Restoration and Management of Rare or Declining Habitats – Natural Oak Regeneration

Massachusetts Conservation Practice Job Sheet MA-643

Client Name:	**Farm #**:	**Tract #:**
Field(s):	**Total Acres:**	
Planned By:	**Date:**	

Definition

Restore and manage rare and declining habitats and their associated wildlife species to conserve biodiversity.

Purpose

To initiate natural oak regeneration in order to restore oak dominated forest habitat in Massachusetts. Oak dominated forests and their acorns play a key role in the distribution, abundance and behavior of a variety of wildlife species. Maintaining this habitat type is important to maintaining Massachusetts' biodiversity.

Operation and Maintenance

Periodic inspections during treatment activities are necessary to ensure that objectives are achieved and resource damage is minimized. Follow-up and ongoing management activities will be needed to obtain the desired results.

Specifications

Wildlife - Time the practice so it minimally affects seasonal wildlife activities and retains essential wildlife habitat requirements such as coarse woody debris and wildlife reserve trees.

Coarse Woody Debris - A minimum of 2 cords (256 cubic feet) of coarse woody debris per acre should be maintained on site after any cutting. To preserve coarse woody debris, avoid having equipment disturb pre-existing large downed logs, stumps and up-rooted stumps. When creating coarse woody debris, use the following guidelines: 1) large pieces are more valuable than smaller pieces (i.e., min 6-inch diameter x 6-ft long), 2) "bark-on" is preferred to "bark-off", and 3) disbursed coarse woody debris is preferred over large accumulations. To help visualize what 2 cords of coarse woody debris per acre looks like, it would equate to approximately 84 - 6-ft long x 6-in diameter logs per acre, or 51 – 6-ft long x 10-in diameter logs per acre, or 42 – 6-ft long x 12-in diameter logs per acre.

Wildlife Reserve Trees - Retain 6 to 12 wildlife reserve trees per acre when possible, but they should not compete with the oak regeneration by shading the released individuals. Reserve trees can be left scattered throughout the regeneration project or may be left in groups or islands.

Regulatory Compliance - Comply with all applicable federal, state, and local laws and regulations during the installation, operation and maintenance of this practice, including the Massachusetts Forest Cutting Practices Act and the Massachusetts Wetlands Protection Act.

Please note: A current forest management plan, completed by a Massachusetts licensed forester, is required for natural oak regeneration under this practice.

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Specifications (cont.)

A minimum of 150 established oak stems per acre is needed in order to successfully regenerate an oak dominated forest stand. A stem is generally considered established when it has a basal diameter of ¾ inch. Establishment, development and/or release of advanced oak regeneration is planned as follows: *(check all that apply)*

□ **Shelterwood Method**

□ *Preparatory Cut* – remove up to 20% of the total stand basal area through selective removal of midstory and understory vegetation. This treatment should not result in direct radiation to the forest floor.

_____acres Years _____ _____ _____

□ *Regeneration Cut* – remove 10-30% of the total stand basal area. Ideally, this operation should occur during or immediately following a good acorn crop. If a good acorn crop does not occur within 3 years of the cut, understory vegetation should be controlled chemically and/or mechanically in order to minimize competition to germinating acorns when a good acorn crop occurs.

_____ acres Years _____ _____ _____

□ *Seedling Development (control of competing vegetation, etc.)*

□ Mechanical Control _____ acres Years _____ _____ _____

□ Chemical Control _____ acres Years _____ _____ _____

□ Other _____ _____ acres Years _____ _____ _____

□ *Overstory Removal* – removal of the canopy to allow the advanced regeneration to develop into mature trees.

_____ acres Years _____ _____ _____

□ **Reserve Tree Method**

□ *Reserve Tree cut* – Remove all trees in the stand except for the large, seed producing oaks and other desired co-dominant tree species.

_____ acres Years _____ _____ _____

□ *Seedling Development (control of competing vegetation, etc.)*

□ Mechanical Control _____ acres Years _____ _____ _____

□ Chemical Control _____ acres Years _____ _____ _____

□ Other _____ _____ acres Years _____ _____ _____

Project site general soil moisture regime is: _____ EWD _____ WD (xeric)

_____ MWD _____ SPD (mesic)

_____ PD _____ VPD (wet)

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Provide a map (may be attached) showing the location of the proposed practice and practice components.

Scale 1"=_____ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")

Site Specific Comments and Recommendations

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