

GREEN RIDGE STATE FOREST

ANNUAL WORK PLAN

FISCAL YEAR 2010

Prepared:	<u>Mark D. Beak</u> (Forest Manager)	<u>9/08/09</u> Date
Reviewed:	<u>Robert D. DeBartol</u> (Regional Manager)	<u>9/9/09</u> Date
Reviewed:	<u>J. F. Wolf</u> (Public Lands Policy & Planning)	<u>1/8/2010</u> Date
Approved:	<u>Environmental Specialist</u> (Environmental Specialist)	<u>1.12.2010</u> Date

Forest Overview

Green Ridge State Forest is located in eastern Allegany County. It is the only State Forest located in the Ridge and Valley province. Green Ridge receives the least amount of rainfall in Maryland, averaging 36 inches annually. Consisting of 46,000 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 out 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.

GRSF Annual Work Plan Contents

A. Forest Overview

Includes an oversight 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, reforestation, and other such projects. This section includes 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 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 similar projects.

J. Budget

Proposed budget specific to the forest.

Green Ridge State Forest

Fiscal Year 2010

AWP Summary

This work plan includes seven silviculture proposals for a total of 415 managed acres within the 20,000 acre general management zone in which area based sustained yield 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 two of the silviculture proposals are intermediate TSI operations.

The silviculture proposals within this plan include 180 acres of variable retention harvests for an estimated 480mbf of hardwood timber. An additional 25 acres are proposed as a pine salvage and is estimated to yield 30mbf of hardwood and hard pine timber. An additional 10 acres is proposed as a white pine thinning and is estimated to yield 10mbf of soft pine. Finally, 200 acres are proposed to be thinned to release crop trees and remove undesirables. This thinning will be done over a course of several years. Yields from this operation are infinitesimal but will likely stimulate our domestic fuelwood program.

In addition to silvicultural projects, maintenance, recreation, inventory, ecosystem restoration, watershed improvement, and monitoring projects are included in this plan. Specific projects are described within the pages of this plan.

Maintenance Projects

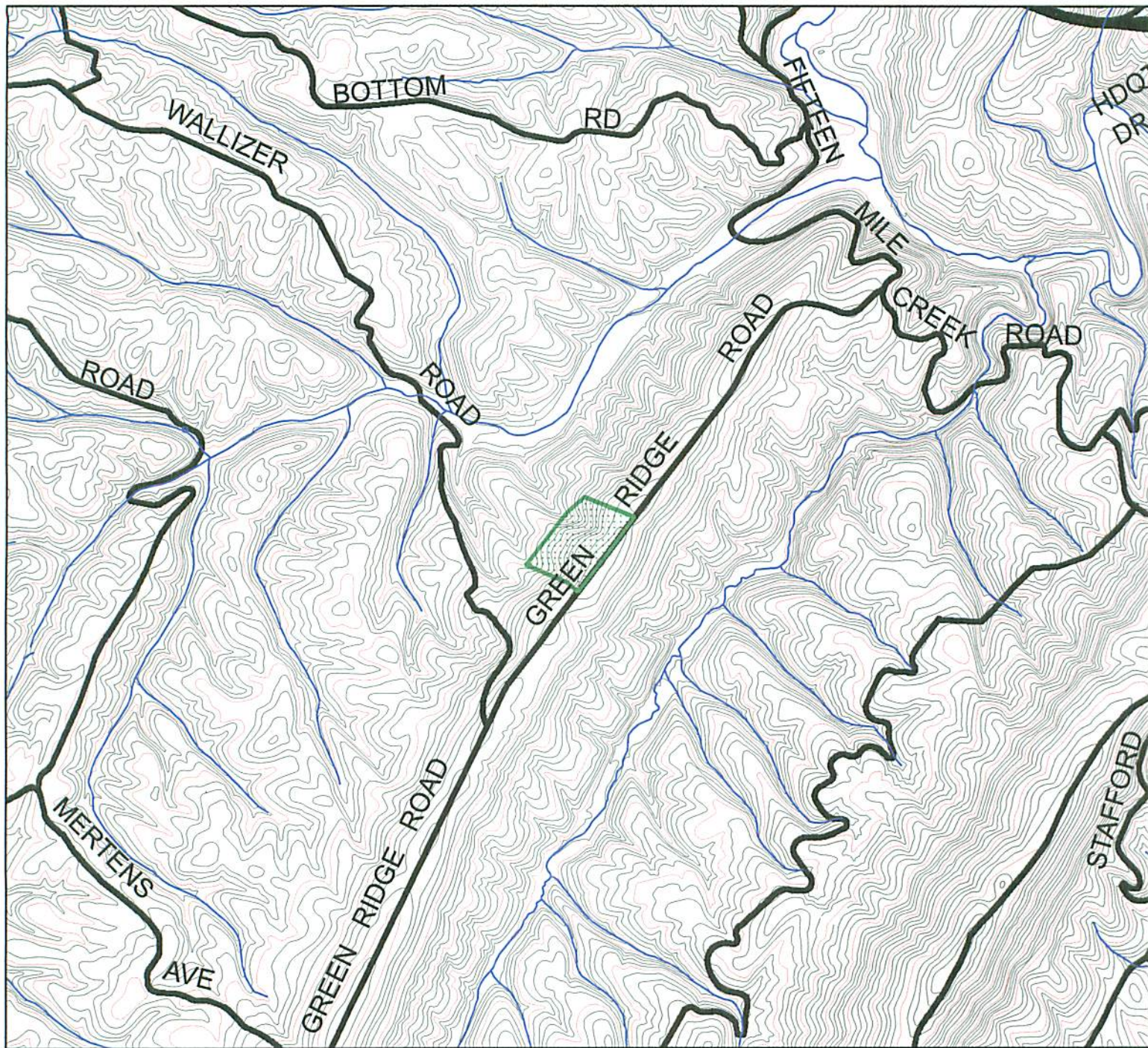
General Maintenance will continue such as maintaining 100 primitive campsites, hazardous tree removal, pole gate installations as needed, mowing and maintenance of handicap access hunting areas, and general maintenance of headquarters complex, shooting range, and outbuildings.

1. Recover 3 miles of Boundary Repaint 30 miles of existing state forest boundary.
2. Rehabilitate Trail Infrastructure (Bridges, Adirondack shelters, signs) pending approval of associated Rec. Trail Grant.
3. Clean and maintain 100 primitive camp sites weekly.
4. Replace pavilion at Group Campsite #4 if funds are available.
5. Maintain four Adirondack shelters on hiking trail.
6. Raze Maple Run Boys Camp.
7. Replace and/or rehab 100 picnic tables on campsites.

Recreation Projects

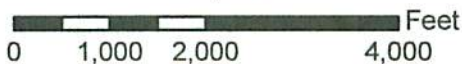
- 1. Develop Self Guided interpretive trail within the Kirk Orchard Early Successional Habitat Area to demonstrate habitat management practices.**
- 2. The Great Eastern Trail will be installed, marked, and open for foot traffic.**
- 3. Maintain approximately 60 miles of trails including 30 miles of hiking trails, 12 miles of mountain bike trail, and 18 mile ORV trail.**
- 4. Replace target standards for 100 yd rifle range.**
- 5. Enhance upland game hunting opportunities by enhancing early successional wildlife habitat at Kirk Orchard, Bull Ring Ranch, and Malcolm Road.**
- 6. Provide quarterly guided interpretive tours on the forest.**
- 7. Work with Fresh Water Fisheries Dept. to improve stocking and fishing access to Town Creek.**

FY-2010 Proposed Harvest Green Ridge Road



Compartment - 30
 Managed Area - 25 Acres
 Age - 75 years
 Type - Hard Pine
 TPA - 474
 AGS - 58 sq. ft.
 Stocking - 115%
 Growth Rate - <2%
 Soil Type - Dekalb
 Site Index - 70
 VMS - Low
 ROS - Roaded Natural
 Composition - VP-69%





1:24,000



Silvicultural Prescription:

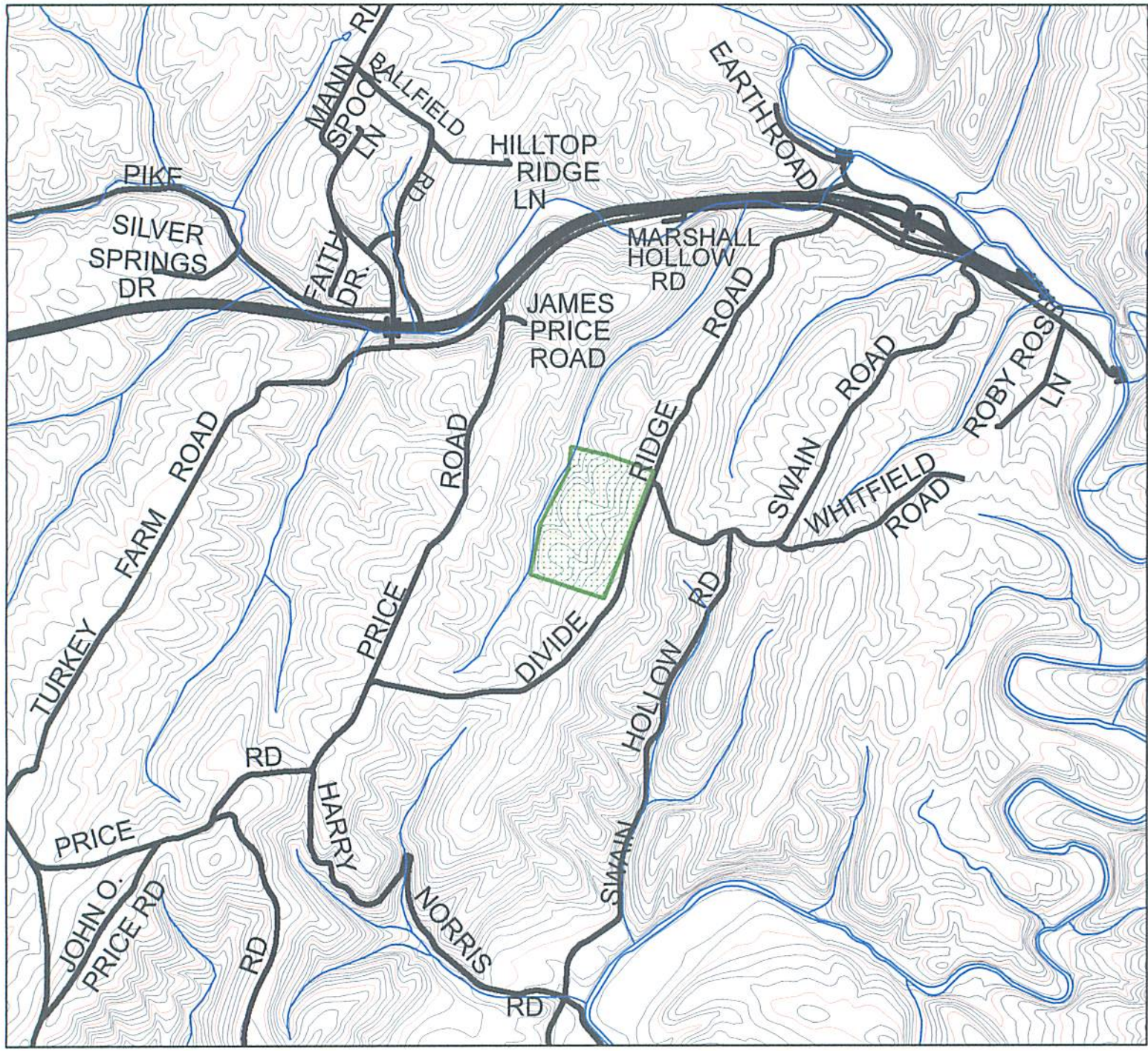
Salvage Harvest - Retain 10% of the original stand in patches and retain legacy trees. Regenerate the remainder of the stand. Oak regeneration is adequate. All hickory, white pine, flowering dogwood, and serviceberry will be retained.

Legend

-  Managed Area
-  Contour (100')
-  Contour (20')
-  Streams



FY-2010 Proposed Harvest Divide Ridge Road



Compartment - 43
 Managed Area - 50 Acres
 Age - 98 years
 Type - Mixed Oak
 TPA - 248
 AGS - 40 sq. ft.
 Stocking - 115%
 Growth Rate - <2%
 Soil Type - Weikert/Lehew
 Site Index - 70
 VMS - Low
 ROS - Roaded Natural
 Composition - SO-37%,
 CO-33%



Silvicultural Prescription:

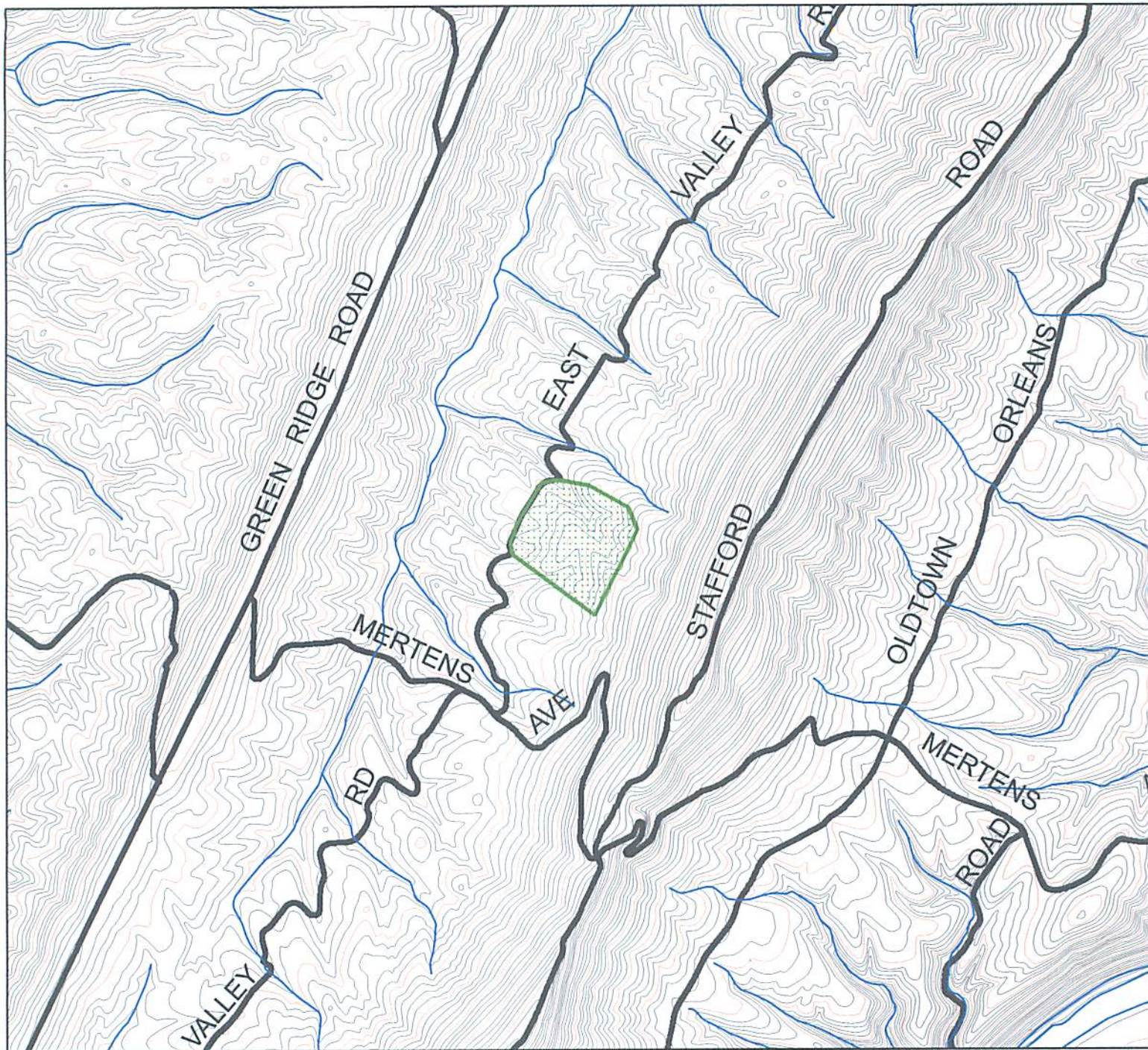
Variable Retention - Retain 10% of the original stand in patches and retain legacy trees. Regenerate the remainder of the stand. Oak regeneration is adequate. All hickory, white pine, flowering dogwood, and serviceberry will be retained.

Legend

- Managed Area
- Contour (100')
- Contour (20')
- Streams

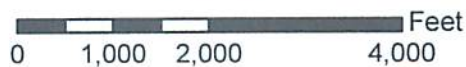


FY-2010 Proposed Harvest East Valley Road



Compartment - 51
 Managed Area - 50 Acres
 Age - 98 years
 Type - Mixed Oak
 TPA - 248
 AGS - 40 sq. ft.
 Stocking - 115%
 Growth Rate - <2%
 Soil Type - Dekalb/Lehew
 Site Index - 75
 VMS - Low
 ROS - Roaded Natural
 Composition - BO-19%,
 SO-18%

1:24,000



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
-  Contour (100')
-  Contour (20')
-  Streams



Green Ridge State Forest Fiscal Year 2010 Silviculture Projects

Map tour location #	Road	Compartment	Managed Ac.	Est (mbf)	Prescription
1	East Valley Rd.	51	50	120	Variable Retention
2	Divide Ridge Rd.	43	50	120	Variable Retention
3	Green Ridge Rd.	30	25	30	Pine Salvage
4	Mertens Avenue	14	10	10	Plantation Thinning
5	Twigg Road	16	40	120	Variable Retention
6	Jacobs Rd.	31/39	40	120	Variable Retention
7	Oldtown Orleans Rd.	63	200	00	TSI
*Total			415	520	

Prescribed Fire – Fall burn on 40 acres to reduce litter in Mertens Avenue Crop Tree Release. The objective of this burn will be to reduce litter on forest floor to encourage germination of acorns. This stand will be monitored for response to practices and subsequent burns to remove red maple competition.

SPECIAL PROJECTS

1. Continue to apply herbicides to control Tree of Heaven and other invasive species.
2. Convert field areas from fescue to better forage covers.
3. Identify, release, fertilize, and prune fruit trees within the forest to enhance wildlife habitat and maintain remnant of apple heritage at GRSF.
4. Utilize Garrett College Students to accomplish forest management and habitat work as laboratory exercises.
5. Continue Involvement with Friends of Green Ridge Group.
6. Continue to develop relationship with Allegany County Board of Ed. to coordinate service learning projects that include tree planting and habitat work on the forest.
7. Resolve encroachment issues.

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.

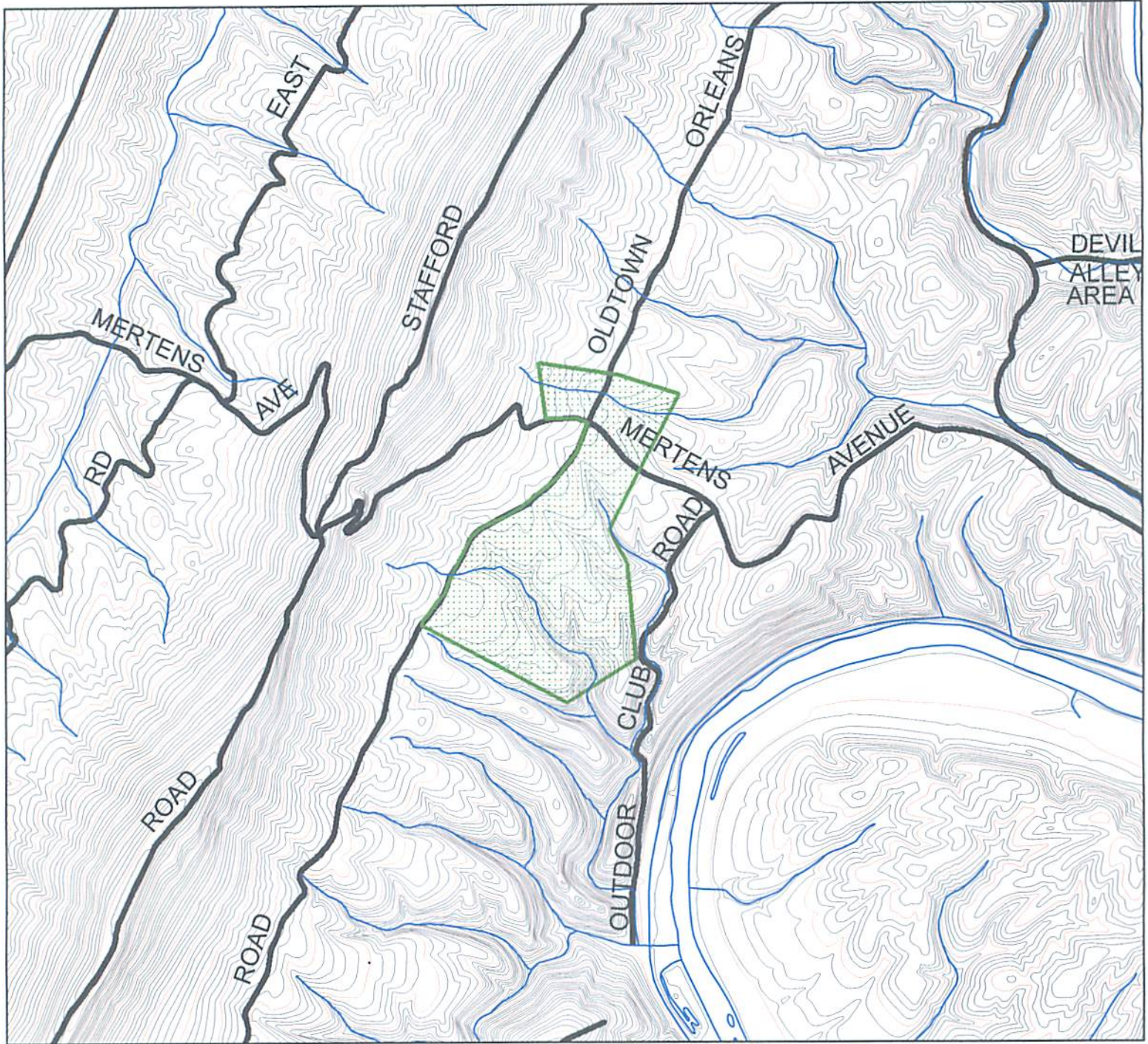
Network with Universities, Colleges; and Conservation Organizations:

1. Forest inventories (University of Maryland, Center for Environmental Science, Appalachian Laboratory and Allegany College-Forestry Division Research projects.
2. Maintain working relationship with Garrett College.
3. Continue participation with Appalachian Forest Heritage Area (AFHA)
4. Continue partnership with the Ridge and Valley Stream Keepers.
5. Cooperate with American Chestnut Foundation.
6. Develop relationship with Wildlife Institute to work on Appalachian Mountain Woodcock Initiative.

Special Outreach:

1. Write general interest stories for newspaper and DNR web page about ongoing research, and GRSF cultural and natural heritage.
2. Attend County Planning & Zoning Commission meetings to monitor County activities that impact GRSF management.

FY-2010 Proposed Harvest Oldtown/Orleans Road







Compartment - 57, 58, 60
 Managed Area - 200 Acres
 Age - 25 years
 Type - Mixed Oak
 TPA - 740
 AGS - 50 sq. ft.
 Stocking - 140%
 Growth Rate - <2%
 Soil Type - Calvin
 Site Index - 80
 VMS - Low
 ROS - Roaded Natural
 Composition - CO-25%,
 RM-23%



Silvicultural Prescription:

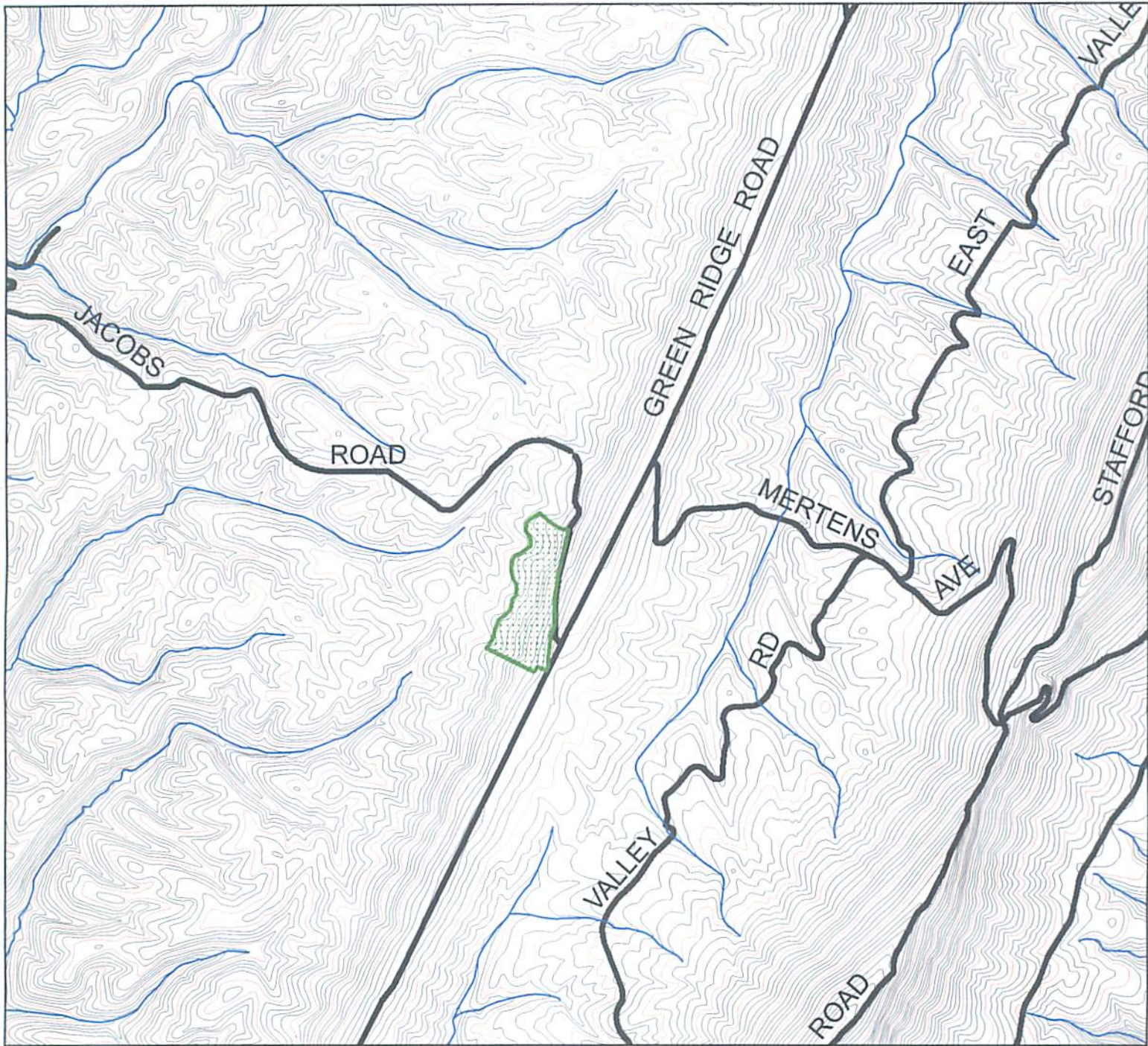
TSI Thinning - Remove 70 sq. ft. of basal area to achieve B-level stocking. Red maple and other undesirable species will be targeted for removal. This will reduce stress and enhance growth on the residual stand of mixed oaks and yellow poplar.

Legend

-  Managed Area
-  Contour (100')
-  Contour (20')
-  Streams



FY-2010 Proposed Harvest Jacobs Road

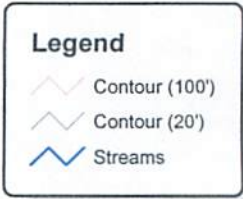


Compartment - 31/39
 Managed Area - 40 Acres
 Age - 110 years
 Type - Mixed Oak
 TPA - 260
 AGS - 57 sq. ft.
 Stocking - 115%
 Growth Rate - <2%
 Soil Type - Weikert
 Site Index - 71
 VMS - Low
 ROS - Roaded Natural
 Composition - WO-29%,
 SO-28%, CO-20%

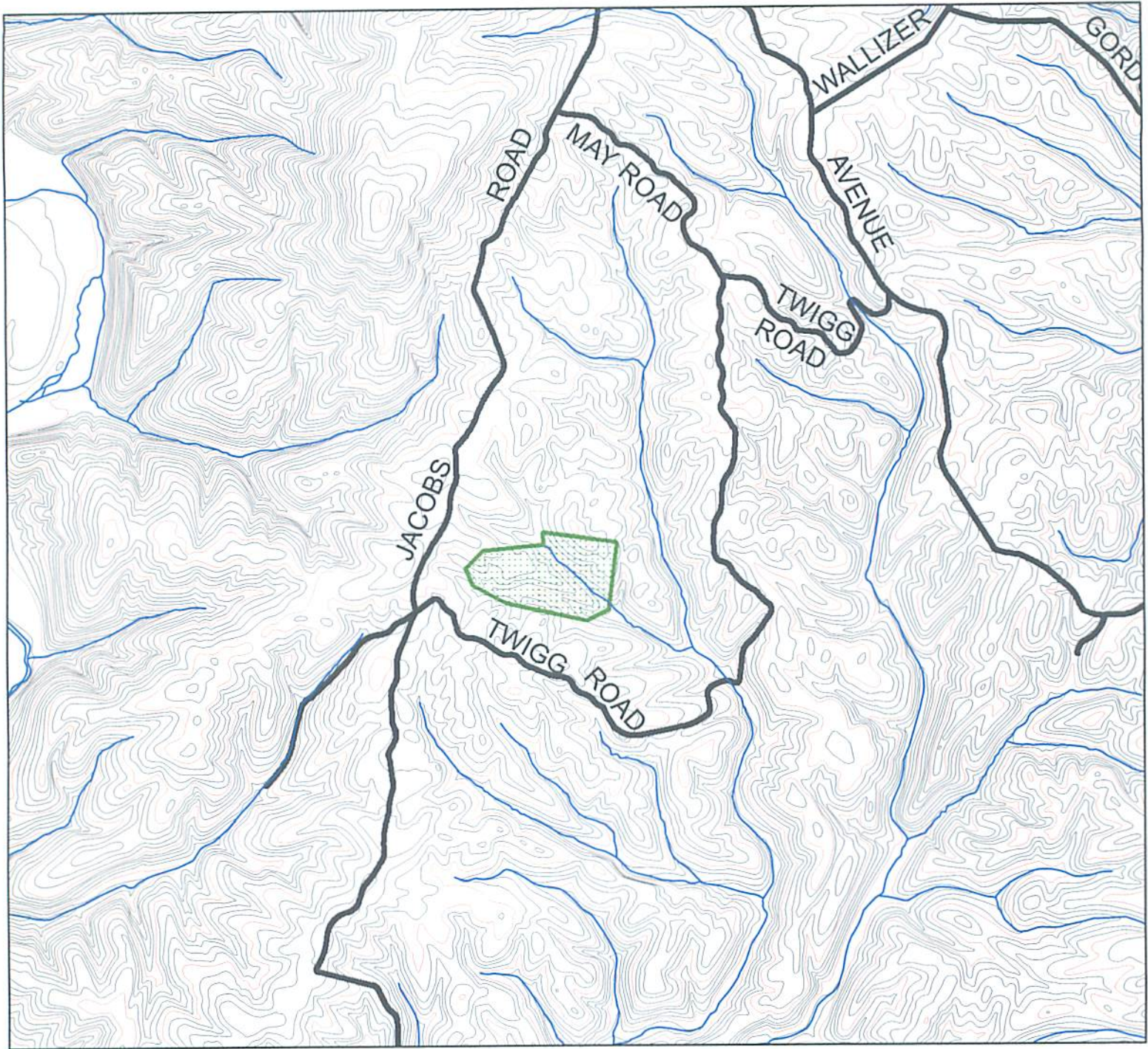


Silvicultural Prescription:

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.



FY-2010 Proposed Harvest Twigg Road



Compartment - 16
 Managed Area - 40 Acres
 Age - 100 years
 Type - Mixed Oak
 TPA - 192
 AGS - 25 sq. ft.
 Stocking - 105%
 Growth Rate - <2%
 Soil Type - Weikert
 Site Index - 65
 VMS - Low
 ROS - Rooded Natural
 Composition - CO-49%,
 SO-23%





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Silvicultural Prescription:

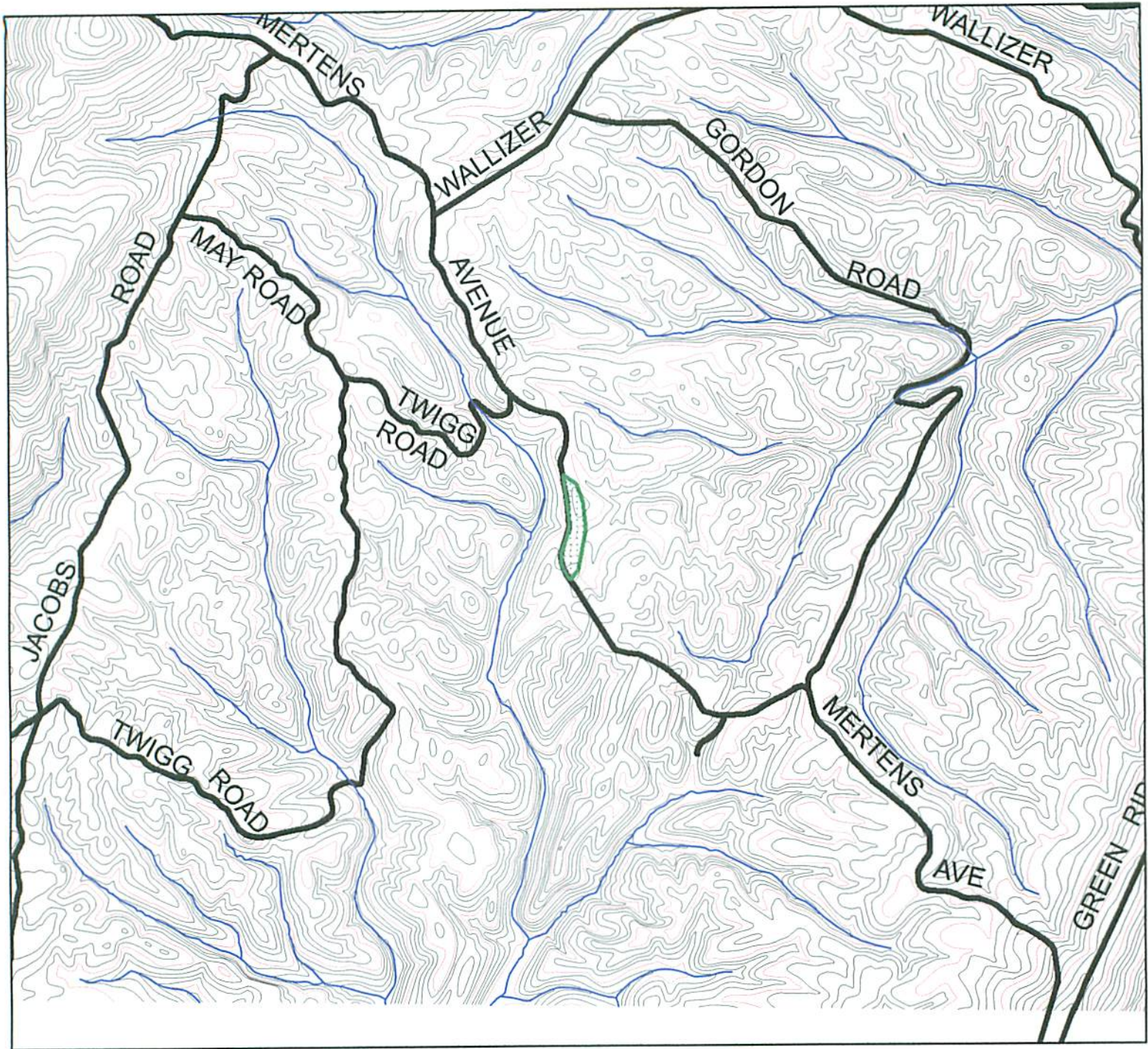
Variable Retention - Retain 10%
 of the original stand in patches and
 retain legacy trees. Regenerate the
 remainder of the stand. Oak
 regeneration is adequate. All
 hickory, white pine, flowering
 dogwood, and serviceberry will
 be retained.

Legend

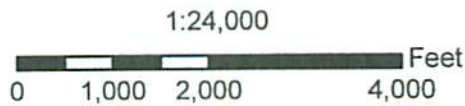
-  Managed Area
-  Contour (100')
-  Contour (20')
-  Streams



FY-2010 Proposed Harvest Mertens Avenue



Compartment - 14
 Managed Area - 10 Acres
 Age - 40 years
 Type - White Pine
 TPA - 520
 AGS - 120 sq. ft.
 Stocking - 130%
 Growth Rate - 2.5%
 Soil Type - Weikert
 Site Index - 70
 VMS - Low
 ROS - Roded Natural
 Composition - WP-90%



Silvicultural Prescription:

White Pine Thinning - Remove 100 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.



Green Ridge State Forest
Fiscal Year 2010 Annual Work Plan Review
August 19, 2008

In Attendance:

Bob Webster, Forest Service, Western Region
Rob Feldt, Forest Service, Annapolis
Jesse Morgan, Forest Service, Green Ridge
Kenneth Jolly, Forest Service, Annapolis
Mike Deckelbaum, Park Service, Rocky Gap
Alan Klotz, Fisheries Service, Western Region
Jim Mullan, Wildlife Service, Western Region
Dan Feller, Heritage Service, Western Region
Wade Dorsey, Forest Service, Garrett County
Rick Latshaw, Wildlife Service, Western Region
Jim Kahl, Department of the Environment
Mark Beals, Forest Service, Green Ridge
Francis Zumbrun, Forest Service, Green Ridge
Jack Perdue, Forest Service, Annapolis
John Wilson (absent), Land Acquisition & Planning

Notes:

Mark Beals mentioned that Green Ridge State Forest has recently gotten two new classified employees. They have also completed work at the Kirk Orchard early successional project in cooperation with the Wildlife Service. It was mentioned by members of the ID Team that it would be a good idea to visit the Kirk Orchard next year as part of the review.

The Heritage Program has submitted a proposed Ecologically Significant Area (ESA) plan for Green Ridge which, as submitted would reduce the active management portion of the forest by about 25 percent. However, this is the first draft and did not include any attribute data or management prescriptions for these areas.

Stop #1 Old Town/ Orleans Road

This is a timber stand improvement project which will be completed over several installments. GRSF has adopted a "managed area" concept of planning activities which includes areas that will be retained as well as the areas to receive treatment. All streams on the site will be buffered. Jim Kahl (MDE) mentioned that all flowing waters are regulated and activity within these areas require a waterway permit. He also stated that areas below flowing waters are also regulated. Jim has agreed to meet with the State Forest managers to more fully discuss the permitting process for forest harvesting in Maryland. This harvest will probably not require any new roads to be built, in that the current road network should be sufficient for access. The roads will be properly stabilized, maintained and closed with a gate at the conclusion of this activity.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned with above adjustments.

COMPARTMENT #57, 58, 60 – Oldtown/Orleans Road

A 200-acre TSI Thinning.

ID TEAM: Release and encourage aspen in this treatment.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned and add treatments to promote aspen.

REVIEW SUMMARY

COMPARTMENT #51 – East Valley Rd.

A 50-acre variable retention harvest.

ID TEAM: No concerns with proposal.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.

COMPARTMENT #43– Divide Ridge Road

A 50-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 #30 – Green Ridge Road

A 25-acre salvage 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 – Mertens Avenue

A 10-acre white pine thinning.

ID TEAM: No Specific Concerns

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned

COMPARTMENT #16 – Twigg Road

A 40-acre variable retention harvest.

ID TEAM: Be sure to bridge stream crossing per MDE specifications and ensure buffering of the stream.

ADVISORY COMMITTEE: No specific concerns.

PUBLIC MEETING: No specific concerns.

FINAL PROPOSAL: Proceed with proposal as planned.

COMPARTMENT #31/39 – Jacobs Road

A 40-acre variable retention harvest.

ID TEAM: Original mapping was incorrect and would have involved old forest. Any pockets of old forest will be retained.

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 (ATV's). 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 are 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 in 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

As an example we need to inform owners, operators, and users of the real need to provide protection of the HRSF from the misuse and abuse from the ATVs and or 4-wheelers.

Select owners, operators and users of these recreational vehicles as volunteers to help provide control. They could be given bright colored vests and HRSF patch for identification of an I.D. card. Volunteers exempt from user fees.

Volunteers could be assigned specific areas providing information to other ATV users, such as rules, regulation and objectives.

They could also issue first warnings as required, written warnings if necessary, even violations identified requiring further appropriate action by park personnel.

If appropriate users in violation could be subject to fines (monetary) heavy fines, banned from using authorized ATV use areas temporary or long periods of time.

We could resort to temporarily restricting some areas to "NOUSE" until ATV users get the message that we will not continue use areas being abused and destroyed.

We really need to be aggressive towards protecting our natural and forested areas for all to enjoy, and should not allow a few to ruin the recreational opportunities for the many who appreciate what is available. The majority of the people using or even just visiting expect and even demand we protect their land for our future generations.

There are so many ways we can correct these situations, just find proper solutions and then take necessary steps now.

Sincerely

Walt B. Sipes, Advisory Board Member

Green Ridge State Forest
28700 Headquarters Drive
Flintstone, Md 21530

October 17, 2008

Dear Francis and Mark,

My comments will be limited as I only attended the morning session of the MAST Advisory Board meeting on October 14, 2008. The maintenance projects, recreational projects and special projects all seem to be very appropriate and important to the program. I fully support the entire program.

There was considerable discussion of the 4 wheelers use in the MAST that needs considerable attention and additional control due to misuse of these vehicles. We need to not only as a group to convince the higher level of State officials the seriousness of this problem, for them to respond and support measures to correct and control the use of 4 wheelers in the forest.

There are ways to provide control and use of the forest in an appropriate manner. We not only need to do so, but have an obligation to do.

Jim Mullan (Wildlife) requested that aspen be encouraged on this site as possible.

Stop #2 Jacobs Road

Due to possible old growth forest components recently discovered on this proposed site, it was recommended by Ed Thompson (Heritage) that this proposal be excluded from the work plan. However the Green Ridge staff has modified the proposal and moved the treatment area to the north. A new map showing the new area was sent out by Jesse Morgan (Green Ridge) to the ID Team members for their review and comments.

This will be a variable retention harvest, which will retain the pockets of old forest and avoid these areas from excessive access activity.

Stop #3 Twigg Road

This treatment will buffer the stream and will set aside retention areas. The access will most likely have to cross the stream via a bridge at one place on the site. All other aspects of the proposal were accepted as submitted.

Great Eastern Trail

This trail is in the planning stages and will run from Florida all the way to the Great Lakes in New York. The portion coming through Maryland, will be through Green Ridge State Forest. Some of the original trail location proposal would take it through flood plains which would not be sustainable. It was discussed how to best realign the trail so that it minimizes environmental impact while still allowing an interesting hiking experience. For the trail to align with its Pennsylvania counterpart, it will be taken near the town of Flintstone. It was suggested by Mike Deckelbaum (Parks) that the trail not go through Anthony's Ridge and not to close the Red Trail (as suggested) since this trail offers hikers a circuit hiking experience and has been maintained since its development. It was decided that the trail location will utilize the existing Wallizer Road to minimize additional disturbance and extensive "grubbing" to put in the new trail portions. Some of the trail that will require "grubbing" has already been approved by the ID Team in previous annual work plans.

Notes provided by Jack Perdue

WATERSHED IMPROVEMENT PROJECTS

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

Pursue Wildlife Habitat Incentive Program (WHIP) contract with NRCS to develop shallow water impoundment on 1 to 3 acres on Bull Ring Ranch and enhance the riparian buffer plantings along Town Creek.

ECOSYSTEM RESTORATION PROJECTS

1. Work will continue to suppress ailanthus populations on the forest. Focus will be put on roadside populations and individuals found within harvest proposal areas. Research has shown that suppression of ailanthus is most successful when using basal bark or cut surface treatments prior to harvest.
2. Conversion of upland grasses from tall fescue to more desirable grassland species mix in some areas. Research has shown that tall fescue has detrimentally affected reproduction systems in some upland avian and mammal species. Tall fescue exhibits a symbiotic relationship with the fungus species *Neotyphodium coenophialum* which can cause fescue toxicosis in small mammals and birds when ingested. Furthermore tall fescue has a low mineral and protein content, thus, does not contain adequate nutrition for many species.
3. Rx Fire in Kirk Orchard and Yonkers bottom areas to clean understory of shrub stands with adequate soil types for earthworm production and/or woodcock habitat.
4. Remove overgrown hedgerow and field trees to restore brush habitat component in early successional wildlife habitat areas.
5. 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. Maryland Department of Agriculture (MDA) will continue to monitor gypsy moth and hemlock wooly adelgid populations on the forest.
2. MD DNR Fisheries will continue to monitor aquatic populations in Town Creek and the Potomac River. Furthermore, the University of Maryland Center for Environmental Science (UMCES) Appalachian Laboratory will continue to conduct biological stream surveys in GRSF waterways.
3. Wisconsin University PHD student Jane Foster (formerly UMCES) will continue to research and monitor the effects of gypsy moth on the forest.
4. MD DNR Wildlife & Heritage Division will continue to monitor 2 GRSF resident black bear sows and cubs that are collared and gps equipped.
5. 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.
6. Wildlife Institute will monitor American Woodcock population in Kirk Orchard area with annual spring singing ground surveys.

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-2010

2. GRSF FUNDING SOURCES: Estimated - \$545,197

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. There may be special funds provided from the Forest or Park Reserve Fund that are not generated by this particular forest or there may be less special funds shown in the budget than was generated on this specific forest. \$240,283

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. \$59,729

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. These funds are designated reimbursable funds. \$60,000

3. OPERATIONAL COST: Estimated Annual Expenses - \$545,197

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-2010 budget proposal was prepared in July of 2008.

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

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

-Contractual Staffing: \$140,453

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: \$96,929

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: \$64,500

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.

Total Income from all sources:	
General, Special, Reimbursable and ORV Funds	\$545,197
 Total Expenditures	 \$545,197