

GREEN RIDGE STATE FOREST

ANNUAL WORK PLAN

FISCAL YEAR 2016

Prepared:	_____	_____
	(Forest Manager)	Date
Reviewed:	_____	_____
	(Regional Manager)	Date
Reviewed:	_____	_____
	(Land Acquisition & Planning)	Date
Approved:	_____	_____
	(Environmental Specialist)	Date

Forest Overview

Green Ridge State Forest is located in eastern Allegany County. It is the only State Forest located in the Ridge and Valley province. Green Ridge receives the least amount of rainfall in Maryland, averaging 36 inches annually. Consisting of 47,560 acres, Green Ridge is the largest contiguous block of forestland in Maryland within the Chesapeake Bay watershed. It accounts for about 30% of the State Forest System and approximately 12% of all DNR land in Maryland.

The general geographic boundaries of Green Ridge are Town Creek to the west and Sideling Hill Creek to the east. The northern boundary extends to the Mason-Dixon Line. The southern boundary parallels the Potomac River.

Elevations range from 500 feet above sea level on the Potomac River to 2,000 feet on Town Hill.

Three Major highways traverse the forest in an east to west direction: Route 144, Maryland Route 51, and Interstate 68.

In the early 1800's, Richard Caton and William Carroll in partnership owned much of the land that is Green Ridge State Forest today. Richard Caton was the son-in-law to Charles Carroll of Carrollton, a signer of the Declaration of Independence. William Carroll was the grandson of Daniel Carroll of Rock Creek, a framer of the United States Constitution. The land was originally patented from vacant lands during the 1820-1840 period for inclusion into various timber and mining interests, primarily the Town Hill Mining, Manufacturing, and Timber Company. This business venture was financed by the estate of Charles Carroll of Carrollton. The crumbling stone structure known as the Carroll Chimney, part of the steam-powered sawmill built in 1836, is the only known surviving structure of that period.

In the 1880-1912 era, most of the remaining virgin forest was cut and a period of neglect resulted in numerous wildfires. During the early 1900's, the Mertens family of Cumberland attempted to convert the forest into apple orchards and promoted it as "The Largest Apple Orchard in the Universe."

The orchard was subdivided into 10-acre parcels and sold to individuals as investment properties. Five acres of each property parcel was cleared, burned, and planted into apple trees. The remaining five acres had the best trees cut and the poorer trees were left standing. The orchard company went into bankruptcy in 1918. The interests of the corporation were acquired by the State Department of Forestry in 1931.

The first forest management activities at Green Ridge were performed by the Civilian Conservation Corps (CCC) in the 1930's. Their main focus was fire control. Other work consisted of building roads, trails, recreation enhancements, and the management of existing forest for its future timber and wildlife potential.

During World War II, the CCC camp at Fifteen Mile Creek housed German prisoners of war who were required to cut pulpwood in the forest. As the forest grew it became popular with outdoor enthusiasts, especially hunters. It also contributed more and more to the local wood

products industry.

Today, Green Ridge is a diverse forest consisting primarily of a 110 year old even-aged mixed oak forest, mixed with a wide variety of age classes resulting from various silviculture activities beginning in the late 1960's.

The oak consists of a variety of species, including black oak, white oak, red oak, scarlet oak, and chestnut oak. Five native pines grow at Green Ridge: white pine, Virginia pine, pitch pine, table-mountain pine, and shortleaf pine. Flowering dogwood, redbud, and serviceberry are common understory trees.

Upland animals found in abundant numbers on the forest are white-tailed deer, fox and gray squirrel, raccoons, red fox, and cottontail rabbits. Other animals include muskrat, beaver, mink, chipmunks, mice, flying squirrels, weasels, skunks, opossums, bobcat, and black bear.

Wild turkey, ruffed grouse, and woodcock are popular game birds on Green Ridge. Other birds include the pileated woodpecker, red-tailed hawk, and the barred owl. A wide variety of neo-tropical migrants and songbirds also occur on the forest.

Wildflowers such as mayapple, coltsfoot, spring beauty, trillium, bloodroot, and spiderwort flourish at Green Ridge.

Green Ridge State Forest

Fiscal Year 2016

AWP Summary

This work plan includes silviculture proposals for a total of 277 managed acres within the 24,414 acre general management zone in which area based sustainable forest management is practiced. Of these managed acres, harvests are proposed. There will be some variation between managed acres and actual harvest acres to provide for various buffers and/or retention areas. Under area based management, the annual target is 200-300 managed acres.

The silviculture proposals within this plan include 183 acres of variable retention harvests for an estimated 575mbf of hardwood.

In addition to the above silviculture projects, other maintenance, recreation, ecosystem restoration, watershed improvement, monitoring, and special projects are included in this plan. Specific projects are described within the following pages.

Maintenance Projects

General Maintenance will continue such as maintaining 100 primitive campsites, hazardous tree removal, pole gate installations as needed, mowing and maintenance of handicap access hunting areas, and general maintenance of headquarters complex, shooting range, and outbuildings.

1. Upgrade all designated primitive campsites to include posting of state forest camping regulations.
2. Recover 3 miles of boundary & re-blaze 20 miles of existing state forest boundary.
3. Continue to maintain 100 primitive camp sites.
4. Continue to maintain public shooting range.
5. Continue to maintain viewsheds on 5 overlooks.
6. Continue to maintain 4 handicap hunter access roads.

Recreation Projects

- 1.** Maintain approximately 60 miles of trails including 50 miles of hiking trails and 12 miles of mountain bike trail.
- 2.** Continue to enhance upland game hunting opportunities by enhancing early successional wildlife habitat at Kirk Orchard, Bull Ring Ranch, Anthony's Ridge, and Kasecamp Bottomlands.
- 3.** Provide 2-4 guided interpretive tours on the forest to share management principles and practices with the public.

Project Title:

Green Ridge Trail Maintenance

Trail Uses

Check all the apply

Diverse Motorized Recreational Non-motorized Recreational Transportation Trail

Project Types

Check only one category

Maintenance and restoration Development and rehabilitation of facilities
 Purchase and lease of equipment Construction Acquisition of easements
 Assessment Interpretive/educational programs

Project Cost:

\$30,000	\$6000.00	\$36,000
RTP Funding Request	Matching Funds	Total Project Cost

Project Sponsor (Applicant)

Please provide contact information for Project Sponsor Entity and Project Manager.

Project Sponsor Entity	MD Department of Natural Resources, Forest Service
Project Manager	Mark Beals
Title	Forest Manager
Organization	DNR-Forest Service
Address 1	28700 Headquarters Drive NE, Flintstone, MD 21530
Address 2	
Telephone	301-478-3124
Cell Phone	
Fax	301-478-2564
E-mail	mbeals@dnr.state.md.us

All questions related to application content, contact tmaxwell@sha.state.md.us

1. Project Location

Green Ridge State Forest, Allegany Co. MD

Describe the limits of the project, including City and County; include a detailed location map

2. Project Abstract *Complete the following sentences...then add additional information*

This project will.....

Support contractual staff for maintenance and operation of the 60+ miles of Recreational Trails at Green Ridge State Forest. The Green Ridge trail system is designated for multiple recreational activities, including hiking, mountain biking, and hunting access. Green Ridge is the most heavily visited recreational destination of the western Maryland State Forests for people from Baltimore and Washington, D.C., area with approximately 100,000 visitors annually. Many of these outdoor enthusiasts visit Green Ridge to enjoy its hiking trails, mountain bike trails, motorized forest roads, and overlooks. All sites are accessible and impacted by motorized vehicles and people. This project benefits the recreational trail user by keeping the existing public recreation resources on the forest functional, safe, sustainable, clean and beautiful.

Benefits the trail user by.....

This project requires no additional planning or design. All environmentally sensitive area are identified and accounted for? This project includes maintenance of the Maryland section of the Great Eastern Trail. The project helps sustain the Green Ridge Trail System, A National Trail. This project enhances tourism/economic development opportunities, within Allegany County This project is located adjacent to the National Road scenic Byway and the C&D Canal National Historic Park. It is also located within the Appalachian Forest Heritage Area.

Concisely describe all the major elements of your proposed project. Points that should be covered include:

- *How much planning and design has been completed for the Project?*
- *Is the Project within proximity to any environmentally sensitive area?*
- *Is the project a missing link or potentially part of the State Transportation Trail network (go to <http://www.mdot.maryland.gov/Planning/Trails/trails.html> for more information)?*
- *Does the project provide access to a regional land or water trail system?*
- *Does the project help sustain a trail system?*
Does the project enhance tourism/economic development opportunities, particularly for towns?
- *Is the Project along a byway, within a heritage area, adjacent to a Chesapeake Gateway, or associated with any other tourism related area or activity?*

3. Project Summary-The project will include continuous maintenance of approximately 60 miles of the Green Ridge trail system to include trail clearing, surface reinforcement, blazing & signage, and interpretive wayside exhibits. Hiking Trails, Campsites, Mountain Bike Trails, and Overlooks are accessed and enjoyed by motorists. Green Ridge has received a national award from the Coalition for Recreational Trails. The National Park Service has designated Green Ridge Hiking Trails as a National Recreation Trail. Furthermore, Green Ridge is now the location for the Maryland section of the new Great Eastern Trail, which is expected to rival the

popularity of the Appalachian Trail. The project will enhance natural heritage and ecotourism opportunities within the economically depressed Appalachia Maryland Region. The project area is considered a gateway to the Appalachian Forest Heritage Area (AFHA) which is a fifteen county area including Allegany County in Maryland. Additionally, the project area is adjacent to the National Road designated byway and the C&O Canal National Park.

Task No. & Name	Task Description
1- Trail Recon	Recon all trails to remove fallen trees and debris that fell over winter and identify trail sections in need of reinforcement.
2- Blazing	Repaint trail blazes on sections that paint is becoming weak.
3- Trail Restoration	Repair trail surface in sections identified in need of repair and water diversions.
4- Signs & Waysides	Maintain and update trail signs, bulletin boards, and interpretive infrastructure as needed.

List by TASK and completely describe all the major elements of your proposed project in a concise manner. Although the program does not cover the cost of planning, design, engineering and permitting, please include these items in your summary if not completed.

4. Project Property Owner

This project will be completed on state land managed by the MD Department of Natural Resources – Forest Service.

The Project shall be constructed on property owned by and/or on permanent easements held by the Project Sponsor. If a non-profit is partnering with a park manager, please include an email or letter by park manager explaining that there is or will be an agreement.

5. Project length

Maintenance activities on Hiking Trail (52+miles); Mountain Bike Trail (12 miles), and six remote scenic overlooks accessed by motorized trails (unimproved roads). This project will last for 12 months and coincide with state fiscal year.

Please include linear feet of trail, width of trail, whether new or reconstructed and proposed surface material of trail.

6. Prior Projects

Green Ridge has been awarded National Recreational Trail Grants to maintain the resources described in this proposal for at least the past ten years. The level of maintenance of these recreation resources would not be sustainable without the grant. Recent seasonal trail labor grants that have been approved and completed include: RT RT09-23, RT10-25, RT11-23 and RT12-22. RT13-34 is the seasonal labor awarded to Green Ridge for State FY14, and will be completed by July 1, 2014. In addition RT14 labor grant will maintain this program through June 2015.

Describe the status of any previously funded National Recreational Trail funded projects.

- *Include the year that it was funded or RT#.*
- *If there are delays with prior projects, please explain why.*
- *Describe any relationship between this project and previously funded National Recreational Trail Program projects.*
- *Describe how the proposed work relates to any multi-year work or comprehensive plans that may have been developed.*

7. Project Work Plan

Task No. & Name	Start Date	Duration	Responsible Party	Justification
NEPA Approval	Nov 2014	7 months	Kenneth Jolly	Environmental review and approval
PCA Codes Assigned	May 2015	1 month	Shenika Allen	Administrative codes for tracking Grant expenditures
Hire contractual staff	July 2015	1 month	Mark Beals	Complete seasonal hiring process
Purchase materials	July 2015	2 months	Mark Beals	Purchase materials needed for trail maintenance
Implement Trail work	July 2015	12 months	Mark Beals	Work is continuous throughout contract
Grant close out	June 2016	1 month	Mark Beals Shenika Allen	Close out documentation completed and submitted to HQ

This table is provided as a guide to developing a realistic project schedule for implementing the TASKS described in item 1. Project Summary. Although the program does not cover the cost of planning, design, engineering and permitting, please include these items in your schedule if not completed.

8. Project Budget

Task No. & Name	Requested Funds 80%	Sponsor Match 20%	Total Task Cost 100%
Seasonal Labor-Contractual Trail Maintenance 1.5 positions @ \$15.00/hour	\$26,000	\$5,200	\$31,200
Materials & Supplies (tree marking paint, pressure treated lumber, specialized hand tools, etc.)	\$4,000	\$800	\$4,800
Total Cost	\$30,000	\$6,000	\$36,000

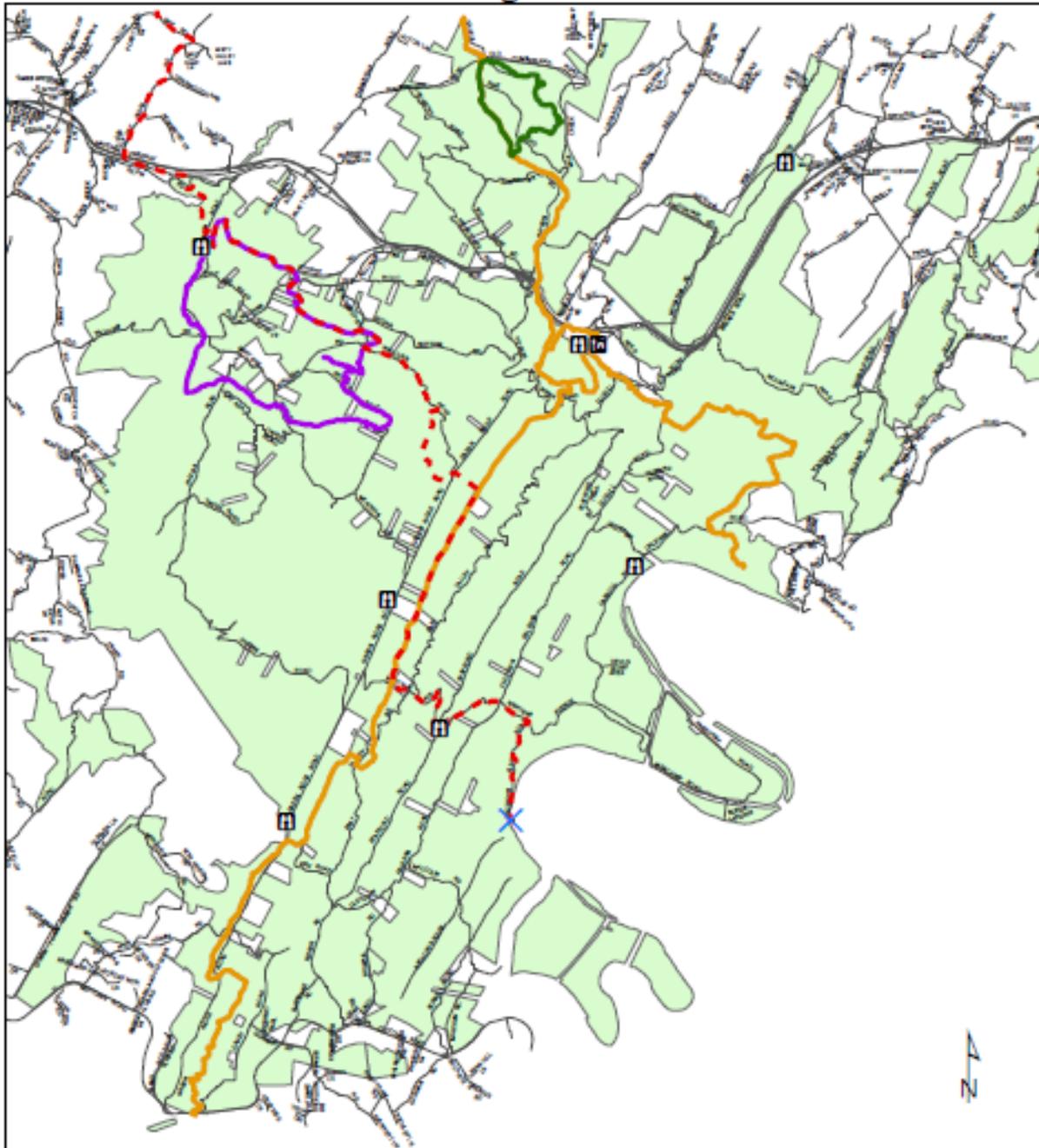
Funds requested for projects cannot exceed \$40,000 for trail construction and \$30,000 for non-construction. (For the FY14 solicitation, we will consider lifting the \$40K cap for construction projects that score exceedingly high with our criteria)

9. Matching Funds (20%)

Task	Source	Type (Cash or In-kind)	Description Including Hours and Rate	Amount
MD Forest Service Staff Labor	GRSF operational budget	In-kind	Project implementation/s taff labor – 400 hours @ \$15/hour	\$6,000
Total				\$6,000

10. Location Map

Green Ridge State Forest



1:100,000

0 0.75 1.5 3 Miles

- | | | |
|-------------------------|-----------------|-------------------|
| Outdoor Club Rd Project | Mtn. Bike Trail | GRSF Headquarters |
| Great Eastern Trail | Hiking Trails | Overlook |
| 4-Mile Loop | Roads | GRSF Boundary |

11. **Submission-It** is preferred that applications be submitted electronically to tmaxwell@sha.state.md.us by **2 p.m. on July 1st, 2014**. Because our email server rejects most attachments larger than 6 MB, please use an FTP site or file sharing service to transmit the application and any large attachments. Confirmation will be sent when the application is received. Please contact us at the email above with any questions about submissions or to discuss potential projects. In early August, the Recreational Trail Advisory Committee will meet to review projects. Applicants will be notified concerning awards during the Fall of 2014.

Options for Submission include:

Internet/E-mail (preferred)

- Complete the form on your computer and save the file on your computer.
- Email the file as an attachment to: Terry Maxwell, tmaxwell@sha.state.md.us
- Use an FTP site or file sharing service to transmit the application and any large attachments.

U.S. Mail

- Mail printed form to:

Terry Maxwell
Maryland Scenic Byways / Recreational Trails Program
State Highway Administration
707 N Calvert Street, Mailstop C-303
Baltimore, MD 21202

SPECIAL PROJECTS

A. Forest Regeneration Inventory:

A Critical part of achieving long term sustainable forestry monitoring and measuring the outcomes or responses to the management. Since the Stand delineation and inventory project will be complete by FY2016, these technician resources will be available to focus on inventory of the regeneration and response to management. This work will include collecting regeneration inventory data under the Silvah protocol and all stands will be sampled 3-5 years post regeneration harvest.

B. Continue to Network with Partners:

GRSF is committed to being a “teaching forest” and strives to reconnect people to the land through providing forest management tours for the general public, hosting training sessions and forest resource-based events, service learning projects, and serving as natural laboratory for schools and universities.

1. Maintain working relationship with Garrett College – Forestry classes use forest as training laboratory and implement practices directed by Forest Manager.
2. Maintain working relationship with Allegany College of Maryland-Forestry Program will use GRSF for forestry lab and site for their Summer Harvesting Course. GRSF will provide a site where timber can be extracted as part of harvesting course in return for in-kind services.
3. Continue participation with Appalachian Forest Heritage Area (AFHA) Forest Manager serves as Executive Board member.
4. Continue partnership with the Ridge and Valley Stream Keepers (RVSK). GRSF provides meeting room and shares information in return RVSK monitor water quality in the streams within GRSF.
5. Continue partnership with Wildlife Institute to work on Appalachian Mountain Woodcock Initiative to enhance American Woodcock habitat on the forest.
6. Continue to support and collaborate with Volunteer Team Incorporated to facilitate the spirit of service on the forest and reconnect people to the land.
7. Continue to participate in I&E Programs including Arbor Day, Project Learning Tree, Becoming an Outdoors Woman, Natural Resources Careers Camp, etc..

Silviculture Proposal Narrative

Proposal Name: Double Pine Rd

Managed Area: 81 Acres

Harvest Area: 44 Acres

Resource Impact Assessment

Forest Community Types and Development: This is a mixed oak stand within the general forest area. According to the GRSF specified 100 year rotation, this stand is over-mature at 113 years. Furthermore it is an overstocked stand. These facts constitute the selection of this stand for regeneration silviculture treatment.

Rare, Threatened and Endangered (RTE) species: There are no known RTE species currently on or impacted by this site.

Habitats and Species of Management Concern: There are no known habitats or species of management concern on this site.

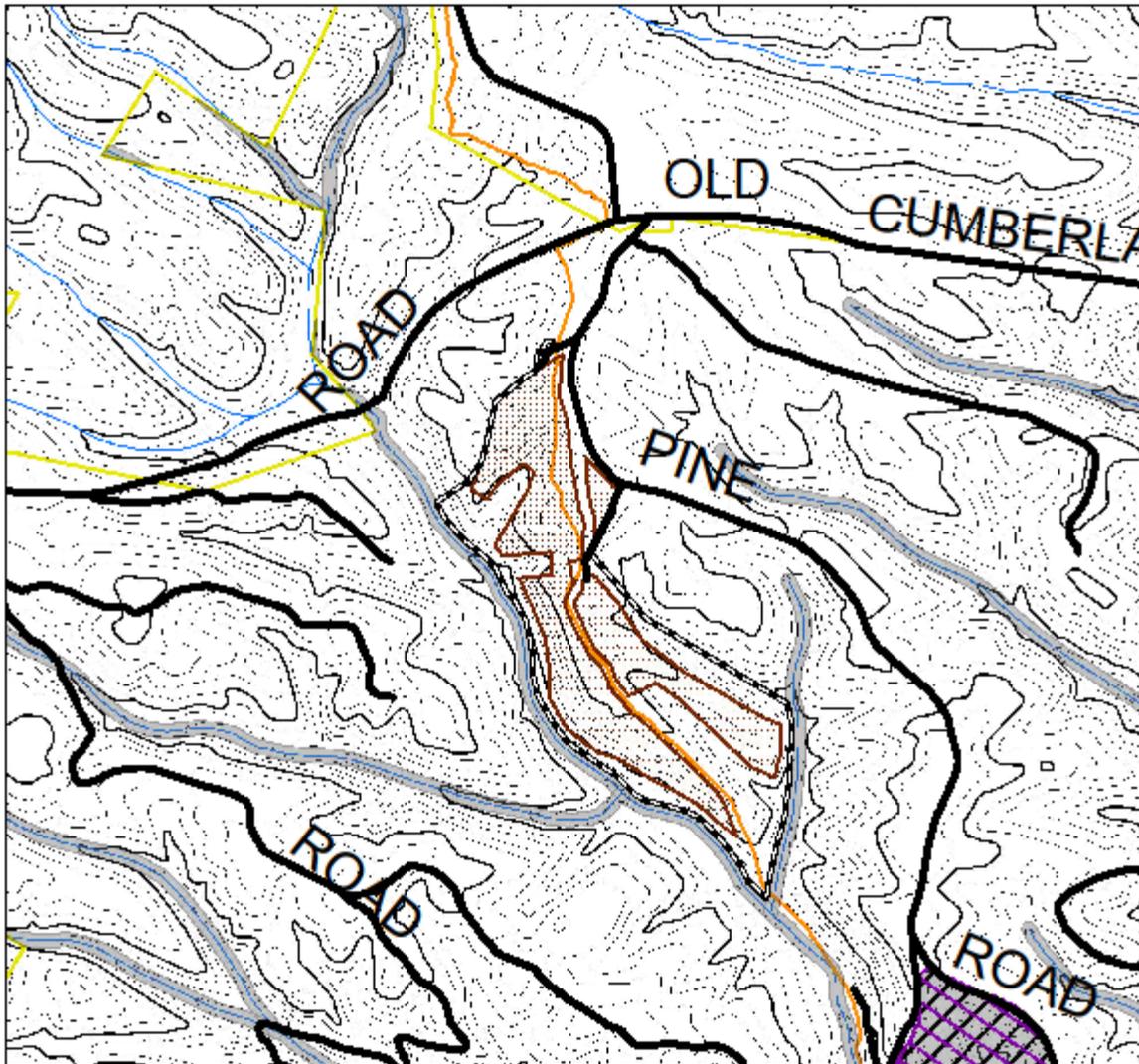
Water Resources: Water resources will be protected on this site. Access to the site is an existing road. All streams are already identified as HC VF and will be protected by a 50-foot wide no-cut forest buffer.

Soil Resources: Soil resources on this site will be protected under the *Maryland Department of Natural Resources-Forest Service: Rutting Guidelines for Forest Operations on Maryland State Forests*.

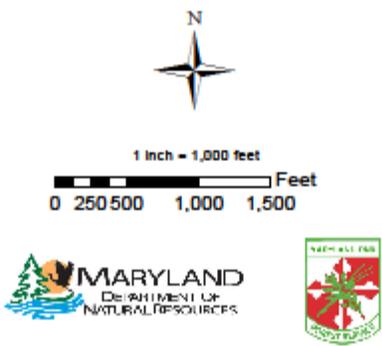
Historic Conditions: This stand like most of GRSF likely developed on its own over the past 113 years into what it is today despite the fact that it was commercially clearcut, and likely the ground was converted to fruit orchard in years prior to 113 years ago. Historically this site was likely dominated by American chestnut. However, chestnut blight has eliminated American chestnut from having a dominant position in the landscape.

Silvicultural Prescription: The recommendation for this stand is to regenerate the stand under the principles of variable retention. The objective is to achieve regeneration of a mixed oak stand while maintaining some attributes of the original stand for wildlife habitat, natural heritage, and aesthetics values.

FY-2016 Proposed Harvest Double Pine Rd



Compartment - 2B
 Managed Area - 81 Acres
 Harvest Area - 44 Acres
 Age - 113
 Type - Mixed Oak
 TPA - 260
 AGS - 62 sq. ft.
 Stocking - 96%+
 Growth Rate - <2%
 Soil Type - Weikert
 Site Index - 47
 Composition - WO-46%
 CO-14%



Legend

- Managed Area
- Harvest Area
- Wildlands
- OGEA
- ESA
- HCVF
- GRSF Boundary
- Hiking Trail

Silviculture Proposal Narrative

Proposal Name: East Valley Rd

Managed Area: 49 Acres

Harvest Area: 38 Acres

Resource Impact Assessment

Forest Community Types and Development: This is a mixed oak stand within the general forest area. According to the GRSF specified 100 year rotation, this stand is over-mature at 125 years. Furthermore it is an overstocked stand. These facts constitute the selection of this stand for regeneration silviculture treatment.

Rare, Threatened and Endangered (RTE) species: There are no known RTE species currently on or impacted by this site.

Habitats and Species of Management Concern: There are no known habitats or species of management concern on this site.

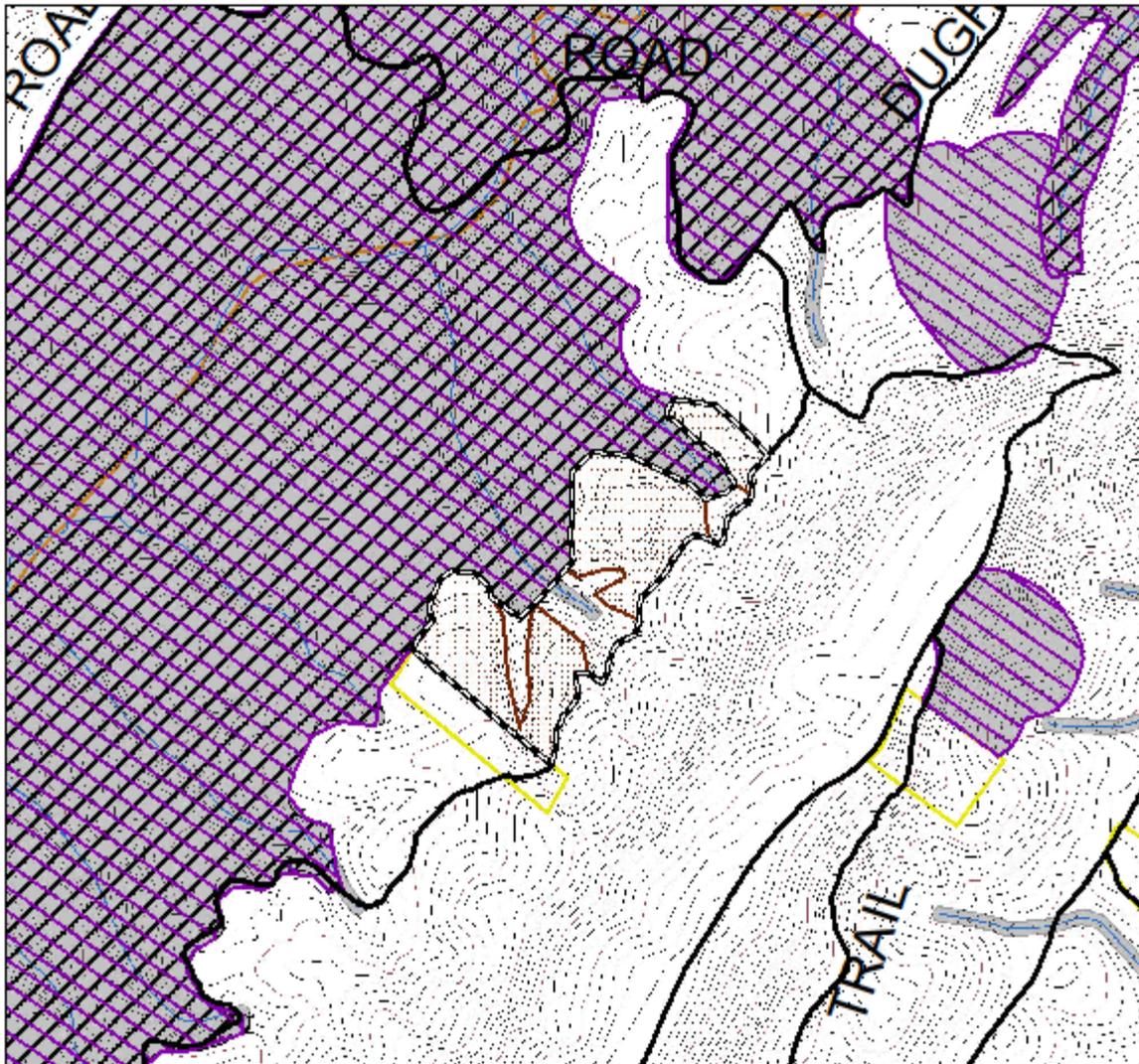
Water Resources: Water resources will be protected on this site. Access to the site is an existing road. All streams are already identified as HC VF and will be protected by a 50-foot wide no-cut forest buffer.

Soil Resources: Soil resources on this site will be protected under the *Maryland Department of Natural Resources-Forest Service: Rutting Guidelines for Forest Operations on Maryland State Forests*.

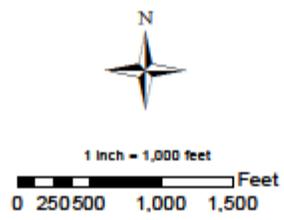
Historic Conditions: This stand like most of GRSF likely developed on its own over the past 125 years into what it is today despite the fact that it was commercially clearcut, and likely the ground was converted to fruit orchard in years prior. Historically this site was likely dominated by American chestnut. However, chestnut blight has eliminated American chestnut from having a dominant position in the landscape.

Silvicultural Prescription: The recommendation for this stand is to regenerate the stand under the principles of variable retention. The objective is to achieve regeneration of a mixed oak stand while maintaining some attributes of the original stand for wildlife habitat, natural heritage, and aesthetics values.

FY-2016 Proposed Harvest East Valley Rd



Compartment - 54
 Managed Area - 49 Acres
 Harvest Area - 38 Acres
 Age - 125
 Type - Mixed Oak
 TPA - 236
 AGS - 124 sq. ft.
 Stocking - 126%+
 Growth Rate - <2%
 Soil Type - Dekalb/Klinesville
 Site Index - 55
 Composition - SO- 58%
 WO- 47%



Legend

-  Managed Area
-  Harvest Area
-  Wildlands
-  OGEMA
-  ESA
-  HCVF
-  GRSF Boundary

Silviculture Proposal Narrative

Proposal Name: Mertens Avenue

Managed Area: 73 Acres

Harvest Area: 46 Acres

Resource Impact Assessment

Forest Community Types and Development: This is a mixed oak stand within the general forest area. According to the GRSF specified 100 year rotation, this stand is over-mature at 122 years. Furthermore it is an overstocked stand. These facts constitute the selection of this stand for regeneration silviculture treatment.

Rare, Threatened and Endangered (RTE) species: There are no known RTE species currently on or impacted by this site.

Habitats and Species of Management Concern: There are no known habitats or species of management concern on this site.

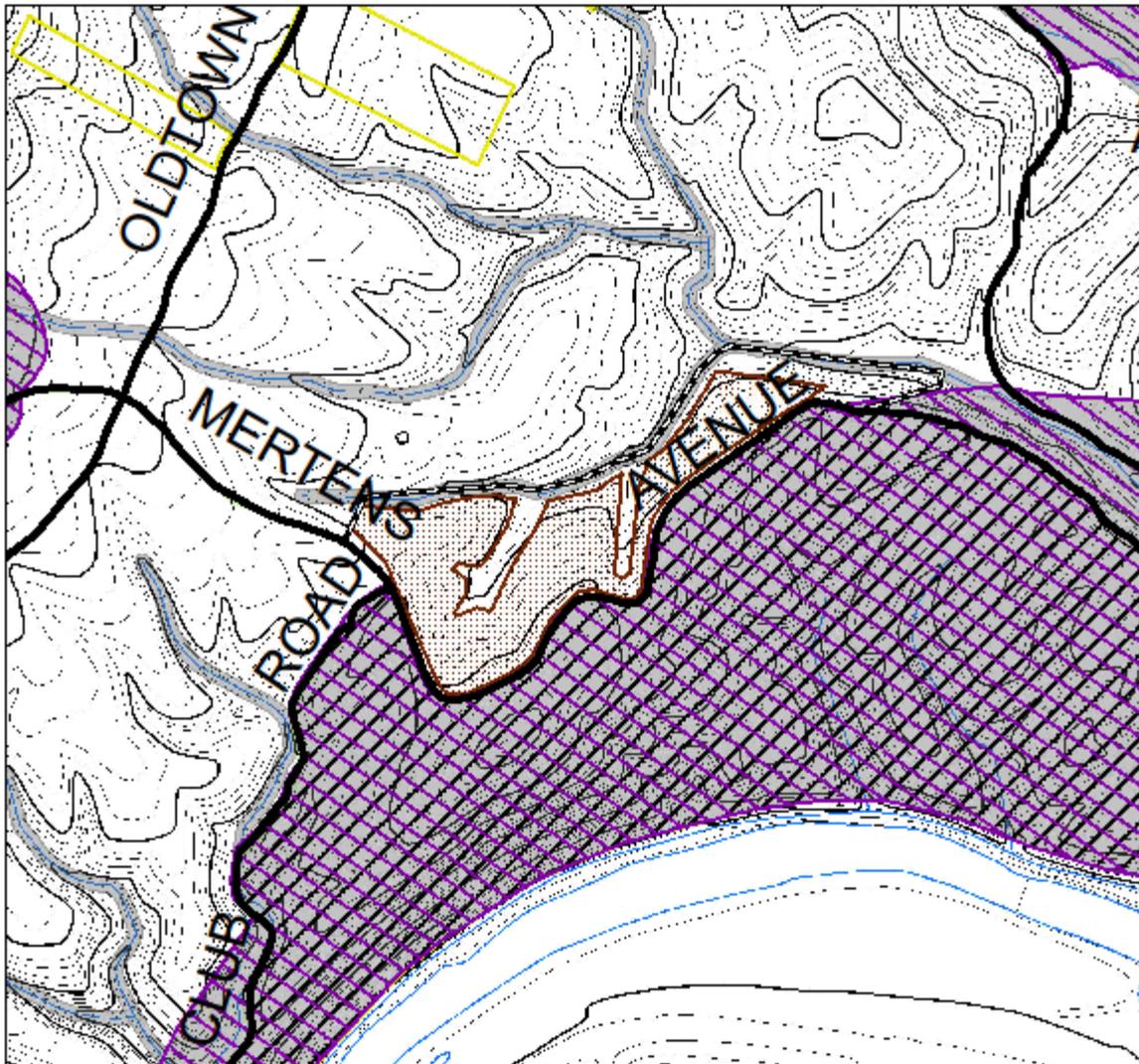
Water Resources: Water resources will be protected on this site. Access to the site is an existing road. All streams are already identified as HCVF and will be protected by a 50-foot wide no-cut forest buffer.

Soil Resources: Soil resources on this site will be protected under the *Maryland Department of Natural Resources-Forest Service: Rutting Guidelines for Forest Operations on Maryland State Forests*.

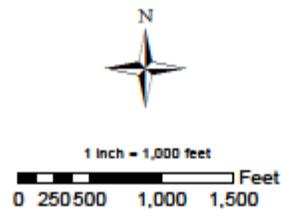
Historic Conditions: This stand like most of GRSF likely developed on its own over the past 122 years into what it is today despite the fact that it was commercially clearcut, and likely the ground was converted to fruit orchard in years prior to 122 years ago. Historically this site was likely dominated by American chestnut. However, chestnut blight has eliminated American chestnut from having a dominant position in the landscape.

Silvicultural Prescription: The recommendation for this stand is to regenerate the stand under the principles of variable retention. The objective is to achieve regeneration of a mixed oak stand while maintaining some attributes of the original stand for wildlife habitat, natural heritage, and aesthetics values.

FY-2016 Proposed Harvest Mertens Ave



Compartment - 58
 Managed Area - 73 Acres
 Harvest Area - 46 Acres
 Age - 122
 Type - Mixed Oak
 TPA - 255
 AGS - 80 sq. ft.
 Stocking - 103%+
 Growth Rate - <2%
 Soil Type - Klinessville/Weikert
 Site Index - 58
 Composition - CO- 38%
 WO- 15%



Legend

- Managed Area
- Harvest Area
- Wildlands
- OGEMA
- ESA
- HCVF
- GRSF Boundary

Silviculture Proposal Narrative

Proposal Name: Old Williams Rd

Managed Area: 37 Acres

Harvest Area: 26 Acres

Resource Impact Assessment

Forest Community Types and Development: This is a mixed oak stand within the general forest area. According to the GRSF specified 100 year rotation, this stand is over-mature at 107 years. Furthermore it is an overstocked stand. These facts constitute the selection of this stand for regeneration silviculture treatment.

Rare, Threatened and Endangered (RTE) species: There are no known RTE species currently on or impacted by this site.

Habitats and Species of Management Concern: There are no known habitats or species of management concern on this site.

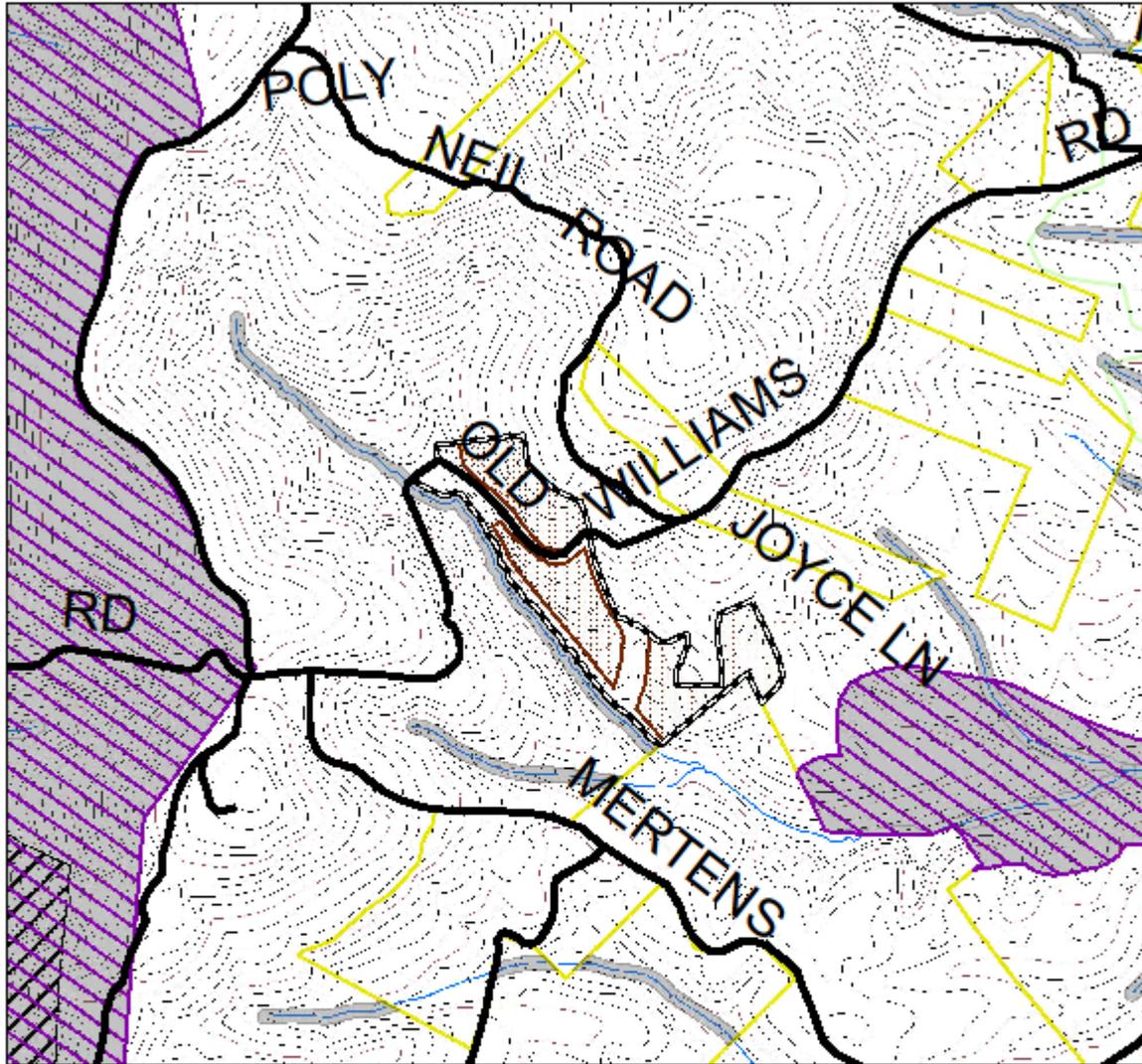
Water Resources: Water resources will be protected on this site. Access to the site is an existing road. All streams are already identified as HCVF and will be protected by a 50-foot wide no-cut forest buffer.

Soil Resources: Soil resources on this site will be protected under the *Maryland Department of Natural Resources-Forest Service: Rutting Guidelines for Forest Operations on Maryland State Forests*.

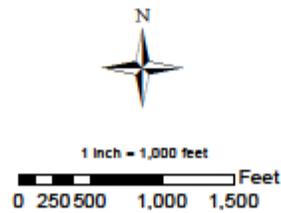
Historic Conditions: This stand like most of GRSF likely developed on its own over the past 107 years into what it is today despite the fact that it was commercially clearcut, and likely the ground was converted to fruit orchard in years prior to 107 years ago. Historically this site was likely dominated by American chestnut. However, chestnut blight has eliminated American chestnut from having a dominant position in the landscape.

Silvicultural Prescription: The recommendation for this stand is to regenerate the stand under the principles of variable retention. The objective is to achieve regeneration of a mixed oak stand while maintaining some attributes of the original stand for wildlife habitat, natural heritage, and aesthetics values.

FY-2016 Proposed Harvest Old Williams Rd



Compartment - 8A & 12
 Managed Area - 37 Acres
 Harvest Area - 26 Acres
 Age - 109
 Type - Mixed Oak
 TPA - 163
 AGS - 98 sq. ft.
 Stocking - 104%+
 Growth Rate - <2%
 Soil Type - Weikert
 Site Index - 54
 Composition - SO- 46%
 WO- 19%



Legend

- Managed Area
- Harvest Area
- Wildlands
- OGEA
- ESA
- HCVF
- GRSF Boundary

Silviculture Proposal Narrative

Proposal Name: Stone Mountain Rd

Managed Area: 37 Acres

Harvest Area: 29 Acres

Resource Impact Assessment

Forest Community Types and Development: This is a mixed oak stand within the general forest area. According to the GRSF specified 100 year rotation, this stand is over-mature at 122 years. Furthermore, it is an overstocked stand. These facts constitute the selection of this stand for regeneration silviculture treatment.

Rare, Threatened and Endangered (RTE) species: There are no known RTE species currently on or impacted by this site.

Habitats and Species of Management Concern: There are no known habitats or species of management concern on this site.

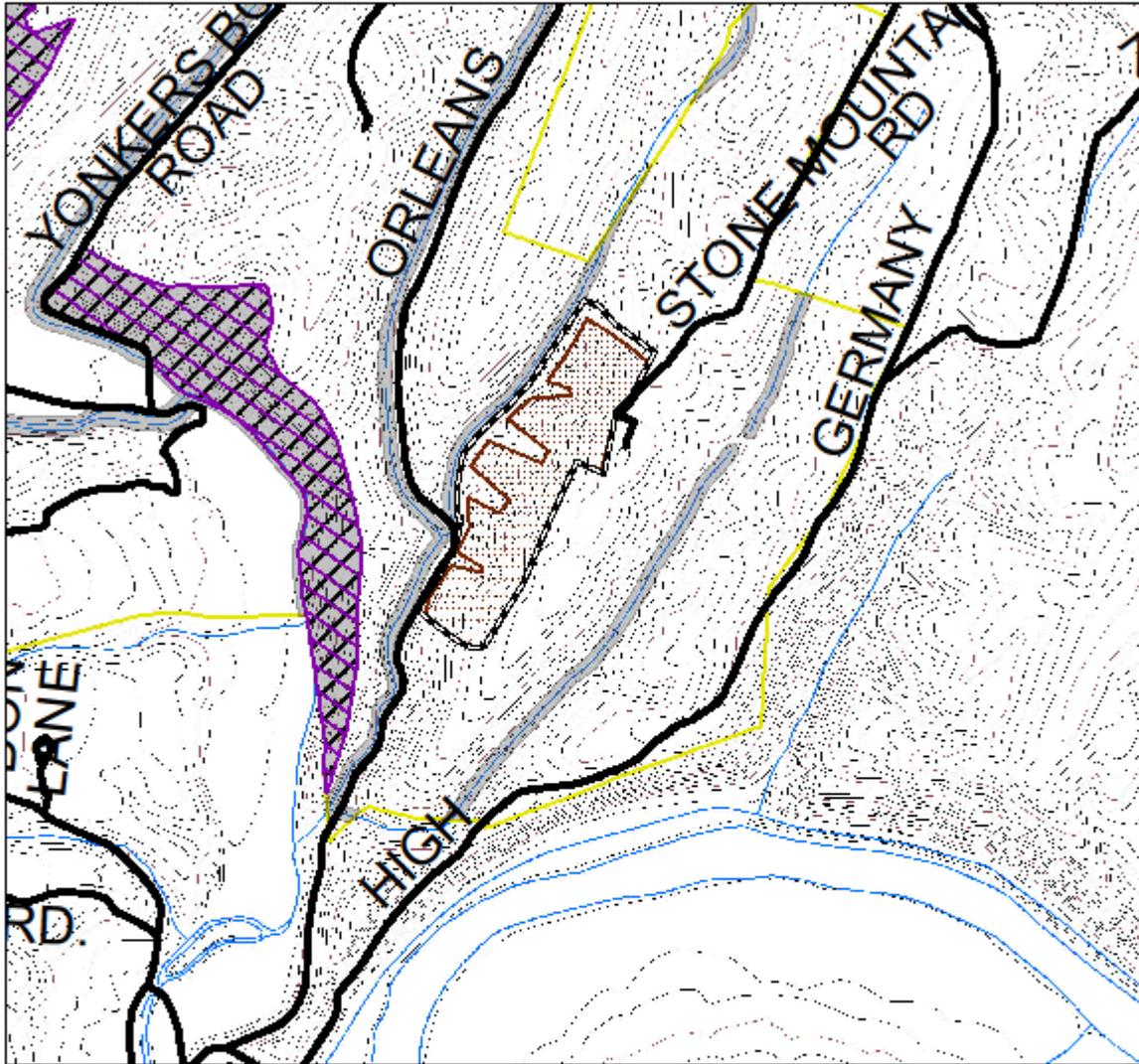
Water Resources: Water resources will be protected on this site. Access to the site is an existing road. All streams are already identified as HCVF and will be protected by a 50-foot wide no-cut forest buffer.

Soil Resources: Soil resources on this site will be protected under the *Maryland Department of Natural Resources-Forest Service: Ruting Guidelines for Forest Operations on Maryland State Forests*.

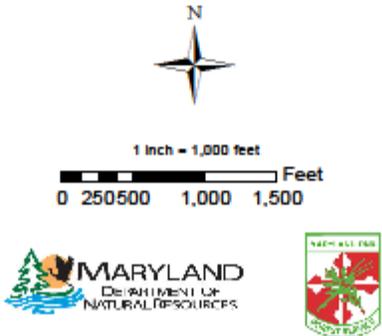
Historic Conditions: This stand, like most of GRSF, likely developed on its own over the past 122 years into what it is today despite the fact that it was commercially clearcut, and likely the ground was converted to fruit orchard in years prior. Historically, this site was likely dominated by American chestnut. However, chestnut blight has eliminated American chestnut from having a dominant position in the landscape.

Silvicultural Prescription: The recommendation for this stand is to regenerate the stand under the principles of variable retention. The objective is to achieve regeneration of a mixed oak stand while maintaining some attributes of the original stand for wildlife habitat, natural heritage, and aesthetics values.

FY-2016 Proposed Harvest Stone Mountain Rd



Compartment - 46B
 Managed Area - 37 Acres
 Harvest Area - 29 Acres
 Age - 122
 Type - Mixed Oak
 TPA - 315
 AGS - 114 sq. ft.
 Stocking - 126%+
 Growth Rate - <2%
 Soil Type - Weikert
 Site Index - 60
 Composition - SO-37%
 WP-28%



Legend

- Managed Area
- Harvest Area
- Wildlands
- OGEMA
- ESA
- HCVF
- GRSF Boundary

WATERSHED IMPROVEMENT PROJECTS

Continue to establish and enhance riparian buffers along Town Creek with volunteer tree planting projects. Non invasive tree and shrub species will be planted to establish forest buffers and enhance wildlife habitat. The F.J. Bruisers Off-Road Club has participated in such planting projects the previous two springs and plan to continue to contribute this coming year by doing additional planting and buffer maintenance in the Bull Ring area.

SPECIAL WILDLIFE HABITAT PROJECTS

1. Continue Implementation of the Kirk Orchard, Anthony's Ridge, and Kasecamp Bottoms Special Wildlife Habitat Plans.
2. Continue Rotational mowing and brush management in approved grasslands and other wildlife openings.

ECOSYSTEM RESTORATION PROJECTS

1. Work will continue to suppress ailanthus populations on the forest. Focus will be put on roadside populations and individuals found within harvest proposal areas. Research has shown that suppression of ailanthus is most successful when using basal bark or cut surface treatments prior to harvest.
2. Partner with DNR Heritage Division to implement ecosystem restoration practices for shale barrens on GRSF.

MONITORING PROJECTS

1. MD DNR Fisheries will continue to monitor aquatic populations in Town Creek and the Potomac River. The Ridge and Valley Stream Keepers will also continue to monitor water quality in the streams within the region.
2. GRSF staff will monitor regeneration of stands by completing post harvest regeneration inventories on all final rotation harvests during 5th growing season.
3. MD DNR Wildlife & Heritage Division will continue to monitor 2 GRSF resident black bear sows and cubs that are collared and gps equipped.
4. MD DNR Wildlife & Heritage Service will continue to research and monitor T&E species on the forest including wood turtle, timber rattlesnake, and several lepidoptra species.
5. MD DNR Wildlife & Heritage Service will continue to monitor big game harvest on the State Forest via required hunter harvest check in system.
6. Wildlife Institute will monitor American Woodcock population in Kirk Orchard area with annual spring singing ground surveys.
7. GRSF staff will continue to monitor and document all timber operations within the forest on a weekly basis.
8. Maryland Department of Agriculture (MDA) will continue to monitor gypsy moth, hemlock wooly adelgid, and other insect pest populations on the forest.
9. MD DNR Wildlife & Heritage Service will continue to monitor whip-poor-will populations with annual spring nightjar survey.

Operational Management

1. Introduction

This section of the plan is designed to cover the annual cost and revenues associated with the operational management of Green Ridge State Forest. It is the Department's intent that most of the revenues generated from the GRSF will be used to pay for the management and operation of the Forest. As stated in Chapter 1 of this plan, "*The primary goal of the Green Ridge State Forest Sustainable Management Plan is to demonstrate that an environmentally sound, sustainably managed forest can contribute to local and regional economies while at the same time protecting significant or unique natural communities and elements of biological diversity.*"

The numbers expressed in this section are only estimates and averages of annual expenses and revenues. These numbers will fluctuate each year based on management prescriptions, economic conditions and public use of the forest.

The following information is a breakdown on Revenues and Operational costs associated with the Green Ridge State Forest. These figures are only estimates that are based on projected revenues and operational expenses. Yearly changes in the timber markets and weather conditions can severely affect revenues. Also weather can greatly affect recreation revenue. Operational expenses will vary from year to year mainly based on costs associated with proposed projects. For many special projects other sources of revenues such as matching grants will be sought to help offset the cost to the Department.

2. Green Ridge State Forest Revenue

Estimated: \$225,000 to \$300,000

Revenues that are generated from the Green Ridge State Forest are deposited into the Department's Forest Reserve Fund. In order to cover expenses out of this Fund, a Green Ridge Forest Budget must be developed a year in advance as part of the larger DNR budget. It then goes through the legislative approval/review process along with all other state operating budgets. Once adopted, the budget goes into effect the first day of the fiscal year (July 1st).

Forest Product Sale Revenue: *Estimated: \$150,000 to \$175,000*

This revenue is generated from the sale of forest products, which are identified in the Annual Work Plan. Traditional forest products include pulpwood and sawtimber from intermediate and regeneration harvests. This revenue is tied to forest harvest activities identified in the annual work plan and will vary each year. With the current age class distribution of the forest most revenue will be from regeneration final harvest operations.

Recreation Revenue: *Estimated: \$75,000 to 125,000*

This revenue is generated from the sale of camping permits, fuel wood permits, and shooting range permits.

Other Revenue/Funding Sources

Annual Amounts vary, Estimated: \$NA

Other budgetary funding that is utilized on an annual basis in the management of Green Ridge State Forest comes from a variety of sources including the Forest or Park Reserve Fund, General Funds and/or the Off-road Vehicle Fund.

Grants

Annual Amounts vary, Estimated for FY-2016: \$30,000

Other funding comes in the form of grants through state and federal sources and are primarily utilized in recreation, habitat and watershed restoration projects. These funds are project specific.

Some funding will be obtained through partnerships and grants, such as National Recreation Trail Grants funds. Expenses include the installation recreation improvements, removing invasive species and re-establishing native plant communities and habitat. This year GRSF has applied for \$30,000 through the National Recreation Trail Grant program to fund labor for maintaining the Green Ridge Trail system.

3. OPERATIONAL COST:

Estimated total Annual Expenses: \$550,000

Operational expenses are those costs paid directly out of the GRSF operational budget by the State Forest Manager and vary based on approval of operational budgets. The Forest Manager prepares a proposed operational budget for the forest based on instructions provided approximately one year in advance of the fiscal year. The FY-2016 budget proposal was prepared in August of 2014.

Staffing Cost

Classified Salaries, Wages and Benefits, Estimated: \$261,810

This cost is associated with Departmental State Personnel classified salaries. This staff is responsible for developing and implementing annual work plans, managing the daily activities on the forest, including resource management, recreation program management, maintenance, and administration.

Contractual Staffing, Estimated: \$130,000

This cost is associated with contractual staffing associated with operations of the state forest. Contractual personnel are responsible for assisting classified personnel in conducting work outlined in the annual work plan, managing the daily activities on the forest, including boundary line work, maintenance of trails, forest roads, maintaining primitive campsites, a public shooting range, overlooks, wildlife habitat areas, and assist with implementing all maintenance, recreational, silviculture, and ecosystem restoration projects.

Land Operation Cost

Estimated: \$100,000

This includes expenses for office and field equipment, vehicles, gates, gravel, signs, boundary paint, roadwork contracts and construction, trash removal from illegal dumping, boundary line work & surveying, tree planting, site preparation, control of invasive species, pre-commercial thinning and other forest management practices. Some of these costs will vary greatly from year to year based on the activities identified in the Annual Work Plan.

Forest Certification, Inventory & Monitoring Program

Estimated: \$10,000

This estimate reflects the annual cost of various on-going inventory and research projects on the forest. Expenses are directly tied to Forest Certification. The purpose of forest monitoring is to accurately evaluate forest health and the effects of specific management activities. Resource managers will use the information to make informed future management decisions (i.e. adaptive management). Cost would cover both forest resource and sensitive habitat inventories and monitoring the effects of various restoration projects.

Expenses for forest certification will vary from year to year and will be at their highest at the initial certification and then every five years when the re-certification is done. Routine audits are used to verify compliance with the various certification programs. The goal is to certify Green Ridge State Forest under both the Sustainable Forest Initiative (SFI) and the Forest Stewardship Council (SFC). Each certifying agency takes a slightly different look at what is needed for sustainable forest management. Expenses will include fees for audits and annual monitoring programs for compliance with the certification requirements.

Future plans include hiring additional staffing to cover wildlife management activities, restoration projects, recreation management, monitoring, and additional forestry related activities outlined in this Sustainable Resource Management Plan for Green Ridge State Forest.

County Payments

Estimated: \$60,000

These are revenue payments to local county governments which will vary every year. Payments are made on an annual basis to Allegany County based on 25% of the gross revenue generated from GRSF. These payments come out of revenue generated from timber sales and recreation. These payments are used to help the counties offset the loss in property tax revenues which are not paid on state owned lands.

4. Summary

This is the general breakdown on Revenues and Operational Cost associated with the Green Ridge State Forest for FY-2016. As described, these figures will vary from year to year. This generalization of the operating budget suggests the importance of maintaining income levels in order to achieve the goals set forth in the other portions of this plan (i.e. sustainability).