

THE WETLAND RESERVE PROGRAM

SOUTH CAROLINA – GUIDANCE DOCUMENT

This guidance document is intended to provide guidance as approved by the South Carolina State Technical Committee. It does not circumvent the National Wetland Reserve Program Manual, and any discrepancy the manual will supercede this guidance. The manual should be consulted for details not covered by this document.

Program Emphasis

The emphasis of WRP is to protect, restore, and enhance the functions and values of wetland ecosystems to attain:

- first and foremost, habitat for migratory birds and wetland dependent wildlife, including threatened and endangered species,
- protection and improvement of water quality,
- attenuation of water flows due to flooding,
- recharge of ground water,
- protection and enhancement of open space and aesthetic quality,
- protection of native flora and fauna contributing to the Nation's natural heritage, and
- contribution to educational and scientific scholarship

District Conservationist Responsibility

- accept WRP applications,
- coordinate initial site visit with landowner and FWS, to:
 - verify eligibility
 - **prepare GIS map**
 - complete ranking sheet
 - complete CPA-SC-52
 - **prepare Toolkit Preliminary Restoration Plan when application is sent in to state office , including map with anticipated practice locations**
 - flag proposed easement lines
 - complete preliminary certificate of inspection and possession,
- forward application and supporting documentation including the Preliminary Restoration Plan to the Program Specialist, for required technical reviews,
- prepare the Final Restoration and Management Plan. Coordinate the restoration planning with FWS
- arrange for the installation of conservation systems and ensure that practices meet standards and specifications contained in the FOTG,
- certify that legal boundary description has been received and that it delineates the proper location,
- provide the landowner with technical assistance to comply with the terms of easements and restoration agreements,
- certify practice establishment for payment,
- complete status reviews until the practices are established (i.e., on an annual basis at a minimum).
- complete preliminary and final certificates of use and consent form,
- provide FSA county office with maps and acreage of recorded WRP easements for purposes of tracking the county cropland limitations, reducing production flexibility contract acres, and retiring allotment history,
- maintain WRP records and reports sufficient for monitoring and compliance purposes,
- monitor easements annually and advise State Office of compliance and enforcement issues,

State Office Responsibility

- maintain official WRP files,
- review all Final Restoration Plans and contracting packages,
- consult with the FWS,
- coordinate with FSA,
- provide training needed to implement the program effectively,
- establish easement values,
- establish a ranking process,
- issue tentative letters of acceptance,
- complete the easement acquisition and recording process, including arrangement for easement payments to landowners,
- ensure restoration is completed,
- monitor enrolled lands,
- maintain official program records and documentation,
- track progress and accomplishments in the WRP database,
- enforce easement or restoration agreement provisions,
- track financial outlays and provide financial reports,

U. S. Fish and Wildlife Service Responsibility

- assists NRCS with land eligibility determinations after applications have been received,
- provides the biological information for determining environmental benefits (e.g., maximizing wildlife benefits in cost-effective restoration effort) for ranking application,
- incorporates its Section 7 responsibilities under the Endangered Species Act with its WRP consultation actions,
- **assists NRCS in restoration planning such that easement lands achieve maximum wildlife benefits and wetland values and functions**

Land Eligibility –

General

- Existing merchantable pine timber may be harvested within 12 months of easement closing. **Area of potential harvest must be depicted on GIS map by field office and approved by state office.**
- **No hardwood timber may be harvested after initial eligibility site visit.**
- Partial Carolina Bays generally will not be accepted into WRP.
- Buffers will be used to enhance the easement.
 - Will not automatically be 1 to 1 ratio.
 - Will be used to square up field where possible.
 - Will be a minimum of 100 feet wide subject to property lines

Problem Soils

Problem soils are defined as those soils that in their natural condition support hydrophytic vegetation and that have the potential to have the hydrophytic vegetation and/or hydrology restored, even if they do not appear on the hydric soils list. These "problem soils" may be considered eligible for enrollment in WRP.

South Carolina "Problem soils" are soils associated with floodplains of the "red water" rivers and streams. They include Cartecay, Chewacla, Ochlockonee, Shellbluff, Tawcaw, Transylvania, Chenneby, Congaree, Riverview, and Toccoa.

Sites that are determined eligible under this category are considered for **permanent easements only** and must have vegetative and hydrological alterations, which can be restored. For example: Floodplains which have been clearcut (clear cuts must be a least 5 years old – NRCS will not except sites with a fresh timber harvests) and the natural flow of the floodplain has been altered due to ditches, diversions or logging roads, not properly culverted, may be eligible.

Preliminary Restoration Plan: (TOOLKIT plan must be received in state office at time of application)

The Preliminary Restoration Plan will consist of:

- an aerial photo and/or map which identifies the offered land and the location of all practices that will be established;
- anticipated practices and associated management required to restore wetland hydrology, topography, and vegetation
- **approximate costs for restoration**
- environmental evaluations, CPA-SC-52;
- land eligibility documentation.
- soil map;
- hazardous waste surveys.

Final Restoration Plan

The final restoration plan will be reviewed by the State Wildlife Biologist and the State Conservation Engineer.

The final restoration plan shall consist of the following:

- objectives of restoration;
- description of habitat types and functions being restored
- management of hydrology to maximize wildlife benefits throughout the year.
- description of practices required for restoration and management of the site.
- schedule of dates for implementing practices and measures. The first practice must be scheduled within one year of filing the easement or approving the restoration agreement;
- cost-share rates, practice costs, and partner contributions;
- FWS signature and date indicating review;
- restoration plan map, including:
 - field numbers.
 - boundaries of the easement or agreement area.
 - acres of the easement or agreement area.
 - practice locations.
 - land uses.
 - restored wetlands.
 - other lands.
 - access routes.
 - utility locations.
 - cultural resource locations.
 - planned wetland system.
- photographs that document site conditions before, during, and after restoration. Location points of photography will be recorded on a map of the easement or agreement area;
- documentation required for application of the required practices including job sheets and engineering designs;
- noxious weed, invasive species, and pest control strategies; and
- plan for the installation of boundary markers or signs on easement areas; and
- management and maintenance.

NRCS is generally responsible for maintenance and management on easements.

IMPORTANT: *NRCS is the landowner for conservation planning purposes once the easement is recorded. Therefore, it is not necessary to obtain the fee title landowner's signature on the final restoration plans for easement projects.*

Note: *The fee title landowner signature is not necessary on the final restoration plans for 30-year and permanent easement projects. NRCS is considered the "client" or "landowner" for conservation planning purposes on easement projects.*

Compatible Use Authorizations

All compatible use authorizations must be in writing and supported by a technical determination in the case file that clearly documents the basis of activities considered to meet compatibility requirements and an easement management guideline sheet.

A **compatible use plan** will be developed for each easement and will not exceed 5 years of authorization at a time.

The following statement must be incorporated in any compatible-use authorization.

"NRCS retains the right to modify or cancel this compatible use authorization at any time if the NRCS determines that such activities do not further the protection and enhancement objectives of the easement, or that the landowner has failed to comply with specified terms and conditions. The landowner engages in such activities at his/her own risk. This authorization does not vest any right of any kind in the landowner. This authorization is null and void after the expiration date. By signing this document, the landowner agrees to the terms described above and on any referenced documents."

Contracting

- Legal services will continue to be secured by the Program Staff up to \$2500.
- Acquisition of surveys will be handled by the state office contracting staff.
- Restoration may be performed either through a turn-key contractor or through an LTC.
- Contracts over \$2500 (\$2000 for construction) will be handled by the state office contracting.
- Contracts not over those amounts may be handled either by a field office employee who has credit card procurement authority or by the state office contracting staff. Under new NRCS funding field office credit card holders who wish to procure these services will need to request counter checks to be written against their credit card account. This will enable payments to be made directly to contractors who do not accept credit cards.
- If field offices elect to purchase construction materials and hire the work, the contract should be for a specified job using government furnished materials.
- LTC
 - Landowner must install substantial portion of the work (e.g. earthfill) through his/her own company or family member.
 - Landowner must be considered by NRCS to be competent to perform the work. Landowner's plan of operation must identify labor, equipment, and schedule. Work will conform to same requirements as if contracted, including schedule and work hours.
 - State wide average cost schedule will be used to determine amount to be paid. Total cost of job to be performed will not exceed \$25,000.
- State office contracting staff will provide master package for the field office construction jobs.

Easement Monitoring

Monitoring WRP restoration sites is necessary to ensure that full wetland functions and values are achieved and maintained. Sites will be visited annually until practices are successfully established. After establishment, the sites will be monitored annually with an onsite visit or remote sensing. Onsite visits will occur at least once every 3 years. Frequent monitoring will allow NRCS to adjust restoration plans to address program objectives.

Easement Management

NRCS, as a Federal land manager, must develop a management plan as part of the WRPO for the easement area. Management plans must be site specific and should be considered "living documents" that are subject to change over time in order to continue the agency's efforts to maximize wetland functions and values and enhance wildlife habitat.

Habitat management and manipulation (e.g., pulling boards to lower water levels and mowing or disking vegetation to control succession) are part of the rights that have been purchased under the easement.

Inspecting the Site for Easement Violations

All easements will be inspected annually for violations during the monitoring process. An easement violation is any unauthorized use of the site, such as encroachment, cropping, dumping trash, and drilling. Onsite inspections will be completed every third year unless a violation is found. Onsite visits consist of walking the easement boundary and confirming that the interior of the easement site is not being used for unauthorized purposes, and verifying that the easement boundaries are still clearly marked. The years when there is no onsite inspection, the evaluation will be by slides, satellite imagery, or aerial photography. The technique selected must be appropriate to allow the integrity of the easement to be assessed. When a violation occurs, onsite visits will be conducted once every 6 months, for a period of 18 months after the violation has been cured. Waivers for variances of the onsite inspection

frequency can be obtained with approval of the National Program Manager and OGC. Suspected violations should be immediately reported to the State Conservationist. The suspected violation and the eventual disposition of that violation should be documented in the official agreement file.

Attachments:

1. Critical Area Planting Specification Sheet for Native Vegetation
2. Wetland Restoration (657) Specification Sheet for Topographic Restoration and Enhancement
3. Easement Monitoring Checklist
4. Compatible Use Authorization

Critical Area Planting (342) Specification Sheet For Native Vegetation

Purpose: For use as Conservation Cover and Critical Area Planting in establishing native vegetation or providing a temporary cover until natural re-vegetation can take place. The use of introduced grasses, such as fescue, bermudagrass, or bahiagrass are prohibited on these areas.

Landowner _____ Tract No. _____
 County _____

Area layout – see sketch	< 10:1 slope	>10:1 slope
Area (ac. / sq.ft.)		
Slope		
Lime (tons/ac.)	1	1
N (lbs/ac.)	100	100
P (lbs/ac.)	100	100
K (lbs/ac.)	100	100
Mulch (tons/ac.)		1 1/2
Temporary Cover Species: (Planting Dates) (Choose 1)	Lbs./Ac. Or PLS	Lbs./Ac. Or PLS
Browntop millet (Apr – Aug)	10	10
Japanese millet (Apr – Aug)	20	
Rye (Sept – Nov)	10	10
Wheat (Oct – Dec)	10	10
Oats (Oct – Nov)	10	10
Other:		
Permanent Cover Species: (Choose 1 or more)	6 lbs. total	10 lbs. total
Switchgrass (Feb – Apr)		
Indiangrass (Feb – Apr)		
Little Bluestem (Feb – Apr)		
Other:		

Reference: Wildlife Planting Guide and Native Wildlife Plants in South Carolina. Clemson University. AFW-2. December, 1997.

If the planting is in the fall, permanent cover species may be seeded at 1 ½ the rates given for Spring seeding.

Typical mixtures

(Per acre)

Slope < 10:1

Slope > 10:1

Spring planting:

10 lbs. Browntop millet	10 lbs. Browntop millet
3 lbs. (PLS) Switchgrass	5 lbs. (PLS) Switchgrass
1 lbs. (PLS) Little bluestem	2 lbs. (PLS) Little bluestem
1 lbs. (PLS) Indiangrass	2 lbs. (PLS) Indiangrass

Temporary Seeding and volunteer native vegetation only:

Spring:

10 lbs. Browntop millet	50 lbs. Browntop millet
	1 ½ tons of mulch

Fall:

1 bu of wheat	2 bu wheat
	1 ½ tons of mulch

Pure Live Seed Calculation:

Pounds of Seed Needed = (Seeding Rate)/(Percent pure seed from tag) x (Percent Germination from tag)

Sketch of Area

Wetland Restoration (657) Specification Sheet for Topographic Restoration and Enhancement

BACKGROUND

Undisturbed wetland systems in South Carolina typically consist of complexes that contain a diversity of topographic relief from extremely shallow areas with minor ridges (micro-topography) to deeper wetland habitats that include some upland characteristics (macro-topography). When wetlands are drained or altered, they normally lose most of their micro and macro topographic relief through land leveling or other agricultural activities, such as disking.

Macro-topographic features are wetland “ridge and swale” complexes whose basins are depressional in landscape position and occur on terraces and in floodplains. These features should be used in all agricultural fields being restored. The basin areas are normally from 0.1 acre to 5 acres in size with depths ranging from 0- 30 inches, depending on the landscape position. These types of wetlands can be found in a multitude of shapes ranging from simple circular basins, to complex amoeba-like outlines, to meandering scours. Ridges (linear) and mounds (circular or elliptical) make up the “upland” component of macro-topographic features that normally do not exceed 30” in height. Together, the ridge and swale features form ephemeral wetlands that hold water from only a few weeks to several months during the year.

Micro-topographic features are normally thought of as those shallow depressions with less than 6 inches of depth between the swales and ridges. Examples of microtopography can be seen in flat fields where shallow “sheet” water stands for short duration after a rain. Within the scope of this document, macro-topography will be assumed to include micro-topographic features.

HABITAT

Wetland restoration plans that include undulating landscape features create a diversity of habitat types. Swales, oxbows, potholes and other macro-topographic basins provide varying hydroperiods from short-term ponding to seasonal and semi-permanent water conditions. A wetland, or wetland complex, with multiple hydroperiods can support a variety of habitat zones. Submergent, emergent, and floating-leaf communities (e.g., duckweed) are examples of herbaceous aquatic habitats. A diverse wetland plant community benefits numerous species of wildlife including many fur-bearing mammals, waterfowl, shorebirds, wading birds, amphibians and reptiles. Because native plants provide the best overall habitat, are essentially self-sustaining, and tend to be non-invasive, only native vegetation should be planted. Low-level mounds or ridges (maximum 30 inches) are considered to be a component of macro-topography, and can greatly increase the biological diversity of restoration sites when combined with basins. Amphibians, for example, tend to have small home ranges. Thus, having a diversity of wetland types in close proximity to terrestrial habitats within the project area will support the greatest populations. When planning a site for amphibian and reptile habitat, macro-topographic features should make up approximately 30-50% of the area. The water (swale, meander, etc.) and the upland habitat (mound) acreage are combined to get the percent of macro-topographic features. It can be assumed that for every acre of water created, an additional acre of mound is created.

Fill excavated from the basins can be used to create multiple upland habitat conditions based on the height, shape, and location of habitat mounds. Variations in habitat mound design can provide escape areas, denning

sites, nesting opportunities, and plant diversity, as well as providing visual breaks within the wetland complex. All side slopes for mounds should have a minimum slope of 10:1, but should be as flat as is feasible. This area should then be planted with a vegetative barrier such as native grasses, trees or shrubs.

MOUNDS

Swales of varying depths (<36") and widths (10' to 20') can connect basins to diversify a site. They provide additional cover for waterfowl as well as escape routes away from predators. Connection swales may have 10:1 (or flatter) side slopes. On gently sloping sites, an efficient means of providing shallow, "sheet" water habitat is through the creation of linear habitat mounds. The excavated material from a macro-topographic basin is used to form a low, meandering ridge on the down slope side of the basin(s). Typical heights for the mound range from 1 to 2 feet. By using the spoil in a creative manner, the total shallow water on a project site can be substantially increased. The impounded sheet water provides seasonal or ephemeral water for shallow feeders such as shorebirds, while the excavated basins provide longer hydroperiod wetland habitats. This method can also be utilized where wetland meadow conditions are desired.

Creative Borrowing: Borrow areas for dikes or embankments can be incorporated into the development of macro-topographic features. Potholes, swales, meanders, and other shallow water habitats can serve as borrow areas for needed fill. All side slopes for basins should have a slope of 10:1 or greater. Slopes exceeding 20:1 are not considered excessive for habitat purposes. Examples of this include situations where equipment operators randomly fill their scrapers leaving shallow, single-trip borrow sites. The borrow areas will result in the basins being the deepest portions of the wetland complex. In seasonal or ephemeral wetlands these areas provide a diversity of hydroperiods by holding water later into the year than the remainder of the wetland.

Rough-finish grading: The desired macro-topographic features will have rough surfaces on all side slopes and top, an undulating bottom, and a ragged shoreline.

LARGE WOODY DEBRIS

Trees cut during essential clearing operations to install structures should be utilized by randomly placing whole trees, logs, or limbs throughout the wetland area. They should not be piled and burned or removed from the site. In cases where no clearing will be done, trees may be cut from the buffer area to provide large woody debris in open fields where restoration is taking place. Six to twelve trees per acre should be added in swale complexes or shallow flats. Consider using different sizes of hardwood material, excluding mast-producing hardwoods.

LARGE WOODY DEBRIS:

- Provides sunning and resting areas for herptiles
- Provides loafing sites for waterfowl
- Is a source for organic soil material
- Provides additional vertical and horizontal habitat
- Is an excellent substrate for invertebrates





Swale and adjacent down slope ridge. Slopes of 20:1.



Newly constructed crescent shaped swale adjacent to the end of an existing hedgerow.

WRP EASEMENT MONITORING CHECKLIST

Review Date _____ Landowner _____

Contract Number _____ Reviewer(s) _____

The purpose of easement monitoring is to ensure compliance with easement requirements and evaluate restoration progress. This information allows adaptive management of the site to ensure that program objectives are met. Staff familiar with wetland restoration and management should collect the information. Partner technical expertise can provide support or conduct the review.

Has landowner changed? Yes / No If yes, review easement requirements with new owner.

Is easement boundary clearly marked and identifiable? (*Note-the boundary must be traversed at least once every three years*) If no, what actions are needed?

Is there any encroachment (timber harvesting, disking, mowing) on easement? Yes / No (*describe*)

Are easement violations occurring (e.g., dumping, cropping, etc.) Yes / No (*describe*)

Are compatible use permits being followed? Yes / No (*describe*)

**Are restoration practices being properly operated and maintained? Yes / No
If not, what maintenance is needed? (Complete Practice & Cost Worksheet)**

**Are restoration practices functioning as planned? Yes / No
If no, what modifications are necessary? (Complete Practice & Cost Worksheet)**

**Is planned hydrology present? Yes / No
If not, what actions are needed? (Complete Practice & Cost Worksheet)**

Are migratory bird program objectives being achieved? Yes / No
If not, what modifications are necessary? (Complete Practice & Cost Worksheet)

If Threatened and Endangered species were part of selection criteria, have their habitat needs been restored? Yes / No N/A
If not, what modifications are necessary? (Complete Practice & Cost Worksheet)

Has planned vegetation restoration goals been achieved? Yes / No
If not, what modifications are necessary? (Complete Practice & Cost Worksheet)

Are noxious or invasive species a problem on the site? Yes / No
If yes, what actions are needed? (Complete Practice & Cost Worksheet)

Does the landowner have any concerns or suggestions for improvement of the easement? Yes / No
(describe)

Additional Observations:

Practice and Cost Worksheet

Practice	Practice Code	Specific Need	Number	Acres	Cost