Eastern Divide Insect and Disease Project Phase II — Eastern Divide Ranger District, Jefferson National Forest
Second Summary of Fieldwork: Fall 2020

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Overview and Objectives

The United States Forest Service has published a final Environmental Assessment and a draft Decision Notice proposing to approve a vegetation management project called the Eastern Divide Insect and Disease Project Phase II, located on the Eastern Divide Ranger District of the Jefferson National Forest. The project area spans Bland, Giles, Pulaski, and Wythe counties, Virginia.

Jessica Bier conducted fieldwork for the Southern Environmental Law Center in October 2020 in the Peak Creek, Tunnel Hollow, and Caseknife working areas. These working areas comprise proposed timber harvest units with Management Prescription 9A1 – Source Water Protection Watersheds.

The primary objectives of this fieldwork were (1) to assess gypsy moth impacts and (2) describe current conditions, including presence of non-native invasive species (NNIS), and possible effects of timber harvest in the working areas.

This fieldwork follows initial fieldwork that Jessica Bier completed in 2019.

Specific Working Areas

Peak Creek Working Area
Date visited: October 21, 2020
Units visited: 1, 2, 3, 5, and 6

Overview

- Conducted walkthrough of units 1, 2, 3, 5, and 6. All units are mixed oak with scattered white and yellow pine.

- Units 1 and 2 are part of a prescribed burn unit. Unit 1 contains numerous white oaks of various ages and sizes. Unit 2 has had a mechanical treatment (stumps present), widespread overstory

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Relevant Work Experience: Forestry Technician, USFS Clinch RD George Washington and Jefferson NF, 2006-2016; Biological Technician, USFS Clinch RD George Washington and Jefferson NF, 2003-2006; Biological Technician, NPS Great Smoky Mountains NP, 1999-2003; Independent Contractor, Virginia Slow the Spread, 1993-1998 (placed gypsy moth pheromone traps on 500 meter and 1 kilometer grids in 3 counties, checked, and reported catch totals).

mortality from fire, and is very open with lower basal area. There is oak regeneration in both units, which is extensive in Unit 2.

- Unit 3 contains lower-quality timber, mountain laurel cover, and areas of yellow pine mortality (some still standing, some down).

- Units 5 and 6 have good-quality timber with scattered large mature white pine in Unit 5. The upper portion of Unit 6 is steep with very shallow soils. White pine seedlings and saplings are prevalent in the lower midstory and may be "released" after harvest. No oak regeneration observed.

- There are younger stands (approximately 25–30 years old) along FSR 6733 that are dominated by tulip poplar and white pine.

Gypsy Moth

- No signs of gypsy moth presence this season (*i.e.* no obvious signs of herbivory/defoliation this season). No egg masses seen.

- Some isolated dieback of oak crowns, mostly minor or moderate, that may be attributed to past defoliation.

NNIS

- NNIS observed along roads in this working area. Autumn olive, wineberry, stiltgrass, lespedeza, multiflora rose, and coltsfoot are present along Peak Creek Road. Stiltgrass is present and abundant on and along most of FSR 6733 and spur roads.

- Stiltgrass is well established inside Unit 1. The western portion of Unit 1 contains has an area that is more flat and moist than surrounding area, where stiltgrass has invaded several hundred feet off of FSR 6733. Stiltgrass is also well established in Unit 2 near the eastern boundary. Wineberry observed in Unit 2.

- The northeast boundary lines of Units 3, 4, and 5 are adjacent to a wide transmission line right of way, which is a probable future source of NNIS. These units are mature/undisturbed and currently free of NNIS. Widespread ground disturbance is likely to introduce NNIS.

Streams and Riparian Impacts

- FSR 6733 includes a ford crossing of Peak Creek. FSR 6733 also includes approximately 4 crossings of intermittent/small perennial streams with culverts up to a point between Units 4 and 5. Observed multiple culverts inlets partially blocked and evidence that water channeled across roadbed during periods of high flow.

- Observed a perennial stream between Units 5 and 6 that may be impacted, depending on how Unit 6 is accessed. Unit 6 contains a spring, and water appears to be close to the surface under rocky terrain upslope from the spring; observed with hazel at the site.

- West of the affected units, Peak Creek Road has drainage issues and needs maintenance due to, for example, channeling in the road bed. Peak Creek Road has the potential to be a significant source of sediment to Peak Creek.

Japanese stiltgrass on FSR 6733 within Peak Creek working area

Japanese stiltgrass in Peak Creek Unit 1

Lespedeza at FSR 6733 gate in Peak Creek working area

Wineberry along FSR 6733 in Peak Creek working area

Spotted knapweed along FSR 6733 in Peak Creek working area

Wineberry in Peak Creek Unit 2

FSR 6733 ford crossing of Peak Creek

Channeling from drainage issues on FSR 607 in Peak Creek working area

Current conditions in Peak Creek Unit 2

Current conditions in Peak Creek Unit 2

Current conditions in Peak Creek Unit 2

Current conditions in Peak Creek Unit 2

Regenerating stand along FSR 6733 in Peak Creek working area, showing regeneration in poplar, birch, red maple, and white pine

Tunnel Hollow Working Area
Date visited: October 22, 2020
Units visited: 1–5

Overview

- Conducted walkthrough of Units 1–5. All units are mixed oak, with chestnut oak being the most common species. There are younger stands of white pine and oak, which appear to be approximately 30 years old, along FSR 6851 and along ridge leading to Unit 3.

- Unit 1 contains chestnut oak and scarlet oak of smaller diameter, approximately 10-12".

- Unit 2 primarily comprises smaller diameter chestnut oak and scarlet oak, with lots of multistemmed trunks. The southwest portion of Unit 2 contains some large yellow pine, as well as white pine between 10-16" diameter south of an unnamed road. Observed more maple; less poplar; and larger, better quality timber (chiefly white oak) in hollow.

- Unit 3 contains very little sawtimber. Instead, contains 6-10" chestnut oak, scarlet oak, and sourwood; a historic yellow pine component, with lots of dead and downed trees showing advanced decay; and mountain laurel.

- Unit 4 contains higher quality timber, primarily larger chestnut oak

- Unit 5 contains higher quality timber with more variety (*i.e.* chestnut oak, black oak, scarlet oak, and white oak). Observed some very large northern red oak and several large poplar in an eastern concavity; presence of maidenhair fern on site indicates higher site index.

Gypsy Moth

- No signs of gypsy moth presence this season. No egg masses or significant herbivory, besides leafroller holes, in freshly fallen oak leaves. Observed some scattered minor to moderate crown dieback, which was also present last year. No obvious downward trajectory in terms of vigor in surrounding area.

NNIS

- Stiltgrass and Japanese barberry established along FSR 610 and in unnamed road in Unit 2.

- Stiltgrass established at FSR 6851 gate. Observed one small patch of stiltgrass on FSR 6851 approximately 1/4 mile in, but no NNIS observed after that point. Stiltgrass spreading into Unit 5 from FSR 610 in slight hollow.

- Observed clump of Ailanthus on private property on other side of FSR 610, adjacent to Unit 2.

- Streams and Riparian Impacts

- Identified ephemeral stream in hollow of Unit 2.

Other

- FSR 6851 shows no signs of having been used or maintained for some time.

- Unnamed road in working area is very impacted by trash and has been used as household dump. After a relative flat, the road is steep and embedded down to bedrock in some places.

- Observed 5–6 pits and/or historical excavations in Unit 2. These pits are approximately 3’ deep and 10–25’ long.

Japanese barberry in Tunnel Hollow Unit 5

Japanese stiltgrass and barberry at top of Tunnel Hollow Unit 5

Japanese stiltgrass on shoulder of FSR 610 in Tunnel Hollow Unit 4

Ailanthus in Tunnel Hollow Unit 4

Japanese stiltgrass on access road to Tunnel Hollow Unit 2

Ailanthus on private property across FSR 610 from Tunnel Hollow Unit 2

Current conditions in Tunnel Hollow Unit 3

Dead and downed yellow pine in Tunnel Hollow Unit 3

Caseknife Working Area
Date visited: October 22, 2020
Units visited: 2, 3, 5, 6, and 7

Overview

- Conducted walkthrough of Units 2, 3, 5, 6, and 7.
- Unit 2 contains mixed oak of two age classes, with some very large old oaks along ridgetop.
- Unit 3 contains areas of higher quality timber (*i.e.* white and black oak of 20"+) and areas of small diameter (pulp) mixed oak.
- Unit 5 is dominated by chestnut oak with pockets of white oak, containing lots of smaller diameter trees (pulp).
- Unit 6 contains mixed oak with nice form, variety of age/size classes, lots of mid-size healthy white oaks, oak seedlings present in some areas.
- Unit 7 includes mixed oak, similar to Unit 6.

Gypsy Moth

- No signs of gypsy moth presence this season. Observed some scattered minor crown dieback, which was also present last year. No downward trajectory in vigor.

NNIS

- Observed bush honeysuckle, autumn olive, Japanese barberry, Oriental bittersweet, and stiltgrass established on FSR 610.

- Access road crosses a transmission line corridor multiple times. There are NNIS established in the corridor that have not yet spread along the access road (*i.e.* broad-winged thistle and perhaps spotted knapweed). On access road, observed many patches of wineberry, several patches of stiltgrass, one established patch of oriental bittersweet making its way into forest, and a few Ailanthus and Paulownia saplings, which appear to be sprouts from larger dead saplings due to ineffective herbicide control.

- Observed evidence of an Ailanthus seed source nearby. Two Ailanthus seedlings were observed in a brief walkthrough of recently cut white pine from thinning at the bottom of the access road. Also observed a well-interior patch of stiltgrass.

Streams and Riparian Impacts

- Access road does not cross any riparian areas, but may cross ephemeral stream on route to Unit 7. Observed ephemeral inside Unit 7.

Ailanthus along Caseknife working area access road in transmission line corridor

Ailanthus seedlings in white pine thinning unit within Caseknife working area

Japanese stiltgrass in white pine thinning unit within Caseknife working area

Asian bush honeysuckle at entrance to Caseknife working area access road

Japanese stiltgrass along Caseknife working area access road (1/2)

Japanese stiltgrass along Caseknife working area access road (2/2)

Lespedeza along Caseknife working area access road

Oriental bittersweet, Ailanthus, and Japanese stiltgrass along Caseknife working area access road

Paulownia along Caseknife working area access road (1/2)

Paulownia along Caseknife working area access road (2/2)

Spotted knapweed along Caseknife working area access road in transmission line corridor

Wineberry along Caseknife working area access road

Other Photographs

Top and bottom: stands along FSR 6031 in Bromley Hollow working area, showing regeneration and dominance by non-oak species

Ailanthus along FSR 6871 in Gatewood Reservoir working area

Ailanthus, Japanese stiltgrass, and oriental bittersweet along FSR 6871 in Gatewood Reservoir working area

Japanese stiltgrass infestation post-harvest in Lime Kiln working area of Lower Cowpasture Restoration and Management Project, James River and Warm Springs Ranger Districts