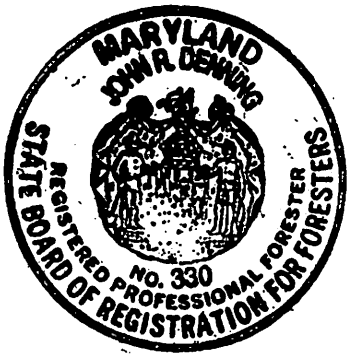
# POTOMAC / GARRETT STATE FOREST

## ANNUAL WORK PLAN

## FISCAL YEAR 2015

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| Prepared: | (Forest Manager) | 6/10/14 Date |
| Reviewed: | (Regional Forester) | 10/16/14 Date |
| Reviewed: | ~~(Public Lands Policy & Planning)~~ Land Acquisition & Planning | 10/24/14 Date |
| Approved: | (Environmental Specialist) | 10-31-14 Date |

# Potomac-Garrett State Forest
# FY-15
# Annual Work Plan


**Potomac- Garrett State Forest**
**FY-15 Annual Work Plan**

## I. State Forest Overview

The Potomac-Garrett State Forests situated in southwestern Garrett County in Western Maryland, have the distinction of being the birthplace of forestry conservation in Maryland. The generous donation of 1,917 acres by the Garrett Brothers in 1906 not only serves as the foundation of the Garrett State Forest, but is the root of both Maryland's present Public Lands system and Forest Service. Mountain forests, streams and valleys make up the nearly 19,000 acres of this State Forest. The forest cover is predominantly a second growth mixed hardwood forest dominated by mixed oaks, sugar and red maples, black cherry, basswood, ash and birch. The geography of this area provides for a wide range of growing conditions from the harsh, wind and ice swept ridge tops of Backbone Mountain to the deep rich slopes above the North Branch of the Potomac River. Much of the State Forestlands contain excellent quality hardwoods.

## II. Annual Work Plan Summary

In addition to the routine operations and management of the State Forest, the FY-2015 Annual Work Plan for Potomac-Garrett State Forest details six "special management" projects and eleven land management projects that will be the focus of the State Forest management staff for FY-15.

### A. Special Management Projects Include:

1. **Storm Damage Recovery** - October 2012's 'Super Storm Sandy' very effectively shut down all public access though out the Potomac Garrett State Forests 59 miles of roads and trails that make up the state forests transportation system. State Forest staff continue to work toward restoring access and function of the road and trail network.

2. **Continued Development of the Certified, Potomac-Garrett State Forest Sustainable Forest Management Plan** - with special focus on addressing items identified as in need of improvement as a result of 2013 FSC/SFI Certification Audits.

3. **ESA Management Plan Development** – Forest management staff will work with Natural Heritage staff to develop management plans for the 34 + ESA areas identified on the forest.

4. **Forest Stand Delineation, Inventory and Monitoring** – Completion of the 5 year long project to re inventory and redefine stands on the entire forest. And develop follow-up monitoring protocols associated with the initial inventory and certification requirements.

5. **Non-Native Invasive Species (NNIS) inventory and control work** - The Sustainable Forest Management Plan calls for various responses to NNIS and the Forest Inventory Project has allowed for a broad view of the problems forest wide. In 2013 MD DNR secured grant funding for non-native invasive species (NNIS) inventory and control work, in regionally important ecologically important areas.

6. **Lostland Recreational Access and Trail Restoration Project** - In January of 2012, the Governor announced approximately $23 million in the proposed capital budget for public land projects that will support nearly 300 jobs, help restore the environment, reduce energy usage, and improve services to visitors and citizens. Approximately $300,000 of this will be directed to improving the public access and trail network on the Potomac -Garrett State Forests in 2013-2014. Improvements are planned for the *Lostland Recreational Access and Trail Restoration Project*

**B. Land Management Projects Include:**

-One wildlife habitat project involving improvements to a Handicapped Hunter Access Area and the associated grassy opening as well as a 27 acre thinning operation in the surrounding conifer stand.

-One continued watershed protection project mitigating impacts of a harmful forest pest; Hemlock Wooly Adelgid mitigation / Red Spruce Restoration.

-Two continued ecosystem restoration projects involving control of invasive, exotic plants in both the Wallman/Laurel Run area and the Backbone Mtn. area.

- Seven silvicultural projects including:

-4 Commercial Thinnings on 88 ac. This work prescribed to increase health and vigor of overstocked stands while yielding a commercial harvest.

-3 Shelterwood Harvests on 106 ac. The first stage of these "2 Stage Shelterwood Systems" involves 'conditioning or preparatory' work prescribed to create conditions suitable for seedling development. These proposals include light commercial harvests, as well as non-commercial work using low volume applications of herbicides to control interfering, undesirable vegetation. These projects require an investment up front to assure sustainable and diverse forest ecosystems for the future.

Forest harvest operations are undertaken to utilize mature and dead/dying/diseased trees; to thin overstocked stands; to improve and diversify wildlife habitat; to effectively correct public safety concerns and issues; to reduce the forests vulnerability to insect attack, disease or wildfire hazard; to facilitate certain approved research needs; to improve certain aesthetic aspects of an area; and to improve the proportions of age class and species diversity within stands and management blocks.

This forest has been intensively managed for over 100 years, utilizing both even and uneven-aged techniques via selective removals and regeneration harvests. Early records indicate that as cut over land was acquired, foresters 'culled' the forest, removing the poorly formed and damaged timber left behind in the wake of the cut and run practices employed by early timber speculators. By removing these undesirable trees, newly forming seedlings were released from competition and were thus cultured into the future growing stock of trees that we enjoy today. The benefits of this work have been significant including: improved wildlife habitat diversity, improved forest health and more abundant mast production, improved utilization of gypsy moth damaged trees, reduced forest fire hazard, and the considerable financial contribution of management to the state and local economies as well as to those employed in the forest products industry.

The FY-15 Work Plan calls for 8 harvests on 221 acres accounting for the harvest of approximately 552,000 Bd.ft. of hardwood saw timber, putting an estimated $120,000 worth of raw wood products out into the local markets. With the repeated Gypsy Moth infestations and weather related damages to the State Forest's oak stands in the past decade, much of the silvicultural work laid out in this work plan is focused on initiating seedling development to better insure oak regeneration successes in future harvests. Much of the value of the harvests in the work plan will be directed back into the forest providing the essential investment in pre-harvest cultural work that will assure the long term sustainable management of these important forest resources.

The cultural operations and management projects outlined within the FY-15 Annual Work Plan are selected to provide significant contributions to sustainability of the forest resources found within the Potomac-Garrett State Forest and the ecosystems associated with it.

## III. General Location Maps for FY-15 Land Management Proposals.

## Map Key

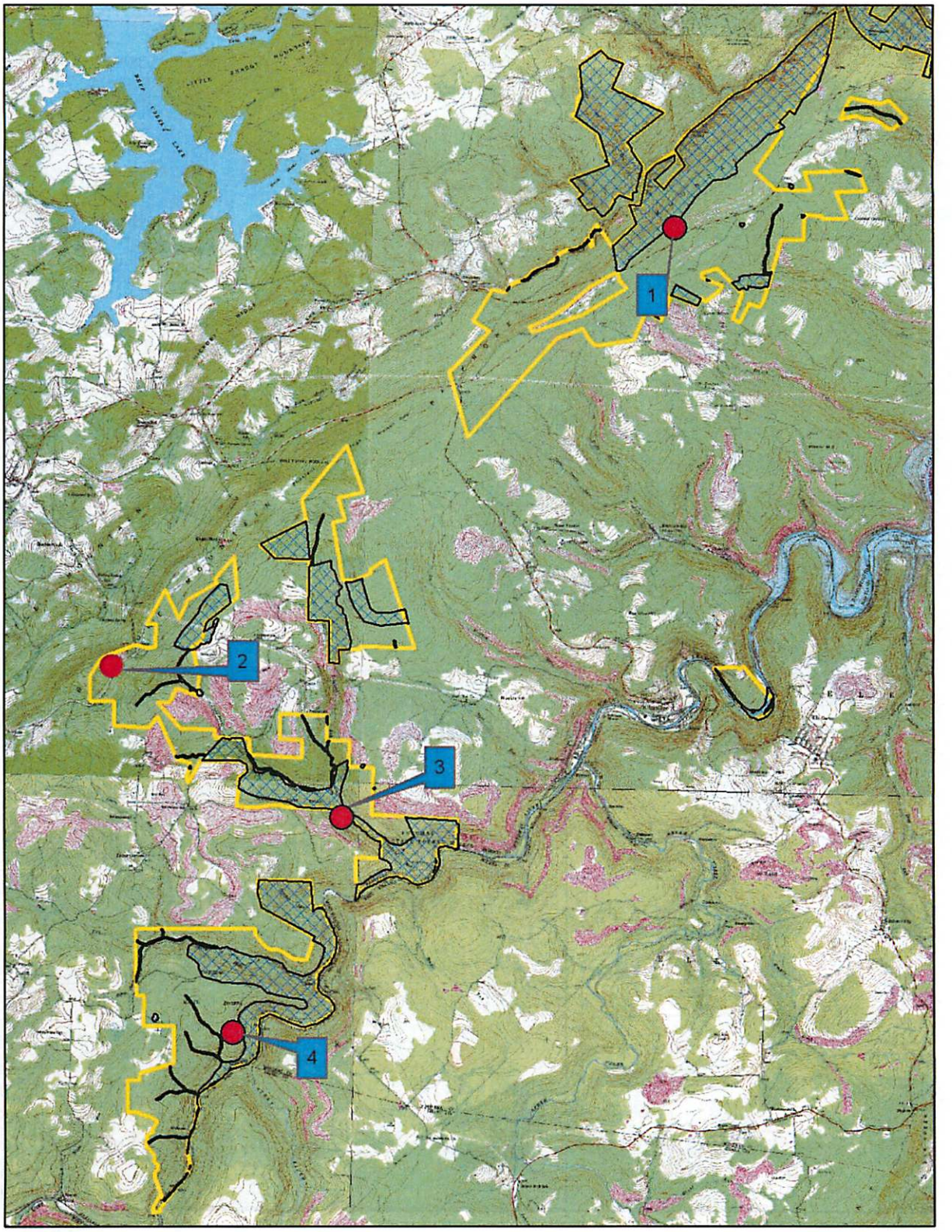
**Potomac State Forest**

1) Comp. 5&7 – Ecosystem Restoration (Japanese Knotweed Control)
2) Comp. 16-21 –Wildlife Habitat Improvement
3) Comp. 19 Lostland Run HWA Mitigation / Red Spruce Project
4) Comp. 21-26 – Ecosystem Restoration (Garlic Mustard Control)

**Garrett State Forest**

1) Comp. 32–11 Thinning
2) Comp. 32–16&17 Thinning
3) Comp. 39–1 Thinning
4) Comp. 39–6 Shelterwood
5) Comp. 45-3 Shelterwood
6) Comp. 45–19 Thinning

# Potomac State Forest
# FY-15 General Location Map




1:100,000

High Conservation Value Forest (Total)

N
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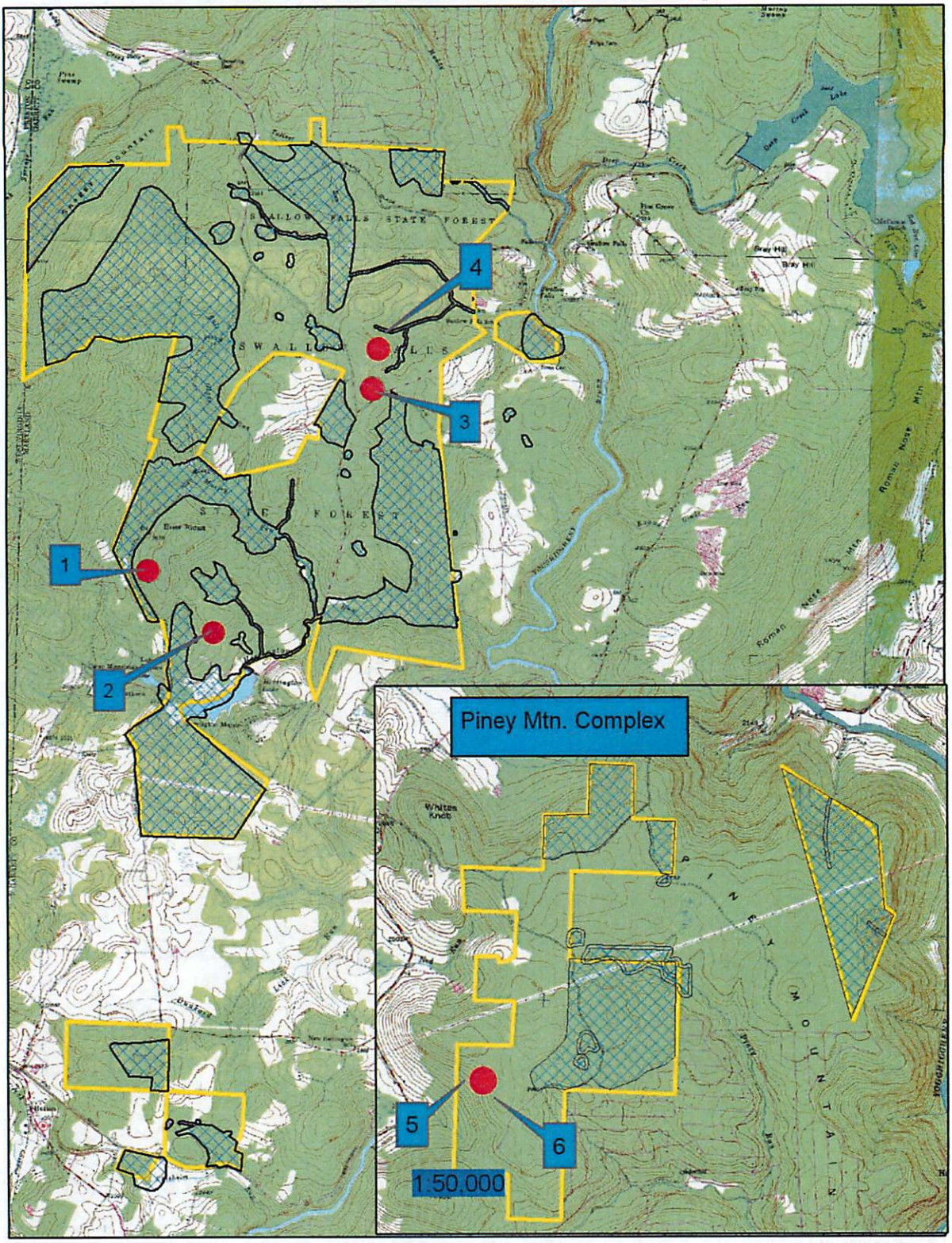
# Garrett State Forest
# FY-15 General Location Map




1:60,000

High Conservation Value Forest (Total)

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## IV. Special Projects - Forest Resource Management Planning

### A. Storm Damage Recovery

October 2012's 'Super Storm Sandy' very effectively shut down all public access though out the Potomac Garrett State Forests 59 miles of roads and trails that make up the state forests transportation system. When the snow melted and the FEMA Crews went home, State Forest staff continued to work toward restoring access and function of the road and trail network. With limited resources, the staff employed a 3 stage clearing approach: 1st stage = single lane open / passable to facilitate emergency access and limited use. 2nd stage= full traveled surface cleared of debris and obstructions. 3rd stage=travel corridor cleared of all obvious and immediate hazards and trees expected to obstruct travel with any snow load; ditches and road shoulders cleared of debris to restore drainage and function of the road / trail bed.

At the close of the 2013 summer season (layoff of seasonal labor), all PGSF hiking trails will have been opened to a stage 2 level; all Class 1-3 Roads have been cleared at least at a stage 2 level; all Class 1&2 roads on the Garrett State Forest have been cleared to a final stage 3 level; approx. 1/3 of the Class 4 (gated service) roads have been opened to Stage 2 as needed for management work; and much of the Class 1 roads on the Potomac State Forest will have been opened to Stage 3 level. For FY-15, summer crews in 2014 will continue: Stage 3 clearing of all Class 1-3 roads on the Potomac SF, Stage 2 and 3 Clearing of Class 4 roads as needed.

### B. Continued Development of the Certified, Potomac-Garrett State Forest Sustainable Forest Management Plan.

(This work done with special focus on addressing items identified as in need of improvement as a result of 2013 FSC/SFI Certification Audits.)

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

Throughout the course of the last two years, broad resource assessments were carried out identifying the various management units and features located on the forests including identification and mapping of High Conservation Value Forest Areas (HCVF), much of which was formerly identified as the State Forests "Special Management Zone".

Within the HCVF are located a broad range of Ecologically Significant Areas (ESA). These areas typically contain rare, threatened or endangered species and their critical habitats. Management schemes for the ESAs on Potomac–Garrett State Forest will be developed in the winter of 2011. By spring of 2011 initial drafts of the Forest's Sustainable Management Plan were developed and shared with stakeholders for initial comment and review. The plans were submitted to both the FSC and SFI organizations in the spring of 2011, at which point audits have been completed on all three of the western state forests. Following the audits, draft plans and audit findings were presented to the State Forests Citizen Advisory Committees for review and comments. The Draft Sustainable Management Plans were made available for public comment fall of 2011.

Each year the State Forests Management Program is audited for compliance to the standards set forth by the Certifying Organizations. Any shortcomings in the programs identified during the audits a identified in a Corrective Action Reports (CARs) and/or observations identified as being in need of improvement in order to be "certified" as sustainably managed forest lands under the internationally recognized FSC and SFI standards. These corrective actions vary from simple formal documentation of routine practices, to more complex policy and procedure development involving various stakeholders and partners. The program requires that all of these items be addressed before the next annual audit, with some needing more immediate attention. The 2013 audit turned up only 3 minor shortcomings in the management approach being used on the MD State Forest System. According to the independent auditors, this is a considerable accomplishment and testimony to the high standards being upheld in the sustainable management of Maryland's State Forest lands.

Items to be addressed at the program level include:

1) Inconsistency in protocols regarding retention and monitoring of silvicultural practices.

2) Administrative and permit challenges associated with managing the road networks to prevent sediment loading.

3) Management to promote healthy and vigorous forests; management of overstocked stands.

State Forest staff time and field operations are adjusted and redirected to assist in addressing these Corrective Action items in the course of the next year.

### C. ESA Management Plan Development

Thirty-four Ecologically Significant Areas have been initially identified on PGSF. Each area harbors unique habitats and sensitive communities that generally contain RT&E species. These communities are in need of special conservation measures. In the

winter of 2013, these areas will be reviewed with the region's Natural Heritage Biologist to develop site specific management plans to identify conservation measures appropriate for each ESA. This will be done in order that these significant features are not just assumed protected by steering direct management activity away from them, but rather actively identifying appropriate management practices that may increase the stability and long term existence of the communities and habitats that make up these ESAs. These ESA plans will be incorporated into the Potomac-Garrett State Forest Sustainable Forest Management Plan before the next audit cycle.

## D. Forest Stand Delineation, Inventory and Monitoring

A critical part of developing long term sustainable management plans is the availability of up-to-date forest inventory data. To this end, the State Forests' staff has been fully engaged in revising the forest stand delineation on the forests. The process continues to consume considerable staff resources as this project is taking shape. This ambitious undertaking has involved collecting detailed inventory data on both overstory and understory conditions over the entire State Forest. The data has been collected and analyzed using the SILVA Inventory System developed by the USFS.

The project involves collecting information on some 22,200 sample points. As the data must be collected during full leaf out seasons between hard frost dates, the working window is five months. The work force of skilled technicians available to us are generally college students that can only offer us three months work before returning to school. To this end, the project is expected to take 4-5 years to complete and will cost approx. $20,000/yr. Our two full time technicians lead and manage this special project on top of their full work load implementing the Annual Work Plan on the forest. The stand delineation and inventory project has resulted in the pulling of one man from his normal duties for the equivalent of approximately six months time each year of the project to serve as crew leader, provide project planning, and processing data. Staff assignments and field operations have been adjusted to assure the timely and accurate completion of this important field level assessment that will serve as the basis which we will draw management decisions from for the next 10-15 years.

With the close of the 4$^{th}$ inventory season, data collection is on track for completion of this stage of the forest monitoring program. The demand for this important data set is increasingly evident as special projects evolving out of demands placed by Forest Certification Standards, are utilizing portions of this work in progress / partial data set for project planning. Examples include the NNIS Inventory and Control Project in the ESAs on Potomac SF, as well as each years FY-Annual Work Plan.

What had historically been carried out on a 10 year interval offering a 'snap shot' in time view of the forest, has evolved into a regular (annual) sampling approach that gives a more frequent look at overall forest condition through out the years. This approach will allow a much closer watch on developing forest conditions and allows for a

more rapid and timely response. This approach is especially valuable in light of the numerous and frequent introductions of foreign insects, diseases, and invasive plants that can rapidly disrupt forest systems. The initial 'Stand delineation and Inventory Project' will be continued as a Forest Monitoring program as required under certification in order to allow for documented observations of changing conditions throughout the forest Program focus will include: monitoring of developing regeneration sites allowing for the timely response to the investment in intensive silvicultural work such as herbicide control of invasive and interfering plants, fencing, and prescribed fire; NNIS monitoring and control work (beyond the special project area identified in this AWP below); silvicultural results with respect to management objectives and outcomes and recreation / visitor impacts. Etc.

## E. Non-Native Invasive Species (NNIS) inventory and control work.

The Sustainable Forest Management Plan calls for various responses to NNIS and the Forest Inventory Project has allowed for a broad view of the problems forest wide. In 2013 MD DNR secured grant funding for non-native invasive species (NNIS) inventory and control work, in regionally important ecologically important areas. The grant scope included portions of the Wallman/ Laurel Run and Lost Land Run Areas of the Potomac State Forest allowing for a more complete inventory within sensitive management areas of the forest. This grant will allow an extension of the work initiated as the 'garlic control project in Wallman / Laurel Run Area as seen within the AWP. Funding will support a 2 person inventory and control crew for 2 years. Work will include assessment of problem areas, prescriptive control plan development and on the ground control work. Field crew members are hired and supervised by PGSF staff.

## F. Lostland Recreational Access and Trail Restoration Project

In January of 2012, the Governor announced approximately $23 million in the proposed capital budget for public land projects that will support nearly 300 jobs, help restore the environment, reduce energy usage, and improve services to visitors and citizens. Approximately $300,000 of this will be directed to improving the public access and trail network on the Potomac -Garrett State Forests in 2013-2014. Improvements are planned for the *Lostland Recreational Access and Trail Restoration Project*

This project will restore 3.0 miles of multi-use trail and access road. Improving public access to 2,189 acres of State Forest lands and Potomac River Access to increase recreational opportunities for: fishermen, hiking, biking , hunting , campsite access, horseback riding, and other nature based recreation. Work will include grading and reshaping road and trail beds, correcting/restoring drainage, replacement of failing water control devices (culverts, ditches, swales etc.)and stone resurfacing and parking lot improvements. Trails to be addressed:

**Lostland Run Road / Trail 3.0 miles**
Improved gravel road which provides vehicle access to campsites, day use, and fishing areas as well as trail heads for the 3.5 mile long Lostland Run Hiking Trail.

Additional funds have been directed to ward the development of the new nested loop bicycle trail network involving the Garrett State Forest, Deep Creek Lake State, Herrington Manor and Swallow Falls State Parks. IMBA (International Mountain Biking Association) has been contracted to develop a plan and design of this multi phased trail development. As trail developments move forward, detailed plans will be included in the State Forests AWP.

The State Forest management staff has developed initial 'scope of work' proposals and has initiated securing permits for waterway improvement work associated with this project. The project is expected to be put out for bids in spring of 2014, with work to begin in FY-15. The general scope of work for this project had been presented and reviewed as part of the FY- 11 AWP, when funding was being sought from a private grant that did not materialize.

## V. Maintenance and Operations

Aside from the detailed cultural work planned for the State Forests, the following is a partial list of projects that are often on-going from year to year and are an integral part of State Forest operations.

### A. Maintenance and Management of Roads and Trails

PGSF staff maintains 59 mi. of roads and trails including 37 miles of improved road and 22 mi. of multi-use trails. This work is ever ongoing. A lack of sufficient road maintenance budget makes the upkeep of this road and trail system a considerable challenge. A reduction in ORV Permit revenue has left a considerable void in the routine maintenance budget of the State Forest. In FY-13 $12,000 from 'ORV Permit Funds' was budgeted for maintenance to ORV trails and primitive roads on PGSF. In FY-14 ORV Permit Funds were eliminated from the PGSF budget, as the limited funding available was redirected toward new trail construction on Savage River and Green Ridge State Forests. Preliminary projections for FY-15 ORV Funds are also zero. In order to attempt to meet this challenge, alternative sources are continuously sought to provide the necessary equipment, labor and materials required for the routine maintenance and improvements needed to sustain this aging and primitive transportation system.

In FY-15 maintenance staff will be involved in the coordination of private contractors carrying out over **$300,000** worth of planned capital improvements and critical maintenance to the Lostland Run Road and motorized-use trail. As this will require considerable attention, maintenance staff will concentrate any remaining time on

basic maintenance on the segments of multiple-use and motorized-use trails that have been rehabilitated using National Recreation Trail Grants over the past 5 years.

In addition to the regular and routine business of road and trail maintenance, as a result of the State Forests Certification Audit, State Forest staff has developed a formalized transportation plan in which the entire transportation (road and trail) network has been inventoried and assessed for management, use, and maintenance needs. From this assessment, the State Forest Manager will develop a maintenance plan geared toward making the road and trail system sustainable. Information gathered for this plan is presently being used to prioritize improvements to be made with the access trails grant referenced above, NRT Grant funds, Critical Maintenance Projects, etc. As work is contracted out, plans will be updated with regard to needs.

As noted in section II.A.1 - Special Management Projects, Storm damage recovery has been the focus of the maintenance staff for the past 2 years, has consumed the lions share of available road and trail maintenance resources and will be a major focus of resources in FY-15.

### B. Boundary Line Maintenance

PGSF has 130 miles of boundary line, including interior lines, exterior lines, and road frontage. Boundary maintenance is critical to the management of all public lands. In order to keep up with this effort, PGSF maintains approximately 30 miles of line each year. In addition to routine marking/painting, considerable effort is spent on researching relocating or establishing missing and/or new line, as well as addressing boundary conflicts. As conflicts arise, every effort is made to resolve the issue in a timely and professional manner. Often, this work leads to the need for a licensed surveyor and legal recourse in order to resolve the issue. The FY-15 planned budget request will include funds to carry out survey needs identified in the Piney Mountain and Snaggy Mountain Complexes of the Garrett State Forest.

### C. Campground Operation and Maintenance

PGSF offers year round, primitive camping in five separate areas of the State Forest; Lost Land Run Area, Laurel Run / Wallman Areas, Snaggy Mt. Area and Piney Mt. Area. Within each area is a 'group site', a rustic trail shelter and several primitive campsites offering a picnic table, lantern post/table and fire ring. From 2003-2009, vault toilets were installed in each of the five areas to improve sanitary conditions for campers and forest visitors. Campsites and trail shelters are available on a first-come, first-served basis; a self registration kiosk is available at the entrance to each area. Additional seasonal staff is hired to operate and maintain the campgrounds during peak summer use to provide a quality camping experience.

Maintenance and operation of these primitive campsites includes: managing group site reservations; maintenance of information / bulletin boards; camper contacts to

insure policies are understood; self registration fee collections and deposits; weekly site inspection and cleaning; hazardous tree evaluation and removals; grass mowing (typically the week before the summer holidays and otherwise as needed); maintenance and replacement of picnic tables, lantern posts, and fire rings; site impact monitoring.

### D. 3-D Archery Range Maintenance and Management

PGSF offers the only 3-D Archery Range in the State's Public Lands System. The facility is located behind the State Forest Headquarters. The range offers a 30-target course, with four separate skill levels at each target. The facility is open April 1st - Oct. 1st, dawn to dusk. The State Forest hosts a summer fun league, an annual tournament shoot, as well as a fall 'hunters special' shoot.

Maintenance and operation of this facility includes: promotion of the facility; maintenance of information / bulletin boards; weekly inspection and cleaning; periodic maintenance and replacement of targets, hazardous tree evaluation and removals; brush removal as needed; site impact monitoring, annual overhaul and patching of targets; seasonal set up and take down for the off season.

### E. Interpretation and Education

With limited staffing resources, interpretive efforts have been focused on Sustainable Forest Management Programs for targeted audiences using the interpretive features at the "Kindness Demonstration Area". Targeted audiences have been Agricultural and Natural Resource Leaders, Extension Service, Forestry Boards, forest land owners, and forest land managers. The facility is set up as a self guided lesson in forestry and wildlife management practices, and is available to groups and individuals wishing to learn more about managing forests.

## VI. Recreation Proposals

### A. Lostland Recreational Access and Trail Restoration Project

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## VII. Wildlife Habitat Improvement Proposals

**COMPARTMENT 16 Stand 21** **FY-15**

### Description/Resource Impact Assessment

**Location:** This area is located north of Eagle Rock Road, approx. 0.3 miles from the intersection of Eagle Rock and Boiling Springs Roads in Compartment #16 Stand 21 of the Potomac State Forest. The site serves as a Handicapped Hunter Access Area.

**Forest Community Type and Condition:** This 27-acre site consists of a 46 year old Norway Spruce (64%) and Red Pine (15%) plantation surrounding 0.6 acre field / permanent wildlife opening. The maturing conifers are crowding the field and reducing its ability to offer quality habitat elements. The plantations are overstocked at 138% and 196 sq. ft. BA/acre and contain no measurable understory as expected in unmanaged plantations of this age. Along the field edge and within any opening in the stand, black cherry poles are present. There are a couple dozen old apple trees scattered throughout the plantation; these trees are in need of release and pruning.

**Interfering Elements:** Interfering plant competition does not pose a significant factor in regeneration. No non-native invasive species (NNIS) were observed in the inventory, though garlic mustard is found along the adjacent County Roads. Deer browse impacts in this area are estimated to be high and must be addressed when considering regeneration efforts on this site.

**Historic Conditions:** These abandoned fields were planted to conifers upon State acquisition, and have not been thinned. The existing old orchard trees have been maintained with occasional release work and pruning. The small field has been maintained as a permanent grassy opening to provide habitat elements not readily found on the primarily forested area. Periodic mowing, sowing, lime and fertilizer applications are made to improve the condition of the field in order to offer a quality habitat element. The area is managed to provide improved hunting opportunities to mobility impaired hunters.

**Rare, Threatened and Endangered Species:** The Forest Manager knows of no rare, threatened or endangered species on the site or impacted by the management prescription.

**Habitats and Species of Management Concern:** Forest Manager knows of no known habitats or species of management concern on this site.

**Water Resources:** The area drains to an unnamed tributary of Block Run and sits ½ mile up slope of the privately owned 'Boiling Springs' within the Youghiogheny River Watershed. The proposed silvicultural treatments will be outside of all required protective riparian buffers of the wetlands and streams.

**Soil Resources:** Underlying soils include: Dekalb channery loams'on 0-25% slopes. These soils are generally moderately deep and well drained with moderate equipment limits and moderate hazard of erosion on the steeper slopes. The site has good - very good productivity for woodland management, with a site index of 65-75 for White Oak.

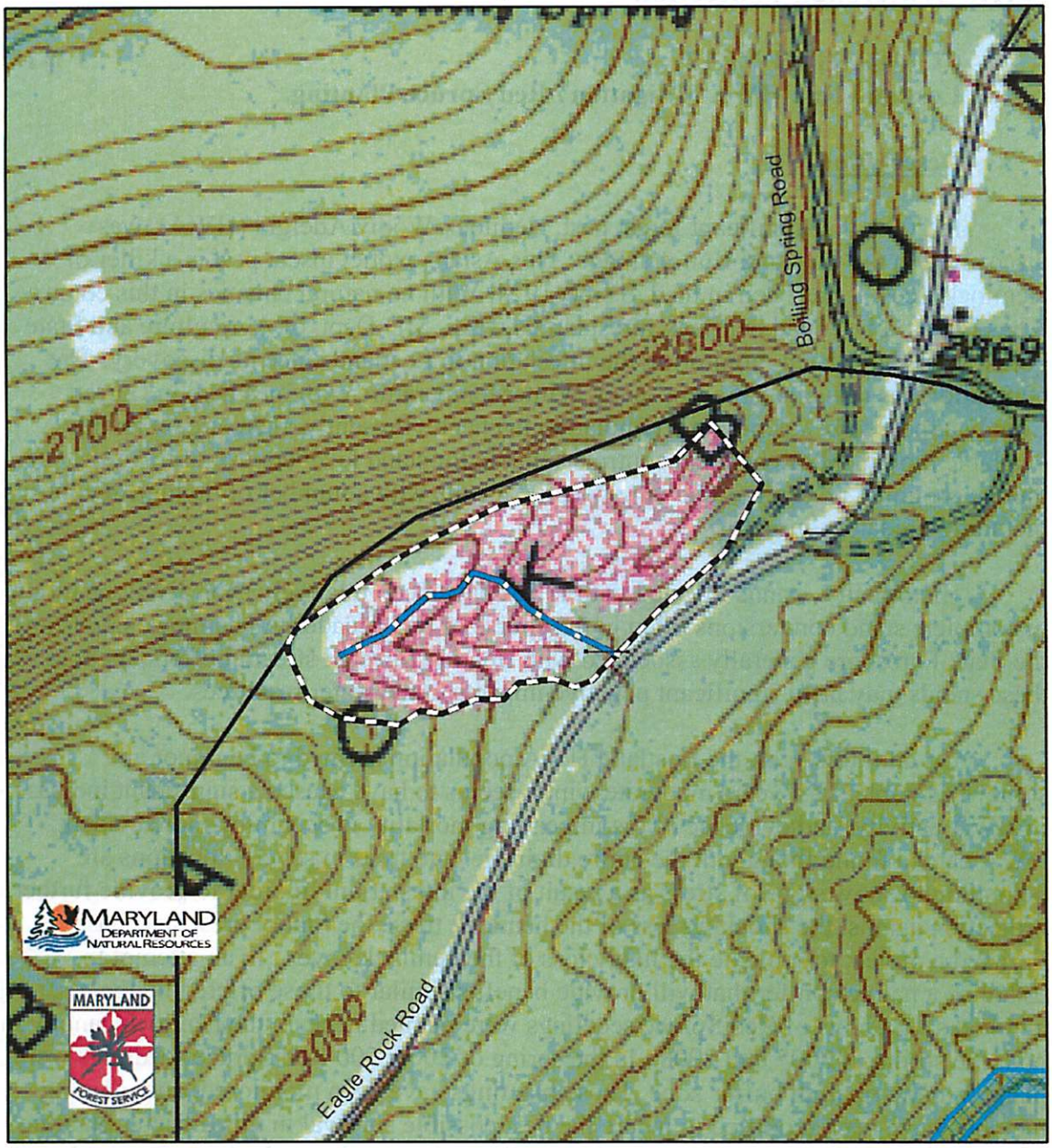
**Management and Silvicultural Recommendations**

The planned silvicultural treatment for the conifer plantations is a commercial thinning. The objective of this thinning is to reduce the stocking level to approximately 90% relative density and 130 sq. ft. of basal area per acre. The thinning will be concentrated heavily among suppressed and intermediate poles and smaller sawtimber. This will remove all of the unacceptable merchantable growing stock thereby improving the vigor and health of the residual trees and will concentrate growth on the small and medium sawtimber trees that will benefit most from this practice. In addition to the thinning, the field edge will be day lighted, by cutting all trees one chain back from the southern edge of the field, and 2 rows deep along the remainder of the field. The day lighting will reopen the field to full sun light allowing for better vegetation management on the field while also providing a soft edge for wildlife cover. Where available, spruce with low hanging branches will be retained to provide winter cover, though few are present. Two to three rows of confers may be planted along this new edge to further stratify and soften the edge while enhancing the winter cover values. Special care will be taken to release any apple trees during the thinning. The harvest will yield approx. 3,000-3,500 Bd. Ft. per acre.

The proposed treatment for the field is to lime, fertilize, and reseed with a grass, forbs and legume mix that will serve as a quality food source that will be beneficial to a wide range of wildlife species. Surface preparation of the grassy openings will include brush hogging and herbicide application in the fall, with follow up spring treatments prior to planting if necessary. The seed mix to be used is a mix offered by the National Ruffed Grouse Society; "RGS Grouse Trail Mix", which contains 'Star Fires Red Clover', 'Hunt Club Brand White Clover', 'Plot Enhancer Brand Chicory', Alsike Clover', 'Birds foot Trefoil', and 'Crimson Clover'. This mix has been formulated especially for the harsh growing conditions found on log landings and skid trails, and has proved to work well on these types of sites.

The completed project will provide an important food source for a variety of wildlife species including grouse, turkey, deer and a variety of non-game species . The work is consistent with the management plans of improving the early succession values associated with this opening by softening the edge to improve nesting and escape cover. This work will also make considerable improvements to the designated Handicapped Hunter Access Area, offering a better recreational hunting opportunity to mobility impaired hunters permitted to drive into the area, as well as all others that may walk in.

# Compartment 16 Stand 21 FY-15
# Habitat Improvement




Approx. Acres.....27
Age.....46
Forest Type..... Plantation
Trees/Acre.....992
Basal Area.....196
AGS BA.....184
Stocking.....138 %
Growth Rate.....3.8 %
Site Index.....62 for Norway Spruce
Composition.....Norway Spruce 64 %
. Red Pine 15 %
. Black Cherry 9 %

**HCVF Components**

- Old Growth and 300' Buffer
- Old Growth
- Wildlands
- Wetlands of State Concern and 100' Buffer
- Ecologically Significant Areas
- Streams and 50' Buffer

- Wetlands and 50' Buffer
- Proposed Area
- Handicapped Hunter Access Rds
- Gates

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0 200 400 800 1,200 1,600 Feet

## VIII. Watershed Protection

**COMPARTMENT 19** **FY-15**
**Lostland Run HWA Mitigation / Red Spruce Planting**

**Description**

In 2004, the significant forest pest, Hemlock Wooly Adelgid (HWA), was discovered in the Lostland Run drainage. This Asian, exotic, insect pest is a killer of Hemlock trees. It has been in the US since1924. With no natural enemies in this country, it has left a trail of dead hemlock forests in its wake. MD Dept. of Agriculture and State Forest staffs have been monitoring the infestation in Lostland since its discovery. The population has remained at a low level. Winter temperature extremes here in Garrett County appear to be keeping the population in check. Presently, there are no readily available biological or chemical controls suitable for stand level control of this pest, though on-going research is showing positive results with a number of biological controls including predatory insects.

Historically, stands infested with HWA have been relatively short lived, resulting in complete stand conversions often in the course of one decade. As hemlock stands on the State Forest are generally associated with riparian forested stream buffers, the loss of these stands may have significant negative impacts to the water resources.

Up until this year, the Lostland HWA population seemed to be minor and somewhat stable. Last years moderate winter seems to have caused a significant increase in HWA activity, and evidence of the impending mortality is becoming more evident. HWA can be found thoughout the entire drainage, and trees in several locations are beginning to show signs of stress as a result of the infestation. In order to provide further protection against the shocking loss of the hemlock trees, the State Forest staff has initiated a project to mitigate the likely loss of the hemlock cover. In an attempt to establish a native conifer that will provide benefits similar to those offered by the hemlocks, test plots of Red Spruce seedlings were planted beneath the hemlock canopy in both the spring of 2007 and 2008. In the spring of 2009, 500 Red Spruce seedlings were planted in the riparian buffer zone. These plantings have been monitored, and planting methods have been modified to insure the best possible survival in this difficult planting site. Analysis of these three test plantings indicate that the dense shade present in these relatively undisturbed hemlock/hardwood riparian forests does not allow sufficient sunlight to penetrate to the forest floor for the successful establishment of even the very shade tolerant red spruce seedlings. Our observations indicate that forest floor light levels must be increased in order to allow the seedlings to be able to photosynthesize and become established.

Further research and experimentation with control of the available light is necessary to determine if under planting with Red Spruce is a viable option that may offer a natural means of off setting the negative impacts associated with the likely loss of the hemlock stands along this important brook trout stream.

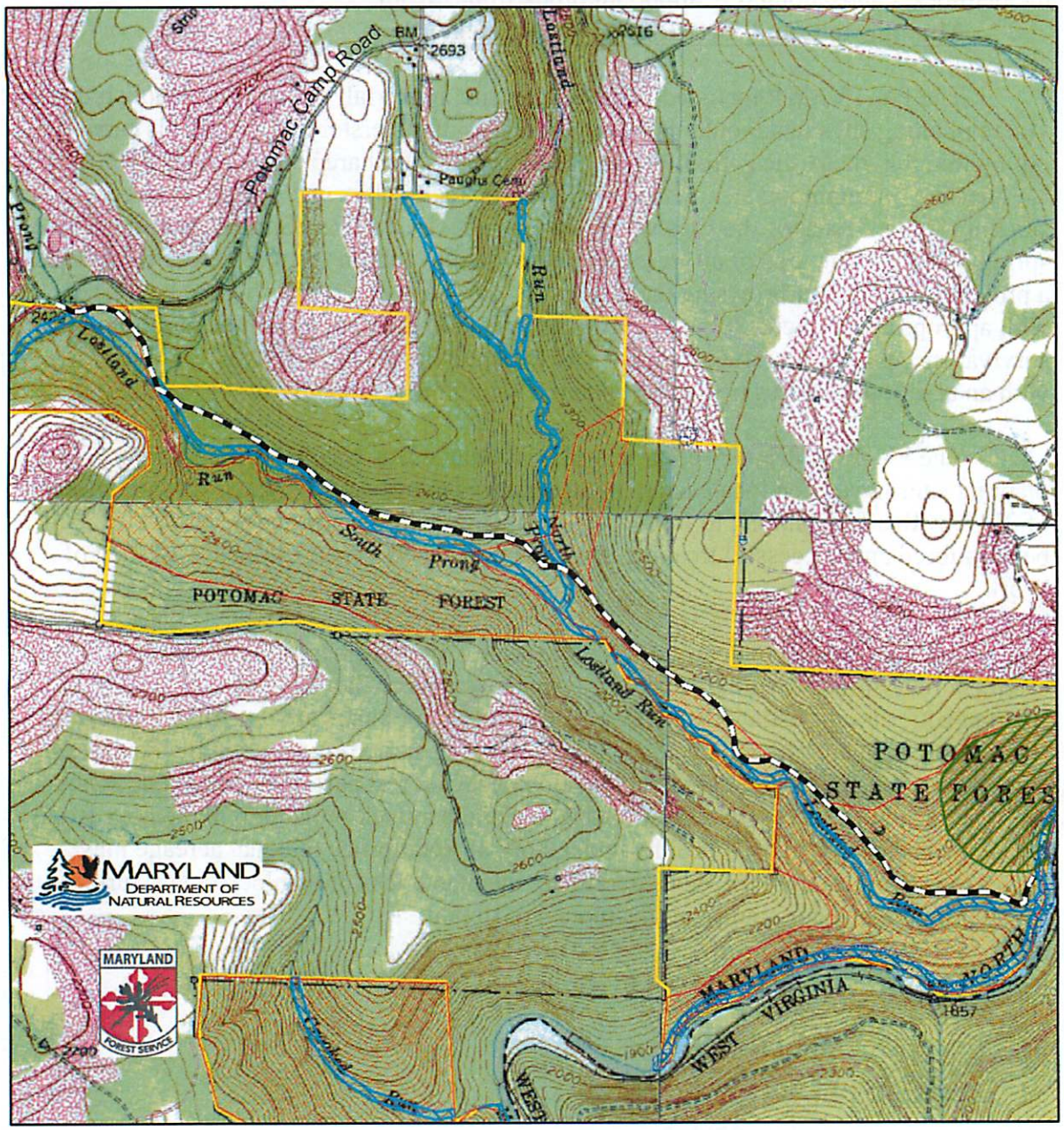
**Management and Silvicultural Recommendations**

The FY-13 AWP included plans for this site, in the fall of 2012, to establish three 1-acre planting sites that would have varying levels of understory light controls carried out by thinning these sites "from below", reducing the basal area of the stands by 10-30 %, focusing on removing stems from the 1 inch diameter class and up until desired stocking is met. Each of the sites was to be planted with 100 Red Spruce seedlings in the spring of 2013. The tops of all trees to be cut would be left on the forest floor to serve as a protection from deer browsing the seedlings. All hardwood stumps would be treated with appropriate herbicide to prevent resprouting. The plantations will be monitored for survival success. Successful treatments are to be duplicated the following year (FY-14) with an additional 3 acres treated and planted within the riparian buffer of the stream.

The FY-13 understory control work was delayed, as was the spring planting. The planting sites have been located and the understory control work is slated for late summer of 2013, with a fall planting to follow. As per the initial project proposal, these sites will be monitored and successful treatments will be duplicated as part of the FY-15 Plan of Work.

The objective is to determine what measures are necessary to successfully establish Red Spruce seedlings that may eventually replace the hemlocks in the 100 ft. riparian zone along Lostland Run. Once regeneration measures are determined, the goal is to establish an approximately equal area of seedling spruce cover along the hemlock covered stream bank. If research and development in forest pest management does not provide the key to successful HWA eradication and hemlock protection in the next 10-20 years, the establishment of a healthy under story of Red Spruce of equal acreage may buffer the stream against the shock and likely inevitable loss of hemlock cover, further safeguarding the water quality of this mountain stream.

# Compartments 18,19,20,21 Lostland Run HWA Mitigation/ Red Spruce Underplanting FY-15




Compartments.....18,19,20,21

39 22' 54.69" N 79 16' 41.63" W

0 6501,300 2,600 3,900 5,200 Feet

**HCVF Components**

- Old Growth and 300' Buffer
- Old Growth
- Wildlands
- Wetlands of State Concern and 100' Buffer
- Ecologically Significant Areas
- Streams and 50' Buffer
- Wetlands and 50' Buffer
- Lostland Run Road

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## IX. Ecosystem Restoration / Protection Projects

### A. Non-Native Invasive Species (NNIS) Control

Across the State, a biological invasion of non-native plants is spreading into our fields, forests, wetlands and waterways. Variously referred to as exotic, non-native, alien, or non-indigenous, invasive plants impact native plant and animal communities by displacing native vegetation and disrupting habitats as they become established and spread over time. Early detection and appropriate control of the spread of problematic species is important for the conservation of our native flora and fauna. Control efforts often require considerable resources (labor, time and money). As in many cases, the introduction of these widespread and invasive plants cannot be prevented. It is important to evaluate and plan control efforts in order that such efforts contribute meaningfully to the success of forest conservation plans.

Populations of two invasive exotic plant species have been identified as being in need of control on PGSF, they are Japanese Knotweed (*Polygonum cuspidatum* ) and garlic mustard (*Alliaria petiolata* ). The following efforts are being taken to limit the impacts of these invasive species.

**1. COMPARTMENTS 5&7** **FY-15**

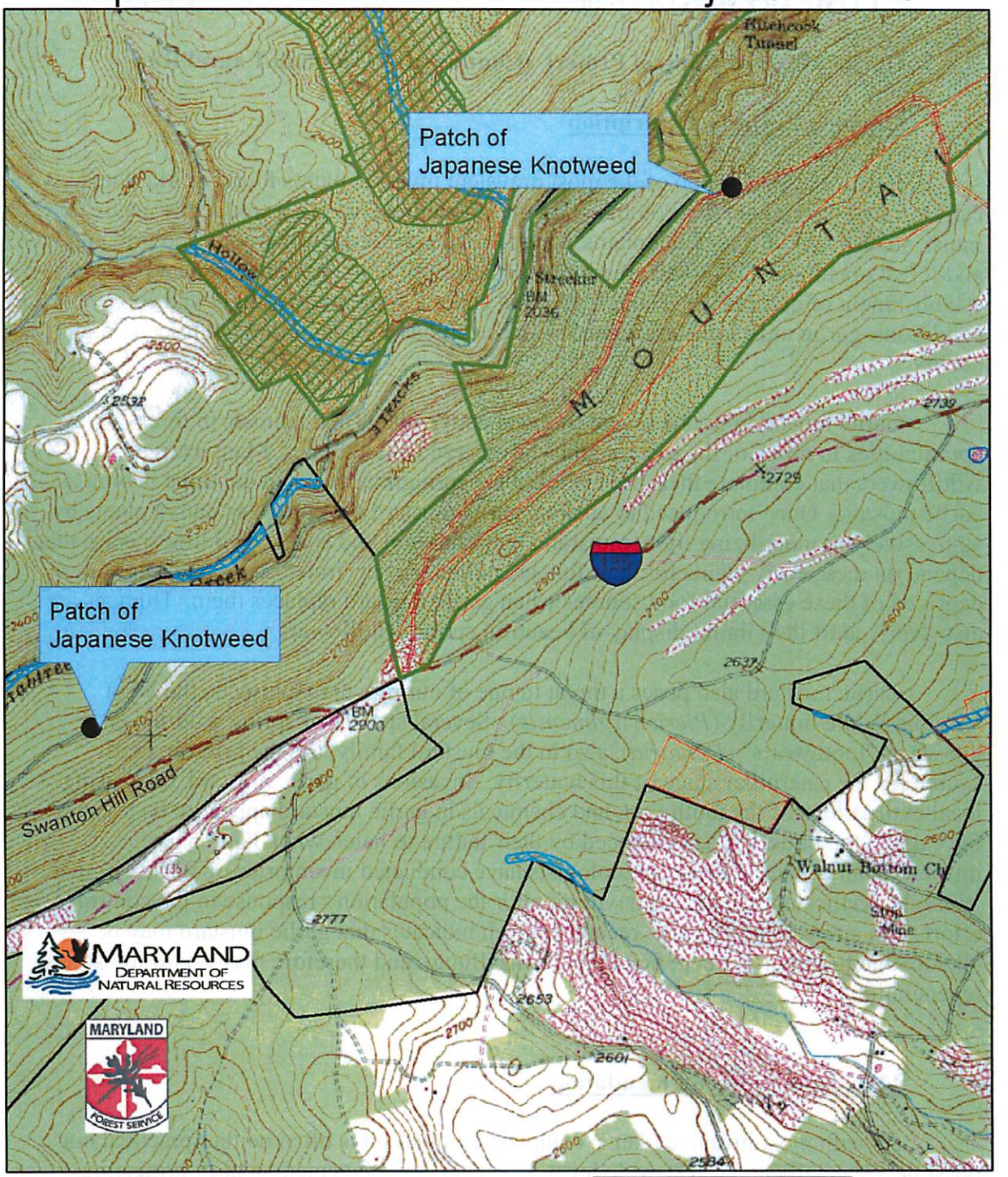
**Japanese Knotweed Control Project (Continued) – Backbone Mt.**

**Ongoing Project**

Within the Potomac State Forest, Japanese Knotweed is well established along the base of Backbone Mountain following the railroad bed at the base of the mountain. It has overtaken much of the lower reaches of Crabtree Creek which runs along the railroad grade. However, within the State Forest, its spread has been generally limited to the base of Backbone Mountain; the area associated with the railroad and Crabtree Creek. In recent years, two 'patches' have been found on the upper slopes of Backbone Mt. The first is located on the roadside edge of a section of the State Forest access road that serves as the Backbone Mt. ORV trail. This road defines the upper boundary of the Crabtree Slopes Special Management Zone. The second and smaller population is located along a gated forest access on the east side of Swanton Hill Road. State Forest staff has been working to restrict the spread of these populations by mowing the roadsides prior to seed development. In 2004, as an educational program for the Maryland Conservation Corps., an effort was made to eliminate the plant colony by strictly mechanical means including mowing and later grubbing out the plants roots and rhizomes. This effort was not successful. Mechanical controls alone cannot eliminate this aggressive plant invader.

In 2005 and 2006, in a cooperative effort between MD DNR Wildlife and Heritage Service, MDA Plant Protection and Weed Management Program, and Potomac-Garrett State Forest staff took an integrated pest management approach toward the control of these knotweed populations. Carefully timed mechanical and chemical treatments were applied to the plant colonies. The areas were mowed just prior to seed development, and later following re-sprouting, but just before the start of fall dormancy, the plants were sprayed with an appropriate herbicide (*glyphosate*). In 2009-2013 only a few persistent individual plants were present, and they were treated with the same mechanical and herbicide treatments. These areas will continue to be monitored annually and follow-up treatments will be applied as necessary to prevent reestablishment of these colonies as the viable soil seed bank is slowly exhausted.

# Compartment 5 Backbone Mtn.
# Japanese Knotweed Control Project FY-15



## 2. COMPARTMENTS 21-26 FY-15

### Garlic Mustard Control Project (Continued) - Wallman/Laurel Run

**Ongoing Project - Description**

Garlic Mustard is one of the most prevalent invasive plants found in Maryland. It can be found throughout the Potomac-Garrett State Forest, where it frequently occurs in moist, shaded soil of river floodplains, forests, road sides, edges of woods and trail edges and forest openings. Disturbed areas are most susceptible to rapid invasion and quick establishment of dominance. Though invasive under a wide range of light and soil conditions, garlic mustard is associated with calcareous soils and does not tolerate high acidity.

Garlic mustard poses a severe threat to native plants and animals in forest communities in much of the eastern and Midwestern United States. Many native wildflowers that complete their life cycles in the springtime occur in the same habitat as garlic mustard. Once introduced to an area, garlic mustard out competes native plants by aggressively monopolizing light, moisture, nutrients, soil and space. Wildlife species that depend on these early plants for their foliage, pollen, nectar, fruits, seeds and roots, are deprived of these essential food sources when garlic mustard replaces them. Humans are also deprived of the vibrant display of beautiful spring wildflowers.

Garlic mustard also poses a threat to one of our rare native insects, the West Virginia White butterfly (*Pieris virginiensis*). Several species of spring wildflowers known as "toothworts" (*Dentaria*), also in the mustard family, are the primary food source for the caterpillar stage of this butterfly. Invasions of garlic mustard are causing local extirpations of the toothwort, and chemicals in garlic mustard appear to be toxic to the eggs of the butterfly, as evidenced by their failure to hatch when laid on garlic mustard plants. Natural Heritage biologists have conducted inventories of West Virginia White butterflies in this area, and will monitor the population's response to the control efforts. On an even larger scale, recent research indicates that garlic mustard may be allelopathic to important beneficial mycorrhizalfungi, and therefore may retard forest tree regeneration.

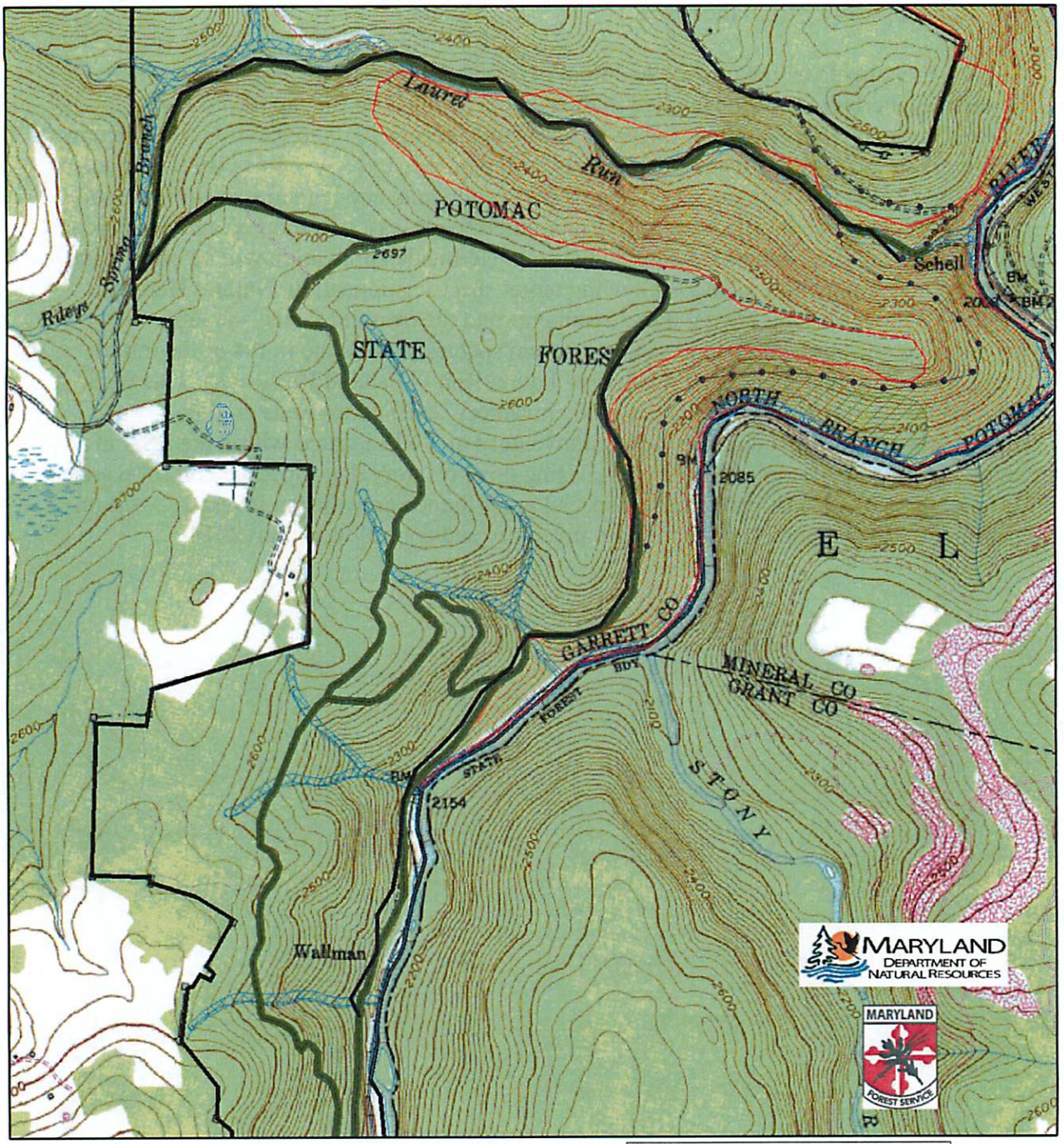
**Management Recommendation**

As with most invasive plants, complete elimination is often neither practical nor possible, especially at a forest-wide level. However, a management goal of protecting specific, ecologically significant areas (ESA) is often feasible using accepted control measures. A number of ESAs have been identified within the Wallman/Laurel Run area of the Potomac State Forest as being jeopardized by adjacent garlic mustard populations.

These ESAs contain at least 9 known Maryland rare, threatened or endangered species that could be negatively impacted if garlic mustard overtakes these ESAs. Critical garlic mustard colonies have been mapped, and evaluated for control priority. Total acreage infested is approximately 1 acre, with this acre comprised of numerous small patches spread out along nearly 5 miles of road edge, and several pockets of infestation under closed canopy away from the roads.

Treatments have involved an initial two-year planned spray program in which glyphosate herbicide will be applied in three applications. The first application was carried out in October of 2009, followed by an early spring 2010 application to catch any survivors of the Oct. 09 treatment and early spring germinants. A return visit was made in spring (2011) in which any survivors or first-year plants newly recruited from the soil seedbank were treated. The area will be monitored for at least two more years to ensure exhaustion of the residual seed bank in the soil. Herbicide application will be done using low volume application methods allowing target specific application. Natural Heritage NNIS specialists are reviewing these treatments and the overall effects, and are developing an approach to address this problem species beyond the limits of the initial project, and out into the greater Wallman / Laurel Run / Lostland Run Areas .This work utilizes the new broader, State Forest-wide inventory data and expands on this information to a more intensive, detailed inventory of NNIS located within the ESA in these areas of the Potomac State Forest. Using this inventory data, specific control work is to be prescribed and carried out. A special grant funded crew began inventory work in summer of 2013, and is funded for both inventory and control work into 2014.

# Compartments 21, 22, 23, 24, 25, 26
# Wallman/Laurel Run Garlic Mustard Control Project FY - 15




Compartments.....21, 22, 23, 24, 25, 26

0 625 1,250 2,500 3,750 5,000 Feet

39 20' 24.65" N 79 16' 20.22" W

**HCVF**

- Old Growth and 300' Buffer
- Old Growth
- Wildlands
- Wetlands of State Concern and 100' Buffer
- Ecogically Significant Areas
- Streams and 50' Buffer
- Wetlands and 50' Buffer
- Snowmobile Trails
- Potomac Access Rds

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## X. Silvicultural Proposals

### A. COMPARTMENT 32 Stand 11 FY-15

**Description/Resource Impact Assessment**

**Location:** This area is located on the west side of Snaggy Mountain Road, behind the group camp site # G9, within Compartment #32 Stand 11 of the Garrett State Forest.

**Forest Community Type and Condition:** This 44-acre site contains a 90 year old transitional, mixed oak stand. The over story is made up primarily of Red Maple (36%) as well as mixed oaks including Northern Red Oak (21%), Scarlet Oak ( 10%) and White Oak ( 23%). This stand was thinned in 1997-98 and is over stocked at 101% relative density and 138 sq.ft. BA/acre. As a result of the thinning, the understory is well developed with 56% of the stand being stocked with advanced regeneration, 52% being Red Maple saplings, most of which have sustained significant damage by the heavy wet snows from the October 2013 "Super Storm Sandy" and are deemed unacceptable for future growing stock. The stand is transitioning toward a Red Maple stand, as only 2% of the stand contains suitable advanced oak regeneration. At this time, there is not sufficient acceptable regeneration present to reproduce a fully stocked stand.

**Interfering Elements:** Deer browse pressure in this area is estimated to be moderate to high and must be addressed when considering regeneration efforts on this site. Interfering plant competition is significant with 78+% of the site harboring some form of undesirable plant competition including both tall woody interference (56% of the site, largely the damaged red maple saplings), as well as dense fern cover (32% of the forest floor) that impedes further seedling development. No non-native invasive species (NNIS) were observed in the stand inventory.

**Historic Conditions:** This site, like most of PGSF, was likely cutover and burned around the turn of the last century. In recent time, this stand was thinned in 1997-98. No evidence of recent fire activity was observed during the recon.

**Rare, Threatened and Endangered species:** The stand bounds on the old Hutton Switch Road, which divides the stand from the adjacent HCVF (High Conservation Value Forest) which includes an Ecologically Significant Area known as the Murley Run ESA. The area includes 'Wetlands of Special State Concern'. The Forest Manager knows of no rare, threatened or endangered species on this site or impacted by the silvicultural prescription.

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

**Water Resources:** This ridge top site has a western aspect and drains at the divide to 2 un-named headwater tributaries; with the northern most portion of the stand draining toward the Murley Run drainage, and the southern portion draining toward Herrington Creek; both part of the Youghiogheny River Watershed. The silvicultural treatments will be outside of our riparian buffer for these streams.

**Soil Resources:** Underlying soils include: 'Dekalb and Gilpin very stony loams'. These soils are generally moderately deep and well drained with inclusions of some poorly drained soils, with moderate equipment limits because water table is close to the soil surface in winter and early in spring. Degree of slope ranges from 0-25% throughout the site. The site has good productivity for woodland management, with a site index of 60-70 for Northern Red Oak.

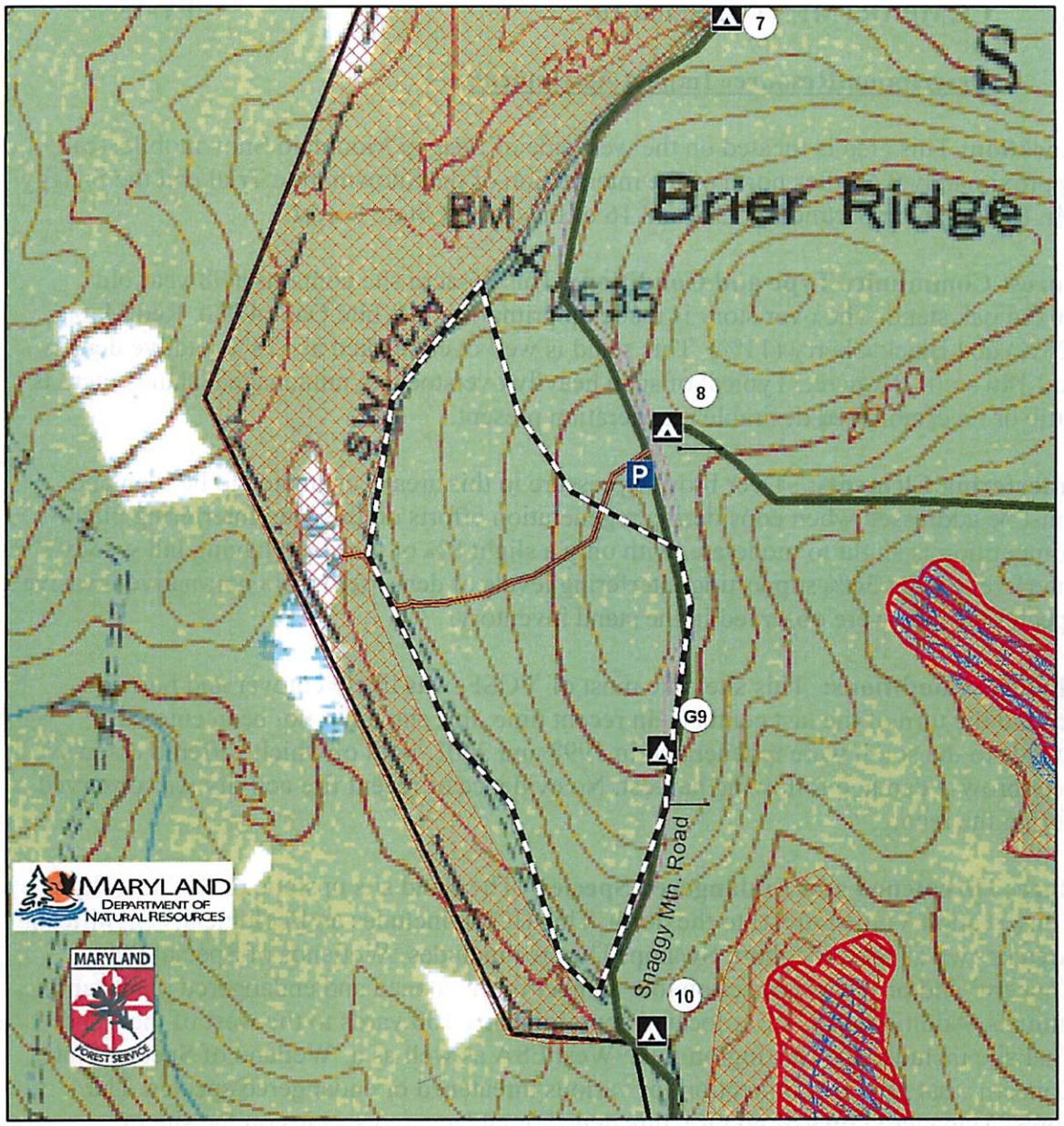
**Management and Silvicultural Recommendations**

The planned silvicultural treatment for this site is to regenerate it using a 2-stage shelter-wood system. The first stage of this regeneration system, will be a "preparation cut" that will involve thinning the stand to enhance conditions for seed production and seedling establishment; reducing stocking to approximately 60-65% relative density. The thinning will largely be a 'thinning from below' with removals taken primarily from the suppressed and intermediate crown positions, as well as over mature Red Maple in order to favor oaks and acorn production. Approximately 2,500 Bd. Ft. / acre will be removed in order to make this a commercially viable operation. In order to retain important wildlife habitat elements, and to preserve a 'legacy' component of the present stand, retention areas will be identified during this thinning operation to be carried through to future final harvest.

Additionally, interfering understory vegetation will be treated with appropriate herbicides in order to open the forest floor to increased sunlight necessary for seedling development. All woody vegetation 1-5 inches in diameter will be removed using a combination of cut surface and 'hack and squirt' treatments applying the herbicide directly to the target tree effectively removing it from the stand. The 34% interfering fern coverage will be foliar sprayed using low volume spray equipment. As an alternative, this work may be completed using a combination of prescribed fire and herbicide treatments to control the interfering woody vegetation and reduce stocking to the desired levels.

Emphasis will be placed on the retention of acceptable growing stock as well as dominant and co-dominant oaks to serve as future seed source. Once the stand is fully stocked with acceptable seedlings, (approx. 5-10 years) the 'second stage' of this system may be carried out as an overstory removal, or liberation cut. This final harvest will release or liberate the now competitive seedlings from overhead competition to fully regenerate the site. Of the 44 acres in this stand, approx. 9 ac. will remain unharvested due to site limitations including unmapped water sources at or very near the surface and the buffers associated with these water resources.

# Compartment 32 Stand 11 FY-15
## Shelterwood




Approx. Acres.....44
Age.....90
Forest Type..... Mixed Oak
Trees/Acre.....447
Basal Area.....138
AGS BA.....106
Stocking.....101 %
Growth Rate.....1.9 %
Site Index.....69 for NRO
Composition.....Red Maple 36 %
. White Oak 23 %
. Red Oak 21 %

**HCVF Components**

- Old Growth and 300' Buffer
- Old Growth
- Wildlands
- Wetlands of State Concern and 100' Buffer
- Ecologically Significant Areas
- Streams and 50' Buffer

- Wetlands and 50' Buffer
- Proposed Area
- Snowmobile Trails
- Hiking Trail
- Gates

0 200 400 800 1,200 1,600 Feet

39 27' 55.92" N 79 27' 53.62" W

N W E S

## B. COMPARTMENT 32 Stand 16 FY-15

### Description/Resource Impact Assessment

**Location:** This area is located on the west side of Snaggy Mountain Snowmobile Trail, approximately 0.6 miles north of the intersection of the Snowmobile Trial and the Snaggy Mt. Road in Compartment #32 Stand 16 of the Garrett State Forest.

**Forest Community Type and Condition:** This 26-acre site contains a 98 year old mixed oak stand. The over story is made up primarily of White Oak (47%). Red Maple (28%) and Black Cherry (11%). This stand is well over stocked at 123% relative density and 146 sq.ft. BA/acre. Typical of such heavily overstocked, unmanaged, stands there is little or no established desirable regeneration present.

**Interfering Elements:** Deer browse pressure in this area is estimated to be high and must be addressed when considering regeneration efforts on this site. Interfering plant competition is slight to moderate, with only a slight 8% of the stand having tall woody interference, but 36% supporting interfering levels of dense ferns. No non-native invasive species (NNIS) were observed in the stand inventory.

**Historic Conditions:** This site, like most of PGSF, was likely cutover and burned around the turn of the last century. In recent time, this stand has not been entered. Stands to the south were regenerated in 1998 and 2002, both of which suffered extensive deer browse damage following harvest. No evidence of recent fire activity was observed during the recon.

**Rare, Threatened and Endangered Species:** The stand sits upslope of HCVF (High Conservation Value Forest) to the north. This HCVF includes an Ecologically Significant Area known as the Pronghorn Swamp. The area includes 'Wetlands of Special State Concern' and provides protection to a number of threatened and endangered plants and animals. Additional HCVF is located approximately 100 yards to the west of the stand. That site includes the Herrington Lake West ESA as well as a 'Wetland of Special State Concern' that provides protection for various threatened or endangered species. The Forest Manager knows of no rare, threatened or endangered species on the site or impacted by the silvicultural prescription.

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

**Water Resources:** This ridge top site drains toward 2 wetlands of special state concern and their associated outflow headwater tributaries which flow to Herrington Creek which

is part of the Youghiogheny River Watershed. The proposed silvicultural treatments will be outside of all required protective riparian buffers of the wetlands and streams.

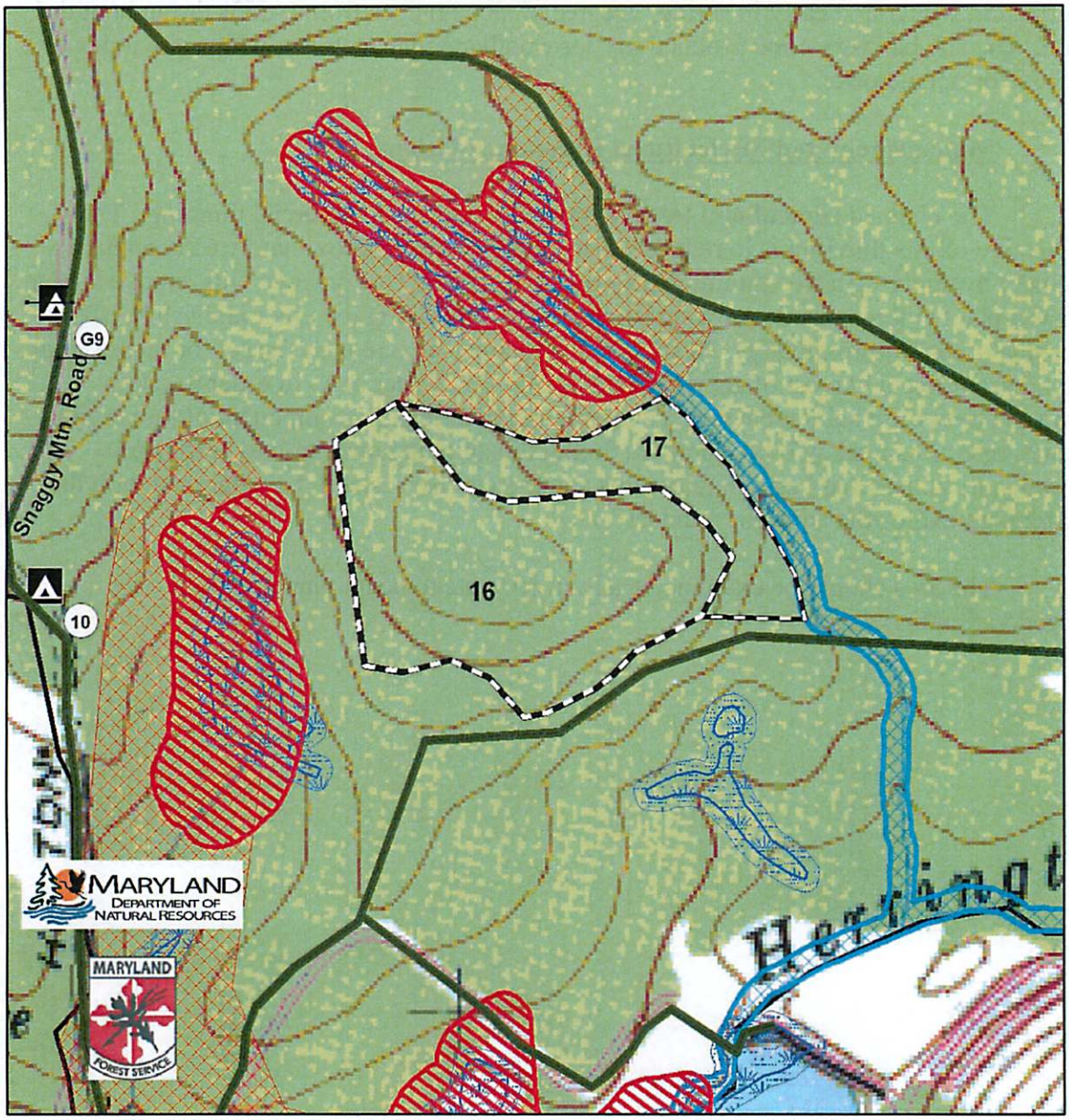
**Soil Resources:** Underlying soils include: 'Dekalb and Gilpin very stony loams'. These soils are generally moderately deep and well drained with inclusions of some poorly drained soils, with moderate equipment limits because water table is close to the soil surface in winter and early in spring. Degree of slope ranges from 0-25% throughout the site. The site has very good productivity for woodland management, with a site index of 65-75 for upland oaks.

**Management and Silvicultural Recommendations**

The planned silvicultural treatment for this site is a commercial thinning. The objective of this thinning is to reduce the stocking level to approximately 65% relative density by applying a free thinning throughout the stand. This practice will remove all the unacceptable merchantable growing stock thereby improving the vigor and health of the residual trees. Approximately, 90 sq. ft. of basal area per acre is the target for the residual stand providing a harvest of approximately 3,500 Bd. Ft. per acre. In order to retain important wildlife habitat elements, and to preserve a 'legacy' component of the original stand, retention areas will be identified during this thinning operation to be carried through to future final harvest. (Note this commercial harvest will be combined with the work planned for the adjacent stand #17.)

The area should be examined again in 10 years to begin planning for a regeneration harvest.

# Compartment 32 Stand 16 FY-15
# Thinning




Approx. Acres.....26
Age.....98
Forest Type.....Mixed Oak
Trees/Acre.....630
Basal Area.....146
AGS BA.....133
Stocking.....123 %
Growth Rate.....1.9 %
Site Index.....73 for WO
Composition.....White Oak 47 %
. Red Maple 28 %
. Black Cherry 11 %

**HCVF Components**

- Old Growth and 300' Buffer
- Old Growth
- Wildlands
- Wetlands of State Concern and 100' Buffer
- Ecologically Significant Areas
- Streams and 50' Buffer

- Wetlands and 50' Buffer
- Proposed Area

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## C. COMPARTMENT 32 Stand 17 FY-15

**Description/Resource Impact Assessment**

**Location:** This area is located on the west side of Snaggy Mountain Snowmobile Trail, approximately 0.6 miles north of the intersection of the Snowmobile Trail and the Snaggy Mt. Road in Compartment #32 Stand 17 of the Garrett State Forest.

**Forest Community Type and Condition:** This 10-acre site contains a 98 year old Allegheny hardwoods stand. The over story is made up primarily of Black Cherry (52%), White Oak (24%) and Red Maple (14%). This stand is over stocked at 92% relative density and 150 sq.ft. BA/acre. As with the adjacent stand #16, there is very little established desirable regeneration present, though a well developed understory of undesirable red maple, and black birch occupies 40% of the stand having been severely damaged by "Sandy".

**Interfering Elements:** Deer browse pressure in this area is estimated to be high and must be addressed when considering regeneration efforts on this site. Interfering plant competition is moderate to high, with 40% of the stand having tall woody interference, and 90% supporting interfering levels of dense ferns. Japanese Barberry, a non-native invasive species (NNIS) was observed in the stand inventory.

**Historic Conditions:** This site, like most of PGSF, was likely cutover and burned around the turn of the last century. In recent time, this stand has not been entered. Stands to the south were regenerated in 1998 and 2002, both of which suffered extensive deer browse damage following harvest. No evidence of recent fire activity was observed during the recon.

**Rare, Threatened and Endangered species:** The stand sits upslope of HCVF (High Conservation Value Forest) to the north. This HCVF includes an Ecologically Significant Area known as the Pronghorn Swamp. The area includes 'Wetlands of Special State Concern' and provides protection to a number of threatened and endangered plants and animals. Additional HCVF is located approximately 100 yards to the west of the stand. That site includes the Herrington Lake West ESA as well as a 'Wetland of Special State Concern' that provides protection for various threatened or endangered species. The Forest Manager knows of no rare, threatened or endangered species on the site or impacted by the silvicultural prescription.

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

**Water Resources:** This ridge top site drains toward 2 wetlands of special state concern and their associated outflow headwater tributaries which flow to Herrington Creek which is part of the Youghiogheny River Watershed. The proposed silvicultural treatments will be outside of all required protective riparian buffers of the wetlands and streams.

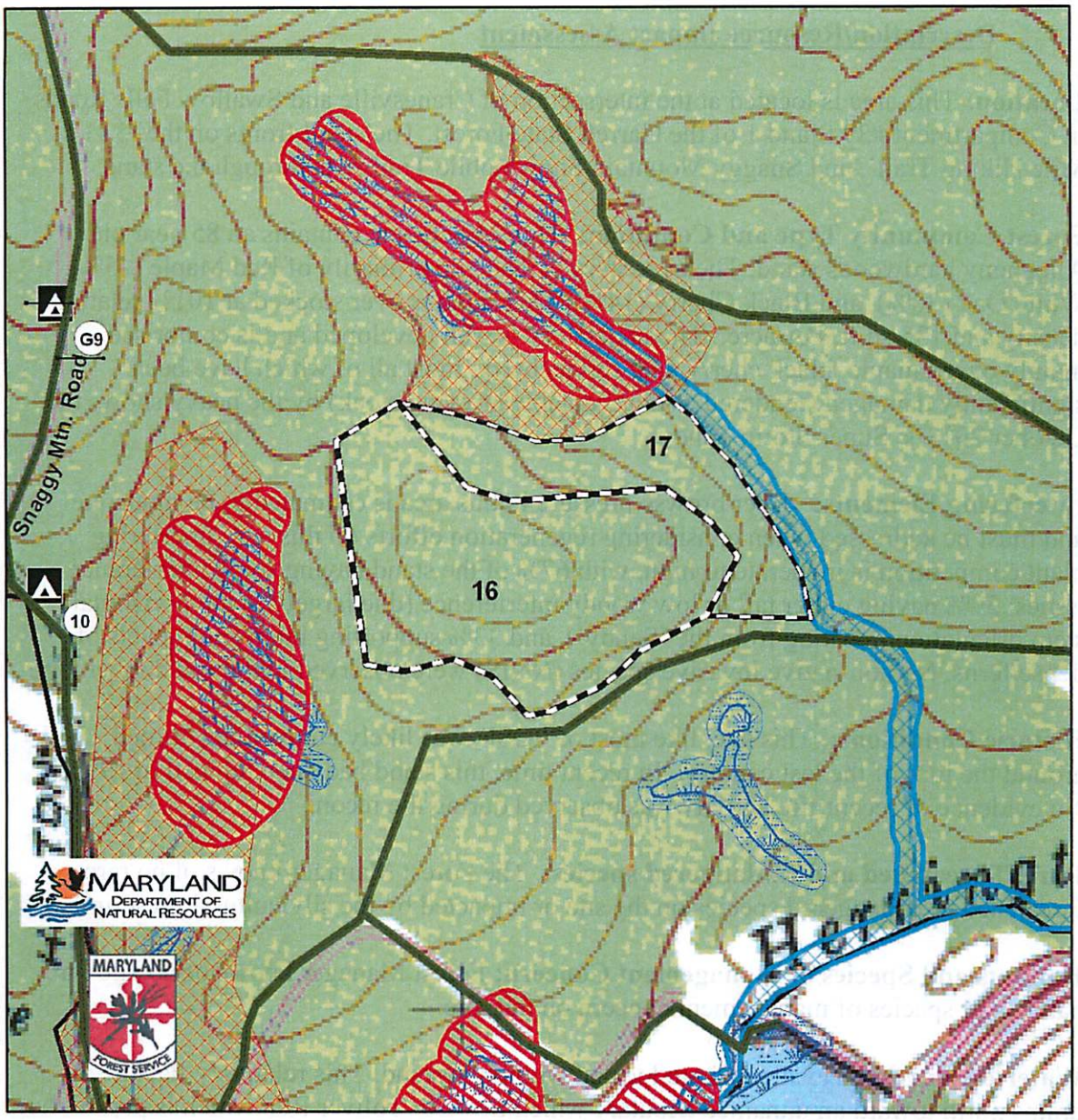
**Soil Resources:** Underlying soils include: 'Dekalb and Gilpin very stony loams'. These soils are generally moderately deep and well drained with inclusions of some poorly drained soils, with moderate equipment limits because water table is close to the soil surface in winter and early in spring. Degree of slope ranges from 0-25% throughout the site. The site has very good productivity for woodland management, with a site index of 65-75 for upland oaks.

**Management and Silvicultural Recommendations**

The planned silvicultural treatment for this site is a commercial thinning. The objective of this thinning is to reduce the stocking level to approximately 65% relative density by applying a free thinning through out the stand. This practice will remove all the unacceptable merchantable growing stock including 12 sq. ft. of overmature trees, thereby improving the vigor and health of the residual trees. Approximately, 105 sq. ft. of basal area per acre is the target for the residual stand providing a harvest of approx. 2,400 Bd. Ft. per acre. In order to retain important wildlife habitat elements, and to preserve a 'legacy' component of the original stand, retention areas will be identified during this thinning operation to be carried through to future final harvest.

Note this commercial harvest will be combined with the work planned for the adjacent stand 16. The area should be examined again in 10 years to begin planning for a regeneration harvest.

# Compartment 32 Stand 17 FY-15
# Thinning




Approx. Acres.....10
Age.....98
Forest Type..... Allegheny Hardwood
Trees/Acre.....222
Basal Area.....150
AGS BA.....134
Stocking.....92
Growth Rate.....2.3 %
Site Index.....88 for BC
Composition.....Black Cherry 52 %
. White Oak 24 %
. Red Maple 15 %

**HCVF Components**

- Old Growth and 300' Buffer
- Old Growth
- Wildlands
- Wetlands of State Concern and 100' Buffer
- Ecologically Significant Areas
- Streams and 50' Buffer

- Wetlands and 50' Buffer
- Proposed Area
- Snowmobile Trails
- Gates

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## D. COMPARTMENT 39 Stand 1 FY-15

### Description/Resource Impact Assessment

**Location:** This area is located at the intersection of Cranesville and Swallow Falls Roads in Compartment #39 Stand 1 of the Garrett State Forest. The stand fronts on the '5 ½ Mile Hiking Trail', and Snaggy Mountain Snowmobile Trail runs through the stand.

**Forest Community Type and Condition:** This 24-acre site contains an 85 year old Allegheny hardwoods stand. The over story is made up primarily of Red Maple (45%), White Oak (30%), and Black Cherry (14%). This stand is over stocked at 101% relative density and 135 sq.ft. BA/acre. The understory is well developed and is comprised mainly of red maple, black cherry and serviceberry; most all of which have been significantly damaged (rendered as unacceptable growing stock) by the heavy snows the October 2013's Super Storm Sandy.

**Interfering Elements:** Deer browse pressure in this area is estimated to be moderate and must be addressed when considering regeneration efforts on this site. Interfering plant competition is moderate to high, with 67% of the stand having some interferance issues; 39% having either tall or low woody interference (due largely to the horizontal stem orientation resulting from the 'Sandy'), and 33% supporting interfering levels of dense ferns. No non-native invasive species (NNIS) were observed in the stand inventory.

**Historic Conditions:** This site, like most of PGSF, was likely cutover and burned around the turn of the last century. In recent time, this stand had been thinned in 1990. No evidence of recent fire activity was observed during the recon.

**Rare, Threatened and Endangered species:** The Forest Manager knows of no rare, threatened or endangered species on the site or impacted by the silvicultural prescription.

**Habitats and Species of Management Concern:** Forest Manager knows of no known habitats or species of management concern on this site.

**Water Resources:** No streams are located within the stand. This relatively flat site drains north toward an unnamed tributary which flows to Toliver Run which is part of the Youghiogheny River Watershed. The proposed silvicultural treatments will be outside of all required protective riparian buffers of the wetlands and streams.

**Soil Resources:** Underlying soils include: 'Dekalb and Gilpin very stony loams'. These soils are generally moderately deep and well drained with inclusions of some poorly drained soils, with moderate equipment limits because water table is close to the soil surface in winter and early in spring. Degree of slope ranges from 0-10% throughout the

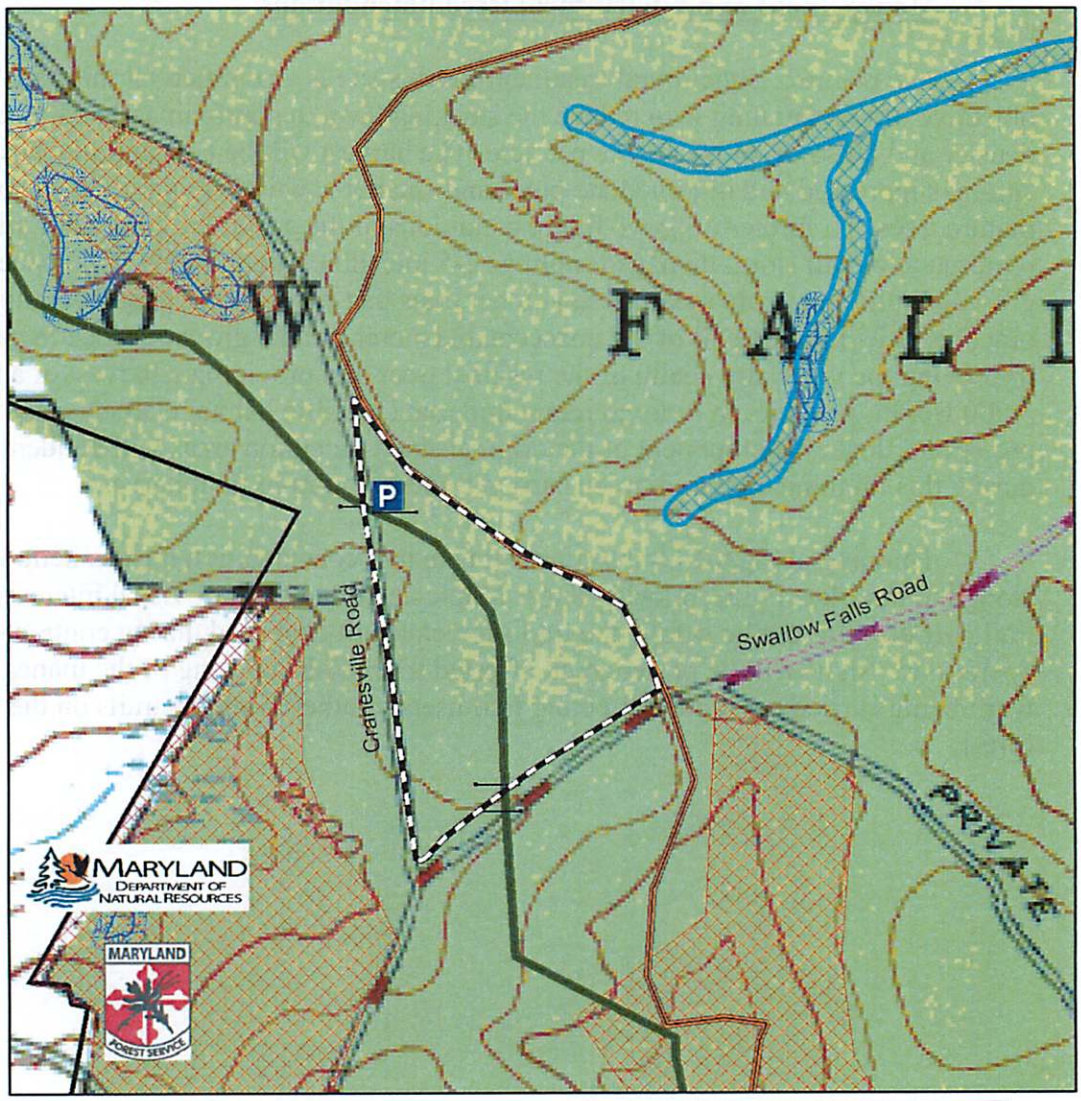
site. The site has very good productivity for woodland management, with a site index of 65-75 for White Oak.

**Management and Silvicultural Recommendations**

The planned silvicultural treatment for this site is a commercial thinning. The objective of this thinning is to reduce the stocking level to approximately 65% relative density and 80 sq. ft. of basal area per acre. The harvest will be concentrated heavily among suppressed and intermediate poles and smaller sawtimber as well as the over mature trees. To further improve future conditions of the stand, the contractor will be required to cut all storm damaged saplings 2-5 inch dbh. The thinning will concentrate growth on the small and medium sawtimber trees that will benefit most from this practice. It will remove all of the unacceptable merchantable growing stock thereby improving the vigor and health of the residual trees and providing a harvest of approx. 3,500 Bd. Ft. per acre. In order to retain important wildlife habitat elements, and to preserve a 'legacy' component of the original stand, retention areas will be identified during this thinning operation to be carried through to future final harvest.

Thinning along the hiking trial will take into consideration the aesthetic values along the trail, leaving Hemlocks, Sugar Maple and other trees of visual interest along the trail corridor. For public safety, the trail segments will be closed during contracted operations. Signs will be posted at all effected trail heads advising of the management work being carried out, and redirecting trail users to other available trails on the state forest.

# Compartment 39 Stand 1 FY-15
# Thinning




Approx. Acres.....24
Age.....84
Forest Type.....Mixed Oak
Trees/Acre.....483
Basal Area.....135
AGS BA.....103
Stocking.....101 %
Growth Rate.....1.6 %
Site Index.....63 for WO
Composition.....Red Maple 45 %
. White Oak 30 %
. Black Cherry 14 %

**HCVF Components**

- Old Growth and 300' Buffer
- Old Growth
- Wildlands
- Wetlands of State Concern and 100' Buffer
- Ecologically Significant Areas
- Streams and 50' Buffer

- Wetlands and 50' Buffer
- Proposed Area
- Snowmobile Trails
- 5.5 Mile Trail
- Gates

0 200 400 800 1,200 1,600 Feet

39 29' 08.83" N 79 26' 21.75" W

N W E S

## E. COMPARTMENT 39 Stand 6 FY-15

### Description/Resource Impact Assessment

**Location:** This area is located north of Cranesville Road, approx. 0.3 miles from the intersection of Cranesville and Swallow Falls Roads in Compartment #39 Stand 6 of the Garrett State Forest. This stand fronts on the "5 ½ mile hiking trail".

**Forest Community Type and Condition:** This 34-acre site contains a 103 year old Allegheny hardwoods stand. The over story is made up primarily of Red Maple (56%), Black Cherry (17%) and White Oak (13%). This stand is stocked at 83% relative density and 145 sq.ft. BA/acre. There is insufficient competitive regeneration present to provide for successful regeneration of the stand; with only 6% of the understory being sufficiently developed.

**Interfering Elements:** Interfering plant competition poses a significant factor in regeneration as 74% of the stand has some form of interfering vegetation impeding seedling regeneration. Problematic levels of fern and grass cover 56% of the stand, while 33% has either tall or low woody interference (due largely to the horizontal sapling stem orientation resulting from the 'Sandy'). Non- native invasive species (NNIS) were observed in the inventory, with Multiflora Rose showing up on 2 sample plots. Deer browse impacts in this area are estimated to be high and must be addressed when considering regeneration efforts on this site.

**Historic Conditions:** This site, like most of PGSF, was likely cutover and burned around the turn of the last century. We have no records of harvest in this stand since the state acquisition, and there was no evidence of harvest or recent fire activity observed during the recon.

**Rare, Threatened and Endangered species:** The Forest Manager knows of no rare, threatened or endangered species on the site or impacted by the silvicultural prescription.

**Habitats and Species of Management Concern:** Forest Manager knows of no known habitats or species of management concern on this site.

**Water Resources:** No streams are located within the stand, though stand lines front on 2 unnamed tributaries that flow to Toliver Run which is part of the Youghiogheny River Watershed. The proposed silvicultural treatments will be outside of the HCVF protective riparian buffers of the wetlands and streams.

**Soil Resources:** Underlying soils include: 'Cookport and Ernest very stony silt loams, Dekalb and Gilpin very stony loams' and 'Very Stony land'. These soils are generally moderately deep and well drained with inclusions of some poorly drained soils, with

moderate equipment limits because water table is close to the soil surface in winter and early in spring. Degree of slope ranges from 0-15% throughout the site hazard of erosion is slight to moderate on steeper slopes. The site has good - very good productivity for woodland management, with a site index of 65-75 for White Oak.

**Management and Silvicultural Recommendations:**

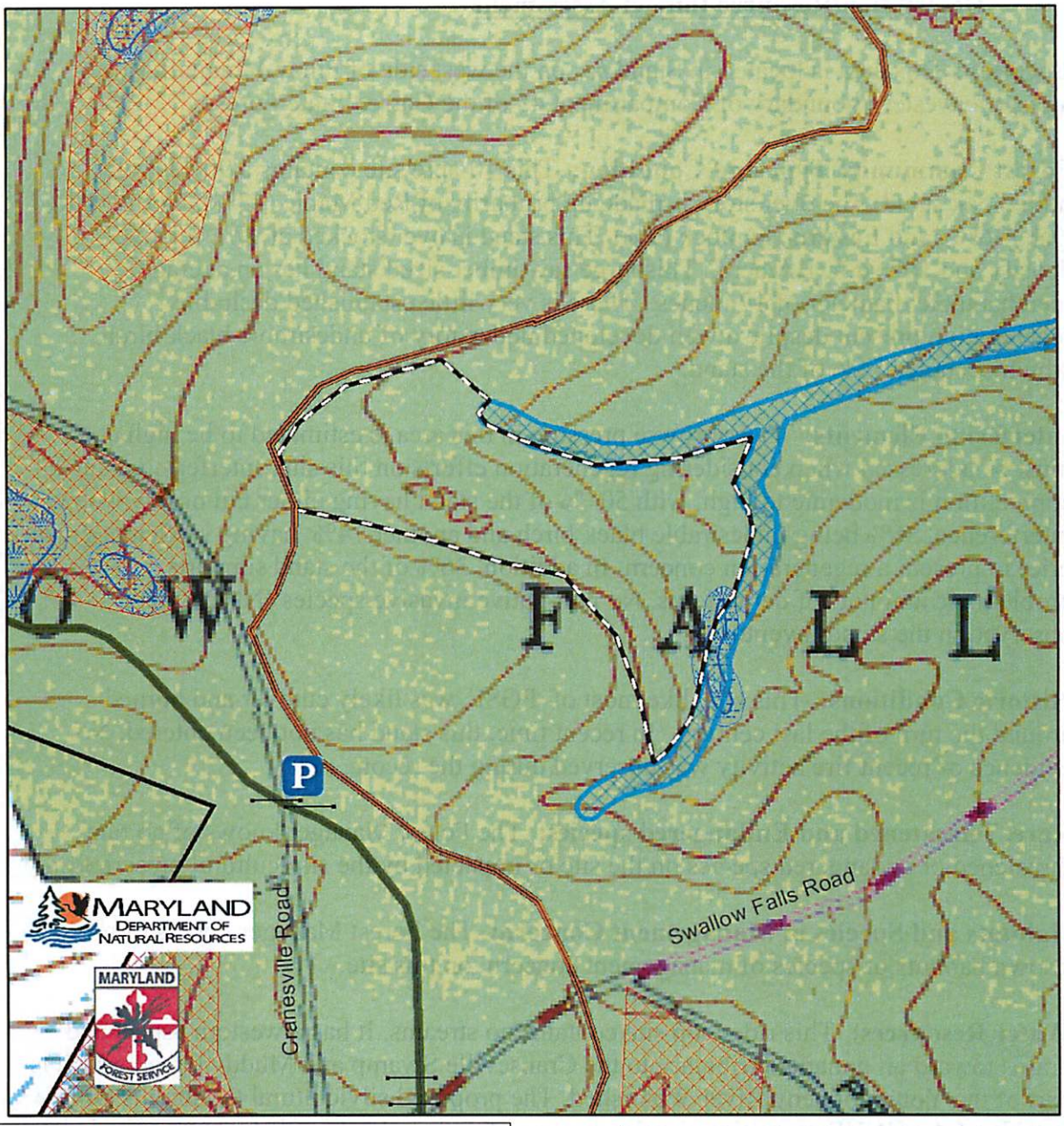
The proposed silvicultural treatment for this stand is to begin regeneration using a 2 stage shelterwood system. The first step in this regeneration process will involve a preparation / seed cut to increase advanced regeneration. The stand will be thinned to reduce the stocking, providing optimum growth potential for the residual seed producing stand. Stand density will be reduced to approximately 60% relative density, retaining a basal area of 105 sq. ft. BA/acre. The harvest will remove unacceptable growing stock including in the smaller sawtimber and poletimber size classes, as well as those over mature trees and will focus on retaining high quality stems in the dominant and co dominant canopy positions for desirable seed trees. In order to retain important wildlife habitat elements, and to preserve a 'legacy' component of the original stand, retention areas will be identified during this thinning operation to be carried through to future final harvest.

As interfering plant competition poses a significant factor in regeneration, prior to harvest, the fern and grass understory will be treated with an appropriate herbicide to remove this impediment to seedling establishment. Interfering woody vegetation will be addressed in the timber contract which will require contractor to cut all storm damaged saplings 1-5" dbh. Deer impacts will also be address in the contract; harvest will be managed to retain high tops and lops from cut trees to offer some deer browse protection to developing seedlings.

The harvest will occur on approx. 25 acres of the 35 acre stand as approx.10 acres of the stand includes wetland inclusions and inoperable land associated with these wetlands not presently mapped as HCVF. All wetlands and streams will be buffered according to the guidelines within the PGSF Sustainable Forest Management Plan. A "50+4" no equipment zone will be established around the wetlands, with this zone being treated as part of the managed stand.

For public safety, the hiking trail will closed during contracted operations. Signs will be posted at all effected trail heads advising of the management work being carried out, and redirecting trail users to other available trails on the state forest.

# Compartment 39 Stand 6 FY-15
# Shelterwood




Approx. Acres.....34
Age.....103
Forest Type.....Allegheny Hardwood
Trees/Acre.....198
Basal Area.....145
AGS BA.....111
Stocking.....83 %
Growth Rate.....1.6 %
Site Index.....63 for WO
Composition.....Red Maple 56 %
. Black Cherry 17 %
. White Oak 13 %

0 200 400 800 1,200 1,600 Feet

30 20' 28.71" N 79 26' 18.14" W

**HCVF Components**

- Old Growth and 300' Buffer
- Old Growth
- Wildlands
- Wetlands of State Concern and 100' Buffer
- Ecologically Significant Areas
- Streams and 50' Buffer

- Wetlands and 50' Buffer
- Proposed Area
- Snowmobile Trails
- 5.5 Mile Trail
- Gates

N W E S

## F. COMPARTMENT 45 Stand 3 FY-15

### Description/Resource Impact Assessment

**Location:** This area is located in Stand #3, on the west side of Piney Mountain Road, along the western boundary of Compartment 45 of the Garrett State Forest.

**Forest Community Type and Condition:** This 10-acre site contains a 90 year old mixed oak stand. The over story is made up primarily of Red Maple (43%), Northern Red Oak (36%), and Eastern Hemlock (9%). This stand is over stocked at 97% relative density and 167 sq.ft. BA/acre. This large sawtimber sized stand has an average merchantable diameter of 17 inches. There is very little established desirable regeneration present despite a well developed understory of undesirable black birch which occupies 36% of the stand.

**Interfering Elements:** Deer browse pressure in this area is estimated to be high and must be addressed when considering regeneration efforts on this site. Interfering plant competition is moderate to high, with 50+% of the stand having either tall or low woody interference, 36% being undesirable black birch and another 14% having sufficient green brier to present a regeneration concern. In addition, 36% of the stand supports problematic amounts of dense ferns. No non-native invasive species (NNIS) were observed in the stand inventory.

**Historic Conditions:** This site, like most of PGSF, was likely cutover and burned around the turn of the last century. In recent time, this stand has not been entered. No evidence of recent fire activity was observed during the recon.

**Rare, Threatened and Endangered species:** The Forest Manager knows of no rare, threatened or endangered species on the site or impacted by the silvicultural prescription.

**Habitats and Species of Management Concern:** The Forest Manager knows of no known habitats or species of management concern on this site.

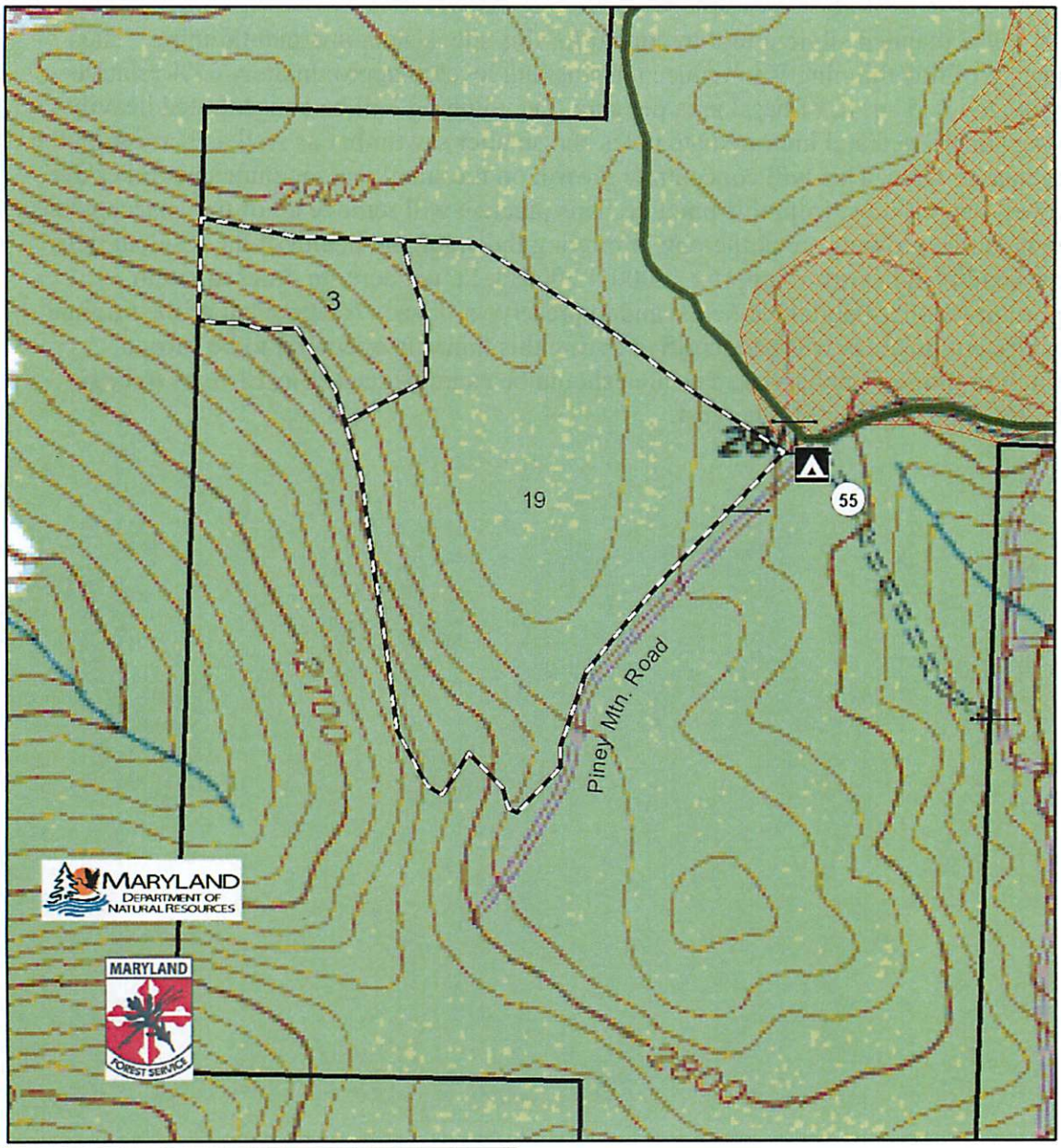
**Water Resources:** This ridge top site contains no streams. It has a western aspect and drains toward an unnamed tributary to the Cranseville Swamp and Muddy Creek which is part of the Youghiogheny River Watershed. The proposed silvicultural treatments will be outside of the HCVF protective riparian buffers of any wetlands and streams.

**Soil Resources:** Underlying soils include: 'Dekalb and Leetonia very stony sandy loams'. These soils are generally moderately deep and well drained and do not retain moisture well. Degree of slope ranges from 0-15% throughout the site. The site has fair-good productivity for woodland management, with a site index of 60-70 for Northern Red Oak.

## Management and Silvicultural Recommendations

The planned silvicultural treatment for this site is a commercial thinning. The objective of this thinning is to reduce the stocking level to approximately 65% relative density and 105 sq. ft. of basal area per acre. The thinning will be concentrated heavily among suppressed and intermediate poles and smaller sawtimber as well as harvesting the over mature trees. This will concentrate growth on the small and medium sawtimber trees that will benefit most from this practice. This practice will remove all of the unacceptable merchantable growing stock thereby improving the vigor and health of the residual trees and providing a harvest of approx. 4,000-4,300 Bd. Ft. per acre. In order to retain important wildlife habitat elements, and to preserve a 'legacy' component of the original stand, retention areas will be identified during this thinning operation to be carried through to future final harvest. The area should be examined again in 10 years to begin planning for a regeneration harvest.

# Compartment 45 Stand 3 FY-15
# Thinning




Approx. Acres.....10
Age.....90
Forest Type.....Mixed Oak
Trees/Acre.....271
Basal Area.....167
AGS BA.....147
Stocking.....97 %
Growth Rate.....1.8 %
Site Index.....60 for NRO
Composition.....Red Maple 43 %
. Red Oak 36 %
. Eastern Hemlock 9 %

**HCVF Components**

- Old Growth and 300' Buffer
- Old Growth
- Wildlands
- Wetlands of State Concern and 100' Buffer
- Ecologically Significant Areas
- Streams and 50' Buffer
- Wetlands and 50' Buffer
- Proposed Area
- Snowmobile Trails
- Gates

0 200 400 800 1,200 1,600 Feet

N W E S

39 31' 59.61" N 79 27' 37.48" W

## G. COMPARTMENT 45 Stand 19 FY-15

### Description/Resource Impact Assessment

**Location:** This area is located on the west side of Piney Mountain Road, fronting on the Handicapped Hunter Access Road in Compartment #45 Stand 19 of the Garrett State Forest.

**Forest Community Type and Condition:** This 52-acre site contains a 90 year old mixed oak stand. The over story is made up primarily of Northern Red Oak (47%), Red Maple (31%), and Chestnut Oak (10%). This stand is over stocked at 101% relative density and 150 sq.ft. BA/acre. There is insufficient desirable regeneration present from which to successfully regenerate this stand; only 11% of the stand is adequately stocked , and only 2% contains established oak seedlings. This, despite a well developed understory of undesirable Black Birch and Red Maple which occupies over 70% of the stand.

**Interfering Elements:** Deer browse pressure in this area is estimated to be high and must be addressed when considering regeneration efforts on this site. Interfering plant competition is moderate to high, with 70+% of the stand having tall woody interference, 12% having sufficient greenbrier to present a regeneration concern, and 18% supporting problematic amounts of dense ferns. No non-native invasive species (NNIS) were observed in the stand inventory.

**Historic Conditions:** This site, like most of PGSF, was likely cutover and burned around the turn of the last century. In recent time, this stand has not been entered. No evidence of recent fire activity was observed during the recon.

**Rare, Threatened and Endangered species:** The Forest Manager knows of no rare, threatened or endangered species on the site or impacted by the silvicultural prescription.

**Habitats and Species of Management Concern:** The Forest Manager knows of no known habitats or species of management concern on this site.

**Water Resources:** This ridge top site contains no streams. It has both eastern and western aspects. The western slopes drain toward an unnamed tributary to the Cranesville Swamp and Muddy Creek while the eastern slopes drain to another unnamed tributary of Muddy Creek all part of the Youghiogheny River Watershed. The proposed silvicultural treatments will be outside of the HCVF protective riparian buffers of any wetlands and streams.

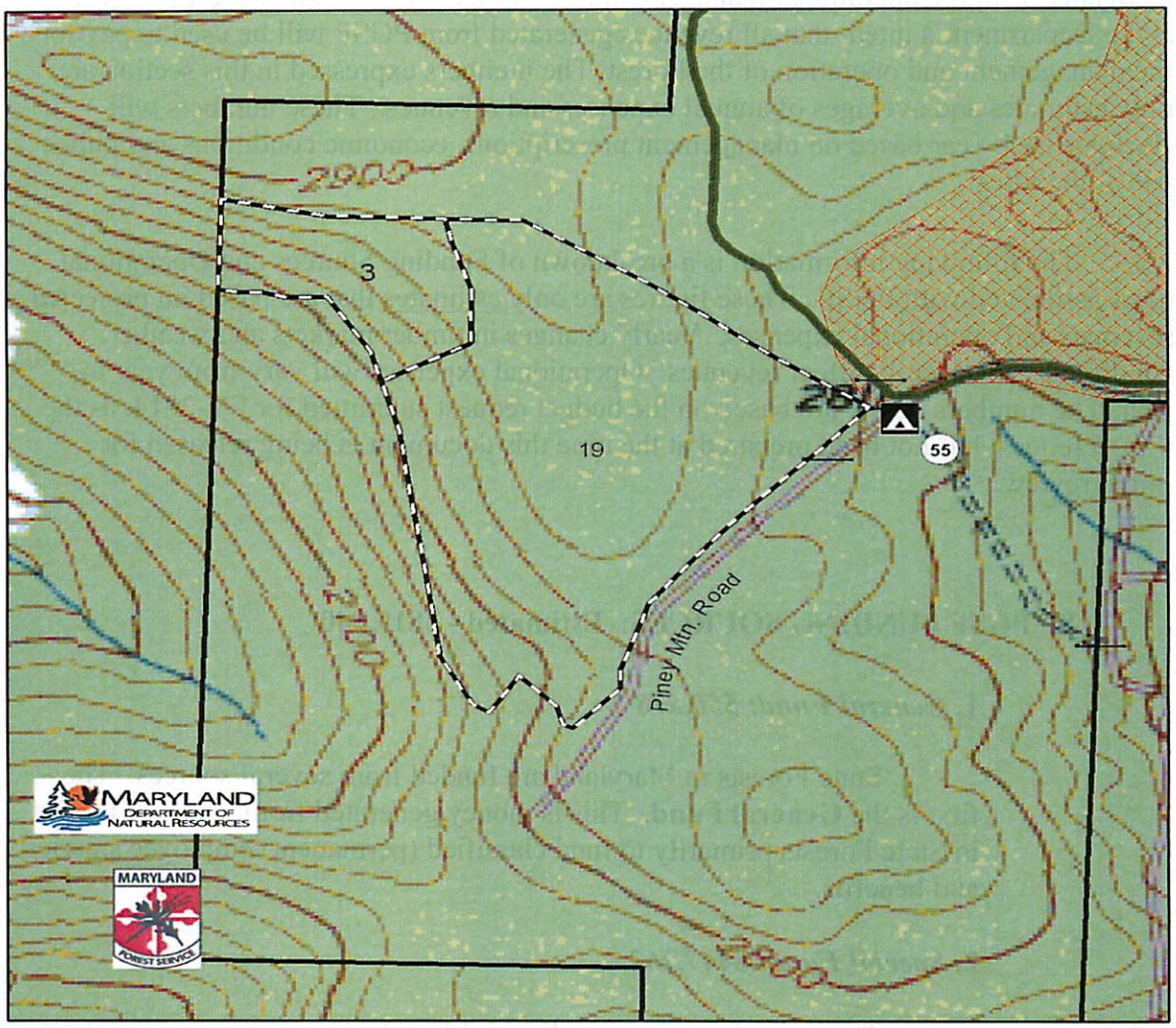
**Soil Resources:** Underlying soils include: 'Dekalb and Leetonia very stony sandy loams'. These soils are generally moderately deep and well drained and do not retain moisture well. Degree of slope ranges from 0-15% throughout the site. The site has fair productivity for woodland management, with a site index of 60 for Northern Red Oak.

**Management and Silvicultural Recommendations**

The planned silvicultural treatment for this site is a commercial thinning. The objective of this thinning is to reduce the stocking level to approximately 65% relative density and 95 sq. ft. of basal area per acre. The thinning will be concentrated heavily among suppressed and intermediate poles and smaller sawtimber as well as harvesting the over mature trees. This will concentrate growth on the small and medium sawtimber trees that will benefit most from this practice. This practice will remove all of the unacceptable merchantable growing stock thereby improving the vigor and health of the residual trees and providing a harvest of approx. 3,000-3,500 Bd. Ft. per acre. In order to retain important wildlife habitat elements, and to preserve a 'legacy' component of the original stand, retention areas will be identified during this thinning operation to be carried through to future final harvest.

For public safety, the Handicapped Hunter Access Trail will be closed during contracted operations. Signs will be posted advising of the management work being carried out, and trail users will be redirected to other available trails on the state forest. The area should be examined again in 10 years to begin planning for a regeneration harvest.

# Compartment 45 Stand 19 FY-15
# Thinning




Approx. Acres.....52
Age.....95
Forest Type.....Mixed Oak
Trees/Acre.....370
Basal Area.....150
AGS BA.....139
Stocking.....101
Growth Rate.....1.8 %
Site Index.....60 for NRO
Composition.....Red Oak 47 %
. Red Maple 31 %
. Chestnut Oak 10 %

0 200 400 800 1,200 1,600 Feet

39 31' 59.61" N 79 27' 37.48" W

**HCVF Components**

- Old Growth and 300' Buffer
- Old Growth
- Wildlands
- Wetlands of State Concern and 100' Buffer
- Ecologically Significant Areas
- Streams and 50' Buffer
- Wetlands and 50' Buffer
- Proposed Area
- Snowmobile Trails
- Gates

N W E S

## XI. Operational Management and Budget Summary

### A. INTRODUCTION

This section of the plan is designed to cover the annual cost and revenues associated with the operational management of Potomac-Garrett State Forest (PGSF). It is the Department's intent that all revenues generated from PGSF 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 Funding Sources and Operational costs associated with PGSF. 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. The numbers below are based on the budget request submitted for FY-2014, as the FY-15 request has not been prepared at the time this document is being released for initial review.

### B. PGSF FUNDING SOURCES: Estimated - $819,840

#### 1. *General Fund: $50,578*

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.

#### 2. *Special Fund: $447,762*

The second source is the **Special Fund**. This is money generated from revenue. The State Forests generate revenue through the collection of service fees, as well as the sale of timber and forest products as detailed within the annual work plan and deposited in the Department of Natural Resources Forest or Park Reserve Fund. These funds must be appropriated by the General Assembly through the annual budgeting process before being spent. It is used in state forests to fund operational costs. 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). The Special Fund contribution of revenue generated by PGSF for FY-14 is expected to be $70,000.

*3. ORV Fund: $0*

In addition, PGSF 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 are a restricted special fund and can only be spent for ORV Trail related expenditures. Note in FY-13, PGSF received $12,000, FY-14 $0 was budget to PGSF from these sources as permit sales are significantly lower since closure of trails in Green Ridge and Savage River State Forests, and funds have dwindled.

*4. Other Funding:*

With limited budgets available for operations, State Forest staffs have been seeking alternative funding sources to carry out necessary maintenance and operations of the State Forest. Sources of potential funding include:

**a.** ***Forest Inventory Grants: $21,500***

Grant monies secured for the completion of the forest inventory project.

**b.** ***National Recreational Trail Grant: $0***

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 and are applied to various trail related projects as detailed in specific grant requests. No NRT Grant funds were secured by PGSF for FY-14 as it was anticipated that all available staff would be engaged in carrying out planned work associated with the Lostland Run Improvements funded by capital improvement funds below.

**c.** ***Other Grants: $300,000 Capital improvement funds***

In January of 2012, the Governor announced approximately $23 million in the proposed capital budget for public land projects that will support nearly 300 jobs, help restore the environment,

reduce energy usage, and improve services to visitors and citizens. Approximately $300,000 of this will be directed to improving the public access and trail network on the Potomac and Garrett State Forests according to the plans outlined in the recreation section of this work plan.

d. ***RGS/SCI Partnership***

State Forest staff has regularly sought wildlife habitat improvement funds from various conservation organizations. For the past 3 years, the Ruffed Grouse Society together with Safari Club International have provided grants of $1,000 -$1,600 each year for specific habitat work. Grant requests will be submitted for FY-15 to assist in carrying out the wildlife habitat proposals seen within the AWP.

## C. OPERATIONAL COST: Estimated Annual Expenses - $519,840

Operational expenses are those costs paid directly out of the PGSF 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-2014 budget proposal was prepared in July of 2013.

### *1. Classified Salaries, Wages and Benefits: $284,549*

This cost is associated with General Funds which are state tax revenues provided annually. These funds are used to pay PGSF Maryland Classified Employee Salaries responsible for the management, operations and maintenance of the state forest.

### *2. Contractual Staffing: $82,088 does not include Contractual Inventory Staff*

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

*3. Special project staffing: $21,500*

This cost is associated with contractual personnel hired to carryout special forest inventory project, planned to be carried out over 5 year period. Project is in year 4 of 5 in 2014.

*4. Land Management and Operation Cost: $106,703*

This includes expenses for office and field equipment, vehicles, 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.

*5- County Payments: $30,000*

These are revenue payments to local county governments which will vary every year. Payments are made on an annual basis to Garrett County based on 25% of the gross revenue generated from PGSF. 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.

The FY-15 Work Plan calls for the harvest of approximately 551,500 Bd.ft. of hardwood saw timber; putting an estimated $120,000 worth of raw wood products out into the local markets. With the repeated Gypsy Moth infestations and weather related damages to the state forests oak stands in the past decade, much of the silvicultural work laid out in this work plan is focused on initiating seedling development to better insure oak regeneration successes in future harvests. Much of the value of the harvests in the work plan will be directed back into the forest providing the essential investment in pre-harvest cultural work that will assure the long tern sustainable management of these important forest resources.

*6. ORV Funds: $0*

ORV funds are a restricted special fund and can only be spent for ORV Trail related expenditures.

## D. SUMMARY

This is the general breakdown on Revenues and Operational Costs associated with the Potomac-Garrett State Forest. As described, these figures will vary from year to year. A more detailed picture on revenues and operational cost will be reviewed quarterly as the actual picture develops within implementation of Annual Work Plan and as operating budgets are approved.

(Appendix 1)

# Annual Work Plan Review Summary
# Potomac Garrett State Forest
## FY15 – AWP

**The following is a summary of the comments received, and actions taken, in response to the three-part review of the Potomac-Garrett State Forest FY-15 Annual Work Plan. Comments were received through DNR ID Team review, State Forest Advisory Committee review, and public review of the internet posted AWP. (See copies of all written comments attached.) Items below are listed as they appear in the in FY-15 AWP table of contents:**

**I. State Forest Overview**

**II. AWP Summary**

**III. General Location Maps**
- Map Key
- Potomac State Forest
- Garrett State Forest

**IV. Special Projects – Forest Resource Management and Planning**

A. Storm Damage Recovery
B. Continued Development of Sustainable Forest Mngt. Plan
C. ESA Management Plan Development
D .Forest Stand Delineation and Inventory
E. Non-Native Invasive Species (NNIS) inventory and control.

*ID Team Comments:* No specific comments or concerns; A-E.
*Advisory Board Comments:* No specific comments or concerns; A-E.
*Public Comments:* No comments received A-E.

- Final Proposals I-IV.A-E : Included as initially presented.

F. Lostland Recreational Access and Trail Restoration Project

*ID Team Comments:* No specific comments or concerns as project has gone through DNR internal project review process and is in progress.
*Advisory Board Comments:* No specific comments or concerns.
*Public Comments: Public Comments:* No comments received.

- Final Proposal : Included as initially presented.

## V. Maintenance and Operations

A. Maintenance & Management of Roads and Trails
B. Boundary Line Maintenance
C. Campground Operation and Maintenance
D. 3-D Archery Range Maintenance and Management
E. Interpretation and Education

*ID Team Comments:* No specific comments or concerns; A-E.
*Advisory Board Comments:* No specific comments or concerns;A-E.
*Public Comments:* No comments received:A-E.

- Final Proposals V.A-E : Included as initially presented.

## VI. Recreation Proposals

### Lostland Recreational Access and Trail Restoration Project

*ID Team Comments:* No specific comments or concerns as project has gone through DNR internal project review process and is in progress.
*Advisory Board Comments:* No specific comments or concerns.
*Public Comments: Public Comments:* No comments received.

- Final Proposal : Included as initially presented.

## VII. Wildlife Habitat Improvement Proposals

### Comp. 16 Stand 21 Wildlife Opening / Thinning Proposal

*ID Team Comments:* Wildlife biologist suggested, where possible, leave the few trees with low hanging branches as they provide good winter cover.
*Advisory Board Comments:* No specific comments or concerns.
*Public Comments: Public Comments:* No comments received.

- Final Proposal : Edited to note retention of trees with low hanging branches for winter cover, and possibly replanting 2-3 rows of conifers along this new edge to further "soften the edge" and replace winter cover values.

## VIII. Watershed Protection

### Comp. 19 – Lostland Run HWA Mitigation/Red Spruce Planting Proposal (extension FY-12 proposal)

*ID Team Comments:* No specific comments or concerns.

*Advisory Board Comments:* No specific comments or concerns.
*Public Comments:* No comments received.

- Final Proposals : Included as initially presented.

## IX. Ecosystem Restoration / Protection Projects

Comps. 5&7 – Backbone Mtn. Japanese Knotweed Control
(Continuation of FY-12 Proposal)

Comps. 21-26 – Wallman/Laurel Run Garlic Mustard
Control Proposal (Continuation of FY-12 Project)

*ID Team Comments:* No specific comments or concerns.
*Advisory Board Comments:* No specific comments or concerns.
*Public Comments:* No comments received.

- Final Proposals : Included as initially presented.

## X. Silvicultural Proposals

Comp. 32 -Stand 11 Shelterwood Proposal

*ID Team Comments:* No specific comments or concerns.
*Advisory Board Comments:* No specific comments or concerns.
*Public Comments:* No comments received.

- Final Proposal: Included as initially presented.

Comp. 32– Stand 16 &17 Commercial Thinning Proposals

*ID Team Comments:* No specific comments or concerns.
*Advisory Board Comments:* No specific comments or concerns.
*Public Comments:* No comments received.

- Final Proposal: Included as initially presented.

Comp. 39– Stand 1 Commercial Thinning Proposal

*ID Team Comments:* No specific comments or concerns.
*Advisory Board Comments:* No specific comments or concerns.
*Public Comments:* No comments received.

- Final Proposal: During the course of reviewing comments it was noted that stand boundary runs with the '5 ½ mile hiking trail' and that the map for the proposed work should have shown the proposal running to the trails edge, as has been done on all recent proposed work. Proposal and map have been adjusted to show stand running along the trail; acreage adjusted accordingly. Trail side aesthetics will be given due consideration as noted in final text.

Comp. 39- Stand 6 Shelterwood Proposal

*ID Team Comments:* No specific comments or concerns.
*Advisory Board Comments:* No specific comments or concerns.
*Public Comments:* No comments received.

- Final Proposal: Included as initially presented with minor grammatical text edits for clarity.

Comp. 45- Stand 3 Commercial Thinning Proposal

*ID Team Comments:* No specific comments or concerns.
*Advisory Board Comments:* No specific comments or concerns.
*Public Comments:* No comments received.

- Final Proposal: Included as initially presented.

Comp. 45- Stand 19 Commercial Thinning Proposal

*ID Team Comments:* No specific comments or concerns.
*Advisory Board Comments:* No specific comments or concerns.
*Public Comments:* No comments received.

- Final Proposal: Included as initially presented.

(end, summary doc.)

(Appendix 2)

## 10 YEAR TIMBER HARVEST SUMMARY
## FOR
## POTOMAC-GARRETT STATE FOREST

| *Fiscal Year* | *Planned Harvest* | *Bd. Ft. Vol. Harvested* | *Gross Value of Sale* |
|---|---|---|---|
| 2005 | 750-1,000 MBF | 925,113 | $ 394,092 |
| 2006 | 750-1,000 MBF | 731,568 | $ 355,712 |
| 2007 | 500 - 750 MBF | 487,027 | $ 288,133 |
| 2008 | 500 - 750 MBF* | 793,002 | $ 288,102 |
| 2009 | 500 MBF* | 251,990 | $ 29,578 |
| 2010 | 500 MBF* | 168,131 | $ 31,720 |
| 2011 | 500 - 600 MBF | 465,653 | $ 155,900 |
| 2012 | 500 - 600 MBF | 534,679 | $ 207,454 |
| 2013 | 500 - 600 MBF | 331,052 | $ 139,300 |
| 2014 | 300 MBF | 298,221 | $ 90,031 |

*salvage driven plans