
NRCS Forestry Overview

Practices and Carbon



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Topics



- Definitions and Policy
- NRCS programs
- NRCS forestry practices
- Forestry Conservation Practice Standards that address Carbon



Forest-related definitions

- “Agricultural Land means cropland, grassland, rangeland, pasture, and other ag. land on which ag. and **forest-related products**, or livestock are produced and resource concerns may be addressed.” (7 CFR part 1466.3)
- “Eligible land includes...**nonindustrial private forest land**, and other land...on which forest-related products are produced and resource concerns may be addressed.” (7 CFR part 1466.8)
- **Nonindustrial private forest land** means rural land, as determined by the Secretary, that has existing tree cover or is suitable for growing trees; and is owned by any nonindustrial private individual, group, association, corporation, Indian Tribe, or other private legal entity that has definitive decision-making authority over the land. (7 CFR part 1466.3)



FMP definition

- ***Forest management plan*** means a site specific plan that is prepared by a professional resource manager, in consultation with the participant, and is approved by the State Conservationist. Forest management plans may include a forest stewardship plan, as specified in section 5 of the Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2103a); another practice plan approved by the State Forester or Indian Tribe; or another plan determined appropriate by the State Conservationist. The plan is intended to comply with Federal, State, Tribal, and local laws, regulations, and permit requirements. (7 CFR Part 1466.3)

Programs



- ***EQIP (Environmental Quality Incentives Program)***
- ***EQIP-CIC (Conservation Incentives Contracts)***
- ***CSP (Conservation Stewardship Program)***
- ***Easements***
 - ***HFRP (Healthy Forest Reserve Program)***
 - ***ACEP (Agricultural Conservation Easement Program)***
 - Agricultural Land Easements
 - Wetland Reserve Easements

Environmental Quality Incentives Program (EQIP)



- Provides financial and technical assistance to agricultural producers and non-industrial forest managers to address natural resource.
- Multi-year contracts to install the needed NRCS Conservation practice(s)
- Must have a Forest Management Plan
 - EQIP does offer CPA/DIA/CEMA to help pay TSP for planning
 - CPA/DIA/CEMA are separate EQIP contracts

Finding the Conservation Practice Standards (CPSs)



- Search on “NRCS National Conservation Practice Standards”

The screenshot shows the USDA Natural Resources Conservation Service website. The main heading is "National Conservation Practice Standards". Below it, a paragraph states: "National conservation practice standards are presented in a table, in alphabetical order by practice name. The table also contains links to:" followed by a list of links including "Conservation practice information sheets", "Conservation Practice Physical Effects (CPPE) worksheets", "Conservation practice job sheets", "National templates for statements of work associated with each conservation practice", and "Network effects diagrams".

Updated or new National conservation practice standards are released with National Handbook of Conservation Practices (NHCP) notices. The NHCP notices are maintained in eDirectives.

New National Conservation Practice Standards

- Conservation Practice Standard 605 - Denitrifying Bioreactor Fact sheet (PDF, 2.09 MB)
- Conservation Practice Standard 605 - Denitrifying Bioreactor Producer Highlights (PDF, 1.23 MB)

Conservation Practice Standards

The conservation practice standard contains information on why and where the practice is applied, and it sets forth the minimum quality criteria that must be met during the application of that practice in order for it to achieve its intended purpose(s).

State conservation practice standards are available through the Field Office Technical Guide (FOTG). If no state conservation practice standard is available in the FOTG, you should contact the appropriate State Office or your local USDA Service Center.



Forestry Practices

<u>Code</u>	<u>CPS Name</u>
383	Fuel Break
384	Woody Residue Treatment
394	Firebreak
472	Access Control
490	Tree/Shrub Site Preparation
612	Tree/Shrub Establishment
654	Road/Trail/Landing Closure and Treatment
655	Forest Trails and Landings
660	Tree/Shrub Pruning
666	Forest Stand Improvement

Agroforestry Practices

<u>Code</u>	<u>CPS Name</u>
311	Alley Cropping
379	Multi-Story Cropping(Forest Farming)
380	Windbreak/Shelterbelt Establishment and Renovation
381	Silvopasture
391	Riparian Forest Buffer



Purpose

- Sequester and store carbon

Additional Criteria for Sequestering and Storing Carbon

For shorter term, rapid carbon sequestration, select species that have high-growth rates, recognizing that they are typically short-lived. For longer term storage of carbon, select plants with a long life span, the ability to reach a large size, high-wood density, and potential for use in long-lived products. Establish and maintain a fully stocked stand.

612 Continued...



CONSIDERATIONS

When using trees and shrubs for carbon sequestration and storage, consider using modeling tools to predict carbon sequestration rates and amounts of stored carbon.

Purpose

- Increase or maintain carbon storage

Additional Criteria to Increase Carbon Storage

Manage for tree species and stocking rates that have higher rates of growth and potential for carbon sequestration

Considerations for Increasing Carbon Storage

To increase carbon storage, consider shifting from even-aged to uneven-aged management to increase the retention of carbon onsite. Use regeneration methods that encourage advanced regeneration and retention of mature trees, such as shelterwood, to retain carbon onsite for longer periods. Consider retaining snags and downed woody debris for additional onsite carbon storage, and adopt techniques for maintaining soil quality, including organic carbon retention. To grow trees that can store carbon in durable manufactured products, consider lengthening rotations to retain mature trees longer and grow to larger sizes; also consider using crop tree management techniques (Perkey et al. 1994) to concentrate growth on suitable long-lived species.

384 Woody residue Treatment 2017



CONSIDERATIONS

Consider effects on soil carbon when off-site removal of woody material is to occur

380 Windbreak-Shelterbelt Establishment and Renovation 2021



Purpose

- Increase carbon storage in biomass and soils

Additional Criteria for Carbon Capture and Storage

Plant windbreaks with a larger footprint to increase carbon capture and storage in biomass and soils. Where practical, while meeting the primary objective of the windbreak, adjust plant spacing and species selection to increase above and belowground productivity for increased carbon capture and storage.

Maintain site fertility. Minimize soil disturbance during windbreak establishment, maintenance, and renovation. Manage without tillage, where possible, to reduce impacts on soil organic matter. Limit the use of petroleum-based herbicides and fertilizers.

Models that predict carbon storage in biomass over time are useful when selecting trees and shrubs for greenhouse gas mitigation.

Purpose

- Increase carbon storage in plant biomass and soils.

Additional Criteria to Increase Carbon Storage

Select tree and shrubs species with rapid growth rates.

Plant/manage the appropriate density for the site that will maximize above- and below-ground biomass production.

Minimize soil disturbance through use of no-till methods.

Purpose

- Increase carbon sequestration and storage.

Additional Criteria to Increase Carbon Sequestration and Storage

Select stocking rates and tree species to optimize growth rates and lifespans, suited to site capability, to enhance and sustain carbon sequestration. Use forage species that are deeply rooted and allocate higher amounts of carbon to below-ground portions.

Purpose

- Maintain or increase total carbon stored in soils and/or perennial biomass to reduce atmospheric concentrations of greenhouse gasses

Additional Criteria to Maintain or Increase Total Carbon Stored in Soils and/or Perennial Biomass to Reduce Atmospheric Concentrations of Greenhouse Gasses

The minimum width to maintain or increase total carbon stored in soils and or plant biomass and to reduce atmospheric concentrations of greenhouse gasses shall be 35 feet. Maximize width and length of the riparian forest buffer. Select adapted plants known to sequester high rates of carbon in soils and plant biomass. Use the appropriate stocking, seeding, or planting rate for the site.

379 Mult-Story Cropping (Forest Farming) 2010



Purpose

- Increase net carbon storage in plant biomass and soil

Additional Criteria to Increase Net Carbon Storage in Plant Biomass and Soil

For optimal carbon storage, select plant species that are adapted to the site to assure strong health and vigor and plant the full stocking rate for the site.

Manage the appropriate density for the site that will maximize above and below ground biomass production.

Minimize soil disturbance during establishment of the site.

Minimize soil disturbance during cultivation of the understory crop(s)

EQIP Conservation Incentive Contracts (EQIP CIC)



To provide stewardship opportunities for producers through EQIP:

Based on land use

Must address at least one Priority Resource Concerns (PRC)

Within an identified watershed or other area

Steppingstone for producers from EQIP to CSP:

Allows producers to implement elements of CSP on a smaller scale

EQIP Conservation Incentive Contracts (EQIP CIC)



- EQIP CIC can attain additional levels of conservation by providing two types of payments:
- Incentive Practice payments for adopting practices
- Structural, Vegetative, Management Practices
- Paid after certification
- Enhancement payments for managing, maintaining, and improving the incentive practices
- Paid the FY after certification
- May not occur every year

Conservation Stewardship Program (CSP)



- Encourages producers to address resource concerns in a comprehensive (whole-farm) manner by maintaining and improving their existing conservation systems and adopting additional conservation activities to address priority resource concerns.
- Participants earn CSP payments for conservation performance—the higher the performance, the higher the payment.
- 5 year contract
- Must enroll all acres
- Payment every year



Forestry Enhancements

- E338B Short-interval burning
- E338C Sequential patch burning
- E384A Biochar production from woody residue
- E643A Restoring coastal vegetation
- E643B Management for sensitive plants
- E612A Cropland conversion to trees or shrubs
- E612B Planting for carbon capture
- E612C Tree/shrub restoration
- E612D Adding food-producing trees/shrubs
- E612E Cultural plantings
- E612F Sugarbush management
- E612G Tree/shrub planting for wildlife



Forestry Enhancements

- E666A Maintaining and improving forest SQ
- E666B Converting plantations to longleaf
- E666C Sustainable pine straw raking
- E666D Forest management to improve understory
- E666E Reduce fuel ladders
- E666F Reduce forest density
- E666G Daylighting roads
- E666H Increase on-site carbon storage
- E666I Crop tree management for mast production
- E666J Facilitating oak forest regeneration
- E666K Patch openings mimic natural disturbance
- E666L Improve degraded hardwoods
- E666M Maintain diversity in dry forests
- E666N Create diversity in dry forests
- E666O Forest habitat features
- E666P Summer roosts for forest bats
- E666Q Increase diversity in pine plantations
- E666R Maintain forest bird habitat
- E666S Facilitating LLP regeneration and est

Other Noteworthy Enhancements related to Forestry CPSs

Grazing - E338A Patch
burning for wildlife
habitat

Grazing - E381A
Silvopasture to
improve wildlife
habitat

Grazing - E383A
Grazing to maintain
fuel breaks

Water Quality - E391A
Enhanced riparian
buffer for WQ

Water Quality - E391B
Stream shading for
temperature
reduction

Water Quality - E391C
Enhanced riparian
buffer for wildlife



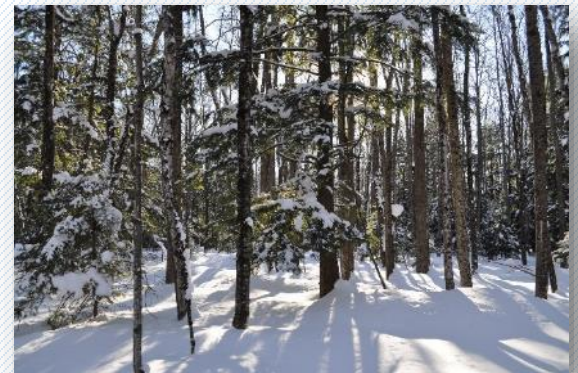
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- (3) email: program.intake@usda.gov



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Questions?

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