



Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE



Kansas Wetland Mitigation Procedures

FARM PRODUCTION AND CONSERVATION
FSA | NRCS | RMA | Business Center

NRCS Functional Assessment & Mitigation Procedures

- National Bulletin 180-24-8
- National Template
- Mitigation provides for an exemption to the conversion of a wetland
- States may customize
- No change to policy or regulation

Mitigation Tool Adoption Process

1. Review & make any changes to the National Template
2. Present to the State Technical Committee
3. Adopt as interim
4. Make any adjustments
5. Present to the State Technical Committee
6. Officially adopt

Mitigation Overview

- Must mitigate for:
 - Wetland values
 - Acreage
 - Function
- Types of mitigation:
 - Onsite
 - Offsite

Mitigation Overview

- Good faith waiver:
 - Good faith is decided by FSA county committee
 - Mitigation is a requirement of good faith
 - NRCS has the sole responsibility of approving a mitigation plan
- NRCS has the responsibility to make or approve wetland functional assessments
 - Functional assessment determines the ratios of mitigated acres

Hydrogeomorphic guides

- National Food Security Act Manual (NFSAM) suggests the utilization of published guides
- Developed by U.S. Army Corps of Engineers (Corps)
- Corps guides have limited applicability to USDA wetland conservation provisions
- NFSAM gives option to develop functional assessments applicable to a state

Proximity of Offsite Mitigation to the Converted Wetland

- Onsite mitigation (restoration) returns the most value
- Offsite mitigation
 - The closer to the converted wetland the greater the return of lost functions & values

Lost Wetland Acres, Functions, & Values

- Requirement to mitigate acres means that a ratio of 1:1 is the minimum
- Each function is assessed independently to ensure that each function's loss is adequately replaced
 - Mitigation ratio for each function
 - Wildlife
 - Water quality (sequestration of sediments, elements, & compounds)
 - Floodwater storage
 - 16 U.S.C. 3901 (a)(1)-(9)
 - Largest ratio required for a single function will determine the acreage ratio

Previously Restored Wetlands

- Wetlands previously restored are eligible if contract has expired
 - Ex: CRP

Associated Non-Wetland Acres

- Sometimes non-wetland acres are a suggested part of a mitigation plan
 - Ex: vegetated buffer around a closed basin
 - These acres are not given credit in determining functions and values

Wetland Acres

- Acres requirement can be met by creating a wetland where one previously didn't exist
 - Prior-Converted (PC)
 - Non-Wetland (NW)
- Not eligible land uses for mitigation site acres*
 - Farmed Wetland (FW)
 - Farmed Wetland Pasture (FWP)
 - Wetland (W)

*FW/FWP can be used for additional functional capacity units when acres are being mitigated elsewhere

Wetland Determinations

- A certified wetland determination is required on both the site that was converted and the site for proposed mitigation

Wetland Assessment Areas (WAA)

- The wetland converted or proposed for conversion
- Based off sampling unit recorded during wetland determination process
- If a sampling unit supports 2 or more land uses or vegetative types, it will be divided into separate WAA
 - Herbaceous and forested areas in the same wetland
 - Pasture and cropland uses on the same wetland basin

Five-year Rule

- Used when the wetland has already been manipulated
 - Trees cut and plan to remove stumps
 - Drainage activity already implemented
- Determine rating for variables based on conditions that occurred 5 years prior to initial manipulation
- Based on best professional judgement according to the agency expert
- Will utilize all available data

Ten-Year Rule

- Rating of mitigation site based on the conditions 10 years following implementation

1:1 Ratio Rule

- Minimum of 1 acre mitigated for 1 acre converted

Rounding Rule

- Final mitigation acres are rounded to the nearest 0.10
- Determination and FSA use 0.01 accuracy
- Difficult to create & expensive to survey to 0.01 accuracy

Variables

- Ponding Depth
- Microtopography
- Land Use
- Vegetative Type
- Connectivity
- Proximity*
- HGM Classification*

*only apply to the mitigation site assessment

Ponding Depth

- Seasonally ponded have greater value than permanently flooded or saturated wetlands
 - Greater floodwater storage
 - Increase in soil organic matter (denitrification)
 - Greater invertebrate & amphibian production
- Measured at the sampling point during normal circumstances
- Ponding depth of greater than 14 inches only allowed if converted wetland was also greater than 14 inches

Ponding Depth (in)	Rating
0	0.1
1-3	0.2
4-6	0.6
7-14	1.0
Over 14	0.7

Micro-Topography

- Visual assessment of percent land covered by micro-highs
- Increase heterogeneity
 - increased sequestration of sediments, elements, & compounds
 - Increase in diversity of invertebrate & amphibian habitat
 - Increase diversity of plants

% of WAA Represented by Micro-Highs	Rating
< 5%	0.1
6 – 10%	0.4
11 – 20%	0.7
> 20%	1.0

Land Use

- Impacts societal value & functional level
- Managed/active management—mowing, herbicide use
- Woody vegetation control is not considered active management
- 1.0 rating – will need to have periodic management to maintain species composition & habitat

Land Use	Rating
Cropped or Hayed	0.1
Managed Improved Pasture	0.3
Managed Native Pasture, Managed Timber, or Silvopasture	0.5
Grazed without Active Management	0.7
Not Cropped, Hayed, Managed, or Grazed	1.0

Vegetative Type

- Increase species richness leads to higher wildlife function
- Native species also increase wildlife functional value

Vegetative Type	Rating
Crops, Hay, or other intensely managed communities	0.1
Monotypic herbaceous communities supporting ≤ 2 dominant native plant species.	0.3
Herbaceous plant communities supporting 3-4 dominant native species.	0.7
Herbaceous plant communities supporting > 4 dominant native species.	1.0

Vegetative Type (cont'd)

Vegetative Type	Rating
Communities dominated by woody species ≤ 10 years old and $< 20\%$ of the canopy or stems are hard mast species.	0.1
Communities dominated by woody species ≤ 10 years old and $\geq 20\%$ of the canopy or stems are hard-mast species	0.3
Communities dominated by woody species > 10 years old and < 40 years old, with $< 20\%$ of the canopy or stems being hard-mast species; or pine plantations ²⁵ of any age class.	0.5
Communities dominated by woody species > 10 years old and < 40 years old, with $\geq 20\%$ of the canopy or stems being hard-mast species	0.7
Communities dominated by woody species ≥ 40 years old, with $< 20\%$ of the canopy or stems being hard-mast species.	0.8
Communities dominated by woody species ≥ 40 years old and $\geq 20\%$ of the canopy or stems being hard-mast species	1.0

Connectivity

- Rating based on other lands within 1/4 mile beneficial for wildlife use
- Excludes cropland, hayland, pastureland, developed land, & farmsteads
 - Exception: all FSA wetlands (FW, FWP, W, AW) will be included regardless of land use/cover
- Wetlands being assessed (converted and/or proposed mitigation) will not be considered
- Use 1 year of imagery within 5 years prior to conversion

Connectivity	Rating
< 5%	0.1
6 - 15%	0.3
16-33%	0.7
> 33%	1.0

Proximity

- Proximity to converted wetland
 - Only evaluated for mitigation wetland
- Gives a higher rating for onsite mitigation (restoration)

Proximity	Rating
Within the State	0.1
Withing Adjacent 8-digit HUC or 50 Miles	0.3
Within the 8-digit HUC or bank service area	0.6
Within 2 miles of the sampling point	0.8
Onsite Mitigation (restoration)	1.0

HGM Classification

- Replacing lost wetland functions within the same HGM better ensures lost functions are replaced
- 10-year rule can't apply because HGM class cannot be changed
 - Based on classification at time of site selection

HGM Classification	Rating
Mitigation site is a different HGM Class than the converted wetland.	0.2
Mitigation site is the same HGM Class, but different subclass or regional subclass.	0.4
Mitigation provides the same HGM class, subclass, and regional subclass, but a different modifier.	0.8
Mitigation provides the same HGM class, subclass, regional subclass, and modifier as the converted wetland	1.0

Functional Capacity Index– Converted Wetland

- Use of weighted average formula

Wetland Wildlife Habitat

$$\frac{3V_{pd} + V_{mt} + 2V_{use} + 6V_{vt} + V_C}{13}$$

Water Quality

$$\frac{3V_{pd} + V_{use}}{4}$$

Floodwater Storage

$$V_{pd}$$

Functional Capacity Index – Mitigation Site

Wetland Wildlife Habitat

$$\frac{3V^{pd} + V^{mt} + 2V^{use} + 6V^{vt} + V^c + V^p}{14}$$

Water Quality

$$\frac{3V^{pd} + V^{use} + V^p + V^{hgm}}{6}$$

Floodwater Storage

$$\frac{4V^{pd} + 2V^p + V^{hgm}}{7}$$

Calculating Mitigation Ratios

- To encourage onsite mitigation a 1:1 ratio will be accepted if a ratio $\leq 1.3:1$ is calculated

Good Faith Waiver

- If:
 - good faith waiver is granted
 - Onsite mitigation is chosen
 - Function Capacity Index for all 3 factors ≥ 0.70 on mitigation site
- Then:
 - Ratio will not exceed 1:1

Conversion of a 0.60 ac. wetland

	Functions	FCI
WAA 1 (Converted Wetland)	Wildlife	0.65
	Water Quality	0.54
	Floodwater Storage	0.61
WAA 2 (Mitigation Site)	Wildlife	0.72
	Water Quality	0.57
	Floodwater Storage	0.63

Functions	Mitigation Ratios	Acres to Replace Lost Function	Acres to Replace Lost Acres
Wildlife	$0.65 \div 0.72 = 0.90$	$0.60 \times 0.90 = 0.54$	0.6
Water Quality	$0.54 \div 0.57 = 0.95$	$0.60 \times 0.95 = 0.54$	0.6
Floodwater Storage	$0.61 \div 0.63 = 0.95$	$0.60 \times 0.95 = 0.54$	0.6

Questions/Comments

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