



**US Army Corps  
of Engineers**  
St. Paul District

**INTERAGENCY MEMORANDUM OF  
UNDERSTANDING**  
  
**WETLAND MITIGATION GUIDELINES**



This Memorandum of Understanding (MOU) is made and entered into by the Minnesota Board of Water and Soil Resources and the U.S. Army Corps of Engineers.

**WHEREAS**, the Minnesota Board of Water and Soil Resources has state oversight responsibilities for the Wetland Conservation Act and the rules through which it is implemented (Minnesota Rules Chapter 8420);

**WHEREAS**, the U.S. Army Corps of Engineers administers Section 404 of the Clean Water Act, which regulates the discharge of dredged or fill material into waters of the United States. Under Section 10 of the Rivers and Harbors Act, the Corps also regulates any work done below the ordinary high water mark of traditionally navigable waters,

**WHEREAS**, these State and Federal authorities regulate impacts to wetlands/waters and require that unavoidable impacts be offset through compensatory mitigation;

**WHEREAS**, increased efficiency and effectiveness in program administration, reduced cost to the governments that administer these programs, and reduced cost for the regulated public can be gained through increased consistency between and among these State and Federal agencies;

**WHEREAS**, the discussions over how to reconcile programmatic differences have led to proposals to increase state and federal program consistency in the following areas:

- Criteria for the use of preservation as a wetland mitigation option;
- Mitigation credit for stream restoration;
- In lieu fee mitigation;
- Definition of in kind, in place, and in advance for wetland mitigation;
- Options for mitigation credit, including credit for water quality treatment areas; and
- Mitigation ratios.

**THEREFORE**, the undersigned agencies concur that it is in the public interest to implement changes to bring their programs into conformance with the wetland mitigation requirements that are contained within the "Wetland Mitigation Guidelines" and hereby incorporated into this MOU.

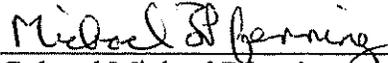
**GENERAL.**

1. The policies and procedures contained within this MOU do not create any rights or obligations, either substantive or procedural, enforceable by any party or any third party. Deviation or variance from the wetland mitigation guidance included in this MOU will not constitute a defense for violators or others concerned with any State or Federal action.

2. Nothing in this MOU is intended to diminish, modify, or otherwise affect statutory or regulatory authorities of any signatory agencies. All formal guidance interpreting this MOU and background materials upon which this MOU is based will be issued after consultation with the signatory agencies.
3. All responsibilities identified in this MOU are subject and dependent on the availability of sufficient funds appropriated and allocated for that purpose.
4. This MOU will take effect on the date of the last signature below and will continue in effect until modified or revoked by the signatory agencies.
5. This MOU is based on the state and federal authorities as they exist on the date of signature. Subsequent changes to these authorities are not binding on the parties to this MOU.

  
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Randy Kramer  
Chair  
Minnesota Board of Water and Soil Resources

5/20/07  
Date

  
\_\_\_\_\_  
Colonel Michael Pfenning  
District Engineer and Commander  
St. Paul District  
U.S. Army Corps of Engineers

16 May 2007  
Date

Attachment: Wetland Mitigation Guidelines



**US Army Corps  
of Engineers**  
St. Paul District

## **Wetland Mitigation Guidelines** For the State of Minnesota



### **Introduction.**

The Minnesota Board of Water and Soil Resources (BWSR) and the U.S. Army Corps of Engineers (COE), St. Paul District have been leading discussions for the past two years on streamlining wetland compensatory mitigation requirements under the Minnesota Wetland Conservation Act and Section 404 of the Clean Water Act. The purpose of this effort is to increase state and federal regulatory consistency with the resulting programmatic and natural resource benefits.

These guidelines between BWSR and COE represent the programmatic changes that will be pursued to implement the Wetland Mitigation Guidelines. Each agency will make a good faith effort to implement these guidelines, but strict adherence to these guidelines is beyond the authority of the agencies to guarantee.

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### **1. *ISSUE*** – Use of preservation as a wetland mitigation option.

#### **GUIDELINES BETWEEN BWSR AND COE:**

- Wetland to be preserved must be under demonstrable threat. Demonstrable threat is defined as follows: A proposed activity or potential activity(-ies) that would degrade or destroy wetland functions that are important to the watershed. Examples that document demonstrable threat include an approved development plat, approved building permit, zoning change or USDA authorization to fill/drain a non-jurisdictional wetland. Important functions can be determined by a functional assessment (e.g. MnRAM 3.0)
- Replacement credit is awarded at minimum 8:1 ratio or 12.5% (1 acre replacement credit for every 8 acres preserved)
- Preservation should be the last priority for compensatory mitigation
- Preservation may be considered for replacement credit statewide

### **2. *ISSUE*** – Mitigation credit for stream restoration

#### **GUIDELINES BETWEEN BWSR AND COE:**

- Stream restoration projects confined to the channel (the area between the ordinary high water marks on each bank) should not be used as wetland mitigation. Stream restoration projects that include restoration of adjacent riparian wetlands are eligible to receive credit for the area of wetlands restored, enhanced, or created as part of the stream restoration project.

**3. ISSUE** – In-Lieu Fee (ILF) Mitigation

**GUIDELINES BETWEEN BWSR AND COE:**

- BWSR and the Corps do not support allowing in lieu fee mitigation to be used as a standard wetland mitigation option under the regulatory programs. However, discussions will continue between the Corps and BWSR regarding special circumstances where in lieu fee mitigation may be appropriate, such as for large impacts and enforcement penalties or after the fact compensatory mitigation.

**4. ISSUE** – Definition of In-kind, In-place and In-advance for wetland mitigation

**A. GUIDELINES BETWEEN BWSR AND COE – IN-KIND:**

- BWSR and the Corps support using the “Wetland Plant Community Types” by S. Eggers and D. Reed that will establish 12 wetland types for purposes of determining in-kind wetland mitigation. This will require establishing guidelines on how to translate these wetland types with those currently recognized in the WCA rule. (See table shown below)

<b>Wetland Plant Community Types<sup>1</sup></b>	<b>Classification of Wetlands and Deepwater Habitats of the United States (Cowardin <i>et al.</i> 1979)</b>	<b>Fish and Wildlife Service Circular 39 (Shaw and Fredine 1971)</b>
Shallow, Open Water	Palustrine or lacustrine, littoral; aquatic bed; submergent, floating, and floating-leaved	Type 5: Inland open fresh water
Deep Marsh	Palustrine or lacustrine, littoral; aquatic bed; submergent, floating, and floating-leaved; and emergent, persistent and nonpersistent	Type 4: Inland deep fresh marsh
Shallow Marsh	Palustrine; emergent; persistent and nonpersistent	Type 3: Inland shallow fresh marsh
Sedge Meadow	Palustrine, emergent; narrow-leaved persistent	Type 2: Inland fresh meadow
Fresh (Wet) Meadow	Palustrine; emergent; broad- and narrow-leaved persistent	Type 1: Seasonally flooded basin or flat; Type 2: Inland fresh meadow
Wet to Wet-Mesic Prairie	Palustrine; emergent; broad- and narrow-leaved persistent	Type 1: Seasonally flooded basin or flat; Type 2: Inland fresh meadow
Calcareous Fen	Palustrine; emergent; narrow-leaved persistent; and scrub/shrub, broad-leaved deciduous	Type 2: Inland fresh meadow Type 6: Shrub swamp
Open Bog or Coniferous Bog	Palustrine; moss/lichen; and scrub/shrub; broad-leaved evergreen, and forested; needle-leaved evergreen and deciduous	Type 8: Bog

Shrub-Carr or Alder Thicket	Palustrine; scrub/shrub; broad-leaved deciduous	Type 6: Shrub swamp
Hardwood Swamp or Coniferous Swamp	Palustrine; forested; broad-leaved deciduous; needle-leaved evergreen and deciduous	Type 7: Wooded Swamp
Floodplain Forest	Palustrine; forested; broad-leaved deciduous	Type 1: Seasonally flooded basin or flat
Seasonally Flooded Basin	Palustrine; flat; emergent; persistent and nonpersistent	Type 1: Seasonally flooded basin or flat

<sup>1</sup> Plant communities are based on: S. Eggers and D. Reed. 1997. *Wetland Plants and Plant Communities of Minnesota and Wisconsin. Second Edition.* St. Paul District, U.S. Army Corps of Engineers. 264 pp.

**B. GUIDELINES BETWEEN BWSR AND COE – IN-ADVANCE:**

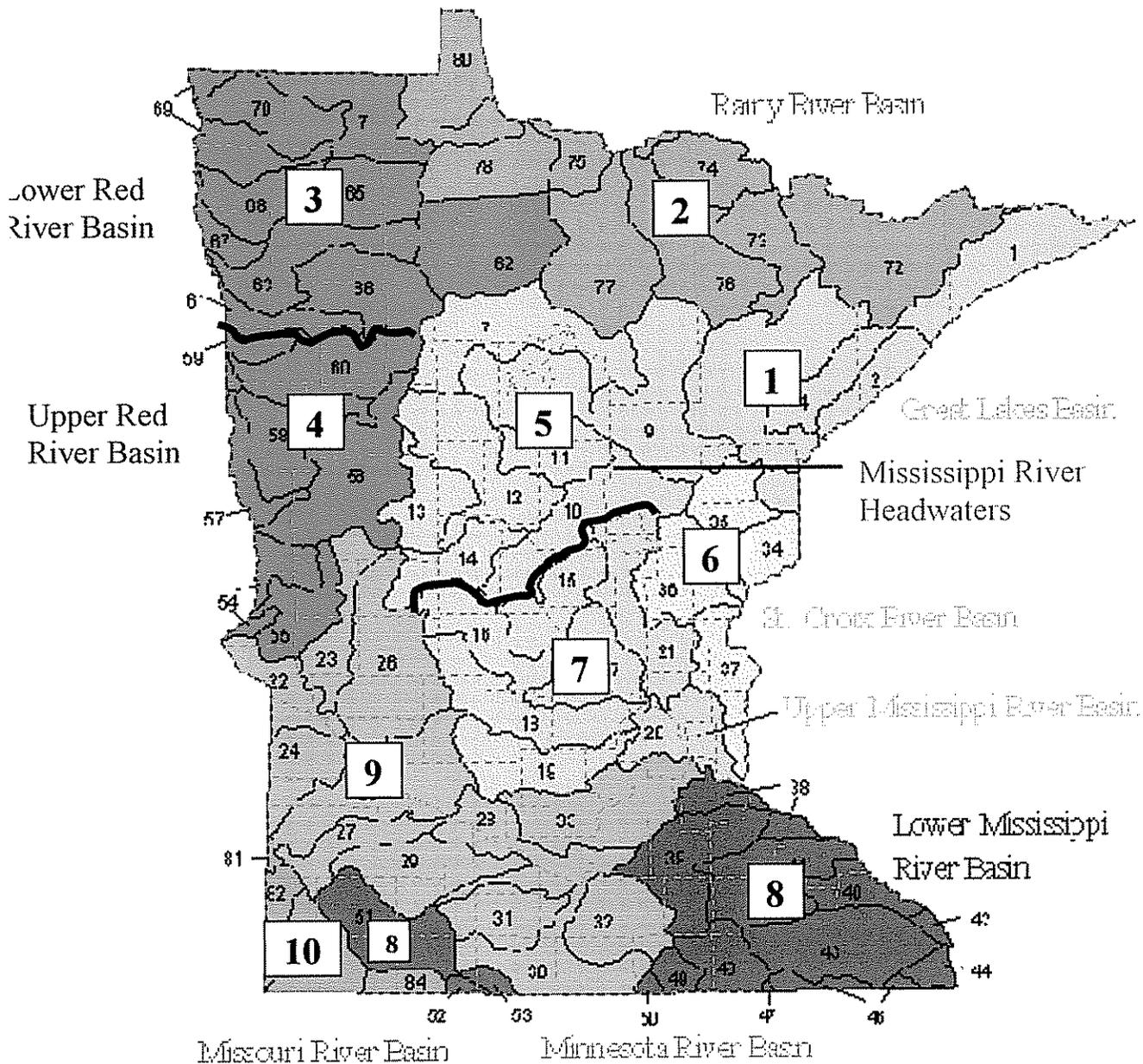
- BWSR and the Corps support defining in-advance as: (1) approved bank credits, or (2) compensation sites that have established wetland hydrology and vegetation, but the vegetation may not be mature. The minimum requirement for (2) is that the compensation site has wetland hydrology and hydrophytic vegetation established a full growing season (April-October) prior to the authorized discharge of dredged/fill material. Further, the site must meet all performance standards applicable to that stage of the compensation site.

**C. GUIDELINES BETWEEN BWSR AND COE – IN-PLACE:**

- In-place means the mitigation occurs within the same major watershed (one of 81 in Minnesota) as the permitted activity or, if debits are withdrawn from a bank site, in the same bank service area as that where the permitted impact occurred. (See map below)
- Replacement for impacts in Bank Service Area 10 can be accomplished in Bank Service Area 9 or the Des Moines River Basin in Bank Service Area 8 with no increase in the replacement ratio.
- Replacement for impacts in Bank Service Area 1 can be accomplished in Bank Service Area 2 with no increase in the replacement ratio.
- A seven-county metropolitan area bank service area may be established in the future to acknowledge land value disparities that are not accounted for under a watershed approach.
- Comprehensive inventories of replacement opportunities may be used to establish special replacement siting criteria.

# MAJOR BASINS AND WATERSHEDS OF MINNESOTA

Red River of the North Basin



**5. ISSUE** - Options for Mitigation Credit

**GUIDELINES BETWEEN BWSR AND COE:**

Proposed and Current Replacement Methods and Amount of Credit Under State and Federal Regulatory Programs

	Affected Wetland	Replacement Method	Proposed	Current Amount of Credit (x:1 = x acres of treatment to get 1 acre of credit)	
				WCA / WPP(DNR)	Section 404
<b>Restoration</b>	Completely drained or filled	Hydrologic and vegetative	100% of wetland area restored	New Wetland Credit (NWC): 100% of area restored (MR 8420.0541 Subp. 2)	100% of area restored
	Partially drained	Hydrologic	Based on a percentage of wetland hydrology restored  Variable credit is determined by the Technical Evaluation Panel (TEP) and/or Corps based on professional judgment, using a functional analysis as a foundation.	in "<80% areas": NWC: 25% of total wetland area restored (includes areas that remained as wetland); requires establishment of permanent, native, non-invasive vegetation w/in restored wetland area and on upland buffer.  or Public Value Credit (PVC): 50% of degraded wetland area restored  in ">80% areas": NWC: 25% of total area (MR 8420.0541 Subp. 3 and Guidance)	50% or 100% of total wetland area restored, depending on a sliding scale that measured the degree that wetland functions were increased
	Cropped wetlands where hydrology is still intact (i.e., no ditches, tiles, etc.)	Vegetation	Based on percentage of wetland area restored and cropping history (% of years).  Variable credit is determined by the TEP and/or Corps based on professional judgment, using a functional analysis as a foundation.	NWC: Up to 100% of area restored if farmed more than 10 years of previous 20; percent based on frequency of farming  PVC: Up to 50% of wetland area restored if farmed at least six of previous 20 years (MR 8420.0541 Subp. 5)	33% credit; considered more vegetative enhancement as opposed to restoration

	Affected Wetland	Replacement Method	Proposed	Current Amount of Credit (x: 1 = x acres of treatment to get 1 acre of credit)	
				WCA / WPP(DNR)	Section 404
	Wetlands previously restored via conservation easements	Extending restoration	Up to 75% depending on cropping history prior to enrollment in easement program. Excludes any remnant wetland area that existed prior to restoration.	NWC: 75% of wetland area preserved (MR 8420.0541 Subp. 7)	12.5% of wetland area preserved; wetland must be under demonstrable threat of loss
Enhancement	Wetlands dominated by invasive or exotic species	Establish native, non-invasive vegetation	33% credit baseline if escrow account is established to ensure vegetative management plan is implemented for a period of ten years.  Credit is determined by TEP and/or Corps based on professional judgment, using Floristic Quality Assessment as a foundation, degree of invasives, and establishment of escrow account to fund maintenance for a period of ten years.	PVC: 25% of total area vegetatively restored (MR 8420.0541 Subp. 8)	33% credit
	Upland buffer areas	Establish native, non-invasive, permanent vegetation	Required minimum upland buffer width of 50 ft. in non-municipal areas and 25 ft. in municipal areas; credit given at 10% (non-native vegetation) to 25% (native vegetation) depending upon quality of buffer; typically, no more than 25% of total credits at a compensation site can be composed of upland buffer.	PVC: 100% of the upland buffer area, up to the size of the replacement wetland it surrounds; must have 50 ft. avg. width in non-municipal areas, 25 ft. avg. width in municipal areas (MR 8420.0541 Subp. 6)	Required minimum upland buffer width of 50ft. in non-municipal areas and 25 ft. in municipal areas; credit given at 10:1 (non-native vegetation) to 4:1 (native vegetation) depending upon quality of buffer; typically, no more than 25% of total credits at a compensation site can be composed of upland buffer.

	Affected Wetland	Replacement Method	Proposed	Current Amount of Credit (x:1 = x acres of treatment to get 1 acre of credit)	
				WCA / WPP(DNR)	Section 404
Preservation	Wetlands under demonstrable threat and providing important functions	Preservation	12.5% credit baseline for wetland area preserved, wetland must be under demonstrable threat and providing important functions based on professional judgment, using a functional analysis as a foundation	NWC: Up to 12.5% of wetland area preserved; must involve restoration of hydrology or vegetation over 25% of wetland area; must be under documented threat	12.5% of wetland area preserved; wetland must be under demonstrable threat of loss
				PVC: 25% of wetland area preserved (MR 8420.0541 Subp. 4)	
Creation	Mineral extraction sites	Established via reclamation	Baseline is 50% to 100% of wetland area created depending on risk of failure and connection (or lack of) to other wetlands and upland habitats. See 404 column at right	Up to 100% of wetland area (MR 8420.0541 Subp. 9)	
	Non-wetland areas	Wetland creation		100% of wetland area created; performance bond required (MR 8420.0541 Subp 11)	50% credit if isolated from other habitats and/or has a higher risk of failure; 100% credit if has low risk of failure (adequate hydrology data to predict successful hydrology) and connected to other wetlands and upland buffers

Affected Wetland	Replacement Method	Proposed	Current Amount of Credit (x:1 = x acres of treatment to get 1 acre of credit)	
			WCA / WPP(DNR)	Section 404
Water quality treatment areas in non-wetlands	Creation	No credit for single or primary cells; up to 50% credit for secondary or tertiary cells based on professional judgment, using a functional analysis as a foundation and after five-year monitoring period	<p>NWC: 100% of normal pool area for downstream cell of two-cell system if certain criteria are met</p> <p>PVC: 100% of isolated one-cell system; upstream cell of two-cell system; or one year design pool of stormwater infiltration area that has native, non-invasive veg. cover</p> <p>(MR 8420.0541 Subp. 10)</p>	No credit for primary stormwater/water quality cells. 50% credit for second or third cells if designed for saturated soils to 3-foot water depths; has less than a 12-inch bounce lasting less than 7 days for the 10-year, 24-hour event; and is successfully planted to native, non-invasive vegetation. Credit is limited to that acreage of the cell in excess of that needed to comply with local/state stormwater management requirements. A second compensation site is typically needed to replace additional wetland functions not adequately replaced by cells.

Notes:

1. The information found in the "Section 404" column of this table is based upon the draft Minnesota guidelines (St. Paul District Compensatory Mitigation Policy for Minnesota dated March 14, 2007).
2. The credit ratios adopted by the Corps are guidelines; they are not regulations.
3. NWC – New Wetland Credit: Must be used for all mitigation requirements up to 1:1. May also be used for mitigation requirement exceeding 1:1.
4. PVC – Public Value Credit: May only be used for the portion of mitigation requirements exceeding 1:1.
5. < 80% areas and > 80% areas refers to areas of the state having less than or more than 80% of their presettlement wetland acreage remaining (see MR 8420.0545)

**6. ISSUE** – Mitigation Ratios

Proposed WCA/Section 404 Mitigation Ratios

Impact Location	Replacement Location (in-place)	Type of Replacement Wetland (in-type)	Replacement Process (in-time)	Minimum Replacement Ratio
				Proposed WCA/ Section 404 (see notes)
> 80% area (or agricultural land – WCA)	In-Place	Same type as impact wetland	In advance	1:1
			Not in advance	1.25:1
		Different type	In advance	1.25:1
			Not in advance	1.5:1
	Not In-Place	Same type as impact wetland	In advance	1.25:1
			Not in advance	1.5:1
		Different type	In advance	1.5:1
			Not in advance	1.5:1
< 80% area (and non-agricultural land – WCA)	In-Place	Same type as impact wetland	In advance	2:1
			Not in advance	2.25:1
		Different type	In advance	2.25:1
			Not in advance	2.5:1
	Not In-Place	Same type as impact wetland	In advance	2.25:1
			Not in advance	2.5:1
		Different type	In advance	2.5:1
			Not in advance	2.5:1

Note: Ratio guidelines for Section 404 only pertain to < or > 80% areas (not related to agricultural areas). Existing U.S. Army Corps of Engineers Section 404 regulations regarding agricultural areas are unchanged by this MOU.

**Unresolved Issues:**

**1. ISSUE** – Agency participation in developing local wetland plans

**GUIDELINES BETWEEN BWSR AND COE:**

- BWSR and the Corps will continue to explore and work on methods to ensure that locally generated wetland plans can be accepted by all state and federal regulatory agencies.