Limestone Timber Stand Improvement (TSI)

Decision Memo

USDA Forest Service, Eastern Region
Cheat-Potomac Ranger District, Monongahela National Forest
Tucker County, West Virginia

I. Decision and Project Description

A. Summary Description of Project

I have decided to conduct a non-commercial crop tree release treatment on approximately 678 acres of the Cheat-Potomac Ranger District on the Monongahela National Forest (MNF).

B. Purpose and Need

These stands were regenerated between 10 and 40 years ago, and have since grown into overstocked sapling/pole-sized stands. The numbers of stems per acre are high, with more than 2,500 in some areas. Healthy stocking for these age classes is between 1,000 and 1,500 stems per acre.

In these young stands, as time progresses, crowding will become more severe, resulting in decreased growth and vigor for hard mast-producing trees that are competing with faster-growing trees like yellow poplar and fire cherry. Increased mortality of important mast producing tree species, such as oak or hickory, is expected if they are not released from competition soon.

The release or thinning will be conducted to accomplish the following objectives:

- Increase the growth and ensure the survival of selected hard mast-producing tree species,
- Maintain the species diversity of the stands, and
- Provide greater potential for future mast production.

This project is specifically intended to respond to the Forest Plan’s management emphasis in Management Prescription (MP) 3.0 areas (Vegetation Diversity) to manage for age class diversity, habitat for wildlife species tolerant of disturbances, and sustainable timber production. Specific direction relevant to this project includes, but is not limited to:

- Guideline TR24: “Consider the needs of other appropriate resources when prescribing TSI activities.” (p. II-41). [Note: The needs of other resources, such as aquatics and wildlife, have been incorporated into the project description in the next section.]
- Goal 6001: “Enhance diversity of forest vegetative cover through the dispersion of a variety of species, types, and ages.” (p. III-7)
- Guideline 3011: “Timber stand improvement should favor long-lived trees with healthy crowns, flowering trees, vegetation for screening or other objectives of a site-specific vegetation management plan.” (p. II-8)
C. Project Location

The stands selected for treatment are on the Cheat portion of the Cheat-Potomac Ranger District, in Tucker County, north of St. George, West Virginia. The stands are in compartments 1, 8, 10, 11, and 14. A total of approximately 678 acres will be treated. See Figure 1, which shows the locations of the units.

Figure 1. Locations of Limestone TSI Units
D. Project Description

TSI activities will be conducted on an estimated 678 acres. Approximately 50 to 75 trees per acre will be released from competition. Trees will be chosen for release based on species, form, and crown size. Trees touching the crown of the tree designated for release will be felled or girdled. No shagbark hickory, healthy butternut, or healthy American chestnut trees will be cut or girdled. Trees not interfering with released trees and under-story shrubs will not be cut, unless necessary for safety. Commercial utilization of cut stems will not be possible because of their small size and value. The stems will be hand-felled and left on site with little or no ground disturbance.

No new roads will be required; all work will use existing roads. No logging equipment will be used.

Treatment Summary:

- Timber stand improvement guidelines:
  - Release approximately 50 to 75 crop trees per acre.
  - Chainsaw fell trees touching or interfering with the crown of the crop tree. If trees identified for removal are over 6 inches diameter at breast height (dbh), those trees will be girdled instead of felled.
  - Approximately 50 to 400 stems will be cut per acre, depending on the age of the stand.
  - Vines will be controlled (cut) in stands with more than 40 vines per acre.

- Determination of crop trees to be retained:
  - Species in order of importance:
    - Shagbark hickory, healthy butternut, healthy American chestnut
    - Red oak
    - Black cherry
    - White oak/chestnut oak
    - Yellow-poplar/cucumber tree
    - Basswood
    - Red/sugar maple
  - Other guidelines:
    - No forks below 17 feet.
    - Select sprouts low to the ground.
    - Select best 2 to 3 sprouts per stump.
    - No black knot on main bowl of cherry.
    - Avoid picking red maple stump sprouts as crop trees.
- Retain shagbark hickory, healthy butternut, and healthy American chestnut trees.
- Girdle large residual trees interfering with crop trees.
- Retain 6 snags per acre or create additional snags if needed.
- No trees will be cut within 25 feet of intermittent or perennial stream channels.
- A maximum of 25 crop trees will be released between 25 and 100 feet from all perennial and large intermittent streams.
- A maximum of 25 crop trees will be released between 25 and 50 feet from all small intermittent streams.
- The non-native invasive species tree of heaven (*Ailanthus altissima*) will be cut when encountered in the units.

II. Reasons for Categorically Excluding the Project

A. Type of Categorical Exclusion

This project falls in a category of actions excluded from analysis in an Environmental Assessment (EA) or Environmental Impact Statement (EIS), as projects of this type individually and cumulatively do not have a significant effect on the human environment (36 CFR 220.6(e)). Forest Service categorical exclusions are defined in the Forest Service Handbook, at FSH 1909.15 (Environmental Policy and Procedures Handbook), Chapter 30 (Categorical Exclusion from Documentation), Section 30.3 (Policy), which states:

1. “A proposed action may be categorically excluded from further analysis and documentation in an environmental impact statement (EIS) or environmental assessment (EA) only if there are no extraordinary circumstances related to the proposed action … .”

and

2. “Resource conditions that should be considered in determining whether extraordinary circumstances related to the proposed action warrant further analysis and documentation in an EA or an EIS are [see resource conditions in Section VII below].”

The mere presence of one or more of these resource conditions does not preclude use of a categorical exclusion. It is the existence of a cause-effect relationship between a proposed action and the potential effect on these resource conditions, and if such a relationship exists, the degree of the potential effect of a proposed action on these resource conditions that determine whether extraordinary circumstances exist. (36 CFR 220.6(b); FSH 1909.15, Section 32.2(6)).

This project falls under category 36 CFR 220.6(e)(6), and FSH 1909.15, Chapter 30, Section 32.2(6):

“Timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than one mile of low-standard road construction”.

Page 4 of 9
B. Relationship to Extraordinary Circumstances

The extraordinary circumstances have been reviewed and are summarized below. Additional details are contained within the project file. This project is consistent with categories described under Section 31.2 of the Forest Service Handbook 1909.15, as described above.

There are no extraordinary circumstances as defined in FSH 1909.15, Paragraph 30.3.2, which might cause the action to have significant effects on flora, fauna, or the quality of the human environment. Specifically:

1. Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species (TES species).

   **Botany TES**

   The stands to be treated are young sapling/pole stands that were impacted by timber harvest 10 to 40 years ago. Therefore, TES plants associated with late successional habitats will not be affected. Due to the dense sapling/pole canopy, most TES plants associated with early successional habitats are also unlikely to occur. If any do occur, they likely would benefit from the canopy openings created by the project. Herbicides will not be used and the ground will not be disturbed, which eliminates the chance of direct impacts to non-target plants.

   **Threatened and Endangered Plants:** No Effect

   **Regional Forester’s Sensitive Species (Plants):**

   - May Impact Individuals, Not likely to lead to loss of viability or a trend toward federal listing: butternut; Appalachian blue violet
   - No Impact: All other Regional Forester’s Sensitive Plant Species

   Butternut (*Juglans cinerea*, an early to mid-successional species) is known to occur in compartment 14, stand 68. Butternut is known to occur elsewhere in the general vicinity, so additional undiscovered individuals could occur in the TSI units. Project design features will prevent negative impacts to butternut and could have beneficial effects due to the treatment of butternut as a crop tree.

   Appalachian blue violet (*Viola appalachiensis*) is known to occur at several locations in the general vicinity, but it is not known to occur in any of the TSI units. Most units have not had a botanical inventory, so potential presence cannot be ruled out. If Appalachian blue violet occurs in any of the units, the increased light availability due to TSI likely would be beneficial because Appalachian blue violet is known to prefer lightly disturbed habitats.

   **Nonnative Invasive Species**

   The activity will not involve ground disturbance, off-road vehicles or heavy equipment, or seeding and mulching. Therefore, this activity has a low risk for spreading non-native invasive species.
Terrestrial Wildlife TESP

 Threatened, Endangered, and Proposed Wildlife:

No Effect: Cheat Mountain salamander (*Plethodon nettingi nettingi*); Virginia big-eared bat (*Corynorhinus townsendii virginianus*); Indiana bat (*Myotis sodalis*)

May Affect, Not Likely to Adversely Affect: northern long-eared bat (*Myotis septentrionalis*)

Three federally-listed threatened and endangered wildlife species and one proposed species are known to occur on the MNF (T. Evans, 2014, Biological Evaluation – Limestone Timber Stand Improvement). There is no designated critical habitat for any of these wildlife species within the project area.

Based on field surveys, the proposed northern long-eared bat (NLEB) is known to occur within the project area. The project area does not have suitable NLE hibernacula. Summer roosts are abundant in the project vicinity. Generally, the TSI units themselves do not provide exceptional roosting habitat for NLEB. The TSI areas are densely stocked and most stems are < 5” dbh. These healthy young trees have smooth bark without the defects needed to create crevices accessible for bat roosting; however, it is documented that NLEB will use small diameter trees if there are crevices/defects that bats find appealing. Therefore, it is possible that some stems could provide roosting habitat. Habitat changes due to TSI activity would involve cutting only small young trees and cutting grapevines. If stems are larger than 5” dbh, the trees will be girdled instead of cut. This will retain standing snags for the future. None of the mature reserve trees will be cut within the units and no trees with sloughing, loose bark, obvious cavities, or snags will be selected for removal per project specifications. Indirectly, over the long term, the young stems retained will grow and may provide suitable roosts in the future.

The removal of small live trees (<5” dbh) is not likely to adversely affect the species for several reasons. The probability that removal of select small trees (<5” dbh) as part of TSI activities in a forest stand with an abundance of alternative trees would affect a roost tree at all is extremely unlikely, and the probability that one of those trees would be a maternity tree is so unlikely as to be discountable. Even if one of the trees removed as part of the TSI was a roost tree, the bat(s) using that tree should all be volant and able to easily find an alternative roost tree in the same immediate area. As such, though it is unlikely that these projects would have any effect at all, we have conservatively determined that these TSI projects “May affect, but are unlikely to adversely affect” the NLEB.

Regional Forester’s Sensitive Wildlife Species:

Beneficial Impact, May impact individuals; Not likely to lead to loss of viability or trend towards federal listing: little brown bat; tri-colored bat; timber rattlesnake

No Impact; Not likely to lead to loss of viability or trend towards federal listing: olivesided flycatcher; red-headed woodpecker

May Impact Individuals; Not likely to lead to loss of viability or trend towards federal listing: Appalachian tiger beetle; early hairstreak; columbine dusky-wing; a geometrid moth; bronze copper; West Virginia white; southern grizzled skipper; Diana fritillary
Aquatic TES

No Federally-listed aquatic species or their critical habitats are known to occur on the MNF. Although aquatic Regional Forester’s Sensitive Species (RFSS) may occur within the cumulative effects area for one or more of the project activities, no direct or indirect impacts to aquatic RFSS are anticipated as a result of the Limestone TSI treatments. The project description includes measures designed to protect streams and riparian areas. Project analyses indicate that project activities will not likely adversely affect aquatic TES species.

2. Flood plains, wetlands, or municipal watersheds.

No substantial or measurable adverse effects, either direct or indirect, are expected for floodplains, wetlands, and municipal watersheds.

3. Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas.

The activities will not occur within or adjacent to any congressionally designated areas. Therefore, the localized project activities should not directly, indirectly, or cumulatively affect any of the above special areas.

4. Inventoried roadless areas or potential wilderness areas.

The activities will not occur within or adjacent to any inventoried roadless areas. There are no Inventoried Roadless Areas (IRA), Roadless Review Areas (RRA), or Roadless Area Conservation Rule Areas (RACR) within or directly adjacent to the Limestone TSI project area. Therefore, the localized project activities should not directly, indirectly, or cumulatively affect any inventoried roadless areas or potential wilderness areas.

5. Research natural areas.

The units are not located near any Candidate Research Natural Areas. The MNF currently does not have any designated Research Natural Areas. Therefore, this project will not affect Research Natural Areas or Candidate Research Natural Areas.

6. American Indians and Alaska Native religious or cultural sites.

There are no tribal trust lands or ceded lands located within the state of West Virginia. There are also no federally recognized Indian tribes in West Virginia. Given the absence of tribal connection to the project area, and the low nature of disturbance associated with project activities, this project will likely have no effect on American Indian or Alaskan native religious or cultural sites.

7. Archaeological sites, or historic properties or areas.

Implementation of this project will result in no new ground disturbance; therefore, no archaeological sites or historic properties will be affected by project implementation.

8. Other extraordinary circumstances.

No other extraordinary circumstances for other resources have been identified that warrant further analysis in an EA or EIS.
III. Public Involvement – Scoping

This project was first listed in the January 1, 2014 edition of the Forest Service Schedule of Proposed Actions (SOPA) web site at http://www.fs.fed.us/nepa/nepa_project_exp.php?project=43439. The SOPA is updated and mailed quarterly to about 140 people. No comments or inquiries about this project were received.

Additional scoping was not warranted because this type of project is routinely conducted across the nation. We are familiar with the effects of TSI projects such as this in the type of habitat present here, and no adverse impacts are expected.

IV. Findings Required By And/Or Related To Other Laws and Regulations

This project will comply with all applicable laws and regulations. This project is consistent with the goals and management directions, including the standards and guidelines in the Land and Resource Management Plan (Forest Plan) for the MNF (2006, as updated in 2011).

This project is not in a visually sensitive area and there will be no change in visual quality as a result of this project.

Civil rights impact analysis is an integrated requirement for projects falling under the National Environmental Policy Act (NEPA), including those projects that qualify for categorical exclusion. This project is located solely on National Forest System land. During internal scoping, the interdisciplinary team could not identify any affected private property, or any direct effects that single out individuals or groups, including those defined as minorities or other identified categories. The project will either be done by force account (Forest Service employees) or contracted out through a bidding process that provides equal opportunity to all individuals, organizations, and businesses authorized to live, work, and/or operate in the United States.

No social issues of any type were identified during public scoping. There is no record of an environmental justice issue being identified on any MNF forest vegetation management project prepared under the current Forest Plan. The absence of effects or issues leads to the conclusion that civil rights and environmental justice impacts will not occur as a result of this project, and that additional analysis of these issues is unnecessary.

V. Appeal Opportunities

This decision is not subject to appeal.

VI. Implementation Date

Implementation is expected to begin in the summer or fall of 2014.
VII. Contact Person

Further information about this decision may be obtained and comments may be made during normal office hours (weekdays, 8:00 a.m. to 4:30 p.m.) by contacting:

Jeff Kochenderfer, Silviculturist
Monongahela National Forest
Cheat-Potomac Ranger District
2499 North Fork Highway
Petersburg, WV 26847

Phone: (304) 257-4488, ext. 17
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Email: jdkochenderfer@fs.fed.us

VIII. Signature of Responsible Official and Date

/s/ M. Troy Waskey 5/7/14
M. TROY WASKEY Date
Cheat-Potomac District Ranger
Monongahela National Forest
Responsible Official

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