

GREEN RIDGE STATE FOREST

ANNUAL WORK PLAN

FISCAL YEAR 2012

Prepared:	<u>Mark D. Beak</u> (Forest Manager)	<u>8/23/11</u> Date
Reviewed:	<u>Robert Deery</u> (Regional Manager)	<u>8-29-11</u> Date
Reviewed:	<u>J. F. West</u> (Land Acquisition & Planning)	<u>9/13/11</u> Date
Approved:	<u>[Signature]</u> (Environmental Specialist)	<u>9.14.11</u> Date

State Forest Annual Work Plan Contents

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. Ecosystem Restoration Projects

Includes projects to manage exotic invasive species, efforts to restore shale barrens or other natural habitats, and other such activities aimed at improving ecosystems.

I. Monitoring Projects

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

J. 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 47,000 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 2012 AWP Summary

This work plan includes seven silviculture proposals for a total of 277 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 115 acres of variable retention harvests for an estimated 402mbf of hardwood timber. An additional 31 acres are proposed as a pine salvage and is estimated to yield 93mbf of hardwood and hard pine timber. An additional 37 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 Kasecamp Bottoms Unit Plan, Zumbrun Overlook Deck and Parking Area Construction Project and a Paired Watershed Comparison and Long-term Monitoring Study. The Kasecamp Bottoms Unit Plan is a Habitat restoration plan that will focus on American Woodcock Habitat and other early succession habitat species.

The Zumbrun Overlook project is a proposal that will create access, a stabilized parking area, and an appealing observation deck at the Zumbrun Overlook for forest visitors to enjoy. The Overlook project will also include interpretive signs to educate visitors about the forest trails and Polish Mountain natural and cultural heritage assets. The Overlook also serves as the intersection of the Great Eastern Trail and the Green Ridge Mountain Bike Trail.

The Paired Watershed Comparison and Long-term Monitoring Study will be a partnership between MD DNR and WVU's Forest Resource Management Program. This study will include a long term monitoring program and will allow us to study the impacts of silvicultural practices on the watershed as well as the effectiveness of current forest harvesting BMPs.

In addition to the above projects, maintenance, recreation, ecosystem restoration, watershed improvement, and monitoring 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. Recover 3 miles of Boundary Repaint 20 miles of existing state forest boundary.
2. Install an observation deck and stabilized parking area for the Zumbrun Overlook.
3. Upgrade Electric Service in GRSF Wood & Radio shops
4. Remove non historic additions, stabilize and secure "old foresters cabin" located at Fifteen Mile Creek Boys Camp.
5. Continue process to Raze Maple Run Boys Camp.
6. Continue to maintain 100 primitive camp sites.
7. Continue to maintain public shooting range.
8. Continue to maintain viewsheds on 5 overlooks.
9. Continue to maintain 4 handicap hunter access roads.

Recreation Projects

- 1. Develop the new Zumbrun Overlook on Polish Mountain to construct an observation deck, a stabilized parking access and erect interpretive signage along a short section of trail to promote natural and cultural heritage assets of the site.**
- 2. The Great Eastern Trail will be installed, marked, and open for foot traffic.**
- 3. Maintain approximately 60 miles of trails including 30 miles of hiking trails, 12 miles of mountain bike trail, and 16.4 mile ORV trail.**
- 4. Continue to enhance upland game hunting opportunities by enhancing early successional wildlife habitat at Kirk Orchard, Bull Ring Ranch, Malcolm Road, and Kasecamp Bottomlands.**
- 5. Provide 2-4 guided interpretive tours on the forest to share management principles and practices with the public.**
- 6. Work with Fresh Water Fisheries Dept. to host a trout fishing program for local school groups.**
- 7. Develop a virtual geocaching projects to interpret county and state Big Tree champions within the forest as well as other natural and cultural heritage assets of the forest.**

2011 NATIONAL RECREATIONAL TRAILS FUNDING APPLICATION

1. Project Sponsor (Applicant):

Please provide contact information for entity and project manager.

Government / non-profit entity: State of Maryland DNR-Forest Service

Name of project manager: Mark Beals

Title: Manager of Green Ridge State Forest (GRSF)

Organization: Maryland Forest Service

Address: 28700 Headquarters Drive NE, Flintstone, MD 21530

Phone: 301-478-3124

Fax: 301-478-2564

E-mail: mbeals@dnr.state.md.us

2. Project name: Zumbrun Overlook Observation Deck

3. Project location

The Zumbrun Overlook is located on the west side of Troutman Road on Polish Mountain. The project is within the boundaries of Green Ridge State Forest, Allegany County, MD. (See attached location Map).

4. Trail Type

May check more than one.

Motorized Trail

Diversified Trail

Non-motorized Trail

Transportation Trail (diversified trail designed for bicyclists and pedestrians to connect destinations. Go to <http://www.mdot.maryland.gov/Planning/Trails/trails.html> for more information)

5. Project Type

Maintenance / Restoration of existing trail

Construction of new trails

Relocation of existing trail

Development and rehabilitation of trailside facilities and trail linkages

Purchase and lease of trail construction equipment

Lease or acquisition of easements or property for recreational trails or corridors

Implementation of interpretive/educational programs to promote intrinsic

qualities, alternative transportation, safety, and environmental protection, as those objectives relate to the use of recreational trails

6. Abstract

This project will provide funding to construct and stabilize an observation deck at the newly established Zumbrun Scenic Vista and provide good access to the overlook from the motorized trail (Troutman Road), The Great Eastern Trail and the GRSF Mountain Bike Trail. This observation deck will be placed near the intersection of the Great Eastern Trail (GET) and the GRSF Mountain Bike Trail while providing convenient access to motorists via Troutman Road. This project will also include development and installation of interpretive signage to interpret the unique natural and cultural heritage assets of the site.

This project benefits the recreational trail user by improving access and function of the overlook, and providing a comfortable observation deck and resting area to enjoy a picnic or recreation break in a scenic and tranquil environment. Furthermore, this project benefits the recreational trail user by establishing a short interpretive loop trail that motorists can easily access for a brief outdoor recreational experience in close proximity to Interstate 68.

7. Project Summary

The project will include materials and construction of a wood construction observation deck, split rail fencing around the parking lot access, and interpretive signage for the trail head and unique natural heritage assets along the trail. The project will also fund one contractual trail specialist position to assist with completion of the project.

The GRSF visitors center currently receives an estimated 100,000 visitors per year. Of these visitors, one frequent request that is underserved is the opportunity for travelers to take in a relatively short interpretive loop hiking trail. This project will provide that niche for visitors while also serving the GET and GRSF Mountain Bike Trail users.

The project area has been evaluated and determined not to include known environmentally sensitive areas.

The project will enhance natural heritage and eco-tourism opportunities within the economically repressed Appalachia Maryland Region. GRSF is considered a gateway to the Appalachian Forest Heritage Area (AFHA) which is a fifteen county area including Garrett and Allegany Counties of Maryland. The project area is approximately 2 miles north of and overlooks the National Road designated byway. Furthermore, the Zumbrun Vista overlooks Flintstone which is a destination point for the GET users traveling north on the trail.

8. Project property ownership

All work funded by this grant will be conducted within the boundaries of Green Ridge State Forest, which is owned by the State of Maryland and managed by the Department of Natural Resources.

9. Project Length, Width, Surface

The observation deck will be approximately 10' x 20' and include a 36" high hand rail all the way around. The deck will be ½ to 2 foot above ground surface to level on 6X6 pole construction. Entire deck will be constructed of 2" stock pressure treated construction lumber. The specific design and construction will be coordinated with MD DNR's Engineering and Construction unit. A qualified person will provide engineering drawings before the deck is constructed.

Three to four interpretive signs will be developed and installed at the overlook and along the trail to interpret eco-tourism assets. Approximately 200 linear feet of split rail fencing will be installed around the overlook parking area. An approximately two mile loop trail will be identified and established using the existing trail and unimproved Troutman Road. This Project will last for 12 months and coincide with state fiscal year.

10. Prior Projects

Green Ridge has been awarded National Recreational Trail Grants to maintain the existing recreation trail resources for at least the past seven years including RT06-44, RT07-43, RT08-42, and RT09-23. The level of maintenance of these recreation resources would not be sustainable without the grant. In addition to these annual labor grants, GRSF has been awarded other NRT grants including: RT-09-43 Trail Infrastructure Rehabilitation \$30K for labor and materials to rehab signs, bridges etc... funding was not approved until November of 2009 so the labor portion will not be closed out until December 2010.

RT-10-41 Vault Toilets \$30K to purchase and install 2 vault toilet facilities along trails on GRSF. Awarded and funded. Project will commence July 1, 2010.

RT-10-25 GRSF Labor Grant. Awarded and funded. Project will commence July 1, 2010.

11. Work Plan

Although program does not cover, please include planning and design, if not completed yet.

Milestone / Task	Start Date	Duration	Responsible Party	Justification
Project review for vista development	July 2009	6 mos.	GRSF Interdisciplinary team	Project named by Board of Public Works and site approved by DNR Interdisciplinary Team.
Site cleared for vista & access	March 2010	3 mos.	GRSF staff manage contract for clearing with operational budget.	Clearing will be completed by May 2010
Hire contractual trail specialist	July 2011	10 mos.	Mark Beals	Money available July 1 and contracts authorized for 10 months max. per state policy.
Purchase materials for project & complete project.	July 2011	10 mos.	NRTG Staff	Money available July 1 and work will be completed over 10 mos. Contract period. Winter weather may dictate project to be finished in the spring of 2012.
Grant Closeout	May 2012	1 mos.	Mark Beals	Grant closeout will be completed by June 1, 2012 provided funding is approved to follow state fiscal year.

12. Budget

Cost Breakdown for Federal Funds Requested (80%)

#	Description	Amt. Request Total	Required Match (20%)	Total (100%)
1	Contractual Trail Maintenance Specialist @ \$13/hr + social security & workers comp. ins.	\$17,000.00	\$3400.00	\$20,400.00
2	Supplies and materials for deck, fencing, and signs.	\$13,000.00	\$2600.00	\$15,600.00
	Total	\$30,000.00	\$6000.00	\$36,000

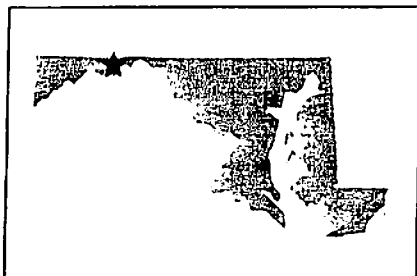
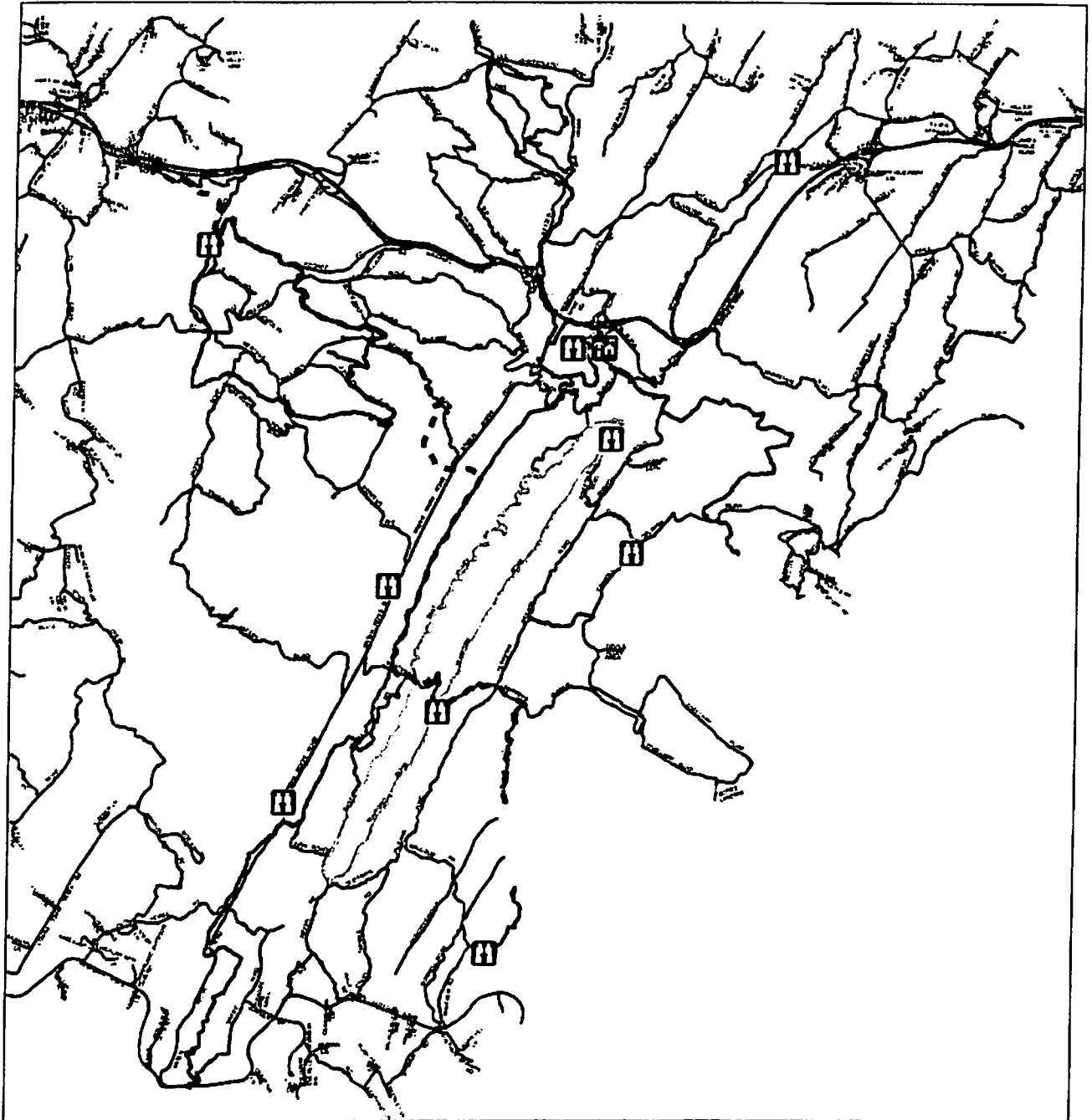
Matching Funds (20%)

Source	Type (cash or in-kind)	Description including Hours and rate	Total
GRSF Operational Budget Funds	Cash	Trail maintenance staff at \$13/hr for 450 hours + social security & workers comp. ins.	\$6000.00
Total			\$6000.00

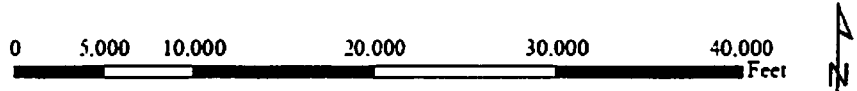
13. Submission

Applications should be submitted to your Trail Grant Coordinator by March 31, 2010. In early August, the Recreational Trail Advisory Committee will meet to review projects. Applicants will be notified concerning awards during the fall of 2010.

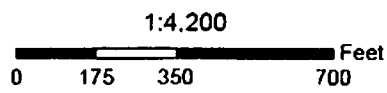
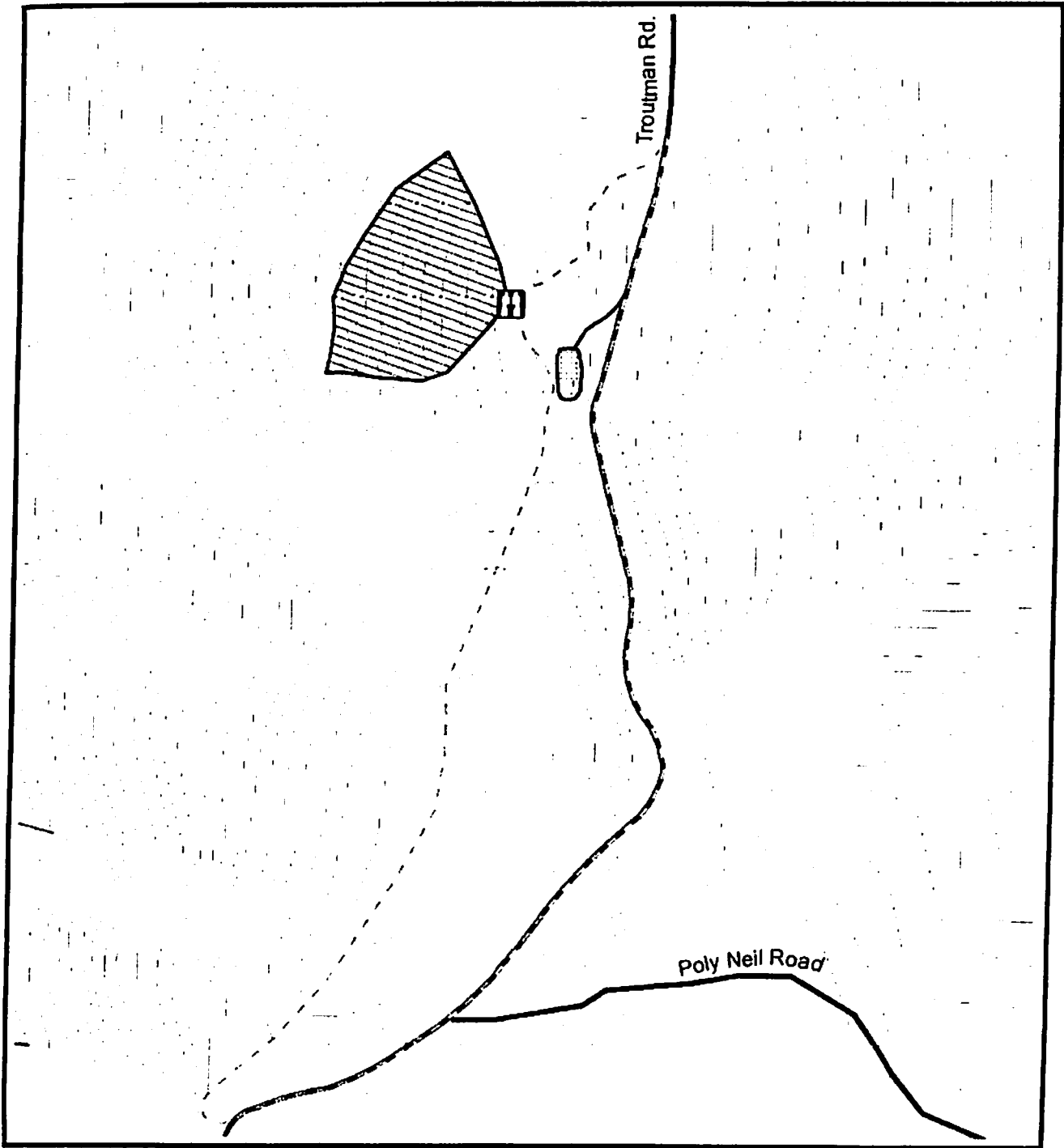
Green Ridge State Forest: Trails and Overlooks



- | | | |
|-------------------------|-----------------|-------------------|
| --- Great Eastern Trail | ----- ORV Trail | GRSF Headquarters |
| — 4-Mile Loop | — Hiking Trails | Overlook |
| — Mtn. Bike Trail | — Roads | GRSF Boundary |



Zumbrun Overlook



Legend	
	Observation Deck
	Overlook Loop Trail
	Cleared Area
	Parking Lot

SPECIAL PROJECTS

1. Complete Long term sustainable management plan along with stand level data database for the forest.
2. Identify, release, fertilize, and prune fruit trees within the forest to enhance wildlife habitat and maintain remnant of apple heritage at GRSF.
3. Continue to develop partnership with Volunteer Team Incorporated to keep the spirit of service alive on the forest and to reconnect people to the land.

Network with Maryland DNR agencies:

1. Town Creek Watershed Project (Forest Service)
2. Information and Education Programs including Arbor Day, Project Learning Tree, Becoming an Outdoors Woman, Natural Resources Awareness Camp Hickory, etc...
3. Cooperate with DNR-Fresh Water Fisheries to maintain & improve angling opportunities and access.
4. Collaborate with DNR-Wildlife Division to develop upland habitat sites ie. Field mowing rotations, brush pile management, and field plantings.
5. Work with Heritage biologists to identify, map, and develop management descriptions for Ecologically Sensitive Areas (ESAs), and High Conservation Value Forest (HCVF)

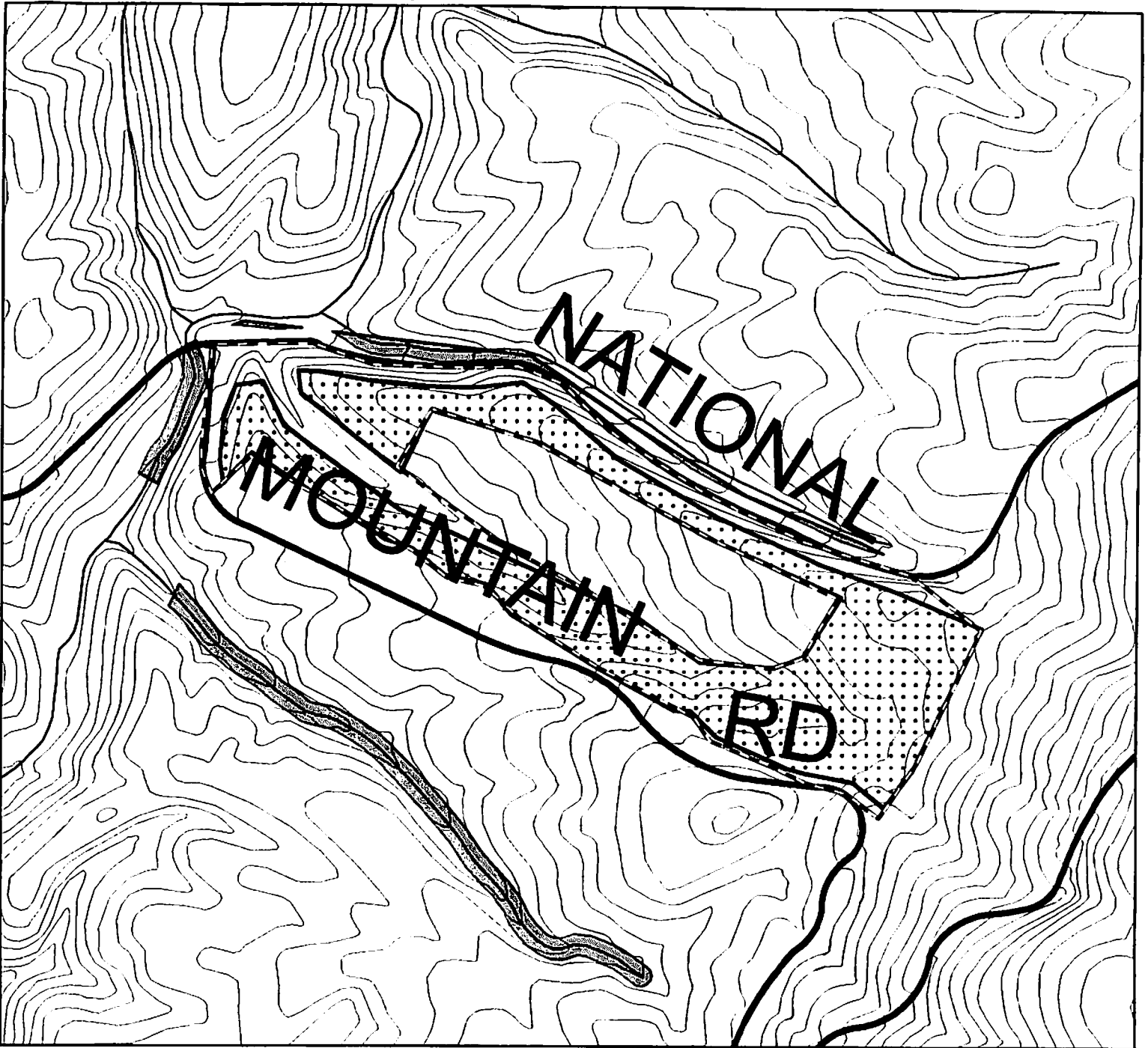
Network with Universities, Colleges, and Conservation Organizations: GRSF is committed to being a “teaching forest” through forest management tours for the general public, hosting agency training sessions, service learning projects, and serving as natural laboratory for schools and universities.

1. Partnership with WVU’s Forest Resources Management Dept. to establish and maintain a long-term forest hydrology research project on the forest.
2. Maintain working relationship with Garrett College – Forestry classes use forest as training laboratory and implement practices directed by Forest Manager.
3. 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.
4. Continue participation with Appalachian Forest Heritage Area (AFHA) Forest Manager serves as Executive Board member.
5. 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.
6. Cooperate with American Chestnut Foundation. GRSF staff continue to maintain 50- tree American Chestnut plantation at Kirk Orchard.
7. Continue partnership with Wildlife Institute to work on Appalachian Mountain Woodcock Initiative to enhance American Woodcock habitat on the forest.

Special Outreach:

1. Finding representatives of indigenous people that may have traditionally been on the forest for consultation of traditional uses on the forest.

FY-2012 Proposed Harvest Mountain Road







Compartment - 40
 Managed Area - 53 Acres
 Harvest Area - 39 Acres
 Age - 96 years
 Type - Mixed Oak
 TPA - 246
 AGS - 58 sq ft
 Stocking - 82%
 Growth Rate - <2%
 Soil Type - Klinesville Loam
 Site Index - 70
 VMS - Low
 ROS - Roaded Natural
 Composition - CO - 31%
 SO - 19%
 RO - 13%

1 inch equals 660 feet



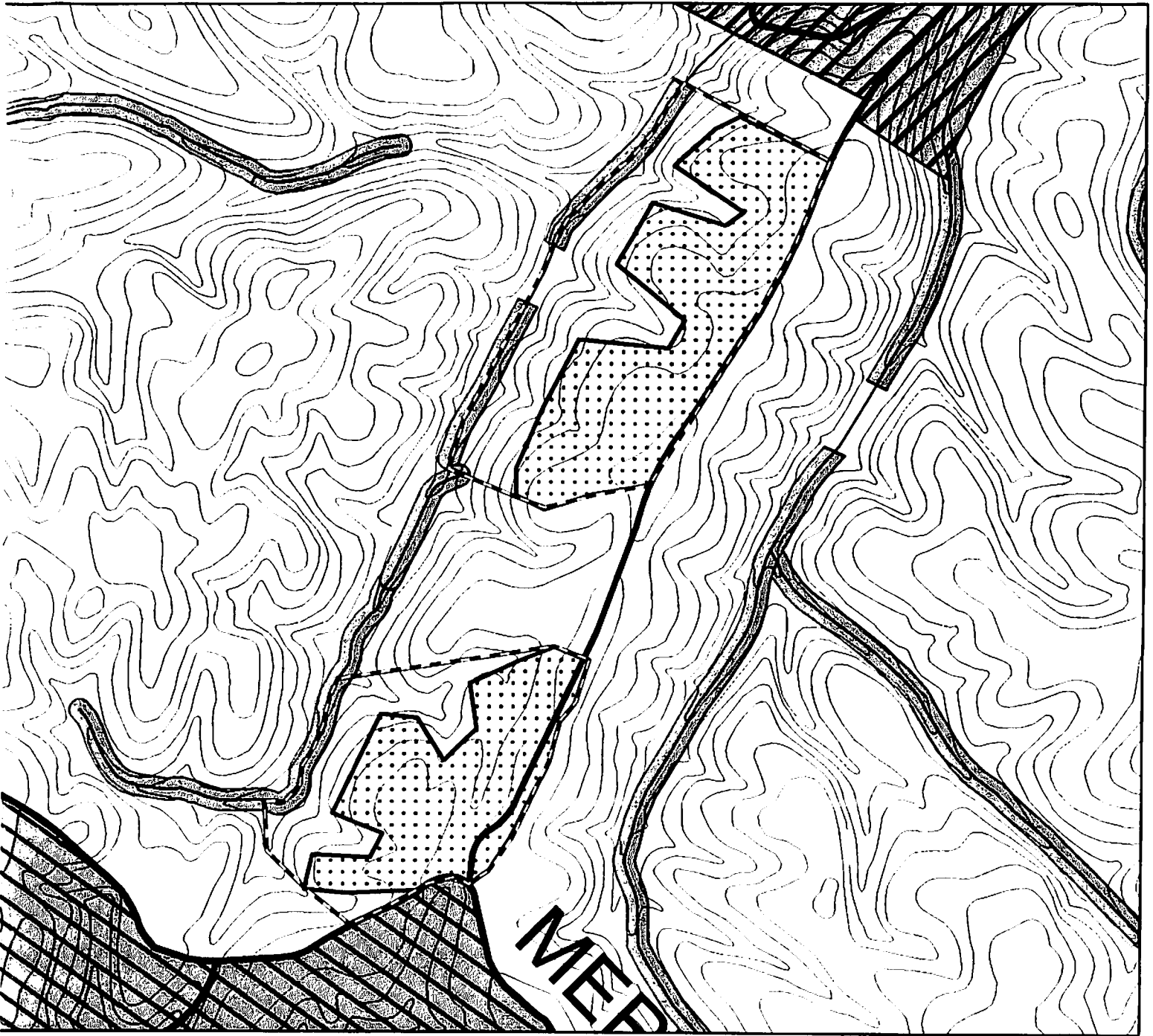
Silvicultural Prescription:
 Variable Retention - Retain 10% of the original stand in patches and retain legacy trees. Regenerate the remainder of the stand. Oak regeneration is adequate. All hickory, white pine, flowering dogwood, and serviceberry will be retained.

Legend

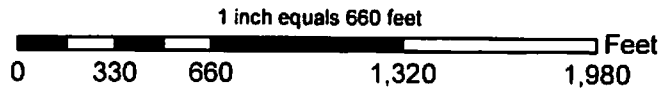
-  Managed Area
-  Harvest Area
-  Wildlands
-  OGEMA
-  ESA
-  HCVF
-  GRSF Boundary



FY-2012 Proposed Harvest Gordon Road



Compartment - 14
 Managed Area - 67 acres
 Harvest Area - 41 acres
 Age - 95 years
 Type - Mixed Oak
 TPA - 204
 AGS - 56 sq. ft.
 Stocking - 105%
 Growth Rate - 2.1%
 Soil Type - Weikert
 Site Index - 70
 VMS - Low
 ROS - Roaded Natural
 Composition - SO-49%,
 WO-24%



Silvicultural Prescription:

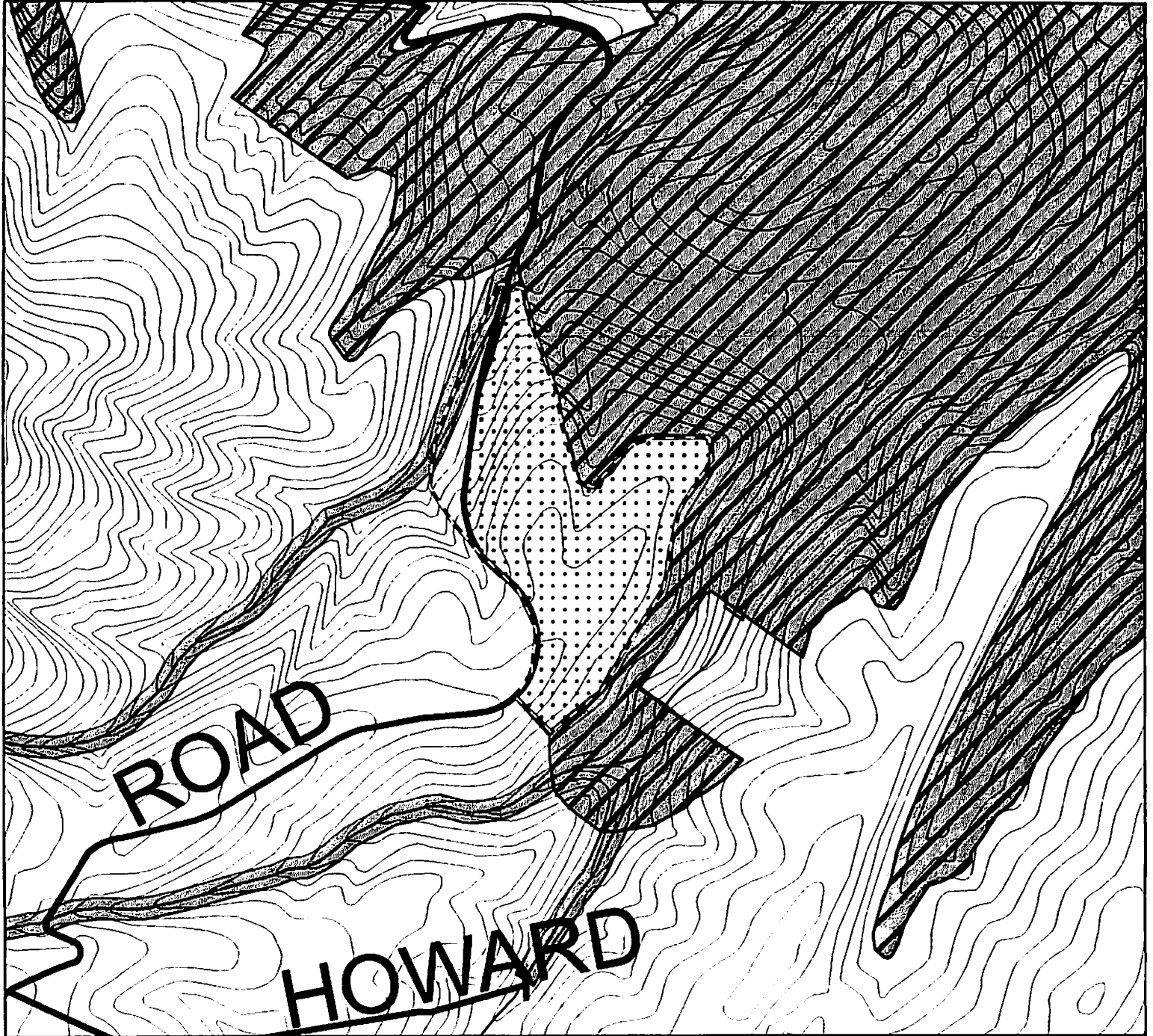
Variable Retention - Retain 10%
 of the original stand in patches and
 retain legacy trees. Regenerate the
 remainder of the stand. Oak
 regeneration is adequate. All
 hickory, white pine, flowering
 dogwood, and serviceberry will
 be retained.

Legend

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



FY-2012 Proposed Harvest Dughill Road



1 inch equals 660 feet



Compartment - 49
 Managed Area - 27 acres
 Harvest Area - 26 acres
 Age - 95 years
 Type - Mixed Oak
 TPA - 173
 AGS - 71 sq. ft.
 Stocking - 115%
 Growth Rate - <2%
 Soil Type - Calvin\Lehew Loam
 Site Index - 75
 VMS - High
 ROS - Roded Natural
 Composition - SO - 43%
 WO - 20%

Silvicultural Prescription:

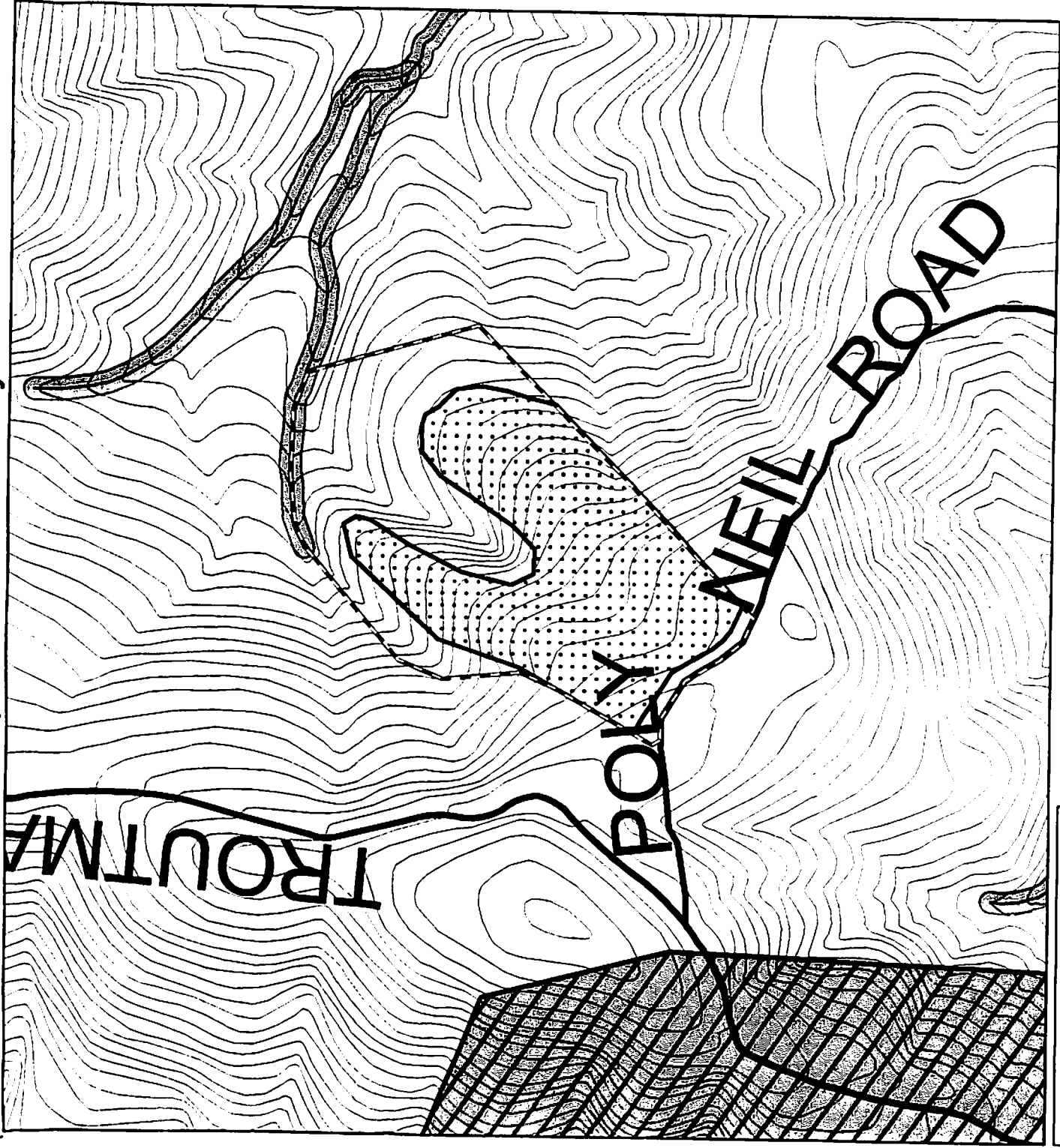
Variable Retention - Retain 10% of the original stand in patches and retain legacy trees. Regenerate the remainder of the stand. Oak regeneration is adequate. All hickory, white pine, flowering dogwood, and serviceberry will be retained.

Legend

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



FY-2012 Proposed Harvest Poly Neil Road



Compartment - 40
 Managed Area - 54 Acres
 Harvest Area - 32 Acres
 Age - 102 years
 Type - Mixed Oak
 TPA - 354
 AGS - 64 sq ft
 Stocking - 110%
 Growth Rate - <2%
 Soil Type - Calvin
 Site Index - 60
 VMS - Low
 ROS - Roaded Natural
 Composition - CO-37%
 SO-24%



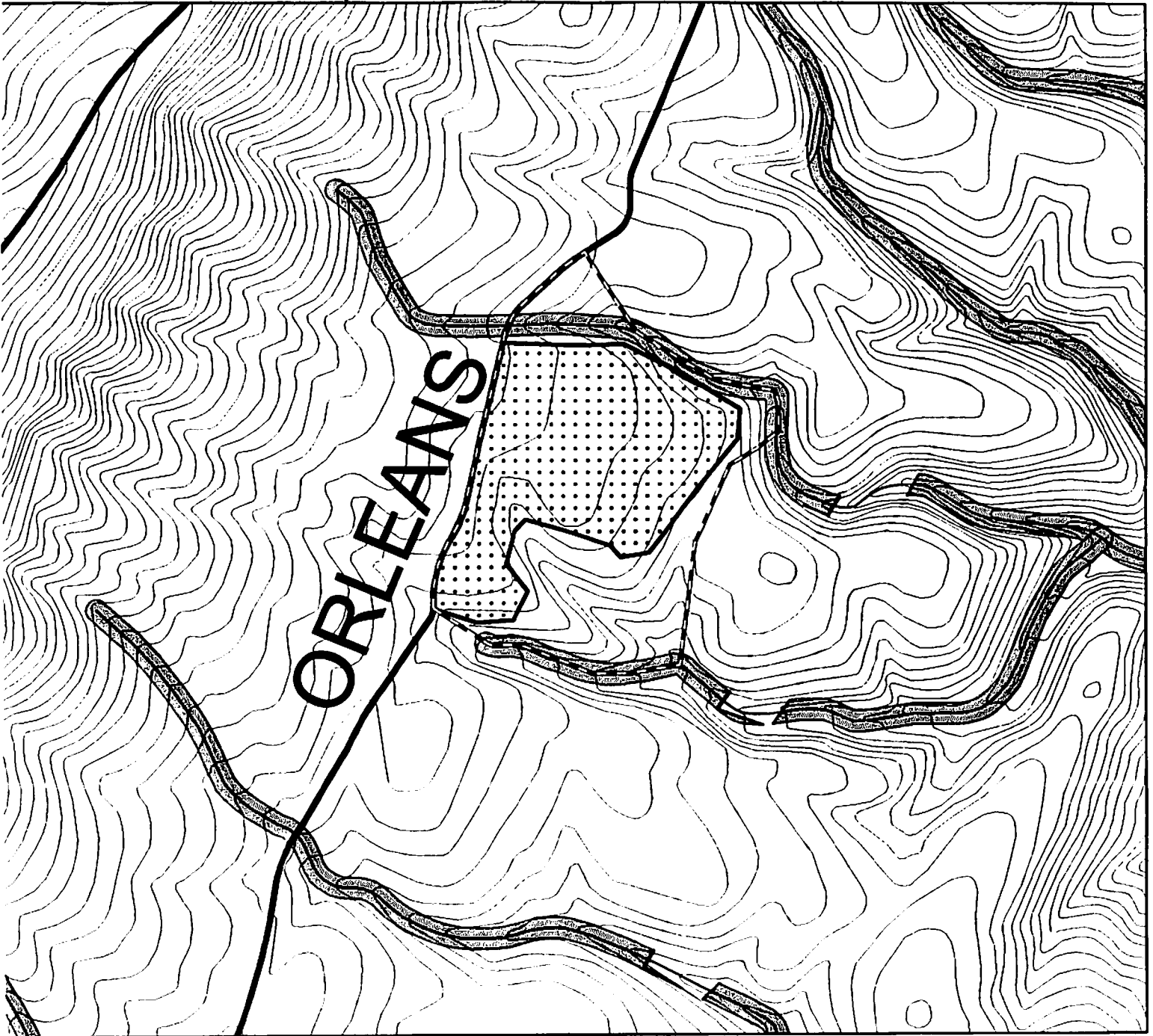
Silvicultural Prescription:
 Variable Retention - Retain 10% of the original stand in patches and remain legacy trees. Regenerate the remainder of the stand. Oak regeneration is adequate. All hickory, white pine, flowering dogwood, and serviceberry will be retained.

Legend

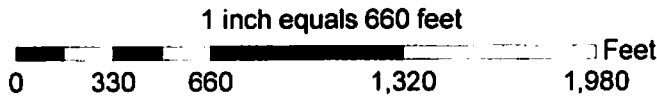
- Managed Area
- Harvest Area
- HCVF
- Wildlands
- OGEMA
- ESA
- GRSF Boundary



FY-2012 Proposed Harvest Oldtown/Orleans Road



Compartment - 51
Managed Area - 42 acres
Harvest Area - 24 acres
Age - 49 years
Type - Mixed Oak
TPA - 382
AGS - 86 sq. ft.
Stocking - 110+%
Growth Rate - 3%
Soil Type - Weikert
Site Index - 75
VMS - Low
ROS - Roaded Natural
**Composition - SO-57%,
 RM-17%**



Silvicultural Prescription:

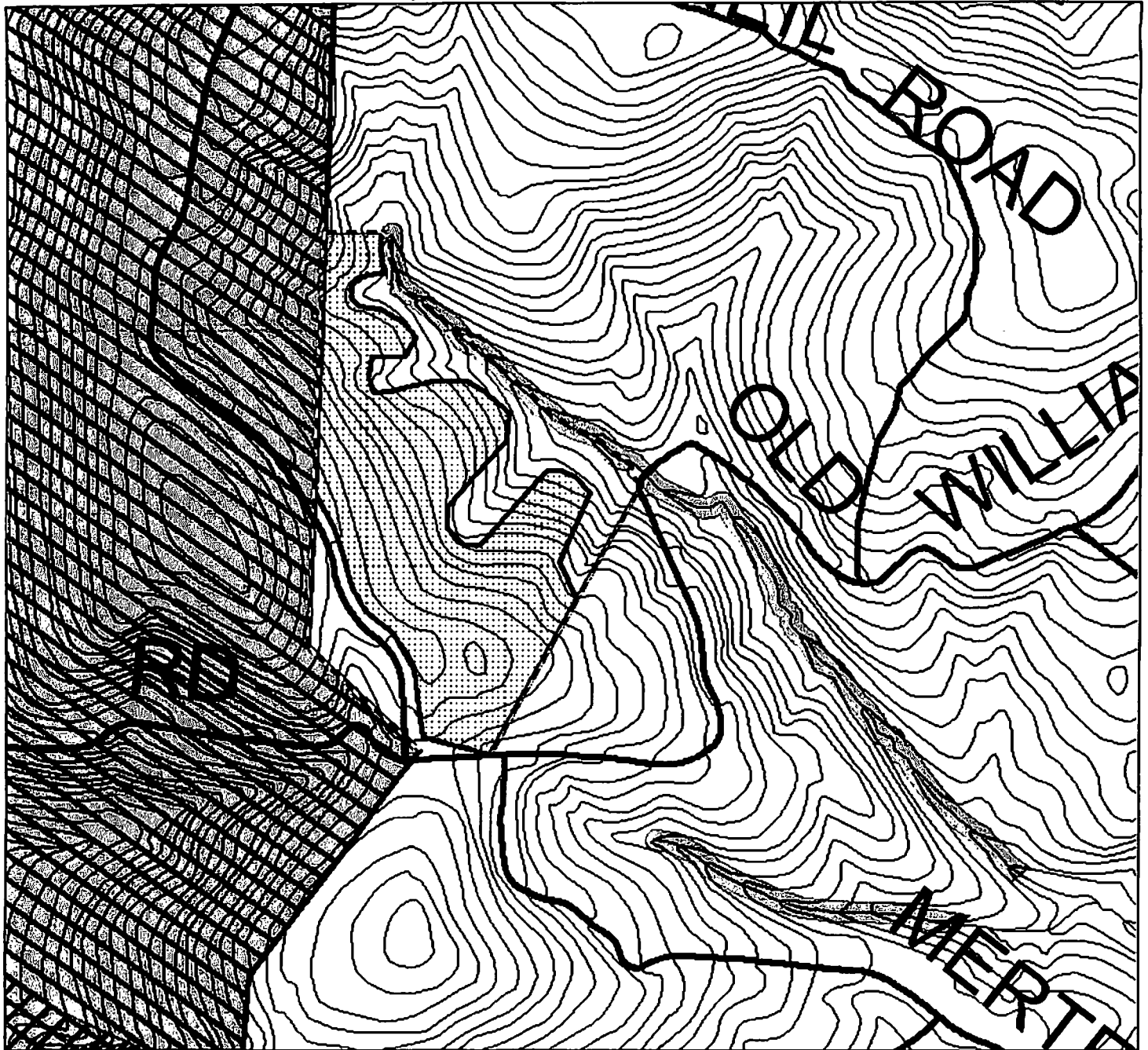
TSI Thinning - Remove 82 sq. ft. of basal area to achieve B-level stocking. Red maple and other undesirable species will be targeted for removal. This will reduce stress and enhance growth on the residual stand of mixed oaks.

Legend

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



FY-2012 Proposed Harvest Troutman Road



Compartment - 40
 Managed Area - 54 Acres
 Harvest Area - 37 Acres
 Age - 108 years
 Type - Mixed Oak
 TPA - 214
 AGS - 34 sq ft
 Stocking - 100%
 Growth Rate - <2%
 Soil Type - Weikert/Dekalb
 Site Index - 68
 VMS - Low
 ROS - Roaded Natural
 Composition - SO-43%
 CO-41%

1 inch equals 678 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
- HCVF
- Wildlands
- OGEMA
- ESA
- GRSF Boundary



REVIEW SUMMARY

COMPARTMENT #38 – Kasecamp Bottoms.

A 23-acre single tree and group selection harvest.

ID TEAM: Decided to table this proposal until Kasecamp Unit Plan is approved and prescription can be better illustrated.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proposal removed from the FY-2012 work plan and additional proposal added below (Troutman Road).

COMPARTMENT #40– Mountain Road

A 39-acre variable retention harvest.

ID TEAM: No specific concerns.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.

COMPARTMENT #14 – Gordon Road

A 41-acre variable retention harvest.

ID TEAM: No specific concerns.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.

COMPARTMENT #49 – Dughill Rd

A 26-acre variable retention.

ID TEAM: Recommend to follow up with Rx fire to promote lupine and table mountain pine.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned and work with heritage to complete a Rx burn on site to promote lupine and table mountain pine.

COMPARTMENT #37 – Poly Neil Road

A 32-acre variable retention harvest.

ID TEAM: No specific concerns.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.

COMPARTMENT #51 – Oldtown Orleans Rd

A 24-acre timber stand improvement.

ID TEAM: No specific concerns.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.

COMPARTMENT #40 – Troutman Road

A 37-acre variable retention. This proposal was added to replace Kasecamp Bottoms proposal.

ID TEAM: No specific concerns.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.



MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

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

**Green Ridge State Forest
DNR-ID Team
FY-12 Annual Work Plan Review
Agenda**

August 17, 2010

09:00: Coffee & GRSF Update.

09:30: Review FY 2012 proposed Annual Work Plan.

10:15: Visit Dug Hill Road Proposal.

10:50: Visit Oldtown Orleans Road Proposal & active thinning.

11:30: Visit Kasecamp Bottoms to discuss harvest proposal and woodcock habitat plan.

12:00: Lunch @ Bond's Landing.

13:00: Visit Zumbrun Overlook project & Polyneil Timber proposal. Discuss watershed study.

14:00 Wrap up review.

14:30 Adjourn



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Green Ridge State Forest
ID Team annual work plan FY 2012
August 17, 2010

Attendance: Mark Beals, Mike Deckelbaum, Jim Mullen, Jim Kahl (MDE), Rob Felt, Bob Webster, Nicole Sisler, Jack Perdue, Jesse Morgan, Rick Latshaw, Ed Thompson, Alan Klotz

Forest Certification

currently working on forest resource management plan and inventory system. Inventory work began through work with eCognition and heads-up digitizing. And have digitized 1700 stands.

Nicole Sisler is working on a paired watershed study and doing GIS work to digitize stands.

Data Collection.

To date has collected 30 plots and now collecting over story data. Understory data will be collected in preparation for the annual work plans not part of the ongoing inventory are collecting about 30 plots per day with about 30 plots per stand.

Annual Work Plan Proposals

Dug Hill Road - has been on the site needs a fire treatment but has been some concern. To gain more use of fire ecological benefit state forest managers should work through the regional fire manager Rick Lillard.

Kase Camp Bottoms – planned harvest and woodcock habitat work.

Zumbrun Overlook – site work will be reviewed.

ATVs – the DNR ORV report has been completed with recommendations and is awaiting action to be taken by the Secretary. An alternative site is being considered at Kitzmiller that will hopefully divert some use off of the state forest trails or even allow their closure. That site is about 1 hour and 45 minutes away, so not sure what affect will may have on GRSF. There has been new legislation passed that will require titling of newly purchased ATVs.

John Wilson (LAP) was absent from the meeting but did send some comments (see below) ahead for the groups consideration.

- Overall, the 2012 AWP presents a multi-objective approach to forest management by including recreation, monitoring, water quality and wildlife enhancements as well as silvicultural projects.
- I would like to review a copy of the proposed Paired Watershed Comparison and Long-Term Monitoring Study. *Can get him a copy.*
- What is the status of the proposal to raze the Maple Run Boys Camp? *Not much.*

- What segment of the Great Eastern Trail will be implemented in FY 2012? *Hopefully all of it.*
- What is the status of the Sustainable Forest Management Plan and the anticipated time-frame for the review of a draft by the ID team? *See above references. Draft is expected to be completed in September and ID Team will be able to review in October.*
- Under special projects, what site is proposed to be harvested by the Alleghany College of Maryland-Forestry Program? *Unknown at this time. Possibly at Anthony's Ridge. Hopefully at Kirks Orchard.*
- Where can I find the results of the monitoring projects that are listed in the AWP? Who receives the results of the monitoring projects? *Results held by the organizations doing the monitoring projects, e.g. Fisheries, Wildlife & Heritage. Much of this monitoring is on-going. GRSF staff will gather these and keep them at GR as well.*

Heavenly Lane – there are issues with hunter access. Jim Mullan requested a site visit.

DNR Access For All Permit – new single permit disabilities permits available from Fair Practices Office. Also serves as free Park pass for people with disabilities. It is available online. Allows access to State Parks and other DNR lands which may lead to greater access to disability hunting areas. Land managers should be aware of this.

Tunnel Hill – there has been a request to do work on access here. Due to rutting in the road, access has become difficult. The Kessler Tunnel bat study access is the purpose for this specific access improvement request. GRSF would like to maintain a limited access to this area. The Wildlands legislation allows the maintenance of fire roads.

Field Tour

Dug Hill Rd

Variable retention harvest proposal with retention of conifers. Harvest could possibly include some trees right along the roadside. Lupin has been found near this site. To benefit the lupin an ecological fire is suggested. We need to seek sources such as The Nature Conservancy or Blackwater Wildlife Refuge, or the PA Prescribed Council for advice on this use of ecological use of fire. Wildlife & Heritage is willing to commit staff to assist with the fire treatment. There is some table mountain pine on this site. The team needs to do some research on best management practices for table mountain pine. It will include the use of fire. It may require some discussion with the state and regional fire managers to make this kind of treatment possible.

Old Town / Orleans Rd

There was not much discussion regarding this proposal. It was agreed to proceed as proposed.

Kase Camp Bottom

This site involves woodcock habitat management. Traditional woodcock habitat management involves rotating small patch clearcuts. The forest manager is considering

some overstory removal to open the forest floor. Paw paw is in the understory. Invasive plants are a concern. Invasives are a common concern here. Ed Thompson (Heritage) wants to be involved in specifications of the site management. Bill Harvey (Wildlife) has visited the site and has commented on it.

Paired Watershed Study – Nicole Sisler is working on a graduate degree under Dr. Zag at West Virginia University. This will involve second order streams using isotopic hydrographs. Each storm has a signature which will allow an analysis of how storms move through the canopy and down through the stream and deposited.

Boundary Issues – Heaven's Lane. Private landowner will not recognize state forest boundary paint and is painting over state paint.

Summary

Kasecamp Bottom proposal – no concerns with original proposal but suggested harvest does raise some issues. Jim Mullan suggested a two phase approach. Phase I would be activated in FY12 and Phase II (harvest portion) after further research and consideration. The upland area would pose no problem but the lower areas will need further consideration. It was agreed that an emailed update should be sent to the ID Team before the final proposal is accepted.

Oldtown-Orleans Road and Dughill Road proposals were accepted as proposed. There are some interests in better utilizing prescribed fire in management.

Sites not visited include: Mountain Road, Polyneil Road (watershed study), Gordon Road proposals had no concerns from the ID Team.

Tunnel Hill Road access for bat research. Heritage wants to look at the road, but has no problem with the proposal. Wildlife has no problem with the access if natural materials are used to stabilize the site.

Heritage is interested in shale barren restoration. Since there has been no fire in these areas, succession is occurring here with pignut hickory (herbicide injections), hackberry and tree of heaven having been an issue. Hanging Prairie and Turkey Camp shale barrens are of particular interest. Prescribed fire is needed here. It was suggested that the ID Team visit some of the shale barrens next year.

The proposal maps have changed slightly in that the GIS data layers used in preparing the maps are detailed in the legend so that reviewers can determine where management zones lie.



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

Mr. Dale Sipes
10954 High Germany Road
Little Orleans, MD 21766

Hello GRSF Citizens Advisory Committee,

It is that time of year again, fall is in the air and the forest is alive with color and wildlife scampering about preparing for the coming winter. This has also become a traditionally good time to conduct the GRSF AWP review and field tour. The GRSF Citizens Advisory Committee meeting is scheduled for Monday, October 18, 2010. Coffee and other refreshment will be available at the GRSF office at 8:30 am and the meeting will officially begin at 9:00 am. A tentative agenda for the day is attached.

Please contact the GRSF office prior to October 14 to confirm your attendance for the meeting so that we can prepare for the provided lunches. I hope that all of you are available to spend the day on the forest and I look forward to your input on the management of Green Ridge State Forest.

Sincerely,

Mark D. Beals
Forest Manager



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

**Green Ridge State Forest
Advisory Board
FY-12 Annual Work Plan Review
Agenda**

October 18, 2010

- 08:30 Coffee & Donuts
- 09:00 Introductions & GRSF Updates
- 09:15 Status Update on State Forest Planning & Certification
- 09:30 Review FY 2012 proposed Annual Work Plan
- 11:00 Visit Dug Hill Road Proposal.
- 11:30 Visit Oldtown Orleans Road Thinning Operation
- 12:00 Lunch at Bond's Landing (bagged lunch provided).
- 12:45 Visit Kasecamp Bottoms to discuss woodcock habitat plan and Wildlife Habitat Areas layer.
- 13:30 Visit Zumbrun Overlook project & Polyneil Timber proposal. Discuss watershed study.
- 14:30 Return to GRSF office for wrap up & adjourn.



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From: Cheryl A. Kassed, PhD [cherylkassed@yahoo.com]
Sent: Tuesday, December 28, 2010 1:35 PM
To: Perdue, Jack
Cc: Peditto, Paul
Subject: Comment on Green Ridge State Forest 2012 annual work plan public comment

Follow Up Flag: Follow up
Due By: Tuesday, January 04, 2011 10:00 AM
Flag Status: Red
Mr. Purdue and Mr. Peditto,

I am very concerned about the continued destruction to our State forests, and Green Ridge in particular, from all-terrain vehicles, as brilliantly illustrated in this video posted by an "enthusiast."
<http://forums.offroadtb.com/viewtopic.php?f=10&t=1631> I have not seen a DNR response to other public comments on this issue. How is DNR planning to address this destructive practice? Why is it not addressed in the FY 2012 AWP? How are these vehicles being policed in the State forests, and in particular Green Ridge? What was DNR's response to comments from Mr. Dale Sipes, copied below? Why is DNR ignoring this issue as the destruction continues?

Copied from publicly posted comments from Mr. Dale Sipes:

"Mr. Paul Peditto

Maryland Department of Natural Resources

Wildlife and Heritage Service

Tawes State Office Building

580 Taylor Avenue

Annapolis, MD 21401

Dear Mr. Peditto:

All Terrain Vehicle use at Green Ridge State Forest has dramatically increased over the past several

years. The Green Ridge State Forest Advisory Committee is concerned about both the capacity of the land to support this activity and the increasingly irresponsible and illegal use of All Terrain Vehicles (ATVs) Driving ATV's in non-designated areas is threatening our State Forest. This illegal activity is having a negative impact on wildlife habitat and has carved untold miles of new trails through our State Forest lands The illegal trails penetrate sensitive forest habitats, streams, and wetlands. Illegal routes erode and compact soil, destroy plants, degrade wildlife habitat, diminish water quality, and spread invasive plants. In consideration of the increasing negative impacts resulting from the illegal use of ATV's, we have

asked DNR to consider revisiting Maryland's existing policy regarding ATV use on State-owned or controlled properties. We support responsible use and wise stewardship of our public lands use that leaves the land healthy, use that conserves our wildlife, and uses that allows for the continued enjoyment of these lands for our families, for our future

We have recently been informed that you have been charged with making recommendations to DNR about ATV use on State Forests and other DNR lands. The Green Ridge State Forest Advisory

Committee would like to receive information about this project. Are you and your staff indeed working on an evaluation of ATV use on state lands? What information am you reviewing? Will there be new

data on ATV use and impacts collected? What DNR divisions or staff will be involved? Will you be soliciting input from stakeholders and the public? This is an issue our Committee has spent significant time discussing, and we have observed conditions Green Ridge State Forest. We hope that our experience and perspective will be of value to you as you lead DNR's consideration of this important management issue.

Sincerely,

Mr. Dale B. Sipes
Chairperson*

Thanks, Cheryl

*Cheryl A. Kassed, PhD
Researcher/Communicator/Neuroscien
tist
C: 301-221-9458 V: 301-946-5233*

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planet?**

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Please consider the environment before
printing this e-mail.

From: mike glenn [magiw16@yahoo.com]
Sent: Tuesday, December 21, 2010 3:01 PM
To: Perdue, Jack

Follow Up Flag: Follow up

Flag Status: Green

maryland needs to look at the antlered deer kills. there should be a point restriction put on deer like they did in penn.. i live in maryland but i also hunt pa. and in the past few years i could see a major effect the point restriction has had and its all been positive. just putting something out there for all the hunters that spend alot of time in the woods and dont get to see the real potential of the deer where they hunt. thanks.

Dated: December 29, 2010

COMMENTS FROM THE MARYLAND ALLIANCE FOR GREENWAY IMPROVEMENT AND CONSERVATION (MAGIC Alliance) ON THE PROPOSED FY2012 ANNUAL WORK PLAN FOR GREEN RIDGE STATE FOREST

Why is the public competing with the private landowner to sell timber? Green Ridge is Maryland's largest publicly owned forested area in the Chesapeake watershed. While private land is being logged or subdivided or used for development to suit the legitimate economic interest of the property owner, Green Ridge has the potential to be one of the few expanses of land that on which trees to grow to maturity, without the risk of being felled for purported economic gain. Mature trees anchor potentially eroding soil; cleanse the water supply; sequester greenhouse gases; feed and shelter wildlife; and provide greenscape. Why are we logging a public forest when private forests in the general area abound?

The benefit from logging Green Ridge is minimal; the cost is great. Logging revenue is meager at best. Gross revenue from logging never exceeded \$160, 000 in recent fiscal years. The meager revenue is largely due the poor soil conditions and the lack of rainfall in the forest. Green Ridge is located in the leeward side of the Allegheny rain shadow. Revenue *per acre logged* in Green Ridge is only a third of what it is in Savage River State Forest, a forest on the windward side of the rain shadow, having plenty of rain and better growing conditions.

Given the meager revenue, it is reasonable to assume that cost of the logging program in Green Ridge exceeds the revenue generated, i.e., the State is losing money logging Green Ridge. Unlike the federal forest management agencies, DNR does not keep data on its cost to administer the logging program on a sale-by-sale basis. Our organization put this issue to Steve Koehn, the State Forester. Mr. Koehn's response neglected to address the issue of loss of revenue from logging. He said that "State forests are managed for multiple public benefits (recreation, water and air quality, wildlife habitat, wood products, aesthetics and many other amenity values) . . ." Mr. Koehn concluded that "attempting to focus on one particular aspect of the forest—revenue from logging—is not especially useful." In this response, Mr. Koehn overlooks the fact that *the other benefits from the forest can be derived without incurring the economic and environmental losses from logging.* (Mr. Koehn's email to us dated March 23, 2010 is attached.)

Mr. Koehn defends logging in Green Ridge: "by providing wood to the local community and forest industry, DNR is doing its part to support traditional Appalachian culture and economy." First, there is no evidence that without the 200 acres per year of logging that the "traditional Appalachian culture and economy" would wither. Private forest resources abound in Allegany and surrounding counties to take up any slack in timber production. Additionally, the Sustainable Forestry Act of 2009 makes it clear that we must consider biodiversity, carbon sequestration, and ecological services in planning State forest resource utilization.

While the financial benefit to the State for logging is minimal or nonexistent, the environmental harm done by logging is significant. Logging fragments plant and animal habitat. Mr. Koehn contends that the fragmentation is "only temporary." We don't know exactly what Mr. Koehn means by "only temporary." Green Ridge cuts trees in various tracts on a 100-year cycle. A century lapses until a felled tree is replaced by one of the same size and maturity. In their paper on "Vertical Structure," Brokaw and Lent state that "ideal management to conserve species richness within a stand is probably to let it attain maturity and not disturb it." The authors explain "the frequency of felled tree gaps and cutting of large trees may exceed the frequency of natural gaps and death of large trees and have negative impacts on animals and plants that depend on

relatively continuous canopy pathways, uniform understory conditions, or large trees."¹ In spite of the fact the logged forests eventually grow back, the "temporary" fragmentations have a measurable and detrimental impact on animal and plant species.

In addition, logging opens the canopy, inviting damaging invasive species, further degrading the natural forest habitat. Mr. Koehn suggests that factors in addition to logging promote the presence of invasives. He points to high deer-herd levels. Ironically, logging causes high deer-herd levels. Deer are edge-dwelling animals and logging creates forest edges.

Logging also disturbs and degrades soil and microfauna. Uncompacted soil and microfauna are critical to forest health. Mr. Koehn agrees with us that logging causes soil compaction. He says, however, that its "potential impact can be greatly reduced" by proper management. What is the cost of "proper management"? And how does one compare the cost with the minimal cost incurred when the cessation of logging entirely obviates the need for managing the intrusion of heavy logging equipment?

In addition, logging releases sequestered greenhouse gas and contributes to global warming. Mr. Koehn responded, without citation, that "it is generally accepted that the harvesting of wood products is carbon neutral." In fact the scientific literature is exactly the opposite. A major study published this year in the peer-review journal *Forest Ecology and Management* concluded that "mean carbon sequestration was significantly greater for 'no management' compared to any of the active management scenarios."²

Mr. Koehn argues that the amount of greenhouse gases generated by the production and use of wood substitutes greatly exceeds the amount associated with harvesting. We are unaware that anyone has suggested that wood substitutes would be used in place of Green Ridge timber. Rather, we suggest that trees on private wood lots would be substituted. The potential for carbon sequestration by these trees is significantly less since they need to be felled at an earlier age to recoup their private economic value.

We pointed out that logging Green Ridge was unnecessary because of abundant private forests surrounding Green Ridge. Mr. Koehn agrees that "a relatively small amount of logging occurs on public land." Nevertheless, he argues that if that logging were shifted to private land, "the entire sector may wither away." Mr. Koehn cites no evidence for his concern and we are aware of none.

Finally, we pointed out that the value of ecosystem services in Green Ridge that would be derived from letting the tree remain in place was higher than the value derived from logging. This position is coincident with the legislative finding in the Sustainable Forestry Act of 2009: "Chesapeake forests annually contribute an estimated \$24 billion to the Bay watershed in ecological services such as wildlife habitat, recreation, air and water filtration, and flood control" ³ Unfortunately, Mr. Koehn dismisses this point with the statement that "the value of ecosystem services has yet to be monetized in our economy" However, the Maryland legislature has put a value of these services: \$24 billion for the watershed, and has incorporated that value in legislation.

Why does Mr. Koehn value these services at zero?

DNR is seeking certification for Green Ridge. Certification may be advisable for forests maintained for timber. Green Ridge is currently managed under a ten-year plan written in 1993,

¹ Brokaw, N.V.L. and R.A. Lent, "Vertical Structure," pp. 373-399, in M.L. Hunter, ed. *Maintaining Biodiversity in Forest Ecosystems*, Cambridge Univ. Press (1999); 386, 392. (Italics added.)

² J. S. Nunery and W.S. Keeton, "Forest carbon storage in the northeastern United States: Net effects of harvesting," *Forest Ecology and Management* 259:1363-1375 (2010)

³ The whole forest products industry only contributes \$2.2 billion to the Maryland economy, according to the legislative statement. Green Ridge is the large Maryland forest in the Chesapeake watershed.

almost 18 years ago. The 1993 plan was quite clear regarding priorities: "Rotations approaching biological maturity can be very long (dependant upon species), often several hundred years. Biological maturity is seldom desirable from a timber management perspective, due to the loss of merchantable lumber. . . ." ⁴ Accordingly, the ten-year plan was intended to optimize timber production. The plan concluded that a 100-year rotation was optimal. Hence the 1993 plan provided for logging 200 acres annually in the 20,000 acre general management zone. (20,000 acres/100 years=200 acres/year.)

Currently, public policy is no longer focused on timber production. The Sustainable Forestry Act of 2009 changed the focus. The Act uses three terms that were barely in the lexicon in 1993: biodiversity, ecological services, and carbon sequestration. The Act requires that these concepts be taken into account when managing state forest resources.

The effort to obtain "certification" marches it the opposite direction: more logging and deterioration of our largest public forest. Unfortunately, certification will not reposition Green Ridge on the other side of the rain shadow. It will not increase rain fall nor improve the soil. Certification will not obscure the fact that Green Ridge is Maryland's largest continuous landmass in the Chesapeake Watershed. We applaud the incorporation of more sustainable forestry practices on privately owned land or on State land where logging make economic sense. However, Green Ridge is not one of those locations: we need to treasure Green Ridge for the ecosystem services it provides and preserve it intact for future generations. Logging it should be the furthest thought from our minds.

Sincerely,

Frank Lipson
President
Maryland Alliance for Greenway Improvement
and Conservation
Wheaton, Maryland
(www.magicalliance.org)

Dated: December 29, 2010

⁴ GRSF, Ten Year Resource Management Plan, Vol. II, pg 68 (Oct. 1993).

EXCERPT FROM EMAIL OF STEVE KOEHN TO FRANK LIPSON DATED MARCH 23 2010:

In regards to the first item (concern over continued logging), our responses are further sub-divided (listed as "a" through "e") to the five "summary items" listed on the first page of your "white paper." Your issues are repeated in **Black font**, and our responses are in **Green font**.

MAGIC Issues / DNR Responses:

(1) concern over continued logging in Green Ridge State Forest.

(a) meager revenue generated by logging

a. DNR revenue is not the sole measure of economic benefits related to harvesting; the overall economic multiplier impacts of harvesting are much greater in both local (primary producers) and expanded community (secondary producers).

b. Although MAGIC may consider the revenue "meager," it still contributes to helping support the many staff activities on the forest to provide recreational opportunities, trails and campsites, maintain boundaries, and visitor services that the public enjoys and demands of DNR

c. Green Ridge State Forest is in the Appalachian Region where the forest has been a large part of the economy and culture of the region at least since the first settlements and continues today. By providing wood to local community and forest industry, DNR is doing it's part to support the traditional Appalachian culture and economy.

d. State forests are managed for multiple public benefits (recreation, water and air quality, wildlife habitat, wood products, aesthetics and many other amenity values) – all of which have much broader social, environmental and economic value – attempting to focus on just one particular aspect of the forest – revenue from harvesting – is not especially useful.

(b) logging is environmentally detrimental

a. fragments plant and animal habitat

i. While harvesting may be considered to fragment habitat for certain species, this effect is only temporary, and does not create a significant habitat disturbance within predominantly forested landscapes (e.g., where all of DNR's State Forests are located); alternatively, the fragmentation caused by harvesting may be considered as a means to provide a variety of size and age classes across the landscape which benefit a wider variety of plant and animal species

b. allows invasives to become established

i. Given the widespread presence of invasives across the landscape, as well as contributing factors that inhibit forest regeneration and promote development of invasive species (such as high deer herd levels), it is misleading to "point the finger" at forest harvesting as being

primarily to blame for this problem – however, it is correct to take a proactive approach to the issue:

1. Careful planning of harvests, which take into account the existing locations of invasive plants and avoids moving equipment through them can minimize this problem;

2. It should also be realized that when the regenerating forest achieves a closed canopy of saplings (typically within a few short years), the sunny conditions conducive for invasive plant growth are no longer present;

3. Forestry staff monitor regenerating stands, and can conduct invasive plant control if necessary

c. it disturbs and degrades soil/microfauna critical for forest health

i. Harvesting can cause soil compaction, however, if properly managed, this potential impact can be greatly reduced, and does not have any significant effect on forest health

(c) logging releases sequestered greenhouse gases, contributing to global climate change

a. It is generally accepted that harvesting of wood products is carbon neutral, and the amount of greenhouse gases generated by the production and use of wood substitutes greatly exceeds the amount associated with harvesting

(d) logging in GRSF is unnecessary, given the availability of private forest land

a. Economists realize that if the economic activity in any given sector drops below a certain “tipping point,” the entire sector may wither away; MD’s state forests are primarily situated in the portions of the state where the forest industry is most significant; consequently, even the relatively small amount of harvesting that occurs on public land plays a vital important role in keeping the forest industry from reaching the “tipping point”; conservationists have widely recognized that a healthy forest products industry goes “hand-in-hand” with maintaining the forest land base, and that both private and public lands have unique and essential roles to play to accomplish this goal

(e) the value of ecosystem services in Green Ridge is higher than the revenue gained

a. The value of ecosystem services has yet to be monetized in our economy, and although the hope is that these services will one day be appropriately valued, this in itself will not make the current economic values that are realized by wood products “null and void” – they will only add to the economic importance of forests and hopefully strengthen society’s commitment to conserving our precious forest resources into the future

WATERSHED IMPROVEMENT PROJECTS

Continue to maintain no-cut buffers along all streams within harvest areas.

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.

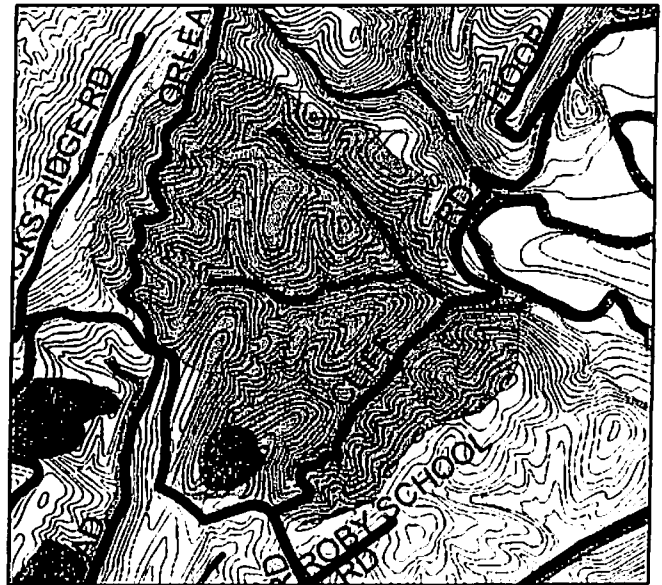
Partnership with WVU's Forest Resources Management Dept. to establish and maintain a long-term forest hydrology research project on the forest. This project will compare two watersheds within the forest. Once baseline data has been collected, silvicultural practices will be applied in the non-control watershed so effects of the practices may be studied and compared. Results of this long term study are expected to provide refined guidelines for harvest methods and forest buffer management for sustainable forest management and watershed protection. This study will include in-stream water flow and quality study comparison as well as isotope tracking technology.

Troutman Road Watershed (Managed Area)

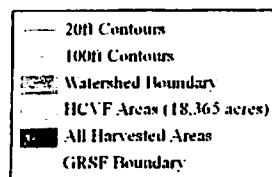


Watershed Area: 557 acres
 Stream Order: Four
 Forest cover: 94.6%
 Stream cover: 4% (22.5 out of 557 acres)
 Road cover: 1.4% (8 out of 557 acres)
 Aspect:
 Slope:

Cliff Road Watershed (Control Area)



Watershed Area: 417.3 acres
 Stream Order: Three
 Forest cover: 90.6%
 Stream cover: 5.1% (21.3 out of 417.3 acres)
 Road cover: 4.3% (18 out of 417.3 acres)
 Aspect:
 Slope:



ECOSYSTEM RESTORATION PROJECTS

1. Partnership with American Woodcock Initiative and Maryland Wildlife and Heritage Division to develop a woodcock habitat plan for the bottomlands currently comprised primarily of abandoned agricultural fields along the Potomac River and Kasecamp Road. This plan will include invasive plant suppression and wetland restoration. See attachment for Kasecamp Bottoms Habitat Plan.
2. 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.
3. Selectively harvest trees and Rx Burn area adjacent to existing rare lupine population to mimic past disturbance regime and site condition for promotion of the lupine population.
4. Rx Fire in Kirk Orchard and Bull Ring areas to maintain native warm season grass plantings.
5. Remove overgrown hedgerow and field trees to restore brush habitat component in early successional wildlife habitat areas.
6. Work will continue to implement practices outlined in the Kirk Orchard Early Successional Wildlife Habitat Area plan to restore, enhance, and maintain an upland ecosystem.

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.
12. WVU Forest Resource Management (Forest Hydrology Program) will monitor stream flow and water quality parameters in an ongoing paired watershed comparison study.

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 (GRSF). It is the Department's intent that all revenues generated from GRSF will be used to pay for the management and operation of the Forest. 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 of Revenues and Operational costs associated with GRSF. These figures are only estimates that are based on projected revenues and operational expenses. Yearly changes in timber markets and weather conditions can severely affect revenues. Operational expenses will vary from year to year and the numbers below are based on the budget request submitted for fy-2011

2. GRSF FUNDING SOURCES: Estimated - \$536,216

State Forests in Maryland are funded from several sources. The first is the **general fund**. This is money generated from taxes. It is used in state forests primarily to fund classified (permanent) employee salaries and benefits. \$184,985

The second source is **revenue generated by the forests**. These funds are deposited in the Department of Natural Resources' Forest or Park Reserve Fund (FPRF) and must be appropriated by the General Assembly through the annual budgeting process before being spent. The state forest budget is prepared approximately one year before the beginning of the fiscal year in which it will be spent. The budget 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). Revenue generated by the state forests is designated special fund revenue. \$232,600

In addition, GRSF is included in the Maryland Forest Service's Off Road Vehicle (ORV) Budget. This separate budget is based on **revenue generated from ORV permit sales** statewide and is allocated back to the state forests through the budgeting process. ORV funds generated as permit sales at GRSF do not necessarily reflect funds allocated back to the GRSF operating budget. These funds, as expenditures from all fund sources must be appropriated before being spent. ORV funds are a restricted special fund and can only be spent for ORV Trail related expenditures. \$58,631

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. \$60,000

3. OPERATIONAL COST: Estimated Annual Expenses - \$536,216

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.

-Classified Salaries, Wages and Benefits: \$243,315

This cost is associated with FPRF funds and General Funds used to pay GRSF Maryland Classified Employee Salaries.

-Contractual Staffing: \$126,081

This cost is associated with contractual staffing associated with operations of the state forest. Contractual personnel are responsible for 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 implementing all maintenance, recreational, silviculture, and ecosystem restoration projects.

- Land Operation Cost: \$105,243

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, non-commercial thinning and other forest management practices. These costs vary greatly from year to year based on the activities identified in the Annual Work Plan.

- County Payments: \$61,577

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 Costs associated with the GRSF. As described, these figures will vary from year to year. A more detailed picture on revenues and operational cost will be provided quarterly as the actual picture develops within implementation of Annual Work Plan and as operating budgets are approved.

Total Revenue	\$536,216
Total Expenditure	\$536,216