United States Department of Agriculture | Forest Service | George Washington and Jefferson National Forests | North River Ranger District
401 Oakwood Drive
Harrisonburg, VA 22801

Date: January 13, 2015

Dear Interested Party:

The North River Ranger District of the George Washington and Jefferson National Forests (Forest) is initiating scoping for the proposed North New Road Run prescribed burn and is requesting your input in the process in accordance with the National Environmental Policy Act.

The North New Road Run burn unit is approximately 5,460 acres of National Forest land and is located on Shenandoah Mountain in Augusta and Highland Counties, Virginia and in Pendleton County, WV. This project occurs within Management Area 4FA (Shenandoah Mountain Recommended National Scenic Area), Management Area 8E7 (Shenandoah Mountain Crest – Cow Knob Salamander), and Management Area 13 (Mosaics of Habitat).

Background

Recent research on the Forest and elsewhere in the Appalachians has studied the historic role of fire in the ecosystems represented in the project area. By examining basal fire scars and microscopic charcoal in bog and pond sediments, it has been shown that fire was widespread and occurred frequently across the landscape. For example, approximately 80% of the Forest's acreage has had frequent fire while only 20% has had infrequent or no fire. Fire scar/tree ring studies at eight sites on or near the Forest show fires occurred at a frequency of approximately every 3-9 years from the earliest chronology dates in the mid-1600s to mid-1700s continuing until the 1930s when fires began to be effectively and actively suppressed.

While fires may be relatively frequent on the landscape, they do vary greatly in their intensity and effects. The drier ridge tops and south to west aspects have the most frequent and intense fires while the cove and riparian areas have less frequent and very low intensity fires. Typically fires on the upper drier slopes would be naturally extinguished as they burned into the cool moist habitats in coves and along streams.

Research also indicates that the oak forests may not perpetuate themselves without some level of disturbance, especially on mesic sites (Loftis 1991). Treatments such as prescribed burning (Brose et al. 1999) have been shown to create conditions that promote adequate oak regeneration. Research in the regeneration of table mountain and pitch pine (Waldrop 2009) has shown that both species are shade intolerant, and also require mineral soil for successful germination. Table mountain pine regeneration is achieved with seeds dropped from the serotinous cones (which open due to heat from a fire), while for pitch pine the seed is generally blown in from adjacent areas. In the absence of fire, both oaks and pines declined and were succeeded by shrubby thickets of mostly mountain laurel.

To determine the condition of a fire dependent or fire maintained ecosystem, the U. S. Forest Service, along with agencies of the Department of Interior, use the Fire Regime Condition Class (FRCC) system. This system measures the amount of departure from the natural regime (Hann

and Bunnell 2001) for a given area. This departure results in changes to one (or more) of the following ecological components: vegetation characteristics (species composition, structural stages, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern. There are three condition classes based on low, moderate, and high departure from the central tendency of the natural (historical) regime (Hann and Bunnell 2001, Hardy et al. 2001, Schmidt et al. 2002). Low departure (Condition Class 1) is considered to be within the natural (historical) range of variability, while moderate (Condition Class 2) and high (Condition Class 3) departures are outside the natural range of variability. The North New Road Run unit is currently in Condition Class 3.

A collaborative effort between the Forest and The Nature Conservancy assessed the vegetative communities and fire dependent and/or fire enhanced species across the District, and developed a ranking system to prioritize which areas on the District are most in need of prescribed fire. This process prioritized the North New Road Run unit as one of those areas.

Approximately 900 acres at the southern end of the unit were burned in 2001, 2009, and 2010, and the full unit was burned in 2012.

Existing Conditions:
This project area is comprised primarily of the Oak Forests and Woodlands and Pine Forests and Woodlands ecosystems, with a small amount of Acidic Cove Forest present.

Oak Forests and Woodlands cover approximately 70 percent of this burn unit. The over-story is dominated by red oak, white oak, chestnut oak, black oak and scarlet oak. Heath shrubs such as blueberry, huckleberry and mountain laurel are common in the understory and often form a dense shrub layer.

Pine Forests and Woodlands cover approximately 25 percent of this burn unit and primarily occupy ridge tops and south and west aspects. The over-story is dominated by table mountain pine and pitch pine along with chestnut oak, scarlet oak, and bear oak. A dense heath shrub layer comprised of mountain laurel, fetterbush, blueberry, and huckleberry is almost always present. Native grasses and sedges are common along with dry site herbs and forbs.

Acidic Cove Forests cover approximately 5 percent of this burn unit and typically occupy land along riparian areas and adjacent to upland areas in concave landforms at upper ends of watersheds. Overstories are typically dominated by yellow poplar, hemlock, birch, magnolia, basswood, and red maple. Rhododendron is often abundant in the midstory.

Desired Future Conditions:
In the Oak Forests and Woodlands ecosystem, approximately 4% of the unit should be in open grassland, 22% in an early successional stage (0-19 years) with an open canopy, 50% in a mid-late successional stage (20-299 years) with an open canopy, and 24% in a mid to late successional stage with a closed canopy.

In the Pine Forests and Woodlands ecosystem, approximately 13% of the system should be regenerating forests (0-13 years old), 25% mid-successional open canopy, 54% late successional

open canopy, and 30% mid to late successional closed canopy. Native grasses and sedges should be common along with dry site herbs and forbs.

In the Cove Forests ecosystem, approximately 4% of the system should be regenerating forests, 48% late successional closed canopy, 9% late successional open canopy, and 39% mid-successional closed canopy. Fire is not a major disturbance in this system and typically occurs during the driest of conditions when fire may back and creep into these areas from upper slopes.

Open	Land with less than 10 percent canopy cover in permanent or long-term open condition (grasslands, barrens, etc.; not timber harvest regeneration)
Early Successional or Regenerating Forest	Stands developing after a major disturbance or timber harvest, generally less than 11 years in age in the most common systems, but can be up to 35 years
Mid-Successional Open Canopy Forest	Stands beyond regeneration that stay in a relatively open canopy (canopy closure of 25-60%)
Mid-Successional Closed Canopy Forest	Stands beyond regeneration where the canopy closes (canopy closure of 61% or greater)
Late Successional Open Canopy Forest	Stands reaching older ages of mature trees (50-100 years or greater) and more lasting structural conditions with overall open canopy (canopy closure of 25-60%; typical of an area being thinned)
Late Successional Closed Canopy Forest	Stands reaching older ages of mature trees (50-100 years or greater) and more lasting structural conditions with a largely closed canopy (all layers) greater than 60%, includes natural canopy gaps

In order to achieve these desired future conditions, a mosaic of over-story removal would need to be an objective for each burn on this unit.

Purpose and Need

The proposed action will move the area closer to desired conditions described in the 2014 Revised Land Resource Management Plan (Forest Plan). The need is tied to the overarching purpose to re-establish the historic fire regime and restore native ecosystems through the use of prescribed fire.

There is a need to use prescribed fire to move this unit from a Fire Regime Condition Class 3 to a Fire Regime Condition Class 2 within 10 years and to the Desired Future Condition of Fire Regime Condition Class 1 within 20 years of implementation. This can be accomplished through using fire in a controlled, well-planned manner to manage vegetation, restore fire-dependent ecosystems and species, create desired wildlife habitat conditions, and modify uncharacteristic fuel conditions resulting from extended absence of fire and/or tree mortality from non-native insects and disease.

The following objectives have been discussed for this project:

- Provide for firefighter and public safety.
- Decrease canopy cover in order to promote fire-dependent and fire-adapted species and restore open oak and pine woodlands.
- Expose mineral soil to enhance pine regeneration.
- Increase soft mast production.
- Decrease non fire-adapted woody vegetation.
- Increase grassland openings.

Proposed Action

Prescribed fire is proposed to accomplish restoration objectives and mimic the fires historically found in the Appalachian Mountains. Typically these burns occur in the spring or fall when the fuel moistures are low enough to carry the fire, yet burn cool enough to protect the dominant over-story canopy. However, depending on the seasonal weather, these conditions may be present at any time of the year. Ignition of the unit may be executed through both aerial and hand firing methods. The ignition patterns would be planned to foster low to moderate fire intensity by igniting the uphill areas first, thus creating a backing fire to minimize scorching of over-story trees; however, scattered patches of over-story killed trees are expected to occur. Due to the size of the unit, and the desire to mimic fire's natural role in the ecosystem, multiple days of ignition will be necessary. Existing roads and trails will be used for firelines. No new line construction is proposed. Dead trees that pose safety or holding concerns along the unit boundaries will be felled or lined prior to implementation.

In order to improve and restore these habitats, prescribed burning would be carried out over several years, and would include appropriate fire return intervals, seasonality, and fire intensity. A prescribed fire burn plan will be completed for this area prior to implementation. This tactical implementation plan will specify parameters, such as weather and fuel conditions, that must be observed before and during implementation. The burn plan also includes resource coordination requirements. These coordination requirements include provisions for public and firefighter safety, contingency plans for escaped fire, notifications of appropriate agencies and persons, smoke management guidelines to ensure compliance with air quality regulations, and mop-up and patrol procedures. An appropriate number of trained fire management specialists, as specified in the burn plan, will perform all burning operations.

An adaptive management strategy would be used to ensure that the desired future condition of this unit can be achieved in a timely and efficient manner. Pre-burn vegetative monitoring has been completed and can be used to assess the current condition and to develop objectives. Post-burn monitoring would be used to evaluate the condition of the unit and adjust future objectives.

Public Involvement

Supporting documentation is available at:
www.fs.usda.gov/projects/gwj/landmanagement/projects or at the North River Ranger District, 401 Oakwood Drive, Harrisonburg, VA. 22801. For additional information regarding this

project please contact: Tom Ledbetter, North Zone Fire Management Officer, 540-432-0187, or tjledbetter@fs.fed.us.

If you would like to be notified of ignition dates for this project, please provide your email address to Sami Schinnell, North Zone Fuels Technician, at 540-432-8262 or slschinnell@fs.fed.us.

We are currently preparing a categorical exclusion (CE), in accordance with regulations 36 CFR 220.6(e)(6), subject to public involvement and the determination that no extraordinary circumstances exist. Effective March 15, 2014, categorically excluded projects are no longer required to offer notice and comment and appeal opportunities, pursuant to 36 CFR 218.23(a) [Federal Register Vol. 79, No. 147]. However, we will continue to offer opportunities for your comments and involvement with this decision as provided in the scoping procedures under NEPA. Although we will consider your input at any time before the decision is made, it would be most helpful to hear your issues/concerns specific to this project within 30 days from the date of this letter. When a decision is made, we will promptly mail the appropriate decision and analysis documentation to those who participated in the process or who specifically request the information.

Written comments must be submitted to:
Elwood Burge
District Ranger
North River Ranger District
401 Oakwood Drive
Harrisonburg, VA 22801
Office: 540-432-0187

The office hours for those submitting hand-delivered comments are: 8:00 am to 4:30 pm Monday through Friday, excluding holidays. Electronic comments must be submitted in a format such as an email message, plain text (.txt), rich text format (.rtf), or Word (.doc, .docx) to *comments-southern-georgewashington-jefferson-northriver@fs.fed.us*. Please state "North New Road Run Prescribed Burn" in the subject line when providing electronic comments, or on the envelope when replying by mail.

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Elwood Burge Date
District Ranger