



CONSERVATION ENHANCEMENT ACTIVITY

E666J

CONSERVATION STEWARDSHIP PROGRAM

Facilitating oak forest regeneration

Conservation Practice 666: Forest Stand Improvement

APPLICABLE LAND USE: Forest, Associated Ag Land

RESOURCE CONCERN: Plants, Animals

ENHANCEMENT LIFE SPAN: 10 Years

Enhancement Description

Facilitate oak regeneration following a forest stand improvement treatment for natural oak regeneration (e.g., a regeneration cut). After a regeneration cut, competition from invasive brush and undesirable tree and shrub species often suppresses successful establishment of oak seedlings and saplings. This enhancement will release seedling and sapling oaks from competing invasive plants and other undesirable species, and thin stump sprouts. A forester will monitor site conditions, treat competition, protect seedlings, and recommend additional follow-up treatments as needed. The enhancement protects investments in oak regeneration by providing for follow-up activities that require the expertise of a professional forester.

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 (FMP) in consultation with NRCS personnel and a professional forester to direct the management of the property. The FMP will include guidelines for the amount of advanced oak regeneration needed to achieve the desired future condition. It will describe the types of competition or other stressors that threaten oak survival and recruitment in the area, and recommend facilitating controls such as prescribed burning, chemical, and mechanical treatments to achieve desired outcomes. The FMP will also include guidelines for future inspection and monitoring, types of forest health impacts or stand damage to look for during inspections, and potential supplementary activities that may be needed to achieve additional oak recruitment and regeneration.



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This enhancement may be applied only to forest stands that have already had a seed tree, shelterwood, thinning, or other silvicultural treatment designed to regenerate oak. The stands must contain an adequate amount of oak regeneration in the seedling and/or sapling stages, sufficient to achieve stand objectives if they survive and become fully established. The stands must also have evidence that the oak regeneration is not “free to grow” due to the presence of competing species. This enhancement is not appropriate for stands that have reached the pole timber size class because they are considered fully established at that point and stand management activities will be different.

- A forestry specialist will inspect the stand and identify existing or potential species of harmful insects, tree diseases, and invasive plants, as well as other biotic and abiotic (i.e. ice storms, drought, flooding, etc.) impacts on forest growth, health, structure and/or composition.
- A forestry specialist will conduct regeneration surveys according to methods described in the NRCS National Forestry Handbook, Title 190, Section 636.2.
- The forestry specialist will make recommendations for short-term treatments as needed. A skilled laborer will implement appropriate activities such as applying mechanical and spot chemical treatments, and/or installing tree protection.
- In appropriate settings, prescribed burning may be used to control vegetative competition after oak root systems are sufficiently established to re-sprout after a fire. With the recommendation of a forestry specialist, use NRCS Conservation Practice Standard Prescribed Burning (Code 338), or CSP Enhancement E338B, Short-interval burn.
- The forestry specialist will recommend additional practices as needed to correct undesirable forest health conditions. Practices may include: NRCS Conservation Practice Standards Integrated Pest Management (Code 595), Brush Management (Code 314), Herbaceous Weed Control (Code 315).
- Forest stands lacking sufficient oak regeneration with no surrounding seed-producing oaks may need an enrichment planting of oak. Use NRCS Conservation Practice



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Standard Tree and Shrub Establishment (Code 612). Prescribed burning may not be appropriate where trees have been recently planted.



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Documentation and Implementation Requirements:

Participant will:

- Y Prior to implementation, the participant will obtain a new or updated Forest Management Plan (FMP) that includes activities required to implement this enhancement. The FMP will identify regeneration needs, competition that impedes oak regeneration and recruitment, other forest health concerns, and activities recommended for implementation. The participant will make the FMP available for NRCS review.
- Prior to implementation, arrange for a forestry specialist to inspect the stand and perform the tasks identified in this enhancement.
- Prior to implementation, review the NRCS Conservation Practice Standard Forest Stand Improvement (Code 666) conservation practice standard and other applicable implementation documentation and use the information to meet the criteria of this enhancement.
- During implementation, the participant and the forestry specialist will ensure that regenerating oak trees are protected from any damage.
- During implementation, notify NRCS if there are any planned changes, to verify they meet the enhancement criteria.
- After implementation, notify NRCS that the work has been completed, and make the following information available to NRCS: dates that inspection was conducted, methods used, and the treatments applied to remove competition and protect young oaks.

NRCS will:

- Prior to implementation, verify the enhancement activity is planned for acres that meet the criteria within the enhancement guide sheet. Verify that a forest stand improvement treatment to initiate oak regeneration was previously applied, that regenerating seedling and/or sapling oaks are present, and that oak survival is threatened by competing species and/or other environmental stressors.
- Prior to implementation, provide assistance with interpretation of a new or updated FMP on acres targeted by this enhancement.
- Prior to implementation, provide and explain the following NRCS Conservation Practice Standards as they relate to implementing this enhancement:
 - o Forest Stand Improvement (Code 666)



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- Integrated Pest Management (Code 595)
 - ~~Prescribed Burning (Code 338)~~
 - Brush Management (Code 314)
 - Herbaceous Weed Control (Code 315)
 - Tree/Shrub Establishment (Code 612)
 - Tree/Shrub Site Preparation (Code 490)
- As needed, prior to implementation, NRCS will provide technical assistance by:
 - Preparing specifications for applying this enhancement for each site using approved guide sheets, implementation requirements, technical notes, and narrative statements in the conservation plan, or other acceptable documentation, and discussing the details with the participant.
 - Providing methods for conducting regeneration surveys.
 - During implementation, provide technical assistance if requested by the participant.
 - During implementation, as needed, evaluate any planned changes to verify they meet the enhancement criteria.
 - After implementation, certify that the enhancement was completed according to the NRCS Conservation Practice Standard Forest Stand Improvement (CPS 666) specifications and the 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



WASHINGTON SUPPLEMENT TO CONSERVATION ENHANCEMENT

CONSERVATION STEWARDSHIP PROGRAM

ACTIVITY E666J

Additional Criteria for Washington

- In addition to the criteria specified in the National job sheet E666J the following additional criteria apply in Washington:
 - Work with a forester or natural resources professional to update your forest management plan to include inventory and activities needed for this enhancement, and guidance on compliance with WA Forest Practice Rules. In addition, the participant should consult with a forester or natural resources professional for guidance on how to: selection of oak seedlings & samplings to protect; lay out and mark treatment areas boundaries; inventory post-treatment stocking of the regeneration layer and the understory competing vegetation; and control undesirable species.
 - 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.
 - **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.**
 - Use the Conservation Practice Standard (CSP) 384 Woody Residue Treatment when woody debris on the ground is enough to make difficult for oak seedling to become established. Estimate the amount of woody residue by using USFS forest residue photo series, or some other professionally accepted protocol for estimating the amount of down wood on site. Excessive woody debris may need to be treated through piling, chipping, crushing or removal based on WAC 332-24-650 to 660.
 - 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.



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- For this enhancement, seedlings are defined as being shorter than DBH; saplings are taller than DBH to 4.99" DBH.
- In Washington, conifers are usually the main competing overstory trees for Oregon White Oak stands. Removal of these competing conifers is usually important part of the Oregon White Oak restoration.
- Use to CPS 490 Tree and Shrub Site Preparation prior to planting Oak acorns or Oak seedlings.

Additional Documentation Requirements for Washington

- In addition to the documentation requirements specified in the National job sheet E666J the following additional documentation requirements apply in Washington:
 - Provide Implementation Requirements for Forest Stand Improvement (666) which documents current and post treatment forest residue/fuel loading. Also document which method was used for estimating the amount of forest residue.
 - Document current and post treatment stocking data for oaks and undesirable competing vegetation. Use stocking survey methods found in the NRCS National 190 Forestry Technical Note 1.
 - WINPST risk rating for any chemicals used and their labels.
 - Document WA Forest Practice Application class and required compliance if a Forest Practices Application is required.