



Post Office Box 1070
Frankfort, Kentucky 40602
Phone: 502-875-2428
Fax: 502-875-2845
fitz@kyc.org
www.kyrc.org

WORKING FOR JUSTICE IN ENVIRONMENTAL POLICY

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April 27, 2020

Dan Olsen, Forest Supervisor
Daniel Boone National Forest
1700 Bypass Rd
Winchester, KY 40391
dan.olsen@usda.gov

Tim Reed, District Ranger
Stearns Ranger District
Daniel Boone National Forest
3320 Hwy 27 North
Whitley City, KY 42653
timothy.reed@usda.gov

Dear Supervisor Olsen and Ranger Reed:

I am writing on behalf of my client, Kentucky Heartwood, to respectfully request an immediate investigation into what appear to be significant deviations between management actions approved as part of the Greenwood Vegetation Management Project (“Greenwood Project”) and implementation of the project on the ground.

I am forwarding a *Monitoring Report for Timber Harvest in the Greenwood Vegetation Management Project* from Kentucky Heartwood dated April 15, 2020, in which field investigation found that “the United States Forest Service has marked and sold substantially more timber than what was analyzed in the Greenwood project Environmental Assessment and approved in the 2017 Decision Notice and Finding of No Significant Impact (FONSI).” The *Monitoring Report* estimates that somewhere between 6,000 and 20,000 more trees have or will have been marked and sold than what was approved in the Greenwood Project Decision.

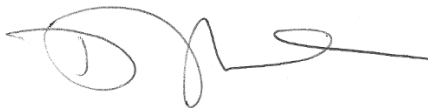
Additionally, the field surveys discovered and documented several instances of timber marked for harvest within the 1.E Riparian Corridor for intermittent streams, in apparent violation of the Forest Plan.

As you know, the Greenwood Vegetation Management Project, approved on October 31, 2017, was many years in development and review. The Project was subject to the analyses required both under the organic statutes that govern the forest management activities of the Forest Service, and under the National Environmental Policy Act. Timber harvesting to implement the Greenwood Project began in 2019 and is ongoing.

The apparent discrepancy between the management actions and commercial timber harvest prescriptions approved in the Greenwood Project, and the activities identified in the *Monitoring Report* are of immediate and significant concern since they appear to contemplate actions that have not been studied, subject to agency and public review, and would result in overharvesting beyond what was studied and approved by the agency.

Kentucky Heartwood requests that any further timber harvesting under the Greenwood Project be suspended pending review and field validation of the discrepancies identified in the *Monitoring Report*, to assure that any marking and commercial timber harvest is consistent with the approved project. As you are aware, to the extent that there is overharvesting that exceeds that which was studied and approved, such actions would be a violation both of Forest Service regulations and planning obligations, and would also constitute a prejudicial action in violation of the limitations imposed on the Forest Service under the National Environmental Policy Act. I am certain that the Forest Service is as concerned with assuring that field activities do not exceed those approved by your offices, as is my client Kentucky Heartwood.

Cordially,

A handwritten signature in black ink, appearing to read 'Tom FitzGerald', with a stylized, flowing script.

Tom FitzGerald
Counsel for Kentucky Heartwood

Cc: Ken Arney, Regional Forester
USDA Forest Service
Southern Region (R8)
1720 Peachtree Street, NW
Atlanta, GA 30309

Enc: *Monitoring Report for Timber Harvest in the Greenwood Vegetation Management Project*

Monitoring Report for Timber Harvest in the Greenwood Vegetation Management Project

Kentucky Heartwood

April 15, 2020

This monitoring report details significant deviations between management actions approved as part of the Greenwood Vegetation Management Project (“Greenwood project”) and implementation of this project on the ground. Specifically, we found that the United States Forest Service has marked and sold substantially more timber than what was analyzed in the Greenwood project Environmental Assessment and approved in the 2017 Decision Notice and Finding of No Significant Impact (FONSI). We estimate that the Forest Service has, or will have, marked and sold somewhere between 6,000 and 20,000 more trees than what was approved in the Greenwood project Decision. During these surveys we also documented several instances of timber marked for harvest within the 1.E Riparian Corridor for intermittent streams, in violation of the Forest Plan.

Background

The Greenwood Vegetation Management Project was approved by the United States Forest Service, Daniel Boone National Forest, on October 31, 2017. Project development began in 2013 with a landscape assessment of the Beaver Creek area as part of the Daniel Boone National Forest Integrated Resources Management Strategy (IRMS). A meeting was held at the Stearns Ranger District office on March 28, 2013 to gather input from the public and interested partners, including Kentucky Heartwood. Scoping for the Greenwood project, which grew out of the Beaver Creek IRMS, was initiated on July 18, 2014. The legal notice of publication and comment opportunity on the Environmental Assessment (EA) was on February 2, 2017. Multiple field trips and meetings, including with the Cumberland River Fire Learning Network, occurred throughout the analysis process. A major revision of the project occurred between Scoping and publication of the EA, with further smaller changes in response to a Predecisional Objection filed by Kentucky Heartwood in 2017. Timber harvesting to implement the Greenwood project began in 2019 and is ongoing.

Management Prescriptions

The Forest Service analyzed and approved 17 management actions including 5 commercial timber harvest prescriptions in the Greenwood project. A total of 2,143 acres of commercial logging was approved by the Decision. Sampling for this monitoring report focused primarily on stands approved for harvest as part of Action 2: Woodland Establishment. The Woodland Establishment prescription calls for commercial timber harvest on 674 acres. We also sampled one stand marked for harvest to implement Action 4: Shelterwood Preparatory Cut. The Shelterwood Preparatory Cut prescription was approved for 245 acres.

The prescription for Action 2: Woodland Establishment is described as follows:

“A woodland establishment treatment is proposed on approximately 674 acres in 20 stands. This treatment would retain an overstory canopy of dominant and co-dominant, vigorous, healthy, long-lived, and fire resilient trees, (e. g. shortleaf pine, chestnut oak, and white oak). The target leave basal area would be 30 to 50 square feet per acre. Trees designated for cutting would be sold through a harvest, cut using a chainsaw or mechanical equipment such as a feller-buncher, and removed from the site using ground based equipment such as skidders. Following the harvest, a midstory control treatment (Action 5), and prescribed burning (Action 13) is proposed. Because a portion of the midstory would be harvested (6 to 8 inch DBH trees), midstory control would be conducted on an as needed basis in these areas.”¹

The prescription for Action 4: Shelterwood Preparatory Cut is described as follows:

“A shelterwood preparatory cut, also known as an irregular shelterwood (Stringer 2006b), is proposed on approximately 245 acres in nine stands. This type of cut is essentially a thinning to leave 50-70 ft² of basal area/acre, preferably the lower part of this range. Trees favored for retention would be healthy, dominant, codominant, long lived, and fire-resilient species such as shortleaf pine, white oak, chestnut oak, and hickory with the best crowns. Trees to be removed would be designated and sold through a harvest. Chainsaws or feller-bunchers would be utilized to cut the trees, and skidders used for moving cut trees to a log landing where they would be loaded and hauled to be utilized as forest products.”²

Sampling Methods

Residual basal area (unmarked trees) was recorded in 195 plots (176 Woodland Establishment, 19 Shelterwood Preparatory Cut) across seven stands (6 Woodland Establishment, 1 Shelterwood Preparatory Cut) on April 1 and April 6, 2020. One stand (5076-44) had already been harvested. We used a systematic sampling protocol with a random starting point. Plots were randomly sampled every 30 paces (approx. 90') with effort made to represent all sections of sampled stands and avoid edge effects. Measurements were taken using a 10 BAF prism following standard forestry techniques (See: Wenger 1984, Mitchell et. al 1995).^{3,4} Tallied trees included all codominant and dominant trees, and excluded trees in understory and intermediate canopy positions⁵ following the Woodland Establishment prescription in the EA. All species of dominant and co-dominant trees were tallied, including trees with lesser longevity or relatively low fire tolerance (e.g., scarlet oak, *Quercus coccinea*)⁶. Trees were

¹ Appendix J, Greenwood Vegetation Management Project Vegetation Report, November 18, 2016

² Id

³ Forestry Handbook, Second Edition. Ed. Karl F. Wenger. 1984. Publisher John Wiley & Sons

⁴ Mitchell, W.A., H.G. Huges, and L.E. Marcy. 1995. U.S. Army Corps of Engineers, Environmental Impact Research Program Technical Report EL-95-24, PRISM SAMPLING, Section 6.2.3, U.S. Army Corps of Engineers Wildlife Resources Management Manual

⁵ Nyland, Ralph D. (2002), Silviculture Concepts and Applications, Second Edition, page 387 Notation 17-1

⁶ A significant number of unmarked trees sampled were scarlet oak (*Quercus coccinea*). USDA Forest Service Agriculture Handbook 654, Silvics of North America (1990), remarks on the relative intolerance of Scarlet oak to fire, stating “Because of its thin bark, scarlet oak is very susceptible to fire damage. If not killed outright, the tree is usually injured so that sap or heart rots enter. This weakness, coupled with a dry environment, helps explain the high mortality or severe damage to trees even from light ground fires.”

excluded from the tally of residual basal area if they were hollow, had clear indications of rot (open wounds, seeping cracks), significant crown dieback, or other obvious issues that would preclude their contribution toward the final basal area as described in the Woodland Establishment prescription (i.e., trees that are “vigorous, healthy, (and) long-lived”). The few eastern hemlock trees that were encountered were excluded on account of their general intolerance to fire, as well as the near certainty that they will die over the next few years due to infestation of hemlock woolly adelgid. Hemlock woolly adelgid infestation was common on hemlock trees encountered during the survey.

On April 13, 2020, a qualified individual independently re-sampled four of the previously sampled stands as a quality check on the original data set. The sampling method employed for the data quality check was similar to the original survey, except that all trees > 5” dbh were counted, thereby including trees in the intermediate canopy position in the tally. We excluded red maple (*Acer rubrum*) from the tally in our final analysis of residual basal area on account of its lack of fire tolerance and predominantly intermediate canopy position.

Results

The average residual basal area across the six sampled Woodland Establishment units was 20.5 ft²/ac (Table 1). The data quality check largely confirmed the initial survey results (Table 2). In some locations, scarlet oak (*Quercus coccinea*) appeared to be a preferred tree for retention, despite its lesser longevity and lack of fire tolerance. Excluding scarlet oak from the tally would likely bring the average basal area down further. By including trees that were excluded from the tally due to poor health or vigor, the residual basal area would only increase to 26.7 ft²/ac. Assuming an average target basal area for the Woodland Establishment prescription of 40 ft²/ac, we estimate that the Forest Service has marked and sold 13,163 more trees than what was analyzed in the project EA and approved in the Decision Notice and FONSI.⁷

The Shelterwood Preparatory Cut we sampled was marked to a final basal area of 44 ft²/ac (48 ft²/ac including damaged trees). This overharvest appears to be marginal, and further sampling is needed across this management prescription.

⁷ This calculation is based on an assumption of an average tree diameter of 14” (1 ft² of basal area), and an average target basal area for the Woodland Establishment prescription being 40 ft²/ac. If the Forest Service marked only to the minimum basal area of 30 ft²/ac for the prescription across all Woodland Establishment harvest units, this would result in an overharvest of 6,413 trees.

Table 1. Results of Greenwood harvest area sampling

Compartment- Stand	Acres	Prescription	Target BA (ft ² /ac)	Marked BA (ft ² /ac)	Plots Sampled	Status (April 6, 2020)	Trees marked in Riparian Buffer
5072-09	69	Woodland Establishment	30 to 50	15	46	Sold, expected to be harvested this year	Yes
5062-21	32	Woodland Establishment	30 to 50	20	12	Sold, not expected to be harvested this year	
5062-42	36	Shelterwood Preparatory	50 to 70	44	19	Sold, not expected to be harvested this year	
5072-44	33	Woodland Establishment	30 to 50	21	27	Sold, expected to be harvested this year	
5062-40	45	Woodland Establishment	30 to 50	25	44	Sold, expected to be harvested this year	Yes
5076-08	58	Woodland Establishment	30 to 50	23	34	Sold, expected to be harvested this year	
5076-44	19	Woodland Establishment	30 to 50	22	13 ^a	Harvest complete	

^a Survey effort was limited in unit 5076-44 on account of daylight, with only a portion (about one half) of the stand area surveyed. However, results from the second survey (data quality check) indicated a residual basal area of 19 ft²/acre (see Table 2).

Table 2. Results of data quality check

Compartment-Stand	Initial sampling effort		Quality check	
	Marked BA (ft ² /ac)	Number of plots	Marked BA (ft ² /ac)	Number of plots
5072-09	15	46	18	38
5072-44	21	27	18	27
5062-40	25	44	26	43
5076-44	22	13	19	20

Riparian buffers

We observed many trees marked for harvest within the 1.E Riparian Corridor for intermittent streams in at least four locations in two stands. The Forest Plan requires that no timber harvest occur within 50 ft. of intermittent streams except “when the purpose is to improve riparian function and values or where cable corridors are needed for adjacent Prescription Areas.”⁸ Neither of those exceptions applies to these locations. The Forest Plan does allow logging across ephemeral streams.

In stand 5062-40 we found a significant number of trees marked within the 1.E Riparian Corridor, including along stream banks, at 36.878748, -84.405045. At this location the stream is unambiguously

⁸ Land and Resource Management Plan for the Daniel Boone National Forest, April 2004 (3-11)

intermittent (See Figure 1) and not ephemeral. The stream was flowing well on April 6, 2020, with no recorded rain events during the previous 6 days.

We also observed trees marked along several flowing stream channels in three portions of stand 5072-09 on April 1. While some sections appeared to be ephemeral, several other sections do appear to be more properly characterized as intermittent streams. While a rain event did occur the previous day⁹, the flow in these channels appeared to be more substantial than what could be accounted for by the previous day's precipitation. The Forest Plan defines an intermittent stream as one that flows "10-90 percent of an average year."¹⁰ We suspect that a close examination of these locations would indicate that they flow much of the winter. The locations for these channels are 36.877610, -84.451314; 36.879058, -84.449974; and 36.879273, -84.448816.



Figure 1. Marked trees in 1.E Riparian Buffer in stand 5062-40

⁹ According to the National Weather Service, 0.67" was recorded for Somerset, KY on March 31, 2020

¹⁰ Land and Resource Management Plan for the Daniel Boone National Forest, April 2004 (A-16)