practicable:** Available and capable of being done after taking into consideration cost, existing technology, existing habitat impacts, and logistics in light of the overall project purpose.

**Prior-Converted Cropland (PC):** Wetlands that before December 23, 1985, were drained, dredged, filled, leveled, or otherwise manipulated including the removal of woody vegetation, for the purpose of, or to have the effect of making the production of an agricultural commodity possible and an agricultural commodity has been produced at least once before December 23, 1985.

If the “PC” still maintains all wetland criteria and would still be considered a wetland except for the fact that the area fell under NRCS’s determination (prior to the bank), then protection would be the appropriate ratio type.

If, on the other hand, the “PC” does not maintain all wetland criteria and some sort of restoration (re-establishment or rehabilitation), enhancement or functional lift could be applied, and then the corresponding ratio type would be used.

**Protection/Maintenance:** (Formerly called preservation). The removal of a threat to, or preventing the decline of, wetland or stream conditions by an action in or near a wetland or stream. Includes purchase of land or easements, repairing water control structures or fences, or structural protection such as repairing a barrier island, etc. This term also includes activities commonly associated with the term preservation. Protection/Maintenance does not result in a gain of wetland acres or linear feet of stream. In addition, wetland/stream protection may include the protection of upland buffer areas adjacent to the wetland or stream as necessary to insure protection.

**Restoration:** The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions of a former wetland or stream. For the purpose of tracking net gains in wetland/stream acres/linear feet, restoration is divided into:

**1. 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 wetland or stream. Re-establishment results in rebuilding a former wetland/stream and results in a gain in wetland/stream acres/linear feet.

**2. Rehabilitation:** The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions of a degraded wetland or stream. Rehabilitation results in a gain in wetland/stream function but does not result in a gain in wetland acres or in stream linear feet.

**Riffle:** A bed feature, usually between bends, where the water depth is relatively shallow and the slope is steeper than the average slope of the channel. At low flows, water moves faster over riffles, which provides oxygen to the stream. Riffles can be found entering and exiting meanders and this substrate controls the streambed elevation until it is eroded through.

**Sinuosity:** A measure of meander ‘intensity’. Computed as the ratio of the length of a stream measured along its centerline to the length of the valley through which it flows. The degree of curve of a stream is related to channel dimensions, sediment load, stream flow and the bed and bank materials.

**Stream Pattern:** The sinuosity or meander geometry of a stream. Variables that are commonly measured include sinuosity, meander wavelength and width ratio, belt width, and radius of curvature. Naturally stable streams typically tend to wind or curve around within the floodplain.

**Stable Stream:** A stream system that can transport the sediment load and flows produced by its watershed. Stream energy is used to move water and carry sediment and to maintain a consistent dimension, pattern and profile over time.

**Stream bank erosion:** The removal of bank material by the force of flowing water causes failure of stream banks.

**Success Criteria (Ecological based):** The standards required to meet the objectives for which mitigation/bank was established to include, but not limited to, hydrology, soil condition and vegetative community. These success criteria should be sustainable. The success criteria are specific to each permit or banking instrument. (Note: Minimum Evaluation Criteria is the set of basic criteria ranges created to assist the MBRT in determining success criteria.)

**Stream Flow:**

**Peak flow:** The greatest flow in a stream.

**Base flow:** The lowest flow in a stream.

**Stream Types:** (33 CFR 330)

**Perennial:** Has flowing water year-round during a typical year. The water table is located above the streambed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall (precipitation) is a supplemental source of water for stream flow.

**Intermittent:** Has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall (precipitation) is a supplemental source of water for stream flow.

**Ephemeral:** Has flowing water only during and for a short duration after, precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall (precipitation) is the primary source of water for stream flow. (NW Notice 15 Jan 2002, vol. 67).

**Waters of the United States:** Those areas including wetlands that are subject to Corps regulatory authority pursuant to Section 404 of the Clean Water Act, as defined at 33 CFR Part 328.3(a).

**Watershed:** A topographically defined area drained by a river/stream or system of connecting rivers/streams such that all outflow is discharged through a single outlet.

## **2. MITIGATION BANKING TERMS**

**Authorizing Agency:** A Federal, U.S. Army Corps of Engineers (Corps) and/or the Natural Resource Conservation Service (NRCS), or Tribal agency that has authorized the use of a mitigation bank as compensation for an authorized activity. The authorizing agency will typically have the enforcement authority to ensure that the terms and conditions of the banking instrument are satisfied. Also referred to as the ‘regulatory authority’.

**Bank Operational Life:** The period during which the terms and conditions of the enabling instrument are applicable, and signatories of the instrument are responsible for carrying out its provisions. With the exception of arrangements that are required for the long-term management and protection of wetlands in the bank, the bank’s operational life terminates at the point when (1) bank credits have been exhausted or banking activity is voluntarily terminated with written notice by the bank sponsor provided to the ‘regulatory authority’ and any other signatories to the Agreement, and (2) it has been determined by the ‘regulatory authority’ that wetlands in the fully debited bank are functionally mature (i.e., self-sustainable).

**Bank Site:** The geographic location of an individually created, restored (re-establishment or rehabilitation), enhanced, or protected wetland that serves as the physical resource used to generate bank credits.

**Bank Sponsor:** Any public or private entity responsible for establishing and, in most circumstances, operating a mitigation bank.

**Consensus:** A process by which a group synthesizes its concerns and ideas to form a common collaborative agreement acceptable to all members. While the primary goal of consensus is to reach agreement on an issue by all parties, unanimity may not always be possible.

**Credit:** A unit of measurement representing the accrual or attainment of wetland functions at a mitigation bank. This can be indexed by either the number of acres restored, created, enhanced, or preserved or by functional capacity units. (Where there is a mix of ecological factors, open water, wetland, etc., that contribute to the sustainable success of the mitigation then all combined features will be included in the 'credit'.)

**Debit:** A unit of measure corresponding to the loss of aquatic acres/functions usually represented in a mitigation bank ledger as a withdrawal ("debit") of pre-credit/credit(s) aimed at offsetting those aquatic losses.

**Geographic Service Area:** The service area of a mitigation bank is the designated area wherein a bank can reasonably be expected to provide appropriate compensation for impacts to wetlands and/or other aquatic resources. Boundaries are usually expressed as an eight-digit hydrologic unit (HUC).

**Instrument:** A developed document by the bank sponsor in coordination with the Mitigation Bank Review Team (MBRT) to describe in detail the physical and legal characteristics of the bank. The instrument includes, but is not limited to, how the bank will be established and operated, monitor methods and schedule, etc. The document is subject to concurrence of the MBTR and is the enabling document for the bank. (See Appendix F)

**Ledger:** Document to be used in the accounting of credits and debits. The ledger will be maintained by the bank sponsor and reviewed by the 'regulatory authority'.

**Mitigation Bank:** A system of accounting for wetland loss and compensation, which can include one or more wetland mitigation sites. It is a site where wetlands are restored, enhanced, created, or in rare circumstances, preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.

**Mitigation Bank Review Team (MBRT):** An interagency group of Federal, state, tribal and/or local regulatory resource agency representatives who are signatory to a banking instrument and oversee the establishment, use, and operation of a mitigation bank. Commonly called MBRT.

**Pre-credits:** Credits that can be debited prior to the mitigation site meeting the 1987 manual criteria and/or being ecologically sound. Pre-credits typically have a higher ratio than certified credits due to the temporal loss associated with them. The Omaha District has a 30% ceiling on such releases. (See Page C8).

**Prospectus:** A preliminary plan for a wetland mitigation bank prepared by a prospective sponsor and submitted for consideration to MBRT and other principals involved in the review and approval of banks. (See Appendix E)

**Protection (Site):** (Formerly called perpetuity): A written discussion of the means of protecting the mitigation bank site. Methods include, but are not limited to, conservation easements, or deed restrictions. Generally, state or local government, other Federal agencies such as the Fish and

Wildlife Service, or non-governmental groups such as The Nature Conservancy holds conservation easements or land trusts.

**Site Plan**: A detailed plan for each mitigation bank site that identifies all actions that will be undertaken to generate bank credits. Representative elements of the site development plan include plans for site grading, re-vegetation, erosion control, structures, management, and monitoring.