



CONSERVATION ENHANCEMENT ACTIVITY

E666137Z3

CONSERVATION STEWARDSHIP PROGRAM

Increase diversity in pine plantation monocultures

Conservation Practice 666: Forest Stand Improvement

APPLICABLE LAND USE: Forest; Associated Ag Land; Farmstead

RESOURCE CONCERN ADDRESSED: Fish & Wildlife – Inadequate Habitat

ENHANCEMENT LIFE SPAN: 10 Years

Enhancement Description

Create small openings to provide diversity in pine plantations, which are typically monocultures and inhospitable to wildlife. Small openings are one-half (0.5) to three (3) acres in size. The cleared area will have the vegetation removed through cutting, mulching, or other means compatible with the site.

Criteria

- States will apply general criteria from the NRCS National Conservation Practice Standard Forest Stand Improvement (Code 666) as listed below, and additional criteria as required by the NRCS State Office.
- Apply to sites which have a closed canopy and few native herbaceous or shrub plants in the understory.
- Select sites with ≥ 50 square feet of basal area per acre.
- Selected sites must contain pine species included on the NRCS state list of pine species on that have the ability to regenerate from seed.
- Create openings to have varying sizes. The size of openings shall be between one-half (0.5) to three (3) acres, be distributed throughout the forest and total 10-30% of the forested acres. If possible, locate openings so that lower-quality trees will be removed.

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Vary shapes of openings to correspond with land features (e.g., a wetter area within the plantation with poorer-quality trees), or to utilize sunlight effectively to encourage regeneration within the opening.

- Minimize damage to residual trees when the openings are being created and prepared.
- Slash and cull trees must be mitigated to allow for natural regeneration to occur. This can be accomplished by applying the following treatments singly or in combination:
 - Windrowing
 - Wildlife piles
 - Removal for firewood or other non-commercial purposes
 - Biochar creation
- Retain any desirable tree species that provide diversity in the plantation, that are not of the planted pine species.
- Time tree felling to avoid buildup of insect or disease populations. Refer to criteria in NRCS Conservation Practice Standard Integrated Pest Management (Code 595) to assist with site-specific strategies for pest prevention, pest avoidance, pest monitoring, and pest suppression.
- Implement forest stand improvement activities in ways that avoid or minimize soil erosion, compaction, rutting, and damage to remaining vegetation, and that maintain hydrologic conditions. Protect site resources by selecting the method, felling direction and timing of tree felling, and heavy equipment operation. For temporary access use NRCS Conservation Practice Standard Forest Trails and Landings (Code 655) to protect soil and site resources from vehicle impacts.
- Use NRCS Conservation Practice Standard Access Road (Code 560) for more heavily used roads associated with forest stand improvement activities.
- The enhancement will comply with all applicable federal, state, and local laws and regulations, and with States' Forestry Best Management Practices for Water Quality.



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Documentation and Implementation Requirements

Participant will:

- Prior to implementation, determine and document sites to apply enhancement based on having a closed canopy with a basal area of 50 or higher, having few native herbaceous or shrub species in the understory, and having pine species present that are on the NRCS state list of pine species that have the ability to regenerate from seed. (NRCS will provide technical assistance, as needed.)
- Prior to implementation, determine and document the shape and size of openings, ½ to 3 acres, so they are distributed throughout the forest and total 10-30% of the total forested acres.
- Prior to implementation, locate openings where lower quality trees will be removed.
- During implementation, minimize damage to residual trees when creating openings.
- During implementation, mitigate slash and cull trees by windrowing, creating wildlife piles, removing for firewood or other non-commercial uses, and/or creating biochar.
- During implementation, retain any desirable tree species that provide diversity in the plantation that are not of the planted pine species.
- During implementation, protect the site from plant and animal pests, fire, and adverse impacts to the soil resource.

NRCS will:

- Prior to implementation, as needed, provide technical assistance in determining sites for enhancement implementation that meet specified criteria, including canopy/understory conditions and size, shape, and location of planned openings.
- Prior to implementation, provide and explain the following NRCS Conservation Practice Standards as they relate to implementing this enhancement (as applicable for the site):
 - Forest Stand Improvement (Code 666)
 - Integrated Pest Management (Code 595)
 - Forest Trails and Landings (Code 655)
 - Access Road (Code 560)
- During implementation, evaluate any planned changes to verify they meet the enhancement criteria.

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- After implementation, verify the post treatment stand conditions meet the specifications developed for the openings.

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NRCS Documentation Review:

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

NRCS Technical Adequacy Signature Date