Agricultural Conservation Easement Program
Wetland Reserve Easements
ACEP-WRE

WETLAND RESTORATION CRITERIA GUIDE

Delaware

April 2020
The purpose of this guide is to provide technical eligibility and restoration criteria for the Agricultural Conservation Easement Program Wetland Reserve Easements (ACEP-WRE) in Delaware. Administrative policy and guidance for ACEP-WRE is provided in national and state directives.
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* These sections have had significant changes from previous guidance.
PROGRAM OBJECTIVE

The purpose of ACEP-WRE is to restore, re-habilitate, and protect wetlands in order to ensure the long-term provision of wetland functions and values. Program emphasis is on habitat for migratory birds, threatened and endangered species, and other wetland dependent wildlife. Other important wetland functions and values include water quality protection, flood retention, groundwater recharge, biodiversity conservation, and preservation of natural heritage. Following are the primary ways in which program objectives are achieved:

- Restore wetlands on sites where the production of food or fiber has resulted in the loss of one or more wetland criteria: hydrology, vegetation, soils.
- Re-habilitate wetlands where the production of food or fiber has resulted in a significant degradation in hydrology.
- Protect restored and re-habilitated wetlands through acquisition of conservation easements.

PROGRAM OVERVIEW

There are two types of enrollment for ACEP-WRE in Delaware, both of which are easement options.

**Permanent and 30-year Easements.** Lands otherwise eligible to be enrolled in ACEP-WRE, which currently do not have the same protections as provided by an ACEP-WRE easement, are eligible to be enrolled as an easement. ACEP-WRE easements are held by the federal government. The landowner retains ownership of the land and reserves the rights to use and lease the property for recreational purposes, and to restrict public access to the property. NRCS must be provided access to the land for the purposes of restoration and monitoring.

**Easement Payments.** Participants who enroll land in ACEP-WRE easements are eligible to receive compensation based on a percentage of the fair market value (FMV). The percentage is set by NRCS based on historical data and other factors. State-wide geographic area payment rate caps (GARCs) have been established in Delaware based on market analyses. The GARCs provide a set easement compensation rate for specific types of land for proposed easements that fall within the range of acres applicable to the GARC. Typically, the landowner will receive the GARC as the easement compensation rate if land in the easement is one of the applicable GARC land types. If the GARC is not applicable, an appraisal will be used to determine the easement compensation rate. An appraisal may also be required if the fair market value is expected to be less than the GARC, or the proposed easement includes land that is not applicable to the GARC. Participants who enroll land in **30-year easements** are eligible to receive payments equal to 75% of the amount paid for a permanent easement.

Participants may elect to receive the value of the easement in one lump sum or recurring annual payments. For easements or 30-year contracts valued at $500,000 or less, NRCS provides a single payment or up to 10 annual installment payments, as requested by the landowner and as specified in the Agreement to Purchase the Conservation Easement (APCE). For easements or 30-year contracts valued at more than $500,000, NRCS makes a single payment unless annual installment payments are requested by the landowner. For installment payments, the landowner must specify on the APCE form the number of annual installment payments within the range of 5 to a maximum of 10.
Cost-Share for Restoration. All practices required for restoration are eligible for cost-share, including practices necessary to exclude livestock from the site. NRCS pays 100 percent of the cost of restoration for permanent easements, and 75 percent of the cost of restoration for 30-year easements.

Payments for cost-share from all sources shall not exceed 100 percent of the cost of restoration. For 30-year easements, cost-share payments from all USDA sources shall not exceed 75 percent. Non-USDA federal agencies may provide additional cost-share up to 100 percent, within their own program restrictions.

Cost-Share for Management Activities. Cost-share may be requested to conduct necessary management activities and repairs. For more information, see the section on Management and Maintenance.

RESPONSIBILITIES

State Office

The responsibilities of the State Office include the following:

- Overall program management, including managing funding allocations;
- Obligate funds for easements and restoration agreements;
- Provide state-level policy and guidance to field offices;
- Establish easement compensation values;
- Review and make determinations regarding compatible use agreements;
- Establish ranking criteria;
- Obtain recommendations from the State Technical Committee;
- Assist with land eligibility determinations;
- Provide technical support to field offices for evaluation and design;
- Provide and/or contract services to assist with engineering design, including aerial topographic surveys and high-resolution digital elevation data (e.g. lidar);
- Evaluate and facilitate use of new restoration technologies and techniques;
- Coordinate/consult with FWS on program priorities;
- Conduct easement acquisition activities, including ordering easement boundary surveys;
- Process land ownership and adjacent lands waiver requests.

Field Office

The responsibilities of the Field Office include the following:

- Accept ACEP-WRE applications;
- Complete application package materials, including preliminary restoration plan, application ranking, and NEPA documentation;
- Determine landowner and land eligibility;
• Consult with FWS on land eligibility and restoration plans;
• Conduct environmental due diligence requirements to verify the absence of offsite and onsite conditions that would preclude successful restoration;
• Certify that the legal boundary survey (for easements) is correct, and boundary markers have been correctly placed;
• Complete final restoration plan, engineering designs, and cost estimates;
• Enter plan in Conservation Desktop, including digitizing boundaries;
• Communicate to landowner easement/agreement requirements and restrictions, and monitor site for compliance; advise State Office of non-compliance issues;
• Provide technical and administrative assistance to complete restoration plan and certify practice implementation for payment;
• At the time of easement enrollment, provide FSA county office notice of location and acreage for county cropland limitation tracking;
• At the time of easement closing, provide FSA county office completed CCC-505 along with map and acreage of recorded ACEP-WRE easement.

LAND ELIGIBILITY

Privately-owned cropland, hayland, pasture, forested land (including timber production lands), and other lands that are, or have been used for the production of food or fiber are eligible for enrollment. In addition, lands adjacent to these lands that are functionally connected to the wetlands may also be eligible for enrollment. All enrolled lands must be configured in a way that allow for efficient management of the area.

There are two main types of eligible lands: Lands with primary eligibility; and, lands eligible as adjacent lands, the enrollment of which is limited by the amount of land enrolled with primary eligibility.

Lands with Primary Eligibility

Lands with primary eligibility are lands that have been used or are currently being used for the production of food or fiber, including cropland, pasture, and forest. The following types of lands are eligible as lands with primary eligibility:

• Prior converted cropland, farmed wetland, farmed wetland pasture, and wetlands farmed under natural conditions.
• Former or degraded wetlands occurring on lands that are or have been used for production of food or fiber, where the hydrology has been significantly degraded. These may include lands such as ditched woodland and ditched tidal marsh with evidence of agricultural use.
• Riparian areas along streams or other waterways that link wetlands protected by an easement or an interest that achieves the same purpose of an easement (e.g. State wildlife management

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1 The term “primary eligibility” has been adopted by NRCS Delaware for clarity but is not used in the national manual.
area) and provides protections similar to those of the ACEP-WRE easement. Areas enrolled under this eligibility may average no more than 300 feet in width on one side of the stream or waterway, and connect eligible areas separated by not more than 1 mile. The riparian area may be in a natural condition, or in need of restoration. Riparian areas for the purposes of ACEP-WRE are the floodplains and immediate buffers along perennial streams, rivers, or bays. Riparian areas and the areas they connect may be enrolled simultaneously. When appropriate, the State Conservationist may waive the 300-foot average width limitation. The entire riparian area up to the 300 foot limit is considered primary eligibility.

- Lands substantially altered by flooding due to scouring or broken levees, or lands where off-site effects on hydrology have permanently altered the water table to the extent that the site will develop wetland soil and vegetation characteristics. Typically, the alteration would be sufficient to significantly reduce or limit agricultural production.

- Restored wetlands enrolled in CRP. Upon closing of the easement, the CRP contract must either be terminated or modified to remove the portion being transferred to ACEP-WRE. Refunds of cost-share and annual payments, interest, and liquidated damages will not be required or applied. Refunds of SIP and PIP payments are required.\(^2\)

- Wetlands restored under a local, state, or federal program (e.g. Partners for Wildlife), or by private individuals, that meet NRCS standards and specifications.

### Adjacent Land Eligibility

Lands with adjacent land eligibility are those adjacent to, or contiguous with lands enrolled with primary eligibility, that will contribute significantly to the wetland functions and values of the restored land. Lands offered for enrollment as other land must be configured in a way that when combined with the primary eligible land, provide values and functions for wetlands and wildlife. Adjacent lands include:

- Natural wetlands not in need of restoration;
- Restorable wetlands not otherwise eligible; and
- Non-wetlands either in natural condition or that can be restored to upland buffer.

The maximum ratio of primary to adjacent land cannot exceed 1:1, except in cases where the additional adjacent land would provide significant benefits to program objectives and priorities. Requests for exceptions will be reviewed by the State Biologist and must be approved by the State Conservationist on a case-by-case basis up to 5:1 ratio. Examples include:

- Lands interspersed and surrounding unique wetland complexes, such as Delmarva Bays
- Lands enrolled under the marsh migration eligibility (MME) that are required to facilitate marsh migration;
- Lands determined to be critical for the protection of habitat for rare, threatened, or endangered species;
- Lands that if not enrolled would:
  - Create unmanageable boundaries;
  - Limit restoration or make restoration infeasible;

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\(^2\) Per 2-CRP (Rev 5), Paragraph 554.
Result in areas that are infeasible to farm or manage for timber.

**Marsh Migration Eligibility (MME)**

Cropland, active pasture, and forest land below 2-ft above mean sea level (AMSL) may be considered eligible for enrollment when they will facilitate marsh migration. Lands enrolled under the marsh migration eligibility must be paired with directly adjacent lands with elevations between 2-4 ft AMSL. The acreage enrolled below 2-ft AMSL shall be no more than the paired acreage where marsh migration will be allowed to occur. The WRPO must include provisions to allow for marsh migration within the areas below 2-ft AMSL and the paired lands above 2-ft AMSL (see the *Delaware Wetland Design Guide, Measures to Provide Marsh Migration in the Near Marsh Zone Marsh* for specific criteria, located in Section IV of the FOTG). The lands above 2-ft AMSL may have primary or adjacent land eligibility.

Tidal marsh may be considered eligible for enrollment in support of marsh migration when needed for management (e.g. phragmites control) or restoration.

Cropland, including CRP/CREP land capable of being cropped, and woodland enrolled under MME will have standard GARC rates applied, as applicable. Tidal marsh of up to 10 percent of the total easement area will received the woodland rate. If the tidal marsh exceeds 10 percent, an appraisal will be required for the easement.

Lands enrolled under MME criteria must meet all other program eligibility requirements.

**Size Limits.** ACEP-WRE does not have a minimum size for eligibility, but applications of less than 10 acres will be given lower priority, except when the following applies:

- The land currently provides habitat for rare, threatened, or endangered species; or,
- Enrollment will result in the restoration of unique or rare wetland types (e.g. Delmarva Bays); or,
- The land is integral to restoration on a contiguous parcel, and the total area of the combined parcels is 10 acres or more.

**Ineligible Land.** The following lands are ineligible for enrollment:

- Lands owned by the federal, state, or local government;
- Lands where conditions may undermine restoration integrity;
- Lands that are currently offered similar protection as an ACEP-WRE easement are not eligible for enrollment as easements;
- Lands under an easement that would provide additional protection if enrolled in ACEP-WRE, but for which the easement holder will not subordinate easement control to NRCS are not eligible for enrollment as easements;
- Lands established to trees through a CRP contract, generally CP3, CP3A, and CP22, are ineligible, except in cases where the land is integral to a wetland restoration on adjacent lands, or where the tree planting was determined to be a failure. The State Conservationist must provide a waiver to enroll these lands.
- Converted wetlands (CW and CW+year), except if the CW is incidental to an otherwise eligible easement offer, and not enrolling the area would create unmanageable boundaries, and the landowner agreed to restore the CW at their own expense.
- Lands below 2-ft above mean sea level (AMSL), based on the North American Vertical Datum of 1988 (NAVD 88), except for lands that meet the marsh migration eligibility (MME) criteria.
PROGRAM PRIORITIES AND APPLICATION RANKING

Program emphasis is on habitat for migratory birds, threatened and endangered species, and other wetland dependent wildlife. Other important wetland functions and values include water quality protection, flood retention, groundwater recharge, biodiversity conservation, and preservation of natural heritage.

Applications are ranked and selected based on environmental, cost, and agreement duration factors. Environmental factors include habitat for threatened and endangered species and species of concern, proximity to existing wildlife habitat and migratory bird corridors, increase in wetland functions as a result of the restoration, and the size and location of the site. The cost of restoration, level of required maintenance, and easement cost are cost considerations.

Permanent easements are given priority over 30-year easements. Special ranking factors apply for easement offers, including the proportion of the easement to be restored to wetland, the easement location, and the landowner’s willingness to accept less than the geographic area rate cap for the easement.

Appendix C provides an explanation of the ranking criteria.

PROGRAM IMPLEMENTATION

Application Process

Applications are submitted by landowners to the local NRCS field office using the NRCS Conservation Program Application (NRCS-CPA-1200). On the form, the applicant indicates the type of agreement or easement in which they are interested. For easement applications, the landowner must provide evidence of ownership (ex. deed). A landowner applying for an easement is provided with sample copies of the Warranty Easement Deed (LTP-30), the Subordination Agreement and Limited Lien Waiver (AD-1158), and Agreement for the Purchase of a Conservation Easement (LTP-31).

The applicant must be established in SCIMS, and provide information necessary to determine eligibility, and member’s information and signatory authority for legal entities.

The field office determines landowner eligibility (i.e. AGI and HEL/WC compliance) and initial land eligibility (i.e. length of ownership requirement).

If eligibility is met, a site visit is made to determine eligibility of the land. If the site is determined to be eligible, the District Conservationist certifies eligibility, and the preliminary wetland restoration plan of operations (WRPO) is developed. The application is ranked and submitted to the NRCS State Office.

Application packages shall be developed using the current year application package and submitted to the NRCS State Office ACEP-WRE Program Manager. A list of the required items for application submittal is on the Application Field Office Checklist.

Application Development

The preliminary WRPO is an important component of the application package. The purpose of the preliminary WRPO is to identify the objectives of the restoration, and the proposed restoration practices, components, and methods, and estimated cost. The preliminary WRPO is developed before
completion of the ACEP-WRE application ranking. Normally, the preliminary WRPO is developed with knowledge of typical restoration needs and techniques, tailored for an individual site, but without engineering designs. The preliminary WRPO also identifies the areas that will be restored, and the extent of restoration.

The WRPO shall be signed by the applicant as an acknowledgement of the restoration objectives, plans, and, if applicable, their out-of-pocket costs.

For easement applications, it is important to accurately identify property boundaries, to the extent practical, and account for all parcels that will be included in the easement.

Other elements to be completed during the preliminary WRPO process include environmental evaluations (i.e. NEPA), identification of existing structures, potential hazardous waste areas, easement and property boundaries, and certification of land ownership.

See the Wetland Restoration Plan section and the current Application Field Office Checklist for additional information.

Enrollment and Payments

When an application is selected for funding, the landowner is notified with a letter of offer of enrollment. Once the landowner is enrolled, the development of the final WRPO can begin.

Title and environmental searches are ordered by the NRCS SO when the application is accepted. After the NRCS SO reviews the searches, an Agreement for the Purchase of a Conservation Easement is developed by the NRCS SO and presented to the landowner for accepted applications. The landowner accepts enrollment by signing the agreement to purchase. Once the agreement is signed, the SO obligates funds for the easement, and proceeds with easement acquisition activities. Prior to easement closing, NRCS obtains a boundary survey, legal description, title insurance policy, and develops the warranty easement deed. The NRCS FO inspects the property and completes a Certification of Inspection and sends it to the NRCS SO. These items are reviewed by the Office of General Counsel (OGC). Upon authorization by the OGC, the easement proceeds to closing, during which the easement is recorded, and the landowner is paid. The average closing time for easements in Delaware is 24 months from the signing of the agreement to purchase.

Restoration Contracts and Agreements. Except when enrolling a previously restored site, restoration is not implemented until the easement is closed. Restoration funds for easements are reserved at the time of enrollment but are not obligated until the final restoration plan is completed and easement acquisition has been assured. However, engineering design and final restoration plan development should be initiated as soon as possible after the agreement to purchase is signed. At least one cost-shared practice should be commenced within the first year of the restoration agreement, and all restoration practices should be completed within 3 years.

Restoration can be accomplished through a Conservation Program Contract (CPC, form NRCS-CPA-1202) with the landowner, a federal contract, a cooperative agreement, or any combination thereof. In Delaware, restoration on permanent easements will typically be accomplished using a cooperative agreement or CPC with the landowner. In most cases, restoration on 30-year easements will be accomplished using a CPC with the landowner.

If restoration is implemented through a CPC with the landowner, the CPC is developed when the final WRPO and schedule of operations have been completed. The CPC and schedule of operations are presented to the landowner for signature when the State Office confirms that easement acquisition is
certain to occur. Funds for the restoration are obligated when both the landowner and State Conservationist sign the CPC. The landowner is paid when the restoration has been completed and certified. Payments may be made separately for practices scheduled for implementation at different times. Partial payments for individual practices are not allowed. Landowners should be strongly encouraged to obtain at least two to three bid estimates for restoration work.

If restoration is implemented through a federal contract or agreement, NRCS makes payments directly to the contractors or cooperating agency. For 30-year easements implemented through a federal contract, the landowner’s share of the restoration cost will be withheld from their easement payment, and NRCS will make payment to the contractor.

TECHNICAL ELIGIBILITY DETERMINATION

The technical eligibility determination is made after a landowner submits an application and is determined to be an eligible entity. The technical eligibility determination, which is separate from the administrative eligibility determination (e.g. 24 month ownership), is a resource inventory that is specifically conducted for the purposes of the program. Information gathered during the technical eligibility determination will be utilized to develop the preliminary wetland restoration plan and support the development and implementation of the final wetland restoration plan. Therefore, the technical eligibility determination is an important part of the ACEP-WRE process, and effort should be made to fully assess the restoration potential and effects.

The determination of eligibility for ACEP-WRE is an on-site determination, which includes a combination of site visits and review of GIS data. Site visits, historic aerial photography, and historical soils maps can help to identify drainage ditches and tile lines. Lidar and other digital elevation data can be used to delineate flow paths and watershed boundaries. Tax map data assists with determining parcel boundaries, which can affect the potential for restoration. Other important data includes soils maps and interpretations, DNR wetlands inventory, and FEMA floodplain maps.

Eligibility Evaluation Process

The majority of technical eligibility determinations are made for lands applied for enrollment under the following primary eligibility categories:

- Prior converted cropland, farmed wetland, farmed wetland pasture, and wetlands farmed under natural conditions; and,
- Former or degraded wetlands occurring on lands that are or have been used for production of food or fiber, where the hydrology has been significantly degraded.

For lands falling into one of the two categories listed above, the technical eligibility determination often begins with an evaluation of soil hydric ratings, but includes other factors related to conversion scope and restoration potential. The technical determination for these two land categories can be viewed as a 3-step process:

1. Are the areas proposed for enrollment existing or former wetlands? The presence of hydric soils is the most stable and reliable indicator that an area is or has been a wetland. If the area is occupied by hydric soils, it is potentially eligible for ACEP-WRE. These areas are considered to be primary eligible lands under the assumption that if they have been converted or degraded, they can be re-established or re-habilitated. If yes, continue with determination.
2. **Was the area converted** to a non-wetland or is it an existing wetland that has been significantly altered or degraded? Cropland, hayland, and managed (non-natural) pastureland capable of being cropped that meet the criteria provided in step 1 above are considered converted or significantly altered/degraded wetlands. Other land types (e.g. woodland) consisting of former or degraded wetlands with **significant degradations in hydrology** are also considered significantly altered/degraded wetlands. In these other land types, the presence, scope, and effect of the hydrology degradation must be evaluated to determine significance. If the land is converted or significantly altered/degraded cropland, hayland, or managed pastureland, or it is other types of land with significant degradation of hydrology, then it is considered potentially eligible for ACEP-WRE as primary eligible land. **If yes, continue with determination.**

3. **Is the converted or degraded wetland area capable of being re-established or re-habilitated?** Site conditions need to be evaluated to determine if restoration activities can be implemented to attain all three wetland criteria (hydrology, plants, and soil) and significantly restore functions. This step includes determination of the scope of the restoration activities (i.e. the amount of wetland capable of being re-established or re-habilitated). **If an area meeting criterion 1 and 2 above can be re-established or re-habilitated, then, notwithstanding other unique factors, it meets technical eligibility requirements for ACEP-WRE.**

It is not mandatory to apply the above process in the order provided. In some cases, you may be able to determine that an area has no indicators of degradation (step 2), without determining the acreages of hydric and nonhydric soils (step 1). However, each of the steps describes criteria that must be evaluated for eligibility.

**Evaluation of Hydric Soils**

As stated in step 1 above, evaluation of the presence of hydric soils is the most stable and common indicator of the presence of an existing or former wetland. The Delaware NRCS policy for evaluating hydric soils for ACEP-WRE eligibility uses three levels of evaluation: Soil map units; obvious landform scale inclusions; and, other hydric inclusions. These are described below:

A. **Soil map units.** When evaluating soils for the purposes of ACEP-WRE initial eligibility determination, soil map units shall be assigned hydric and nonhydric ratings based upon the representative percentages of the major components of the map unit. Soil map units for which all the major components are hydric shall be considered **hydric**, and map units for which all the major components are **not hydric** shall be considered **not hydric**.

B. **Obvious landform scale inclusions**. Obvious nonhydric and hydric landform scale (e.g. depressions, ridges) inclusions shall be delineated within soil map units when they can be readily distinguished by available remote sensing data (e.g. aerial photography, LiDAR-based digital elevation models). Typically, these delineations will occur where changes in elevation are significant and relatively abrupt. In contrast, landform scale inclusions occurring on flats are not likely to be discernible with remote sensing data, and in such cases, are not required to be delineated.

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3 The term “converted” here is not referring to the Food Security Act compliance use of the term.

4 In soils terminology, the terms *inclusion* and *minor component* are synonymous.
C. Other hydric inclusions. In addition to landform scale hydric inclusions, other hydric inclusions may be delineated, and shall be field verified using the latest version of *Field Indicators of Hydric Soils in the U.S.*

In using the above process, the acreage determinations from A will be modified by the delineations based on B and C, if applicable.

**Consideration of Existing Drainage**

Often, an important component of the technical eligibility determination process is the determination of the effects of existing drainage on wetland hydrology. In ditched systems, some wetlands may be partially drained, while others may be drained sufficiently to completely remove wetland hydrology. Restoration of these systems is usually implemented using water control structures, ditch plugs and/or small berms.

**WETLAND RESTORATION PLAN**

**Preliminary Restoration Plan**

The development of the preliminary WRPO is an important process that is rooted in the eligibility determination, and in which many considerations must be made to determine the potential for restoration and how the restoration will be accomplished. When the preliminary WRPO is completed, the planner should have a very good idea of what the restoration will entail, and how it will be accomplished. A good cost estimate is also a necessary outcome of the preliminary plan, especially in cases where the landowner will be required to contribute to the cost of restoration.

When developing the preliminary WRPO, a determination must be made as to how much and to what extent wetlands can be restored. The results of the determination are documented on the *Preliminary Plan Worksheet* (see Appendix A). Lands with primary eligibility and lands with adjacent land eligibility are identified and totaled separately. Upland and wetland habitat acres and water regimes pre- and post-restoration are also documented. The water regimes are a condensed version of the *National Wetlands Inventory* (NWI) water regime modifiers (see Appendix B). Existing wetlands classifications may be found for some wetlands on the NWI and DNR Wetlands geospatial data layers. The classification of the wetland should match the existing condition (before restoration) and the planned condition (after restoration) as closely as possible. Soils interpretations that can be useful in determining planned hydrologic condition include soil drainage class, depth to water table, and ponding and flooding frequency.

Also refer to the section on Restoration for information relevant to planning considerations.

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5 Depth to water table, ponding frequency, and flooding frequency together are referred to as “water features” interpretations, and are available through Soil Data Viewer.
Final Wetland Restoration Plan of Operations

The final WRPO is developed after the land is enrolled in the program. Development of the final WRPO usually does not occur on easement sites until there is a reasonable level of certainty that the easement will be closed. The final WRPO includes the following elements:

- Objectives of restoration;
- Targeted habitat types, including wildlife, vegetation, and hydrology;
- Schedule of operations, including practices, locations, and acreages;
- Restoration plan map, identifying management units, restored areas, habitat types, boundary of easement or agreement, and location of practices;
- Engineering designs, with quantities and estimated cost;
- Operation and maintenance plans;
- Management plan, including reference to locations for each management unit.

RESTORATION

Objective

The overall goal of the ACEP-WRE restoration is to optimize wetland benefits, including water quality and wildlife functions. Restoration plans should maximize benefits to the extent possible. Because the enhancement of one wetland function may negatively affect another, the target for functional restoration is the condition that naturally occurred on the site. Restoration refers to both the wetland and upland portions of a site that will be restored.

Restoration Requirements

The following section provides restoration requirements specific to ACEP-WRE, as well as some other important considerations for restoring wetlands. Also refer to the NRCS conservation practice standards for Wetland Restoration (Code 657), Riparian Forest Buffer (Code 391), Riparian Herbaceous Cover (Code 390), Conservation Cover (Code 327), all of which can be found in the FOTG.

Historic Wetland Types and Alternative Communities. Wetland restoration plans for ACEP-WRE typically target a historic wetland type found in Delaware. Historic wetland types occurring in Delaware include riverine headwater, riverine floodplain, depression, estuarine tidal fringe, flats, and slope wetlands. Alternative communities within ACEP-WRE are defined as an assemblage of plant and animal species that naturally occur in the physiographic region but had not naturally occurred on the specific restoration site. Alternative communities are applicable to any restored sites, including both wetlands and uplands. For example, cropland restored to emergent wetland in an area where it would naturally be forested wetland is considered an alternative community.

ACEP-WRE allows for the establishment of alternative communities for the purposes of substantially replacing original habitat functions and values while providing significant support or benefit for migratory waterfowl or other wetland-dependent wildlife, or to address local resource concerns.
identified in a State wildlife plan or initiative, as determined by NRCS. The 2018 Farm Bill rules allow states to establish the thresholds for the percentage of the easement that may be established to an alternative community for these purposes. The table below provides the allowable alternative communities and thresholds for Delaware.

Table 1. Alternative community types and thresholds for Delaware. The threshold is the percentage of the entire easement that may be established to an alternative community. Although this allows for counting areas that will not be restored as a portion of the historic community, these areas generally should not be converted to the alternative community.

<table>
<thead>
<tr>
<th>Region</th>
<th>Alternative Wetland Communities</th>
<th>Alternative Upland Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic Coastal Plain</td>
<td>Up to 100% of the wetlands may be established as emergent wetlands and depressions with up to 30% open water to support waterfowl, shorebirds, wading birds, and amphibians.</td>
<td>Up to 100% of the uplands may be established to native grasses and forbs, with or without shrubs, to support northern bobwhite, grassland birds, and marsh migration.</td>
</tr>
<tr>
<td>Piedmont</td>
<td>Up to 50% of the wetlands may be established as emergent wetlands and depressions with up to 30% open water to support waterfowl, shorebirds, wading birds, and amphibians.</td>
<td>Up to 30% of the upland may be established to native grasses and forbs to support waterfowl nesting. Up to 100% of the uplands may be established to native grasses and forbs to support grassland birds. These areas must be planned to meet the requirements for grassland birds, per the Delaware Wildlife Habitat Planning Guide. Up to 100% of the uplands within 300 feet of a bog turtle wetland may be established to native grasses and forbs to support birds and insects associated with these wetlands, to reduce shading effects, and prevent establishment of volunteer tree seedlings in or near the wetland.</td>
</tr>
</tbody>
</table>

The following exceptions to the alternative communities allowance apply:

- Existing forest shall not be converted to non-forest except where the existing forest is within 2 feet of mean sea level and occurs directly adjacent to existing tidal marsh. The conversion of forest within 2 feet of mean sea level to non-forest will facilitate migration of native tidal marsh.
- Non-forested areas adjacent to perennial and non-channelized intermittent streams will be established to riparian forest buffers of at least 150 feet in width or the width of the geomorphic floodplain plus 50 feet, whichever is greater.

The above exceptions may be waived in special circumstances with concurrence by the State Resource Conservationist and State Conservationist.

Restoration of natural communities that historically occurred on the specific site and in the specific location are not counted against the alternative communities allowance. For example, a Delmarva Bay restored to a natural condition of emergent vegetation, or a xeric dune restored to a shortleaf pine-oak-hickory savannah would not count against the alternative communities allowance, because it represents the original community for the specific location. These types of restoration should be documented in the final restoration plan so as not to cause confusion with accounting for alternative communities.

Restoration planners should consider the effects of establishing alternative communities on the conservation of natural resources and ensure planning decisions do not increase the chances of long-
term degradation. For example, on sites with steep slopes, planners may want to offer long-term protection of the soil resources by planning for the land to be established to trees and shrubs.

Establishment of alternative communities is generally restricted to cropland, pasture, and hayland. However, existing forest land may be considered for establishment to alternative communities where ecological justification exists. Typically, this would apply to establishment of early successional forest habitat along the edges of fields and openings to create a feathered edge. Generally, this should be avoided in areas providing high quality habitat for forest interior dwelling species (FIDS).

**Wetland Criteria**

The three criteria for wetlands are: hydrology, vegetation, and soils. Restored sites must meet all three wetland criteria. In potential restoration sites, soils are often in place, especially in forested and agricultural areas. Vegetation may be in place in forested areas but is usually missing or highly degraded in cropland and pasture. Hydrology is probably the most critical factor for wetland functioning, because it is necessary for the development and functioning of hydric soils, and the establishment and maintenance of wetland vegetation.

All restoration activities occurring in existing wetlands must comply with DNREC and ACOE permitting requirements. The following document provide permitting guidance:

- Nontidal Wetlands and Waterways Permit Guidance Table 3;

**Hydrology.** In areas to be restored to the natural condition, the hydrology should be able to provide the functions that the original wetland would have offered, to the extent practical. Common, as well as adaptive and novel restoration techniques should be considered when planning hydrology restoration. At times, complete functional restoration may not be practical because of adjacent land uses and project boundaries. Restoration of hydrology shall not affect adjacent properties.

In agricultural areas, landscape alterations have often resulted in significant effects on wetland systems. Some of these alterations have made it difficult to restore wetlands completely and/or in a way that returns the landscape to its pre-altered condition. When these conditions exist, hydrology may be restored using techniques that provide hydrologic functions without achieving the pre-altered landscape condition.

In agricultural areas with wetland hydrology, microtopography techniques can be used to provide the hydrologic variability typically found in natural wetlands. Establishment of wetland vegetation can provide support for hydrologic functions by creating topographical variation, modifying flow paths, and restricting water movement.

On prior converted cropland where drainage ditches cannot be plugged because of effects on neighboring properties, low profile berms and shallow excavation can be used to restore hydrology. This may be an effective technique where soils can perch water and adjacent ditches cannot be plugged.

Areas adjacent to tidal marsh should be restored in a way that facilitates marsh migration.

Many floodplains have been disconnected from streams and rivers because of channelization and the development of artificial levees. These connections should be re-established to the extent possible to
attenuate flooding and promote nutrient and sediment removal. These connections can be re-
established by breaching levees and installing controlled outlets.

Existing degraded forested wetlands should not be converted to emergent wetlands or open water,
extcept in special circumstances, such as when the site was historically a natural depressional wetland
(e.g. Delmarva Bay), or when the site will provide habitat for a rare, threatened or endangered species
(e.g. bog turtle seepage wetland). Restoration techniques typically applicable to degraded forested
systems include ditch plugs and floodplain reconnection.

Typically, hydrology restoration components should be permanent so that long-term maintenance is
minimized. One exception to this is when the participant has requested a compatible use that requires
water level control, such as for moist soil management. Another exception is when water levels need to
be managed initially to allow for successful restoration of vegetation. If water control structures are
installed for temporary water level management, they should be identified as such in the restoration
and management plans.

Vegetation. Wetland vegetation may be restored by natural regeneration, seeding and plantings,
removal of undesirable species, or a combination thereof. Where a seedbank of desirable species is
likely to exist, natural regeneration may be preferable for cost efficiency. In areas where less desirable
species, such as red maple and sweet gum, are likely to dominate a site, plantings should be used to
facilitate the growth of a diverse vegetative community. Species for planting should be selected based
on soils, planned hydrologic conditions, and knowledge of natural plant communities. Tree species
should be well-distributed throughout the restored area, including the buffer.

In areas dominated by pine saplings, restoration plans should include actions necessary to restore the
site to a natural mix of vegetation. Hydrology restoration may be significant enough to affect the
survival of the pine saplings. If the changes in hydrology will be insufficient to affect pine survival, the
pine may need to be harvested, removed, or destroyed to encourage natural regeneration or allow for
planting of hardwood species.

The reduction in pine as a component of the plant community should be based on the proportion that
they are found in a natural plant community. For the purposes of ACEP-WRE in the areas of Delaware
where pine naturally occurs, at a minimum, 50 percent of the plant community shall be hardwoods, bald
cypress, pond cypress or Atlantic white cedar. Pines often account for a much smaller portion of the
trees in wetland areas and are often found on the higher knolls within wetland complexes. Near
brackish waters, pines may account for a relatively higher proportion of the overall plant community. In
some cases, NRCS may determine that it is in the interest of the project to remove all the pines. Such
may be the case when an area is dominated by young (i.e. less than 10 years old) and/or extremely
dense pine.

The reduction of pines may be conducted following a long-term, strategic approach. One technique to
reduce undesirable tree species is to conduct multiple harvests at intervals of 5 to 10 years. Harvest
rates should be targeted to promote the natural regeneration of hardwoods throughout the stand.
Harvest rates typically will be greater than rates targeted for commercial pine production. Follow-up
harvests can release naturally regenerated species. Patch clear-cuts of 1 to 5 acres can be incorporated
into harvests prescriptions to create areas that can be planted to highly desirable species. This type of
forest management is often more practical and manageable than removing all the pines at once and
may reduce the negative effects of invasive species such as mile-a-minute.

The removal of woody vegetation should be conducted in a manner that promotes conservation of
natural resources. If the vegetation to be removed has commercial value, it can be harvested and the
landowner can collect the income (if this occurs after the easement has been closed, a compatible use agreement is required), or it can be used to negotiate costs with the contractor performing the removal. If the vegetation does not have commercial value, a good strategy would be to incorporate the biomass into the restoration as coarse woody debris and organic matter. Organic matter should be incorporated in a manner and quantity that will not negatively affect wetland functions or the ability for natural regeneration via the seedbank.

**Soil Organic Matter.** Organic matter is necessary to restore the natural functions of a wetland, including sustaining beneficial microbes and aquatic invertebrates. When needed, soil organic matter should be supplemented with both coarse woody debris and finer organic carbon. Supplemental soil organic matter is usually not necessary in non-agricultural lands.

**Upland Buffer.** Upland buffers adjacent to wetlands provide important ecological functions and protect the condition of the wetland. At a minimum, all wetlands enrolled in ACEP-WRE should have a minimum buffer to address both water quality and wildlife habitat needs.

Typically, naturally occurring upland buffers in Delaware consist of a diversity of trees and shrubs. Some or all of the upland buffer may be maintained in herbaceous vegetation if it is appropriate to meet the wildlife objectives and complies with the alternative communities criteria. Common appropriate uses of an herbaceous buffer are to create a “soft edge” where woodland or forest meets agricultural lands, provide habitat for targeted species such as northern bobwhite or grassland birds, provide nesting areas for waterfowl, and provide areas for marsh migration. Herbaceous buffers established in areas that would naturally be forested are considered alternative communities.

In some cases, a filter strip may be required to provide a water quality buffer for the wetland. When needed, the filter strip should be designed to the minimum size required to address water quality.

It may not always be feasible to have an adequate buffer on every wetland. When a buffer is not feasible, NRCS shall ensure that the conditions will not undermine the integrity of the restoration.

### MAINTENANCE AND MANAGEMENT

Operation and maintenance (O&M) activities are those activities necessary to maintain proper function of the land and conservation treatments implemented to achieve plan objectives. Operation and maintenance include inspection of structures and mowing berms to prevent failure, control of noxious and invasive species, mowing of trails and access roads, and repair and replacement of damaged structures. In contrast, management activities are implemented to manipulate hydrology, soils, or vegetation to benefit wildlife and habitat values. Management activities are typically implemented to support alternative communities, and may include mowing or spot treatment to control woody vegetation in herbaceous buffers, moist-soil management, and water level control.

Maintenance and management are the responsibility of NRCS, except for practices installed to exclude and manage livestock, and activities required to control noxious weeds and maintain alternative communities. Management and maintenance activities may be assumed by the landowner, at their discretion. Management activities assumed by the landowner typically require a compatible use authorization (see the Compatible Use Authorization section for more information). General maintenance, such as removing debris from structures, maintaining forestry plantings, control of noxious and invasive species, and mowing the tops of berms, can be performed by the landowner without a compatible use authorization. These items must be identified and described in the operations and maintenance plan.
Financial assistance for maintenance and management may be requested on an as-needed basis, based on the actual cost. Submit funding requests to the NRCS State Office. Funding must be requested and obligated prior to implementing the activities. Financial assistance is not available for regular maintenance activities conducted by the landowner (e.g. mowing berms).

**Invasive Species Control.** Financial assistance may be provided for control of invasive species. A plan shall be developed to control the invasive species to a specified “maintenance” threshold, which may require multiple treatments over successive years. When the maintenance threshold has been attained, the landowner assumes responsibility for controlling the invasive species at the maintenance level. The requirements and responsibilities shall be identified in the restoration and management plan. Final restoration plans should address invasive species control to the extent practical to minimize the need for long-term control and reduce the potential for long-term loss of functions and values.

**Maintenance of Tree Plantings.** Financial assistance may be provided for maintenance of tree and shrub plantings. Any tree or shrub plantings should include an operations and maintenance plan to assure successful establishment. The plan may include activities such as mowing between tree rows, spraying herbicide around shelters, and controlling undesirable vegetation. These activities may be scheduled for periods of 3 to 5 years, as determined by the planner.

**Operation and Maintenance Plan**

The final WRPO must include an O&M plan that includes activities to be performed by the landowner. Operation and maintenance plans can also include restrictions, such as when to avoid allowable activities. At a minimum, O&M plans shall include activities required to maintain structures and control noxious and invasive plants, and restrictions on when activities can be conducted. See Appendix F for standard O&M plan statements.

**ACTIVITIES AND USES**

**Reserved Rights**

Reserved rights are uses and activities that are not restricted by ACEP-WRE. The landowner reserves the right to undeveloped recreational uses, such as hunting and fishing, and the leasing of such rights for economic gain. The landowner reserves the right to restrict public access and trespass on the land.

**Acceptable Structures.** Non-permanent hunting structures, such as tree stands and duck blinds, that will accommodate no more than 4 people are allowed and are not subject to the Compatible Use Authorization process.

**Compatible Uses**

Compatible uses are activities that promote the objectives and enhance the long-term protection and values of the area in an ACEP-WRE easement or agreement. Compatible uses may be requested by the landowner or recommended by NRCS, FWS, Conservation District or DNREC Fish and Wildlife, but must be approved by NRCS. Approved compatible uses are not required to be implemented by the landowner. Economic gains from approved compatible uses are acceptable.

Requests for compatible uses will be reviewed by the State Resource Conservationist, and if acceptable, recommended for approval by the State Conservationist or Assistant State Conservationist for Programs. A completed Environmental Evaluation (NRCS-CPA-52) must be included with all compatible use authorization requests.
Compatible uses are approved by NRCS on a case-by-case basis for a specific activity, location, and time period, not to exceed 10 years, and do not vest any right to the landowner. NRCS reserves the right to withdraw approval for a compatible use at any time when the activity has been determined to be in conflict with the objectives of the project or program.

Compatible uses cannot be guaranteed to a landowner at the time of enrollment. However, the landowner can be provided reasonable assurance that they will be allowed to conduct periodic mowing and prescribed burns to maintain early successional habitat, when it is included in the final restoration plan. These areas must be clearly identified in the restoration plan and their location cannot be changed.

Refer to Appendix G for a list of allowable compatible uses in Delaware.

**Prohibited Uses**

Prohibited uses are those that have been identified as not being compatible with program or project objectives. Prohibited uses include:

- Planting or harvesting crops for human or domestic animal consumption, including those crops that may naturally occur in wetlands (e.g. cranberries, commercial wild rice).
- Road development
- Permanent or temporary placement of structures used for residence or overnight occupancy, including houses, trailers, cabins, and storage facilities, or any structures that compromise program objectives
- Trash disposal
- Aquaculture
- Biomass production
- Surface mining
- Commercial seed production
- Drainage development
- Wastewater treatment or irrigation withdrawal
- Use of the easement for non-passive recreational activities (e.g. motocross, ATV riding)
- Any unauthorized compatible use

**Access Roads and Trails**

Vegetated access roads and walking trails may be maintained when they do not conflict with the objectives of the program. All access roads and trails shall be identified in the final restoration and management plans. New access roads shall not be created once the restoration has been implemented. Trail development may be authorized through a compatible use authorization. Temporary roads for timber harvest may be authorized through a compatible use agreement but must be restored at the landowner’s expense. Maintenance of trails and creation of new trails requires a compatible use authorization (see Appendix G).
Shooting Lanes

Shooting lanes can be desirable to facilitate deer hunting, but too many shooting lanes can significantly affect ecological continuity. In young woody growth, or in forests with dense understory, shooting lanes may be needed to offer sufficient hunting opportunity. In many mature forests shooting lanes are not necessary because undergrowth is not very dense. Shooting lanes generally do not need to exceed 150 yards in length and 10 feet in width at the ground (allowing for equipment widths and overhanging vegetation). The maximum combined length of shooting lanes for any one deer stand should not exceed 300 yards in length.

Existing shooting lanes may be maintained to the original dimensions. Shooting lanes shall not be relocated without prior NRCS approval. When a shooting lane is relocated, the old shooting lane should be allowed to regenerate to forest. Requests for new and relocated shooting lanes are evaluated on a case-by-case basis and require a compatible use authorization.

Use of Motorized Vehicles, Including All-terrain Vehicles (ATV)

The purpose of ACEP-WRE is to provide habitat for wetland-dependent and other wildlife to fulfill life requirements, including breeding, foraging, and migration. Use of motorized vehicles, especially those with 4-wheel drive, can be extremely destructive to plants, animals, and soils, and therefore is not allowed when performed as a recreational activity, as it is not passive recreational use. However, limited ATV use is allowed on existing trails to facilitate other allowable activities. These activities include hunting, trail and berm maintenance, and accessing areas for other passive uses. Landowners and other users of the easement should be notified of the following restrictions to the use of motorized vehicles by including them in the O&M plan:

- Any use of motorized vehicles shall be conducted at speeds and in a manner that minimizes damage and disturbance to vegetation, soils, and wildlife, and shall only occur on designated trails and access roads;
- Do not use motorized vehicles on inundated or saturated areas at any time during the year. These areas provide important habitat for amphibians and are very susceptible to damage from tires.
- Do not use motorized vehicles on any areas except designated access roads during the primary nesting season, which occurs from April 15 to August 15.
- Avoid noisy activities, such as mowing or use of recreational vehicles, in or near the water when waterfowl are present.

Maintenance Mowing

Mowing can be used to maintain the tops of berms, walking trails, and access areas that were not planned to be restored to woody vegetation. Mowing shall be conducted outside the primary nesting season (April 15 – August 15), and not more often than once per year. Existing access roads shall not be maintained at a width wider than 12 feet or that which is required for the intended use, whichever is less. Trails shall be maintained at a width no wider than 6 feet. Mowing of trails and access roads, and creation of new trails requires a compatible use authorization (see Appendix G).

Planting and Harvesting of Crops

Any crops planted prior to the easement recording or execution of the restoration cost-share agreement may be harvested after the easement recording or agreement execution, with written authorization by
NRCS. Crops shall not be planted after the easement recordation or agreement execution, except when in the interest of NRCS, and only with a compatible use authorization.

Landowners who wish to plant and harvest crops after signing the ACEP-WRE Agreement but before the easement has closed must submit a written request to the ACEP-WRE Program Manager. The request should outline the crops, locations, and time frame for planting and harvest. NRCS will review the request and provide a Pre-Acquisition Harvest Authorization letter if approved.

Activities Restricted by Signing an Agreement to Purchase

Upon signing an Agreement for the Purchase of a Conservation Easement, the landowner agrees not to extract resources or conduct any activity that may diminish the value of or encumber the land. Activities that would be considered to diminish the value of the land include, but are not limited to, timber harvest, transfer of development rights, and mineral resource extraction (crops excepted; see Planting and Harvesting of Crops). Therefore, these activities may not be conducted, except when NRCS determines that they do not diminish the value of the land or will further the restoration objectives. Written authorization from NRCS is required to conduct these activities.
APPENDIX A: WETLANDS CLASSIFICATION

A description of the wetlands classifications based on Cowardin et al. 1979 are provided below for some of the commonly restored wetland systems in Delaware. Also refer to the classification table at the end of the appendix.


SYSTEMS AND SUBSYSTEMS

Riverine System

Definition. The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts in excess of 0.5 ‰. A channel is “an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water” (Langbein and Iseri 1960:5).

Limits. The Riverine System is bounded on the landward side by upland, by the channel bank (including natural and man-made levees), or by wetland dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens. In braided streams, the system is bounded by the banks forming the outer limits of the depression within which the braiding occurs.

The Riverine System terminates at the downstream end where the concentration of ocean-derived salts in the water exceeds 0.5‰ during the period of annual average low flow, or where the channel enters a lake. It terminates at the upstream end where tributary streams originate, or where the channel leaves a lake. Springs discharging into a channel are considered part of the Riverine System.

Description. Water is usually, but not always, flowing in the Riverine System. Upland islands or Palustrine wetlands may occur in the channel, but they are not included in the Riverine System. Palustrine Moss- Lichen Wetlands, Emergent Wetlands, Scrub-Shrub Wetlands, and Forested Wetlands may occur adjacent to the Riverine System, often on a floodplain. Many biologists have suggested that all the wetlands occurring on the river floodplain should be a part of the Riverine System because they consider their presence to be the result of river flooding. However, we concur with Reid and Wood (1976:72,84) who stated, “The floodplain is a flat expanse of land bordering an old river ... Often the floodplain may take the form of a very level plain occupied by the present stream channel, and it may never, or only occasionally, be flooded... It is this subsurface water [the ground water] that controls to a great extent the level of lake surfaces, the flow of streams, and the extent of swamps and marshes.”

Subsystems. The Riverine System is divided into four Subsystems: the Tidal, the Lower Perennial, the Upper Perennial, and the Intermittent. Each is defined in terms of water permanence, gradient, water velocity, substrate, and the extent of floodplain development. The Subsystems have characteristic flora and fauna (see Illies and Botosaneau 1963; Hynes 1970; Reid and Wood 1976). All four Subsystems are not necessarily present in all rivers, and the order of occurrence may be other than that given below.
**Tidal.**—The gradient is low and water velocity fluctuates under tidal influence. The streambed is mainly mud with occasional patches of sand. Oxygen deficits may sometimes occur and the fauna is similar to that in the Lower Perennial Subsystem. The floodplain is typically well developed.

**Lower Perennial.**—The gradient is low and water velocity is slow. There is no tidal influence, and some water flows throughout the year. The substrate consists mainly of sand and mud. Oxygen deficits may sometimes occur, the fauna is composed mostly of species that reach their maximum abundance in still water, and true planktonic organisms are common. The gradient is lower than that of the Upper Perennial Subsystem and the floodplain is well developed.

**Upper Perennial.**—The gradient is high and velocity of the water fast. There is no tidal influence and some water flows throughout the year. The substrate consists of rock, cobbles, or gravel with occasional patches of sand. The natural dissolved oxygen concentration is normally near saturation. The fauna is characteristic of running water, and there are few or no planktonic forms. The gradient is high compared with that of the Lower Perennial Subsystem, and there is very little floodplain development.

**Intermittent.**—In this Subsystem, the channel contains flowing water for only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.

**Classes.** Rock Bottom, Unconsolidated Bottom, Aquatic Bed, Streambed, Rocky Shore, Unconsolidated Shore, and Emergent Wetland (nonpersistent).
bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2 m at low water; and (4) salinity due to ocean-derived salts less than 0.5 ‰.

**Limits.** The Palustrine System is bounded by upland or by any of the other four Systems.

**Description.** The Palustrine System was developed to group the vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie, which are found throughout the United States. It also includes the small, shallow, permanent or intermittent water bodies often called ponds. Palustrine wetlands may be situated shoreward of lakes, river channels, or estuaries; on river floodplains; in isolated catchments; or on slopes. They may also occur as islands in lakes or rivers. The erosive forces of wind and water are of minor importance except during severe floods.

The emergent vegetation adjacent to rivers and lakes is often referred to as “the shore zone” or the “zone of emergent vegetation” (Reid and Wood 1976), and is generally considered separately from the river or lake. As an example, Hynes (1970:85) wrote in reference to riverine habitats, “We will not here consider the long list of emergent plants which may occur along the banks out of the current, as they do not belong, strictly speaking, to the running water habitat.” There are often great similarities between wetlands lying adjacent to lakes or rivers and isolated wetlands of the same class in basins without open water.

**Subsystems.** None.

**Classes.** Rock Bottom, Unconsolidated Bottom, Aquatic Bed, Unconsolidated Shore, Moss-Lichen Wetland, Emergent Wetland, Scrub-Shrub Wetland, and Forested Wetland.
CLASSES, SUBCLASSES, AND DOMINANCE TYPES

Class: Emergent Wetland

**Definition.** The Emergent Wetland Class is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants. All water regimes are included except subtidal and irregularly exposed.

**Description.** In areas with relatively stable climatic conditions, Emergent Wetlands maintain the same appearance year after year. In other areas, such as the prairies of the central United States, violent climatic fluctuations cause them to revert to an open water phase in some years (Stewart and Kantrud 1972). Emergent Wetlands are found throughout the United States and occur in all Systems except the Marine. Emergent Wetlands are known by many names, including marsh, meadow, fen, prairie pothole, and slough. Areas that are dominated by pioneer plants which become established during periods of low water are not Emergent Wetlands and should be classified as Vegetated Unconsolidated Shores or Vegetated Streambeds.

Subclasses and Dominance Types.

**Persistent.**—Persistent Emergent Wetlands are dominated by species that normally remain standing at least until the beginning of the next growing season. This Subclass is found only in the Estuarine and Palustrine Systems. Persistent Emergent Wetlands dominated by saltmarsh cordgrass (Spartina alterniflora), saltmeadow cordgrass (S. patens), big cordgrass (S. cynosuroides), needle rush (Juncus roemerianus), narrowleaved cattail (Typha angustifolia), and southern wild rice (Zizaniopsis miliacea) are major components of the Estuarine systems of the Atlantic and Gulf Coasts of the United States. On the Pacific Coast, common pickleweed (Salicornia Virginica), sea blite (Suaeda californica), arrow grass (Triglochin maritimum), and California cordgrass (Spartina foliosa) are common dominants. Palustrine Persistent Emergent Wetlands contain a vast array of grasslike plants such as cattails (Typha spp.), bulrushes (Scirpus spp.), saw grass (Cladium jamaicense), sedges (Carex spp.); and true grasses such as reed (Phragmites australis), manna grasses (Glyceria spp.), slough grass (Beckmannia syzigachne), and whitetop (Scolochloa festucacea). There is also a variety of broadleaved persistent emergents such as purple loosestrife (Lythrum salicaria), dock (Rumex mexicanus), water willow (Decodon verticillatus), and many species of smartweeds (Polygonum).

**Nonpersistent.**—Wetlands in this Subclass are dominated by plants which fall to the surface of the substrate or below the surface of the water at the end of the growing season so that, at certain seasons of the year, there is no obvious sign of emergent vegetation. For example, wild rice (Zizania aquatica) does not become apparent in the North Central States until midsummer and fall, when it may form dense emergent stands. Nonpersistent emergents also include species such as arrow arum (Peltandra virginica), pickerelweed (Pontederia cordata), and arrowheads (Sagittaria spp.). Movement of ice in Estuarine, Riverine, or Lacustrine Systems often removes all traces of emergent vegetation during the winter. Where this occurs the area should be classified as Nonpersistent Emergent Wetland.

Class: Scrub-Shrub Wetland

**Definition.** The Class Scrub-Shrub Wetland includes areas dominated by woody vegetation less than 6 m (20 feet) tall. The species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. All water regimes except subtidal are included.
Description. Scrub-Shrub Wetlands may represent a successional stage leading to Forested Wetland, or they may be relatively stable communities. They occur only in the Estuarine and Palustrine Systems, but are one of the most widespread classes in the United States (Shaw and Fredine 1956). Scrub-Shrub Wetlands are known by many names, such as shrub swamp (Shaw and Fredine 1956), shrub carr (Curtis 1959), bog (Heinselman 1970), and pocosin (Kologiski 1977). For practical reasons we have also included forests composed of young trees less than 6 m tall.

Subclasses and Dominance Types.

Broad-leaved Deciduous. —In Estuarine System Wetlands the predominant deciduous and broadleaved trees or shrubs are plants such as sea-myrtle (Baccharis halimifolia) and marsh elder (Iva frutescens). In the Palustrine System typical Dominance Types are alders (Alnus spp.), willows (Salix spp.), buttonbush (Cephalanthus occidentalis), red osier dogwood (Cornus stolonifera), honeycup (Zenobia pulverulenta), spirea (Spiraea douglasii), bog birch (Betula pumila), and young trees of species such as red maple (Acer rubrum) or black spruce (Picea mariana).

Needle-leaved Deciduous. —This Subclass, consisting of wetlands where trees or shrubs are predominantly deciduous and needle-leaved, is represented by young or stunted trees such as tamarack or bald cypress (Taxodium distichium).

Broad-leaved Evergreen. —In the Estuarine System, vast wetland acreages are dominated by mangroves (Rhizophora mangle, Languncularia racemosa, Conocarpus erectus, and Avicennia germinans) that are less than 6 m tall. In the Palustrine System, the broad-leaved evergreen species are typically found on organic soils. Northern representatives are labrador tea (Ledum groenlandicum), bog rosemary (Andromeda glaucophylla), bog laurel (Kalmia polifolia), and the semi-evergreen leatherleaf (Chamaedaphne calyculata). In the south, fetterbush (Lyonia lucida), coastal sweetbells (Leucothoe axillaris), inkberry (Ilex glabra), and the semi-evergreen black ti-ti (Cyrilla racemiflora) are characteristic broad-leaved evergreen species.

Needle-leaved Evergreen. —The dominant species in Needle-leaved Evergreen Wetlands are young or stunted trees such as black spruce or pond pine (Pinus serotina).

Dead. —Dead woody plants less than 6 m tall dominate Dead Scrub-Shrub Wetlands. These wetlands are usually produced by a prolonged rise in the water table resulting from impoundment of water by landslides, man, or beavers. Such wetlands may also result from various other factors such as fire, salt spray, insect infestation, air pollution, and herbicides.

Class: Forested Wetland

Definition. The Class Forested Wetland is characterized by woody vegetation that is 6 m tall or taller. All water regimes are included except subtidal.

Description. Forested Wetlands are most common in the eastern United States and in those sections of the West where moisture is relatively abundant, particularly along rivers and in the mountains. They occur only in the Palustrine and Estuarine Systems and normally possess an overstory of trees, an understory of young trees or shrubs, and a herbaceous layer. Forested Wetlands in the Estuarine System, which include the mangrove forests of Florida, Puerto Rico, and the Virgin Islands, are known by such names as swamps, hammocks, heads, and bottoms. These names often occur in combination with species names or plant associations such as cedar swamp or bottomland hardwoods.

Subclasses and Dominance Types.

Broad-leaved Deciduous. —Dominant trees typical of Broadleaved Deciduous Wetlands, which are represented throughout the United States, are most common in the South and East. Common
dominants are species such as red maple, American elm (Ulmus americana), ashes (Fraxinus pennsylvanica and F. nigra), black gum (Nyssa sylvatica), tupelo gum (N. aquatica), swamp white oak (Quercus bicolor), overcup oak (Q. lyrata), and basket oak (Q. michauxii). Wetlands in this subclass generally occur on mineral soils or highly decomposed organic soils.

**Needle-leaved Deciduous.**—The southern representative of the Needle-leaved Deciduous Subclass is bald cypress (Taxodium distichum), which is noted for its ability to tolerate long periods of surface inundation. Tamarack is characteristic of the Boreal Forest Region, where it occurs as a dominant on organic soils. Relatively few other species are included in this Subclass.

**Broad-Leaved Evergreen.**—In the Southeast, Broadleaved Evergreen Wetlands reach their greatest development. Red bay (Persea borbonia), loblolly bay (Gordonia lasianthus), and sweet bay (Magnolia virginiana) are prevalent, especially on organic soils. This Subclass also includes red mangrove, black mangrove (Avicennia germinans), and white mangrove (Languncularia racemosa), which are adapted to varying levels of salinity.

**Needle-leaved Evergreen.**—Black spruce, growing on organic soils, represents a major dominant of the Needle-leaved Evergreen Subclass in the North. Though black spruce is common on nutrient poor soils, Northern white cedar (Thuja occidentalis) dominates northern wetlands on more nutrient rich sites. Along the Atlantic Coast, Atlantic white cedar (Chamaecyparis thyoides) is one of the most common dominants on organic soils. Pond pine is a common needle-leaved evergreen found in the Southeast in association with dense stands of broad-leaved evergreen and deciduous shrubs.

**Dead.**—Dead Forested Wetlands are dominated by dead woody vegetation taller than 6 m (20 feet). Like Dead Scrub-Shrub Wetlands, they are most common in, or around the edges of, man-made impoundments and beaver ponds. The same factors that produce Dead Scrub-Shrub Wetlands produce Dead Forested Wetlands.

**NONTIDAL WATER REGIME MODIFIERS**

**Permanently Flooded.** Water covers the land surface throughout the year in all years. Vegetation is composed of obligate hydrophytes.

**Intermittently Exposed.** Surface water is present throughout the year except in years of extreme drought.

**Semipermanently Flooded.** Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.

**Seasonally Flooded.** Surface water is present for extended periods especially early in the growing season, but is absent by the end of the season in most years. When surface water is absent, the water table is often near the land surface.

**Saturated.** The substrate is saturated to the surface for extended periods during the growing season, but surface water is seldom present.

**Temporarily Flooded.** Surface water is present for brief periods during the growing season, but the water table usually lies well below the soil surface for most of the season. Plants that grow both in uplands and wetlands are characteristic of the temporarily flooded regime.

**Intermittently Flooded.** The substrate is usually exposed, but surface water is present for variable periods without detectable seasonal periodicity. Weeks, months, or even years may intervene between periods of inundation. The dominant plant communities under this regime may change as soil moisture...
conditions change. Some areas exhibiting this regime do not fall within our definition of wetland because they do not have hydric soils or support hydrophytes.

**Artificially Flooded.** The amount and duration of flooding is controlled by means of pumps or siphons in combination with dikes or dams. The vegetation growing on these areas cannot be considered a reliable indicator of water regime. Examples of artificially flooded wetlands are some agricultural lands managed under a rice-soybean rotation, and wildlife management areas where forests, crops, or pioneer plants may be flooded or dewatered to attract wetland wildlife. Neither wetlands within or resulting from leakage from man-made impoundments, nor irrigated pasture lands supplied by diversion ditches or artesian wells, are included under this modifier.

**SPECIAL MODIFIERS**

Many wetlands and deepwater habitats are man-made, and natural ones have been modified to some degree by the activities of man or beavers. Since the nature of these modifications often greatly influences the character of such habitats, special modifying terms have been included here to emphasize their importance.

The following modifiers should be used singly or in combination wherever they apply to wetlands and deepwater habitats.

**Excavated.** Lies within a basin or channel excavated by man.

**Impounded.** Created or modified by a barrier or dam which purposefully or unintentionally obstructs the outflow of water. Both man-made dams and beaver dams are included.

**Diked.** Created or modified by a man-made barrier or dike designed to obstruct the inflow of water.

**Partly Drained.** The water level has been artificially lowered, but the area is still classified as wetland because soil moisture is sufficient to support hydrophytes. Drained areas are not considered wetland if they can no longer support hydrophytes.

**Farmed.** The soil surface has been mechanically or physically altered for production of crops, but hydrophytes will become reestablished if farming is discontinued.

**Artificial.** Refers to substrates classified as Rock Bottom, Unconsolidated Bottom, Rocky Shore, and Unconsolidated Shore that were emplaced by man, using either natural materials such as dredge spoil or synthetic materials such as discarded automobiles, tires, or concrete. Jetties and breakwaters are examples of Artificial Rocky Shores. Man-made reefs are an example of Artificial Rock Bottoms.
### WETLANDS AND DEEPWATER HABITATS CLASSIFICATION

**SYSTEM**

**SUBSYSTEM**

**CLASS**

<table>
<thead>
<tr>
<th>Subclass</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
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<td>Bedrock</td>
<td>Cobble-Gravel</td>
<td>Algal</td>
<td>Floating Vegetation</td>
<td>Dead</td>
<td>Emergent</td>
</tr>
<tr>
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**SYSTEM**

**SUBSYSTEM**

**CLASS**

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<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Cobble-Gravel</td>
<td>Algal</td>
<td>Floating Vegetation</td>
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</tbody>
</table>

### Classification of Wetlands and Deepwater Habitats of the United States

Cowardin ET AL, 1979 as modified for National Wetland Inventory Mapping Convention
## Wetlands and Deepwater Habitats Classification

### System

**SUBSYSTEM**

**1 - LIMNETIC**

**2 - LITTORAL**

### Class

<table>
<thead>
<tr>
<th>Subclass</th>
<th>RE - ROCK BOTTOM</th>
<th>UB - UNCONSOLIDATED BOTTOM</th>
<th>AB - AQUATIC BED</th>
<th>CW - OPEN WATER</th>
<th>DR - EMERGENT</th>
<th>CS - OPEN WATER</th>
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<tbody>
<tr>
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<td>1 Cobbles/Gavel</td>
<td>1 Cobbles/Gavel</td>
<td>1 Algal</td>
<td>1 Bedrock</td>
<td>1 Bedrock</td>
<td>2 Nonpersistent</td>
</tr>
<tr>
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<td>2 Sand</td>
<td>2 Sand</td>
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</tr>
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<td>2 Nonpersistent</td>
</tr>
</tbody>
</table>

### P - Palustrine

<table>
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<tr>
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<th>RE - ROCK BOTTOM</th>
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<th>AB - AQUATIC BED</th>
<th>CW - OPEN WATER</th>
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<tr>
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<td>4 Organic</td>
<td>4 Organic</td>
<td>4 Algal</td>
<td>4 Organic</td>
<td>4 Organic</td>
<td>2 Nonpersistent</td>
</tr>
</tbody>
</table>

### Modifiers

In order to more adequately describe the wetland and deepwater habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied to the class or lower level in the hierarchy. The named modifier may also be applied to the ecological system.

<table>
<thead>
<tr>
<th>Water Regime</th>
<th>Water Chemistry</th>
<th>Soil</th>
<th>Special Modifiers</th>
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<td>Tropical</td>
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</tr>
</tbody>
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**Note:** Italicized terms were added for mapping by the National Wetlands Inventory program.
## APPENDIX B: RANKING CRITERIA

### DELAWARE WRP RANKING WORKSHEET

<table>
<thead>
<tr>
<th>Name</th>
<th>Farm No.</th>
<th>Tract No.</th>
<th>TaxMap:</th>
<th>Parcel:</th>
<th>County:</th>
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</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

### ENVIRONMENTAL FACTORS

<table>
<thead>
<tr>
<th>POINTS</th>
<th>SCALE</th>
<th>SCORE</th>
</tr>
</thead>
</table>

#### A. THREATENED AND ENDANGERED SPECIES; DECLINING SPECIES; RARE COMMUNITIES (Max. 60 points)

- Restoration is likely to benefit state-federal endangered, threatened, or candidate species of conservation concern: Higher point for known species occurring on site: Key Wildlife Habitat Map

  List species: 20

- Contiguous with a formally recognized natural resource area or other unique or rare natural habitat types: Higher points for known unique or rare natural habitat types: Key Wildlife Habitat Map

  List habitats: 20

#### B. MIGRATORY BIRDS (Max. 45 points) Within 1000 feet of:

- The shoreline of the Atlantic Ocean, Delaware Bay, or Inland Bays: 30

- The shoreline of mainstem tidal or nontidal rivers or streams: 15

#### C. WILDLIFE ACCESS AND USE (Max. 75 points)

- Site is contiguous with a protected wildlife habitat area which is likely to remain for at least the term of the WRP contract or easement. A protected wildlife habitat area includes (but is not limited to), a State Forest or Park in a natural condition, tidal or nontidal wetland in a natural condition, AND

  Site is contiguous with privately owned woodland >= 50 ac: 30

  Site is contiguous with privately owned woodland < 50 ac: 20

- Subject parcel is within 1,000 feet of tidal waters, and/or the buffer contains unique biological communities, such as uncommon large or old-growth timber (at least 75 years old): 25

  Subject parcel is within 1,000 feet of tidal waters, and/or the buffer contains unique biological communities, such as uncommon large or old-growth timber (at least 75 years old): 25

#### D. PREDOMINANT LAND USE (Max. 50 points)

- Score is based on the predominant land use (present condition) of wetland area to be restored. (If two or more land uses have equal acres, then use is predominant, use the highest applicable value.)

  1. High quality habitat (e.g. mature hardwood forest): 50

  2. Medium quality habitat (e.g. young hardwood forest): 25

  3. Low quality habitat (e.g. pasture, cut-over timber): 15

  4. No habitat (cropland >= 10 ac. And contiguous to woodland): 10

  5. No land use (cropland < 10 ac.): 0

#### E. TREE CHARACTERISTICS (Max. 20 points)

- Tree Species: Maturity

  1. > than 40 years: 10

  2. 20 to 40 years: 5

  3. < than 20 years: 0

- Species Composition

  1. Hardwood: 10

  2. 50/50 Mix: 5


#### F. RESTORATION OF HYDROLOGY (Max. 200 points)

- Extent of entire easement or agreement area where wetlands will be restored or enhanced (50% Program Minimum): Enter data for calculation:

  Hydric Soil Acres X 100 =

  Total Easement or Agreement Acres (Round to 2 decimal places)

- Percentage of restored wetland area with hydrology restored:

  Hydric Soils Acres X 100 =

  Acres with Hydrology Restored (Round to 2 decimal places)

#### C. SIZE OF PROJECT (Max. 100 points)

- Enter data for calculation:

  1. If restored wetland is equal to or larger than 50 acres, Point Score is: 100

  OR

  2. If restored wetland will be smaller than 50 acres:

    Score is = Restored Wetland Acres

    Restored Ac.: (Round to 2 decimal places)
## DELAWARE WRP RANKING WORKSHEET

### ENVIRONMENTAL FACTORS (continued)

#### H. OPERATION AND MAINTENANCE REQUIREMENTS (Max. 75 points)

1a. For permanent easements:
- Minimal management of hydrology or vegetation will be needed to maintain desired conditions after wetland is established (e.g., ‘walk-away’ wetland; includes wetlands with drain plugs).  
<table>
<thead>
<tr>
<th>SCALE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>50</td>
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</tr>
</tbody>
</table>

OR
- Occasional management/maintenance needed to maintain desired conditions (e.g., repair of water control structures, infrequent control of undesirable plants or animals).
<table>
<thead>
<tr>
<th>SCALE</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

OR
- Intensive management/maintenance needed (e.g., yearly control of undesirable plants or animals).
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<thead>
<tr>
<th>SCALE</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

1b. For 30-year easements or 10-year long-term agreements:
- Minimal management of hydrology or vegetation will be needed to maintain desired conditions after wetland is established (e.g., ‘walk-away’ wetland; includes wetlands with drain plugs).
<table>
<thead>
<tr>
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<th>SCORE</th>
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</thead>
<tbody>
<tr>
<td>25</td>
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</table>

OR
- Occasional management/maintenance needed to maintain desired conditions (e.g., repair of water control structures, infrequent control of undesirable plants or animals).
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</thead>
<tbody>
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OR
- Intensive management/maintenance needed (e.g., yearly control of undesirable plants or animals).
<table>
<thead>
<tr>
<th>SCALE</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

#### 2. Easement Type

- Permanent NRCS WRP easement  
  | POINTS |               |
  |        |               |
  | 25     |               |

- 30 year WRP easement  
  | POINTS |               |
  |        |               |
  | 20     |               |

- 10 year non easement  
  | POINTS |               |
  |        |               |
  | 10     |               |

### TOTAL POINTS FOR ENVIRONMENTAL FACTORS

(include points from page 1)  
(Maximum 630 points)  
0

### COST FACTORS

#### A. EASEMENT COST (Max. 150 points, only for easement offers)

<table>
<thead>
<tr>
<th>Type</th>
<th>Cost / Ac.</th>
<th>Percent of Landuse in Offer</th>
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</thead>
<tbody>
<tr>
<td>Woodland Offer</td>
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<tr>
<td>Cropland Offer</td>
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<table>
<thead>
<tr>
<th>Easement cap - easement cost* for offered parcel =</th>
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</tr>
</tbody>
</table>

* If there is more than one land use category in the offered parcel, formula uses a weighted average.

Note: If offers are greater than WRP Cap, the score will be a negative number and points will be deducted.

#### B. RESTORATION COST (Max. 150 points)

Enter the per acre restoration cost (NRCS cost) for the site:  
$0

1. If restoration costs are less than or equal to $250 per acre, the score is 150 points.
   | OR |
   |    |

2. If restoration costs are more than $250 per acre, use the following formula:

\[
\text{points} = \left( \frac{\text{Restoration Cost} - \text{NRCS Cost}}{2,500} \right) \times 150
\]

(Note: If cost is equal to or greater than $2,500 per acre, the score will be a negative number and points will be deducted.)

### TOTAL POINTS FOR COST FACTORS

(Maximum 300 points)  
0

### TOTAL SCORE FOR WRP PROJECT (Environmental Factors plus Cost Factors)

(Maximum 930 points)  
0
APPENDIX C: ELIGIBILITY OF PDA RIGHTS OF WAY

Policy

Rights of way (ROWs) along public drainage association (PDA) drainages are eligible to be enrolled in ACEP-WRE, assuming all other eligibility requirements are met. This includes both maintenance and construction ROWs. PDA ROWs may be enrolled as buffer and/or restorable wetland acreage.

A PDA maintenance ROW that is maintained in grass and/or shrub cover by mowing or other mechanical methods, and that is not being utilized specifically as a restoration component (e.g. low-profile embankment for hydrology restoration) shall be counted against the alternative communities or food plot allowances. PDA maintenance ROWs should be mowed outside the primary nesting season (Apr 15 – Aug 15).

NRCS assumes responsibility for repair and maintenance of any structures that were installed as part of the restoration project, including those installed within the ROW. NRCS does not assume responsibility for normal PDA maintenance activities.

Projects that involve construction within the PDA ROW shall be provided to the PDA managers for review prior to final design.

Explanation

On PDAs, there are two types of ROWs: Maintenance and construction. A typical maintenance ROW is 20 feet in width and is mowed once every 1 to 2 years. A construction ROW is typically wider (up to 200 feet), but is only utilized when major repairs or construction are required, usually when large storm events have caused damage. Construction ROWs may be established to trees outside the footprint of the maintenance ROW.

Because construction ROWs are rarely utilized and are not maintained, they are considered suitable for providing wildlife benefits. The disturbance frequency on maintenance ROWs is compatible with early successional wildlife habitat, as long as the disturbance occurs outside the primary nesting season. Maintenance ROWs may also provide some benefits to a ACEP-WRE project, such as when maintenance of the ROW supports the integrity of restoration components (e.g. low-profile embankments).

The national ACEP manual also provides that restoration measures implemented to counteract offsite effects on hydrology are not counted against the alternative communities allowance (440-528.132B(2)). For example, if a low-profile embankment was needed along a PDA drainage to effectively restore the hydrology of the adjacent area, then the area of the embankment would not count against the alternative communities allowance.
APPENDIX D: ACEP-WRE RESTORATION PHASE WORKFLOW DIAGRAM

ACEP-WRE Restoration Phase Workflow

**Easement Offer Accepted**
- APCE Signed, Easement Funds Obligated, Restoration Funds Reserved
- Engineering Design
  - Final Restoration Plan
  - RLOA or Permit Request Submitted

**Easement Acquisition**
- Title and Environmental Review
- Boundary Survey
- Warranty Easement Deed

**Restoration Phase**
- Cooperative Agreement (Coop)
- Signed Final Restoration Plan Submitted to MDSO
- Coop Developed with Partner
  - Coop Review and Approval by Grants and Agreements and Restoration Funds Obligated

**Easement Closed and Recorded**
- Conservation Program Contract (CPC) with Landowner (NRCS-CPA-1202, NRCS-CPA-1155)
- Landowner CPC Developed
- Final Restoration Plan and CPC Signed by Landowner and Designated Conservationist
- CPC Approved at MDSO and Restoration Funds Obligated

**Acquire Contractor Estimates/Bids**
- Landowner Selects Contractor
- NRCS & Partner Selects Contractor

**Conduct Restoration Activities**
- Field Staff Certifies Practice
- Landowner Pays Contractor and Submits Bills to Field Office
- Field Office Develops Application for Payment and Obtains Landowner Signature
- Field Office Submits Application for Payment to MDSO
- MDSO Approves Payment
- Electronic Payment to Landowner
- Electronic Payment to Coop Partner

**KEY**
- NRCS Responsibility
- NRCS Responsibility Task may be completed by USTWS or Partner

*Contract instrument determined by NRCS in consultation with landowner. Use landowner CPC for 30-year easement restoration.

†Typically, easement closing occurs before restoration funds are obligated, but restoration funds may be obligated in cooperative agreement prior to closing.
APPENDIX E: WRP SCREENING TOOL (VERSION 2)

This optional tool can assist with doing a quick ACEP-WRE eligibility determination. If any of the answers are NO the applicant is ineligible for ACEP-WRE.

1. Is the land owned by the Applicant and is it private land? (units of government and government land are ineligible)

2. Does the Applicant meet the AGI requirement?

3. Is the property free of easements that offer similar protection as that provided by a ACEP-WRE easement (i.e. prohibits development, agriculture, and production forestry) or any MALPF easements?

4. For lands not being offered under the riparian area eligibility category:
   If **cropland** is offered, does it contain hydric soils?
   If **woodland** is offered, does it contain hydric soils AND ditches or some other significant degradation of hydrology?

5. Is the land free of timber stands established through a CRP contract (i.e. CRP practice CP3 or CP3A), or is the land marginal pastureland (FSA definition) free of trees established through a CRP contract? **Guidance:** If the land has trees on it, and it looks like it was converted from a farm field or pasture to a timber stand, then ask the landowner or FSA if it was enrolled in CRP or CREP, and if so, in what practice and was the land considered cropland or marginal pasture. If it was enrolled in CRP or CREP, was considered cropland, and was successfully established to trees using CP3 or CP3A, then it is **not** eligible. If it was enrolled in CRP or CREP, was considered marginal pastureland, and was successfully established to trees using any practice, then it is **not** eligible. Lands established to trees through CRP or CREP using CP23 or CP23A are eligible. Lands established to trees through CRP or CREP using CP22 may be considered eligible.
APPENDIX F: OPERATION AND MAINTENANCE PLAN

The following statements shall be included in all O&M plans, except for the statements referring to embankments when not applicable.

- **Any activity that involves the cutting, harvesting, or removal of vegetation or manipulation of hydrology, except for spot control of noxious and invasive plants, and maintenance of established and approved access roads, requires authorization from NRCS in the form of an approved compatible use authorization (CUA).** Contact NRCS if you want to conduct an activity that manipulates vegetation or hydrology, if you do not already have an approved CUA for the activity.

- Do not implement maintenance activities during the primary nesting season, which runs from April 15 to August 15, unless specifically prescribed in the final restoration plan or an approved compatible use authorization.

- Inspect all embankments and structures at least once per year and after every major storm. Promptly remove trash and obstructions, fix leaks, and make other repairs as needed.

- Mow or burn embankments once every 1 to 3 years, if needed to reduce encroachment of trees and shrubs. Do not mow or burn between April 15 and August 15, to protect ground-nesting wildlife.

- Control noxious weeds and other invasive plants by spot treatment, using mechanical methods or approved herbicides. Control of noxious weeds (specifically, Johnsongrass, Shattercane, Canada Thistle, Bull Thistle, Plumeless Thistle, and Musk Thistle) is required by state law. Noxious weed control can be conducted during the primary nesting season.

- Deter colonization of invasive plants (e.g. phragmites) by conducting regular site inspections and spot treatment (using mechanical methods or approved herbicides). Spot treatment of individual or small clumps of invasive species, which can be performed by hand removal or manual herbicide application, does not require a compatible use authorization. Contact NRCS for any invasive weed control that requires machine or other intensive treatment methods.

- Nuisance animals such as beavers and muskrats may be removed to protect structural practices in accordance with state game regulations. Geese can be discouraged by minimizing the area of open water and promoting the growth of tall vegetation in both the shallow water area and buffer.

- Use of motorized vehicles as a form of recreational activity is not allowed on the easement. Motorized vehicles can be used to facilitate other allowable activities (e.g. hunting, maintenance, access). When using motorized vehicles on the easement, the following requirements apply:
  - Any use of motorized vehicles shall be conducted at speeds and in a manner that minimizes damage and disturbance to vegetation, soils, and wildlife, and shall only occur on designated trails and access roads;
  - Do not use motorized vehicles on inundated or saturated areas **at any time during the year.** These areas provide important habitat for amphibians, and are very susceptible to damage from tires.
  - Do not use motorized vehicles on any areas except designated access roads during the primary nesting season, which occurs from April 15 to August 15.
Avoid noisy activities, such as mowing or use of recreational vehicles, in or near the water when waterfowl are present.

- To the extent possible, livestock, dogs, and cats should be kept off the site to avoid disturbance to wildlife (except when used for allowable activities).
- To prevent disease, promptly remove and dispose of dead birds and fish.
APPENDIX G: COMPATIBLE USES

The following compatible uses may be used in Delaware for the purpose of establishing, enhancing, and maintaining habitat for species targeted in the ACEP-WRE:

- **Annual Crops** – Annual crops with the intent to harvest may be authorized when the purpose is to prepare an area for restoration of natural vegetation or native herbaceous vegetation. The planting of the annual crop must provide a substantial cost benefit to the restoration or management of the easement. This activity will only be authorized in the year or season prior to the restoration activity it is intended to benefit. This use does not apply to wildlife food plots, which may not be harvested.

- **Commercial Shooting Preserves** – Lands enrolled in ACEP-WRE may be used for commercial shooting preserves, under the following conditions:
  - The preserve is licensed by a State agency and operated consistent with the license; and,
  - The vegetative cover, as prescribed in the restoration plan, is maintained; and,
  - No barriers are constructed that limit wildlife movement into, out of, or within the ACEP-WRE acreage; and,
  - No infrastructure (e.g. camping facilities, wildlife pens) is developed on the ACEP-WRE acreage; and,
  - The use is consistent with the wildlife objectives and does not degrade the wildlife or wetland functions of the easement.

- **Early Successional Habitat Management** – Authorization may be provided to manage early successional habitats included in the WRPO. Mechanical and chemical methods of management may be prescribed, including brush-hogging, mulching, foliar application, cut-stump treatment, and hack and squirt.

- **Firewood Harvest for Personal Use** – Authorization may be provided to allow the harvest of firewood for personal use.

- **Forest Stand Improvement** – Selective harvest of timber may be used to enhance or protect habitat for migratory birds and at-risk species, or to promote the development of unique habitats. Examples of appropriate compatible uses of forest stand improvement are: the selective removal of diseased trees that present a threat to the integrity of the forested habitat; thinning of undesirable volunteer trees in an area that was planted with specific species (e.g., bald cypress, Atlantic white cedar), and thinning to change species composition to a targeted natural plant community (e.g. loblolly pine plantation thinned to encourage hardwoods).

- **Grass, Forb and Legume Plantings** – Authorization may be provided for landowners to plant grasses, forbs and legumes on areas that require vegetation establishment or where the planting will improve the ecological function (e.g. areas of tall fescue converted to native species). All species included in the planting must be native and appropriate for the site.

- **Haying** – Haying with removal of biomass may be used on areas planned as early successional habitat for the purpose of improving plant diversity and maintaining bare ground or minimizing thatch accumulation. Haying is an alternative to prescribed burning when site conditions or lack of resources makes prescribed burns impractical. All haying must be conducted after July 15th.
for sites in the Piedmont or Coastal Plain. Haying shall not be conducted more than one time per 3 years, and must allow for sufficient regrowth to provide winter and early spring cover.

- **Herbaceous Weed Treatment** – Use of herbicides may be authorized to control invasive species and other species that may negatively affect ecological functions. Compatible use authorizations shall identify the species to be controlled, methods, timing, and location.

- **Moist Soil Management** – Moist soil management may be conducted on waterfowl impoundments and other areas targeted for waterfowl management but shall not exceed 50 percent of the impoundment or targeted area. Moist soil management areas shall be identified on a map and must remain in the same location. Moist soil management does not include planting of crops.

- **Mowing** – Mowing may be authorized to maintain early successional habitat and authorized trails, access roads, shooting lanes, and food plots. All mowing, except when used for establishment of vegetation, must be conducted outside the primary nesting season.

- **Prescribed Burning** – Prescribed burning may be used to maintain early successional habitat. Prescribed burns should be conducted outside the primary nesting season, to the extent practical. Prescribed burns must be conducted with a burn management plan and all necessary permits.

- **Prescribed Grazing** – Grazing by domestic livestock may be used to manage early successional habitats where the habitat is part of the restoration and management plan. Grazing must be conducted in accordance with a prescribed grazing plan that includes specifications based on managing the cover for the habitat values, but not for maximization of forage quantity or quality. Typically, the grazing plan will specify lower than normal grazing intensities (animal units/acre). Medium to high intensities may be warranted in some situations. Any grazing must ensure there is adequate regrowth of vegetation to provide winter and early spring cover. The most common use of grazing on wetland easements are for vegetation management on bog turtle (i.e. threatened species) sites.

- **Shooting Lanes** – Shooting lanes for hunting may be created or maintained, but the total combined length of shooting lanes for any one deer stand shall not exceed 300 yards. Shooting lanes shall not exceed 10 feet in width at the ground (allowing for equipment widths and overhanging vegetation). The maximum combined length of shooting lanes for any one deer stand shall not exceed 300 yards in length. Shooting lanes shall not be relocated without prior NRCS approval. When a shooting lane is relocated, the old shoot lane should be allowed to regenerate to forest. Also see the section on **Shooting Lanes** under **Activities and Uses**.

- **Strip Disking** – Strip disking may be authorized to maintain early successional habitat in an area planned to be in herbaceous cover. Strip disking in uplands shall not be conducted during the primary nesting season. Strip disking shall not be conducted on the same footprint more than once every 3 years.

- **Structures for Wildlife Observation and Education** – Structures, such as viewing platforms, boardwalks, and signage, may be authorized for quiet enjoyment and promotion of wetland conservation. These structures shall not exceed 80 square feet and 8 feet in height.

- **Timber Harvest** – When in the interest of NRCS for the restoration of the vegetative community, timber harvest may be authorized. For example, where a site contains commercially viable
loblolly pine in monotypic stands, NRCS may authorize timber harvest to facilitate restoration of a natural vegetative community.

- **Trail Development** – Trail development may be authorized for passive recreational use and access to areas for management, hunting, and wildlife observation. Trail widths shall be the minimum required to facilitate access and allow for maintenance with mowing equipment, but usually 6 feet in width or less. In forested areas, trail widths shall allow for a closed canopy.

- **Tree and Shrub Planting** – Planting of trees and shrubs by the landowner may be authorized when compatible with the objectives of the easement. All trees and shrubs must be native and appropriate for the site.

- **Water Level Management** – When included in the plan, water level management may be authorized as a compatible use in the alternative communities area of the easement.

- **Wildlife Food Plots** – If requested, wildlife food plots may be authorized on up to 5 percent of the total easement acreage, within the restrictions specified below. Food plots of crops requiring conventional planting equipment (e.g. soybeans, sorghum) may be authorized on agricultural lands, when they can be implemented in a way that is compatible with the objectives of the program. In non-agricultural areas, wildlife food plots are generally limited to over-seeding of legumes (e.g. clovers and annual lespedezas) along existing access roads and PDA rights of way. In some cases where availability of food resources are limited, annually-planted wildlife food plots may be allowed in small patches within wooded uplands.

The following requirements apply to areas proposed for wildlife food plots:

- Up to 2 percent of the total easement acreage may be authorized for wildlife food plots of annual crops requiring conventional planting equipment. Up to 3 percent of the total easement acreage may be authorized for wildlife food plots of perennial plants or annuals that can be broadcast seeded with light or no soil disturbance (e.g. clovers, annual lespedezas).

- Annually planted food plots shall be located in uplands. On sites where uplands do not exist or it is impractical to establish a food plot on uplands, food plots established by broadcast seeding and maintained by overseeding and/or light disking may be authorized on areas of somewhat poorly drained or poorly drained soils that typically are not subject to inundation or ponding, and that were in crop production at the time of enrollment.

- Permanently vegetated buffers shall be used to protect wetlands and waters from nutrient and sediment pollution.

- Wildlife food plots generally shall not exceed 2 acres in size. When the total area of wildlife food plots exceeds 2 acres, the food plots should be spread out or broken up by native perennial vegetation.

- The area must be evaluated for potential effects on wetland-dependent species and species of concern. Priority shall be given to wetland-dependent species and species of concern over use of wildlife food plots.

- Incorporation of wildlife food plots in existing forest land shall not affect habitat for forest interior dwelling species (FIDs). For the purposes of this program, FIDs habitat is defined as contiguous forest of at least 100 acres containing at least 20 acres of interior habitat that is at least 300 feet from the nearest edge, OR riparian forests of 100 acres or more with an average total width of at least 300 feet, adjacent to perennial streams.
A wildlife food plot shall not be located within 100 feet of a perennial stream or a natural intermittent stream. Consideration may be provided for perennial food plots adjacent to channelized perennial streams that have an active maintenance right of way. Waivers of the above requirements may be approved in special cases by the State Biologist. Areas approved for wildlife food plots will remain in the same location for the duration of the compatible use agreement. Wildlife food plots may not be harvested.