USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

DELAWARE
Conservation Practice Guide
2022

Helping People Help the Land.

Corn grows in a field of residue where a no-till planting method was used to improve soil health and save energy and money.

Delaware Conservation Practice Guide

The Delaware Conservation Practice Guide provides a comprehensive outline of all current practice standards within the state. This document is not to be used as technical guidance or policy. NRCS practices shall be applied according to current Conservation Practice Standards available in the Field Office Technical Guide, Section IV.

Note to the Reader:

Conservation practices may change periodically as new practices are added or obsolete practices are removed. If you are interested in addressing a resource concern with a practice that is not included in this guide, please contact your local USDA Service Center.

A certified conservation planner will work with you to identify and address all of the resource concerns on your operation— ensuring balance between your economic goals and the needs of the environment.

CONSERVATION PRACTICES

CONSERVATION PRACTICES *(Continued)*

CONSERVATION ACTIVITIES

Conservation Practices

The conservation practice information in this guide contains a photograph, description, and purpose of each practice.

Delaware conservation practice standards are available through the Field Office Technical Guide (FOTG).

Access Control
472

Practice Description:
The temporary or permanent exclusion of animals, people, vehicles, and equipment from an area.

Practice Purpose:
Achieve and maintain desired resource conditions by monitoring and managing the intensity of use by animals, people, vehicles, and equipment in coordination with the application schedule of practices, measures, and activities specified in the conservation plan.

Access Road
560

Practice Description:
An access road is an established route for equipment and vehicles.

Practice Purpose:
To provide a fixed route for vehicular travel for resource activities involving the management of conservation forestry operations, livestock, agriculture, wildlife habitat, and other conservation enterprises.

Amendments for the Treatment of Agricultural Waste
591

Practice Description:
The addition of chemical or biological additives to manure, process wastewater, contaminated storm water runoff, or other wastes to reduce adverse effects on air and/or water.

Practice Purpose:
This practice may be applied to achieve one or more of the following purposes:

- Facilitate the management, handling and processing of manure and waste;
- Reduce risk associated with the spread and contamination from pathogens;
- Improve or protect air quality;
- Improve or protect water quality; and
- Improve or protect animal health.

Anaerobic Digester
366

Practice Description:
A component of a waste management system in which biological treatment breaks down animal manure and other organic materials in the absence of oxygen.

Practice Purpose:
This practice may be applied for one or more of the following purposes:

- Manage odors.
- Reduce the net effect of greenhouse gas emissions
- Reduce pathogens.
- Captures biogas to facilitate energy production.

Animal Mortality Facility
316

Practice Description:
An on-farm facility for the treatment or disposal of animal carcasses due to routine mortality.

Practice Purpose:
This practice may be applied to achieve one or more of the following purposes:

- Reduce pollution impacts to surface water and groundwater resources;
- Reduce the impact of odors; and
- Decrease the spread of pathogens.

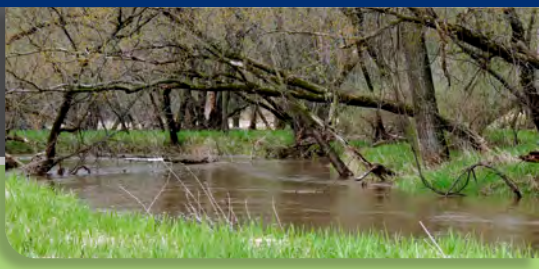
Brush Management
314

Practice Description:
The management or removal of woody (nonherbaceous or succulent) plants including those that are invasive and noxious.

Practice Purpose:

- Create the desired plant community consistent with the ecological site or a desired state within the site description.
- Restore or release desired vegetative cover to protect soils, control erosion, reduce sediment, improve water quality, or enhance hydrology.
- Maintain, modify, or enhance fish and wildlife habitat.
- Improve forage accessibility, quality, and quantity for livestock and wildlife.
- Manage fuel loads to achieve desired conditions.
- Pervasive plant species are controlled to a desired level of treatment that will ultimately contribute to creation or maintenance of an ecological site description "steady state" addressing the need for forage, wildlife habitat, and/or water quality.

Channel Bed Stabilization
584



Practice Description:
Measure(s) used to stabilize the bed or bottom of a channel.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Maintain or alter channel bed elevation or gradient.
- Restore natural streambed function.
- Manage water and sediment transport from a watershed to reduce sediment transport and/or deposition.
- Manage surface water and groundwater levels in floodplains, riparian areas, and wetlands.

Clearing and Snagging
326

Practice Description:
Removal of vegetation along the bank (clearing) and selective removal of snags, drifts, or other obstructions (snagging) from natural or improved channels and streams.

Practice Purpose:
Reduce risks to agricultural resources or civil infrastructure by removing obstructions that hinder channel flow or sediment transport to:

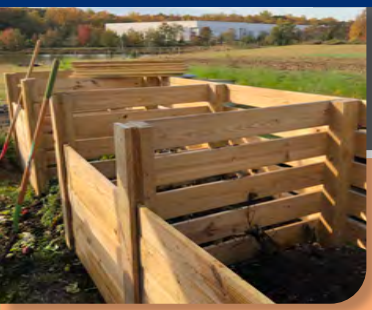
- Restore flow capacity and direction.
- Prevent excessive bank erosion by eddies or redirection of flow.
- Reduce the undesirable formation of bars.
- Minimize blockages by debris and ice.

Combustion System Improvement
372

Practice Description:
Replace, repower, or retrofit an agricultural combustion system and related components or devices.

Practice Purpose:
This practice is to accomplish one or more of the following purposes:

- Improve air quality by reducing emissions of oxides of nitrogen (NOx).
- Improve air quality by reducing emissions of particulate matter (PM).
- Reduce energy use by increasing the efficiency of the combustion system.



Composting Facility
317

Practice Description:
A structure or device to contain and facilitate an aerobic microbial ecosystem for the decomposition of manure, other organic material, or both, into a final product sufficiently stable for storage, onfarm use, and application to land as a soil amendment.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Reduce water pollution potential.
- Conserve energy by reducing mass and improving handling characteristics of organic waste solids.
- Reuse organic waste as animal bedding.
- Transform organic waste into a soil amendment that improves soil health, provides slow-release plant-available nutrients, and suppresses plant disease.

Conservation Cover
327

Practice Description:
Establishing and maintaining permanent vegetative cover.

Practice Purpose:
This practice is applied to support one or more of the following purposes:

- Reduce sheet, rill, and wind erosion and sedimentation.
- Reduce ground and surface water quality degradation by nutrients and surface water quality degradation by sediment.
- Reduce emissions of particulate matter (PM), PM precursors, and greenhouse gases.
- Enhance wildlife, pollinator and beneficial organism habitat.
- Improve soil health.

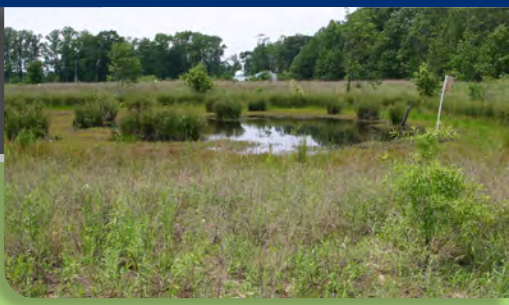
Conservation Crop Rotation
328

Practice Description:
A planned sequence of crops grown on the same ground over a period of time (i.e., the rotation cycle).

Practice Purpose:
This practice is applied to support one or more of the following purposes:

- Reduce sheet, rill and wind erosion.
- Maintain or increase soil health and organic matter content.
- Reduce water quality degradation due to excess nutrients.
- Improve soil moisture efficiency.
- Reduce the concentration of salts and other chemicals from saline seeps.
- Reduce plant pest pressures.
- Provide feed and forage for domestic livestock.
- Provide food and cover habitat for wildlife, including pollinator forage, and nesting.

Constructed Wetland
656



Practice Description:
An artificial wetland ecosystem with hydrophytic vegetation for biological treatment of water.

Practice Purpose:

- To treat wastewater or contaminated runoff from agricultural processing, livestock, or aquaculture facilities.
- To improve water quality of storm water runoff or other water flows.

Cover Crop
340

Practice Description:
Grasses, legumes, and forbs planted for seasonal vegetative cover.

Practice Purpose:
This practice is applied to support one or more of the following purposes:

- Reduce erosion from wind and water.
- Maintain or increase soil health and organic matter content.
- Reduce water quality degradation by utilizing excessive soil nutrients.
- Suppress excessive weed pressures and break pest cycles.
- Improve soil moisture use efficiency.
- Minimize soil compaction.

Critical Area Planting
342

Practice Description:
Establishing permanent vegetation on sites that have, or are expected to have, high erosion rates, and on sites that have physical, chemical, or biological conditions that prevent the establishment of vegetation with normal seeding/planting methods.

Practice Purpose:

- Stabilize areas with existing or expected high rates of soil erosion by wind or water.
- Stabilize stream and channel banks, pond and other shorelines, earthen features of structural conservation practices.
- Stabilize areas such as sand dunes and riparian areas.

Denitrifying Bioreactor
605

Practice Description:
A structure that uses a carbon source to reduce the concentration of nitrate nitrogen in subsurface agricultural drainage flow through enhanced denitrification.

Practice Purpose:
This practice is used to achieve the following purposes:

- Improve water quality by reducing the concentration of nitrate nitrogen in flow from subsurface agricultural drainage systems.

Dike
356

Practice Description:
A barrier constructed of earth or manufactured materials.

Practice Purpose:

- To protect people and property from floods.
- To control water level in connection with crop production; fish and wildlife management; or wetland maintenance, improvement, restoration, or construction.

Diversion
362

Practice Description:
A channel generally constructed across the slope with a supporting ridge on the lower side.

Practice Purpose:
This practice may be applied to support one or more of the following purposes:

- Break up concentrations of water on long slopes, on undulating land surfaces and on land that is generally considered too flat or irregular for terracing.
- Divert water away from farmsteads, agricultural waste systems, and other improvements.
- Collect or direct water for storage, water-spreading, or water-harvesting systems.
- Protect terrace systems by diverting water from the top terrace where topography, land use, or land ownership prevents terracing the land above.
- Intercept surface and shallow subsurface flow.
- Reduce runoff damages from upland runoff.
- Reduce erosion and runoff on urban or developing areas and at construction or mining sites.
- Divert water away from active gullies or critically eroding areas.
- Supplement water management on conservation cropping or stripcropping systems.

Drainage Water Management
554

Practice Description:
The process of managing the drainage volume and water table elevation by regulating the flow from a surface or subsurface agricultural drainage system.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Reduce nutrient, pathogen, and pesticide loading from drainage systems into downstream receiving waters.
- Improve productivity, health, and vigor of plants.
- Reduce oxidation of organic matter in soils.

Early Successional Habitat Development and Management
647

Practice Description:
Manage plant succession to develop and maintain early successional habitat to benefit desired wildlife and/or natural communities.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Increase plant community diversity to provide habitat for early successional species.
- Provide or restore wildlife habitat for those species that need early successional vegetative habitat.

Emergency Animal Mortality Management
368

Practice Description:
A means or method for the management of animal carcasses from catastrophic mortality events..

Practice Purpose:
This practice may be applied to achieve one or more of the following purposes:

- Reduce impacts to surface water and groundwater resources;
- Reduce the impact of odors; and
- Decrease the spread of pathogens.

Energy Efficient Agricultural Operation
374

Practice Description:
Onfarm facilities, equipment, and management strategies that provide increased energy efficiency.

Practice Purpose:
This practice is used to accomplish the following purpose:

- Improve energy efficiency for facilities, equipment, and/or processes.

Energy Efficient Building Envelope
672

Practice Description:
A boundary between a conditioned space and an unconditioned space that meets or exceeds best practices for energy efficiency.

Practice Purpose:
This practice is used to accomplish the following purpose:

- Improve energy efficiency of an existing agricultural building envelope.

Energy Efficient Lighting System
670

Practice Description:
An agricultural lighting system with increased energy efficiency.

Practice Purpose:
This practice is used to accomplish the following purpose:

- Improve energy efficiency of an agricultural facility lighting system.

Fence
382

Practice Description:
A constructed barrier to animals or people.

Practice Purpose:
This practice is used to accomplish the following purpose:

- Provide a means to control the movement of animals, people, and vehicles to accomplish specific conservation objectives.

Field Border
386

Practice Description:
A strip of permanent vegetation established at the edge or around the perimeter of a field.

Practice Purpose:

- Reduce erosion from wind and water and reduce excessive sediment to surface waters (soil erosion).
- Reduce sedimentation offsite and protect water quality and nutrients in surface and ground waters (water quality degradation).
- Provide food and cover for wildlife and pollinators or other beneficial organisms (inadequate habitat for fish and wildlife).
- Reduce greenhouse gases and increase carbon storage (air quality impact).
- Reduce emissions of particulate matter (air quality impact).

Filter Strip
393

Practice Description:
A strip or area of herbaceous vegetation that removes contaminants from overland flow.

Practice Purpose:

- Reduce suspended solids and associated contaminants in runoff and excessive sediment in surface waters.
- Reduce dissolved contaminant loadings in runoff.
- Reduce suspended solids and associated contaminants in irrigation tailwater and excessive sediment in surface waters.

Forage Harvest Management
511

Practice Description:
The timely cutting and removal of forages as hay, green-chop, or ensilage.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Optimize quantity and quality of forage at the desired levels while promoting vigorous plant regrowth .
- Manage the species composition to enhance desirable specie.s
- Reduce excess soil nutrients.
- Reduce pest pressure (insects, disease, weeds, invasive plants or plant toxins).
- Improve or protect wildlife and their habitat.
- Optimize soil microbial life and aggregate stability.
- Reduce soil compaction.

Forest Stand Improvement
666

Practice Description:
The manipulation of species composition, stand structure, or stand density by cutting or killing selected trees or understory vegetation to achieve desired forest conditions or obtain ecosystem services.

Practice Purpose:
- Improve and sustain forest health and productivity.
- Reduce damage from pests and moisture stress.
- Initiate forest stand regeneration.
- Reduce fire risk and hazard and facilitate prescribed burning.
- Restore or maintain natural plant communities.
- Improve wildlife and pollinator habitat.
- Alter quantity, quality, and timing of water yield.
- Increase or maintain carbon storage.

Grade Stabilization Structure
410

Practice Description:
A structure used to control the grade in natural or constructed channels.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Reduce erosion
- Improve water quality

Grassed Waterway
412

Practice Description:
A shaped or graded channel that is established with suitable vegetation to convey surface water at a nonerosive velocity using a broad and shallow cross section to a stable outlet.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Convey runoff from terraces, diversions, or other water concentrations without causing erosion or flooding.
- Prevent gully formation.
- Protect/improve water quality.

Ground Water Testing
355

Practice Description:
Testing the physical, biological, and chemical quality of groundwater from a water well or spring.

Practice Purpose:
This practice is used to accomplish the following purpose:

- To determine the suitability of a groundwater supply source for livestock watering, irrigation, wildlife, or other agricultural uses.

Heavy Use Area Protection
561

Practice Description:
Stabilization or protection of an intensively used area.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Reduce soil erosion
- Provide a stable, noneroding surface for areas frequently used by animals, people, or vehicles
- Protect or improve water quality

Hedegrow Planting
422

Practice Description:
Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.

Practice Purpose:
Providing at least one of the following conservation functions:

- Habitat, including food, cover, and corridors for terrestrial wildlife.
- To enhance pollen, nectar, and nesting habitat for pollinators.
- Food, cover, and shade for aquatic organisms that live in adjacent streams or
- Watercourses.
- To provide substrate for predaceous and beneficial invertebrates as a component of integrated pest management.
- To intercept airborne particulate matter.
- To reduce chemical drift and odor movement.
- Screens and barriers to noise and dust
- To increase carbon storage in biomass and soils.
- Living fences
- Boundary delineation and contour guidelines

Herbaceous Weed Treatment
315

Practice Description:
The removal or control of herbaceous weeds including invasive, noxious, prohibited, or undesirable plants.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Enhance accessibility, quantity, and/or quality of forage and/or browse
- Restore or release native or desired plant communities for wildlife habitat
- Protect soils and control erosion
- Reduce fine fuel loads and wildfire hazard
- Control pervasive plant species to a desired level of treatment

Herbaceous Wind Barriers
603

Practice Description:
Herbaceous vegetation established in narrow strips within the field to reduce wind speed and wind Erosion.

Practice Purpose:

- Reduce soil erosion (wind erosion: saltation, creep, and suspension)
- Reduce soil particulate emissions to improve air quality.
- Improve plant health by reducing crop damage by wind or wind-borne soil particles.

High Tunnel System
325

Practice Description:
An enclosed polyethylene, polycarbonate, plastic, or fabric covered structure that is used to cover and protect crops from sun, wind, excessive rainfall, or cold, to extend the growing season in an environmentally safe manner.

Practice Purpose:
- Improve plant health and vigor.

Irrigation Pipeline
430

Practice Description:
A pipeline and appurtenances installed to convey water for storage or application as part of an irrigation water system.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Convey water from a supply source to an irrigation system, storage pond, or reservoir.
- Reduce irrigation conveyance water losses by converting from open channel to pipeline.
- Reduce energy use.

Irrigation Reservoir
436

Practice Description:
A constructed dam, pit, or tank used to store water for irrigation.

Practice Purpose:
This practice may be applied to achieve one or more of the following:

- Store water to provide a reliable irrigation water supply.
- Store water to control available irrigation flows.
- Improve water use efficiency on irrigated land.
- Provide storage for spills and tailwater recovery and reuse.
- Provide irrigation runoff retention time to increase breakdown of chemical contaminants.

Irrigation System, Microirrigation
441

Practice Description:
An irrigation system for frequent application of small quantities of water on or below the soil surface as drops, tiny streams, or miniature spray through emitters or applicators placed along a water delivery line.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Efficiently and uniformly apply irrigation water and maintain soil moisture for plant growth.
- Prevent contamination of ground and surface water by efficiently and uniformly applying chemicals or nutrients.
- Establishment of vegetation such as windbreaks and buffers.
- Improve poor plant productivity and health.

Irrigation Water Management
449

Practice Description:
The process of determining and controlling the volume, frequency, and application rate of irrigation water.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Improve irrigation water use efficiency.
- Minimize irrigation-induced soil erosion.
- Protect surface and ground water quality.
- Manage salts in the crop root zone.
- Manage air, soil, or plant microclimate.
- Improve poor plant productivity and health.
- Reduce energy use.

Lined Waterway Or Outlet
468

Practice Description:
A waterway or protected outlet section having an erosion-resistant lining of concrete, stone, synthetic turf reinforcement fabrics, or other permanent material.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Provide safe conveyance of runoff from conservation practices or other flow. concentrations without causing erosion or flooding.
- Prevent or stabilize existing gully erosion or scour.
- Protect and improve water quality.

Livestock Pipeline
516

Practice Description:
A pipeline and appurtenances installed to convey water for livestock or wildlife.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Convey water to points of use for livestock or wildlife.
- Reduce energy use.

Mulching
484

Practice Description:
Applying plant residues or other suitable materials to the land surface.

Practice Purpose:
This practice is applied to achieve the following purposes:

- Improve the efficiency of moisture management.
- Reduce irrigation energy used in farming/ranching practices and field operations.
- Improve the efficient use of irrigation water.
- Prevent excessive bank erosion from water conveyance channels.
- Reduce concentrated flow erosion.
- Reduce sheet, rill, & wind erosion.
- Improve plant productivity and health.
- Maintain or increase organic matter content.
- Reduce emissions of particulate matter.

Nutrient Management
590

Practice Description:
Manage rate, source, placement, and timing of plant nutrients and soil amendments while reducing environmental impacts.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Reduce excess nutrients in surface and ground water.
- Reduce emissions of objectionable odors.
- Reduce emissions of particulate matter (PM) and PM precursors.
- Reduce emissions of greenhouse gases (GHG).
- Reduce emissions of ozone precursors.
- Reduce the risk of potential pathogens from manure, biosolids, or compost application from reaching surface and ground water.
- Improve or maintain soil organic matter

Obstruction Removal
500

Practice Description:
Removal and disposal of buildings, structures, other works of improvement, vegetation, debris or other materials.

Practice Purpose:
This practice may be applied to achieve one or more of the following purposes:

- Improve water quality for surface and ground water.
- Prevent future flood damage.
- Facilitate other conservation practices.

Open Channel
582

Practice Description:
An open channel is a natural or artificial channel in which water flows with a free surface.

Practice Purpose:
Construct, improve, or restore an open channel to convey water required for flood prevention, drainage, wildlife habitat protection or enhancement, or other authorized water management purpose.

Pasture and Hay Planting
512

Practice Description:
Establishing adapted and compatible species, varieties, or cultivars of perennial herbaceous plants suitable for pasture or hay production.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Improve or maintain livestock nutrition and health.
- Provide or increase forage supply during periods of low forage production.
- Reduce soil erosion.
- Improve water quality.
- Improve air quality.
- Improve soil health.

Pest Management Conservation System
595

Practice Description:
A system that combines an integrated pest management (IPM) decision-making process with natural resource conservation to address pest and environmental impacts.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Reduce plant pest pressure.
- Reduce injury to beneficial organisms.
- Reduce transport of pesticides to surface and ground water.
- Reduce emissions of particulate matter (PM) and PM precursors (chemical droplet drift).
- Reduce emissions of ozone precursors (pesticide volatilizations).

Pond
378

Practice Description:
A pond is a water impoundment made by constructing an embankment, by excavating a dugout, or by a combination of both.

In this standard, NRCS defines ponds constructed by the first method as embankment ponds, and those constructed by the second method as excavated ponds. Ponds constructed by both the excavation and the embankment methods are classified as embankment ponds if the depth of water impounded against the embankment at the auxiliary spillway elevation is 3 feet or more above the lowest original ground along the centerline of the embankment.

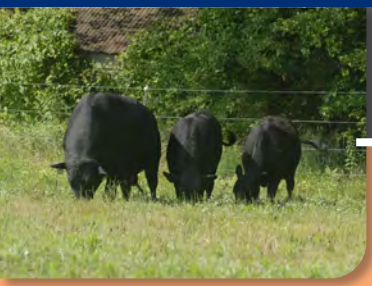
Practice Purpose:
A pond stores water for livestock, fish and wildlife, recreation, fire control, erosion control, flow detention, and other uses such as improving water quality.

Prescribed Burning
338

Practice Description:
Planned fire applied to a predetermined area.

Practice Purpose:
Use this practice to accomplish one or more of the following purposes:

- Manage undesirable vegetation to improve plant community structure and composition.
- Manage pests, pathogens, and diseases to reduce plant pressure.
- Reduce wildfire hazards from biomass accumulation.
- Improve terrestrial habitat for wildlife and invertebrates.
- Improve plant and seed production, quantity, and/or quality.
- Facilitate distribution of grazing and browsing animals to improve forage-animal balance.
- Improve and maintain habitat for soil organisms and enhance soil health.



Prescribed Grazing
528

Practice Description:
Managing the harvest of vegetation with grazing and/or browsing animals with the intent to achieve specific ecological, economic, and management objectives.

Practice Purpose:
Apply this practice as a part of a conservation management system to achieve one or more of the following:

- Improve or maintain desired species composition, structure and/or vigor of plant communities.
- Improve or maintain quantity and/or quality of forage for grazing and browsing animals' health and productivity.
- Improve or maintain surface and/or subsurface water quality and/or quantity.
- Improve or maintain riparian and/or watershed function.
- Reduce soil erosion, and maintain or improve soil health.
- Improve or maintain the quantity, quality, or connectivity of food and/or cover available for wildlife.
- Manage fine fuel loads to achieve desired conditions.

Pumping Plant
533

Practice Description:
A facility that delivers water or wastewater at a designed pressure and flow rate.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Deliver water for improved plant condition, livestock, or wetlands.
- Remove excessive subsurface or surface water.
- Provide efficient use of water on irrigated land.
- Transfer of livestock waste or liquid byproducts as part of a wastewater transfer system.
- Reduce energy use.

Residue and Tillage Management, No-Till
329

Practice Description:
Limiting soil disturbance to manage the amount, orientation and distribution of crop and plant residue on the soil surface year around.

Practice Purpose:

- Reduce sheet, rill and wind erosion and excessive sediment in surface waters.
- Reduce tillage-induced particulate emissions.
- Maintain or increase soil health and organic matter content.
- Increase plant-available moisture.
- Reduce energy use.
- Provide food and escape cover for wildlife

Residue and Tillage Management, Reduced Tillage

345

Practice Description:

Managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year-round while limiting soil-disturbing activities used to grow and harvest crops in systems where the field surface is tilled prior to planting.

Practice Purpose:

- Reduce sheet, rill, and wind erosion and excessive sediment in surface waters (soil erosion).
- Reduce tillage-induced particulate emissions (air quality impact).
- Improve soil health and maintain or increase organic matter content (soil quality degradation).
- Reduce energy use (inefficient energy use).

Restoration of Rare or Declining Natural Communities

643

Practice Description:

Reestablishment of abiotic (physical and chemical) and biotic (biological) conditions necessary to support rare or declining natural assemblages of native plants and animals.

Practice Purpose:

To restore the physical conditions and/or unique plant community on sites that partially support, or once supported, a rare or declining natural community. Application of this practice addresses resource concerns of a degraded plant condition and/or inadequate wildlife habitat.

Riparian Forest Buffer

391

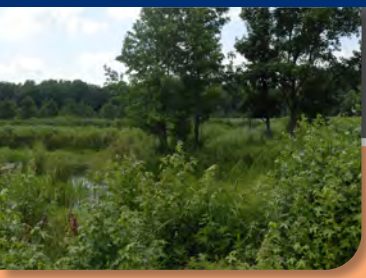
Practice Description:

An area predominantly covered by trees and/or shrubs located adjacent to and up-gradient from a watercourse or water body.

Practice Purpose:

This practice is used to accomplish one or more of the following purposes:

- Reduce transport of sediment to surface water, and reduce transport of pathogens, chemicals, pesticides, and nutrients to surface and ground water
- Improve the quantity and quality of terrestrial and aquatic habitat for wildlife, invertebrate species, fish, and other organisms
- Maintain or increase total carbon stored in soils and/or perennial biomass to reduce atmospheric concentrations of greenhouse gasses
- Lower elevated stream water temperatures
- Restore diversity, structure, and composition of riparian plant communities.



Riparian Herbaceous Cover
390

Practice Description:
Grasses, sedges, rushes, ferns, legumes, and forbs tolerant of intermittent flooding or saturated soils, established or managed as the dominant vegetation in the transitional zone between upland and aquatic habitats.

Practice Purpose:
This practice may be applied as part of a conservation management system to accomplish one or more of the following purposes:

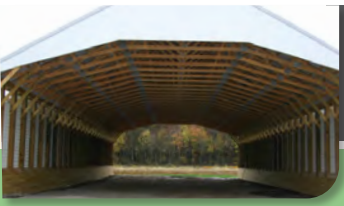
- Provide or improve food and cover for fish, wildlife and livestock,
- Improve and maintain water quality.
- Establish and maintain habitat corridors.
- Increase water storage on floodplains.
- Reduce erosion and improve stability to stream banks and shorelines.
- Increase net carbon storage in the biomass and soil.
- Enhance pollen, nectar, and nesting habitat for pollinators.
- Restore, improve or maintain the desired plant communities.
- Dissipate stream energy and trap sediment.
- Enhance stream bank protection as part of stream bank soil bioengineering practices.

Roof Runoff Structure
558

Practice Description:
A structure or system of structures to collect, control, and convey precipitation runoff from a roof.

Practice Purpose:
This practice may be applied to achieve one or more of the following purposes:

- Protect surface water quality by excluding roof runoff from contaminated areas.
- Prevent erosion from roof runoff.
- Increase infiltration of roof runoff.
- Capture roof runoff for on-farm use.



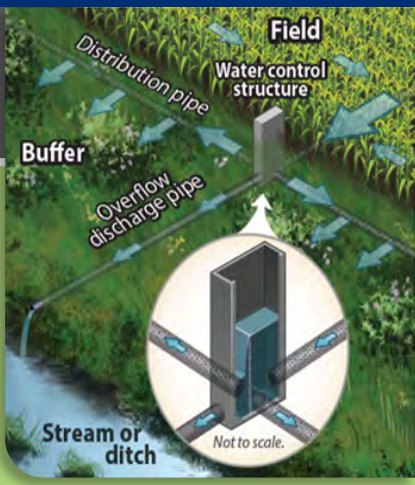
Roofs and Covers
367

Practice Description:
A rigid, semirigid, or flexible manufactured membrane, composite material, or roof structure placed over a waste management facility, agrichemical handling facility, or an on-farm secondary containment facility.

Practice Purpose:
Provide a roof or cover to:

- Protect clean water from dilution in waste water in an existing or planned animal waste handling or storage area.
- Improve waste management and utilization to protect nearby surface water quality.
- Capture biogas emissions from an existing or planned animal waste storage facility to reduce the net effect of greenhouse gas emissions, improve air quality, and reduce odor as a result of:
  - Biological treatment with composite cover material
  - Combustion by flare
  - Combustion by engine generator for energy production
- Protect clean water by excluding it from a chemically contaminated area.

Saturated Buffer
604



Practice Description:
A subsurface, perforated distribution pipe used to distribute drainage system discharge beneath a vegetated buffer along its length and discharge channel.

Practice Purpose:
Install the practice to achieve one or more of the following purposes:

- Reduce nitrate loading from subsurface drain outlets through vegetation uptake and denitrification
- Enhance or restore saturated soil conditions in riverine, lacustrine fringe, slope, or depression wetland hydrogeomorphic classes.

Sediment Basin
350

Practice Description:
A basin constructed with an engineered outlet, formed by constructing an embankment, excavating a dugout, or a combination of both.

Practice Purpose:
To capture and detain sediment-laden runoff, or other debris for a sufficient length of time to allow it to settle out in the basin.

Shallow Water Development and Management
646

Practice Description:
The inundation of lands to provide habitat for fish and/or wildlife.

Practice Purpose:
To provide habitat for wildlife such as shorebirds, waterfowl, wading birds, mammals, fish, reptiles, amphibians and other species that require shallow water for at least a part of their life cycle.

Soil Carbon Amendment
808

Practice Description:
Using carbon-based amendments to increase soil carbon and improve the physical, chemical, and biological properties of the soil.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Maintain, increase, or improve soil organic matter quantity and quality
- Maintain or improve soil aggregate stability
- Maintain or improve habitat for soil organisms
- Improve plant productivity and health
- Improve the efficient use of irrigation water

Spoil Disposal
572

Practice Description:
Disposal of surplus excavated materials from construction activities.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Minimize soil erosion
- Minimize water quality degradation
- Minimize ponding

Spring Development
574

Practice Description:
The collection and use of water from seeps or springs.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Improve water quantity for livestock and wildlife
- Improve water quality for livestock and wildlife

Sprinkler System
442

Practice Description:
A distribution system that applies water by means of nozzles operated under pressure.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Apply water on irrigated lands, efficiently and uniformly.
- Improve plant condition, productivity, health, and vigor.
- Prevent the entry of excessive nutrients, organics, and other chemicals in surface and groundwater.
- Improve condition of soil contaminated with salts and other chemicals.
- Reduce particulate matter emissions to improve air quality.
- Reduce energy use.

Stormwater Runoff Control
570

Practice Description:
Measures or systems to control the quantity and quality of stormwater runoff.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes in controlling stormwater runoff:

- Minimize erosion and sedimentation during and following construction activities.
- Reduce the quantity of stormwater leaving developing or developed sites.
- Improve the quality of stormwater leaving developing or developed sites.

Stream Crossing
578

Practice Description:
A stabilized area or structure constructed across a stream to provide controlled access for people, livestock, equipment, or vehicles.

Practice Purpose:
This practice is applied to:

- Improve water quality by reducing sediment, nutrient, or organic loading to a stream.
- Reduce streambank and streambed erosion.

Stream Habitat Improvement and Management
395

Practice Description:
Improve, restore, or maintain the ecological functions of a stream and its adjacent floodplain and riparian area.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Improve or manage stream habitat by evaluating and addressing factors that impair stream function and structure.

Streambank and Shoreline Protection
580

Practice Description:
Treatment(s) used to stabilize and protect banks of streams or constructed channels and shorelines of lakes, reservoirs, or estuaries.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Prevent the loss of land or damage to land uses or facilities adjacent to the banks of streams or constructed channels and shorelines of lakes, reservoirs, or estuaries. This includes the protection of known historical, archaeological, and traditional cultural properties.
- Maintain the flow capacity of streams or channels.
- Reduce the offsite or downstream effects of sediment resulting from bank erosion.
- Improve or enhance the stream corridor or shoreline for fish and wildlife habitat, aesthetics, or recreation.

Structure for Water Control
587

Practice Description:
A structure in a water management system that conveys water, controls the direction or rate of flow, maintains a desired water surface elevation, or measures water.

Practice Purpose:
Apply this practice as a component of a water management system to control the stage, discharge, distribution, delivery, or direction of water flow.

Structures for Wildlife
649

Practice Description:
A structure installed to replace or modify a missing or deficient wildlife habitat component.

Practice Purpose:
To provide structures, in proper amounts, locations and seasons to:

- Enhance or sustain non-domesticated wildlife; or
- Modify existing structures that pose a hazard to wildlife.

Subsurface Drain
606

Practice Description:
A conduit installed beneath the ground surface to collect and convey excess water.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Remove or distribute excessive soil water.
- Remove salts and other contaminants from the soil profile.
- Mitigate degraded plant condition, undesirable plant productivity, and health due to saturated soil, ponding, and flooding.

Trails and Walkways
575

Practice Description:
A constructed path with a vegetated, earthen, gravel, paved, or other hard surface to facilitate the movement of animals, people, or off-road vehicles.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Provide or improve animal access to forage, water, working/handling facilities, or shelter
- Protect ecologically sensitive, erosive, or potentially erosive sites
- Provide pedestrian or off-road vehicle access for agricultural, construction, or maintenance operations
- Provide trails or walkways for recreational activities or access to recreation sites.

Tree/Shrub Establishment
612

Practice Purpose:
Establish woody plants to:

- Maintain or improve desirable plant diversity, productivity, and health by establishing woody plants.
- Create or improve habitat for desired wildlife species compatible with ecological characteristics of the site.
- Control erosion.
- Improve water quality. Reduce excess nutrients and other pollutants in runoff and groundwater.
- Sequester and store carbon.
- Restore or maintain native plant communities.
- Develop renewable energy systems.
- Conserve energy.
- Provide for beneficial organisms and pollinators.

Practice Description:
Establishing woody plants by planting seedlings or cuttings, by direct seeding, and/or through natural regeneration.

Tree/Shrub Site Preparation
490

Practice Description:
Treatment of sites to enhance the success of natural or artificial regeneration of desired trees and/or shrubs.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Manage soil conditions, naturally available water, and seasonally high water to favor tree and shrub establishment, survival, and growth.
- Modify the habitat of weeds, pests, and diseases to reduce pressure on naturally or artificially regenerated trees and shrubs.
- Facilitate the establishment, survival, and growth of tree and shrub species.

Underground Outlet
620

Practice Description:
A conduit or system of conduits installed beneath the ground surface to convey surface water to a suitable outlet.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Prevent concentrated flow erosion
- Manage flooding and ponding.

Upland Wildlife Habitat Management
645

Practice Description:
Provide and manage upland habitats and connectivity within the landscape for wildlife.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Treating upland wildlife habitat concerns identified during the conservation planning process that enable movement, or provide shelter, cover, food in proper amounts, locations and times to sustain wild animals that inhabit uplands during a portion of their life cycle.

Vertical Drain
630

Practice Description:
A well, pipe, pit, or bore in porous, underground strata into which drainage water can be discharged without contaminating groundwater resources.

Practice Purpose:
This practice is used to:

- Provide an outlet for drainage water from a surface or subsurface drainage system.

Waste Facility Closure
360

Practice Description:
The decommissioning of a facility where agricultural waste has been treated or stored, and is no longer used for the intended purpose.

Practice Purpose:
The practice is implemented to:

- Protect the quality of surface water and groundwater resources.
- Mitigate air emissions.
- Eliminate a safety hazard for humans and livestock.
- Safeguard the public health.

Waste Separation Facility
632

Practice Description:
A filtration or screening device, settling tank, settling basin, or settling channel used to partition solids and/or nutrients from a waste stream.

Practice Purpose:
This practice is used to accomplish one or more of the following:

- Improve or protect air quality.
- Improve or protect water quality.
- Improve manure handling methods or serve as a pre- or post-treatment for other processes.

Waste Storage Facility
313

Practice Description:
An agricultural waste storage impoundment or containment made by constructing an embankment, excavating a pit or dugout, or by fabricating a structure.

Practice Purpose:
To store manure, agricultural by-products, wastewater, and contaminated runoff to provide the agricultural operation management flexibility for waste utilization.

Waste Transfer
634

Practice Description:
A system using structures, pipes, or other conduits installed to convey wastes or waste byproducts from an agricultural source to a storage facility, treatment facility, or land application site.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Prevent nutrient transport to surface or ground water
- Prevent transport of pathogens to surface or ground water.

Water and Sediment Control Basin
638

Practice Description:
An earth embankment or a combination ridge and channel constructed across the slope of a minor drainageway.

Practice Purpose:
This practice may be applied for one or more of the following purposes to:

- Reduce gully erosion.
- Trap sediment.
- Reduce and manage runoff.

Water Well
642

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Address the need for adequate livestock water quality and quantity
- Provide water for terrestrial wildlife
- Provide irrigation water.

Practice Description:
A hole drilled, dug, driven, bored, jetted, or otherwise constructed into an aquifer for agricultural water supply.

Watering Facility
614

Practice Description:
A watering facility stores or provides drinking water to livestock or wildlife.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Supply daily water requirements
- Improve animal distribution
- Provide a water source that is an alternative to a sensitive resource.

Wetland Creation
658

Practice Description:
The creation of a wetland on a site location that was historically non-wetland.

Practice Purpose:
To establish wetland hydrology, vegetation, and wildlife habitat functions on soils capable of supporting those functions.

Wetland Enhancement
659

Practice Description:
The augmentation of wetland functions beyond the original natural conditions on a former, degraded, or naturally functioning wetland site; sometimes at the expense of other functions.

Practice Purpose:
To increase the capacity of specific wetland functions (such as habitat for targeted species, and recreational and educational opportunities) by enhancing:

- Hydric soil functions (changing soil hydrodynamic and/or bio-geochemical properties).
- Hydrology (dominant water source, hydroperiod, and hydrodynamics).
- Vegetation (including the removal of undesired species, and/or seeding or
- planting of desired species).
- Enhancing plant and animal habitats.

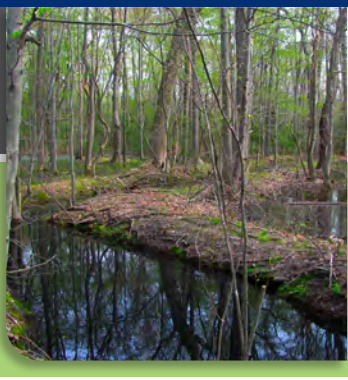
Wetland Restoration
657

Practice Description:
The return of a wetland and its functions to a close approximation of its original condition as it existed prior to disturbance on a former or degraded wetland site.

Practice Purpose:
To restore wetland function, value, habitat, diversity, and capacity to a close approximation of the pre-disturbance conditions by restoring:

- Conditions conducive to hydric soil maintenance.
- Wetland hydrology (dominant water source, hydroperiod, and hydrodynamics).
- Native hydrophytic vegetation (including the removal of undesired species, and/or seeding or planting of desired species).
- Original fish and wildlife habitats.

Wetland Wildlife Habitat Management
644



Practice Description:
Retaining, developing or managing wetland habitat for wetland wildlife.

Practice Purpose:
To maintain, develop, or improve wetland habitat for waterfowl, shorebirds, fur-bearers, or other wetland dependent or associated flora and fauna.

Wildlife Habitat Planting
420

Practice Description:
Establishing wildlife habitat by planting herbaceous vegetation or shrubs.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes:

- Improve degraded wildlife habitat for the target wildlife species or guild.
- Establish wildlife habitat that resembles the historic, desired, and reference native plant community.

Windbreak/Shelterbelt Establishment
380

Practice Description:
Establishing, enhancing, or renovating windbreaks, also known as shelterbelts, which are single or multiple rows of trees and/or shrubs in linear or curvilinear configurations.

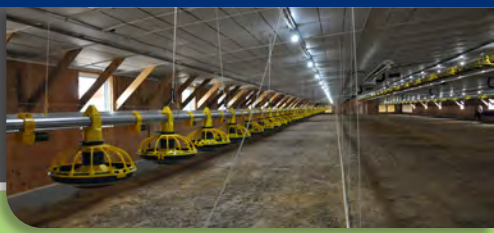
Practice Purpose:
Use this practice to accomplish one or more of the following purposes:

- Reduce soil erosion from wind.
- Enhance plant health and productivity by protecting plants from wind-related damage.
- Manage snow distribution to improve moisture utilization by plants.
- Manage snow distribution to reduce obstacles, ponding, and flooding that impacts other resources, animals, structures, and humans.
- Improve moisture management by reducing transpiration and evaporation losses and improving irrigation efficiency.
- Provide shelter from wind, snow, and excessive heat, to protect animals, structures, and humans.
- Improve air quality by intercepting airborne particulate matter, chemicals, and odors, and/or by reducing airflow across contaminant or dust sources.
- Reduce energy use in heating and cooling buildings, and in relocating snow.
- Increase carbon storage in biomass and soils.

Conservation Activities

Technical service providers (TSP) or other third-party service providers for NRCS can carry out conservation activities for planning, design, implementation, and monitoring tasks for NRCS conservation program purposes. The typical conservation activities completed in Delaware in two of these categories—Design and Implementation Activities (DIAs) and Conservation Evaluation and Monitoring Activities (CEMAs) are identified in this portion of the guide.

Agricultural Energy Management Plan CEMA 228



Practice Description:
An assessment of the energy consuming activities and component of an agricultural operation.

Practice Purpose:
An Agricultural Energy Assessment is a baseline assessment of all the energy use of systems, equipment, and facilities for the agricultural operation. The assessment documents a typical year of the energy use required to operate the agricultural operations, and the strategies by which the client can prioritize on-farm opportunities to increase energy efficiency and reduce energy use.

Drainage Water Management Design DIA 164

Practice Description:
Design the drainage volume and water table elevation by regulating the flow from a surface or subsurface agricultural drainage system. Implementation requirements for CPS 554 Drainage Water Management along with other supporting conservation practices are developed.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes: Reduce nutrient, pathogen and pesticide loading from drainage systems into downstream receiving waters, improve productivity, health and vigor of plants, and reduce oxidation of organic matter in soils. This practice provides design, implementation requirements and O&M for recommended practices.

Irrigation Water Management Design DIA 163

Practice Description:
Design the volume, frequency, and application rate of irrigation water. Implementation requirements for CPS 449, Irrigation Water Management along with other supporting conservation practices are developed.

Practice Purpose:
This practice is used to accomplish one or more of the following purposes: Improve irrigation water use efficiency, minimize irrigation-induced erosion, protect surface and ground water quality, manage salts in the crop root zone, manage air, soil, or plant microclimate, improve poor plant productivity and health, and reduce energy use. The practice provides design, implementation requirements and O&M for recommended practices.

Pest Management Conservation System DIA 161

Practice Description:
Pest Management Conservation System manages pests using a combination of conservation practices and Prevention, Avoidance, Monitoring, and Suppression (PAMS) techniques. It addresses beneficial organism, plant pressure, surface, and groundwater impacts.

Practice Purpose:
Pest management plans are documents of record establishing how pests will be managed while addressing identified resource concerns including plant pest pressure, beneficial organisms, and the movement of pesticides. These plans are prepared in collaboration with producer and/or landowner and designed to help the producer implement and maintain an effective plan for the management of pests from available sources.

Soil Health Testing CEMA 216

Practice Description:
Quantitative testing for physical, biological, or chemical characteristics of soil and constraints of soil using approved laboratory methods.

For More Information

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USDA Service Centers by County:

- **USDA Service Center**
  2430 Old County Road
  Newark, DE 19702
  (302) 832-3100 ext. 3

- **Kent County**
  USDA Service Center
  519 South Red Haven Lane, Suite 200
  Dover, Delaware, 19901
  (302) 741-2600 ext. 3
  New Castle County

- **Sussex County**
  USDA Service Center
  21315 Berlin Road, Unit #3
  Georgetown, DE 19947
  (302) 856-3990 ext. 3

★ **Delaware NRCS State Office**
1221 College Park Drive, Suite 100
Dover, DE 19904
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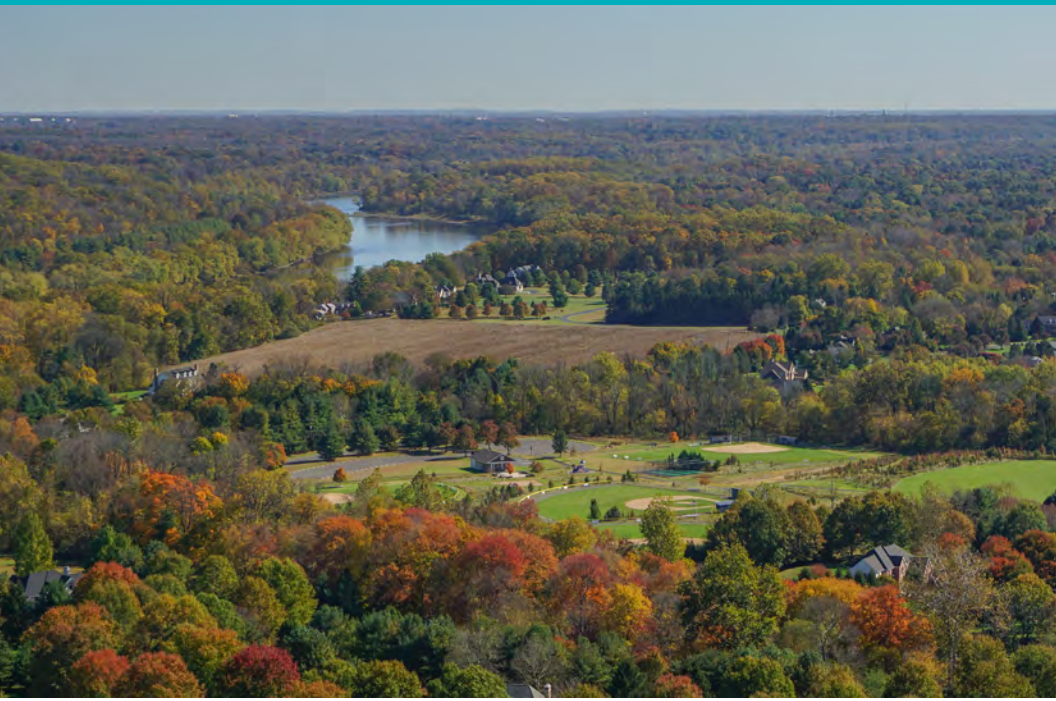

USDA Natural Resources Conservation Service

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