

**Plant Enhancement Activity – PLT31 – Forest stand improvement, prescribed burning – short return interval**



**Enhancement Description**

This enhancement is the controlled use of fire in a forest to restore native forest conditions with a focus on improving the condition of fire-adapted plants and wildlife habitat and reducing the risk of damage from intense, severe wildfires.

**Land Use Applicability**

Forestland

**Benefits**

Prescribed burning restores native forest communities that improve ecological conditions for plant health and vigor, reduced risk of wildfire hazard, and enhanced wildlife habitat. Prescribed burning in fire-adapted ecosystems is beneficial and cost effective in regenerating desirable tree species, controlling invasive plants, and creating snags and den/cavity trees for wildlife. Short fire return interval is important to prevent encroachment of competing vegetation, native and non-native, that degrade habitat for desired plant and wildlife species.

**Conditions Where Enhancement Applies**

This enhancement applies to conifer or mixed forest land acres which have a forest management plan that recommends a prescribed burn within the next 3 years.

**Criteria**

Implement the following actions:

1. Apply to sites where prescribed burning has previously been implemented at long intervals.
2. Develop and apply a prescribed burning plan that complies with state and local regulations and NRCS policy.
3. The prescribed burn interval must be reduced from the previous regimen to an interval of no more than 2 or 3 years.
4. Thoroughly assess the existing fuel load. The following references should be used to make this determination:
  - a. The degree of departure from reference condition vegetation, fuels and disturbance regimes using the Fire Regime Fire Condition Class (FRCC) Guidebook, for vegetation types that are adapted to fire.
  - b. The amount and distribution of live and dead fuels using the Fire Fuel Protocol: Transect Measurements Field Guide.
5. Assess the need for pre-treatment of vegetation and fuels and for complementary practices such Fuel Break, Firebreak, and Forest Slash Treatment.



6. If invasive plants are present, utilize methods and timing that will prevent or control their spread.
7. A written plan must be developed and all necessary approvals secured prior to conducting a prescribed burn. The plan will include the following components at a minimum:
  - a. The objectives of the burn and the expected post-burn conditions.
  - b. Maps, images and/or descriptions of the proposed burn area and any associated or adjacent smoke sensitive areas.
  - c. Inventory of available fuels.
  - d. Required weather and fuel conditions under which the burn will be conducted.
  - e. Firing sequence and methods.
  - f. List of equipment and personnel needed and job assignments.
  - g. Any pre-burn preparation needed to safely and effectively conduct the burn
  - h. List of appropriate authorities, agencies, departments, individuals, and facilities to be contacted and necessary signatures of approval.
  - i. Checklist for a post-burn evaluation.

**Burning criteria:**

1. Follow all components of the burn plan.
2. A current fire weather forecast is required prior to conducting a prescribed burn. Collect weather parameters and other data that affect fire behavior for the day of the burn and monitor the appropriate weather parameters during the burn. Weather conditions outside those prescribed in the written plan will result in postponement or cessation of the burn.

**Adoption Requirements**

This enhancement is considered adopted when the criteria has been implemented on the land use acre.

**Documentation Requirements**

1. A copy of the written burn plan
2. Description of post-burn conditions with representative digital images of the treated area

**References**

Brose, P.H., D.C. Dey, and T.A. Waldrop. 2014. The fire-oak literature of eastern North America: Synthesis and guidelines. Gen. Tech. Rep. NRS-135. USDA Forest Service, Northern Research Station, Newtown Square, PA.

Johnson, R., and D. Gjerstad. 2006. Restoring the overstory of longleaf pine ecosystems. In: S. Jose et al., editors, The longleaf pine ecosystem: Ecology, silviculture, and restoration. Springer, New York. p. 271-295.

Waldrop, T.A., and S.L. Goodrick. 2012. Introduction to prescribed fires in Southern ecosystems. Science Update SRS-054. USDA Forest Service, Southern Research Station, Asheville, NC.