SAVAGE RIVER STATE FOREST

ANNUAL WORK PLAN

FISCAL YEAR 2012

Prepared:	Wade R. Dorsey (Forest Manager)	10/1/11 Date
Reviewed:	Robert Mehrtens (Regional Manager)	10-3-2011 Date
Reviewed:	[signature] (Land Acquisition & Planning)	10/21/11 Date
Approved:	[signature] (Environmental Specialist)	10.25.11 Date

Savage River State Forest Annual Work Plan

A. Forest Overview

Savage River State Forest is approximately 54,324 acres in size and is situated in the northeastern quadrant of Garrett County of Western Maryland. It is a second growth mixed hardwood forest dominated by oak species, sugar and red maple, black cherry, hickory and ash. Owing to high rainfall and certain topographic features, Savage River State Forest contains many excellent quality growing sites stocked with superior quality trees. The forest contains approximately 4000 acres of conifer plantations, established in the 1940's following state acquisition. Red pine is the dominant tree species within these plantations but other conifers include white pine, Norway spruce, larch, and Scotch pine. These plantations were established as nurse crops to rehabilitate abandoned and depleted farm fields, with the long-term goal of conversion back to native hardwoods as appropriate.

Savage River State Forest has been intensively managed for over 60 years. Forest harvest and grooming operations are undertaken to thin overstocked stands, to effectively deal with public safety concerns, to harvest mature or diseased/dying trees, to improve habitat for certain wildlife species, to assist and provide for certain research needs, to address aesthetic concerns, and to increase the proportion of age/height diversity of forested stands.

B. Annual Work Plan Summary

The FY-2012 Annual Work Plan for Savage River State Forest was formulated during the fall and winter of 2010/2011. It contains projects to be undertaken in the areas of Silviculture, Maintenance, Special Projects, and Recreation.

Savage River will harvest approximately 0.382 million board feet of sawtimber through implementation of the FY-12 Annual Work Plan. The plan involves seven proposed silvicultural projects within the forest. The six harvest areas range 15 to 56 acres. One of these harvest areas is a spruce thinning the other areas are hardwood projects. The seventh area is a hardwood stand that will undergo site preparation work for a future regeneration harvest.

Silvicultural treatment	Acres	Live ST	Dead ST	Total ST	Pulp Cords
Salvage/Thinning	92	66,884	155,239	222,123	196
Thinning/Shelterwood	61	74,557	23,248	97,805	358
Salvage/Regeneration	37	6,906	55,500	62,406	166
Spruce Thinning	18	116,273		116,273	36
Salvage	266	502,272	597,239	1,099,511	2,951

There are 5 pure salvage sales included that we would like to conduct during fiscal year 2011.

Most of the maintenance projects are of a routine nature except the Meadow Mountain Trail project that is being funded by a National Recreation Trail grant. Again most of recreation work is of a routine nature; however we will have a new recreation plan for the forest to implement and more information on the Continental Divide Loop Trail. A special effort that began in FY 11 and will be ongoing for the next 4 years is stand level data collection as part of our certification and management efforts. Further we will be monitoring all of our silvicultural activities five and 10 years post treatment. New watershed improvement effort lead by the Bureau of Mines and ecosystem restoration work with the Inland Fisheries Service will be improving the habitat for native brook trout.

C. Maintenance Projects

Routine maintenance projects include: Building repair and maintenance, mowing at the campus, snow removal, repair and replacement of fire rings and tables at the camp sites, brush hogging trails, and repair of road surfaces.

There have 70 plus primitive camp sites that we maintain.

There are about 101 miles of trail and hardened road surface on the forest and we are maintaining 1/3 of these each year.

There is a public shooting range on the forest that we keep open year round.

Eighty miles of boundary will be repainted and 5 miles of "lost" boundary will be recovered.

A National Recreation Trails grant has been submitted to do grading, culvert replacement, cleaning ditch-lines and top-dressing road surface on a portion of the Meadow Mountain Trail (East Shale Road).

D. Recreation Projects

As part of the new forest management plan will be a section describing current recreational opportunities and ways to increase the recreational opportunities. (Background information for this was created by a recreation intern from Frostburg State University and the staff at New Germany State Park oversaw the effort.) We will begin implementing the ideas that have been brought forward.

The Wildlife and Heritage Service will be working on 2 acres of herbaceous openings, 25 bluebird boxes, and pruning and planting 75 fruit trees. They will also be controlling woody vegetation by mowing and prescribed burning on 40 acres of wildlife openings.

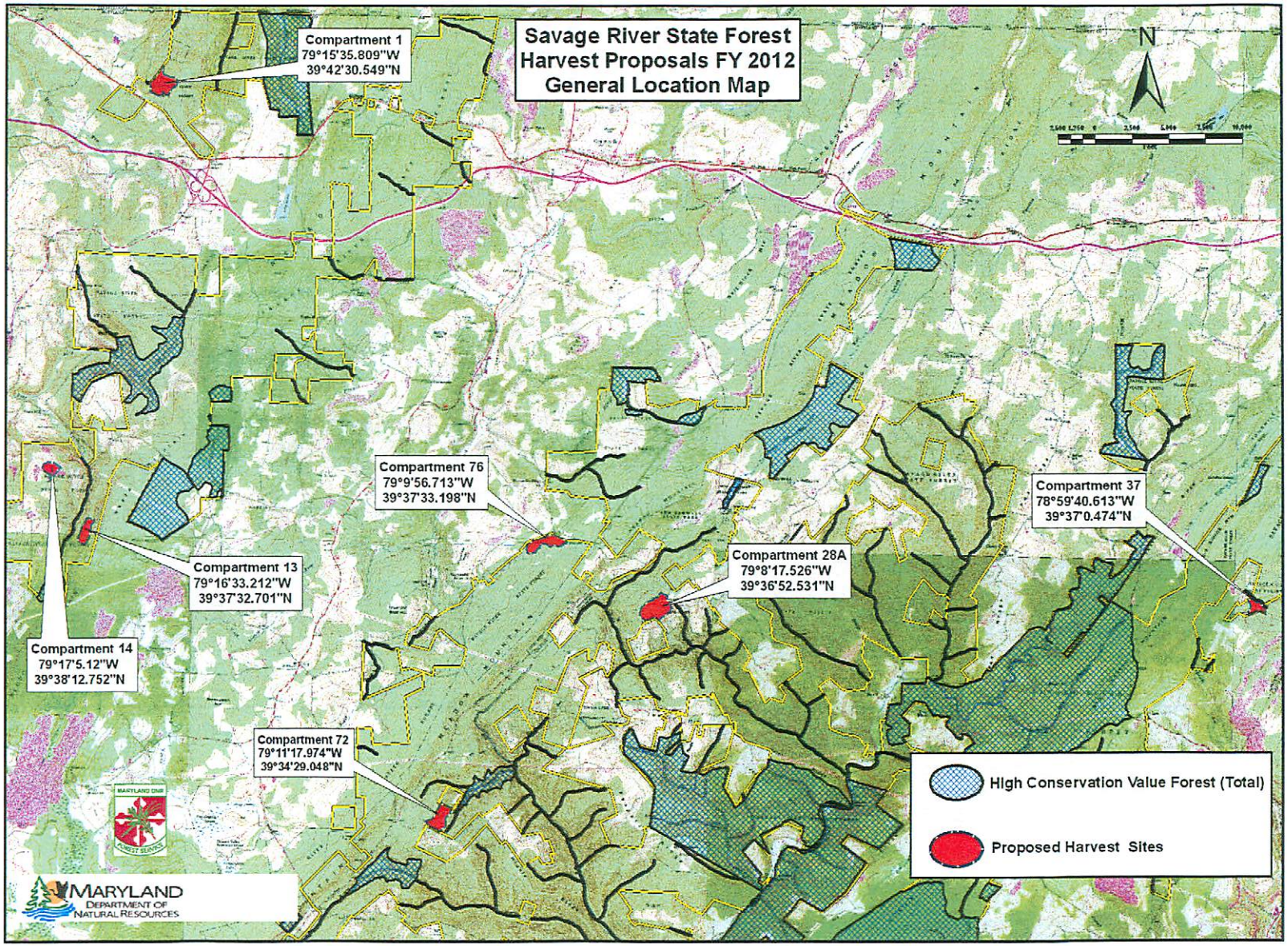
In fiscal year 2011, the forest was asked to participate in a large bike trail effort that would begin in PA, travel down Meadow Mountain Trail, across the 4-H Center property on into Oakland and then travel north through the Youghiogheny Wild and

Scenic Corridor to PA. This project is currently called the Continental Divide Loop Trail. We will be actively involved in the effort in FY 2012.

E. Special Projects

In fiscal year 2011, we began the stand level data collection. This multi-year project will also be a big part of this years work.

F. Silvicultural Projects


Savage River State Forest
Harvest Proposals FY 2012
General Location Map
N
Compartment 1
79°15'35.809"W
39°42'30.549"N
Compartment 76
79°9'56.713"W
39°37'33.198"N
Compartment 37
78°59'40.613"W
39°37'0.474"N
Compartment 13
79°16'33.212"W
39°37'32.701"N
Compartment 28A
79°8'17.526"W
39°36'52.531"N
Compartment 14
79°17'5.12"W
39°38'12.752"N
Compartment 72
79°11'17.974"W
39°34'29.048"N
High Conservation Value Forest (Total)
Proposed Harvest Sites
MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Silviculture Project - Poplar Lick Salvage/Thinning (Compartment 28 & 28A)

Description

This 56 acre project proposal is located upslope and east of Poplar Lick Run. Part of the sale touches the cross country ski trail that connects with New Germany State Park. The trees are a mixed oak type. There are few desirable seedlings present due to the abundant fern cover. The area has experienced several gypsy moth defoliations and there is significant mortality in this stand.

Over 1/3 of the trees in this stand are dead. The remainder of the trees can be managed for future growth but are approaching maturity. There are approximately 180 live trees per acre with 97.8 sq. ft. of basal area per acre. This means that the stand is 84 percent stocked. Sixty-five percent of the growing stock is of acceptable quality. The site is dominated by northern red oak, red maple and black cherry. Other species present include: chestnut oak, white oak, black locust, sugar maple and cucumber tree. The sparse advanced regeneration consists of northern red oak, red maple, black cherry, sweet birch and cucumber tree. The number of deer in this local area is high or has been high which caused preferential browsing to favor dense fern cover. Hayscented fern is the most abundant fern with lesser amounts of Christmas fern, Bracken fern, and woods fern. There is also a fair amount of common greenbriar, huckleberry, witch hazel and striped maple present. The only non-native invasive plant noted is Japanese spirea.

The site is on a hill top and drains into the Poplar Lick Run. The dominant soils are the Dekalb and Gilpin soils, which are very stony loams that are well drained and have few equipment limitations when the slope is less than 15 percent. The percent slope is generally less than 15 % with the largest recorded percent of 35.
The productivity of the site is fair-good with the site index ranging from 65 – 70 feet for mixed oak.

Management and Silvicultural Recommendation

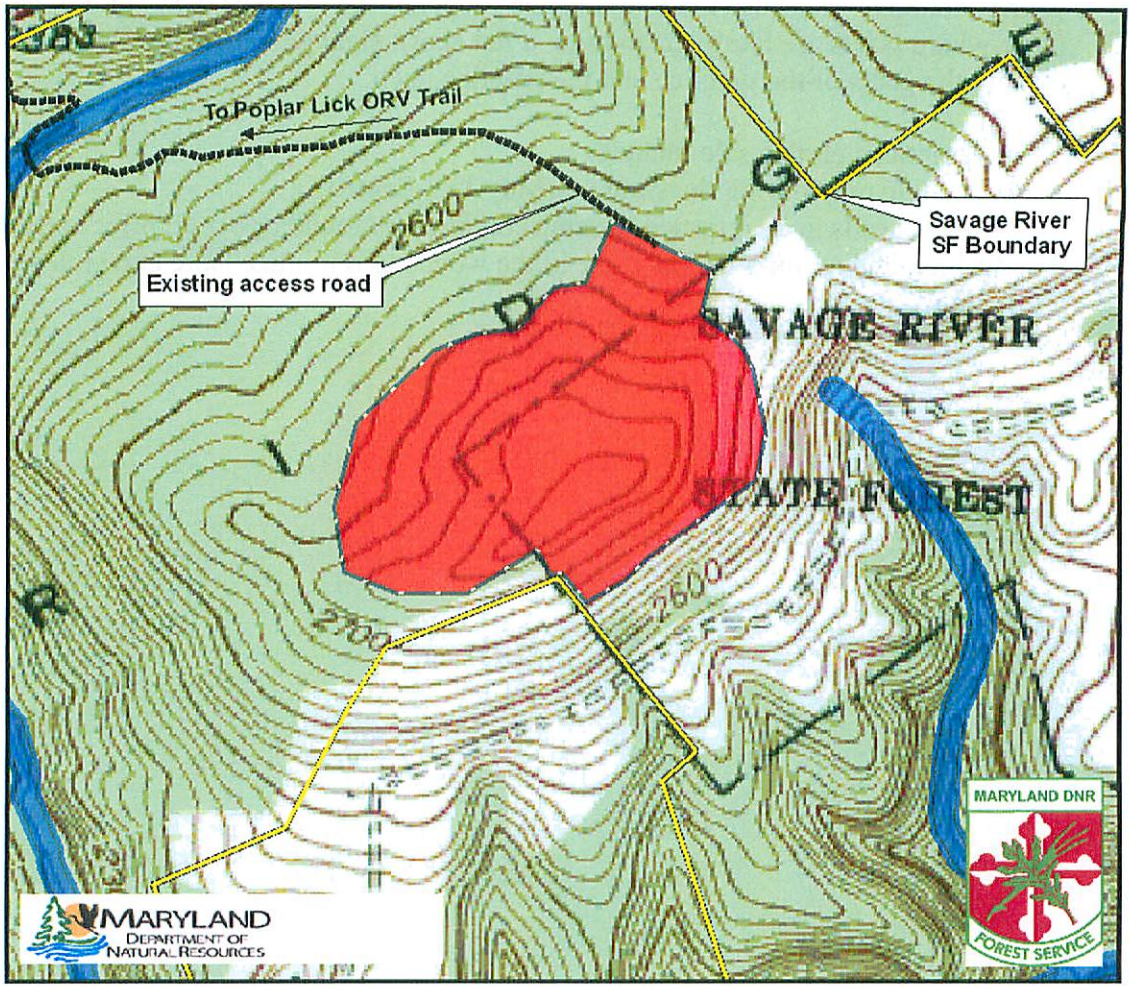
The recommendation for this stand is to salvage the dead trees, thin out the poor quality trees and prepare the stand for a future regeneration harvest.

The key to preparing the stand for a future regeneration harvest is to control the competing plant cover thereby providing sufficient light for new regeneration to sprout and grow. The ideal time to herbicide the fern is late in the growing season. The Japanese spirea can likely be controlled at the same time. Dense areas of striped maple and witch hazel are easily controlled with a stem application of herbicide in the winter time. After the herbicide work is complete the dead trees and the poor quality live trees can be removed. This will reduce the stand basal area to 82.1 sq. ft. /acre. All the mature trees and all the good quality trees will be left. If feasible, part of the area should be fenced to protect the young seedlings from being browsed by deer. The other part should remain unfenced to demonstrate the impact of deer browsing on

young seedlings. Because the sale boundary touches the cross-country ski trail at a place where skiers are likely to stop (i.e. a flat spot); signage will be developed to explain the goals of the practice and the practice itself.

Restrictions on this sale include:

1) harvesting only during the summer (May 15 – Sept. 15),
2) Ski trail needs to be returned to same condition as found or better, prior to Sept 20,
3) Bucking and topping will be done in the woods to minimize large bone piles at the landing.



Savage River State Forest
Harvest Proposal FY 2012
Compartment 28A
Approximately 56 Acres

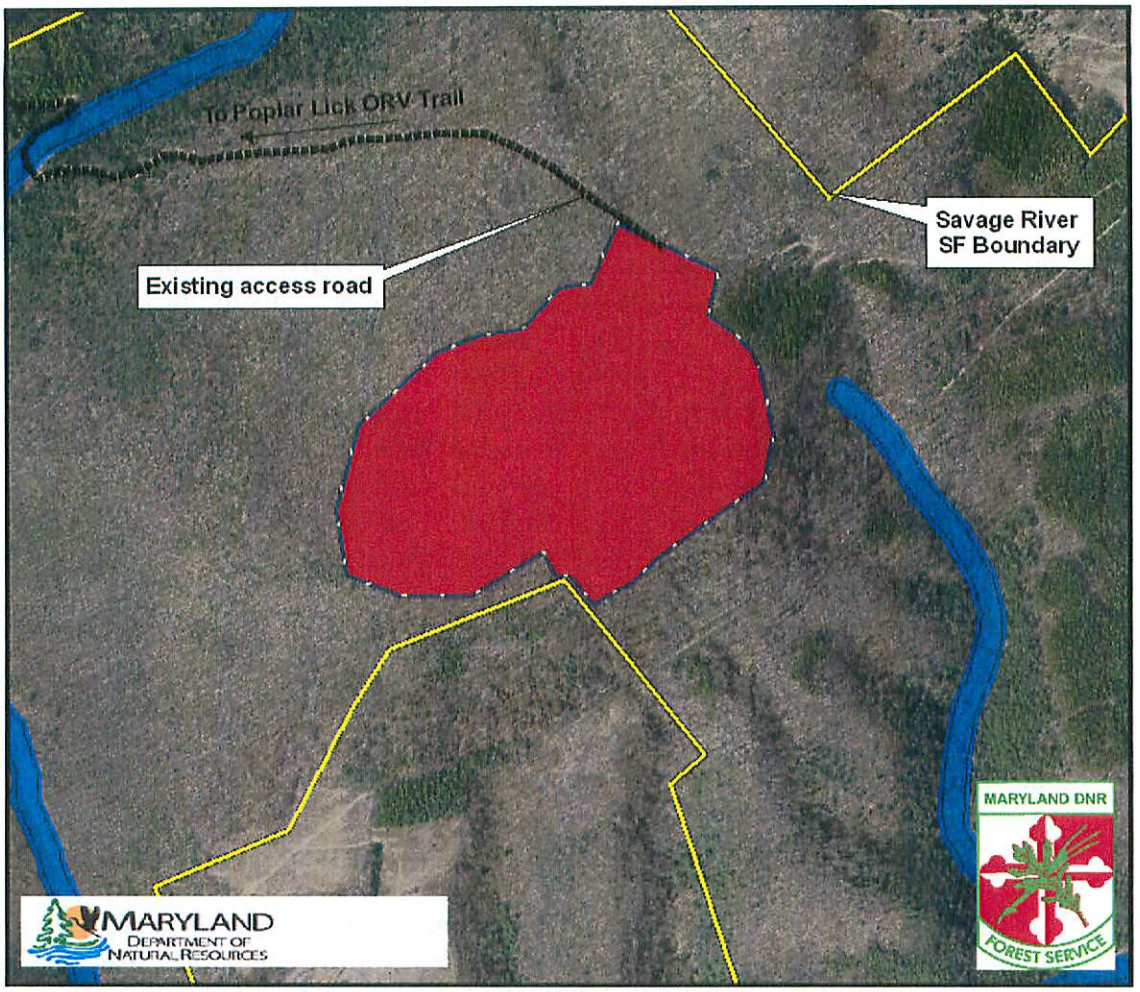
N

1:660

330 165 0 330 660 990 1,320

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area



Savage River State Forest
Harvest Proposal FY 2012
Compartment 28A
Approximately 56 Acres

N

1:660

330 165 0 330 660 990 1,320
Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area

Silviculture project – Bowman Hill South (Compartment 13)

Description

This 24 acre project proposal is located on the west slope of Negro Mountain and upslope from Bear Creek and upstream from the Bear Creek Fish Hatchery. It is approximately 1 mile south of Bowman Hill Road off a Forest Service road. The trees are a cove hardwood type which implies the productivity of the soils is good. The few desirable seedlings that are present appear to be from last year's seed crop. There are abundant sweet birch saplings (1-5" DBH) present.

The stand has been thinned in the past. The canopy trees are financially mature. With forty percent of the growing stock being larger than or equal to 20 inches DBH and 34 % of the growing stock is between 11" and 20" DBH. There are approximately 286 trees per acre with 136.4 sq. ft. of basal area per acre. This implies that the stand is overstocked. Of the trees less than 20" DBH, 48 percent are of acceptable quality. The site is dominated by yellow poplar, northern red oak, and red maple. Other species present include: chestnut oak, basswood, sugar maple, hickory, black cherry, American beech and sweet birch. The sparse advanced regeneration consists of red oak, red maple, black cherry, yellow poplar and sweet birch. The understory vegetation includes: hayscented fern, New York fern, Christmas fern, wood's fern, mayapple, dogbane, blackberry, greenbriar, and striped maple.

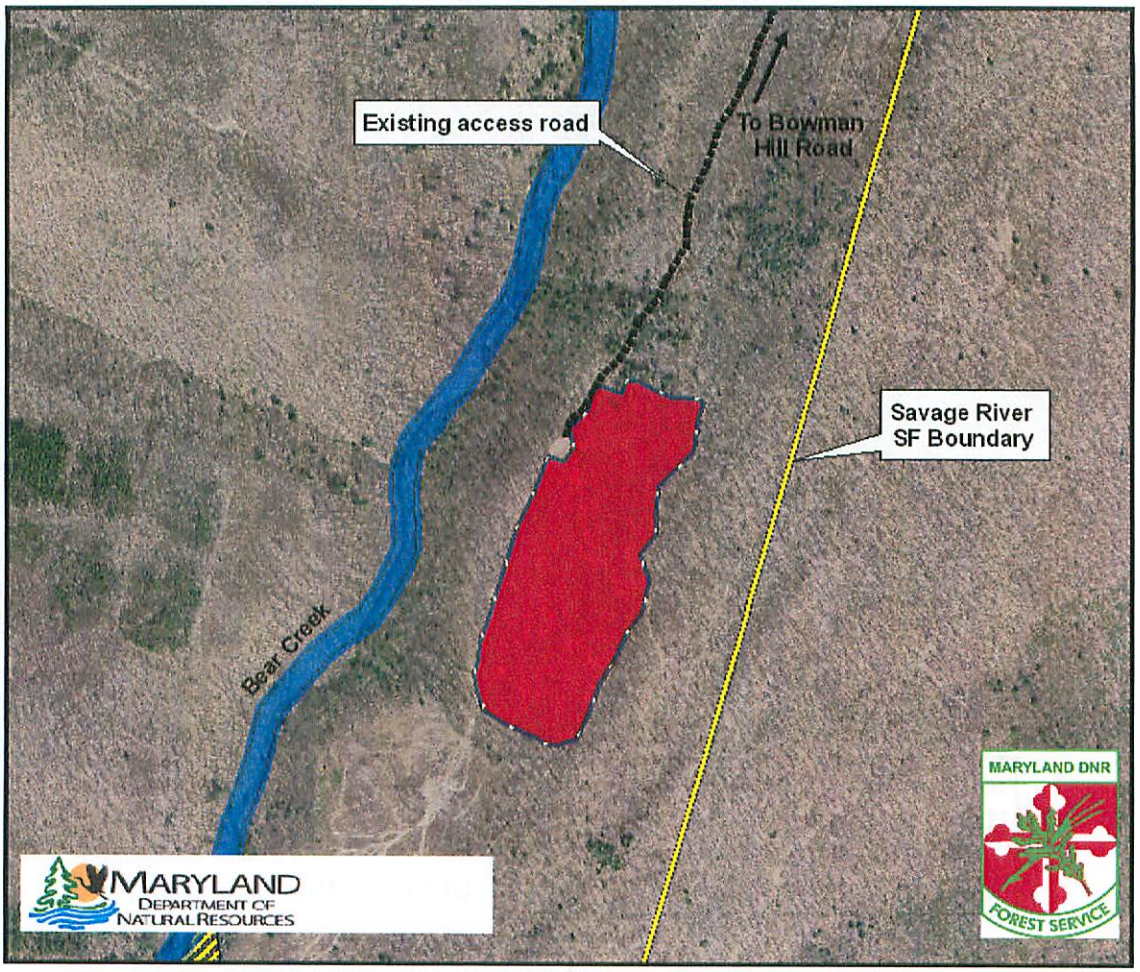
This project area has a northwestern aspect and the slope is generally less than 20 percent. The dominant soils on the hillside are the Dekalb-Calvin soils which are very stony loams that are well drained and have few equipment limitations when the slope is less than 20 percent. The productivity of the site is good to very good with a site index ranging from 75 to 80 feet for upland oaks.

Management and Silvicultural Recommendations

The recommendation for this stand is to stimulate the oak advanced regeneration without simultaneously stimulating the sweet birch, yellow poplar, and black cherry regeneration. Once this prep work is completed and the oak regeneration is 3 – 5 feet tall then the overstory trees can be removed.

The overstory trees are ready to be regenerated but the desirable seedling understory is not present to take its place. Undesirable ferns and striped maple are scattered throughout the stand. These need to be controlled with herbicide. Abundant sweet birch in seedling and sapling sizes is also throughout the stand. A prescribed fire should be conducted in this stand after the herbicide work is completed to top kill all the sapling size sweet birches. This combination of herbicide work and prescribed fire should provide sufficient light to stimulate the growth of the young desirable seedlings present in this stand.

In 5 years or so the oaks should have a good head start over the black cherry, yellow poplar, red maple and sweet birch that the overstory can be removed. The stand should be monitored to determine if the deer problem implied by the fern is a current problem or a legacy problem. If it is a current problem then we will need to consider fencing.



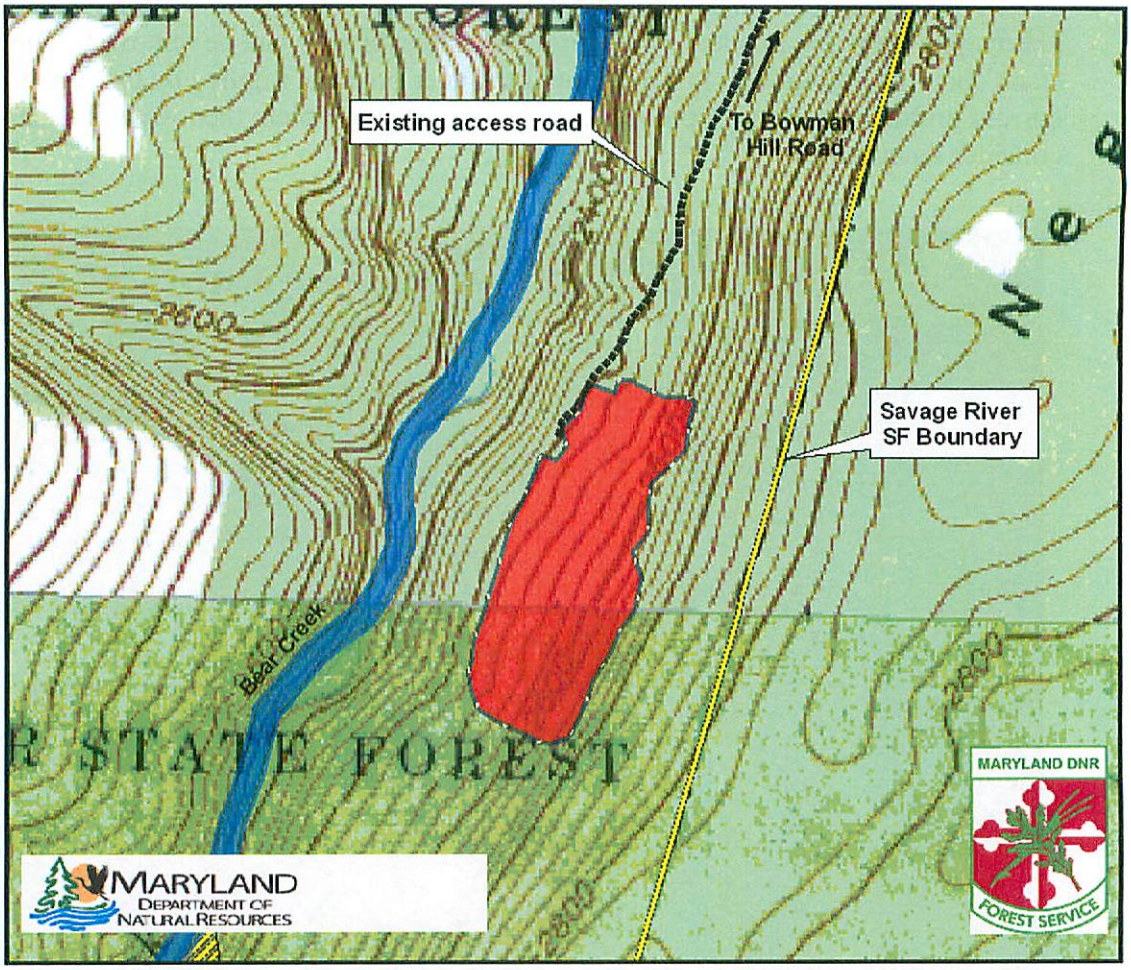
Savage River State Forest
Harvest Proposal FY 2012
Compartment 13
Approximately 24 Acres

N

1:660

330 165 0 330 660 990 1,320
Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area



Savage River State Forest
Harvest Proposal FY 2012
Compartment 13
Approximately 24 Acres

N

1:660

330 165 0 330 660 990 1,320
Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area

Silviculture project – Klondike Thinning/First Shelterwood Cut (Compartment 37)

Description

This 15 acre project proposal is located on the east side of Big Savage Mountain. Its northeastern boundary is the buffer of Woodland Creek and its western boundary is the access road that comes from the town of Klondike. The trees present are the northern hardwood type. There are few desirable seedlings present at this time perhaps due to the abundance of competing plants or white tailed deer. Some of the trees in the project area have been previously defoliated by gypsy moth and there is some mortality.

This stand has been previously thinned. Less than 5 % of the trees in this stand are dead. There are approximately 198 live trees per acre and with 101.3 sq. ft. basal area per acre. This means that the stocking level is about 89 percent. The site is dominated by red maple, northern red oak, and sugar maple. Other species present include: white ash, black cherry, basswood, cucumber tree, hemlock, hickory and sweet birch. The sparse advanced regeneration consists of red oak, red maple, sugar maple, black cherry, and basswood. The understory vegetation includes: hayscented fern, woods fern, Christmas fern, stinging nettle, mayapple, grape vine, gooseberry, blue cohosh, raspberry, blackberry, sarsaparilla, greenbriar, pokeweed, ginseng, and mayapple. In many places witch hazel and striped maple are very abundant and over 6 feet tall.

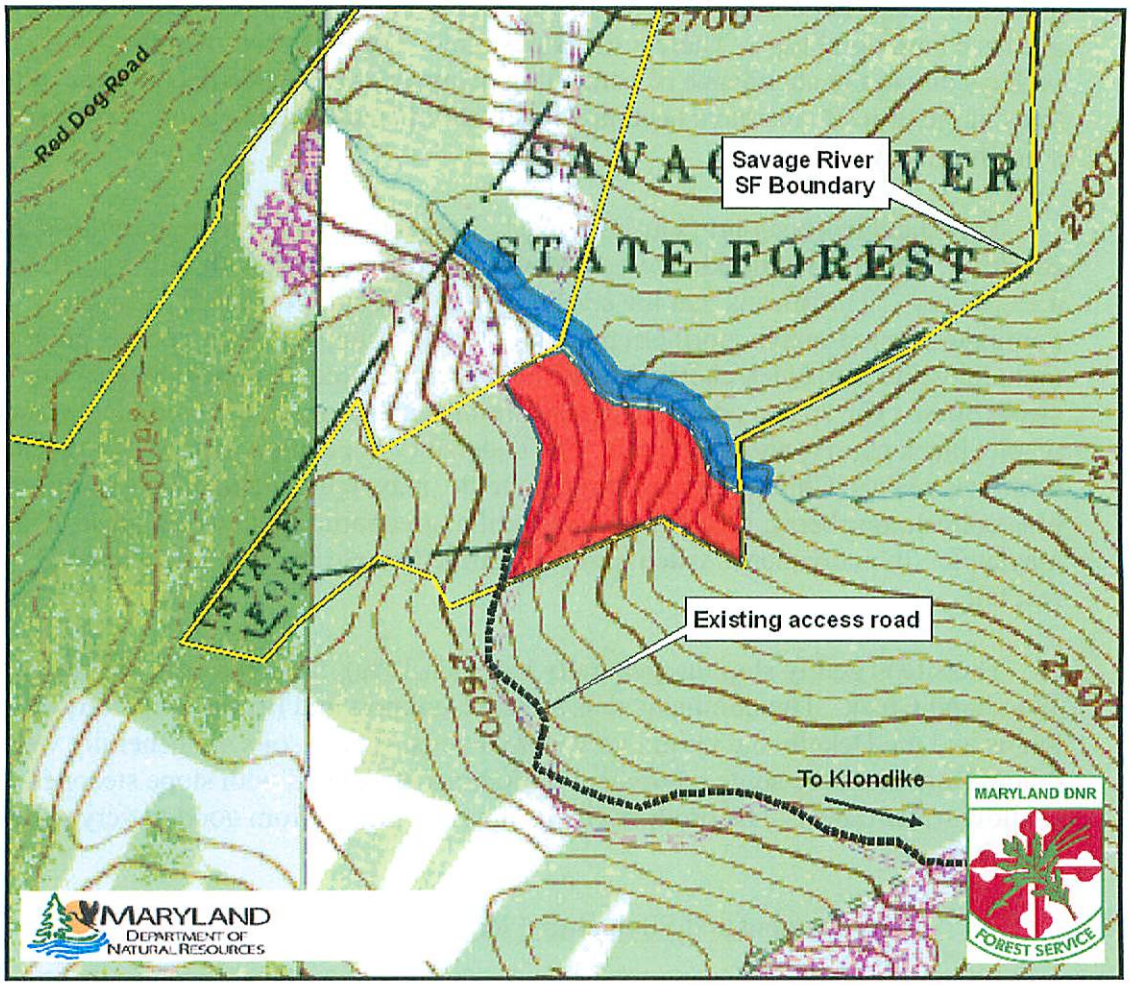
The site is gently sloping (generally less than 15%), faces the east, and drains into Woodland Creek. The dominant soils are the Cookport and Ernest very stony silt loams and the Dekalb and Gilpin very stony loams. These soils are generally well drained and there are some equipment limitations associated with slope steepness and shallow water tables. The productivity of the soils ranges from good to very good (70 – 80 feet).

Management and Silvicultural Recommendations

The recommendation for this stand is to salvage the dead trees, remove all the poor quality trees, and reduce the basal area to 67 sq. ft. by removing all the rest of the pole size trees and some of the immature red maples. This practice is technically called the 1st shelterwood cut, because we are prepping the site for a regeneration harvest in 15 years or so.

Before the cutting recommendation is carried out the competing vegetation needs to be controlled. Due to the large size and density of the striped maple and witch hazel backpack spraying is not practical. Two ways to control these plants and other competing plants are: Contract with a broadcast herbicide applicator to spray the area with tank mounted tracked vehicle. The second way would be to conduct a prescribed burn to top kill the competing stems then when the stems sprout up in the spring to herbicide them with a backpack sprayer.

After the competing plants are controlled then the thinning from below should create sufficient light for the desirable regeneration that is already present to grow and new seed sources to sprout and grow while not providing enough light to stimulate undesirable shade tolerant species.



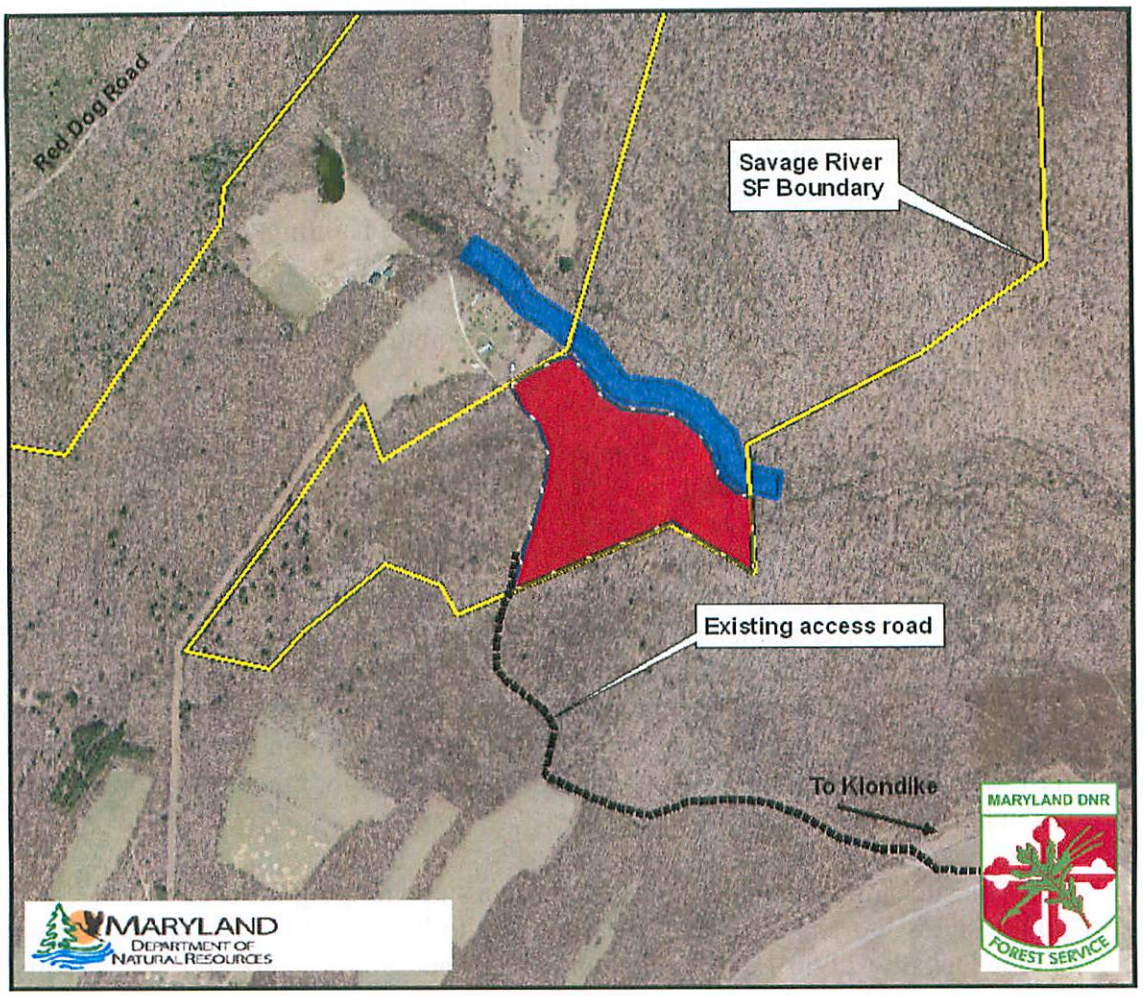
Savage River State Forest
Harvest Proposal FY 2012
Compartment 37
Approximately 16 Acres

N

1:660

330 165 0 330 660 990 1,320
Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area



Savage River State Forest
Harvest Proposal FY 2012
Compartment 37
Approximately 16 Acres

N

1:660

330 165 0 330 660 990 1,320
Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area

Silviculture project – Hard Struggle Thinning/First Shelterwood Cut (Compartment 1)

Description

This 46 acre project proposal is located on the north side of US Route 40 just west of Keyser's Ridge and east of the west fork of Puzzley Run.. Access off Route 40 is a logging road that was the access to the Hard Struggle Hunting Camp. This logging road splits the area into 2 sections. Section 1 is 14.1 acres and section 2 is 32.9 acres in size. The trees present are the Alleghany hardwood type. There are few desirable seedlings present at this time perhaps due to the abundance of competing plants or white tailed deer.

The trees in section 1 were thinned in 1994 and the trees in section 2 were thinned in 1972. Less than 5 % of the trees in section 2 are dead. There are 176 trees per acre in section 1 and 192 trees per acre in section 2. The basal area in each section is 92.5 sq. ft. of basal area per acre and 129 sq. ft. of basal area per acre, respectively. The percent stocking in section 1 is 83 % and in section 2 is 98 %. The site is dominated by black cherry, red maple and northern red oak. Other species present include: white ash, chestnut oak, sugar maple, American beech, black locust, sweet birch and cucumber tree. Advanced regeneration consists of black cherry, red maple, northern red oak, sweet birch and service berry. Understory vegetation includes: hayscented fern, woods fern, greenbriar, crowsfoot, dogbane, trillium, blueberry, striped maple, witch hazel, and multiflora rose.

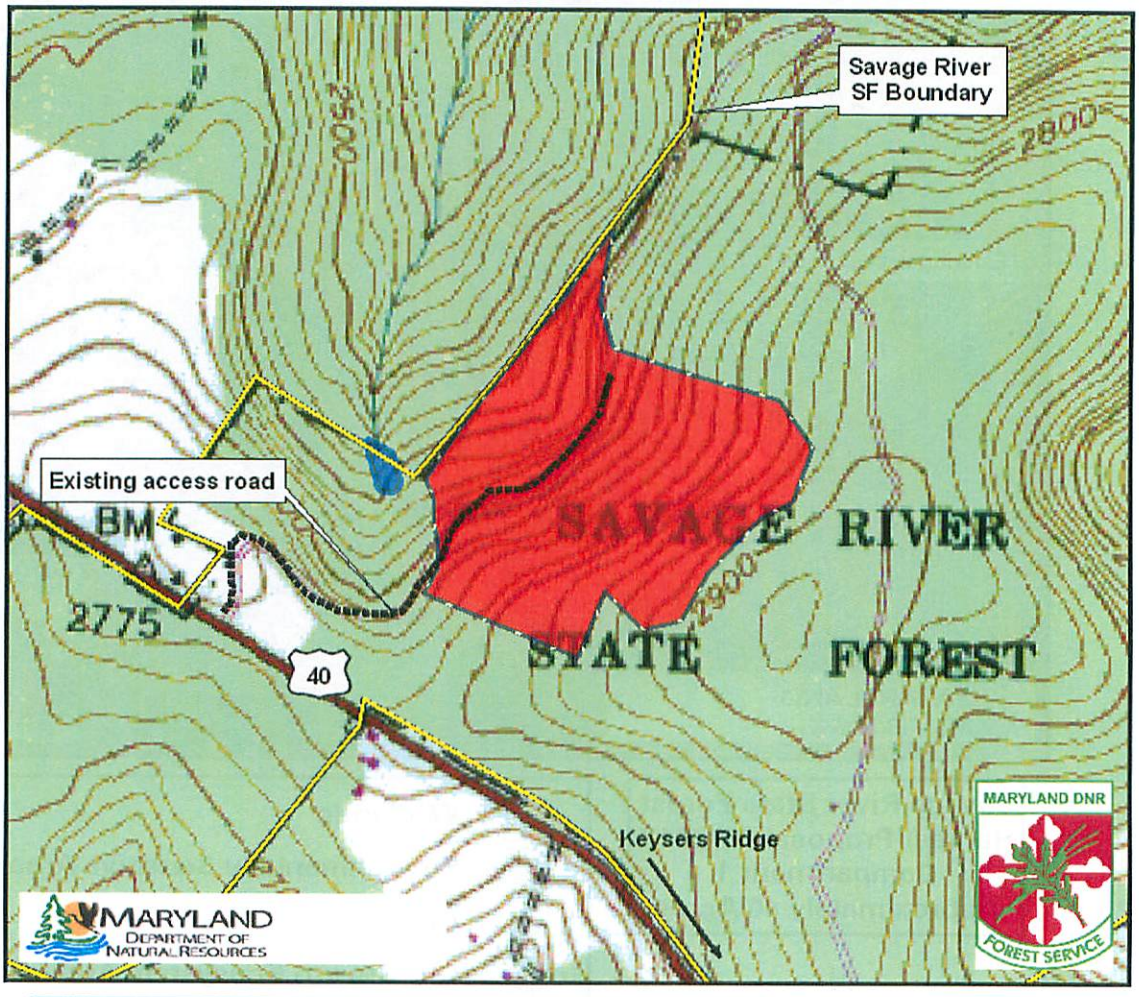
The site slopes to the northwest and has a slope ranging from 10 - 25 %. Water off the site will drain into one of the drainages to Puzzley Run. The major soil series are the Dekalb-Calvin-Lehew very stony loams and Stony steep land. These soils are generally well drained and there is some equipment limitations associated with slope steepness. The productivity of the soils ranges from good to very good (70 – 80 feet).

Management and Silvicultural Recommendations

The recommendation for this area is to control the ferns, striped maples and witch hazel which are competing with desirable tree regeneration. Then to conduct a thinning, where all the trees from 6 – 11 inches DBH and poor quality sawtimber trees will be removed to provide light to desirable tree regeneration.

Controlling the understory competition is a necessary prerequisite to successfully establishing the next forest. The understory can be controlled by herbicide application and/or prescribed fire. The herbicide work should be done first; this will kill the competing vegetation and reduce the rapid re-colonization of the site by these plants. Prescribed fire can be used instead of herbicides or in conjunction with herbicides. Prescribed fire will top kill the understory competition including small undesirable trees. Prescribed fire is fairly inexpensive, but gives a fairly short window for desirable seedlings to get established. The herbicide work is fairly expensive, but gives a longer window for desirable seedlings to get established.

The thinning operation that follows the understory control work is designed to provide sufficient light to stimulate the germination and growth of young oak and black cherry seedlings. Within 10 years the desirable seedlings should be 3 – 4 feet tall. At which point, a shelterwood sequence could begin or if the seedlings are tall and thrifty enough an overstory removal/regeneration cut could be conducted.



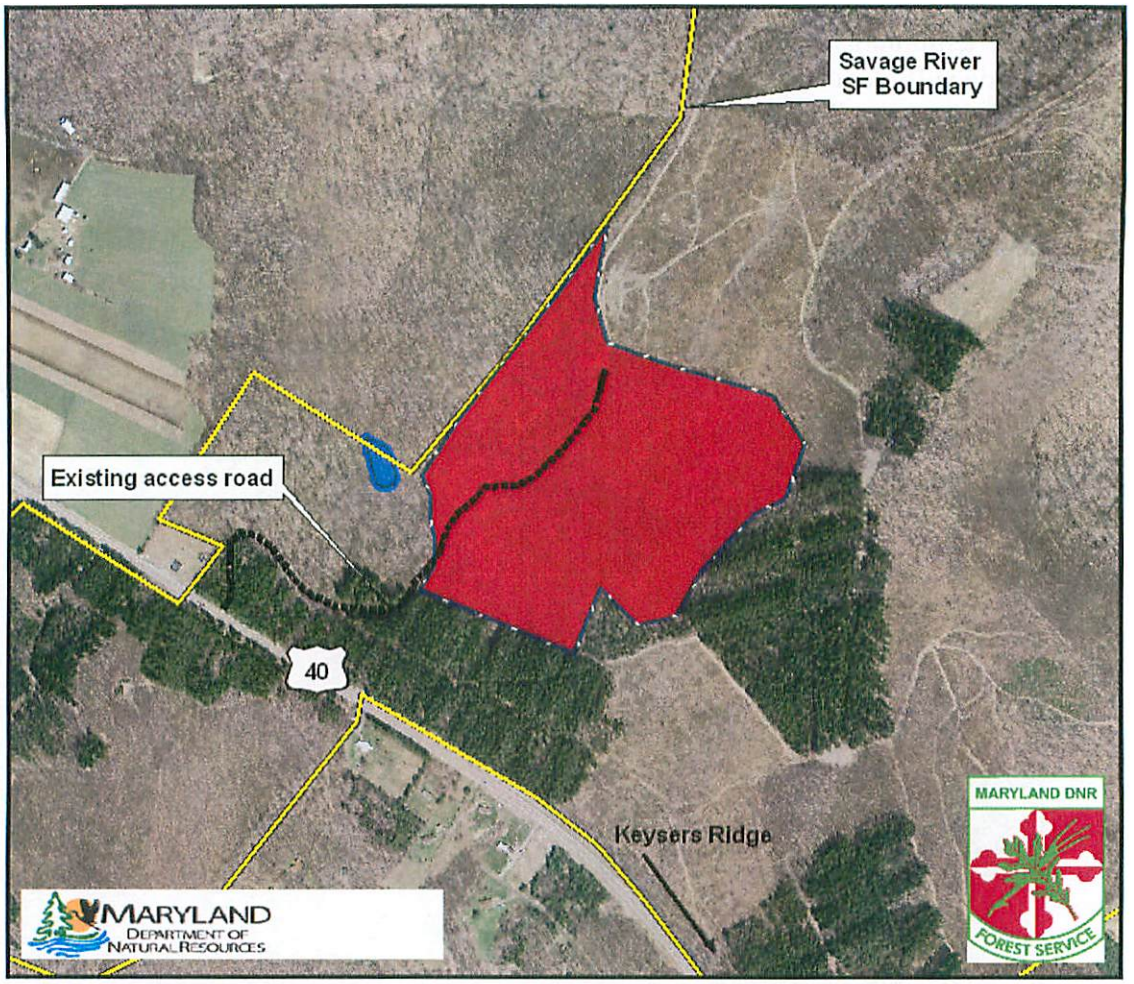
Savage River State Forest
Harvest Proposal FY 2012
Compartment 1
Approximately 46 Acres

N

1:660

330 165 0 330 660 990 1,320
Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area



Savage River State Forest
Harvest Proposal FY 2012
Compartment 1
Approximately 46 Acres

N

1:660

330 165 0 330 660 990 1,320

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area

Silviculture project – Margroff Spruce Thinning (Compartment 14)

Description

This 18 acre project is located approximately 2.5 miles east of Accident, MD on the portion of the state forest that is known as the Margroff Place. There is a bicycle trail that goes through part of this area. There is very little desirable regeneration in this stand due to the dense canopy. This stand was planted with Norway spruce and red pine in 1941. This stand was thinned in 1989, the red pine was likely removed during this thinning.

There are 232 trees per acre on this site and the basal area is 167 sq. ft. per acre. This means that the stand is over stocked for the species present and the growth rate of the stand is slowing down. The dominant species present is Norway spruce. There are some trees that have seeded-in which include: red oak, white ash, sugar maple and black cherry. The understory vegetation consists of ferns, greenbriar, striped maple and crow's foot.

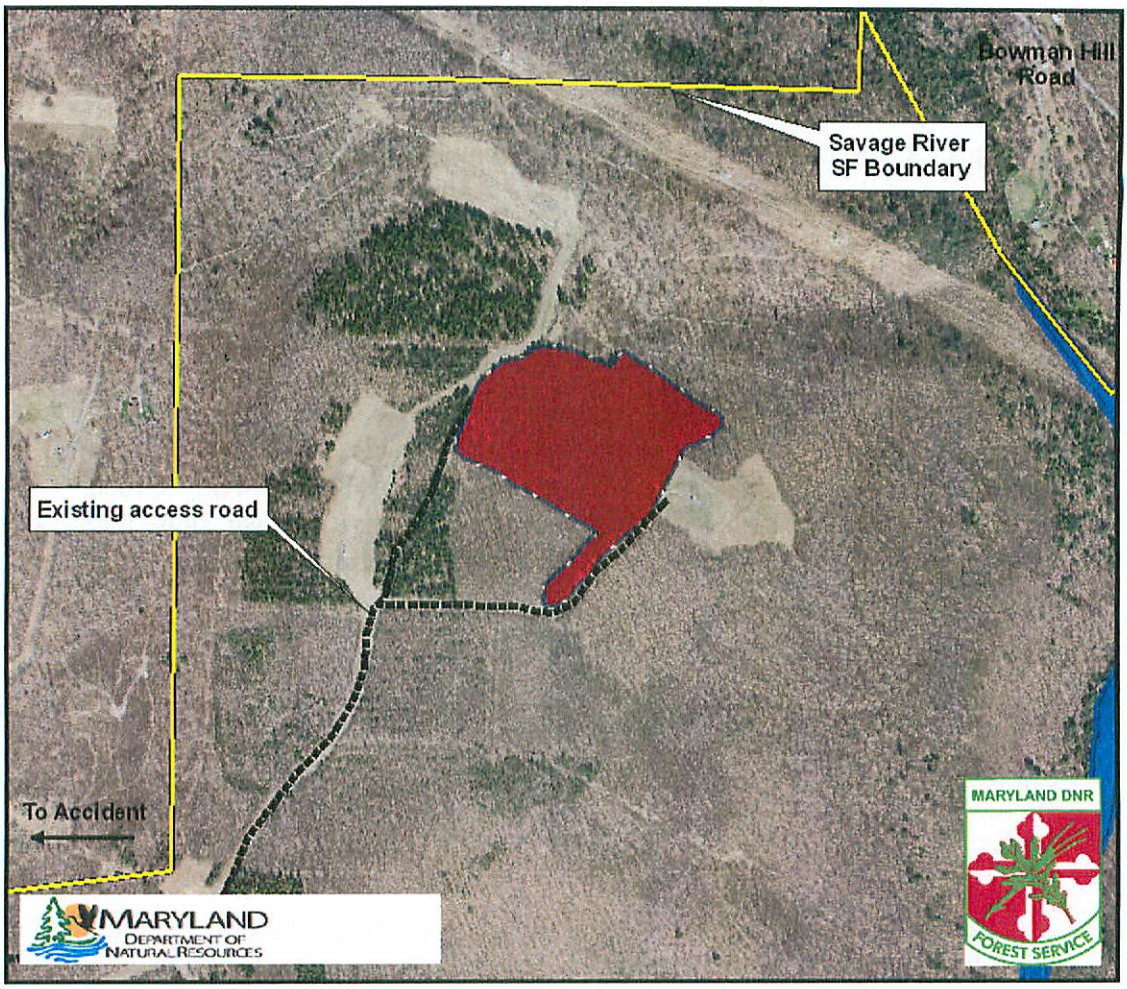
The site is on a northeast aspect and the slope ranges from 5 to 25 percent. The dominant soil is the Dekalb channery loam. This soil is well drained and equipment limitations are slight when the slope is less than 15 percent. The productivity of the site is fair to good with the site index ranging from 65 – 75 feet for mixed oaks.

Management and Silvicultural Recommendations

The recommendation for this project is to convert the stand to a white pine plantation. This will ultimately improve the available habitat for Goshawks and likely increase the value of the stand.

Approximately 1/3 of the stand basal area or 55 sq. ft. should be removed from the stand. The trees to remove should come from the small sawtimber size classes. In places the competing vegetation may be dense in which case it should be herbicided prior to the cutting activity. After the cutting activity then white pine seedlings should be under planted in the stand. In late summer bud caps should be placed on the terminal buds to reduce browsing damage from deer.

After 5 – 10 years the lower branches of the new seedlings should be pruned to reduce the likelihood of blister rust infecting the trees. Further if blister rust does infect the stand then the infected branches should be cut out. Once the white pine trees have reached 20 feet tall then the remainder of the Norway spruce can be removed.



Savage River State Forest
Harvest Proposal FY 2012
Compartment 14
Approximately 18 Acres

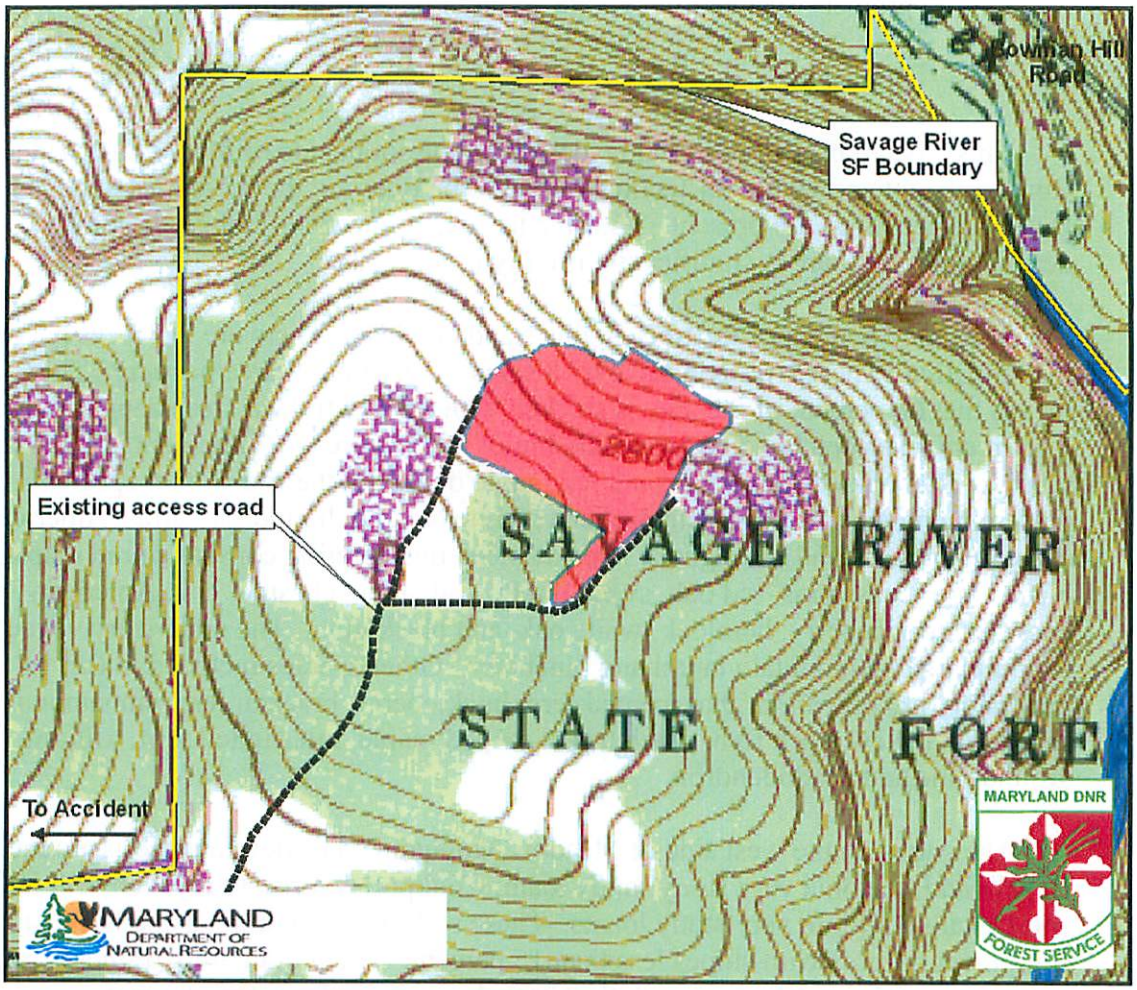
N

1:660

340 170 0 340 680 1,020 1,360

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area



Savage River State Forest
Harvest Proposal FY 2012
Compartment 14
Approximately 18 Acres

N

1:660

340 170 0 340 680 1,020 1,360
Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area

Silviculture project – Maynardier Ridge - Clay Pits (Compartment 76)

Description

This 37 acre project proposal is located on the south side of Maynardier Ridge Road at the intersection with Jennings Road. The trees are the mixed oak type. Desirable seedlings are present. The area has experienced several gypsy moth defoliations and there is significant mortality in this stand.

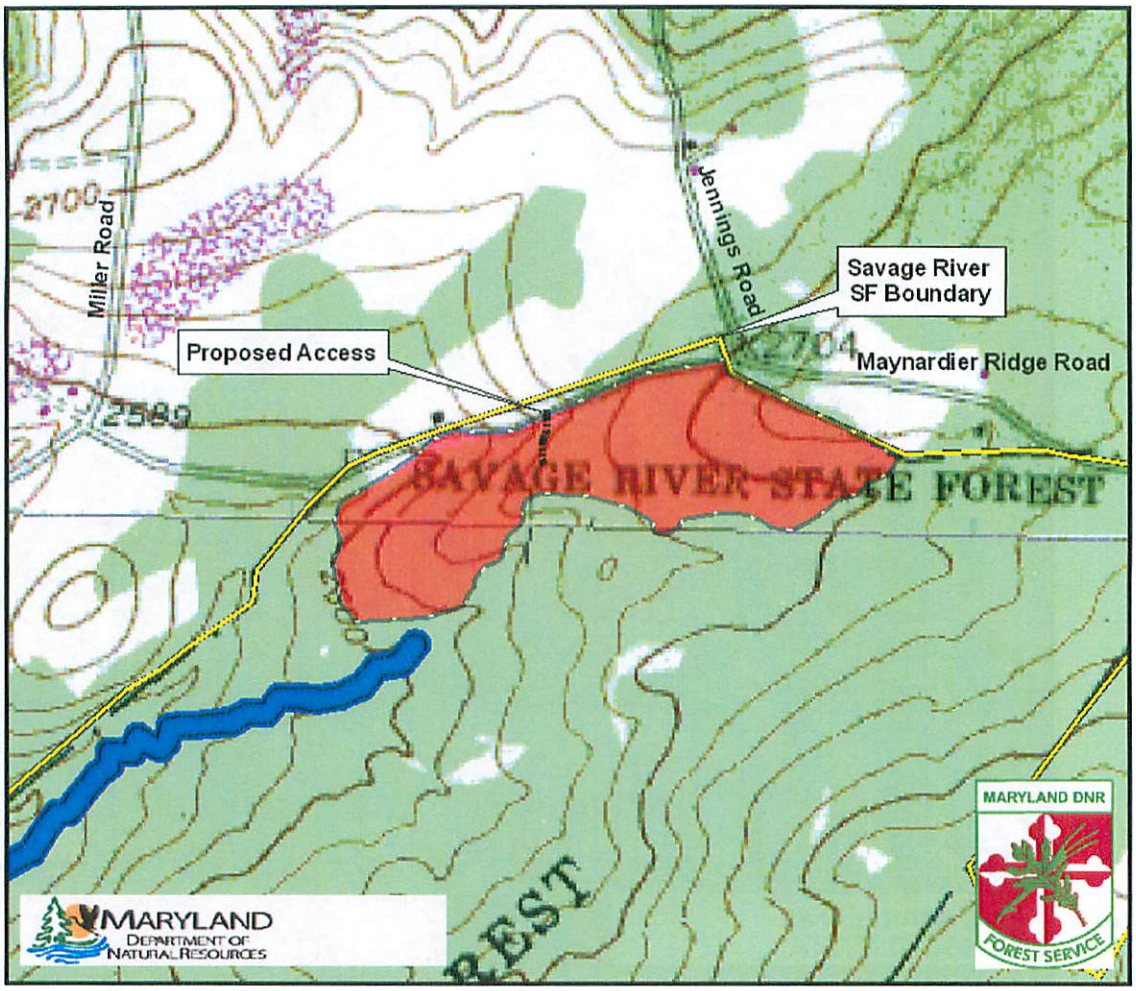
Forty-one percent of the trees in this stand are dead. There are 273 trees per acre that are alive. These live trees have 67.8 square feet of basal area per acre. This means that 68 percent of the area is stocked with trees. Of these trees approximately 75 percent is acceptable growing stock, but of the 75 percent, 34 percent is small red maples. Red oak, chestnut oak, and red maple dominate the site. Other species present include: scarlet oak, black cherry, white oak, pitch pine, sassafras, American chestnut, hickory and blackgum. The advanced regeneration consists of red maple, black cherry, sassafras, red oak, sweet birch, white pine, chestnut oak, American chestnut, serviceberry, hemlock, white oak, and black gum. The understory vegetation is dominated by mountain laurel and blueberry. Other species included in the understory are greenbriar, hayscented fern, huckleberry, bracken fern, cinnamon fern, sarsaparilla, New York fern, witch hazel, striped maple, interrupted fern, trillium, ground pine and rhododendron.

The site is on the west side of Meadow Mountain. The dominant soils are the Dekalb and Leetonia very stony sandy loam; Cookport & Ernest very stony silt loam; and Dekalb & Gilpin very stony loams. These soils are well drained and have slight equipment hazards with slopes less than 15 percent. The productivity of theses soils ranges from fair to very good with the site index ranging from 60 – 80 feet.

Management and Silvicultural Recommendations

The recommendation for this stand is to conduct a regeneration/salvage harvest followed by a prescribed burn.

This recommendation is proposed because it is desirable to salvage the value in the dead trees before they decay further. However, if only the dead trees were salvaged, then the abundance of the red maple would dominate the next forest and reduce the diversity of the stand. Thus it is recommended to conduct a regeneration harvest as well. Following up the cutting activity with a prescribed fire will tend to favor oak regeneration and this is desirable for many wildlife species. Approximately, 10 sq. ft. basal area per acre of oak species in the larger size classes should be left uncut and a 25 foot buffer around larger rock outcrops should also be left uncut. On the south side of the proposed sale is an intermittent stream that will be buffered with the southern boundary of the sale.



Savage River State Forest
Harvest Proposal FY 2012
Compartment 76
Approximately 37 Acres

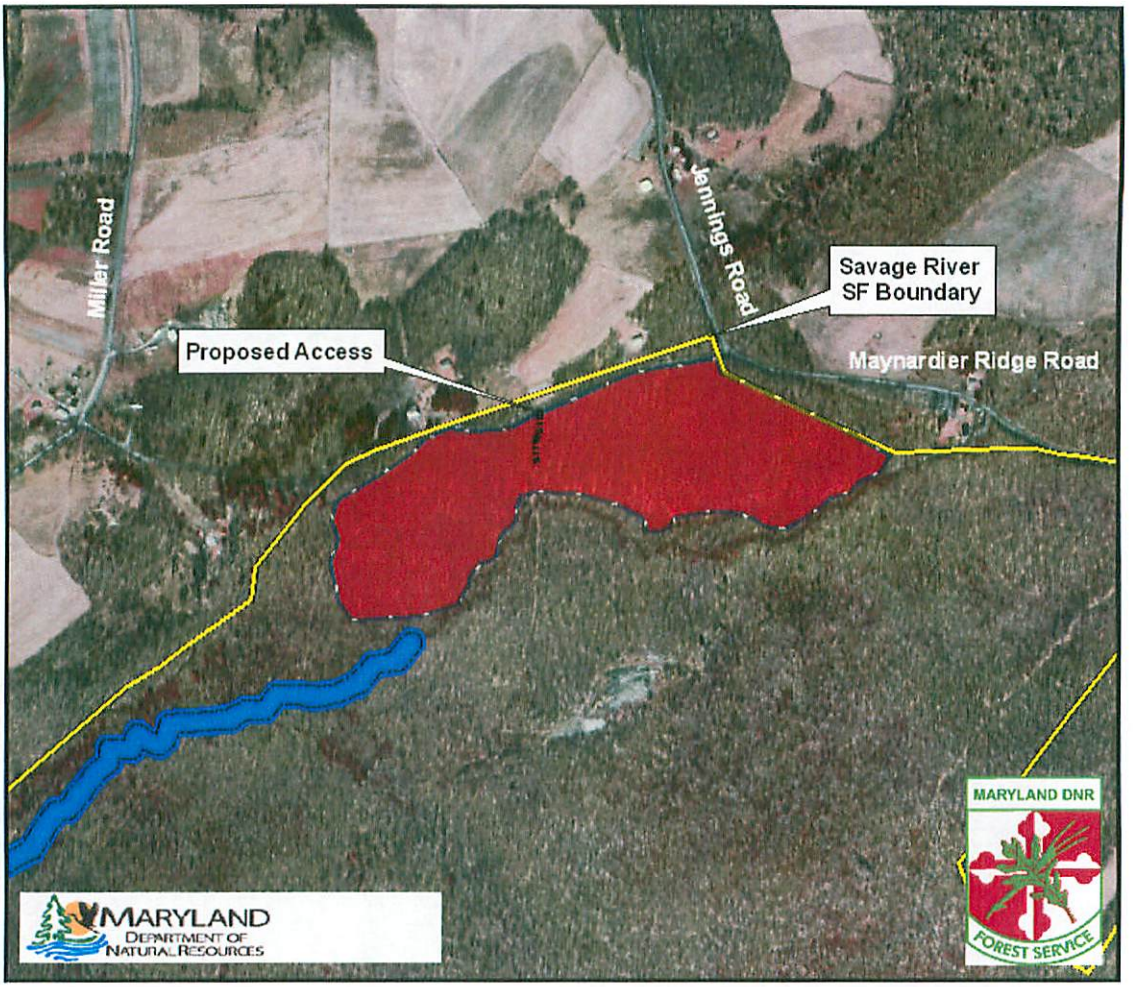
N

1:660

330 165 0 330 660 990 1,320

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area



Savage River State Forest
Harvest Proposal FY 2012
Compartment 76
Approximately 37 Acres

N

1:660

330 165 0 330 660 990 1,320

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area

Silviculture project – Whiskey Hollow (Compartment 72)

Description

This 36 acre project proposal is located upslope and west of Whiskey Hollow. It is approximately ½ mile east of New Germany Road using the road the goes through Meadow Mountain Boys Camp. The trees represent a northern hardwood/mixed oak type. There are few desirable seedlings present due to the dense competing vegetation. The area has experienced several gypsy moth defoliations.

Approximately 6 percent of the stems present are dead. The remaining trees are alive and can be managed for future growth but they are approaching maturity. There are 213 live trees with an associated basal area of 122 sq. ft. This means that the stand is overstocked for the species present. The site is dominated by red oak, sugar maple, and red maple. Other species present include: white ash, white oak, hickory, chestnut oak, yellow poplar, black locust, elm, black cherry and black gum. The sparse advanced regeneration consists of red oak, red maple, sugar maple, cucumber tree, black cherry, yellow poplar and white ash. The abundant understory includes: hayscented fern, New York fern, Christmas fern, blueberry, black cohosh, greenbriar, grapevine, mountain laurel, dogbane, Virginia creeper, maple leaf viburnum, pokeweed, meadow rue, ginseng, striped maple, witch hazel. Non-native invasive plants in the understory include: multiflora rose, garlic mustard and Japanese barberry.

The site has an eastern aspect and drains into Whiskey Hollow. There are a number of seeps at the bottom of the project proposal that have been exposed to 4-wheeler abuse. The dominant soils are the Dekalb-Calvin-Lehew very stony loams; Stony land, steep; Cookport and Ernest very stony silt loams. These soils are generally moderately well drained to well drained. Equipment restrictions are slight to moderate where slopes are more than 15 percent and severe where slopes are more than 35 percent. The slopes are generally 15 – 25 percent with the largest recorded slope of 50 percent. The productivity of the site is good to very good with the site index ranging from 70 – 75 feet for mixed oak.

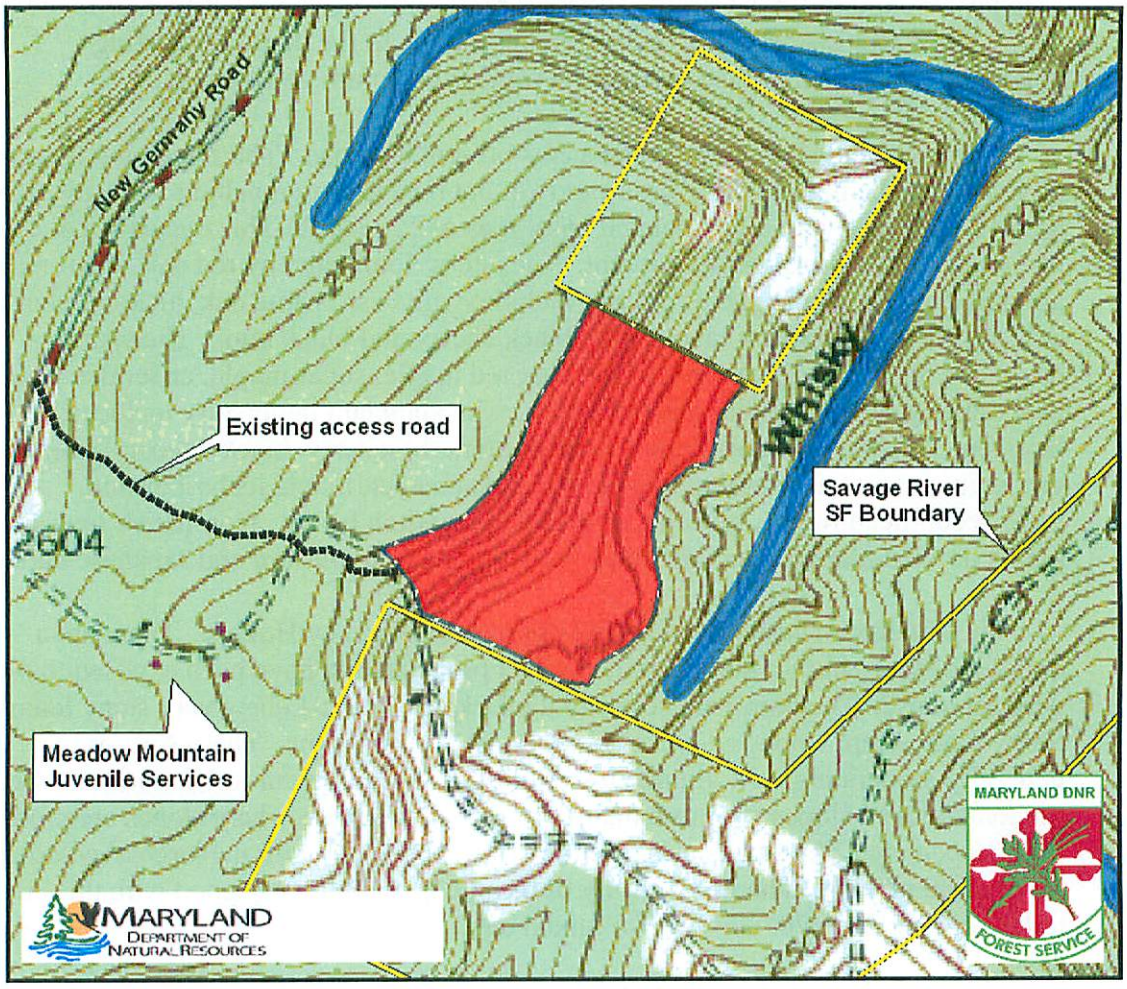
Management and Silvicultural Recommendations

The recommendation for this stand is to salvage the dead trees, thin out the poor quality trees and prepare the stand for a future regeneration harvest.

The key to preparing the stand for a future regeneration harvest is to control the competing plant cover thereby providing sufficient light for new regeneration to sprout and grow. A prescribed fire can be used to control some of the shrubby competing plants. In combination with the prescribed fire or instead of the fire (when conditions do not permit) herbicides can be used to control the competing plants. At the same time the non-native invasives can be controlled. After the fire/herbicide work is completed the dead trees can be removed, all the poor quality trees and the red maples

in the poletimber size class. Doing these activities will provide plenty of light and space for young seedlings to grow.

Then 5 years after the completion of this preparation work the stand should be examined to determine if sufficient advanced regeneration is then present to allow a regeneration cut.



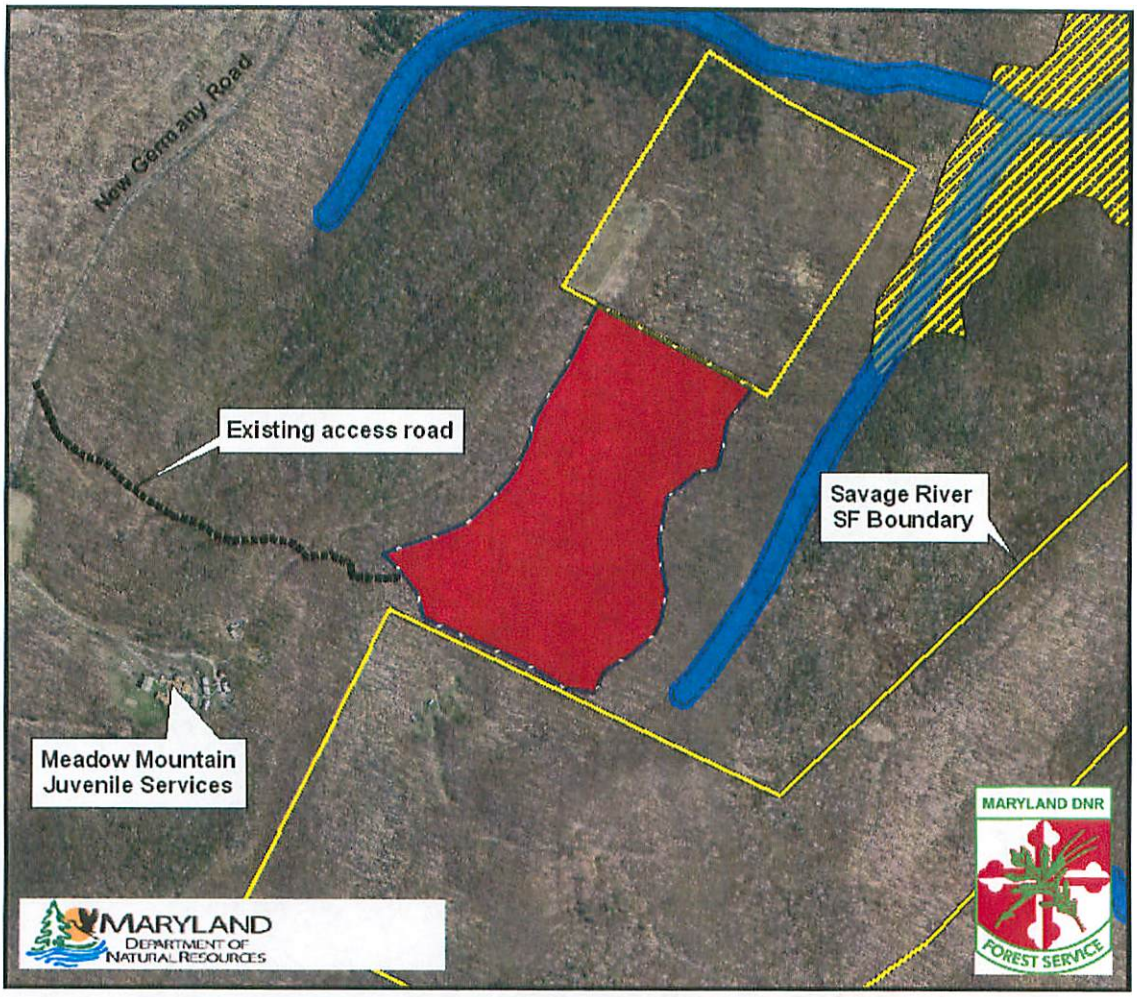
Savage River State Forest
Harvest Proposal FY 2012
Compartment 72
Approximately 36 Acres

N

1:660

325 162.5 0 325 650 975 1,300
Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area



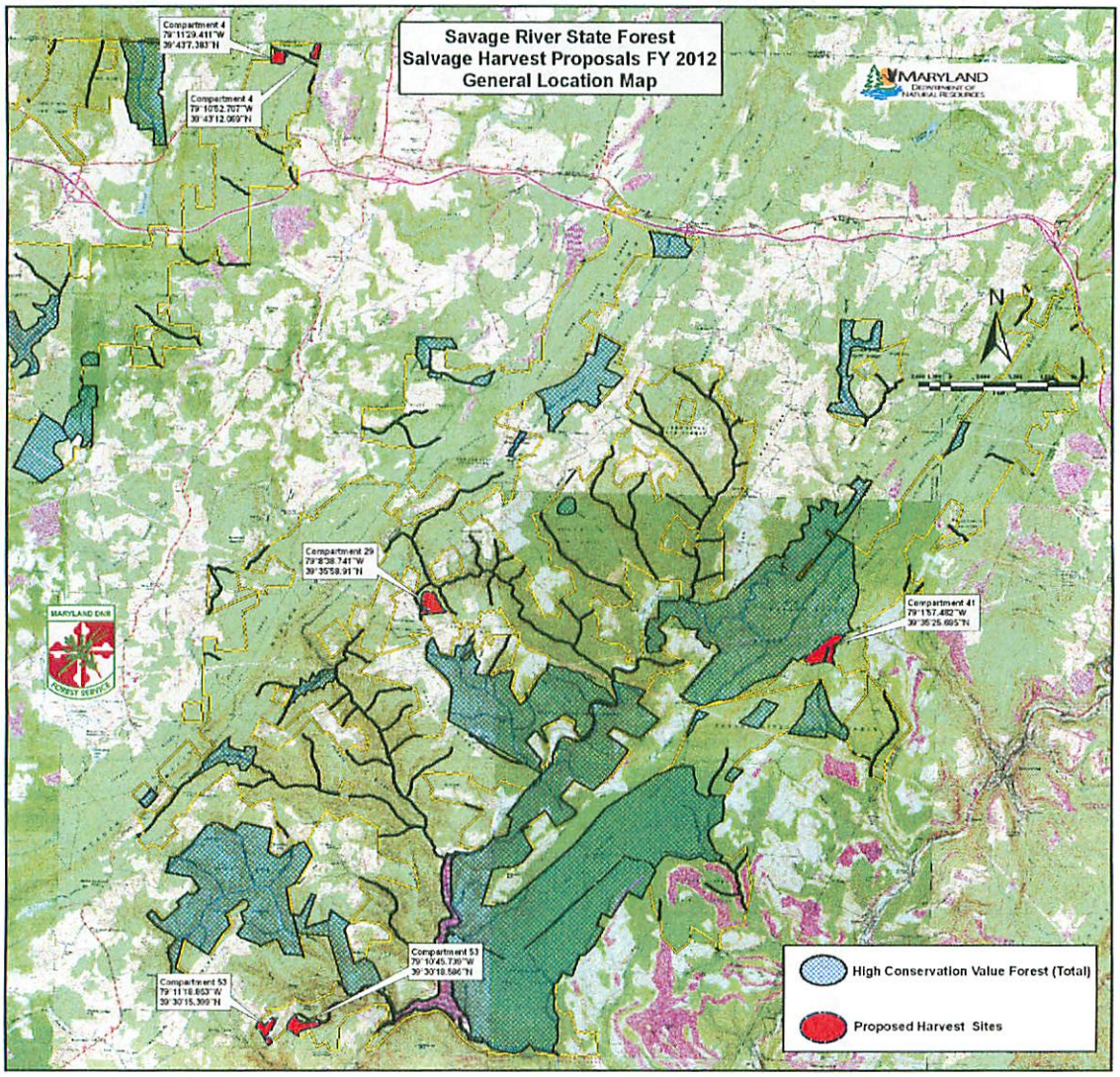
Savage River State Forest
Harvest Proposal FY 2012
Compartment 72
Approximately 36 Acres

N

1:660

325 162.5 0 325 650 975 1,300
Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area


Savage River State Forest
Salvage Harvest Proposals FY 2012
General Location Map
MARYLAND
DEPARTMENT OF NATURAL RESOURCES
Compartment 4
79°11'29.411"W
39°47'7.383"N
Compartment 4
79°10'52.707"W
39°47'12.069"N
Compartment 29
79°8'38.741"W
39°3'58.91"N
Compartment 41
79°1'57.482"W
39°3'25.695"N
Compartment 53
79°10'45.736"W
39°3'18.586"N
Compartment 53
79°11'16.853"W
39°3'15.399"N
N
MARYLAND DNR
FOREST SERVICE
High Conservation Value Forest (Total)
Proposed Harvest Sites

Salvage Sales – Fairview Road

Description

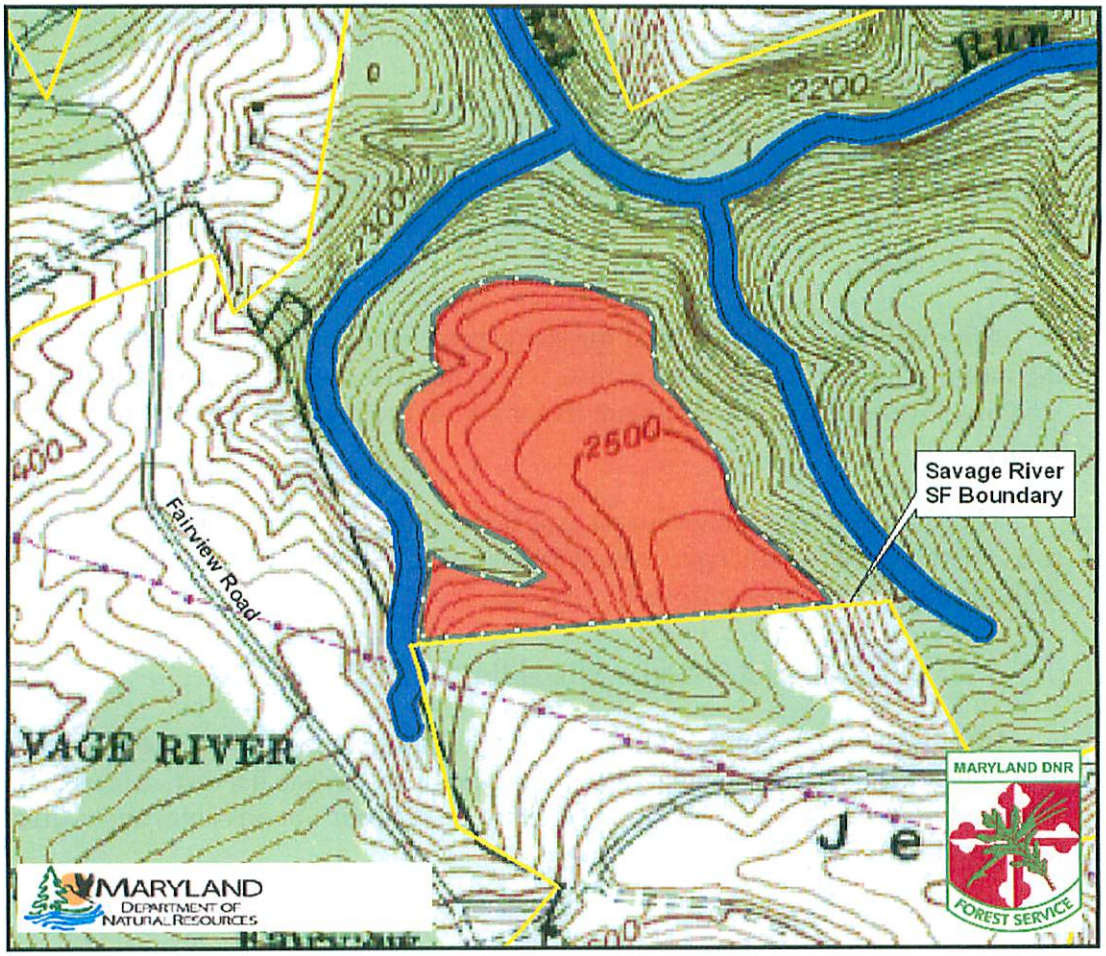
This 54 acre salvage harvest is located upslope and southeast of Poplar Lick Run. It is approximately 1.5 miles from New Germany Road off the north side of Fairview Road. The trees represent a mixed oak type that has experienced mortality from gypsy moth infestation.

Approximately, 46 percent of the stems present are dead. The greatest portion of the mortality is in the larger oak stems. There are 216 live trees per acre and the stocking level is low. The dominant live trees are red maple, cucumber tree and black cherry.

The site has a general northwest aspect and drains to Poplar Lick. The dominant soils are the Calvin and Ungers channery loams. The productivity of the site is good with the site index ranging from 75 – 85 feet.

Management and Silvicultural Recommendations.

Because of the amount of mortality and the small amount of acceptable live growing stock the recommendation for this stand is a salvage harvest. This should be followed up with a prescribed burn (or herbicide if fire is not possible) and artificial regeneration of oak



Savage River State Forest
Harvest Proposal FY 2012
Compartment 29
Approximately 54 Acres

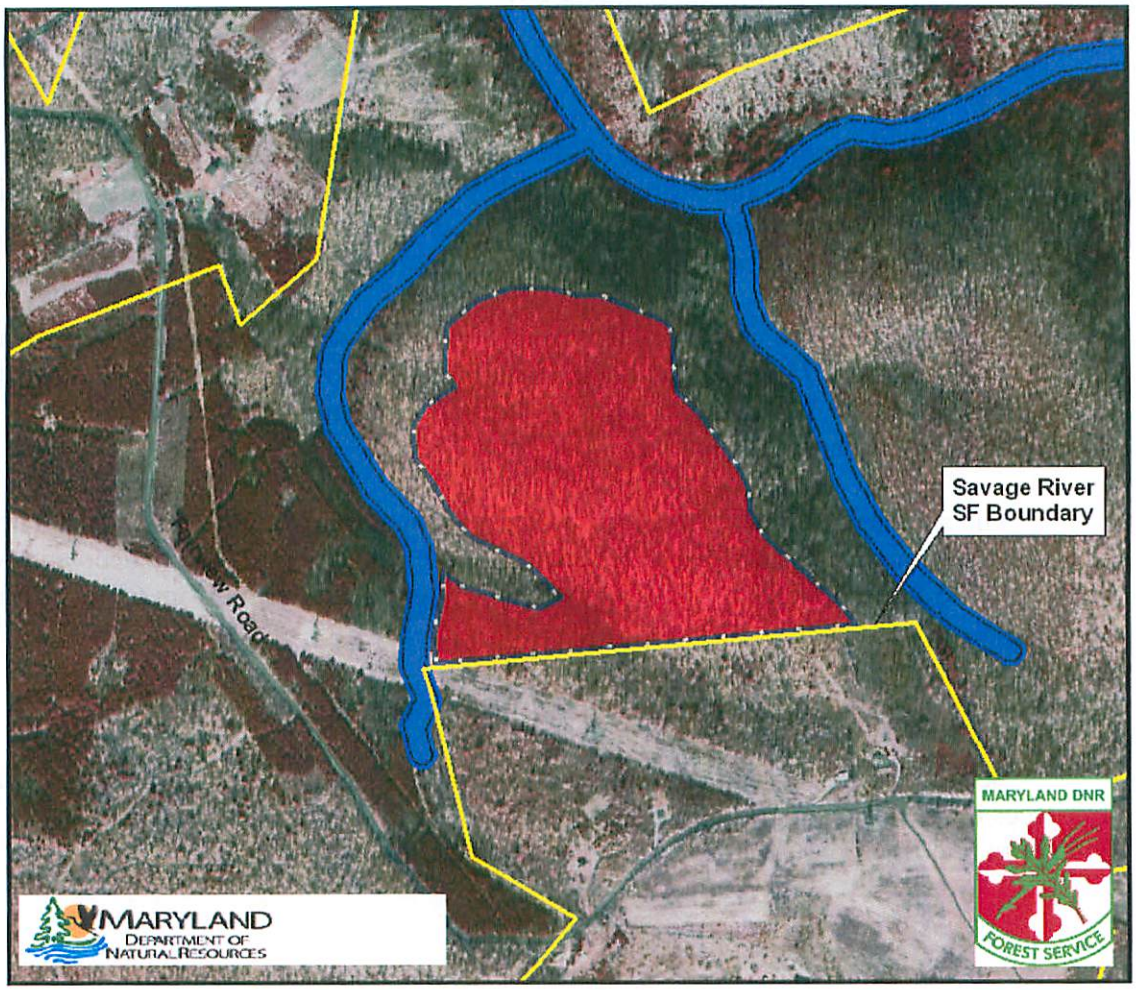
N

1:660

330 165 0 330 660 990 1,320

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffer
- Harvest Area



Savage River State Forest
Harvest Proposal FY 2012
Compartment 29
Approximately 54 Acres

N

1:660

330 165 0 330 660 990 1,320

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffer
- Harvest Area

Salvage Sale – Fort Hill (Compartment 53)

Description

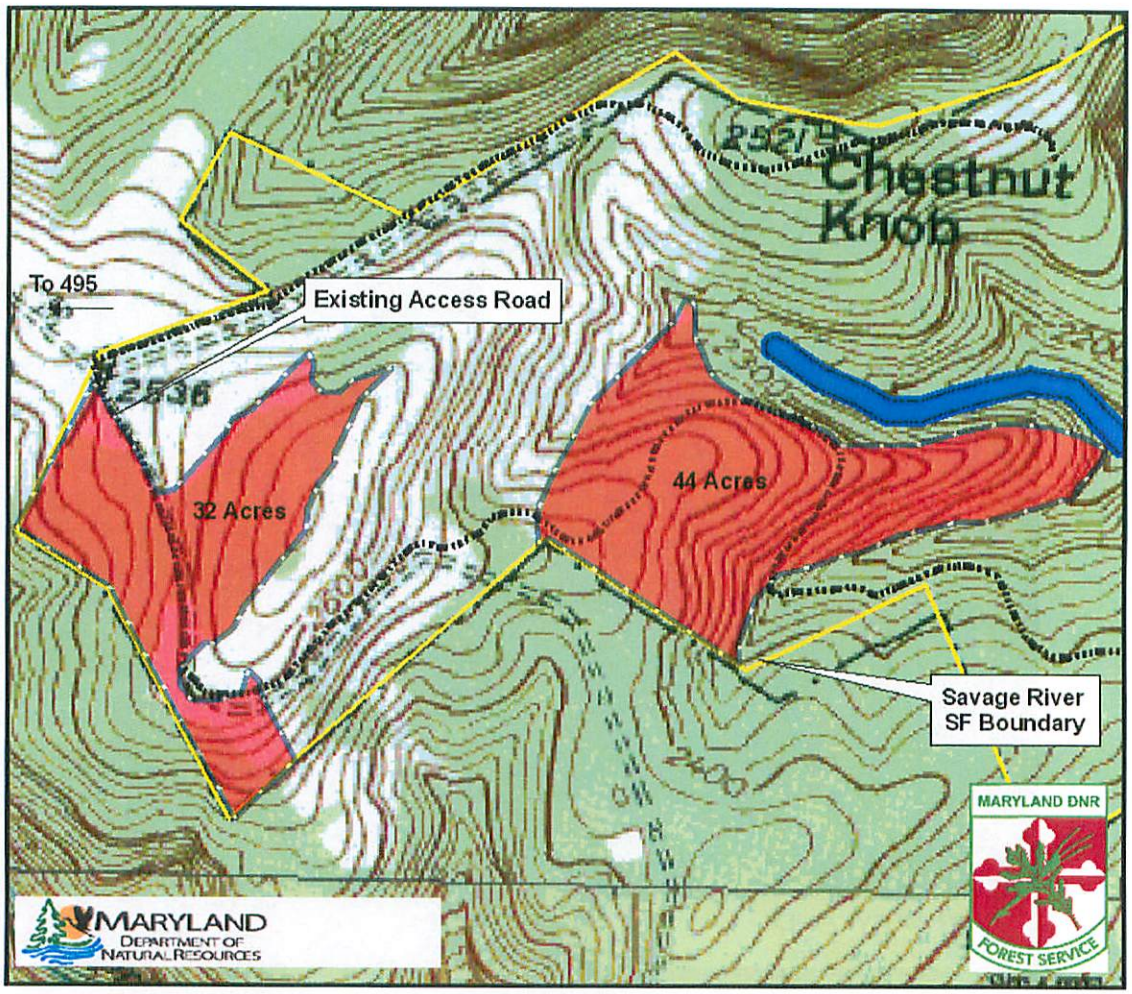
This 76 acre project is located on the ridge top near Chestnut Knob and above Spring Lick. It is located approximately, 1 mile east of Murphy Cemetery off Fort Hill Road. The trees present represent a mixed oak type. The area has a lot of mortality after having been subjected to storm damage and gypsy moth defoliation.

Approximately 36 percent of the stems present are dead. Of the 285 stems per acre that are left, only 76 percent of those are acceptable growing stock. This means that the stand is under-stocked with good quality trees. The dominant live trees are red maple, black cherry and chestnut oak.

The site has a southwest and southern aspect and drains into Spring Lick. The dominant soils are Stony land and steep (SrF). These soils are moderately deep and well drained. The site productivity is average with the site index ranging from 65 to 75 for upland oaks.

Management and Silvicultural Recommendations

Because of the amount of dead trees present and the poor quality of the residual live trees the recommendation for this stand is a salvage harvest. Then conduct a site prep burn and finally artificially regenerate oak back into the stand.



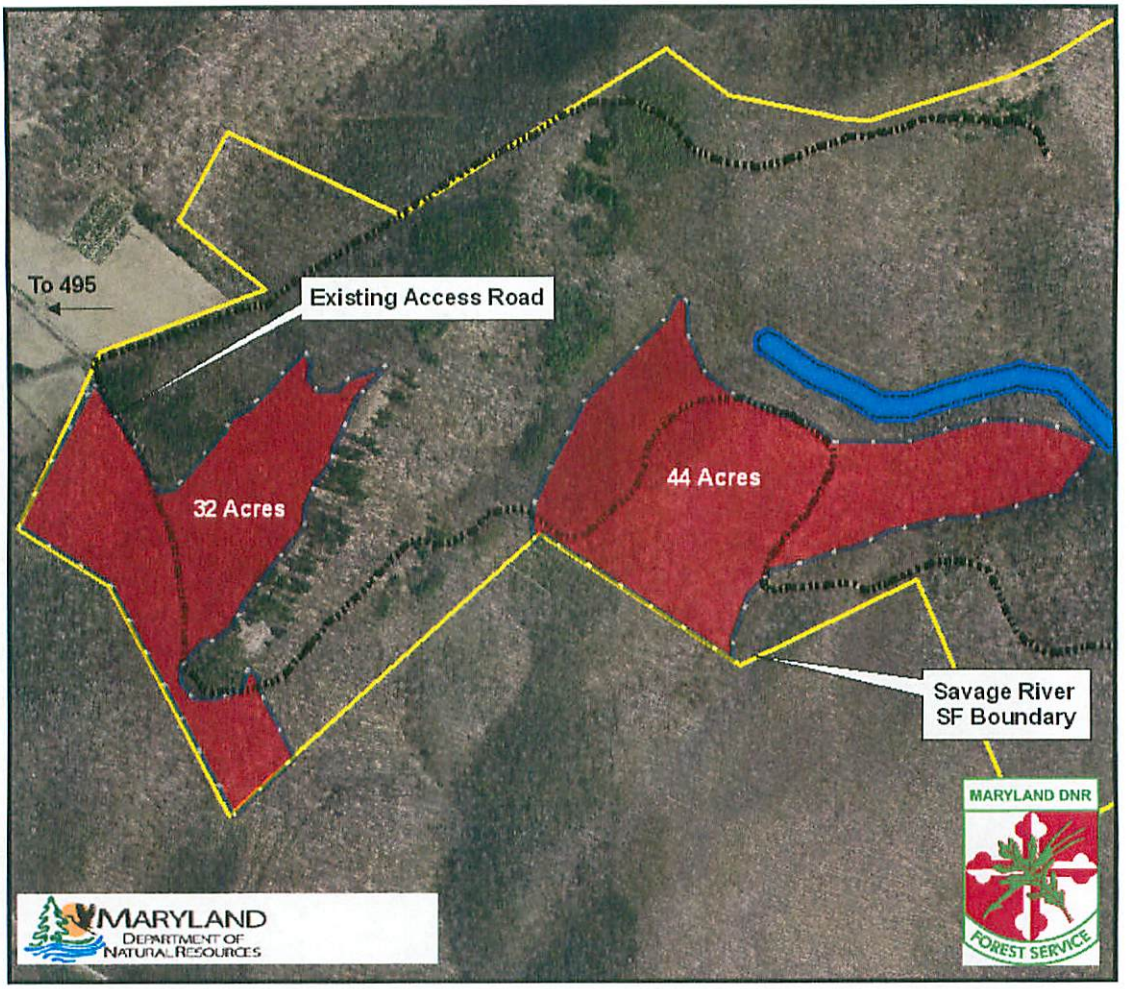
Savage River State Forest
Salvage Proposal FY 2012
Compartment 53
Approximately 76 Acres

N

1:660

325 162.5 0 325 650 975 1,300
Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area



Savage River State Forest
Salvage Proposal FY 2012
Compartment 53
Approximately 76 Acres

N

1: 660

325 162.5 0 325 650 975 1,300

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area

Salvage Sale – Jacob's Road (Compartment 41)

Description

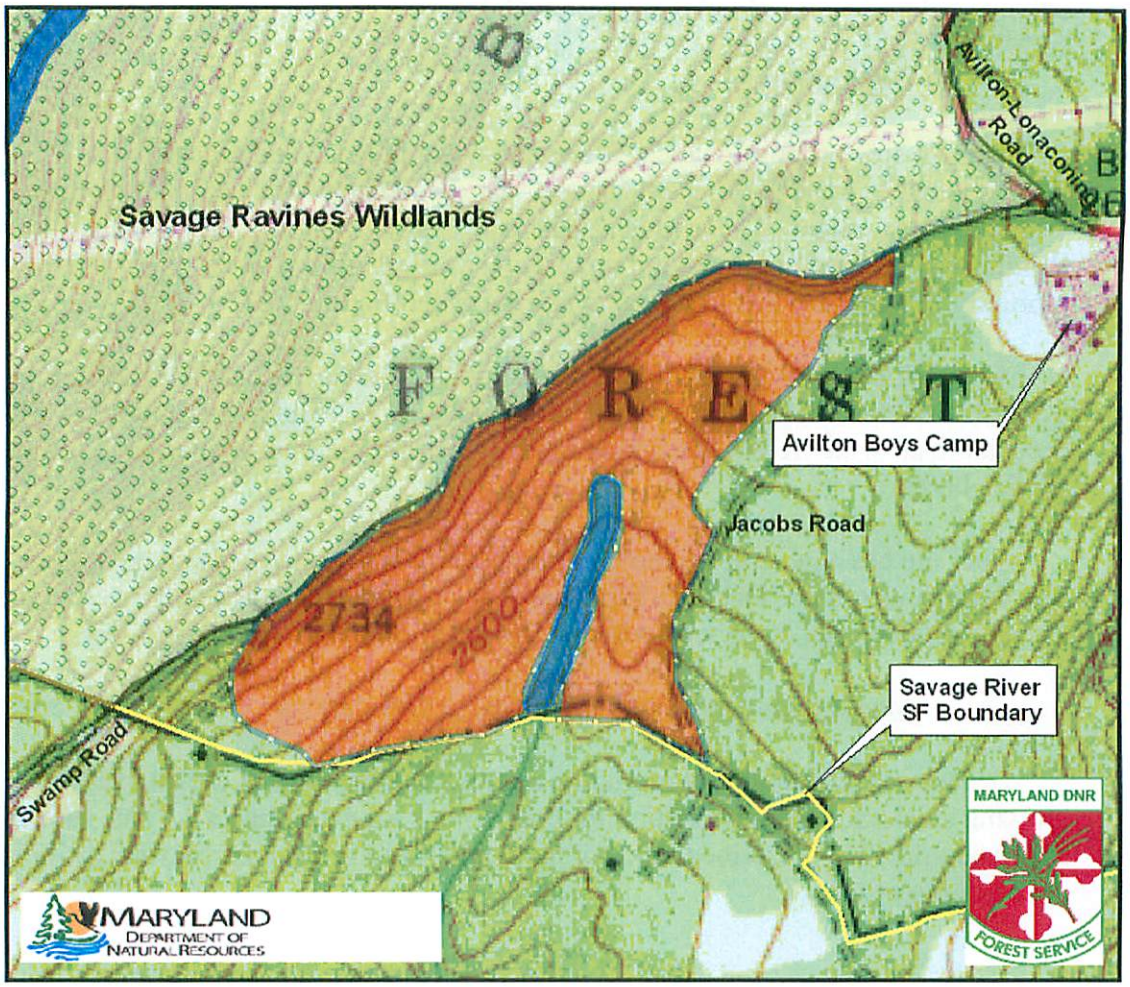
This 77 acre proposal is located between Swamp Road and Jacob Road. It is located about ½ west of Mt. Zion Church. The headwaters of Cucumber Hollow originate in this stand. The area is also across Swamp Road from the Savage Ravines Wildlands. The trees in this stand represent a mixed hardwood/oak type. The mortality in this stand has followed gypsy moth defoliation.

Approximately 44 percent of the stems in this stand are dead. The remaining trees (321 trees/acre) are alive but of poor quality. This stand is under-stocked with acceptable growing trees. The dominant live trees are red maple, chestnut oak and service berry.

This site has a general southeastern aspect and drains into Cucumber Hollow. The dominant soils are Dekalb, Gilpin and Leetonia which are generally well drained. The site productivity is average with the site index ranging from 60 – 75 feet.

Management and Silvicultural Recommendations

Because of the amount of mortality and the small amount of acceptable live growing stock the recommendation for this stand is a salvage harvest. This should be followed up with a prescribed burn (or herbicide if fire is not possible) and artificial regeneration of oak.



Savage River State Forest
Salvage Proposal FY 2012
Compartment 41
Approximately 77 Acres

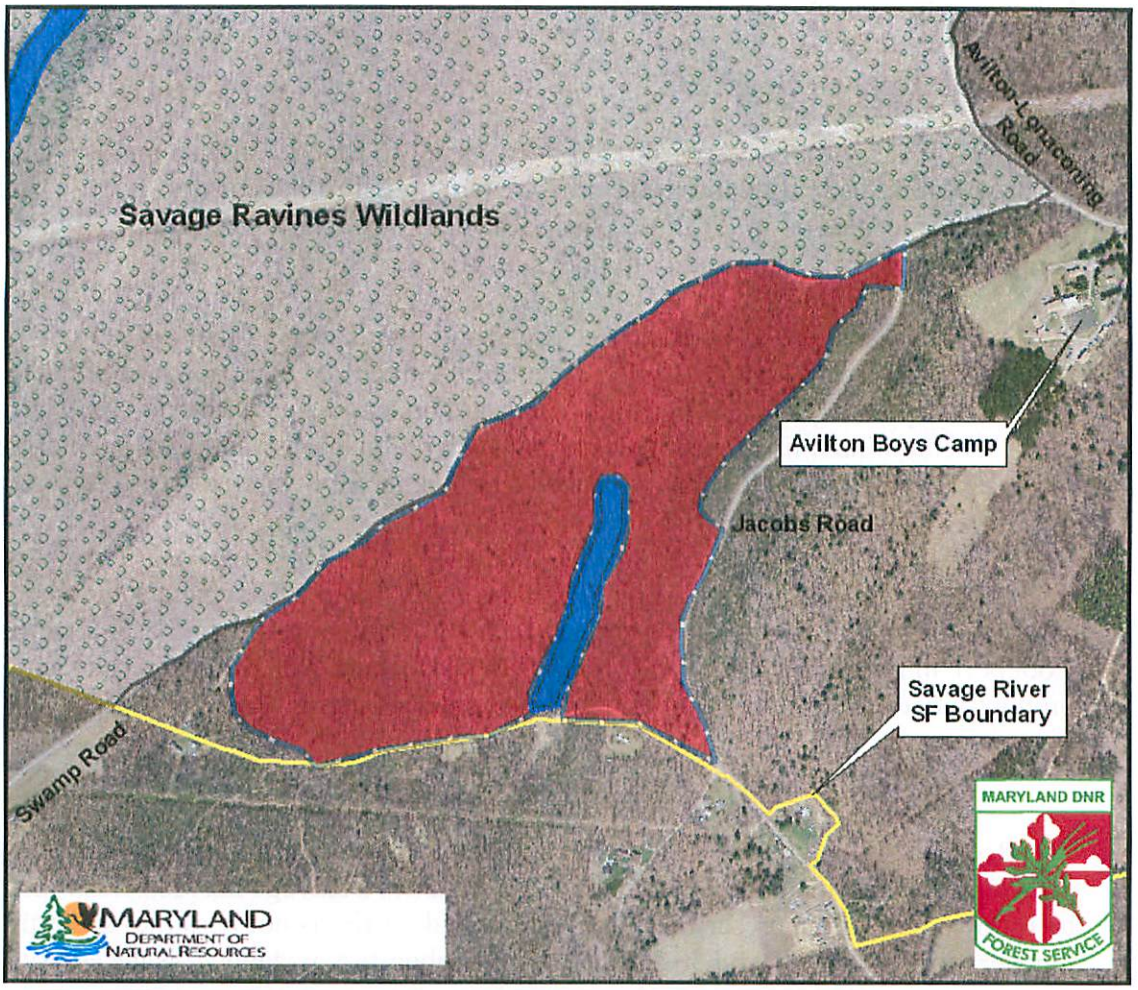
N

1:660

330 165 0 330 660 990 1,320

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area



Savage River State Forest
Salvage Proposal FY 2012
Compartment 41
Approximately 77 Acres

N

1:660

330 165 0 330 660 990 1,320

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area

Salvage Sale – Posey Row (Compartment 4)

Description

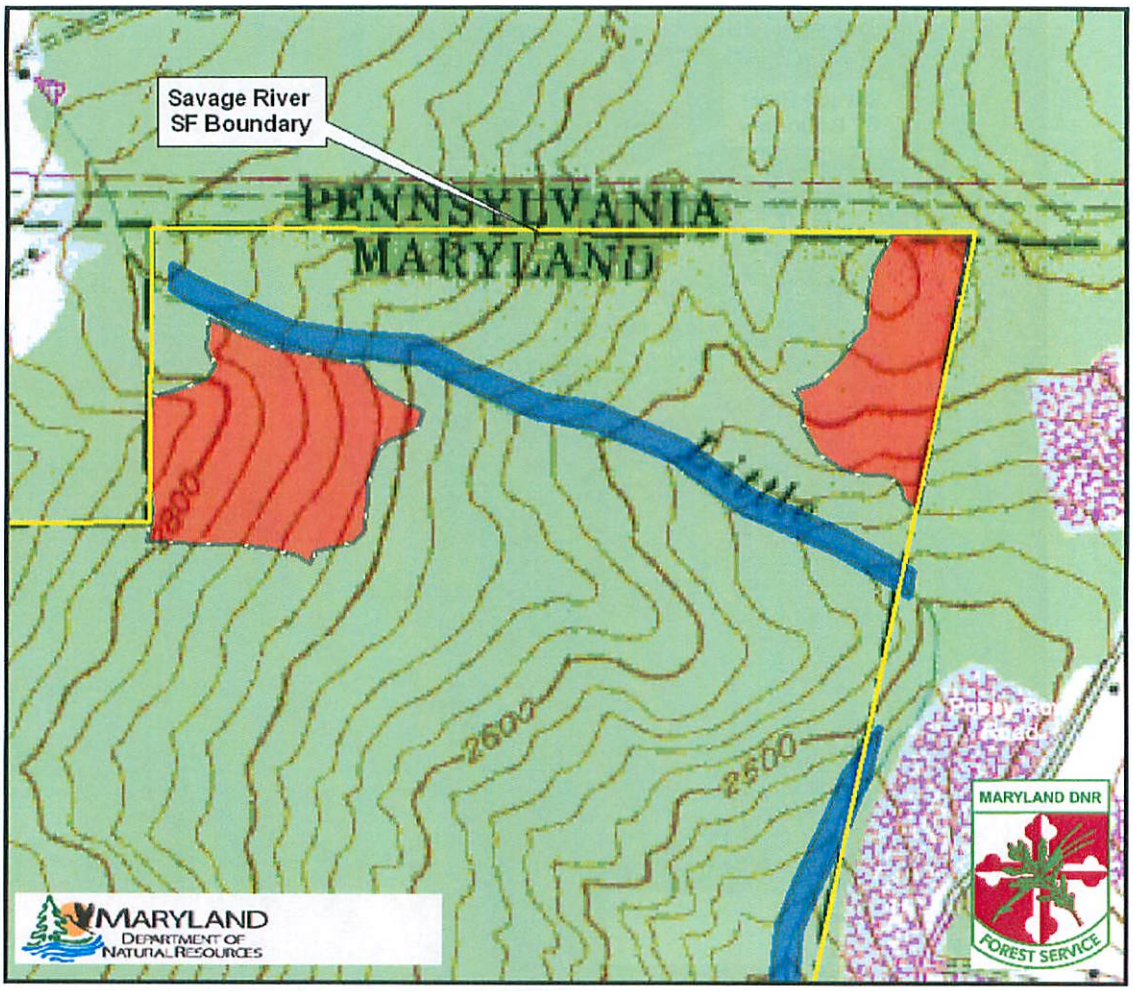
This 37 acre proposal is composed of two stands. Stand 22 (14 acres) is located north of Little Shade Run and in the northeastern corner of the compartment. Stand 50 (23 acres) is located south of Little Shade Run and in the northwestern corner of the compartment. There is mortality in both stands.

Stand 22 has 44 percent of the trees dead and less than ½ of the live trees of acceptable quality. Stand 50 has 56 percent of the trees dead and about ½ of the live trees of acceptable quality. Thus both stands are understocked with good growing trees. The dominant live trees in these stands are red maple, sweet birch and northern red oak. Stand 22 has sufficient advanced oak regeneration whereas stand 50 does not.

Each stand drains toward Little Shade Run with Stand 22 having a southern aspect and stand 50 having an eastern aspect. The dominant soils in these stands are Cookport an Ernest very stony silt loams. These soils are well drained. The site productivity of these soils is good with the site index ranging from 75 to 85 feet.

Management and Silvicultural Recommendations

Because of the amount of mortality and the small amount of acceptable live growing stock the recommendation for these stands is a salvage harvest. This should be followed up with a prescribed burn (or herbicide if fire is not possible) and artificial regeneration of oak in stand 50 and only a prescribed fire in stand 22 is necessary.



Savage River State Forest
Harvest Proposal FY 2012
Compartment 4
Approximately 37 Acres

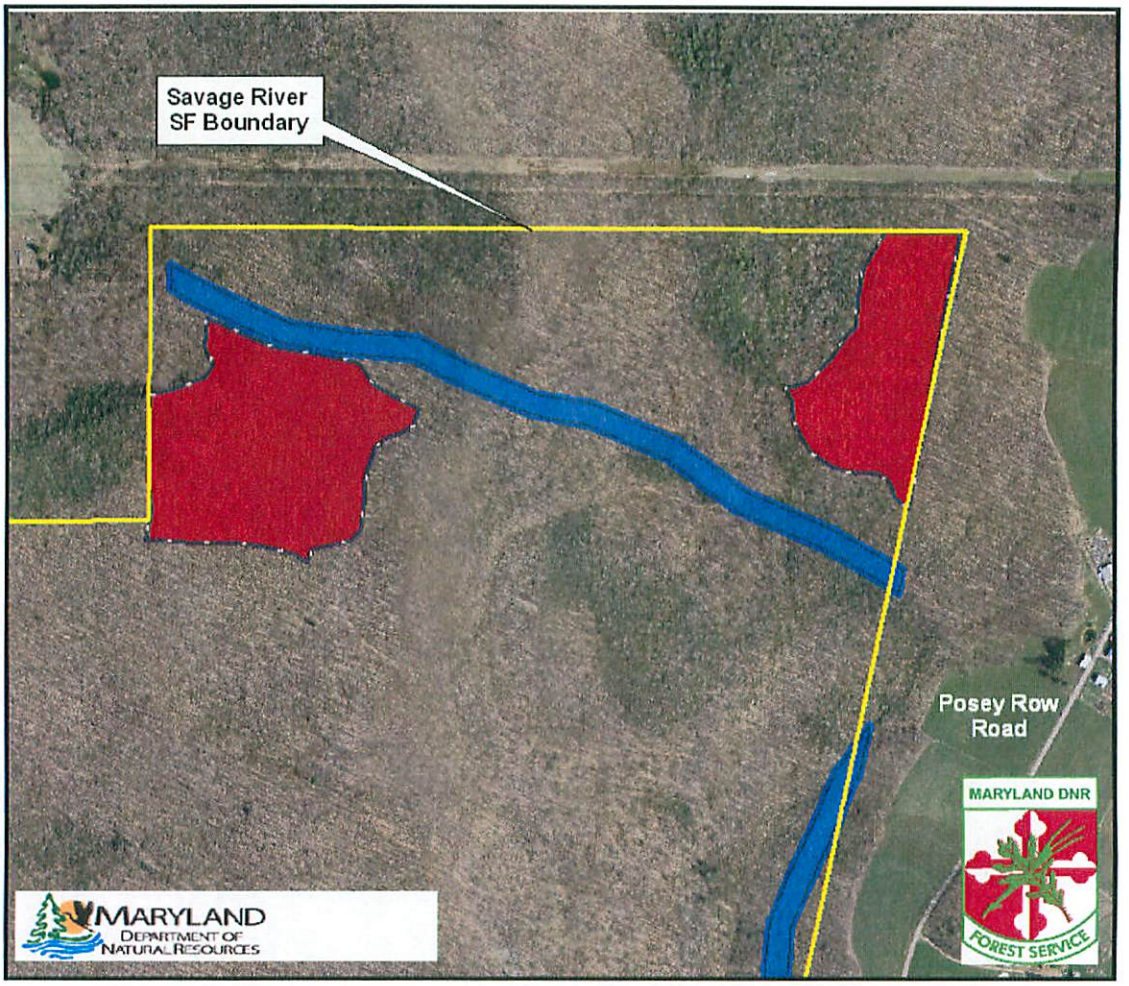
N

1:660

325 162.5 0 325 650 975 1,300

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area



Savage River State Forest
Harvest Proposal FY 2012
Compartment 4
Approximately 37 Acres

N

1:660

325 162.5 0 325 650 975 1,300

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffers
- Harvest Area

Salvage Sale – Dry Run Road (Compartment 62)

Description

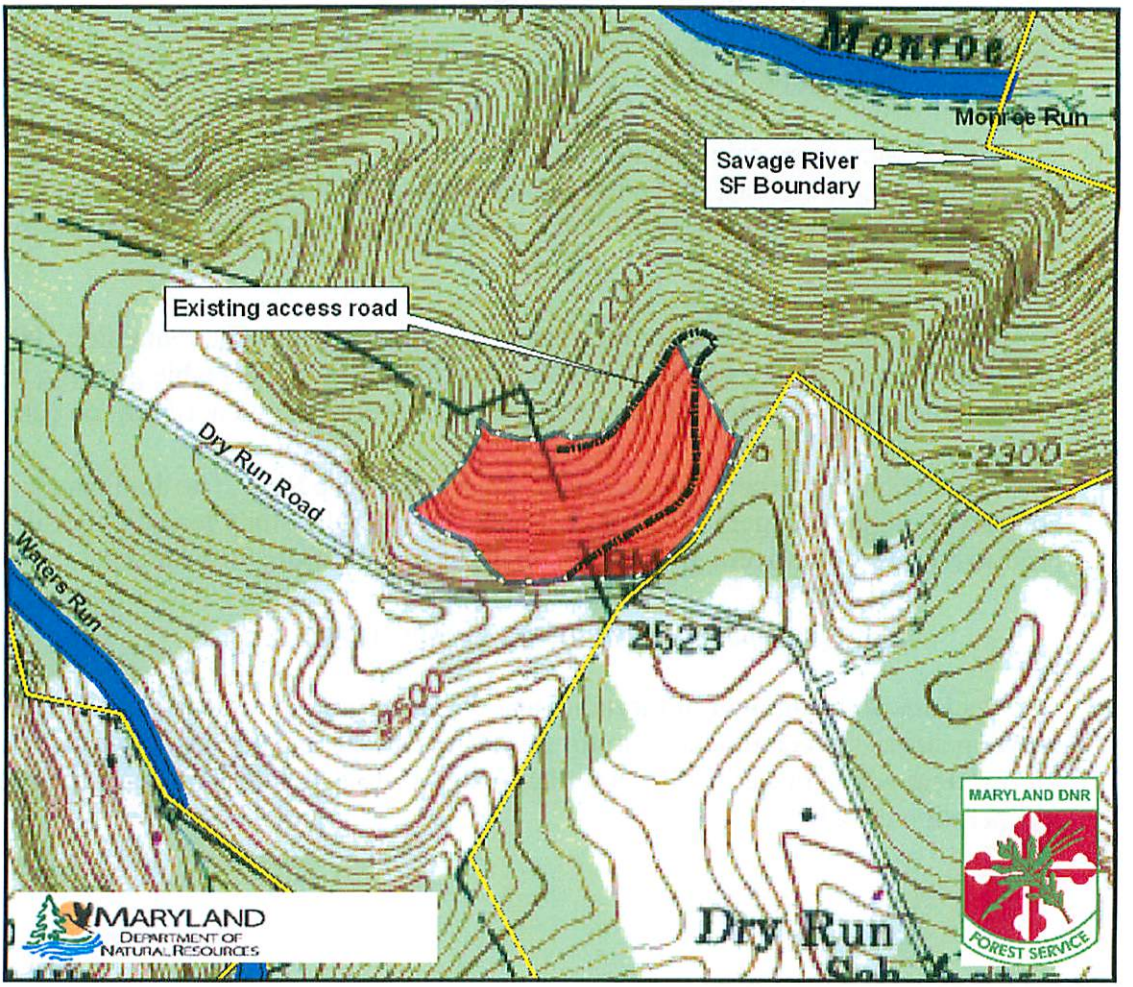
This 22 acre proposal is located on the north side of Dry Run Road. It is located approximately 2 miles east of the intersection with route 495. The trees present represent a mixed hardwood type. There is considerable mortality due to gypsy moth defoliation.

Approximately, 45 percent of the stems present are dead. The remaining 100 live trees per acre are of poor quality. And the stocking level of acceptable growing stock is low. The dominant lives trees are red maple, sweet birch, and northern red oak.

The site has a northern aspect and drains into Monroe Run. The dominant soils are Calvin, Lehew, Ungers and Dekalb which are generally stony loams. The site productivity is above average with the site index ranging from 70 – 80 feet.

Management and Silvicultural Recommendations

Because of the amount of mortality and the small amount of acceptable live growing stock the recommendation for this stand is a salvage harvest. This should be followed up with a prescribed burn (or herbicide if fire is not possible) and artificial regeneration of oak.



Savage River State Forest
Salvage Proposal FY 2012
Compartment 62
Approximately 23 Acres

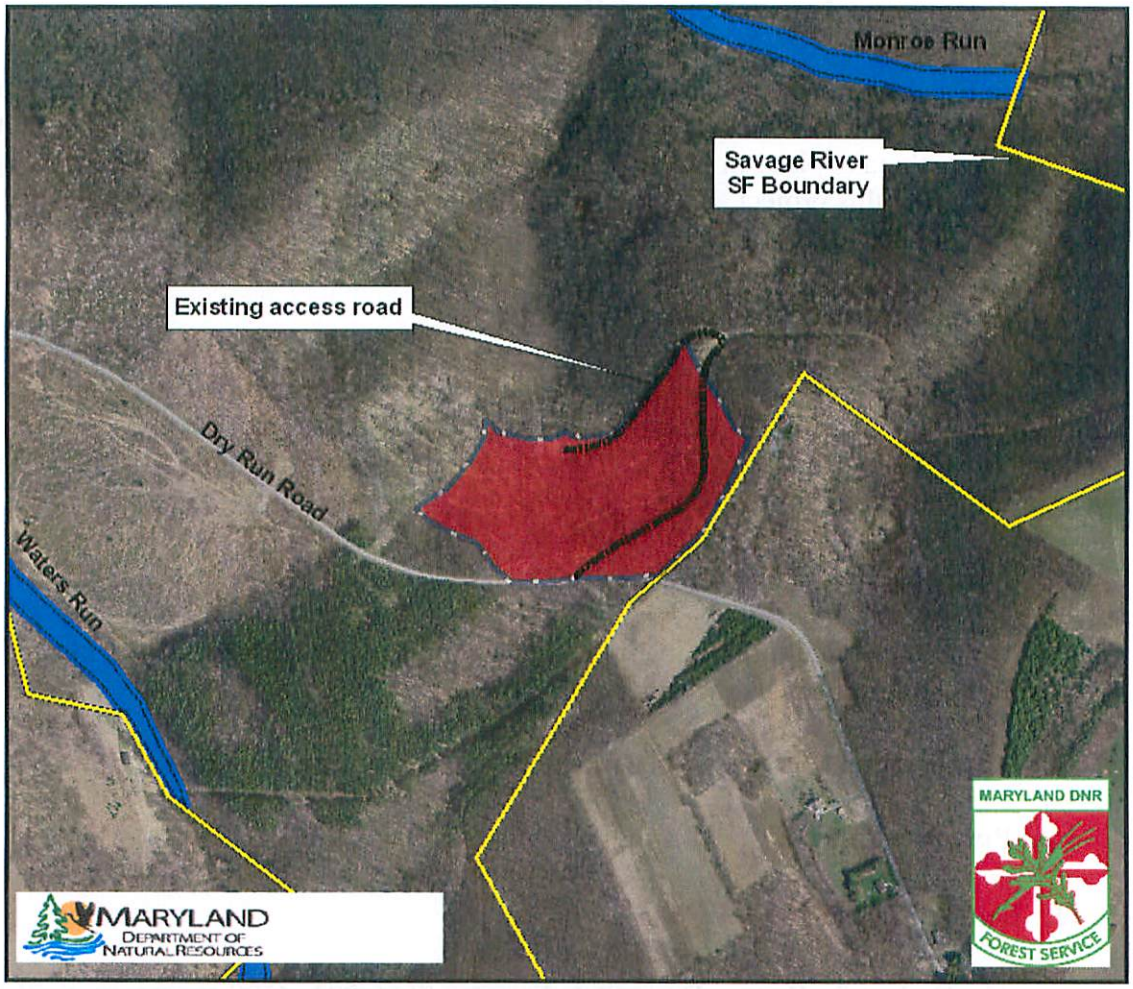
N

1:660

330 165 0 330 660 990 1,320

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffer
- Harvest Area



Savage River State Forest
Salvage Proposal FY 2012
Compartment 62
Approximately 23 Acres

N

1:660

330 165 0 330 660 990 1,320

Feet

- Wildlands
- Environmentally Sensitive Areas
- Old Growth
- Old Growth Ecosystem Area
- Wetlands of State Concern
- Streams and 50' Buffer
- Harvest Area

G. Watershed Improvement Projects

In fiscal year 2011, the Bureau of Mines formally brought to the staff a plan to reduce the acidity in the headwaters of the Casselman River Drainage. It is expected that this will actually take place in FY 2012. The Bureau of Mines and their contractors will be implementing this project. The forest staff's role will be limited to oversight and protection of forested resources.

H. Ecosystem Restoration Projects

Inland Fisheries Service and the staff at SRSF have submitted a grant to implement a "chop and drop" program where woody biomass is selectively added to streams to improve habitat for brook trout. If everything works out this will be the first year of implementing these procedures.

I. Monitoring Projects

On going silvicultural timber operations will be monitored at least weekly and more often during adverse weather conditions.

Regeneration harvests will be monitored 5 and 10 years after harvest.

Research Projects

J. Budget (ESTIMATES)

The Budget for Savage River State Forest is $565,503. Of that amount, $276,095 goes to fund classified salaries and benefits for four employees, $73,682 goes to fund four contractual employees, and $110,000 to Garrett County in lieu of taxes payment, leaving $105,726 to operate the forest on. Savage River has for many years generated revenue that greatly exceeded its cost of operation. The majority of revenue is obtained from the sale of forest products. Successful marketing by selling the mix of species and grades of wood products that the market most demanded contributed substantially to successful revenue generation over the years.

Operational Management

1. Introduction

This section of the plan is designed to cover the annual cost and revenues associated with the operational management of Savage River State Forest State Forest (SRSF). It is the Department's intent that all revenues generated from SRSF will be used to pay for the management and operation of the Forest. The numbers expressed in this section are only estimates and averages of annual expenses and revenues. These numbers will fluctuate each year based on management prescriptions, economic conditions and public use of the forest.

The following information is a breakdown of Revenues and Operational costs associated with SRSF. These figures are only estimates that are based on projected revenues and operational expenses. Yearly changes in timber markets and weather conditions can severely affect revenues. Operational expenses will vary from year to year and the numbers below are based on the budget request submitted for FY-2012

2. SRSF Funding Sources: Estimated - $360,000

State Forests in Maryland are funded from several sources. The first source is the revenue generated by the forests. These funds are deposited in the Department of Natural Resources' Forest or Park Reserve Fund and must be appropriated by the General Assembly through the annual budgeting process before being spent. The state forest budget is prepared approximately one year before the beginning of the fiscal year in which it will be spent. The budget then goes through the legislative approval/review process along with all other state operating budgets. Once adopted, the budget goes into effect the first day of the fiscal year (July 1st). Revenue generated by the state forest is designated special fund revenue. There may be special funds provided from the Department of Natural Resources' Forest or Park Reserve Fund that are not generated by this particular forest or there may be less special funds shown in the budget than was generated on this specific forest. $300,000

The second source is included in the Maryland Forest Service's Off Road Vehicle (ORV) Budget. This separate budget is based on revenue generated from ORV permit sales statewide and is allocated back to the state forests through the budgeting process. ORV funds generated as permit sales at SRSF do not necessarily reflect funds allocated back to the SRSF operating budget. These funds must be appropriated before being spent. ORV funds are a restricted special fund and can only be spent for ORV Trail related expenditures. $30,000

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

3. Operational Cost: Estimated Annual Expenses - $565,503

Operational expenses are those costs paid directly out of the SRSF operational budget by the State Forest Manager. 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-2012 budget proposal was prepared in July of 2010.

-Classified Salaries, Wages and Benefits: $276,095

This cost is associated with Special Funds which are state tax revenues provided annually. These funds are used to pay SRSF Maryland Classified Employee Salaries.

-***Contractual Staffing:*** $73,682

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

- ***Land Operation Cost:*** $105,726

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

- ***County Payments:*** $110,000

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 SRSF. These payments come out of revenue generated from timber sales and recreation. These payments are used to help the counties offset the loss in property tax revenues which are not paid on state owned lands.

4. Summary

This is the general breakdown on Revenues and Operational Costs associated with the SRSF. As described, these figures will vary from year to year.

Total Revenue	$360,000
Total Expenditure	$565,503

Savage River State Forest
ID Team Annual Work Plan FY 2012
August 18, 2010

Attendance: Wade Dorsey (Forest manager), Jim Mullen (Wildlife & Heritage), Jim Kahl (MDE), Rob Felt (Forestry), Bob Webster (Forestry), Jack Perdue (Environmental Specialist), Rick Latshaw (Wildlife), Ed Thompson (Heritage), Alan Klotz (Fisheries), Mary Ironside (Parks)

Overview
The management is expected to burn about 10 acres for wildlife openings.

The Continental Divide Loop Trail – the ID Team has some concerns about the trail going through the Youghiogheny Corridor. It will involve the Meadow Mt. cross country ski trail. This issue will be discussed further later.

Special Projects
They have started taking stand level data as part of the forest certification effort. Meadow Mt. Juvenile Center – there is a camp site one of their students was hurt there. There is a communications problem there – no cell phone service available. Thus they are requesting a new camp site on state forest, behind the current camp, be located in an area that does have service. The Forest Manager sees no problem with this possible new site location. This would also free up the current camp site for other users. It is used on a regular basis.

Watershed Improvement Projects
Bureau of mines acid reduction projects in the Casselman River. Heritage has some concerns with some of the locations.

Ecosystem Restoration Project
This will be putting course woody debris into the streams to develop fish habitat. The forest staff will be working with Fisheries. The problem is that wood in the streams is being removed and used by campers.

Monitoring
Two harvests ongoing look at least weekly and sometimes more often. These monitoring documents should be ready for presenting to the auditors next Spring.

Silviculture
Poplar lick – 56 ac
Bowman Hill – 24 ac
Klondike – 15 ac thinning
Hard Struggle – thinning 46 ac
Margroff Spruce thinning – 18 ac
Maynardier Ridge – 36 ac
Whisky Hollow – 36 ac

Prescribed Fire & Regeneration
Wade stated that many of these sites will have is seeking advice and agreement from the ID Team to use prescribed fire to get site prepped for proper regeneration – the advanced regen is not currently present. Each site will have a unique proposal.

Herbicide will be used to control the fern; a backpack sprayer will be used for most sites.

There was some discussion of deer control. All these sites have a deer issue, either from past or current browsing issues. Fencing is an option but not one preferred by Wildlife. Wildlife would like to include their deer biologist for recommendations on controlling specific deer problems.

Salvage Harvests
Five proposals. About 1 million bf in all sales, about 400 mbf living, 600 mbf dead.

Maynadier Ridge Rd
Variable retention salvage – comment to buffer the rock out crop, keep den trees and found bee tree.

Whiskey Hollow
Heritage and Fisheries has concerns of herbicide use. Wade will submit names of chemicals suggested for use to the ID Team.

Swamp Run
This will be a salvage sale. Heritage thinks the remnant oaks should be excluded from the sale.

Trail Comments
Garrett Loop Trail - Meadow Mt. Trail Extension to 495. They have suggested an improved trail with compacted gravel. The proposal would include a new trail through the Youghiogheny Corridor Wildlands. Part of the trail has already been licensed.

Some concerns are habitat conflicts and no of public hunting opportunities. DNR should state the differences in philosophy between State Parks and State Forests. Also, there is a major issue with entrance of this proposed trail into the Youghiogheny Corridor. This trail will likely conflict with traditional silvicultural activities. The necessary infrastructure would be problematic to accommodate the suggested number of users. Mt. bike trails may be more compatible but not an engineered trail. No new construction – regardless. Conflicts with current user-groups.

The Western Regional Team suggested a trail study and assessment about 5-6 years ago, before any new trails be constructed. The question, "is there enough public demand to warrant the construction of a new trail."

Savage River State Forest
Citizens Advisory Committee
Annual Work Plan FY 2012
October 6, 2010

Attendance: Sunshine Brosi, Mark Diehl, Mike Dreisbach, Steve Green, Matt Sell, Steve Hinton, Charles Hoffeditz, Wade Dorsey, Scott Campbell

The Citizens Advisory Committee is supportative of the Annual Work Plan and provided the following comments.

The committee had a concern about decreasing the Grouse habitat by removing the soft mast producing trees in the Hard Struggle proposal.

During the discussion regarding the Spruce thinning on the Margroff tract, the committee encouraged the manager to restore red spruce at elevations greater than 2400 feet when possible.

The regeneration harvest near Maynardier Ridge Road should be modified to avoid the wet spots and protect adjacent private property.

There was concern expressed about the efficacy of the brook trout – 'Chop and Drop' restoration work.