CONSERVATION ENHANCEMENT ACTIVITY

E666G

CONSERVATION STEWARDSHIP PROGRAM

Reduce forest density and manage understory along roads to limit wildfire risk and improve habitat

Conservation Practice 666: Forest Stand Improvement

APPLICABLE LAND USE: Forest

RESOURCE CONCERN: Plant, Animal

ENHANCEMENT LIFE SPAN: 10 YEARS

Enhancement Description:

Opening the tree canopy along roads ("daylighting") and providing space between ground vegetation and tree crowns minimizes the spread of wildfires that often start along roads and improves wildlife habitat and food sources for many species. Some trees near a forest road are removed through harvesting, cutting, mulching, or another option available at the site, with the objective of creating a partially open forest canopy bordering the road. A semi-open canopy allows more sunlight to reach the forest floor to promote herbaceous understory plants and reduces maintenance needs by allowing moisture to evaporate from roads. The reduced canopy and herbaceous understory limit woodland fuel buildup and reduce fire intensity.

Criteria:

States will apply general criteria from the NRCS National Conservation Practice Standard (CPS) Forest Stand Improvement (Code 666) as listed below, and additional criteria as required by the NRCS State Office.

- Apply the enhancement to sites where vegetation on roadsides presents a fire risk, is inadequate for wildlife habitat, or is detrimental to road maintenance. Treat a strip of forest on both sides of the road, as needed and if feasible. Implement the enhancement for a distance of at least 35 feet into the forest stand from the edge of the road, and extend the distance as needed up to 100 feet based on slope, aspect, soils, fuel type, etc. Use criteria in NRCS CPS Fuel Break (Code 383).

- 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.

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- The enhancement will comply with all applicable federal, state, and local laws and regulations, and with States' Forestry Best Management Practices for Water Quality.
- Wetland compliance and highly erodible land regulations must be followed.
- Trees removed as part of the treatment process that have marketable quality may be sold. Retain desirable species with large healthy crowns, and trees and shrubs that provide a diversity of wildlife food sources. Remove trees that are:
    - At high risk of mortality or failure (unless retained as a wildlife tree at a safe distance from the road)
    - Of low crown vigor
    - Of poor stem form and quality
    - Less-desirable species.
- Trees that cannot be sold may be removed by cutting, mulching, firewood distribution, or other means to reduce the canopy and allow sunlight to reach the forest floor. Trees further away from the road may be killed and left standing as snags, if they will not fall onto the road.
- Minimize damage to residual trees during the daylighting process.
- Refer to criteria in NRCS Conservation Practice Standard Integrated Pest Management (Code 595) Brush Management (Code 314), or Herbaceous Weed Control (Code 315) to assist with site-specific strategies for pest prevention, pest avoidance, pest monitoring, and pest suppression. Time tree felling to avoid buildup of insect or disease populations.
- Where slash and debris will be generated, use NRCS Conservation Practice Standard 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).

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- The understory vegetation can be maintained by prescribed burning where appropriate. Use NRCS CPS Prescribed Burning (Code 338). If prescribed burning is not an option, alternative methods may be used to manage the understory vegetation, such as mowing or fall disking.

- The daylighted area may be treated with herbicides to control noxious and invasive plants and undesirable woody vegetation to promote herbaceous plants. 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), Brush Management (Code 314), or Herbaceous Weed Control (Code 315)

- No daylighting activities should take place during the nesting season for ground nesting birds.

Documentation and Implementation Requirements:

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Participant will:

- Prior to implementation, review NRCS Conservation Practice Standard Forest Stand Improvement (Code 666) which contains information needed to meet criteria for this enhancement.
- Prior to implementation, develop an understanding of management practices that reduce tree density, and the types of understory vegetation that will be encouraged by these practices. (Request NRCS technical assistance, as needed.)
- Prior to implementation, recognize that other NRCS Conservation Practice Standards may be needed to apply this enhancement. These may include:
  - Brush Management (Code 314)
  - Herbaceous Weed Control (Code 315)
  - Integrated Pest Management (Code 595)
  - Woody Residue Treatment (Code 384)
  - Prescribed Burning (Code 338)
- Prior to implementation, acquire all necessary approvals and permits (i.e. local, state, or federal, as applicable).
- Prior to implementation, work with a professional forester who will mark trees and groups of trees to remove and will develop a strategy for controlling undesirable understory vegetation.
- Prior to implementation, if prescribed burning will be used, work with NRCS and a professional forester or biologist to obtain a prescribed burn plan. If chemical methods will be used, obtain recommendations from an approved source.
- Prior to implementation, take pre-treatment photos of the site to show representative conditions.
- During implementation, follow criteria in NRCS Conservation Practice Standard Forest Stand Improvement (Code 666) and specifications provided by NRCS, to ensure that:
  - Overstory trees are removed or retained to achieve all planned purposes and landowner objectives.
  - The desired spacing, density, size-class distribution, number of trees, and amount of understory is achieved.
  - The operation avoids or minimizes damage to desirable vegetation.

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- During implementation, follow state-approved Forestry Best Management Practices (BMPs) to protect streams, water quality, and minimize soil loss.
- During implementation, treat a strip of forest on both sides of the road, if needed and feasible. Implement the enhancement for a distance of at least 35 feet into the forest stand from the edge of the road, and extend the distance as needed up to 100 feet from the road based on slope, aspect, soils, fuel type, etc.
- During implementation, focus on retaining healthy trees and when available retain trees that provide wildlife benefits such as oaks, hickories, etc.
- During implementation, remove trees that are at risk of mortality, trees with low crown vigor, trees with poor form and quality, and less-desirable species.
- During implementation, control undesirable competing vegetation using appropriate methods for the tree species and site conditions.
- During implementation, limit the size of debris piles to minimize wildfire hazards.
- During implementation, as needed, evaluate and review with NRCS any planned changes to verify they meet the enhancement criteria.
- After implementation, take digital photos showing representative post-treatment conditions.
- After implementation, notify NRCS that the work has been completed and make treatment documentation available for NRCS review and certification.

NRCS will:

- Prior to implementation, provide and explain the following NRCS Conservation Practice Standards as they relate to implementing this enhancement.
  - Fuel Break (Code 383)
  - Brush Management (Code 314)
  - Herbaceous Weed Control (Code 315)
  - Forest Stand Improvement (Code 666)
  - Woody Residue Treatment (Code 384)
  - Forest Trails and Landings (Code 655)
  - Integrated Pest Management (Code 595)
  - Prescribed Burning (Code 338)
- As needed, prior to implementation, NRCS will provide technical assistance in:

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- Interpreting enhancement criteria relative to tree species to retain and remove or kill, and strategy for controlling undesirable understory vegetation.
- Preparing specifications for applying this enhancement for each site using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan, or other acceptable documentation.

- Prior to implementation, ensure that the participant has an appropriate prescribed burn plan, herbicide recommendations from an approved source and an understanding of how these practices will be applied on the property.
- Prior to implementation, provide and explain the state's Forestry BMP guidelines.
- During implementation, evaluate any planned changes to verify they meet the enhancement criteria.
- During implementation, provide technical assistance if requested by the participant.
- After implementation, review documentation and photographs to verify the enhancement was completed according to specifications in this enhancement and NRCS Conservation Practice Standard Forest Stand Improvement (Code 666).

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

WASHINGTON SUPPLEMENT TO

CONSERVATION ENHANCEMENT ACTIVITY

CONSERVATION STEWARDSHIP PROGRAM

E666G

Additional Criteria for Washington

- In additon to the criteria specified in the National job sheet E666G the following additional criteria apply in Washington:

  - The participant should consult with a forester or natural resources professional for guidance on how to: inventory forests, mark cut or leave trees to achieve the objective, controlling undesirable species, lay out treatment areas and submit a Forest Practices Application, if harvesting commercial sized trees.

  - **NRCS WA does not provide technical or financial assistance for prescribed burning. See WA Dept. of Natural Resources for all assistance associated with prescribed burning including burn plans and burn permits.**

  - If creating a fuel break is one of the client's objectives, then the strip to be treated should be at least 100’ wide into the forest from the edge of the road (WAC 332-24-650). Conservation Practice Standard (CPS)and Specification for 383 Fuel Break will be helpful guidance for designing a fuel break.

  - Based on WebSoil Survey soil suitabilities and limitations, protect soils sensitive to rutting, compaction and erosion, by using machinery only when the soil is dry or frozen, managing water runoff on the road surface, and/or vegetating the roads, trails and landing. All work done on Forest roads will be in compliace with WA Forest Practices Regulations (See WAC 222-24 and guidelines in Board Manual Section III).

  - Whenever chemicals are being used, determine the risk rating of the proposed chemical by running the on-line version of WINPST. For help with WINPST consult your local NRCS Field Office.

- To avoid disturbing ground nesting birds, perform the activities within this enhancement between August 1st and March 1st. This time period will also help residual crop trees from damage by not thinning during growing season. For pine stands, adjust timing from August 1st to mid January for avoiding the attraction of ips beetle.

- Use the CSP 384 Woody Residue Treatment Specification Guide (FOTG, Section IV), USFS forest residue photo series, or use some other professionally accepted protocol for estimating the amount of down wood on site and/or created during silviculture activities. In fire prone areas (dry forests) keep down woody debris (forest slash) to 9 tons/acre or less. The 9 tons will be lopped and scattered and < 2' in height. The woody debris should be distributed across the site and break continuity in order to disrupt the spread of a fire. Woody debris amounts greater than 9 tons/acre will need to be treated through piling, chipping, crushing or removal (See WAC 332-24-652).

- Pruning overstory tree branches is helpful in disrupting continuity of ladder fuels, allowing increase sunlight for roads to dryout, and promoting understory vegetation development. Use CSP 660 Tree & Shrub Pruning for guidance in successfully pruning trees. To manage ladder fuels within fuel breaks the bottom of the crowns should be at least 3 times the height of the ground fuels (slash and vegetation) plus the height of the ground fuel. If the maximum height of the ground fuels (shrubs, grasses, forbs and slash) is 2’ then the minimum pruning height (live and dead branches from ground to base of crown or un-pruned branches) would be 8’.

- Depending on target wildlife species, suite of species or forest type, refer to the State Action Plan, Woodland Fish and Wildlife publications and/or WDFW's publications for guidance on selecting plants that support wildlife forage on the specific site. For use off other sources contact NRCS Biologist. Seeding of herbaceous forage for wildlife is acceptable. See CPS 420 Wildlife Habitat Planting

Additional Documentation Requirements for Washington

- In additon to the documentation requirements specified in the National job sheet E666G the following additional documentation requirements apply in Washington:

- Document the targed wildlife species, suite of species or forest habitat type and source document for forage enhancement.
- Document current and post treatment forest resdue/fuel loading. Also document which method was used for estimating the amount of forest residue.
- Document WINPST risk rating for any chemicals used and their labels.
- Document WA Forest Practice Application requirements have been met.