

GREEN RIDGE STATE FOREST

ANNUAL WORK PLAN

FISCAL YEAR 2013

Prepared:	<u>Mark D Beck</u> (Forest Manager)	<u>4/3/12</u> Date
Reviewed:	<u>Robert O'Leary</u> (Regional Manager)	<u>8-20-12</u> Date
Reviewed:	<u>J. F. [Signature]</u> (Land Acquisition & Planning)	<u>9/12/12</u> Date
Approved:	<u>[Signature]</u> (Environmental Specialist)	<u>9.11.12</u> Date

State Forest Annual Work Plan

A. Forest Overview

Includes an over site of the forest; history, size, location, special features, etc.

B. AWP summary

Includes number of sales, total harvest acres, acres by harvest method, estimated harvest volume and other important features for the work to be performed during the next year..

C. Maintenance Projects

Includes boundary maintenance, road maintenance, building maintenance and other such projects.

D. Recreation Projects

Includes projects such as campsite improvements, hunting programs, special recreational activities, ATV and hiking trail maintenance, trail grants, signage, and other projects specific to benefiting recreational users of the forest.

E. Special Projects

Includes activities to gain or maintain third party forest certification, GIS databases, and other such activities.

F. Silvicultural Projects

Includes forest harvesting, prescribed fire programs, fertilization, reforestation, and other such projects. This section must include the following:

Final Silvicultural Activities:

1. Site Map
2. Silvicultural Prescription
3. Stand Data

Review Process:

1. Review Summary
2. Interdisciplinary Team Comments (collective)
3. Advisory Committee Comments
4. Public Comments

G. Watershed Improvement Projects

Includes special projects to enhance water quality, wetland restoration, and other such activities.

H. Special Wildlife Habitat Projects

Includes Special Wildlife Habitat Areas plan development and implementation and other wildlife habitat improvement practices.

I. Ecosystem Restoration Projects

Includes projects to manage exotic invasive species, management activities within High Conservation Value Forests, and other such activities aimed at improving ecosystem health and vitality.

J. Monitoring Projects

Includes CFI forest inventories, and other inventory projects being conducted on the forest, watershed monitoring, and other such projects.

K. Budget

Include proposed budget specific to the forest.

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

A. Fiscal Year 2013

AWP Summary

This work plan includes seven silviculture proposals for a total of 301 managed acres within the 20,000 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 managed acres. The acreage in proposals exceeds this target. This is because one of the silviculture proposals is an intermediate TSI operations and allows for some reduction as result of the review process.

The silviculture proposals within this plan include 138 acres of variable retention harvests for an estimated 356mbf of hardwood timber. An additional 23 acres are proposed as group tree selection and single tree selection harvests and is estimated to yield 80mbf of hardwood timber. An additional 24 acres is proposed to be thinned to release crop trees and remove undesirables. This thinning will be done to increase stand health and vitality and will yield enough pulpwood to cover costs of the operation.

Other major projects proposed in this AWP and included in the proposal maps are the Anthony's Ridge Special Wildlife Habitat Area, Kasecamp Bottoms Aerial Herbicide Application Project, Little Orleans Equestrian Trail Proposal, Town Hill ORV Trail Proposal, Hanging Prairie Shale Barren Restoration Project, and the Gordon and Twigg Road Retrofit and Rehabilitation Projects. The Anthony's Ridge Special Wildlife Habitat Area project is to develop a unit management plan for the area with a focus on ruffed grouse habitat enhancement along with other early succession habitat management.

The Kasecamp Bottoms aerial herbicide application project is a proposal to use Habitat funds to treat non-native and invasive species including autumn olive, bush honey suckle spp. and Japanese knotweed as well as to set back forest succession and act as site preparation for additional native shrub plantings in the area.

The Little Orleans Equestrian Trail Proposal is to develop two loop trails that start at a trail head located on the Little Orleans Campground (LOC). These trails will largely utilize existing roads and trails. Less than 1000 feet of new trail would need to be constructed to establish these trails. However, re-designation of the existing roads and trails would need to be approved. Approval of this proposal would require a partnership agreement between DNR and LOC prior to the establishment of the trail. This proposal has been prepared at the request of LOC. Please note that from the GRSF management perspective, this proposal may be a favorable solution to the mounting pressure for developed equestrian resources on the state forest.

The Town Hill ORV Trail proposal is to establish a designated ORV Trail to off set the users loss of the recently closed Green Ridge ORV Trail and is part of the Maryland ORV Stakeholders Workgroup agenda for organizing and enhancing Off-road vehicle recreation opportunities within the state for the users while providing for ecological sustainability of natural resources.

The Hanging Prairie Shale Barren Restoration Project is an ecological restoration project to restore and enhance the unique biological community on this site using integrated management techniques to control invading vegetation and maintain natural ecological processes.

The Gordon and Twigg Road Retrofit and Rehabilitation Projects are maintenance projects that will improve water quality and aquatic habitats while improving and stabilizing the transportation system on the forest. These projects are pending approval of project grants prepared in partnership with The Nature Conservancy.

Other special projects in this plan include Developing the Green Ridge State Forest - Sustainable Forest Management Plan, with special focus on addressing items in need of improvement as identified in the 2011 FSC/SFI Certification Audits and the 3rd year of the state forest stand data collection project.

In addition to the above 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.

Many of the Special Projects listed in this plan must be completed by April of 2012 as specified by FSC/SFI Certification Requirements. Therefore, work outlined in the FY 2012-2014 will be shifted around to

accommodate these requirements while attempting to handle an already robust workload for our current staff resources.

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. Complete work outlined in the Gordon and Twigg Road Retrofit and Rehabilitation Projects pending award of associated grants (see following pages)
2. Recover 3 miles of boundary & re-blaze 20 miles of existing state forest boundary.
3. Complete forest roads inventory and road maintenance plan.
4. Complete demolition of Maple Run Boys Camp and restore site to early succession forest.
5. Continue to maintain 100 primitive camp sites.
6. Continue to maintain public shooting range.
7. Continue to maintain viewsheds on 5 overlooks.
8. Continue to maintain 4 handicap hunter access roads.

Twigg Road Retrofit and Rehabilitation Project Plan

Project Site Background: Twigg Road is a three mile-long public access road within Green Ridge State Forest. It provides access to six designated campsites and for hunting and other recreation. It is located in the headwaters of Maple Run, a tributary to Town Creek, in the Upper Potomac River watershed.

Current Condition – the Problem: Twigg Road was constructed in the early 1900's when the surrounding property was under private ownership. The road location and design are not ideal under current standards. Years of use and grading have incised this road in many sections, trapping water on the road, and the drainage structures are not adequate to keep runoff from entering nearby streams. There were never enough water diversions established on this road to safeguard local aquatic habitats from sediment runoff, and many of the drainage structures that exist have failed due to inadequate design and/or deterioration over time.

Project Design – the Solution: This project will address these problems and improve water quality and aquatic habitat in Maple Run by eliminating excessive erosion from the road surface and safely diverting road runoff before it enters the streams. Specific work to be completed includes replacement of failed culverts and installation of additional cross pipes where needed. Eight culverts will be replaced and 3 -5 new culverts or cross pipes will be installed. Some of the existing functioning culverts will be reinstalled to allow for aquatic wildlife passage. Three culverts require the construction of headwalls to ensure sustainability.

Other water diversion structures will be used in conjunction with ditches, culverts and cross pipes to decrease volume and velocity of water on this road. These diversion structures will include rolling dips, broad based dips, and turnouts.

Incised sections of the road will require approximately 3000 tons of new aggregate to facilitate adequate crowning of the road and proper installation of cross pipes.

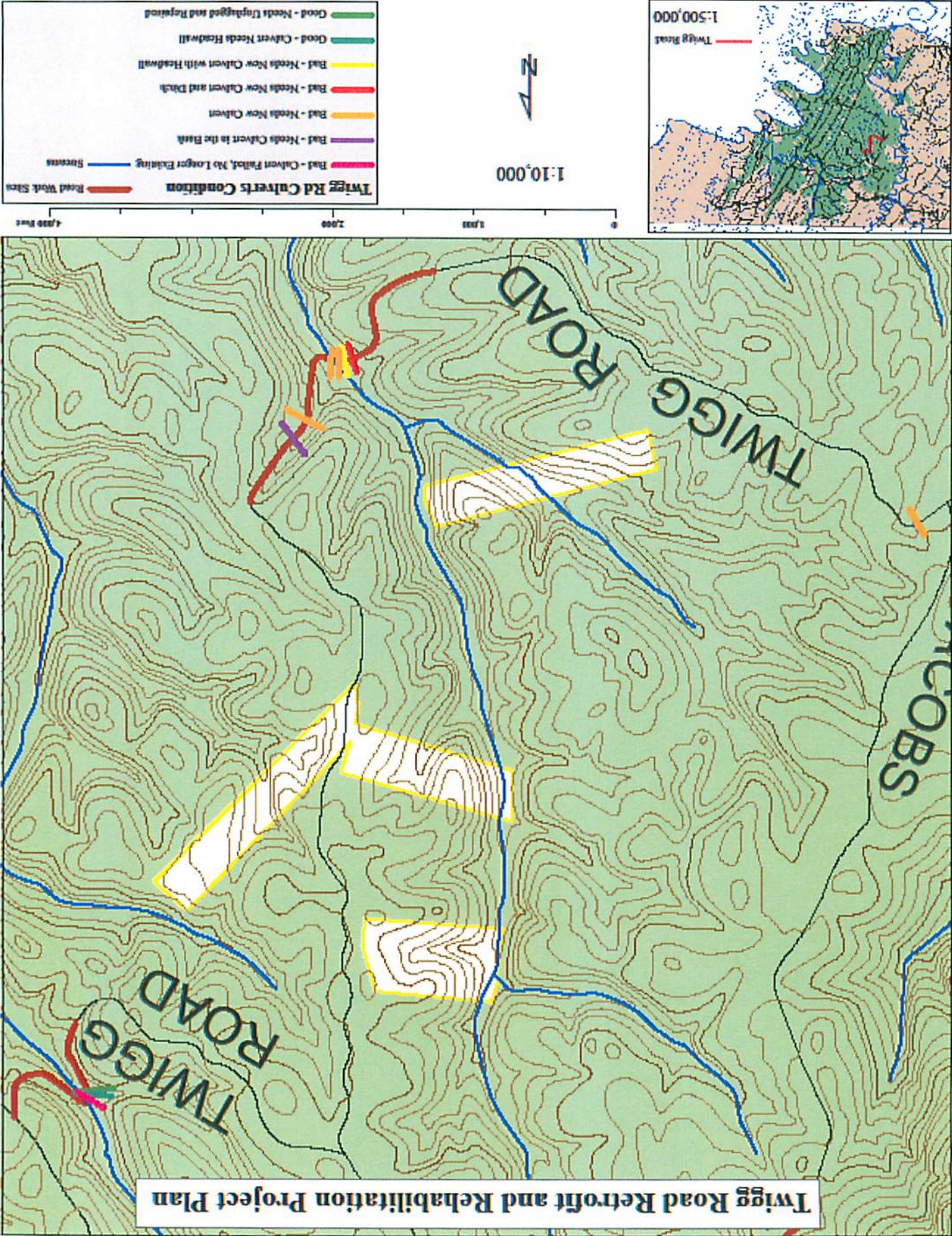
*Refer to the attached project plan map, and to **technical bulletins {pick out which ones and reference}** from Center for Dirt and Gravel Roads for more details.*

Permits: All required permits will be obtained prior to project commencement. We anticipate the need for the following permits, which will be applied for upon notification of this grant approval. .

- Sediment and Erosion Control Permit – Natural Resources Conservation Services
- General Waterway Construction Permit – Maryland Department of Environment

Note: Project partners routinely acquire permits from these entities for similar projects, and have confidence that there will be no problems with obtaining the necessary permits for this project.

Monitoring and Maintenance: The Green Ridge State Forest Manager and staff are committed to long term environmentally sensitive maintenance and continuous monitoring of this implementation project. The State Forest will include this project in their Transportation Inventory and Maintenance Plan and assume the responsibility for long term maintenance of this project.



Gordon Road Retrofit and Rehabilitation Project Plan

Project Site Background: Gordon Road is a three mile-long public access road within Green Ridge State Forest. It provides access to two designated campsites and for hunting and other recreation. It is located in the headwaters of Fifteen Mile Creek, in the Upper Potomac River watershed.

Current Condition – the Problem: Gordon Road was constructed in the early 1900's when the surrounding property was under private ownership. The road location and design are not ideal under current standards. Years of use and grading have incised this road in many sections, trapping water on the road, and the drainage structures are not adequate to keep runoff from entering nearby streams. There were never enough water diversions established on this road to safeguard local aquatic habitats from sediment runoff, and many of the drainage structures that exist have failed due to inadequate design and/or deterioration over time.

Project Design – the Solution: This project will address these problems and improve water quality and aquatic habitat in Fifteen Mile Creek by eliminating excessive erosion from the road surface and safely diverting road runoff before it enters the streams. Specific work to be completed includes replacement of failed culverts and installation of additional cross pipes where needed. Seven culverts will be replaced and 2-4 new culverts or cross pipes will be installed. Some of the existing functioning culverts will be reinstalled to allow for aquatic wildlife passage. Three culverts require the construction of headwalls to ensure sustainability.

Other water diversion structures will be used in conjunction with ditches, culverts and cross pipes to decrease volume and velocity of water on this road. These diversion structures will include rolling dips, broad based dips, and turnouts.

Incised sections of the road will require approximately 3000 tons of new aggregate to facilitate adequate crowning of the road and proper installation of cross pipes.

*Refer to the attached project plan map, and to **technical bulletins {pick out which ones and reference}** from Center for Dirt and Gravel Roads for more details.*

Permits: All required permits will be obtained prior to project commencement. We anticipate the need for the following permit, which will be applied for upon notification of this grant approval. .

- General Waterway Construction Permit – Maryland Department of Environment

Brad Metzger

District Manager Water Management Compliance Program

Maryland Department of the Environment

160 Water Street

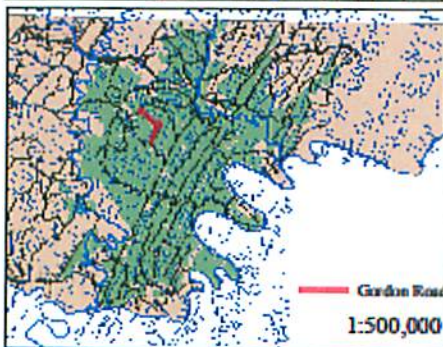
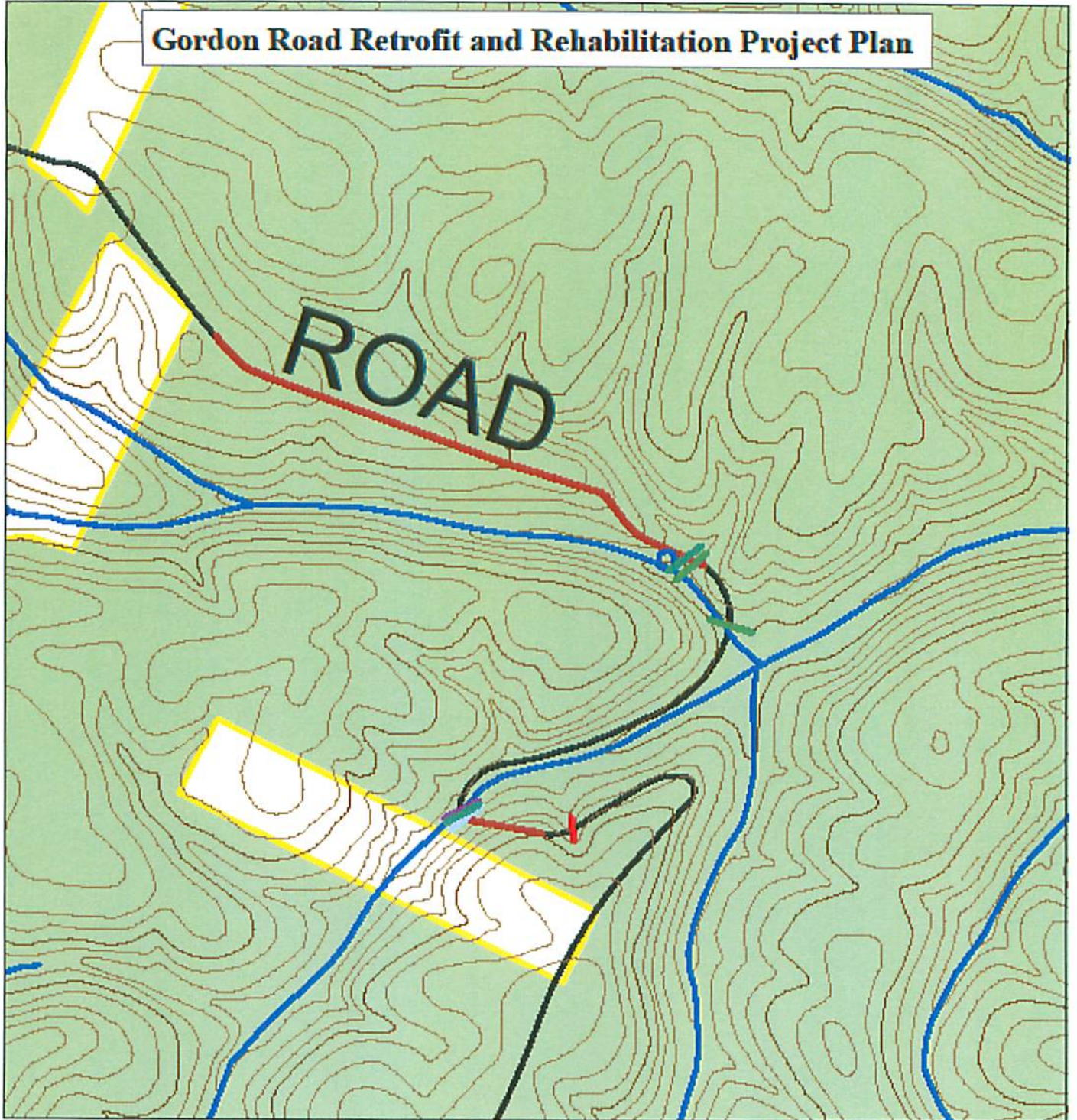
Frostburg MD 21532

301-689-1484

Note: Project partners routinely acquire permits from these entities for similar projects, and have confidence that there will be no problems with obtaining the necessary permits for this project.

Monitoring and Maintenance: The Green Ridge State Forest Manager and staff are committed to long term environmentally sensitive maintenance and continuous monitoring of this implementation project. The State Forest will include this project in their Transportation Inventory and Maintenance Plan and assume the responsibility for long term maintenance of this project.

Gordon Road Retrofit and Rehabilitation Project Plan



1:6,000



Gordon Rd Culverts Condition	
	Good
	Good - Needs Unplugged
	Good - Needs Unplugged and Reassessed
	Good - Needs New and Larger Culvert
	Bad - Culvert Failed; No Water Getting To It
	Road Work Sites
	Streams

Recreation Projects

- 1. Develop a multiuse equestrian loop trail in partnership with Little Orleans Campground to increase opportunity for horseback riding on the forest and the region. (see proposal map below)**
- 2. Work with partners to establish a newly designated ORV Trail on Town Hill to mitigate users concern of losing the Green Ridge ORV Trail.(See Town Hill ORV Trail proposal map below)**
- 3. The Great Eastern Trail will be installed, marked, and open for foot traffic.**
- 4. Maintain approximately 60 miles of trails including 50 miles of hiking trails and 12 miles of mountain bike trail..**
- 5. Continue to enhance upland game hunting opportunities by enhancing early successional wildlife habitat at Kirk Orchard, Bull Ring Ranch, Malcolm Road, and Kasecamp Bottomlands.**
- 6. Provide 2-4 guided interpretive tours on the forest to share management principles and practices with the public.**
- 7. Maintain and enhance a virtual geocaching program to interpret county and state Big Tree champions within the forest as well as other natural and cultural heritage assets of the forest.**

SPECIAL PROJECTS

A. Certified Sustainable Forest Management Plan Development:

Beginning in 2011, the Forest Service had begun revising the long term sustainable management plans for all three of the state forests in the Western Region. The initial framework follows the sustainable management plan format established for the State of Maryland's Chesapeake Forest on the Eastern shore. The Department's goal is to have the updated sustainable forest management plans receive dual third party certification under both the Forest Stewardship Councils (FSC) and Sustainable Forestry Initiatives (SFI) standards and guidelines.

Throughout the course of the last 2 years, broad resource assessments were carried out identifying the various management units and features located on the forests including identification and mapping of High Conservation Value Forest Areas (HCVF). By spring of 2011 initial drafts of the forests Sustainable Management Plan were developed and shared with stakeholders for initial comment and review. The plans were submitted to both the FSC and SFI organizations in the spring of 2011, at which point audits were completed on all 3 of the western state forests. The draft Sustainable Management Plans are expected to be made available for public comment by October 2011.

Audit findings indicate some 20 Corrective Action Requests (CARs) and or observations identified as being in need of improvement in order to be "certified" as sustainably managed forest lands under the internationally recognized FSC and SFI standards. These corrective actions vary from simple formal documentation of routine practices, to more complex policy and procedure development involving various stakeholders and partners. The program requires that all of these items be addressed before the next annual audit, with some needing more immediate attention. State forest staff time and field operations have been adjusted and redirected to assist in addressing all of these Corrective Action items in the course of the next year. A brief listing of the CARs is attached as (Appendix 1). The complete audit findings will be made available with the Sustainable Forest Management Plans later this year.

C. Forest Stand Delineation and Inventory:

A Critical part of developing long term sustainable management plans is the availability of up to date forest inventory data. To this end, the state forests staff has been fully engaged in revising the forest stand delineation on the forests. The process continues to consume considerable staff resources as this project is taking shape. This ambitious undertaking will involve collecting detailed stand inventory data on approximately 1700 stands over the entire state forest. The data will be collected, analyzed, and entered into the GIS database. Staff assignments and field operations have been adjusted to assure the timely and accurate completion of this important field level assessment that will serve as the basis which we will draw management decisions from for the next 10-15 years. The department's goal is to have this project completed by FY-2016.

D. 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. Cooperate with American Chestnut Foundation. GRSF staff continue to maintain 50- tree American Chestnut plantation at Kirk Orchard.
6. Continue partnership with Wildlife Institute to work on Appalachian Mountain Woodcock Initiative to enhance American Woodcock habitat on the forest.
7. Continue to support and collaborate with Volunteer Team Incorporated to facilitate the spirit of service on the forest and reconnect people to the land.
8. Continue to participate in I&E Programs including Arbor Day, Project Learning Tree, Becoming an Outdoors Woman, Natural Resources Careers Camp, etc..

(Appendix 1)

Summary of 2011 Certification Audit findings

In April of 2011, MD State Forests management plans, programs and activities were audited by the Forest Stewardship Council and the Sustainable Forestry Initiative, as part of the Governors directive to seek “certification” of the State Forests Sustainable Forest management plans and programs under both of these internationally recognized management standards. As a result of the audit, a number of ‘Corrective Action Reports’ (CARs) and or observations were identified as being in need of improvement in order to be “certified” as sustainably managed forest lands under the internationally recognized FSC and SFI standards. These corrective actions vary from simple formal documentation of routine practices, to more complex policy and procedure development involving various stakeholders and partners. The programs require that all of these items be addressed before the next annual audit, with some needing more immediate attention. State forest staff time and field operations have been adjusted and redirected to assist in addressing all of these Corrective Action items in the course of the next year.

The following is a brief summary of the ‘Corrective Action Reports’ (CARs) and or Observations identified as being in need of improvement in order to be “certified” as sustainably managed forest lands under the internationally recognized FSC and SFI standards. The complete audit findings will be made available to the public along with the Sustainable Forest Management Plans later this year.

Item # Findings

- CAR 2011.1 Illegal ORV activity, inconsistent with state forest policy, must take additional action to curtail / correct.
- CAR 2011.2 Clear grievance procedures / complaint policy lacking.
- CAR 2011.3 Clear guidelines to minimize rutting and soil compaction lacking.
- CAR 2011.4 Roads and trail assessment and maintenance plans incomplete.
- CAR 2011.5 Non Timber Forest Products policy unclear / inconsistent.
- CAR 2011.6 EAR/project review process regarding impact assessment to be clarified.
- CAR 2011.7 Forest Mngt. Plans do not (at time of audit) include public input.
- CAR 2011.8 Habitat element retention policy unclear.
- CAR 2011.9 Non Native Invasive Species (NNIS) plan lacking.
- CAR 2011.10 Assessment of adequacy of ecosystem representation/protection lacking. (ie. status of protected systems within the scope of the greater landscape.)
- CAR 2011.11 Items missing from Sustainable Forest Management Plans:
 - 1) Description of natural disturbance regimes on the forest.
 - 2) Insect and disease management on the forest.
 - 3) Discussion of biological controls used on the forest.
 - 4) Transportation Network Plans. (roads & trails, assessment and maintenance and use plans).
 - 5) NNIS plan.
- CAR 2011.12 Clear process of monitoring management actions for effectiveness lacking.
- CAR 2011.13 Monitoring program assessing forest road and trail impacts lacking.
- CAR 2011.14 Public input into designation of HCVF not considered. (as plan had not been sent out for public review at time of audit.)
- CAR 2011.15 Chain of Custody to be developed to track “certified wood products”.
- OBS1 Need better documentation of social impacts of forest management.
- OBS2 Need to improve on public notification system for public input.
- OBS3 Need to better address staff and contractor hazardous spill prevention.
- OBS4 Additional staff training with respect to specific standards as expected of FSC and SFI protocols.
- OBS5 Lack of management plan for S-3 species.

Green Ridge State Forest
B. Fiscal Year 2013
Silviculture Projects

Proposal Name	Compartment	Managed Ac.	Harvest Ac.	Est (mbf)	Prescription
1 Stafford Trail	48	58	23	115	VR
2 Old Williams Rd	40	53	39	120	VR
3 Green Ridge Rd	37	27	15	50	VR
4 Keifer Rd	69	43	43	125	VR
5 David Thomas Rd	68	67	32	NA	TSI

*Total 248 187 410mbf

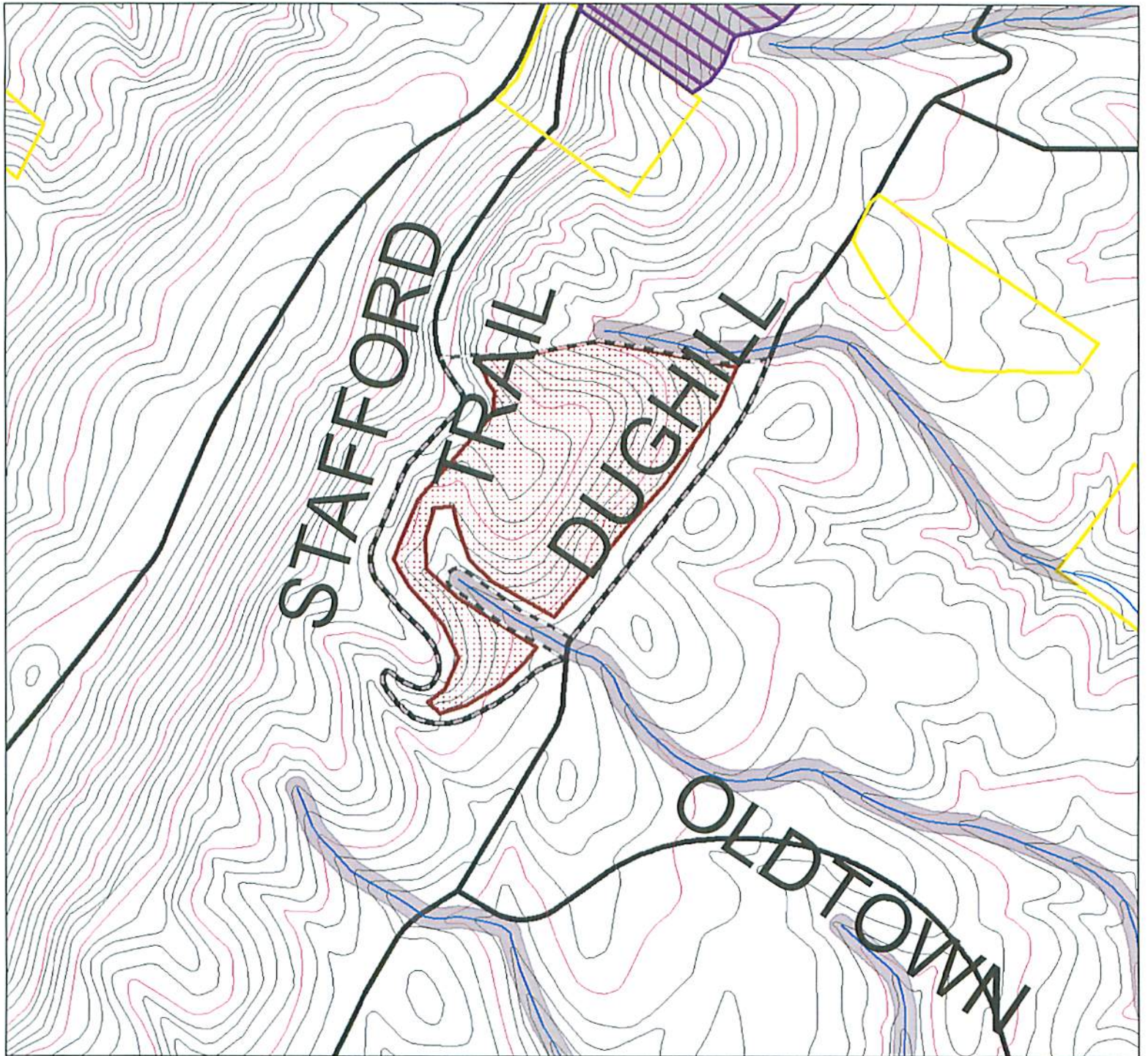
Abbreviations for prescriptions:

TSI Timber Stand Improvement

VR Variable Retention

Note: Managed acres exceeds 200 acres to allow for some reduction and includes intermediate operations.

FY-2013 Proposed Harvest Stafford Trail



Compartment - 48
 Managed Area - 41 Acres
 Harvest Area - 29 Acres
 Age - 88 years
 Type - Mixed Oak
 TPA - 178
 AGS - 67
 Stocking - 110%+
 Growth Rate - <2%
 Soil Type - Weikert
 Site Index - 68
 Composition - SO-55%,
 CO-19%








1 inch = 660 feet



Silvicultural Prescription:

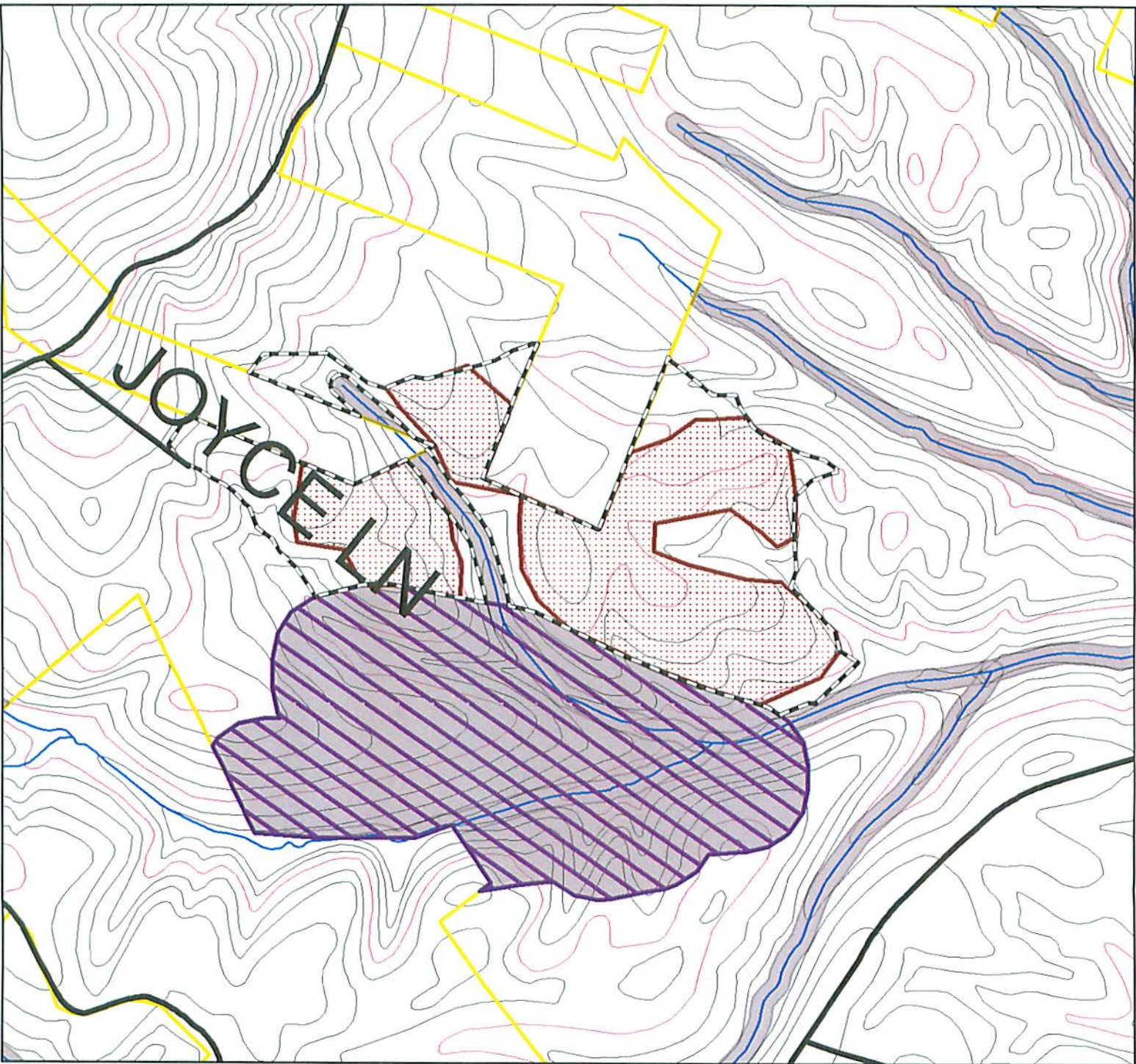
Variable Retention - Retain 10% of the original stand in patches and retain legacy trees. Regenerate the remainder of the stand. Oak regeneration is adequate. All hickory, white pine, flowering dogwood, and serviceberry will be retained.

Legend

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



FY-2013 Proposed Harvest Old Williams Rd



1 inch = 660 feet



Compartment - 12
 Managed Area - 55 Acres
 Harvest Area - 37 Acres
 Age - 104
 Type - Mixed Oak
 TPA - 288
 AGS - 40
 Stocking - 110%+
 Growth Rate - <2%
 Soil Type - Weikert
 Site Index - 64
 Composition - WO-67%
 SO-34%

Silvicultural Prescription:

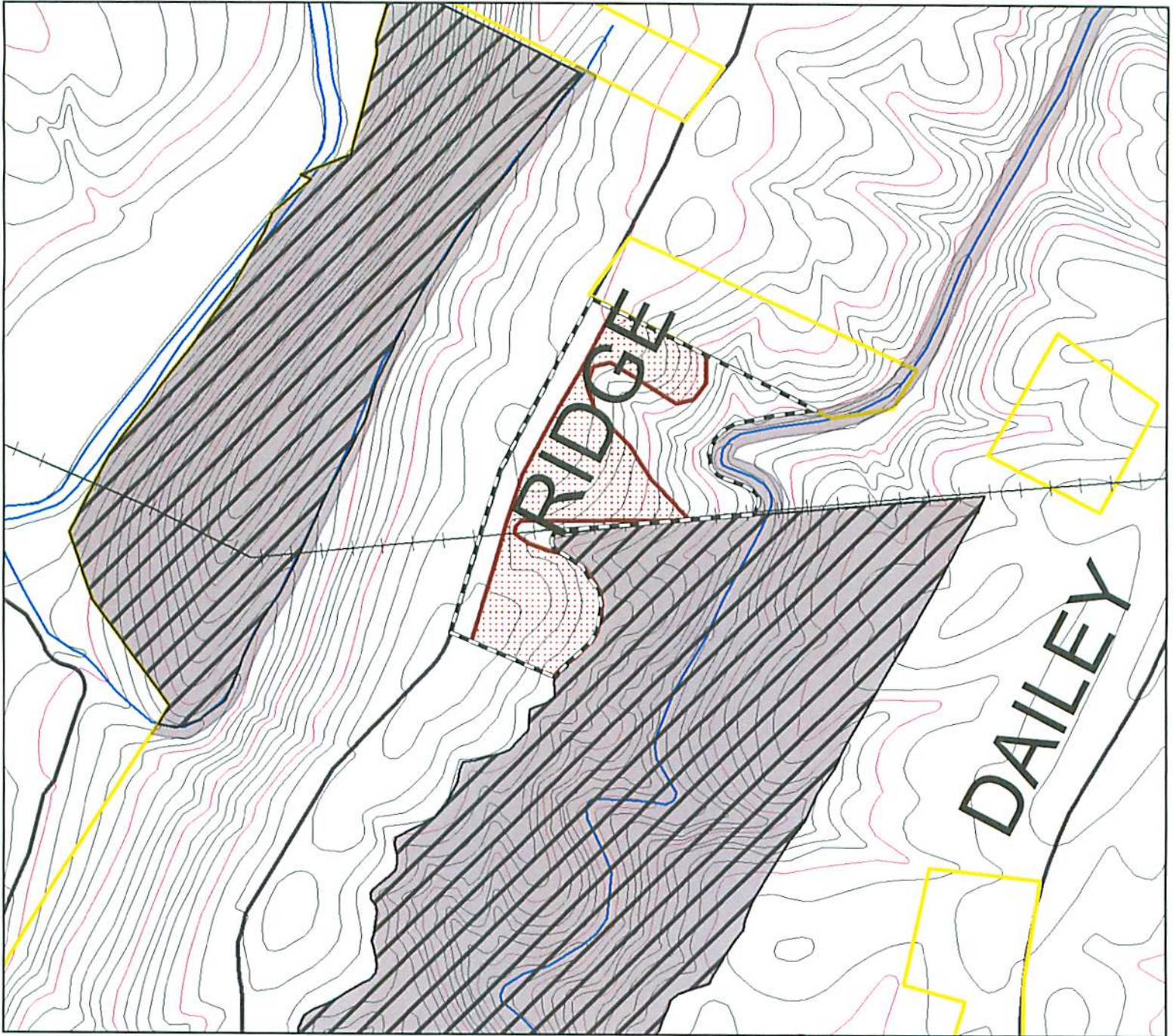
Variable Retention - Retain 10% of the original stand in patches and retain legacy trees. Regenerate the remainder of the stand. Oak regeneration is adequate. All hickory, white pine, flowering dogwood, and serviceberry will be retained.

Legend

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



FY-2013 Proposed Harvest Green Ridge Rd.



1 inch = 660 feet



Compartment - 37
 Managed Area - 27 Acres
 Harvest Area - 15 Acres
 Age -91 years
 Type - Mixed Oak
 TPA - 160
 AGS - 58 sq. ft.
 Stocking - 104%
 Growth Rate - <2%
 Soil Type - Weikert
 Site Index - 68
 Composition - SO-42%,
 WO-31%

Silvicultural Prescription:

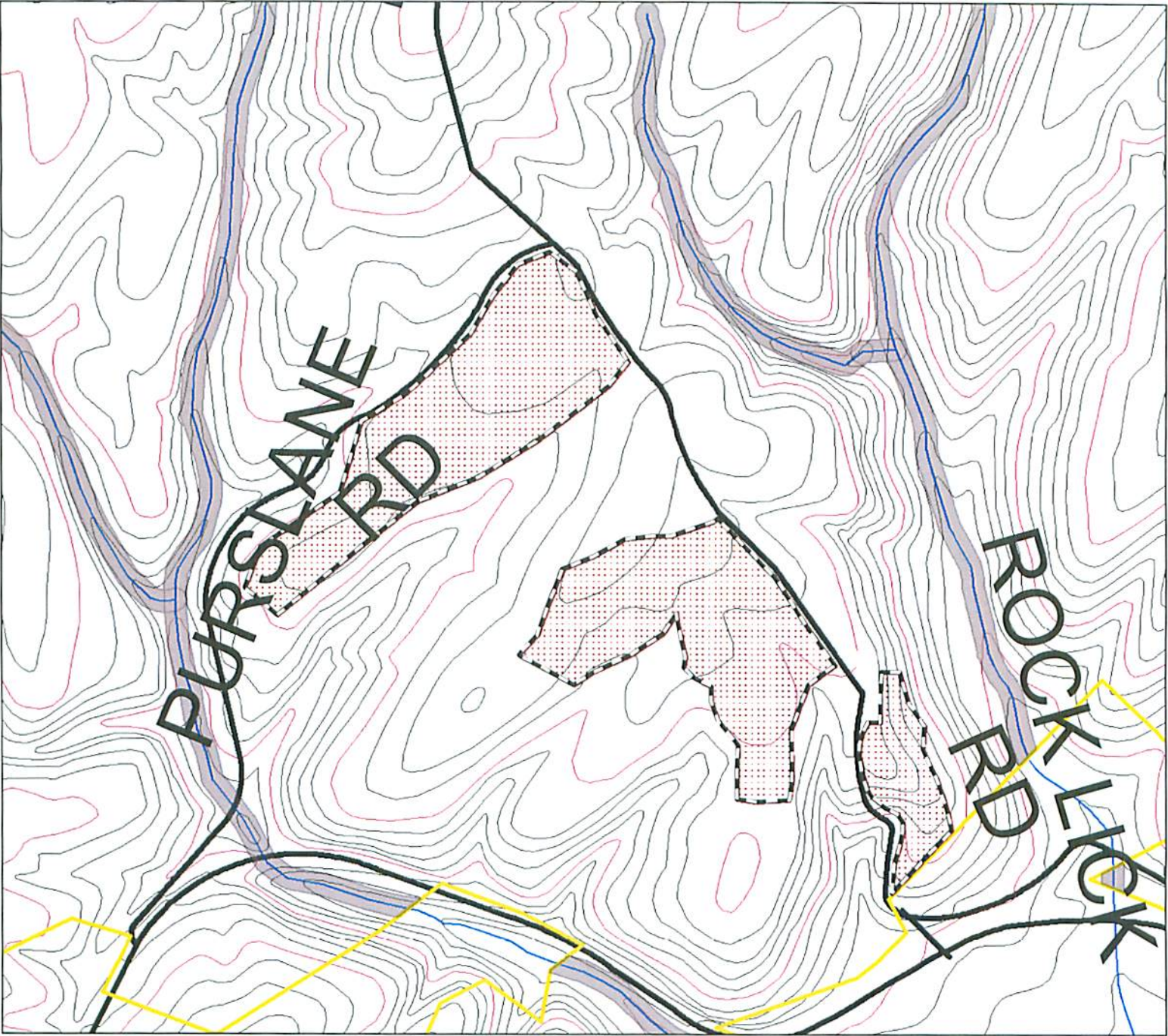
Variable Retention - Retain 10% of the original stand in patches and retain legacy trees. Regenerate the remainder of the stand. Oak regeneration is adequate. All hickory, white pine, flowering dogwood, and serviceberry will be retained.

Legend

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



FY-2013 Proposed Harvest Keifer Rd.



1 inch = 660 feet



Compartment - 69
 Managed Area - 43 Acres
 Harvest Area - 43 Acres
 Age - 65 years
 Type - Hard Pine
 TPA - 292
 AGS - 80 sq. ft.
 Stocking - 110%
 Growth Rate - <2%
 Soil Type - Weikert
 Site Index - 71
 Composition - VP-84%

Silvicultural Prescription:

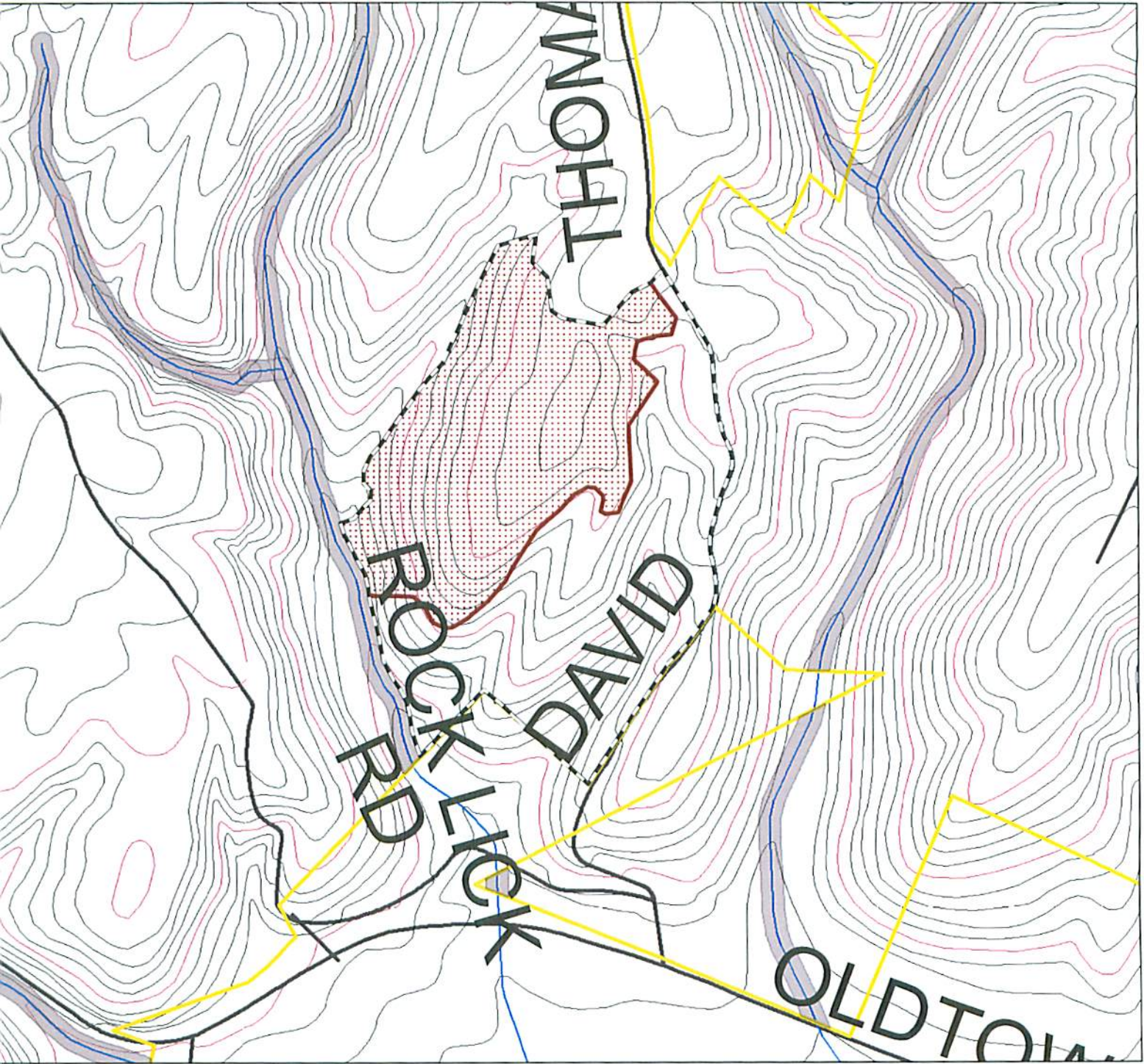
Pine Salvage - Hard pine stand has passed maturity and beginning to die and fall. All pine will be harvested. Where available, five sound VA or pitch pine trees per acre will be retained as seed trees. 20 sq. ft. of oaks will be retained as residuals in the remainder of the stand where available. The stand will be regenerated as a mixed oak/hard pine stand. Oak regeneration is adequate. All hickory, white pine, flowering dogwood, and serviceberry will also be retained.

Legend

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



FY-2013 Proposed David Thomas Rd



1 inch = 660 feet



Compartment - 68
 Managed Area - 67 Acres
 Harvest Area - 32 Acres
 Age - 40
 Type - Mixed Pine
 TPA - 528
 AGS - 91
 Stocking - 115%+
 Growth Rate - <2%
 Soil Type - Calvin
 Site Index - 63
 Composition - WP-52%,
 VP-38%

Silvicultural Prescription:

White Pine Thinning - Remove 110 sq. ft. of basal area of white pine and other undesirable species in the stand to achieve B-level stocking. This will in effect significantly reduce mortality of the stand, increase growth, and improve the overall health of the stand.

Legend

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



REVIEW SUMMARY

COMPARTMENT #48 – Stafford Trail.

A 58 acre unit to regenerate approximately 23 acres via variable retention.

ID TEAM: No major concerns other than suggest retaining adequate oaks to ensure seed source for adequate oak regeneration.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned retaining adequate oak for regeneration.

COMPARTMENT #40– Old Williams Road

A 39-acre variable retention harvest within 53 managed acres.

ID TEAM: No specific concerns.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.

COMPARTMENT #37 – Green Ridge Road

A 17-acre variable retention harvest on 42 managed acres.

ID TEAM: No specific concerns.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.

COMPARTMENT #69 – Keifer Rd

A 43-acre hard pine salvage.

ID TEAM: No specific concerns.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.

COMPARTMENT #68 – David Thomas Road

A 32-acre plantation thinning within 67 managed acres.

ID TEAM: No specific concerns.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.



Martin O'Malley, Governor
John R. Griffin, Secretary

TO: GRSF Interdisciplinary Team
FROM: Mark Beals
DATE: 16 August 2011
SUBJECT: FY-2013 AWP Proposal Maps

The GRSF Interdisciplinary Team review of the FY-2013 AWP is scheduled for August 23, 2011. Please find enclosed a copy of the agenda for next weeks review and a copy of the proposed FY-2013 AWP. Please review the materials and let me know if you have items that you wish to have added to the agenda. Furthermore, please bring this package with you for your reference during the review. I look forward to working with you on the 23rd.

Thanks

Mark



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Martin O'Malley, Governor
John R. Griffin, Secretary

**Green Ridge State Forest
DNR-ID Team
FY-13 Annual Work Plan Review
Agenda**

August 23, 2011

09:00: Coffee & GRSF Update.

09:30: Review FY 2013 proposed Annual Work Plan.

10:00: Visit Town Hill ORV Trail Proposal.

11:00: Yonker's Bottom to review LOCPA Equestrian Trail proposal.

11:45: Visit Kasecamp Bottoms to discuss aerial herbicide application proposal.

12:30: Lunch @ Bond's Landing.

13:00: Visit active harvest Carroll /Oldtown Orleans Road. Discuss rutting & Certification CARs.

14:00 Visit Stafford Trail Silviculture Proposal

15:00 Visit Old Williams Road Silviculture Proposal.

15:30 Wrap up review.

16:00 Adjourn



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Green Ridge State Forest

ID Team Annual Work Plan FY 2013

August 23, 2011

Attendance: Mark Beals, Mike Deckelbaum (Parks), Jim Mullen (Wildlife), Greg Bartles (NRP), Pete Hartman (MDE), Bob Webster, Jack Perdue, Jesse Morgan, Rick Latshaw (Wildlife), Ed Thompson (Natural Heritage), Matt Sell (Fisheries), John Wilson (LAP), Steve Carr (LAP).

Forest Manager Introductions

ORV meetings and work to

Stakeholders work group to look at ORV alternatives. GRSF has provided several proposals and alternative alignments. They submitted three and one (Town Hill) was selected to be promoted to the stakeholders.

MDA mapped some browning and defoliation on GRSF.

Chronic Wasting Disease of deer was found at GRSF. a quarantine has been issued.

Emerald Ash Borer was discovered at GRSF. It was multiple detections. It probably has been here for some years. A proposal has been forwarded to release predatory wasps to help control EAB.

Just for information, there was some hail damage during Memorial Day holiday. It reduced leaf area in some areas.

Some walking stick defoliation issues were witnessed on Town Hill.

Oak Decline fungus may be here too. Oaks and some other tree species have been declining in a strange way.

The forest certification audit occurred in April 2011. This was the first time the western state forests were included in the scope. These forests were recommended as certified by the Sustainable Forestry Initiative and Forest Stewardship Council.

There were Corrective Action Requests that will have to be completed before the next audit in 2012. There were three themes that encompassed the majority of these CARs – roads, retention and rutting. Another huge CAR involves a Chain of Custody. This is a major FSC CAR and will have to be completed within three months of the release of the final report (September 26).

NewPage has great interest in the CoC policy being completed so they can enter state forest into their certified wood supply.

As result of the audit, a group has met with the Natural Resource Police regarding harvesting of wild ginseng on state forests. This group included members from Forest

Service, Natural Heritage and MD Dept of Agriculture. The purpose was to make the NRP more aware of the ginseng harvesting issue.

The new SFI standards require a risk assessment that includes an internal audit. A checklist was developed that will include the ID Teams to examine a couple completed harvest sites against the standards. This checklist will be distributed to the team and will be open for comments on refinements.

Field Stop – Town Hill

The ID Team visited the Town Hill ORV proposal site – a six-mile loop. The volume of use is an issue and keeping users on the designated trails will be key to success for any ORV trail.

The ID Team reviewed the site and discussed the issues of this trail being used for ORV use and it is their opinion that this trail for ORV use would be unsustainable.

The use of old mine sites for ORV parks was discussed but no proposals were forwarded.

Also on this site, the team witnessed several trees that had lost their foliage. A large walking stick population was noticed but it is felt the damage is greater than any previous walking stick issues and may be caused by some other agent.

Field Stop - Little Orleans Horse Trail Proposal

A horse trail has been requested by a local campground owner. Two trail proposals were suggested – a long loop trail and a shorter loop trail. It is felt by the campground owner that an expanded trail accessible to horses would attract a larger number of campers.

The longer trail would enter into wildlands. The concern is that the number of users would degrade the area and especially the nearby streams and fish habitat. There most likely would be issues with exotic invasive plant introduction. Wildlife Management Area managers attempted to limit horse access to weekends but this was discontinued due to negative environmental impact issues.

The C&O Canal is open to horses and they are allowed on all GRSF roads. The neighboring campground would provide/develop horse-ready campsites and GRSF wouldn't have to. The trailhead would originate on the campground and lead onto GRSF. DNR Land Acquisition & Planning (LAP) is developing a licensing agreement for use in such situations.

Any trail project here would have to stay out of the flood plain to avoid water issues.

A possible connector trail from campground to GRSF to Yonkers. There may be a trouble spot with use of a connector. This would require seasonal and sediment restrictions.

The ID Team feels the long loop proposal should not be considered. The short loop may be acceptable with certain restrictions and could be recommended to the campground owner. A connector from the campsite to GRSF roads could be a good compromise and solution.

However, any revised proposal should be brought back to the ID Team for further consideration. The final concept should be seasonal access only and work with Wildlife & Heritage for seasonal limitations.

Field Stop - Kase Camp Herbicide Treatment

This area is along C&O Canal. The proposal is to treat with Arsenal to eliminate exotic species. There are some concerns with chorus frog habitat and the chemical response, but not sure of possible herp issues. This proposal may work considering the treatment of exotic plants may outweigh issues with the frog habitat. Knot weed is here and is very bad in some areas. Imazapyr is the chemical name, Habitat is the marketing name.

The proposal will require further research by the ID Team for use at this site and with species of concern.

Field Stop - Stafford Trail Harvest

This harvest will include retention islands. The stand age is 88 years. No real concerns from the ID Team, but was some question of oak regeneration levels. Retention areas have not been marked but will be identified as the harvest marking progresses.

Other Proposals Not Visited

Heritage had found a sharpshin hawk at Rock Lick Road site, but is not too concerned with the proposal. This hawk is a S2 species. The ID Team did not visit this site. Twigg Road, Gordan Road (coop with The Nature Conservancy) are other proposals and shale barren burns with the poisoning of invading hickory trees. There were no issues raised from the ID Team regarding these other proposals.



Martin O'Malley, Governor
John R. Griffin, Secretary

TO: GRSF Citizens Advisory Committee
FROM: Mark Beals
DATE: 23 August 2011
SUBJECT: Committee Meeting to Review new Long Term Sustainable Forestry Management Plan and FY-2013 AWP.

Hello GRSF Citizens Advisory Committee,

I hope this day finds you well. It is time to think about planning our annual meeting and review. This years meeting will involve a full agenda because I hope that it can serve as both the annual review of the proposed annual work plan and the official review of the new Long Term Sustainable Forestry Management Plan. I recognize the value of your time and do not want to burden your busy schedules more than necessary. I am grateful for your public service and contributions to the management of Green Ridge State Forest.

You should have received a copy of the draft Long Term Sustainable Forestry Management Plan for Green Ridge State Forest back in late April. Hopefully you have had time to review this plan. During this years meeting, I hope to answer any questions you may have regarding the plan and receive your comments and suggestions for amendments to the plan. I look forward to your feedback and discussion.

Prior to the meeting, you should receive a hard copy of the proposed FY-2013 AWP in the mail along with announcement of the meeting date and final agenda. Please review the work plan and bring it with you on the day of the review for your reference. In an effort to accommodate as many members as possible, please respond to me via email or telephone which of the following dates in September you could commit to attending this years meeting: September 14-16, 19-23, 26-28, 30. Please respond to be with your available dates by September 1 so that I can get back to you with a solid meeting date for your calendar.

Finally, please feel free to provide me with edits to the attached proposed agenda. I look forward to hearing from you soon.

Thanks
Mark



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Martin O'Malley, Governor
John R. Griffin, Secretary

**Green Ridge State Forest Advisory Board
FY-13 Annual Work Plan & Long Term Sustainable Forestry Management Plan
Review Agenda (*proposed*)**

September 27, 2011

- 08:30 Coffee & Donuts
- 09:00 Introductions & GRSF Updates
- 09:15 FSC&SFI Certification Audit and Status Update.
- 09:30 GRSF ORV Trail Update.
- 09:45 Overview Presentation of Long Term Sustainable Forestry Management Plan (LTSFMP).
- 10:00 Committee Discussion and Feedback on review of LTSFMP.
- 11:00 Overview Presentation on FY 2013 proposed Annual Work Plan
- 11:30 Committee Discussion and Field Tour Agenda development.
- 11:45 Lunch (provided).
- 12:15 Begin Field Tour (TBA)
- TBA Wrapup & adjourn



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Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
John R. Griffin, Secretary
Joseph P. Gill, Deputy Secretary

Green Ridge State Forest - Advisory Committee Meeting
FY-2013 Annual Work Plan Review
&
Long Term Sustainable Forestry Management Plan
September 27 2011

Attendees:

Mark Beals
Jesse Morgan
Bob Webster
Tom Dulz
Tom Mathews
Preston Stevens
Ed Gates
Louis Bernstein
Donnelle Keech

Forest Manger Introductions and Updates:

- Emerald Ash Borers were discovered at Green Ridge State Forest in multiple locations. In a combined effort with APHIS and MDA, 3-4 releases of parasitic wasps have taken place at each site. Species include: *Spathius agrili* and *Tetrastichus planipennis*.
- Substantial walking stick damage occurred in late summer on Town Hill, especially north of I-68.
- Significant hail damage occurred on Stafford Ridge and along Orleans Rd near Mertens Avenue.
- Chronic Wasting Disease (CWD) was detected last November in a deer taken from Green Ridge. All of Green Ridge is now part of a mandatory quarantine area, better described in the 2011-2012 MD Guide to Hunting and Trapping.
- The MD Forest Service and The Nature Conservancy have partnered in erosion and BMP study using the "rain maker" to help us better maintain our dirt road infrastructure on the forest.



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FY-2013 AWP

- P. Stevens advised that as of now, Rec. Trail money will not be available in the upcoming years.
- M. Beals spoke about how the loss of this Rec Trail Grant money as well as our ORV budget will result in loss of seasonal labor.

Beals spoke about the horse trail proposal as a result of growing public interest.

- explained exploring possible partnership with Little Orleans Campground to supply the kind of "horse friendly" camping the public has interest in with corrals, water, etc.

Briefly discussed ongoing ORV issue on public lands.

T. Dulz and others suggest that we enter into any future ORV or ATV ideas with a plan to earn enough revenue to fully fund enforcement as well as sustainably maintain the landscape.

L. Bernstein- Suggested that we re-incorporate the forest-wide vicinity map into the AWP with all of the sales on it to show perspective.

Beals spoke about the restoration project and on a shale barren within the forest and the prescribed burn scheduled to take place this November.

Beals explained the stand level data collection process and procedures.



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GRFS Long Term Sustainable Forestry Plan

Beals explained new terminology for certification and new zoning nomenclature.

T. Mathews suggested that the it read "Special Wildlife Management Area" instead of Special Wildlife Habitat Area" to clarify that specific management work is being carried out in these areas to promote certain species and they are not simply areas of natural undisturbed occurrences of the species.

T. Mathews explained the national designation of the Kirk Orchard as a Woodcock demonstration area for Allegany County.

Beals explained the possibility of using aerial application of herbicide to control invasive species in the Kasecamp Bottoms area.

T. Mathews and several others voiced in their opinion the Long Term Plan seems very redundant and should be edited down.

-Beals explained the plan writing process to everyone. It was also noted how this plan differs from the old in that it is intended to be an ongoing document that is to be continually updated and edited.

Several Members of the Green Ridge Advisory Committee are not comfortable with approving the submission of the Long Term Sustainable Plan until it is edited to remove redundancy and to flow better to the reader



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Western Maryland Forest Work Plans 2012

From: cpreb@comcast.net
Sent: Saturday, March 24, 2012 11:58 AM
To: Perdue, Jack
Cc: Michael Jackson
Subject: Western Maryland Forest Work Plans 2012

Jack,

I have taken the time to read your well documented work plans for the Savage, Potomac, and Green Ridge state forests. Thoughtful work by everyone who contributed. The objectives are realistic and obtainable.

The bike, hike, pedestrian venues are becoming more clear as recreational demands continue to change.

This is a very good report.

Carl Rebele,

Penn State, Forestry-1950

MDOT/MBPAC Committee since 1994

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. Implement the management work outlined in the Kasecamp Bottoms Habitat Plan provided it has been approved.**
- 2. Develop a habitat unit plan for the 910 acre Anthony's Ridge Special Wildlife Habitat Area to be reviewed during the FY-2014 AWP review process.**
- 3. Continue rotational mowing and brush management in approved grasslands and other wildlife openings.**
- 4. Work will continue to implement practices outlined in the Kirk Orchard Early Succession Wildlife Habitat Area plan to restore, enhance, and maintain an upland ecosystem.**

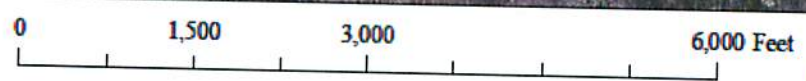
ECOSYSTEM RESTORATION PROJECTS

5. 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.
6. Development and implementation of an Invasive Species Management Plan for the State Forest to be attached to the long term Sustainable Forest Management Plan for Green Ridge State Forest.
7. Partner with DNR Wildlife Habitat Program to fund aerial herbicide application in the Kasecamp Bends area to control non-native invasive vegetation problem that exists. (See proposal map below)
8. Partner with DNR Heritage Division to implement ecosystem restoration practices for the Hanging Prairie ESA. (See proposal map below)

Kasecamp Bottoms Pesticide Spray Proposal



-  Spray Plots (26 Acres)
-  C&O Canal Hunter's Crossing
-  GRSF Boundary



1:15,000



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 2nd – 4th 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. GRSF staff will monitor turkey and ruffed grouse reproduction by recording observations per mileage driven from June 1 to September 30 within the forest.**
- 9. GRSF staff will work with Wildlife & Heritage Division to develop a bird monitoring program for the Kirk Orchard Early Successional Area to observe responses to habitat work. Golden-winged warber will be a focal species for monitoring.**
- 10. Maryland Department of Agriculture (MDA) will continue to monitor gypsy moth, hemlock wooly adelgid, and other insect pest populations on the forest.**
- 11. 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: \$250,000

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-2013: \$150,000

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 partnered with TNC on submitting two grant proposals that if awarded would bring an estimated \$75K - \$150K to the forest to go into restoring two state forest roads.

Another source of funding at GRSF is **Recreational Trail Grants**. These grants are competitive and are generally limited to \$30,000 per year per grant. The source of this funding is the Federal Department of Transportation administered through the Maryland Department of Transportation, State Highway Administration and available per approval award of grant. These funds are designated reimbursable funds. \$30,000

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-2011 budget proposal was prepared in August of 2009.

G. Staffing Cost

Classified Salaries, Wages and Benefits, Estimated: \$250,000

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.

H. 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.

I. 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.

J. 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. As described, these figures will vary from year to year. A more detailed picture on revenues and operational cost will be provided within each Annual Work Plan and an annual report prepared by the Land Manager. 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).