**WETLAND MITIGATION AGREEMENT**

**Farm #1350, Tract #1786, Field(S) 12 --- Halifax County, VA**

**For: Owner: H. G. Brown; Operator: J. H. Brown**

This agreement is to stipulate the conditions which must be created and maintained in order to mitigate/restore wetland conditions for areas that have been converted. This agreement refers to all areas found to be in violation with the USDA’s Food Security Act. For a reference to these areas please see Natural Resources Conservation Service (NRCS) wetland determination maps dated, August 20, 2015 for Farm # 3436, Tract # 5671, field(s) \_\_\_\_, and acres \_\_\_\_, located in Charlotte County, VA, Latitude:\_\_\_\_\_\_\_\_\_\_\_\_\_\_; Longitude : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

By signing this WETLAND MITIGATION AGREEMENT the USDA participant agrees to the terms set forth below, and understands that any action that is not consistent with the stipulated terms that will diminish the value and/or acreage of the restored wetland will result in the area being considered a converted wetland (CW+YR). By signing this agreement the USDA participant agrees that the following terms will be installed and maintained in a condition that is to the satisfaction of the NRCS and agrees to provide the right of access to USDA personnel to monitor the terms of the agreement.

All converted areas that have had hydrology alteration due to the removal of vegetation and or reshaping of the land shall be shaped in a manner that is in accordance with NRCS guidance in order to restore wetland hydrology.

For the area determined by NRCS as converted wetland the landowner shall restore the converted wetland following the instructions outlined in the conservation plan, job sheet(s), and other attachments included with this agreement. Success of this restoration will be based on conditions met by the attached Performance Standards and Success Criteria.

Planting recommendations shall be provided by the Virginia NRCS Wetland Team Leaders and/or NRCS State Biologist and through the use of the VA Plant Establishment Guide which can be found in Section IV of the FOTG.

**Herbaceous Cover Seeding Mixtures** (May or may not be needed for mitigation as determined by the ARSS)

Before seeding area, ensure all vegetation in planting area has been eradicated. Immediately after final grading, drill or broadcast the below listed seed mix at a rate of 20 lbs./acre (Exhibit C). Ensure good seed to soil contact by rolling or packing. Do not seed if there is standing water or where flooding is likely to occur before germination. (See VA Conservation Practice Standard for Wetland Restoration (Code 657) Job Sheet for standard and specifications.)

**Temporary Seeding Mixture:** The Attached temporary seed species shall be used for temporary soil stabilization. Where seasons transition it is recommended to combine both heat and cold tolerant species. Annual rye grass shall not be used. (See Exhibit - C)

**Permanent Seeding Mixture:** Upon final stabilization, the attached permanent seeding mixture or an NRCS approved alternative should be planted on all disturbed areas immediately after final grading at a rate of 20 lbs./acre. (See Exhibit - C)

**Tree Planting:**

Natural regeneration may be utilized on sites not suited to any kind of tree planting or where there is an adequate natural seed source. The tree planting plan developed for establishing the buffer will include justification for use of natural regeneration. Natural regeneration may be used under any of the following conditions:

1. Natural regeneration may be utilized on sites not suited to any kind of tree planting or where there is an adequate natural seed source. The tree planting plan developed for establishing the wooded area will include justification for use of natural regeneration. See job sheet for practice specifications and Operation and Maintenance. Natural regeneration may be used under any of the following conditions

2. The site is inaccessible to planting equipment (islands or other remote sites).

3. There are existing mature trees suitable to the planting area, preferably including at least 2 hard mast tree species, within 100 feet of the entire planting site or evidence of existing seedlings.

Native Non-Invasive volunteer species that exist onsite within the seed-bank will establish themselves. The establishment of these species is encouraged to promote diversity within the restored site. Natural regeneration sites will be reevaluated if the survival after 3 growing seasons is less than 25 evenly distributed seedlings per acre. Once reevaluated, and found with less than the minimum stocking level, an establishment plan for establishment will be developed.

No cutting of trees, mowing, or bush hogging of the mitigated wetlands shall be allowed. Trees shall be planted and allowed to grow to maturity. It shall be left to the discretion of the planner as to the species of trees which shall be planted from the NRCS provided list tree species, but all tree species planted must be native species, and have a wetland indicator status of Facultative (FAC) or wetter.

Timber harvest, for the specific purpose of protecting and enhancing optimum wildlife habitat and wetland functions and values may be allowed with NRCS approval. Clear cutting is not an option that will be approved by NRCS unless in a unique situation where the wildlife and forestry professional agree that forest conditions or special wildlife habitat needs require such measure. A forest management plan will be required for all timber harvesting.

Witness Post - Is an integral part of the wetland restoration process, the boundary of the CW+ year area(s) must be delineated using the Global Positioning System (GPS). The witness post marking the outer edge shall be on 35’ spacing at a minimum of 4’ in height. Witness posts may be needed on shorter spacing due to the size and/or shape of the area to be restored. Witness posts shall be a steel “T” channel post at least eighty-four (84) inches in length and have a minimum weight of 1.25 lbs. per foot. Posts shall be of a natural color, preferably green. Other materials may be used with NRCS approval.

If at any point in the future grazing practices are implemented on the tract, all wetland areas shall be fenced, in order to keep livestock out of the restored wetland areas. Fencing shall be adequate enough to meet NRCS standard for exclusion fence, as determined by NRCS, to ensure protection for the wetland areas.

This agreement is only for USDA purposes. Failure to complete all requirements of this agreement within 12 months of the effective date will result in a determination of wetlands being converted. This agreement becomes effective when signed and dated by all parties identified below.

I hereby agree to the terms set forth above, and understand that any willful action on my part that is not consistent with the stipulated terms that will diminish the values and/or acreage of the restored wetland will result in the loss of the Good Faith Exemption and the area will be considered converted wetland (CW+YR). I agree that the conservation plan (see attached) will be installed and maintained in a condition that is to the satisfaction of the NRCS and agree to provide NRCS the right of access to the mitigated wetland(s) for the purpose of monitoring.

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Franklin Jones, Landowner Date

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John Harper, NRCS Designated Conservationist Date

**Exhibit – A**

**Virginia NRCS Wetland Mitigation Performance**

**Standards and Success Criteria**

In the converted wetland area(s) mitigation success shall be evaluated by each cell, field, or block:

1. Wetland hydrology, defined as saturation of the major part of the root zone (in the upper 12 inches of the soil profile) or ponding upon the soil surface for at least twelve and one-half percent (12.5%) of the growing season measured in consecutive days must be achieved (for the purpose of this determination. Growing season is defined as the portion of the year when onsite observations of the following biologic activity indicators are present: 1) above-ground growth and development of vascular plants as per the applicable Corps Regional Supplement is present. 2) If onsite data gathering is not practical, growing season dates may be approximated by using WETS tables available from the NRCS National Water and Climate Center to determine the median dates of 28\*F (-2.2\*C) air temperatures in spring and fall based on long-term records gathered at the nearest appropriate National Weather Service meteorological station.

*A hydroperiod consisting of saturation of the major part of the root zone (the upper 12 inches of the soil profile) or ponding upon the soil surface for between**five percent (5%) and twelve and one-half percent (12.5%) measured in consecutive days may have wetland hydrology, but strong corroborative evidence would be required (such as positive tests with diperydyl, algal mats, common occurrence of oxidized rhizospheres within 12 inches of the soil surface, and blackened leaves.)*.

1. Wetland vegetation dominance, defined as a vegetation community where more than 50% of all dominant species are facultative (“FAC”) or wetter using "routine delineation methods" as described in the "Corps of Engineers Wetland Delineation Method," Technical Report 87-1 (“1987 Manual”) and the “Corps of Engineers Regional Supplement”must be achieved; and

1. Native plant density in forested and shrub/scrub wetland areas of at least 400 living woody stems per acre with an indicator of FAC or wetter shall be maintained through the end of the monitoring period or until canopy coverage of woody species is greater than 30%, whichever comes first. Stem counts shall include all established stems (both planted and volunteer individuals).

Once canopy cover exceeds 30% in any field, cell, or block are met, woody species counts in those areas may be halted;

(d) *No more than 5% aerial cover and/or areas larger than ¼ acre in size dominated by invasive species such as* Typha latifolia *or* Phragmites australis*may be present**in each cell, field, or block.*Invasive species are identified on the Virginia Department of Conservation and Recreation’s Invasive Alien Plant list. This list of invasive plants may be found at [*http://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf*](http://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf); *and*

(e) Native non-invasive herbaceous plant coverage shall be at least 60% by the end of the first growing season, and at least 80% each monitoring year thereafter until full canopy closure from planted and volunteer trees. Any seeds used for plant establishment should conform to the Virginia Seed Law (Sections 3.1-262 Code of Virginia) and Virginia Seed Regulations (2 VAC 5-290-10 et seq) and shall be free of tall fescue, Bermuda grass, and other allelopathic turf grass species, as well as plant species on the Virginia Department of Conservation and Recreation’s Invasive Alien Plant List.

(f) *Soil Success Criteria shall be evaluated for wetland Creation areas located on non-hydric soils*. *In that event, the following success criteria shall be followed:*

(1) For coarse textured (sandy) surface soils, positive indicators of hydric soil formation must be demonstrated within 6 inches of the soil surface. Groundwater monitoring may be used as a positive indicator for all monitoring years after reaching the final grade, in which case, wells must demonstrate free water within 6 inches of the surface for 15 consecutive days during the growing season.

 (2) For fine textured soils (silts, clays, loams), positive indicators of hydric soil formation must be demonstrated within 12 inches of the soil surface.Groundwater monitoring may be used as a positive indicator for all monitoring years after reaching the final grade, in which case, wells must demonstrate free water within 12 inches of the surface for 15 consecutive days during the growing season.

 (3) Positive indicators of hydric soil formation may include redoximorphic features including, but not limited to redox concentrations, redox depletions, reduced matrices, positive tests with diperydyl, or other field indicators contained in the Field Indicators of Hydric Soils of the U.S.

 (4) A complete soil morphologic description shall be documented pre and post construction and at the 3rd, 7th, and 10th year following construction to document changes in overall soil morphology, particularly the development of redoximorphic features over time (such as a reduction in matrix chroma or development of redox depletions), to demonstrate that soils at the site are progressing towards hydric soil conditions. At a minimum, soil profiles shall be described at a distance of 10 to 30 feet from each well.

**Exhibit - B**

**Monitoring, Maintenance, and Compliance**

***Monitoring***:

1. NRCS will conduct follow-up inspections of the mitigation site(s) annually until all practices are successfully established and the performance standards are met. In addition, NRCS is authorized to inspect the site(s) for compliance at any time as long as the participant remains a USDA participant. At a minimum, inspections will consist of the following actions (if applicable):
	1. Review mitigation plan
	2. Inspect the establishment of the planned vegetation.
	3. Inspect the planned hydrologic features and planned landscape features.
	4. Ensure the permanent witness posts are present and in the same location as initially installed.
	5. Determine if a violation of the plan has occurred.

***Maintenance***:

1. Potential maintenance activities:

a. Maintenance of desired plant community

b. Maintenance of hydrologic and landscape features

c. Maintenance of the integrity of structures

* + 1. Permanent witness posts and/or signage

***Compliance with the Mitigation Plan/Agreement:***

1. If terms of the wetland mitigation plan or agreement are violated, NRCS will request Form FSA-569 from FSA. The mitigation exemption will be invalidated and the converted wetland(s) for which it applied will be relabeled CW+year.
2. If the mitigation site(s) does not meet the success criteria in the plan/agreement, the USDA participant will be offered the opportunity to conduct remedial actions to ensure that it will meet success criteria. Any remedial actions must be accomplished within a reasonable period of time that is specified in a revised mitigation agreement signed by the USDA participant and NRCS. If the mitigation area ultimately does not meet success criteria, the mitigation exemption will be invalidated, and converted wetlands will be relabeled CW+year.

**Exhibit – C**

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| **Seeding Mixtures (Coastal Plain)** |
| **Temporary Seeding Mixture:** The following temporary seed species shall be used for temporary soil stabilization. Where seasons transition it is recommended to combine both heat and cold tolerant species. Annual rye grass shall not be used.

|  |  |  |  |
| --- | --- | --- | --- |
| Common Name | Scientific Name | Application Rate (lbs./acre) | Planting Period |
| Rye Grain | *Secale cerale* | 25 | Nov. 1st – April 30th |
| Wheat | *Triticum aestivum* | 30 | Nov. 1st – April 30th |
| German Millet | *Setaria italic* | 10 | May 1st – Sept. 30th |
| Browntop Millet | *Urochloa ramosa* | 10 | May 1st – Sept. 30th |

**Permanent Seeding Mixture:** Upon final stabilization, the following permanent seeding mixture or an NRCS approved alternative should be planted on all disturbed areas immediately after final grading at a rate of 20 lbs. /acre.**Virginia Coastal Plain Mix** **– Wet Meadow**

|  |  |  |
| --- | --- | --- |
| **Common Name** | **Scientific Name** | **% of Seed Mix** |
| Redtop Panicgrass | *Panicum rigidulum* | 35 |
| Virginia Wildrye | *Elymust virginicus* | 15 |
| Lurid (shallow) Sedge | *Carex lurida* | 10 |
| Greenwhite Sedge | *Carex albolutescens* | 9 |
| Beaked Panicgrass | *Panicum anceps* | 8 |
| Green Bulrush | *Scirpus cyperinus* | 5 |
| Hop Sedge | *Carex lupulina* | 4 |
| Soft Rush | *Juncus effuses* | 3 |
| Woolgrass | *Scirpus cyperinus* | 2 |
| Crimsoneyed Rosemallow | *Hibiscus mosheutos* | 2 |
| Purplehead Sneezeweed | *Helenium Flexuosum* | 1 |
| Leathery Rush | *Juncus coriaceus* | 1 |
| New York Ironweed | *Veronia noveboracensis* | 1 |
| Mistflower | *Eupatorium coelestinum* | 1 |
| Broadwing Sedge | *Carex alata* | 1 |
| Lizard’s Tail | *Saururus cernuus* | 1 |
| Common Sneezeweed | *Helenium autumnale* | 1 |
|  | **TOTAL** | **100%** |

Before seeding area, ensure all vegetation in planting area has been eradicated. Immediately after final grading, drill or broadcast the below listed seed mix at a rate of 20 lbs. /acre. Ensure good seed to soil contact by rolling or packing. Do not seed if there is standing water or where flooding is likely to occur before germination. (See VA Conservation Practice Standard for Wetland Restoration (Code 657), Tree/Shrub Site Preparation (Code 490) Job Sheet for standard and specifications. |

**Exhibit –C**

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| **Seeding Mixtures (Piedmont/Mountain)** |
| **Temporary Seeding Mixture:** The following temporary seed species shall be used for temporary soil stabilization. Where seasons transition it is recommended to combine both heat and cold tolerant species. Annual rye grass shall not be used.

|  |  |  |  |
| --- | --- | --- | --- |
| Common Name | Scientific Name | Application Rate (lbs./acre) | Planting Period |
| Rye Grain | *Secale cerale* | 25 | Nov. 1st – April 30th |
| Wheat | *Triticum aestivum* | 30 | Nov. 1st – April 30th |
| German Millet | *Setaria italic* | 10 | May 1st – Sept. 30th |
| Browntop Millet | *Urochloa ramosa* | 10 | May 1st – Sept. 30th |

**Permanent Seeding Mixture:** Upon final stabilization, the following permanent seeding mixture or an NRCS approved alternative should be planted on all disturbed areas immediately after final grading at a rate of 20 lbs. /acre.**Virginia Piedmont/Mountain Mix** **– Wet Meadow**

|  |  |  |
| --- | --- | --- |
| **Common Name** | **Scientific Name** | **% of Seed Mix** |
| Redtop Panicgrass | *Panicum rigidulum* | 34 |
| Beaked Panicgrass | *Panicum anceps* | 19 |
| Virginia Wildrye | *Elymust virginicus* | 15 |
| Lurid (shallow) Sedge | *Carex lurida* | 10 |
| Hop Sedge | *Carex lupulina* | 4 |
| Globe Beaksedge | *Rhynchospora* | 3 |
| Soft Rush | *Juncus effuses* | 3 |
| Woolgrass | *Scirpus cyperinus* | 2 |
| Crimsoneyed Rosemallow | *Hibiscus mosheutos* | 2 |
| Purplehead Sneezeweed | *Helenium Flexuosum* | 2 |
| Squarrose Sedge | *Carex squarrosa* | 2 |
| Leathery Rush | *Juncus coriaceus* | 1 |
| New York Ironweed | *Veronia noveboracensis* | 1 |
| Lizard’s Tail | *Saururus cernuus* | 1 |
| Mistflower | *Eupatorium coelestinum* | 1 |
|  | **TOTAL** | **100%** |

Before seeding area, ensure all vegetation in planting area has been eradicated. Immediately after final grading, drill or broadcast the below listed seed mix at a rate of 20 lbs. /acre. Ensure good seed to soil contact by rolling or packing. Do not seed if there is standing water or where flooding is likely to occur before germination. (See VA Conservation Practice Standard for Wetland Restoration (Code 657), Tree/Shrub Site Preparation (Code 490) Job Sheet for standard and specifications. |

**Exhibit – D**

**Wetland Restoration**

**Engineering (Design and Implementation)**

1. Design Requirements

(1) The engineering design and surveys required for installation of conservation practices or measures may be provided by NRCS, a qualified vendor, or a technical service provider (TSP).

(2) Conservation practice design and implementation is accomplished in accordance with all NRCS policy and procedures, including applicable practice standards and specifications contained in the FOTG.

(3) The design must utilize conclusions from the wetland site evaluation to prescribe and specify through the use of drawings, written specifications, instructions, and related documents, the implementation requirements for all conservation practices, components, measures, and activities included in the final Mitigation Plan.

(4) Structural measures must be designed and installed such that the reach and flow of water on flood plains is not significantly altered. Structural measures must also be designed to minimize future NRCS technical assistance for maintenance and repair.

(5) The engineering design must also ensure that the restoration does not result in a hydrologic impact (for example: additional flooding or inundation) outside of the mitigation area footprint.