



CONSERVATION ENHANCEMENT ACTIVITY

E666132Z2- Colorado

**CONSERVATION
STEWARDSHIP
PROGRAM**

Reduce forest stand density to improve a degraded plant community

Conservation Practice 666: Forest Stand Improvement

APPLICABLE LAND USE: Forest

RESOURCE CONCERN ADDRESSED: Degraded Plant Condition

ENHANCEMENT LIFE SPAN: 10 Years

Enhancement Description:

Reducing forest stand density creates open forest conditions with a low basal area which promotes the health and vigor of the residual trees. The open stand structure allows a significant amount of sunlight to reach the forest floor and stimulates the growth of understory vegetation. Understory vegetation management, along with the wide spacing between trees or clumps of trees, provides visual appeal, lowers the risk of wildfire, and provides habitat for many at-risk and listed wildlife species. The enhancement creates conditions that facilitate a follow-up treatment with prescribed burning. This enhancement provides for management of the understory vegetation in a forested area, using mechanical, chemical or manual methods to improve the plant species mix and the health of the residual vegetation.

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.

- Develop or update a forest management plan in consultation with NRCS personnel and a professional forester to direct the management of the property.
- Thin the stand to a target basal area of 50 to 60 square feet/acre. This creates an open stand and stimulates the growth of herbaceous vegetation on the forest floor. Preferentially remove unhealthy individual trees, undesirable species, and trees with visible defects



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including forked or broken tops, thin crowns or damaged trunks. Retain desired species and individual trees with large healthy crowns and undamaged trunks.

- The stand may have been previously thinned or may be in need of thinning. Merchantable trees may be sold. Reduce stand density sufficiently to get light to the forest floor. The overstory thinning must be completed prior to the understory treatment.
- Trees that cannot be sold may be cut or killed to reduce the canopy and allow sunlight to reach the forest floor. Use NRCS Conservation Practice Standard Woody Residue Treatment (Code 384) as needed to treat felled wood.
- Minimize damage to residual trees during the thinning process.
- Time tree felling to avoid buildup of insect or disease populations.
- Understory vegetation in fire-adapted forest types will receive the greatest benefit from treatment with prescribed burning. Use NRCS Conservation Practice Standard Prescribed Burning (Code 338), and follow all applicable federal, state and local laws. If prescribed burning is not feasible or not appropriate for the site, understory vegetation may be treated with mechanical methods like mulching, mowing, chainsaws, or small dozers.
- Control measures should be used on undesirable competing vegetation, to favor the development of desirable vegetative communities on the site. Vegetation may be treated by chemical methods such as spraying or single stem treatments, or mechanical methods like a heavy duty brush cutter or similar equipment. Refer to criteria in NRCS Conservation Practice Standard Integrated Pest Management (Code 595).
- 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.
- Where slash and debris will be generated, use NRCS CPS Woody Residue Treatment (Code 384) to appropriately treat slash and debris, as necessary, to assure that it will not present an unacceptable fire, safety, environmental, or pest hazard. Remaining woody material will be placed so that it does not interfere with the intended purpose or other management activities. Do not burn vegetative residues except where fire hazard or threats from diseases and insects are of concern or when other management objectives are best achieved through



burning. When slash and other debris will be burned onsite use NRCS Conservation Practice Standard Prescribed Burning (Code 338).

- Where machinery is being used, operate under dry conditions when the machinery will not cause rutting and/or soil compaction.
- Do not conduct activities during the nesting season for ground nesting birds.
- 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, read and understand the NRCS Conservation Practice Standard Forest Stand Improvement (Code 666) conservation practice standard or job sheet. The information contained in these documents will assist you in meeting the criteria of this enhancement.
- Prior to implementation, have a current or updated Forest Management Plan that includes activities required to implement this enhancement.
- Prior to implementation, develop a strategy of tree removal and understory control prior to work being initiated.
- Prior to implementation, take some pre-treatment photos of the site.
- During implementation, reduce stand stocking to a basal area of 50 to 60 square feet/acre, retaining trees with large, healthy crowns and undamaged trunks.
- During implementation, control undesirable competing vegetation using appropriate methods for the species of trees and site conditions. (if using prescribed burning have a prescribed burn plan in place, if using chemical methods have recommendations from an approved source, or mechanical follow state BMP's).
- During implementation, control debris piles to minimize wildfire hazards.
- After implementation, the participant will provide the date completed, methods used, a map delineating treated acres and some representative post-treatment photos.

NRCS will:

- Prior to Implementation, provide assistance with interpretation or a current or updated Forest Management Plan for this property.
- Prior to Implementation, provide technical assistance on updating the Forest Management Plan and address the area targeted with this enhancement.
- Prior to Implementation, (as needed) discuss the need for a prescribed burn plan, how to obtain appropriate herbicide recommendations and/or following the state's BMP guidelines.
- Prior to Implementation, if needed, develop appropriate state approved Job Sheet(s).
- Prior to implementation, provide and explain the following NRCS Conservation Practice Standards (CPSs) as they relate to implementing this enhancement.
 - Forest Stand Improvement (Code 666)
 - Forest Trails and Landings (Code 655)



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- Integrated Pest Management (Code 595)
- Woody Residue Treatment (Code 384)
- Prescribed Burning (Code 338)
- During Implementation, provide technical assistance if requested by the participant.
 - After Implementation, verify the enhancement was implemented according to the NRCS Conservation Practice Standard Forest Stand Improvement Standard (Code 666) specifications and meets enhancement criteria.

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

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