CHESAPEAKE FOREST
Draft FY2009
ANNUAL WORK PLAN

Prepared: _____ _____
(Forest Manager) Date

Reviewed: _____ _____
(Regional Forester) Date

Reviewed: _____ _____
(Environmental Specialist) Date

Approved: _____ _____
(Public Lands Policy & Planning) Date

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Citizens Advisory Committee

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CHESAPEAKE FOREST ANNUAL WORK PLAN SUMMARY

This document summarizes the proposed activities that will occur on the Chesapeake Forest during the 2009 fiscal year. The fiscal year runs from July 1, 2008 to June 30, 2009. The following proposed activities are the results of a multi-agency effort. The multi-agency approach has ensured that all aspects of these lands have been addressed within the development of this plan.

Plan Activities

Network with Maryland DNR agencies:

- Wildlife & Heritage – Identify and develop restoration projects, report and map potential Ecological Significant Areas (ESA) as found during fieldwork, release programs for game and non-game species. Mapping will be done with Global Positioning Systems (GPS). Participates on the Inter-Disciplinary Team (ID Team) and assists in the development of a forest monitoring program.

- Natural Resource Police – Enforcement of natural resource laws on the forest.

- Public Lands Policy & Planning – Provides assistance in the development of plans, facilitates meetings with various management groups, develops Geographic Information System (GIS) maps for public review, and conducts deed research and boundary recovery. Also participates on the ID Team.

- Maryland Conservation Corps (MCC) – Assists in painting boundary lines, installing gates and trash removal.

- State Forest & Park Service – Participates on the ID Team.

- Chesapeake & Coastal Watershed Service – Develops watershed improvement projects, assists in the development of a forest monitoring programs and participates on the ID Team.

Network with other agencies:

- DNR Contract Manager – Implements silvicultural activities on the forest. Also participates on the ID Team.

- Sustainable Forestry Initiative (SFI) – Provides third party forest certification by conducting annual audits.

- Forest Stewardship Council (FSC) – Provides third party forest certification by

conducting annual audits.

- The Conservation Fund – Provides guidance in the development of management activities on the forest.

- The Chesapeake Bay Foundation – Identifies sites for future water quality improvement projects.

- National Wild Turkey Federation – Establishes and maintains handicap-hunting opportunities within the forest and provides funding for habitat protection and restoration.

- US Fish & Wildlife Service – Assists in prescribed burns for Delmarva Fox Squirrel (DFS) habitat. Also assists in maintaining open forest road conditions as fire breaks.

- AmeriCorps* National Civilian Community Corps – Assists in boundary line marking, gate installations, trash pick up, restoration projects, etc.

- Maryland Forest Association - Master Loggers Program provides training in Advanced Best Management Practices for Forest Product Operators (i.e. Foresters & Loggers) workshops on the forest.

- US Department of the Interior, USGS – Conducting ground water monitoring for quality and quantity in the Little Blackwater Watershed.

- Maryland National Guard, 115th MP Battalion – Conduct military exercise on the forest.

Network with Universities and Colleges:

- Maryland Environmental Lab, Horn Point – Conducts water quality monitoring on a first order stream not influenced by agriculture. These samples will serve as a local base line for other samples taken on other Delmarva streams.

- Allegany College – Conduct annual field tour for forestry school student's showcasing Sustainable Forest Management practices on the forest under dual third party certification.

Maintenance:

- Forest roads will continue to be evaluated based on future management needs. Only those roads deemed necessary will undergo maintenance to ensure access for forest management activities (i.e. logging, prescribed burning and wildfire control) and recreation. Interior roads within each complex will be brush hogged with heavy equipment where possible by the MFS & the WHS. Herbicides (approved by FSC) will also be used in controlling vegetation along these road ways.

- Forest boundary lines will continue to be converted from the old Chesapeake Corporation white square markings to the DNR yellow band markings. Signs will be placed along the boundary lines designating they type of public access to the property.

- Illegal trash dumps will continue to be removed off the forest as they are discovered. The average amount of trash removed from the forest each year has been 36 tons.

Recreation:

- Little Blackwater Water Trail – This project will require the collaboration of the USFWS and other agencies (State and private) in order to develop interpretive water trail. The trail access point is located off the Little Blackwater on the east side of Egypt road, which is newly acquired State property. This water trail will enable paddlers, anglers and wildlife observers to travel the Little Blackwater and access the National Blackwater Wildlife Refuge and the Fishing Bay area.

  There is an existing gravel road leading from Egypt road to an unimproved boat launching site on the river. The gravel road will be mowed and chemically sprayed in order to reduce encroaching vegetation. Pot holes along the road will also be filled. A sign and gate will be installed on the access road at the Egypt road intersection. The existing boat launch pad will be improved with clean limestone and the adjacent small field will be mowed and maintained as a parking area. A portion of the small field will be reforested in order to increase the riparian buffer width and restrict vehicle traffic near the rivers edge.

  Water resistant brochures will be produced outlining the trail and highlighting various points of interest. The brochures will be available through the Chesapeake Forest Office, the Blackwater Refuge Office and the Dorchester County Tourism Office. Copies of the brochure will also be available via the forest website.

  Long term maintenance of this project will be handled by one or all of the partners involved in its conception.

  Estimated Cost: $4,000

Little Blackwater Water Trail

1 inch equals 1,320 feet

Legend

- Parking Area
- Ramp
- Access Raod
- Roads
- Water Trail

DEB-DNR Forest Service 06/22/2007

- Develop, improve and post public parking areas for the 30,000 acres designated for public use.

- Host the annual lottery for vacant tracts designated for hunt club access only. Vacant tracts are those that existing clubs opted not to continue to lease or land that has recently become available due to acquisition or right-of-ways being opened.

- Continue to explore additional Resource Based Recreational (RBR) opportunities on the forest. This may include hunting, horseback riding; water trails, hiking trails, bird watching opportunities, etc.

- Wicomico Demonstration Forest (WDF) & Chesapeake Forest (CF) 2008 Trail Enhancement Project – This project will improve the existing 26 miles of hiking and horse back riding trails within the 3,308 acre WDF & CF along Sixty foot road in Wicomico County. The trail system is used frequently by hikers, bird watches, horse back riders and hunters. The forest trails are located along old woods roads that require routine maintenance to provide users with a quality outdoor experience. Many of the trails have grown shut due to a lack of timber harvesting activity in the area. Certain sections of the trail have developed large wet holes, which need to be filled in. Other sections of trails are blocked by downed trees and over hanging branches and vines. The project will involve widening sections of the trail with a flail axe mower, removing overhanging vegetation and downed trees with chainsaws. Several sections of the trails will require fill material to stabilize wet holes and make them passable. Gates that allow horse passage will also be installed to prevent ATV traffic. Parking areas at the 3 trail heads will be mowed and marked with parking signs. Partial funding for this project will be obtained through a 2008 National Recreation Trails Grant.

  Total estimated cost: $33,600.

Special Projects:

- Maintain dual forest certification from the Forest Stewardship Council (FSC) and the Sustainable Forest Initiative (SFI).

- Conduct information and educational opportunities on the forest.

- Update and maintain forest information in a GIS database, which will result in a new updated forest wide field map.

- Continue the effort to inventory and protect historic sites (i.e. cemeteries, old home sites, Native American Indian sites) using GPS and GIS technology.

Silvicultural Activity Overview

Table 2 summarizes the proposed silvicultural activities for the 2009 annual work plan on approximately 3,848 acres (7%) of the CF.

Table 2. 2009 Silvicultural Activity Overview.

Activity	Acres
1. Variable Retention Harvest	294
2. Pre-commercial Thinning	573
3. 1st Commercial Thinning	1,847
4. 2nd Commercial Thinning	257
5. Aerial Release Spray	89
5. Mid-Rotation Spray & Fertilize	71
7. Site Preparation/Regeneration	106
8. Prescribed Fire	202
Total acres affected*	**3,439**

* Total acres affected are not the sum of all acres to be treated since some acres are scheduled for multiple activities (e.g. site preparation & planting, or planting & chemical spray). Efforts to promote natural regeneration should also reduce the acres affected by reducing the areas planned to be planted. In addition, several tracts will have significant buffers and variable retention areas added, which will also reduce the harvest acreage accordingly. The current Geographic Information System (GIS) database is not accurate enough to give a precise acreage. However, the system will be continually updated by using Global Positioning Systems (GPS) to map new stand boundaries as stand prescriptions are carried out in the field.

The following is a list of definitions of proposed management activities that occur within this plan:

Reforestation – Reforestation reestablishes forest cover either naturally or artificially (hand planting), and is usually accompanied by some kind of site preparation during the same fiscal year. The nature of the site preparation will be determined by field examination. It is almost always followed, in the same fiscal year, with grass control in the form of herbicides (hand-applied by ground crews). Site conditions will dictate application rates, etc., in each case.

Site Preparation/Regeneration - While natural regeneration is the preferred method of reforesting harvested areas, alternative plans should be in place in case natural regeneration is unsuccessful. Alternatives include prescribed burning, herbicide, light mechanical disturbance, or a combination thereof followed by planting of native pines or hardwoods as the management zone dictates.

Pre-Commercial Thinning – Pre-commercial thinning is the removal of trees to reduce over crowded conditions within a stand. This type of thinning concentrates growth on more desirable trees while improving the health of the stand. This treatment is usually done on stands 5 to10 years of age. The number of trees retained will depend on growth, tree species present, and site productivity. This activity is conducted with hand held power tools and not heavy equipment, thereby reducing adverse impact to the soil.

First Commercial Thinning – Usually performed on plantations 15-20 years old. The objective is to facilitate forest health and promote development of larger trees over a shorter period of time. This is accomplished in plantations by removing every 5th row of trees and selectively thinning (poor form & unhealthy trees) between rows. In naturally regenerated stands, thinning corridors will be established every 50 feet and the stand will be selectively thinned along both sides of the corridor. Approximately 30-35% of the total stand volume will be removed in this process.

Second Commercial Thinning - Usually performed on stands 30-40 years old. The objective is to lengthen the rotation age of the stand and produce larger healthier trees. In some cases, this technique is used to improve habitat for the Delmarva Fox Squirrel (DFS) and Forest Interior Dwelling Species (FIDS). Approximately 30-35% of the total stand volume will be removed in this process.

Selection Harvest – This includes the removal of single trees and groups of trees within a given stand. This method will be used to distribute age classes and to adjust species composition within a given stand (i.e. riparian buffers, ESA's, DFS & FID areas).

Shelterwood Harvest – The shelterwood method involves the gradual removal of the entire stand in a series of partial cuttings that extend over a fraction of the rotation (Smith 1986). The number of trees retained during the first stage of the harvest depends on the average tree size (diameter at breast height) on the site. As with seed tree

regeneration, the sheltewood method works best when overstory trees are more than 30 years old and in their prime period of seed production potential (Schultz 1997).

Seed Tree Harvest – This type of harvest is designed to regenerate pine on the site by leaving 12 to 14 healthy dominant trees per acre as a seed source. The seed trees are typically left on the site for another rotation. The seed tree method regenerates loblolly pine effectively and inexpensively in the Coastal Plain, where seed crops are consistently heavy (Schultz 1997).

Variable Retention Harvest – This harvest type focuses on the removal of approximately 80 percent of a given stand in one cutting, while retaining approximately 20 percent as wildlife corridors/islands, visual buffers and legacy trees. The preferred method of regeneration is by natural seeding from adjacent stands, or from trees cut in the clearing operation. Coarse woody debris (slash/tree tops) is left evenly across the site to decompose. A Variable Retention Harvests (VRH) is prescribed to help regulate the forest growth over the entire forest, ensuring a healthy and vigorous forest condition. Harvesting of young loblolly pine stands is done to help balance the age class distribution across the forest. Currently, 50% of the forest is 19 years of age or younger. VRH are also used to regenerate mixed natural stands within ESA's, DFS & Core FIDS areas. If adequate natural regeneration is not obtained within 3 years of the harvest, hand planting of the site is typically required (not required for certain restoration projects, such as bay restoration).

Aerial Release Spraying - An aerial spray of herbicide is used to reduce undesirable hardwood species (i.e. sweet gum & red maple) within the stand. In many cases, a reduced rate (well below the manufactures recommendation) is used. A reduced rate has been used on the CF successfully to kill the undesirable species while maintaining the desirable ones (yellow poplar & oaks). All forms of aerial spraying are based on precision GPS mapping and accompanied by on-board flight GPS controls. GPS-generated maps shows each pass of the aircraft and are provided by the contractor to demonstrate precision application. Aerial applications are not allowed over High Conservation Value Forest (HCVF) areas, riparian buffers or wetland areas on the forest.

Prescribed Fire – Prescribed fires are set deliberately by MFS personnel, under proper weather conditions, to achieve a specific management objective. Prescribed fires are used to enhancing wildlife habitat, encouraging fire-dependent plant species, reducing fuel loads that feed wildfires, and prepare sites for planting.

Riparian Buffer Zone Establishment – Riparian buffer zones are vegetated areas adjacent to or influenced by a perennial or intermittent bodies of water. These buffers are established and managed to protect aquatic, wetland, shoreline, and/or terrestrial environments and ultimately the Chesapeake Bay. Boundaries of riparian buffer zones will be marked, surveyed (GPS) and mapped (GIS). Selective harvesting and/or thinnings may occur in these areas to encourage a mixed hardwood-pine composition.

Literature Cited

Schulz, Robert P. 1997. The Ecology and Culture of Loblolly Pine, Loblolly Pine, U.S. Gov. Printing Office, Washington, D.C. 5-13, 5-14 pp.

Smith, David M. 1986. The Practice of Silviculture. Wiley, New York. 403 pp.

Wenger, Karl F. 1984, Forestry Handbook, For the Society of American Foresters, Wiley, New York. 418 pp.

Locations & Descriptions
Of
Silvicultural Activities

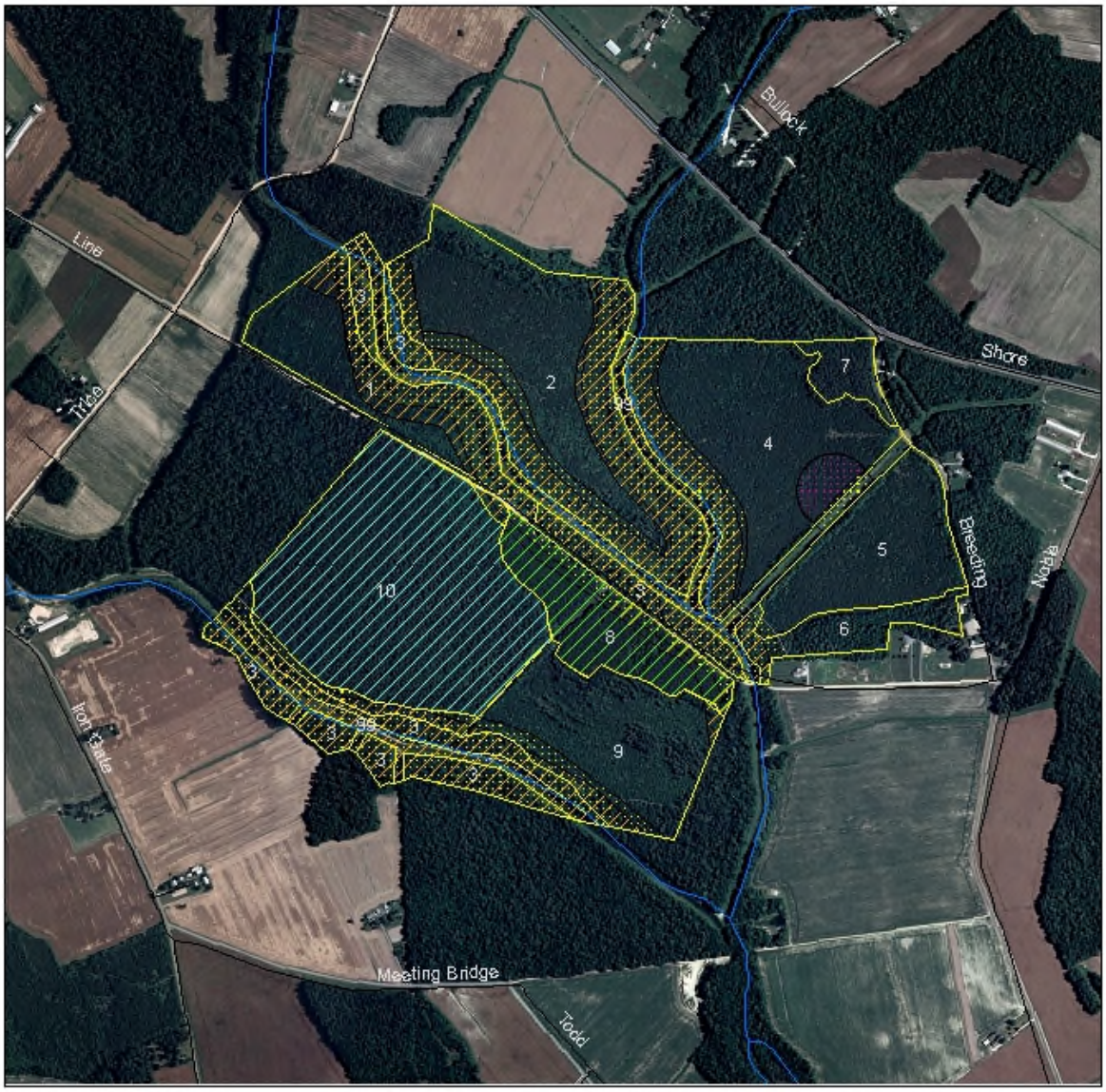
Description of 2009 Activities – Caroline County

Complex C01 Gordy

A first thinning is proposed for Stand 8. Stand 8 is a 23.7-acre loblolly pine plantation established in 1990.

A second thinning is proposed for stand 10. Stand 10 is a 79.3 acre loblolly pine plantation established in 1972 and first thinned in 1997.

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex : C01 Merrikan Gordy

DEB-DNR Forest Service 05/30/2007

Silviculture Prescription:

A first thinning is proposed for Stand 8.
Stand 8 is a 23.7-acre loblolly pine plantation established in 1990.

A second thinning is proposed for stand 10.
Stand 10 is a 79.3 acre loblolly pine plantation established in 1972 and first thinned in 1997.

This prescription takes place in a general management zone.

Guidelines:

Description of 2009 Activities – Dorchester County

Complex D01 Arthurs Seat

A prescribe burn is proposed for stand 4. Stand 4 is a 59.9 acre loblolly pine plantation with large dominant oaks scattered throughout. This stand was established in 1971 and first thinned in 1995. A prescribe burn will open up the understory of this DFS management area while reducing undesirable thin bark species.

Complex D04 W.T. Willis

A first thinning is proposed for Stand 11. Stand 11 is a 18.7-acre loblolly pine plantation, which was established in 1987. This is a DFS management area.

Complex D12 Marshyhope

A first thinning is proposed for Stand 34. Stand 34 is a 16-acre loblolly pine plantation, which was established in 1988. This stand is located in an ESA zone 3 (sawtimber rotation).

Complex D13 Rhodesdale

A pre-commercial thinning is proposed for Stands 5 and 22. Stands 5 and 22 are loblolly pine plantations, which were planted in 1998. The total area to be treated is 53.2 acres. This pre-commercial thinning (PCT) will result in a 10'X10' spacing of residuals where loblolly pine and hard mast producing species (where found) will be retained as per DFS management. A small portion of this stand falls within an ESA zone 1 & the HCVF.

A first thinning is proposed for Stands 6 and 21. Stands 6 and 21 are loblolly pine plantations, which were established in 1988 and 1989 respectfully. The total area to be thinned is 97.6 acres. A small portion of this stand falls within an ESA zone 1.

Complex D14 Indian Town

A first thinning is proposed for stands 6, 7 & 10. Stands 6, 7 & 10 are loblolly pine plantations, which were established in 1988, 1989 & 1984 respectfully. The total area to be treated is 204 acres. This thinning occurs within an ESA zone 1, 2 &3.

A second thinning is proposed for stand 14. Stand 14 is a 63.7 acre loblolly pine plantation, which was established in 1971 and first thinned in 1995. This stand is within a DFS management area.

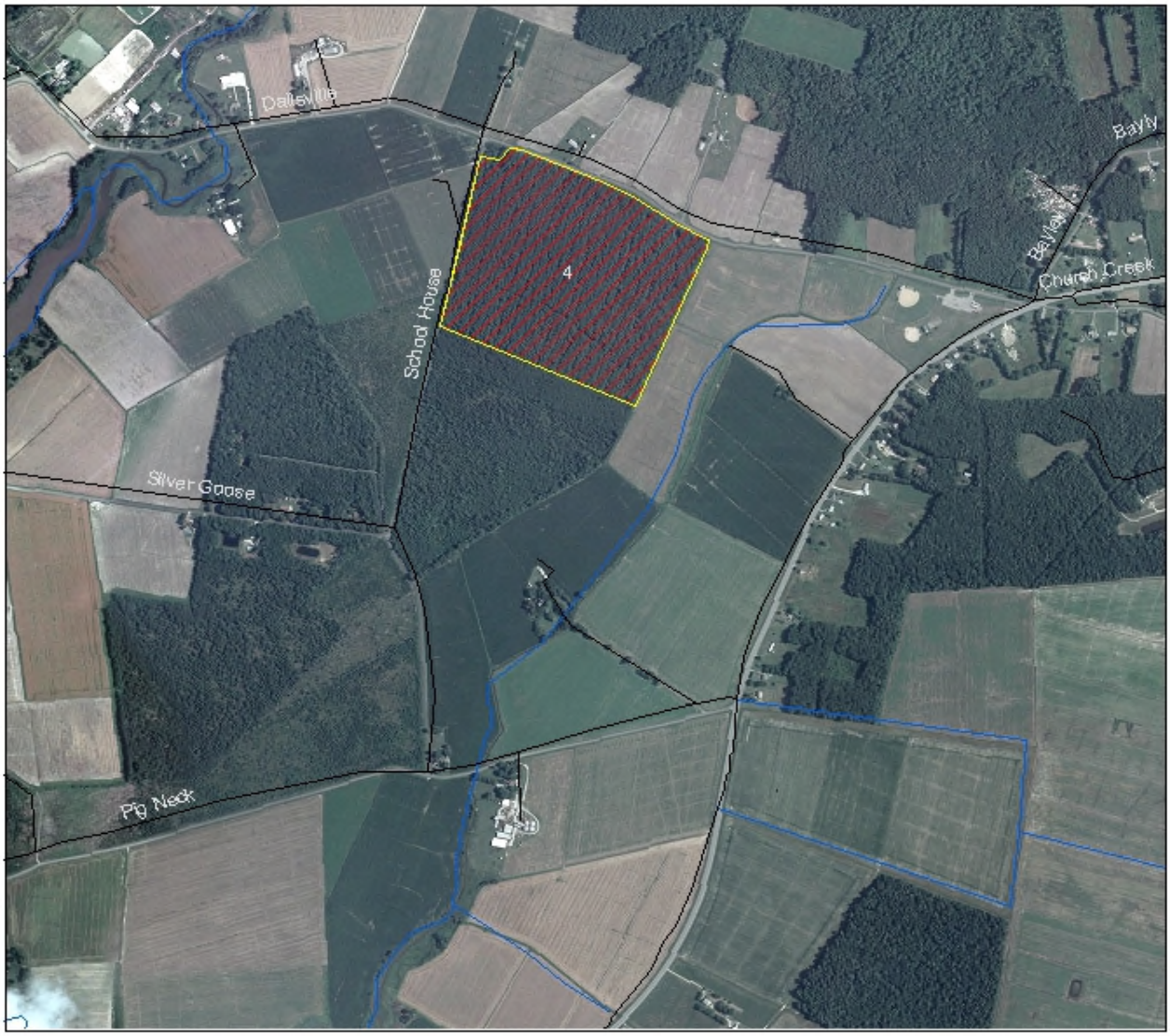
Complex D20 Trice

A prescribed burn is proposed for Stand 2 following the approved thinning and ESA prescriptions from the FY2004 AWP. Stand 2 is a loblolly pine plantation, which was established in 1977, first thinned in 1996 and currently scheduled for a second thinning. This stand is within an ESA zone 1, 2 & 3.

Complex D26 Lewis

A first thinning is proposed for Stand 2. Stand 2 is a 81.9-acre loblolly pine plantation, which was established in 1988 and pre-commercially thinned in 1994. This activity falls within the DFS management area only (not ESA zone 1). Thinning in this stand will increase the spacing among residuals while favoring hard mast producing species where found.

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: D01 Arthurs Seat

DEB-DNR Forest Service 05/31/2007

Silviculture Prescription:

A prescribed burn is proposed for stand 4.
Stand 4 is a 59.9 acre loblolly pine plantation
with large dominant oaks scattered throughout.
This stand was established in 1971
and first thinned in 1995.
A prescribed burn will open up the understory of this
DFS management area while reducing
undesirable thin bark species.

Guidelines:

FY09 Annual Work Plan

1 inch equals 1,320 feet

Complex: D04 W. T. Willis

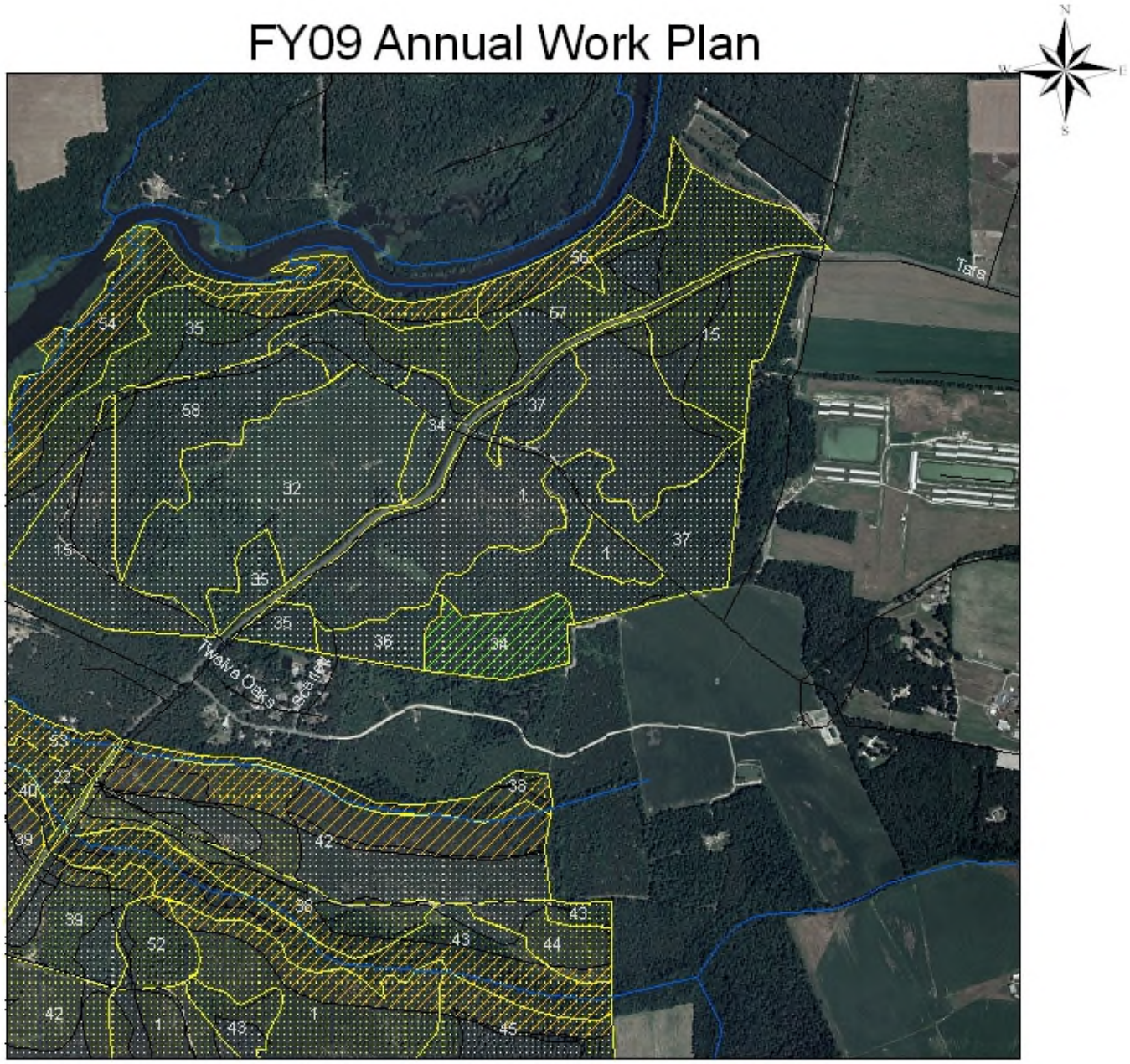
DEB-DNR Forest Service 06/01/2007

Silviculture Prescription:

A first thinning is proposed for Stand 11.
Stand 11 is an 18.7-acre loblolly pine plantation, which was established in 1987.
This is a DFS management area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: D12 Marshyhope

DEB-DNR Forest Service 06/01/2007

Silviculture Prescription:

A first thinning is proposed for Stand 34.
Stand 34 is a 16-acre loblolly pine plantation, which was established in 1988.
This stand is located in an ESA zone 3 (sawtimber rotation).

Guidelines:

FY09 Annual Work Plan

1 inch equals 1,320 feet

Complex: D13 Rhodesdale

DEB-DNR Forest Service 06/01/2007

Silviculture Prescription:

A pre-commercial thinning is proposed for Stands 5 and 22. Stands 5 and 22 are loblolly pine plantations, which were planted in 1998. The total area to be treated is 53.2 acres. This pre-commercial thinning (PCT) will result in a 10'X10' spacing of residuals where loblolly pine and hard mast producing species (where found) will be retained as per DFS management. A small portion of this stand falls within an ESA zone 1 & the HCVF.

A first thinning is proposed for Stands 6 and 21. Stands 6 and 21are loblolly pine plantations, which were established in 1988 and 1989 respectfully. The total area to be thinned is 97.6 acres. A small portion of this stand falls within an ESA zone 1.

Guidelines:

FY09 Annual Work Plan

1 inch equals 1,320 feet

Complex: D14 Indian Town

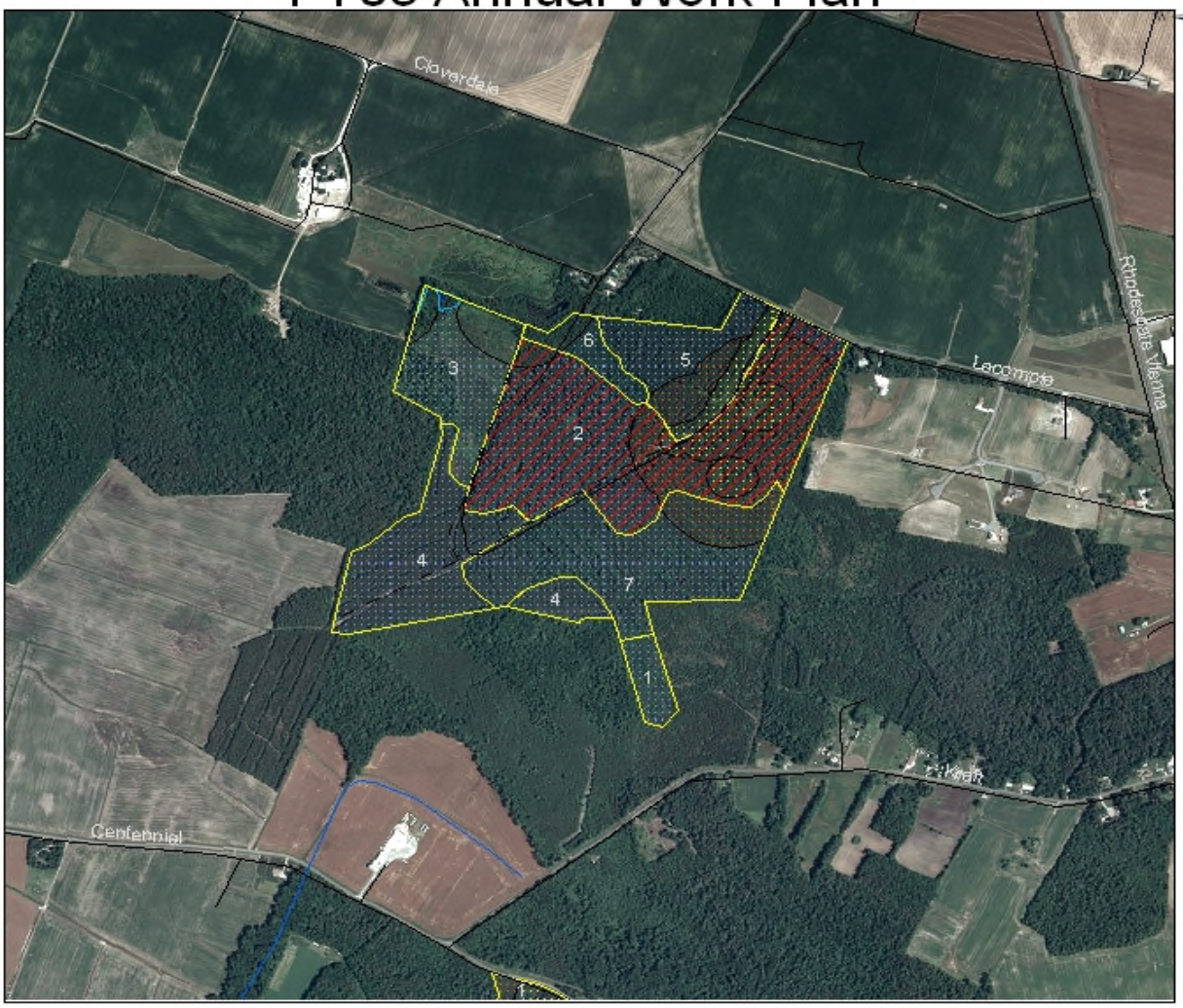
DEB-DNR Forest Service 09/25/2007

Silviculture Prescription:

A second thinning is proposed for stand 14. Stand 14 is a 63.7 acre loblolly pine plantation, which was established in 1971 and first thinned in 1995. This stand is within a DFS management area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: D20 Trice

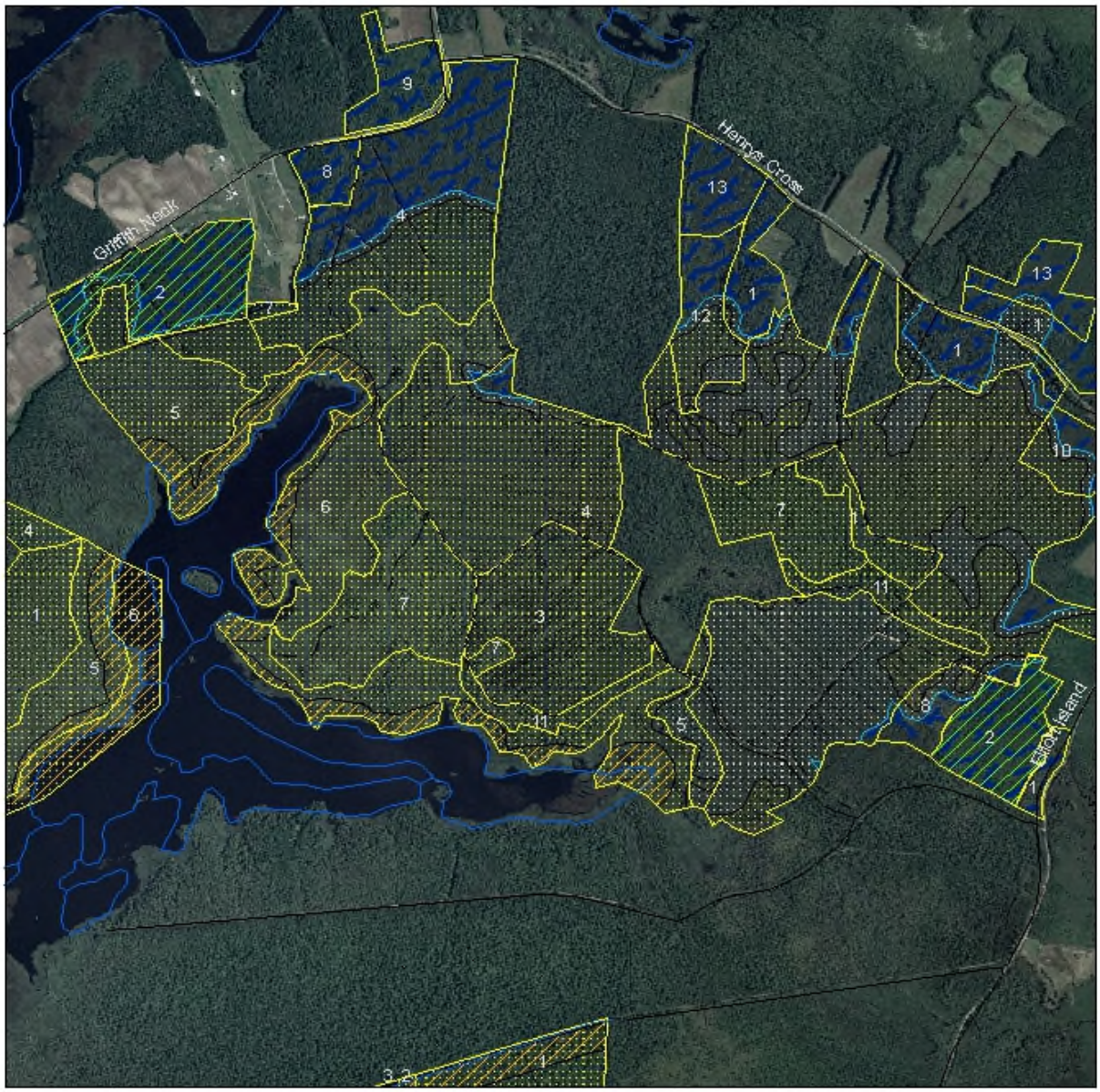
DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A prescribed burn is proposed for Stand 2 following the approved thinning and ESA prescriptions from the FY2004 AWP. Stand 2 is a loblolly pine plantation, which was established in 1977, first thinned in 1996 and currently scheduled for a second thinning.
This stand is within an ESA zone 1, 2 & 3.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,886 feet

Complex: D26 Lewis

DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A first thinning is proposed for Stand 2. Stand 2 is a 81.9-acre loblolly pine plantation, which was established in 1988 and pre-commercially thinned in 1994. This activity falls within the DFS management area only (not ESA zone 1). Thinning in this stand will increase the spacing among residuals while favoring hard mast producing species where found.

Guidelines:

Description of 2009 Activities – Wicomico County

Complex W02 Aughty Naughty

A first thinning is proposed for Stands 21 & 22. Stands 21 & 22 are 135 acres of loblolly pine plantations located in a DFS management area. The stands were established in 1989 & 1991 respectfully. The thinning will retain hard mast producing species & pine during the operation to provide a balanced food source for DFS's, Any thinning within the adjacent HCVF will be done according to HCVF guidelines.

A second thinning is proposed for stand 5. Stand 5 is a 13.9 acre loblolly pine plantation, which was established in 1970 and first thinned in 1996. This stand is a DFS management area and will be thinned in a way that promotes a mixture of hard & softwood species. A prescribed burn will be conducted 2 years post thinning to create an open understory for DFS habitat.

Complex W09 Waller Taylor

A first thinning is proposed for Stand 4. Stand 4 is a 45.6-acre loblolly pine plantation, which was established in 1984. This activity occurs within an ESA zone 1 & 3.

Complex W14 Helmick

Potential site prep and reforestation is proposed for stand 11, which is 31 acres. Stand 11 is scheduled for a final harvest in the FY 2008 AWP. Possible site prep may include herbicide application and/or light mechanical. This stand is located within the General Management Area.

Complex W23 Greenhill

A first thinning is proposed for Stand 48. Stand 48 is a 16.6-acre loblolly pine plantation. This stand was established in 1987. This area is managed for DFS. Therefore, the stand will be thinned in a way that retains dominant hard mast producing species.

Complex W33 Phillips

A first thinning is proposed for Stand 1. Stand 1 is a natural pine hardwood stand, which was established in 1971. This stand is located within a DFS management area and will be thinned according to DFS guidelines/objectives.

Complex W38 Parsons

An aerial spray is proposed for Stand 3. Stand 3 is a 19.4-acre sweet gum and red maple stand that was never replanted after a final harvest. The stands age is estimated to

be 8 years old. If an adequate number of pines do not occupy the site post spraying, planting will occur to increase the pine component of the site. This is a general management area.

Complex W46 Wicomico Demonstration Forest

A first thinning is proposed for stands 50, 62, 75, 79, 105 & 116. These stands are all young loblolly pine plantations that are overstocked and stagnate. The total area to be thinned is 170.7 acres. This thinning will improve the health, specie diversity and the growth of the stand as per DFS management guidelines.

A prescribed burn is proposed for stands 57, 54, 101 and 108. These stands are mature loblolly pine stands that have had past thinnings and fire history. Burning the understory will maintain an open understory for DFS and reduce undesirable hardwood species.

An aerial spray is proposed for stand 78. Stand 78 is a 28.7 acre mature loblolly pine stand with a sweet gum and maple dominated understory. This stand had a seed tree harvest conducted in 1994 with few natural pine regenerated. A reduced rate of herbicide will be used to kill the undesirable species while retaining the oaks as demonstrated on Chesapeake Forest.

All prescriptions occur in a DFS management area.

Complex W52 Hughs

A first thinning is proposed for stand 1. Stand 1 is 30.9-acre loblolly pine plantation, which was established in 1989. This is a General Management Area.

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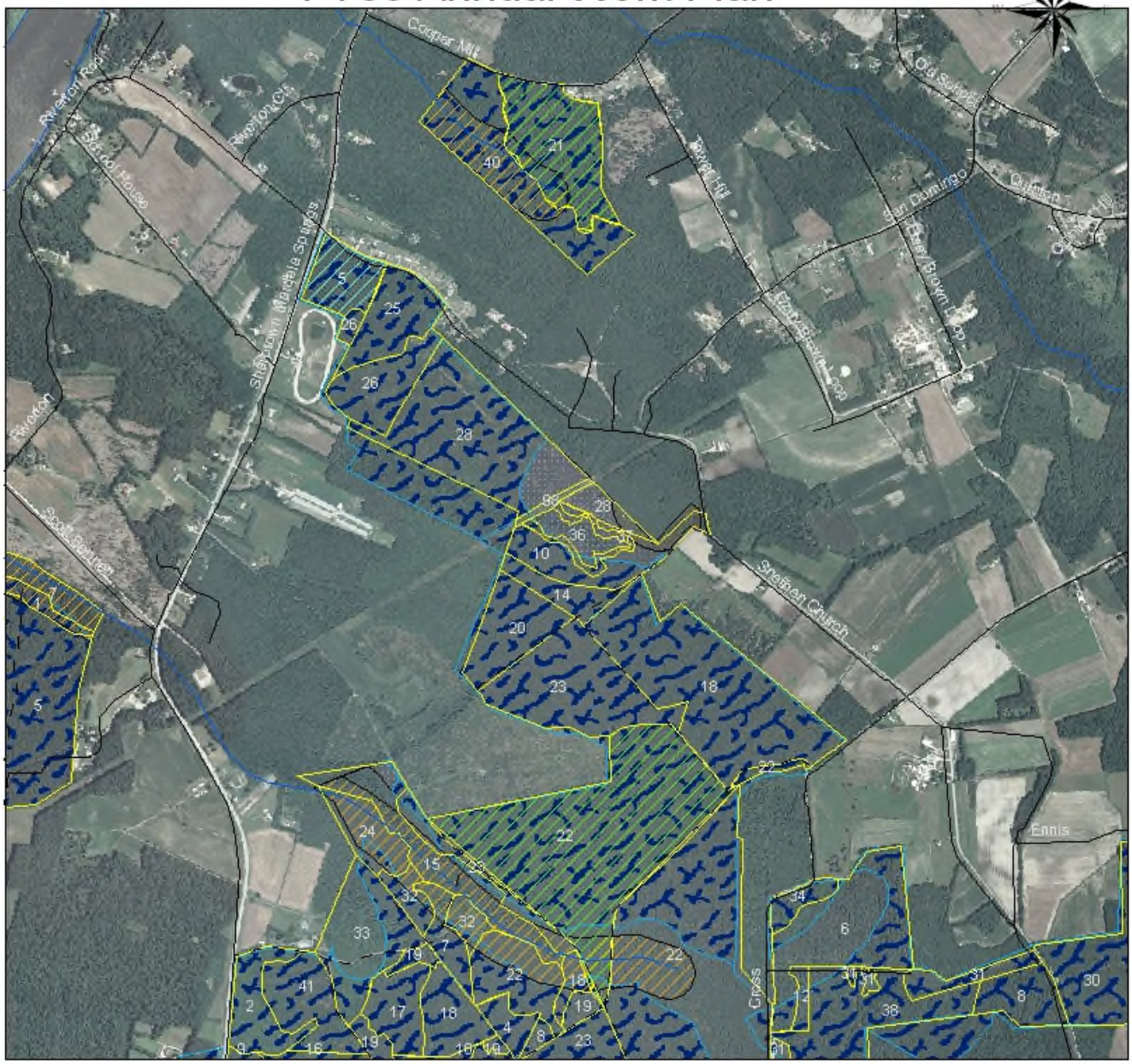


1 inch equals 1,650 feet

Complex: W02 Aughty Naughty

DEB-DNR Forest Service 06/04/2007

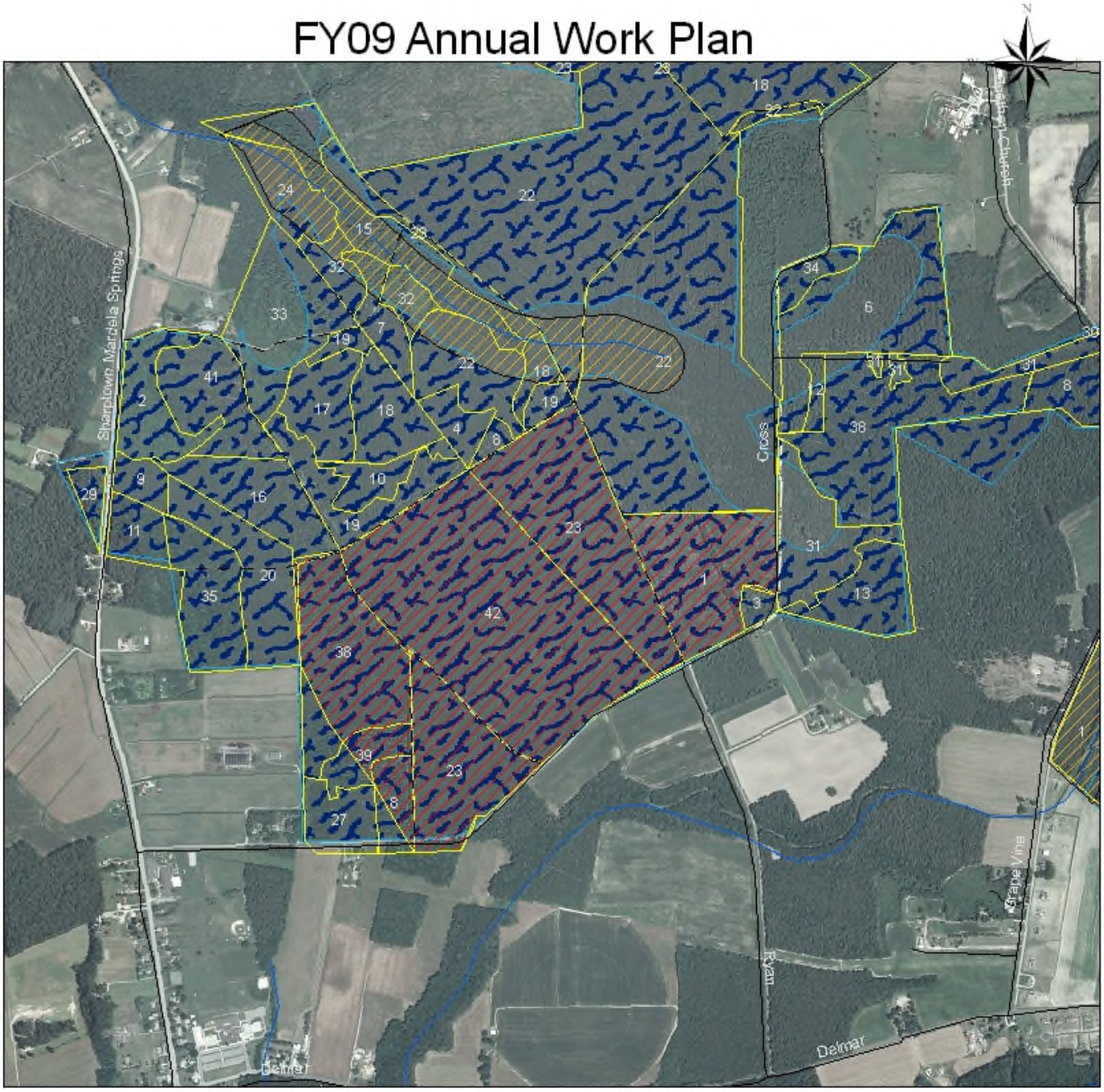
Silviculture Prescription:

A first thinning is proposed for Stands 21 & 22. Stands 21 & 22 are 135 acres of loblolly pine plantations located in a DFS management area. The stands were established in 1989 & 1991 respectfully. The thinning will retain hard mast producing species & pine during the operation to provide a balanced food source for DFS's, Any thinning within the adjacent HCVF will be done according to HCVF guidelines.

A second thinning is proposed for stand 5. Stand 5 is a 13.9 acre loblolly pine plantation, which was established in 1970 and first thinned in 1996. This stand is a DFS management area and will be thinned in a way that promotes a mixture of hard & softwood species. A prescribed burn will be conducted 2 years post thinning to create an open understory for DFS habitat.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: W02 Aughty Naughty

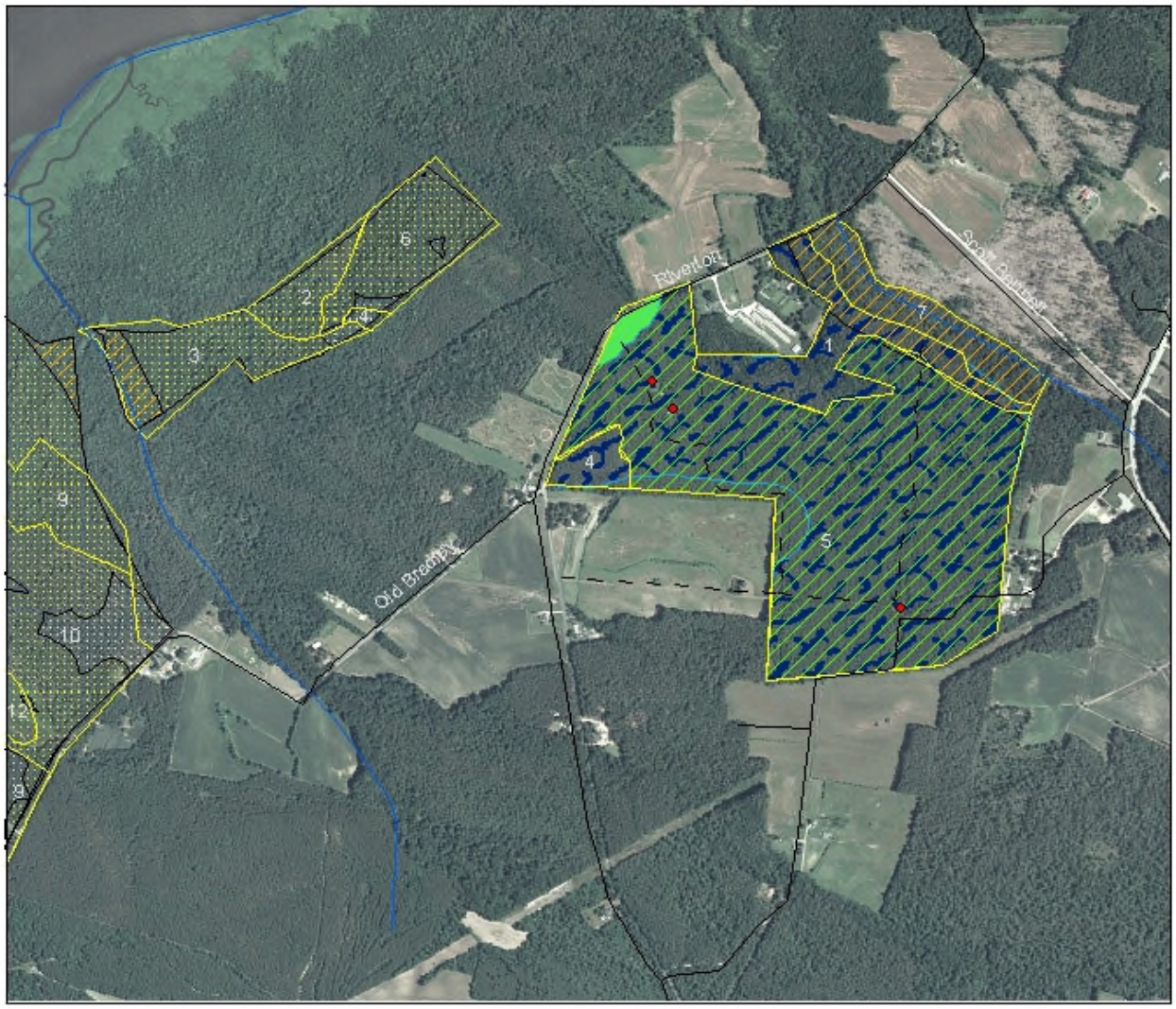
DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A prescribed burn is proposed for the Handicap Hunting area. This burn will create an open understory, which is part of DFS Management. It will also aid handicap hunters in spotting game.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: W06 Lathrop

DEB-DNR Forest Service 06/22/2007

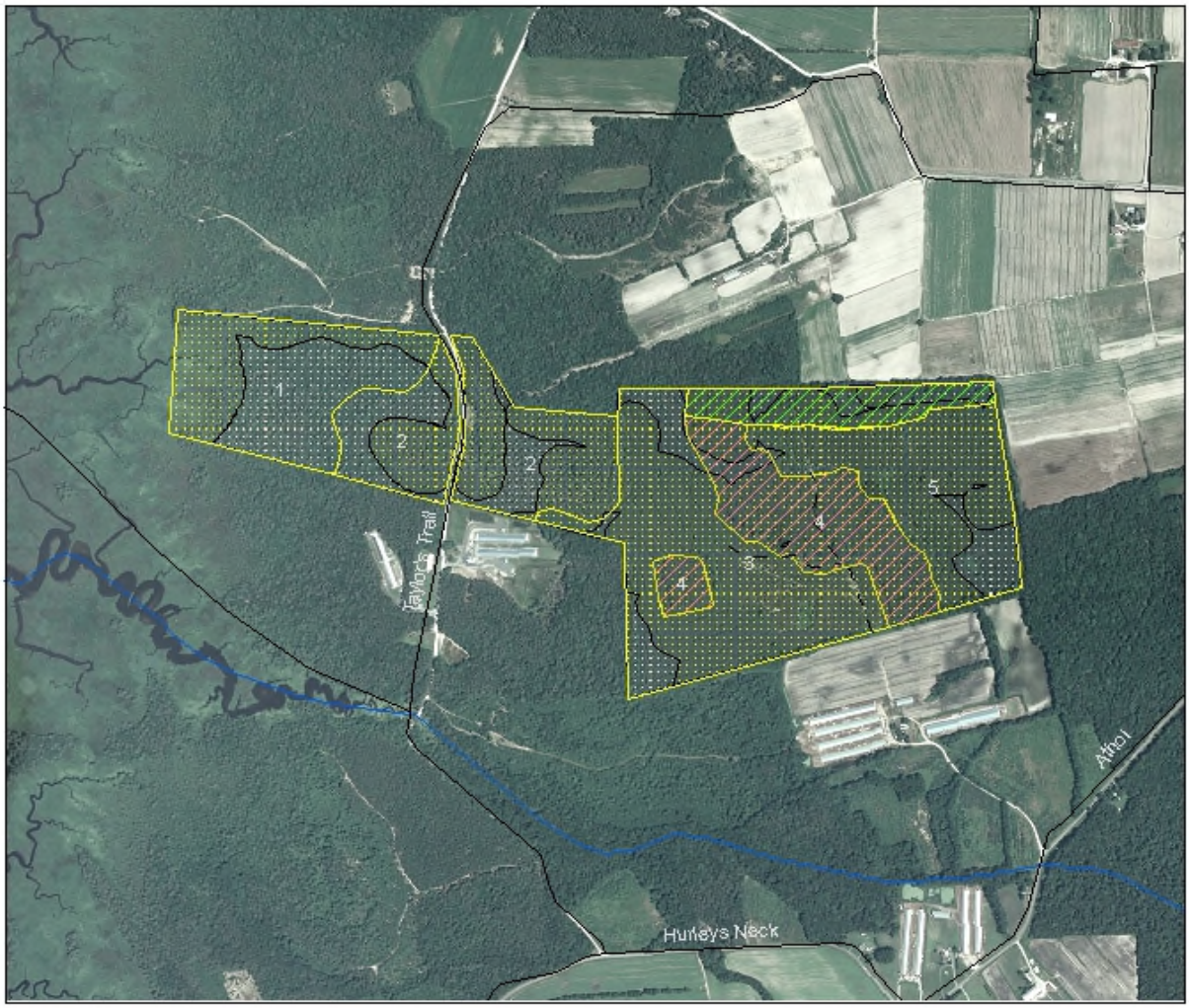
Silviculture Prescription:

A first thinning is proposed for stand 5. Stand 5 is a 125.4- acre loblolly pine plantation established in 1991. Thinning will be conducted in a way that retains dominant and co-dominant hardwood mast producing species. The historic sites will be protected in this thinning operation.

This stand is within the DFS Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: W09 Waller Taylor

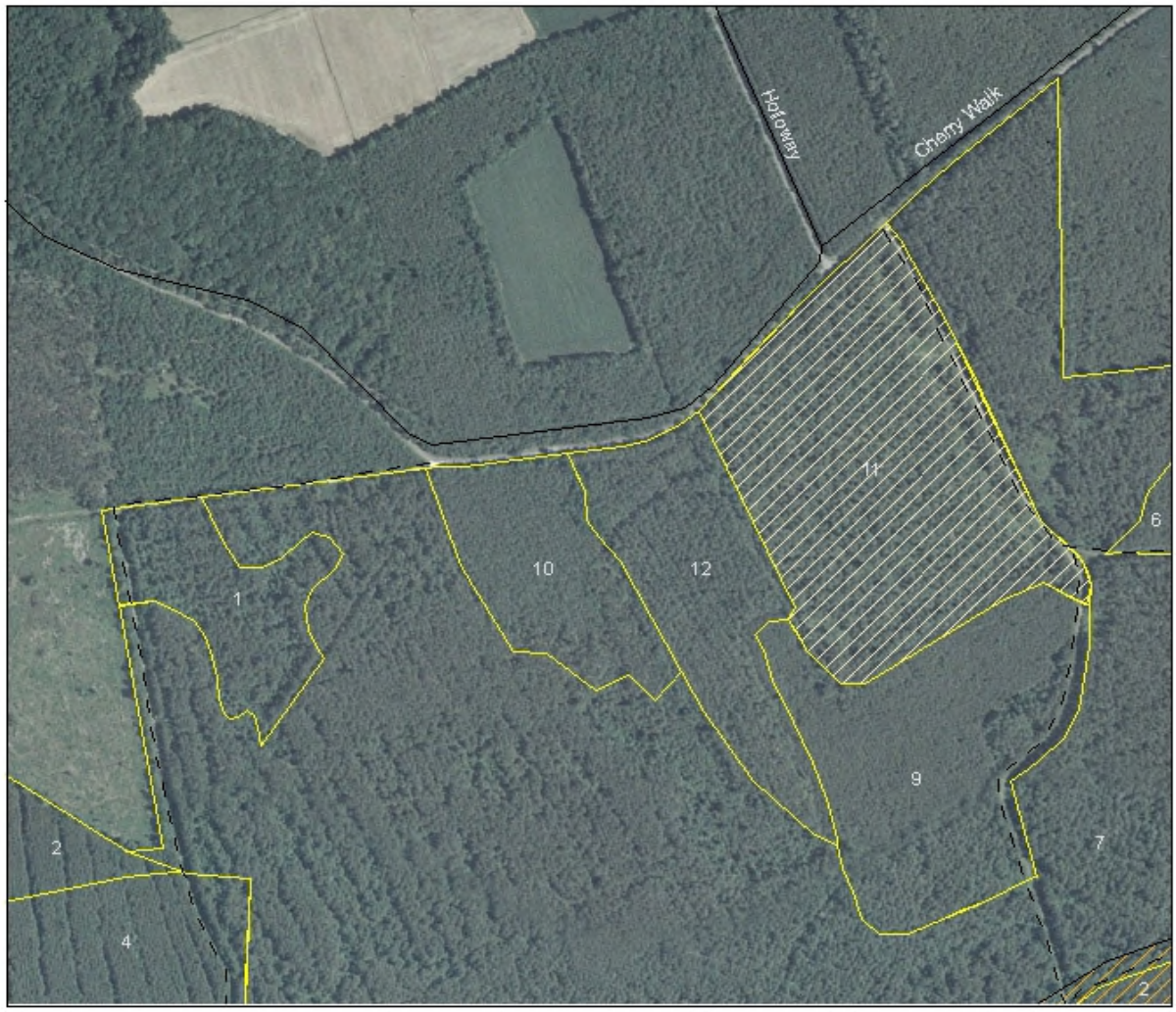
DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A first thinning is proposed for Stand 4. Stand 4 is a 45.6-acre loblolly pine plantation, which was established in 1984. This activity occurs within an ESA zone 1 & 3.

Guidelines:

FY09 Annual Work Plan



1 inch equals 660 feet

Complex: W14 Helmick

DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:	Guidelines:
Potential site prep and reforestation is proposed for stand 11, which is 31 acres. Stand 11 is scheduled for a final harvest in the FY 2008 AWP. Possible site prep may include herbicide application and/or light mechanical. This stand is located within the General Management Area.	

FY09 Annual Work Plan

1 inch equals 1,320 feet

Complex: W20 Dr. Phillips

DEB-DNR Forest Service 06/22/2007

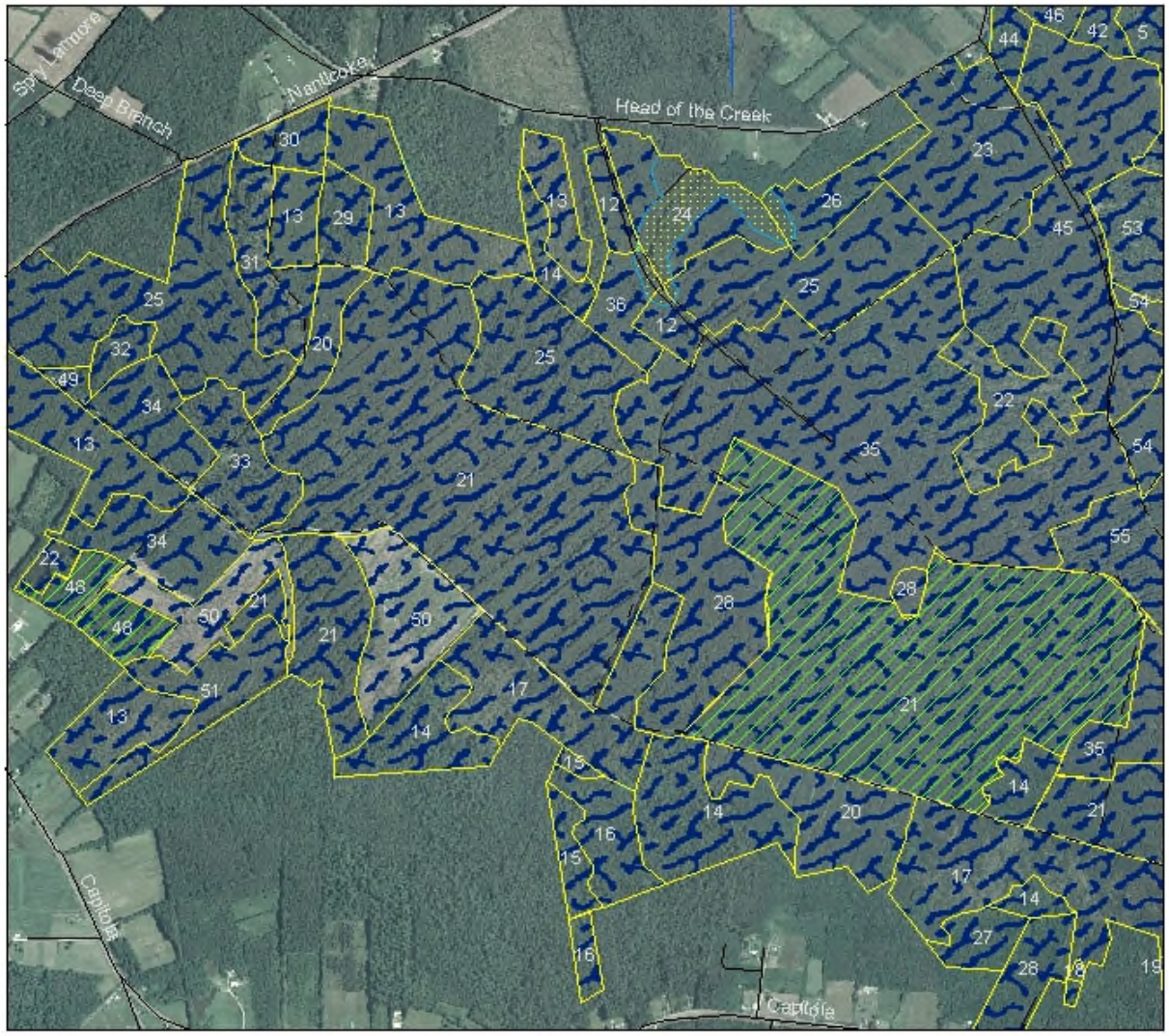
Silviculture Prescription:

A first thinning is proposed for stand 5. Stand 5 is a 125.4- acre loblolly pine plantation established in 1991. Thinning will be conducted in a way that retains dominant and co-dominant hardwwod mast producing species. The historic site will be prodect in this thinning operation.

This stand is within the DFS Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,650 feet

Complex: W23 Greenhill

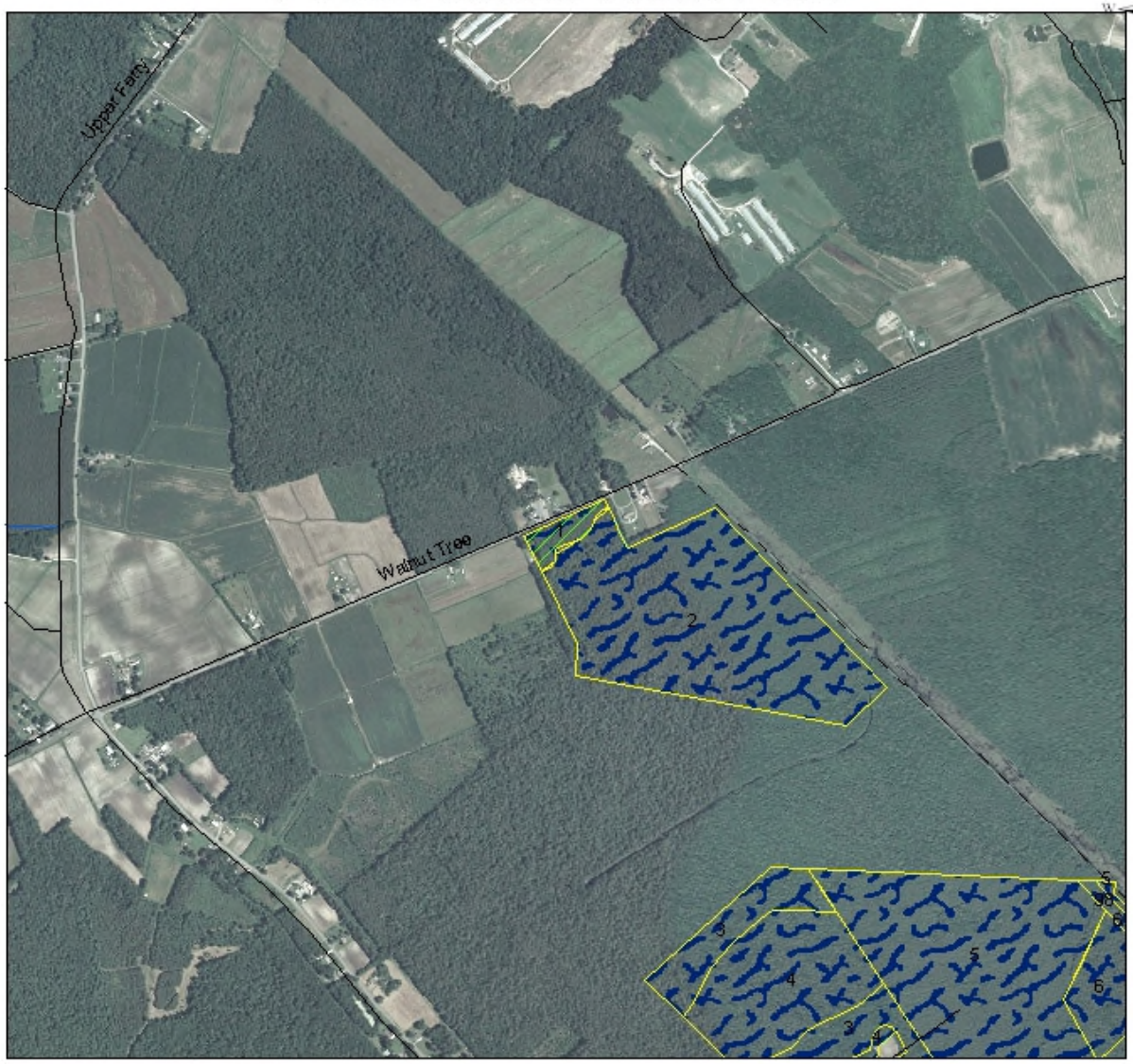
DEB-DNR Forest Service 06/22/2007

Silviculture Prescription:

A first thinning is proposed for Stand 48 and 21. Stand 48 is a 16.6-acre loblolly pine plantation. This stand was established in 1987. Stand 21 is a 185.3 acre loblolly pine plantation established in 1988. These stand will be thinned in a way that retains dominant hard mast producing species. This is a DFS management area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: W33 Phillips

DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A first thinning is proposed for Stand 1. Stand 1 is a natural pine hardwood stand, which was established in 1971.
This stand is located within a DFS management area and will be thinned according to DFS guidelines/objectives.

Guidelines:

FY09 Annual Work Plan

1 inch equals 1,320 feet

Complex: W38 Parsons

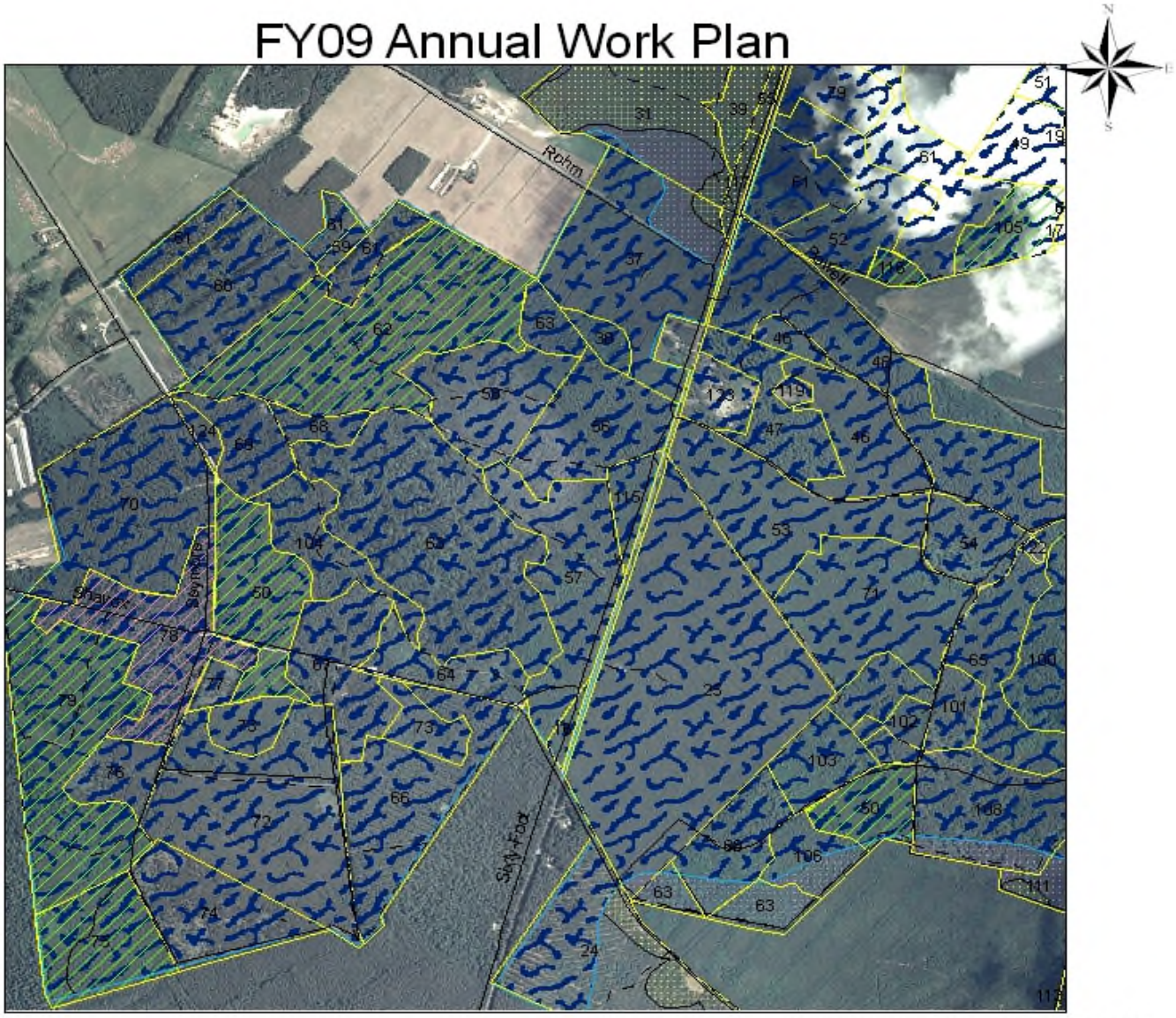
DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

An aerial spray is proposed for Stand 3. Stand 3 is a 19.4-acre sweet gum and red maple stand that was never replanted after a final harvest. The stands age is estimated to be 8 years old. If an adequate number of pines do not occupy the site post spraying, planting will occur to increase the pine component of the site.
This is a general management area.

Guidelines:

FY09 Annual Work Plan



DEB-DNR Forest Service 06/04/2007

1 inch equals 1,320 feet

Complex: W46 Wicomico Demonstration Forest

Silviculture Prescription:

A first thinning is proposed for stands 50, 62, 75, 79, 105 & 116. These stands are all young loblolly pine plantations that are overstocked and stagnate. The total area to be thinned is 170.7 acres. This thinning will improve the health, specie diversity and the growth of the stand as per DFS management guidelines.

An aerial spray is proposed for stand 78. Stand 78 is a 28.7 acre mature loblolly pine stand with a sweet gum and maple dominated understory. This stand had a seed tree harvest conducted in 1994 with few natural pine regenerated. A reduced rate of herbicide will be used to kill the undesirable species while retaining the oaks as demonstrated on Chesapeake Forest.

All prescriptions occur in a DFS management area.

Guidelines:

FY09 Annual Work Plan

1 inch equals 1,320 feet

DEB-DNR Forest Service 06/04/2007

Complex: W46 Wicomico Demostration Forest

Silviculture Prescription:

A prescribed burn is proposed for stands 57, 54, 101 and 108. These stands are mature loblolly pine stands that have had past thinnings and fire history. Burning the understory will maintain an open understory for DFS and reduce undesirable hardwood species.

All prescriptions occur in a DFS management area.

Guidelines:

FY09 Annual Work Plan

1 inch equals 660 feet

Complex: W52 Hughs

DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A first thinning is proposed for stand 1.
Stand 1 is 30.9-acre loblolly pine plantation, which was established in 1989.
This is a General Management Area.

Guidelines:

Description of 2009 Activities – Worcester County

Complex WR02 Littleton Fooks

A variable retention harvest is proposed for Stand 2. Stand 2 is a 40.4-acre loblolly pine plantation, which was established in 1971. This stand will be replanted in loblolly pine if adequate natural pine regeneration is not achieved. This stand is within the General Management Area.

Complex WR09 Perkins

A prescribed burn is proposed for Stand 3. Stand 3 is a 47.7-acre loblolly pine plantation, which was established in 1976 and second thinned in 2003. This burn will reduce the fuel load within the stand and reduce the undesirable hardwood competition in the understory. This stand is within the General Forest Management Zone.

Complex WR08 Godfrey

A prescribed burn is proposed for Stand 2 & 13. Stand 2 is a loblolly pine plantation, which was established in 1976 and second thinned in 2005. Stand 13 is a 1.9 acre mixed hardwood bog embedded within stand 2. This burn will reduce the fuel load within the stand and reduce the undesirable hardwood competition in the understory. This stand is within the General Forest Management Zone.

Complex WR17 Livingston

A final harvest is proposed for Stand 1. Stand 1 is a 39.8-acre loblolly pine plantation, which was established in 1970 and first thinned in 1992. This stand is located within an ESA zone 1 & 3. Therefore, replanting of the site will not occur within 50 feet of the power line (ESA zone1). Replanting will only occur if adequate natural regeneration is not achieved.

Complex WR18 Buck Harbor

A first thinning is proposed for Stands 5 & 8. Stands 5 & 8 are 134.1-acres of loblolly pine plantation, which were established in 1988. These stands are largely located within the general management zone. However, the small portion of stand 8 that is located in an ESA zone 1 will have a final harvest per ESA guidelines.

Complex WR32 Pepperfield

A pre-commercial thinning is proposed for Stand 11. Stand 11 is a 45.5-acre loblolly pine plantation, which was established in 2001. Mast producing hardwoods will be retained when found. This stand is located in a DFS management area.

Complex WR40 Dunn Swamp

A prescribe burn is proposed for stands 3, 4, 12 and 15. Each of these stands are loblolly pine plantations that were established in the 70's and recently second thinned. A prescribed burn will reduce fuel within the stand and reduce the undesirable hardwood competition. The existing forest road network lends itself nicely for a prescribe burn site and should prove useful in the future for demonstration and training purposes. The total area to be burned is 331.9 acres.

FY09 Annual Work Plan

1 inch equals 1,320 feet

Complex: WR02 Littleton Fooks

DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A variable retention harvest is proposed for Stand 2. Stand 2 is a 40.4-acre loblolly pine plantation, which was established in 1971. This stand will be replanted in loblolly pine if adequate natural pine regeneration is not achieved. This stand is within the General Management Area.

Guidelines:

FY09 Annual Work Plan

1 inch equals 1,320 feet

Complex: WR08 Godfrey

DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A prescribed burn is proposed for Stand 2 & 13. Stand 2 is a loblolly pine plantation, which was established in 1976 and second thinned in 2005. Stand 13 is a 1.9 acre mixed hardwood bog embedded within stand 2. This burn will reduce the fuel load within the stand and reduce the undesirable hardwood competition in the understory. This stand is within the General Forest Management Zone.

Guidelines:

FY09 Annual Work Plan

1 inch equals 660 feet

Complex: WR09 Perkins

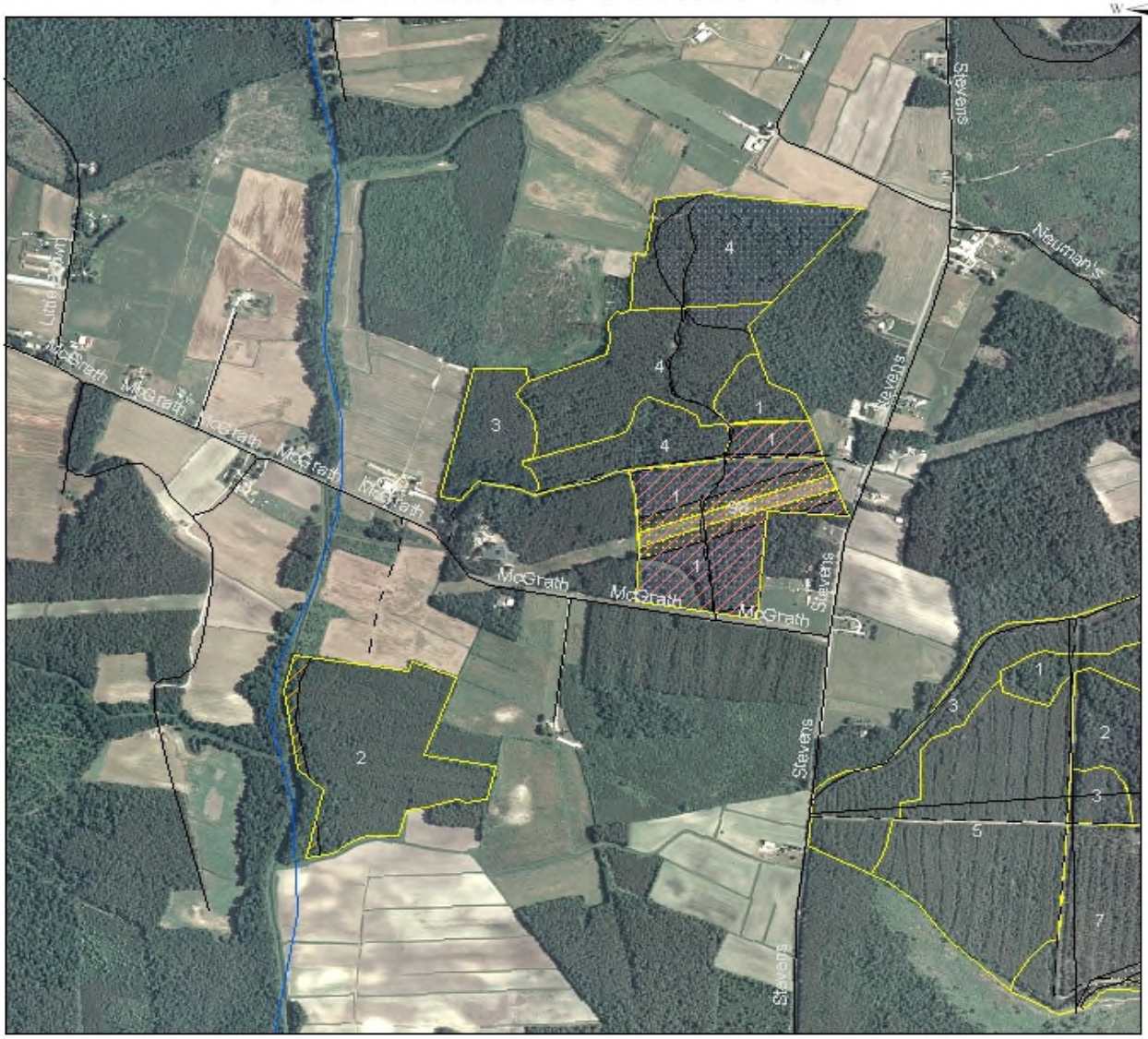
DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A prescribed burn is proposed for Stand 3. Stand 3 is a 47.7-acre loblolly pine plantation, which was established in 1976 and second thinned in 2003. This burn will reduce the fuel load within the stand and reduce the undesirable hardwood competition in the understory. This stand is within the General Forest Management Zone.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: WR17 Livingston

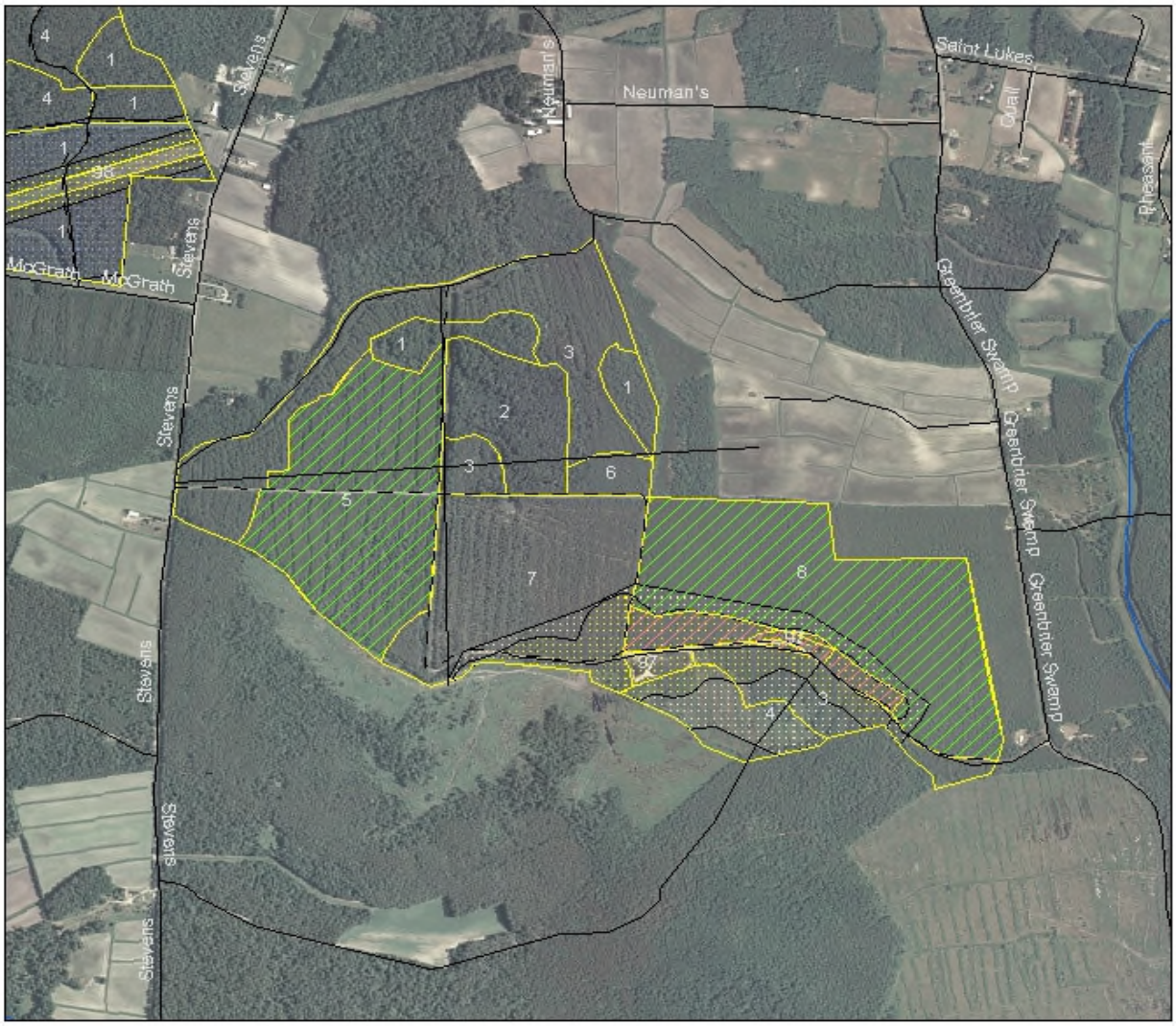
DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A final harvest is proposed for Stand 1. Stand 1 is a 39.8-acre loblolly pine plantation, which was established in 1970 and first thinned in 1992. This stand is located within an ESA zone 1 & 3. Therefore, replanting of the site will not occur within 50 feet of the power line (ESA zone1). Replanting will only occur if adequate natural regeneration is not achieved.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: WR18 Buck Harbor

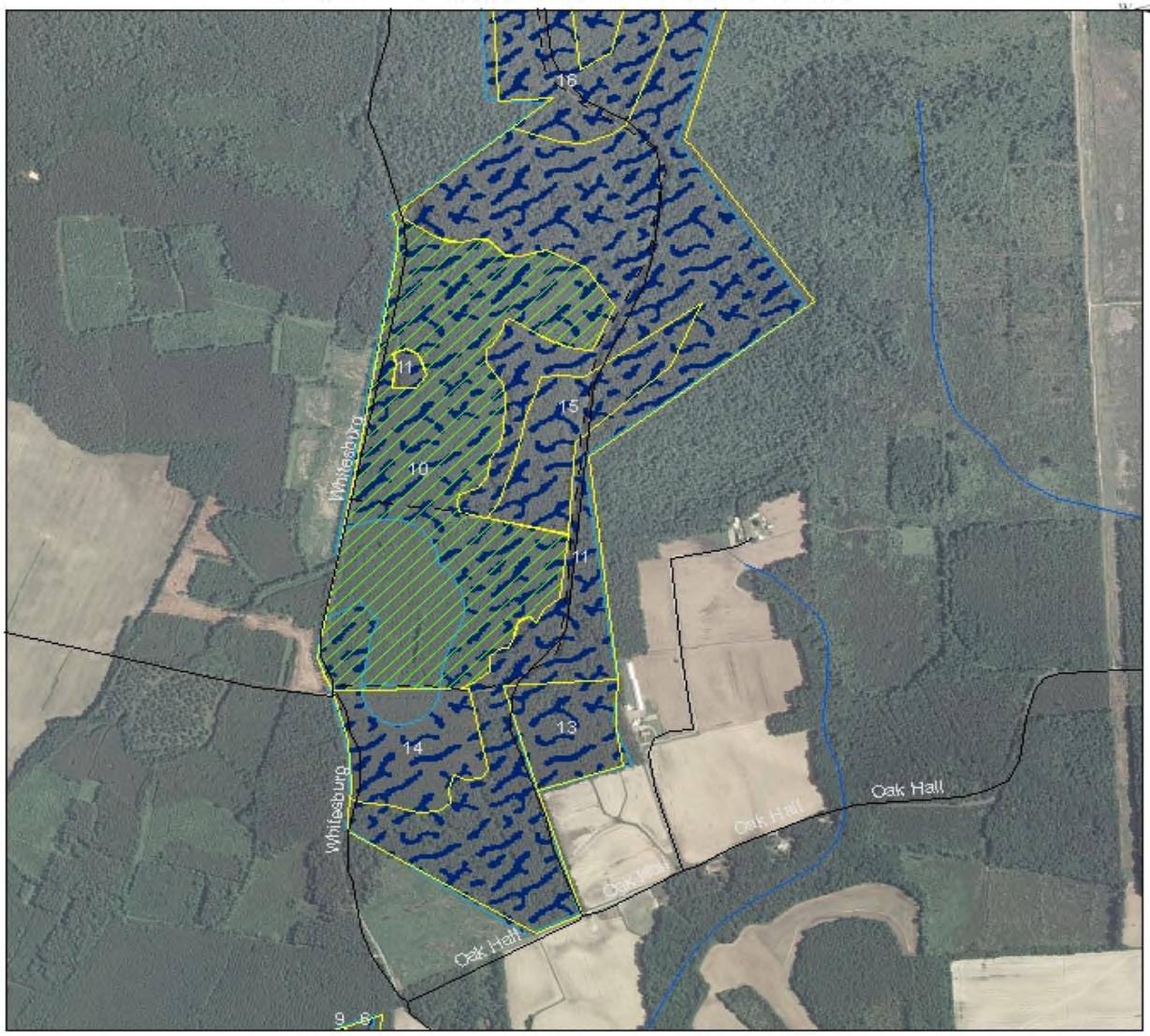
DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A first thinning is proposed for Stands 5 & 8. Stands 5 & 8 are 134.1-acres of loblolly pine plantation, which were established in 1988. These stands are largely located within the general management zone. However, the small portion of stand 8 that is located in an ESA zone 1 will have a final harvest per ESA guidelines.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: WR25 Creek

DEB-DNR Forest Service 06/22/2007

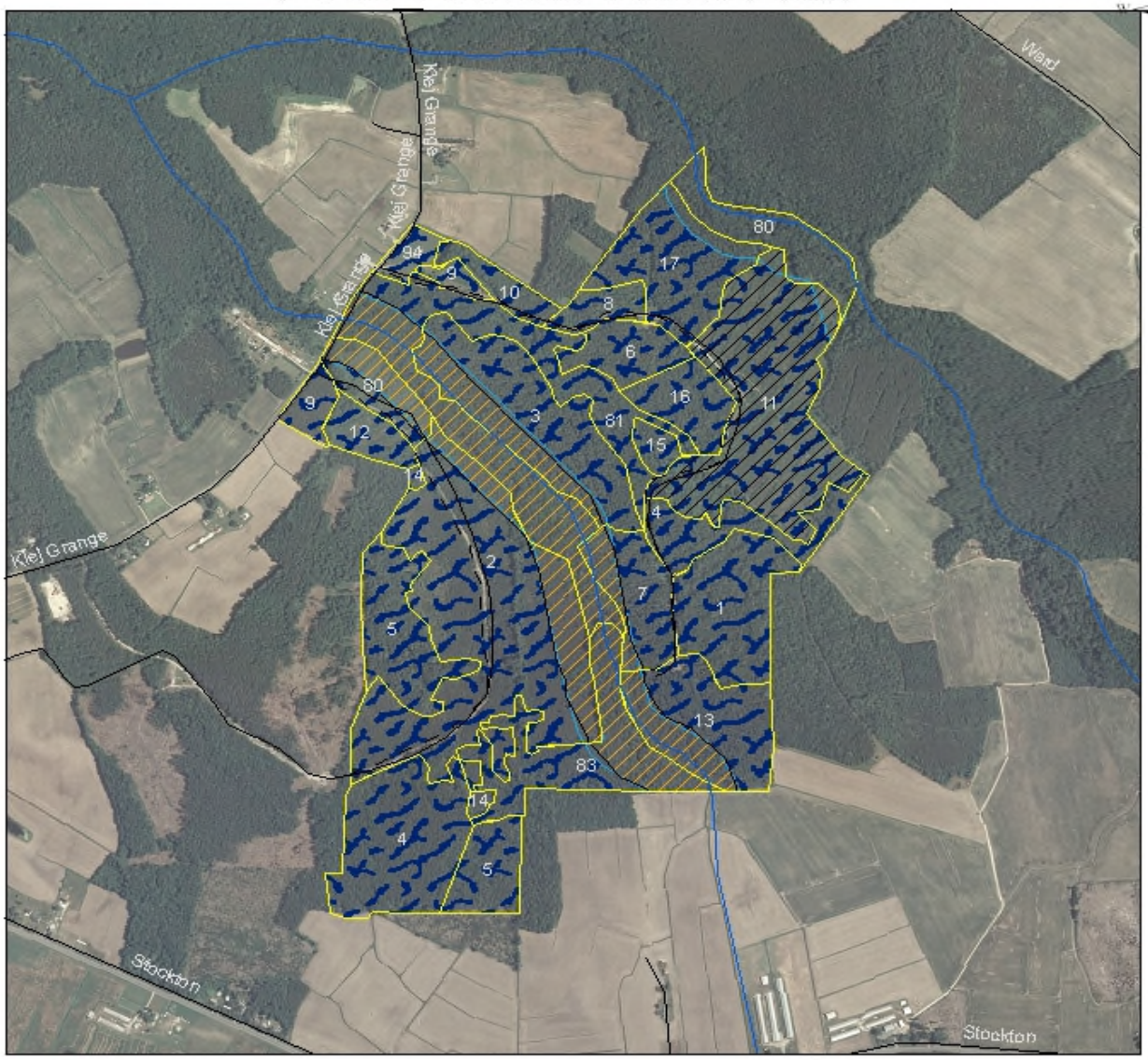
Silviculture Prescription:

A first thinning is proposed for Stand 10. Stand 10 is a 113-acre loblolly pine plantation, which was established in 1990. Thinning in this stand will increase the spacing among residuals while favoring hard mast producing species where found.

This activity falls within the DFS management area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: WR32 Pepperfield

DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:	Guidelines:
A pre-commercial thinning is proposed for Stand 11. Stand 11 is a 45.5-acre loblolly pine plantation, which was established in 2001. Mast producing hardwoods will be retained when found. This stand is located in a DFS management area.	

FY09 Annual Work Plan

1 inch equals 1,320 feet

Complex: WR40 Dunn Swamp

DEB-DNR Forest Service 06/04/2007

Silviculture Prescription:

A prescribed burn is proposed for stands 3, 4, 12, and 15. Each of these stands are loblolly pine plantations that were established in the 70's and recently second thinned. A prescribed burn will reduce fuel within the stand and reduce the undesirable hardwood competition. The existing forest road network lends itself nicely for a prescribed burn site and should prove useful in the future for demonstration and training purposes. The total area to be burned is 331.9 acres.

Guidelines:

Description of 2009 Activities – Somerset County

Complex S03 Covington

Potential site prep and reforestation is proposed for stand 1. Stand 1 is a 43 acre final harvest in the FY 2008 AWP. Possible site prep may include herbicide application and/or light mechanical. This stand is located within the General Management Area.

Complex S05 Mt. Vernon

A variable retention harvest is proposed for stand 6 in conjunction with adjacent stands 2 & 3 approved under the fy2002 AWP. Stand 6 is a 6.1-acre natural mixed hardwood stand. This stand is primarily made up of sweet gum and maple. This stand will be replanted in loblolly pine if adequate natural pine regeneration is not achieved. This stand is within the General Management Area.

Complex S12 Green Polk

An aerial spray is proposed for a portion of Stand 5. Stand 5 is a 38.6-acre loblolly pine plantation, which was established in 2001. The herbicide treatment will eliminate undesirable hardwood species and help the planted pine become established. Hand planting may be done to reinforce the plantation if an inadequate number of pine seedlings are discovered. Spraying will not occur within the ESA zone 1 or the HCVF adjacent to the area.

Potential site prep and reforestation is proposed for stand 6. Stand 6 is a 46.6 acre site scheduled for a final harvest in the FY 2007 AWP. Possible site prep may include herbicide application and/or light mechanical.

Both stands are located within the General Management Area.

Complex S16 Howard Price

A seed tree harvest is proposed for Stand 9. Stand 9 is a 72 acre loblolly pine plantation that was established in 1968 and second thinned in 2000. This stand will be replanted in loblolly pine if adequate natural pine regeneration is not achieved.

A pre-commercial thinning and an aerial spray to control hardwood competition is proposed for stand 4. Stand 4 is an 8.9 acre natural pine hardwood stand, which was established in 1998.

Both prescriptions are within the General Management Area.

Complex S18 Bowland

An aerial spray is proposed for Stand 5 to control hardwood competition & honeysuckle. Stand 5 is a 35.4 acre loblolly pine plantation, which was established in 1999. Hand planting may be conducted to reinforce the plantation if an inadequate number of pine seedlings are discovered. This stand is within the General Management Area.

Complex S21 E. Mace Smith

A pre-commercial thinning is proposed for Stand 37. Stand 37 is a 22.1 acre loblolly pine plantation that was established in 1999. This thinning will increase the spacing between residual trees while improving the specie composition. Oaks and other hard mast producing species will be retained as per DFS management guidelines.

Complex S23 Elmwood

A variable retention harvest is proposed for Stand 3. Stand 3 is a 26.1 acre natural pine hardwood stand that was established in 1964. The purpose of this prescription is to regenerate a new stand while retaining wildlife trees, snags or trees of character. This stand will be replanted in loblolly pine if adequate natural pine regeneration is not achieved. This stand is within the General Management Area.

Complex S28 Lynnwood Duncan

A first thinning is proposed for Stand 6. Stand 6 is a 26.9-acre loblolly pine plantation, which was established in 1991. As a part of DFS management, this thinning is designed to promote the growth of residual trees while encouraging hardwoods within the forest composition.

Complex S34 Lankford

A first thinning is proposed for Stand 5. Stand 5 is a 12.8-acre loblolly pine plantation, which was established in 1988 and pre-commercially thinned in 1994.

Potential site prep and reforestation is proposed for stands 1 & 6, which total 31 acres. Stands 1& 6 are scheduled for a final harvest in the FY 2008 AWP. Possible site prep may include herbicide application and/or light mechanical.

Both prescriptions occur within the General Management Area.

Complex S35 Jackson Lee Cook

An aerial spray is proposed for Stand 1 to control hardwood competition and honeysuckle. Stand 1 is a 45.7-acre loblolly pine plantation, which was established in 1992. This stand is within the General Management Area.

Complex S36 Strickland

A first thinning is proposed for Stands 10 & 16. Stands 10 & 16 are both loblolly pine plantations that were established in 1990 & 1985 respectfully. The total thinning area is 107.8 acres and will promote the growth of residual trees while encouraging hardwoods within the forest composition.

A prescribed burn is proposed for stands 14, 20 &25. All three stands are loblolly pine plantations, which were established in 1980 and have been second thinned. The prescribed burn will open up the understory and promote the growth of oaks within the stand as per DFS guidelines.

Both prescriptions are within the DFS Management Area.

Complex S44 Phillips

A pre-commercial thinning is proposed for Stand 3. Stand 3 is a 76.1-acre loblolly pine plantation, which was established in 2000. This stand is within the General Management Area.

Complex S46 Cullen

A second thinning is proposed for stand 1. Stand 1 is a 66.7 acre loblolly pine plantation, which was established in 1983 and first thinned in 2001. This stand is within the General management Area.

Complex S47 Haislip Savannah

A pre-commercial thinning is proposed for stand 6. Stand 6 is a 32.4 acre loblolly pine plantation, which was established in 2000. This stand is within the General Management Area.

Complex S48 Landon

A seed tree harvest is proposed for stand 1. Stand 1 is a 10.7 acre mature loblolly pine stand. This stand is within the General Management Area.

Complex S49 Handy

An aerial spray is proposed for stand 3 to control competing hardwood vegetation. Stand 3 is a 43.6 acre loblolly pine plantation, which was established in 2002. Hand planting may be conducted to reinforce the plantation if an inadequate number of pine seedlings are discovered. This stand is within the General Management Area.

Complex S55 Marumsco

A first thinning is proposed for stand 2. Stand 2 is a 25.6 acre loblolly pine plantation, which was established in 1982.

A prescribed burn is proposed for stands 8, 11 & 18. All stands are 15 to 20 years of age and total 324.8 acres.

Both proposals are within the General Management Area.

FY09 Annual Work Plan

1 inch equals 856 feet

Complex: S03 Covington

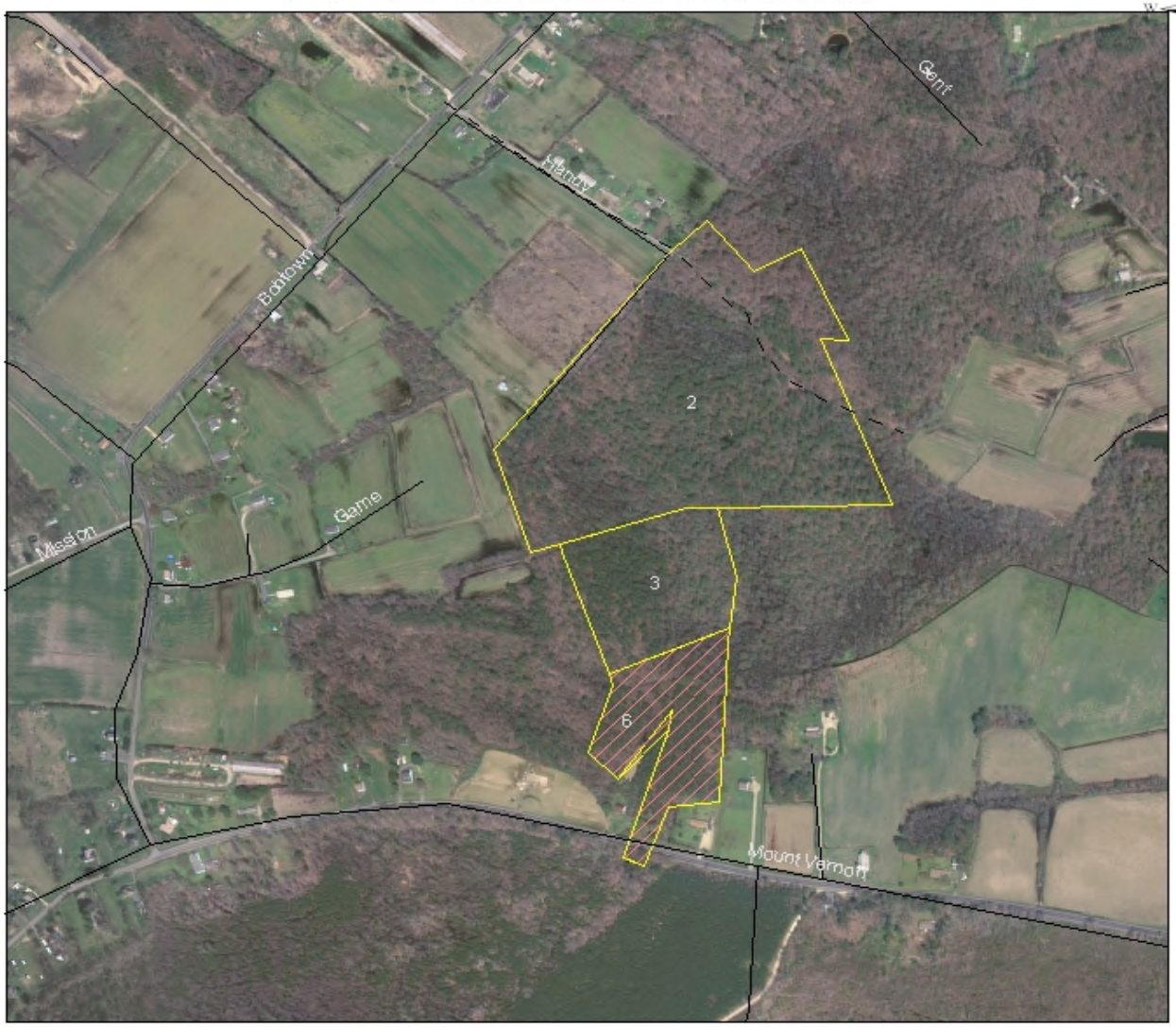
DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

Potential site prep and reforestation is proposed for stand 1. Stand 1 is a 43 acre final harvest in the FY 2008 AWP. Possible site prep may include herbicide application and/or light mechanical. This stand is located within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 660 feet

Complex: S05 Mt. Vernon

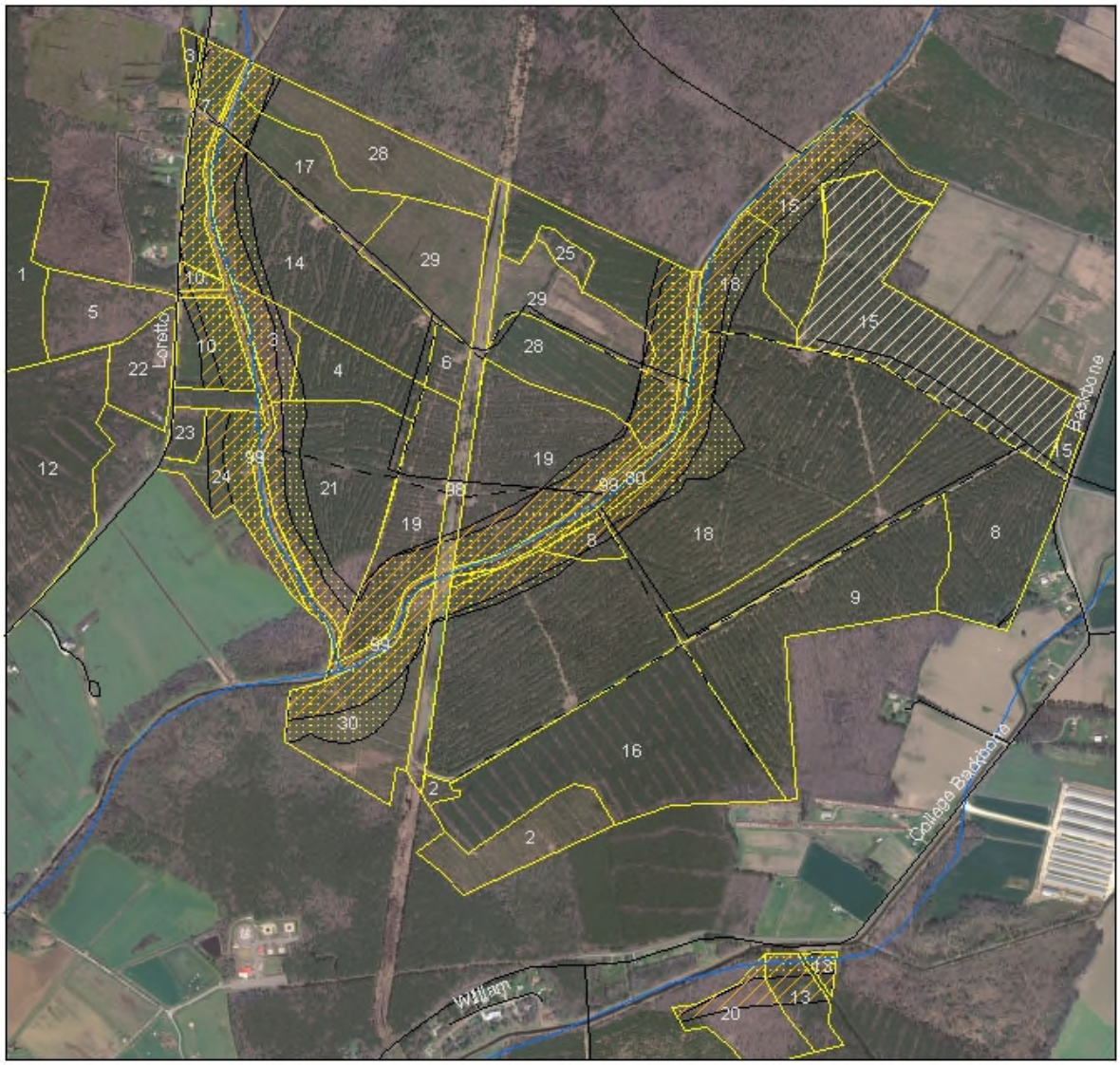
DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

A variable retention harvest is proposed for stand 6 in conjunction with adjacent stands 2 & 3 approved under the FY 2002 AWP. Stand 6 is a 6.1-acre natural mixed hardwood stand. This stand is primarily made up of sweet gum and maple. This stand will be replanted in loblolly pine if adequate natural pine regeneration is not achieved.
This stand is within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: S11 Peters McAllen

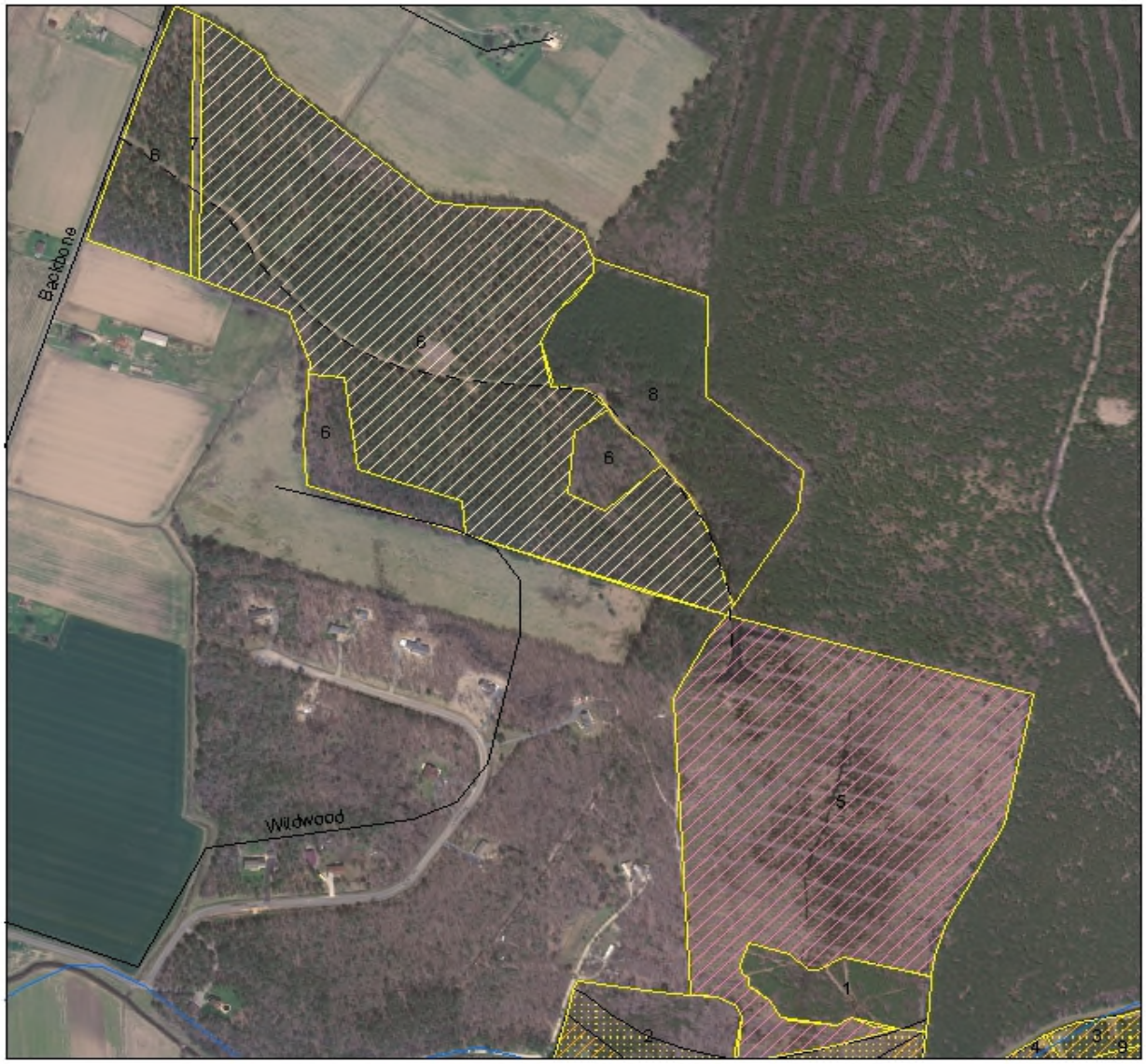
DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

Potential site prep and reforestation is proposed for stand 15. Stand 15 is a 44 acre final harvest in the FY 2008 AWP. Possible site prep may include herbicide application and/or light mechanical. This stand is located within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 660 feet

Complex: S12 Green Polk

DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

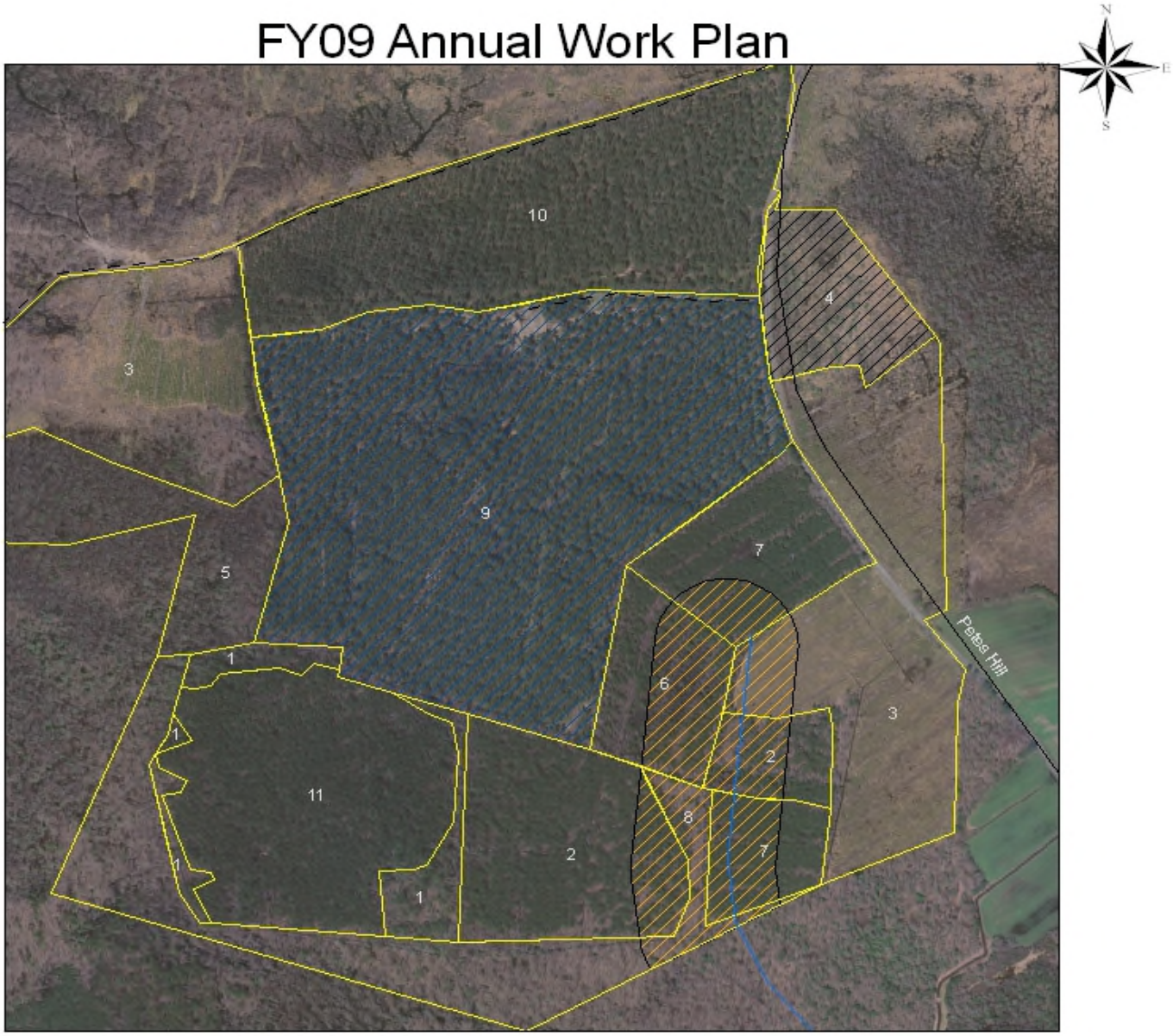
An aerial spray is proposed for a portion of Stand 5. Stand 5 is a 38.6-acre loblolly pine plantation, which was established in 2001. The herbicide treatment will eliminate undesirable hardwood species and help the planted pine become established. Hand planting may be done to reinforce the plantation if an inadequate number of pine seedlings are discovered. Spraying will not occur within the ESA zone 1 or the HCVF adjacent to the area.

Potential site prep and reforestation is proposed for stand 6. Stand 6 is a 46.6 acre site scheduled for a final harvest in the FY 2007 AWP. Possible site prep may include herbicide application and/or light mechanical.

Both stands are located within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 660 feet

Complex: S16 Howard Price

DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

A seed tree harvest is proposed for Stand 9. Stand 9 is a 72 acre loblolly pine plantation that was established in 1968 and second thinned in 2000. This stand will be replanted in loblolly pine if adequate natural pine regeneration is not achieved.

A pre-commercial thinning and an aerial spray to control hardwood competition is proposed for stand 4. Stand 4 is an 8.9 acre natural pine hardwood stand, which was established in 1998.

Both prescriptions are within the General Management Area.

Guidelines:

FY09 Annual Work Plan

1 inch equals 660 feet

Complex: S18 Bowland

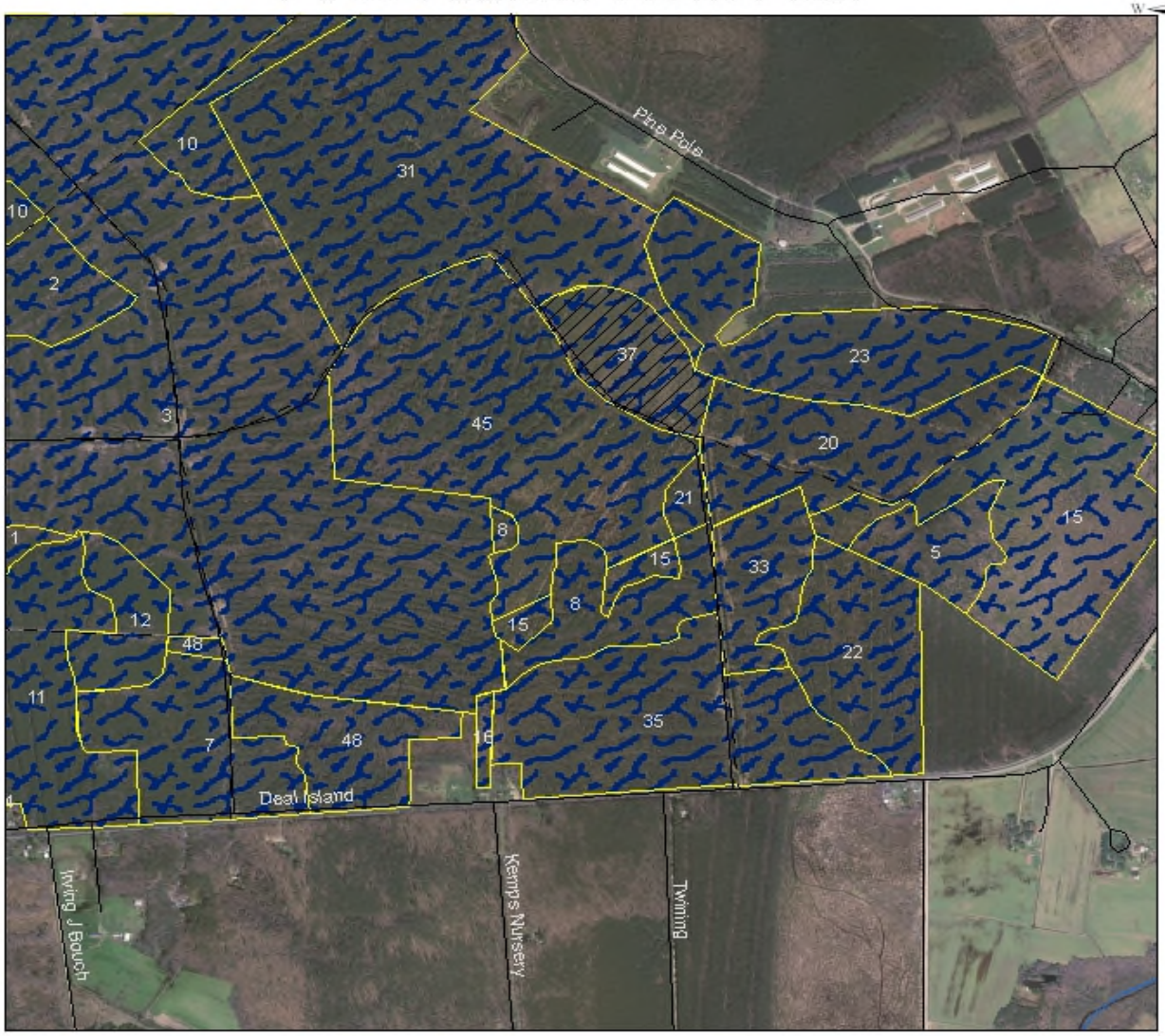
DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

An aerial spray is proposed for Stand 5 to control hardwood competition & honeysuckle. Stand 5 is a 35.4 acre loblolly pine plantation, which was established in 1999. Hand planting may be conducted to reinforce the plantation if an inadequate number of pine seedlings are discovered.
This stand is within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: S21 E. Mace Smith

DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

A pre-commercial thinning is proposed for Stand 37. Stand 37 is a 22.1 acre loblolly pine plantation that was established in 1999. This thinning will increase the spacing between residual trees while improving the specie composition. Oaks and other hard mast producing species will be retained as per DFS management guidelines.

Guidelines:

FY09 Annual Work Plan

1 inch equals 660 feet

Complex: S23 Elmwood

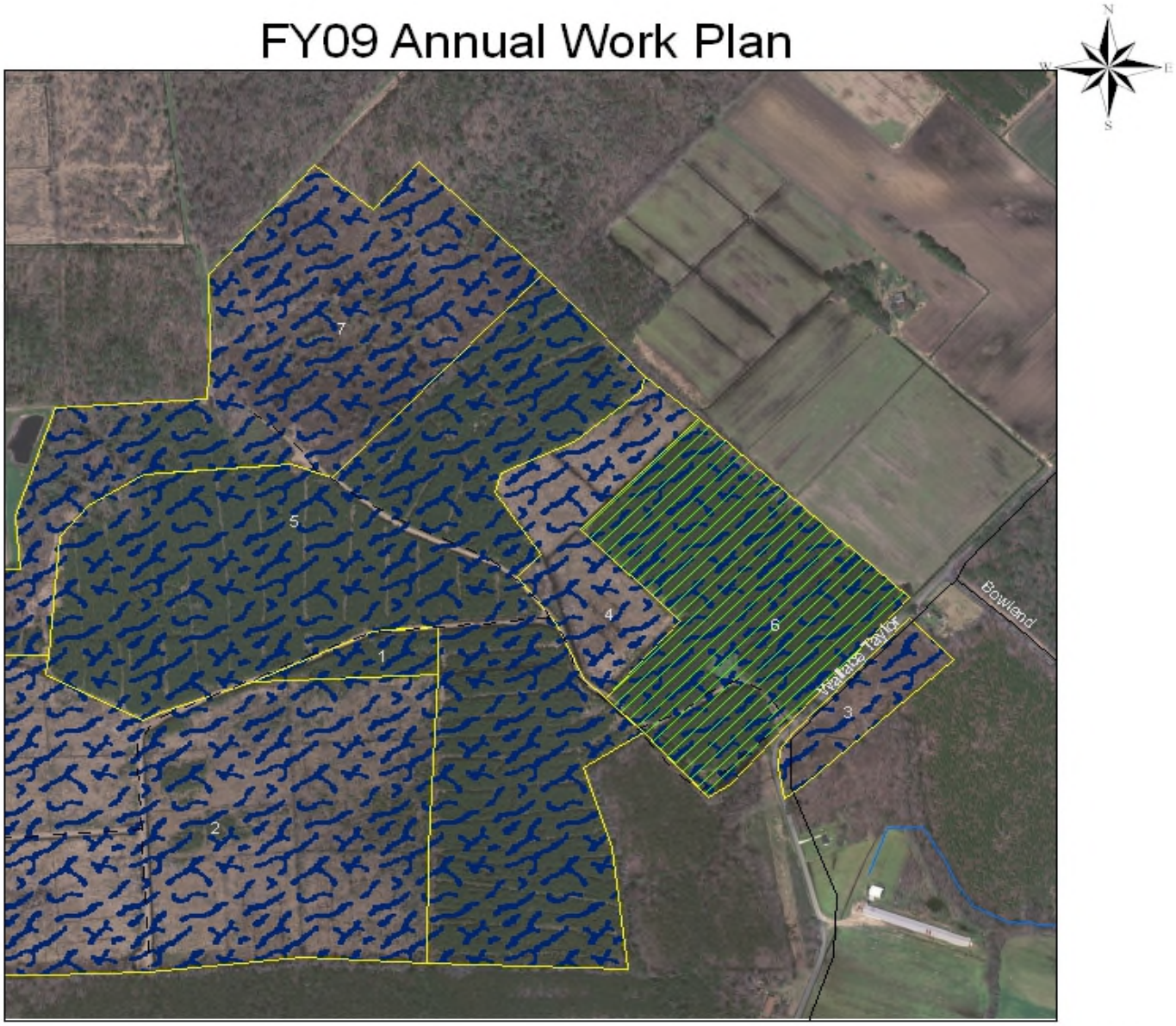
DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

A variable retention harvest is proposed for Stand 3. Stand 3 is a 26.1 acre natural pine hardwood stand that was established in 1964. The purpose of this prescription is to regenerate a new stand while retaining wildlife trees, snags or trees of character. This stand will be replanted in loblolly pine if adequate natural pine regeneration is not achieved. This stand is within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 660 feet

Complex: S28 Lynnwood Duncan

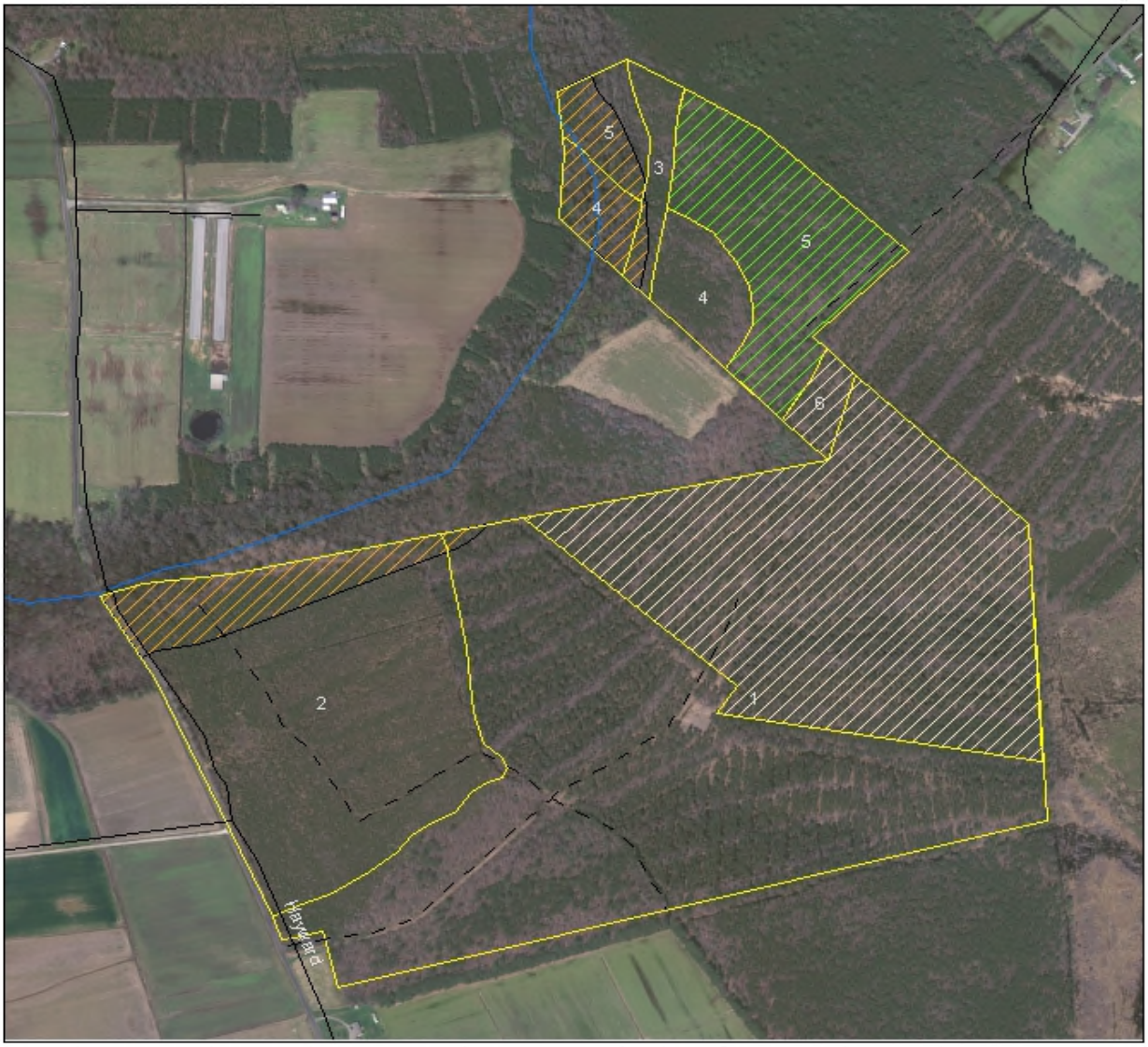
DEB-DNR Forest Service 04/04/2007

Silviculture Prescription:

A first thinning is proposed for Stand 6. Stand 6 is a 26.9-acre loblolly pine plantation, which was established in 1991. As a part of DFS management, this thinning is designed to promote the growth of residual trees while encouraging hardwoods within the forest composition.

Guidelines:

FY09 Annual Work Plan



1 inch equals 660 feet

Complex: S34 Lankford

DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

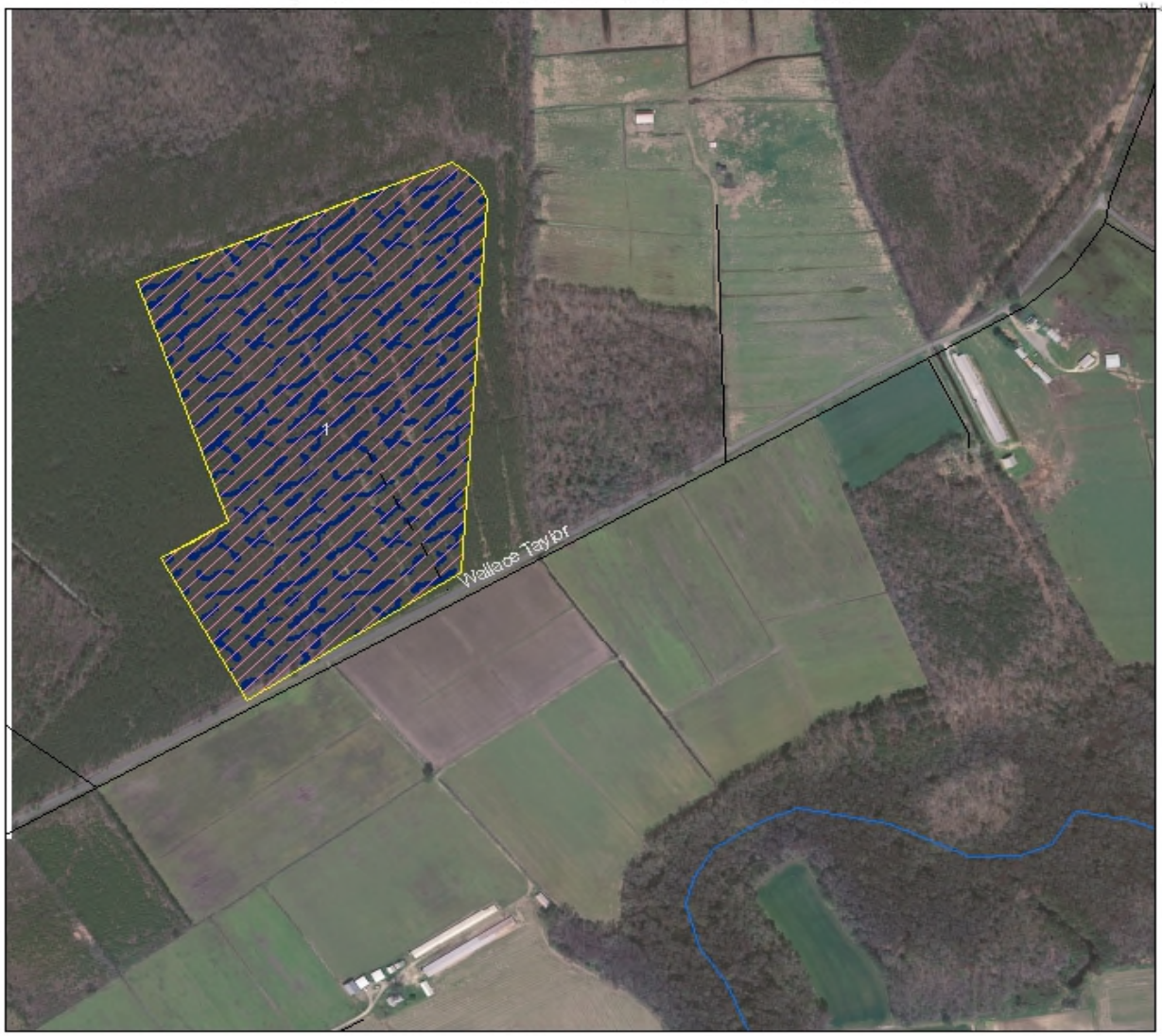
A first thinning is proposed for Stand 5. Stand 5 is a 12.8-acre loblolly pine plantation, which was established in 1988 and pre-commercially thinned in 1994.

Potential site prep and reforestation is proposed for stands 1 & 6, which total 31 acres. Stands 1& 6 are scheduled for a final harvest in the FY 2008 AWP. Possible site prep may include herbicide application and/or light mechanical.

Both prescriptions occur within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 660 feet

Complex: S35 Jackson Lee Cook

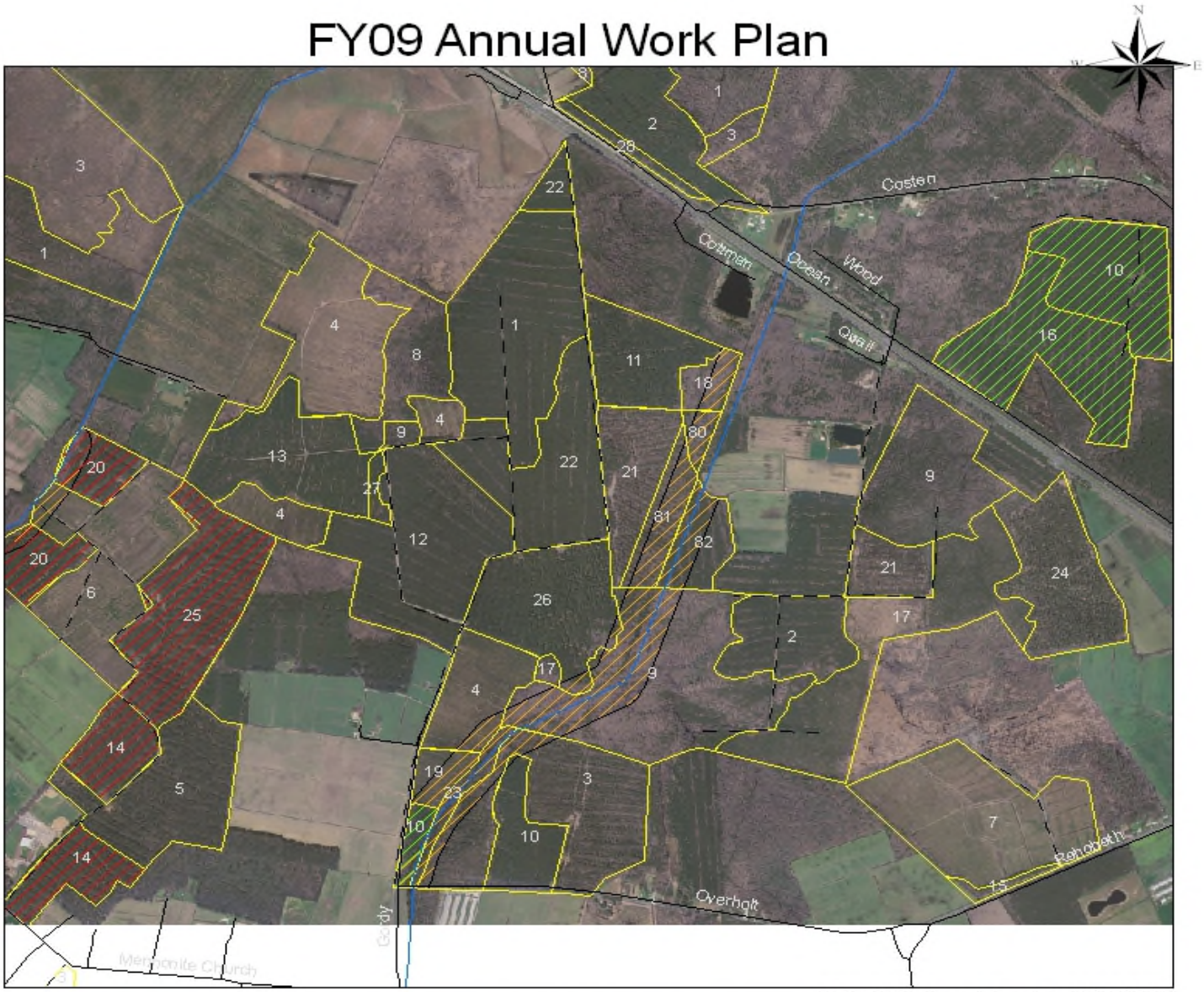
DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

An aerial spray is proposed for Stand 1 to control hardwood competition and honeysuckle. Stand 1 is a 45.7-acre loblolly pine plantation, which was established in 1992. This stand is within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,782 feet

Complex: S36 Strickland

DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

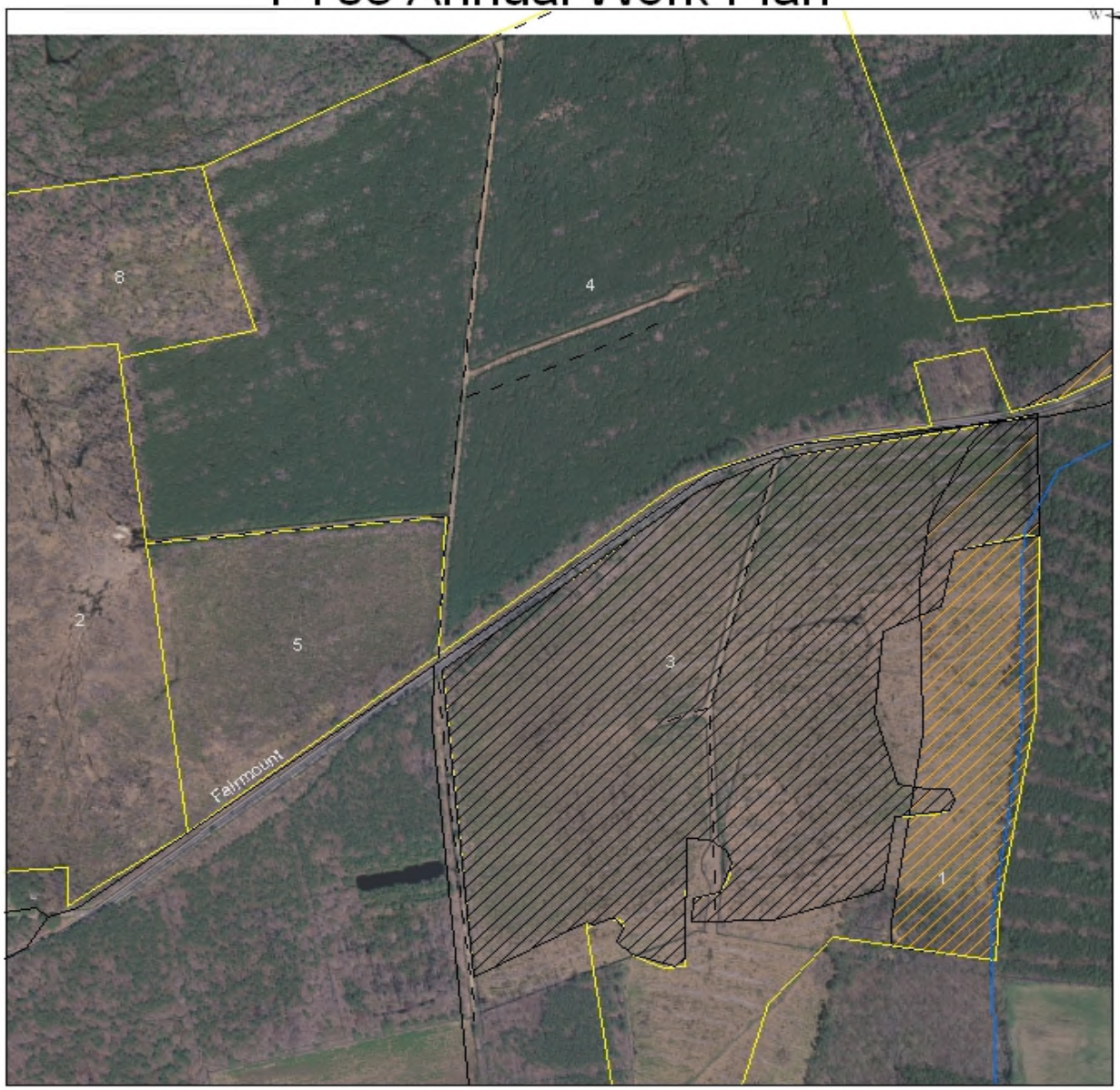
A first thinning is proposed for Stands 10 & 16. Stands 10 & 16 are both loblolly pine plantations that were established in 1990 & 1985 respectfully. The total thinning area is 107.8 acres and will promote the growth of residual trees while encouraging hardwoods within the forest composition.

A prescribed burn is proposed for stands 14, 20 &25. All three stands are loblolly pine plantations, which were established in 1980 and have been second thinned. The prescribed burn will open up the understory and promote the growth of oaks within the stand as per DFS guidelines.

Both prescriptions are within the DFS Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 660 feet

Complex: S44 Phillips

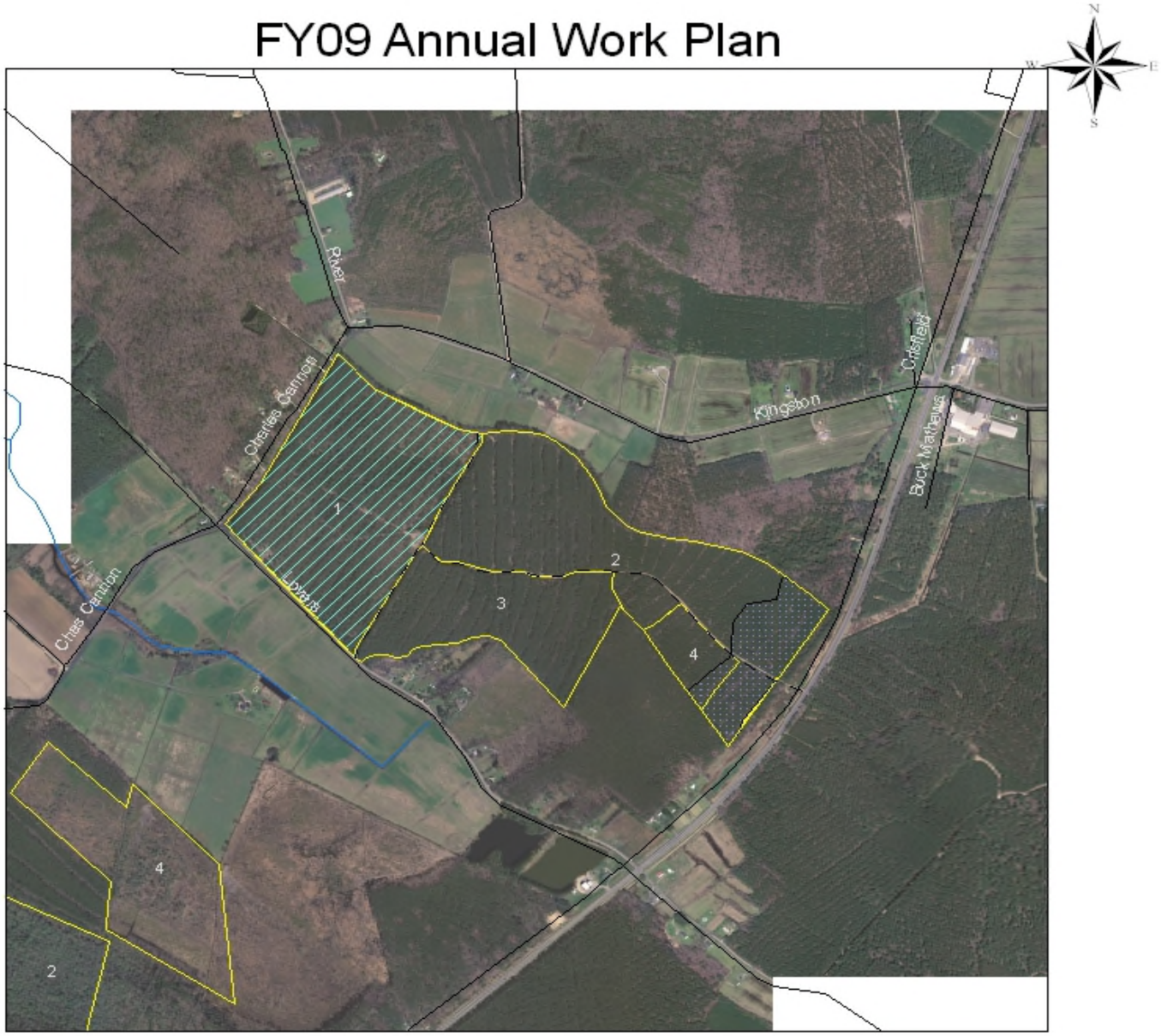
DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

A pre-commercial thinning is proposed for Stand 3. Stand 3 is a 76.1-acre loblolly pine plantation, which was established in 2000. This stand is within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: S46 Cullen

DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

A second thinning is proposed for stand 1. Stand 1 is a 66.7 acre loblolly pine plantation, which was established in 1983 and first thinned in 2001. This stand is within the General Management Area.

Guidelines:

FY09 Annual Work Plan

1 inch equals 660 feet

Complex: S47 Haislip Savannah

DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

A pre-commercial thinning is proposed for stand 6. Stand 6 is a 32.4 acre loblolly pine plantation, which was established in 2000. This stand is within the General Management Area.

Guidelines:

FY09 Annual Work Plan

1 inch equals 660 feet

Complex: S48 Landon

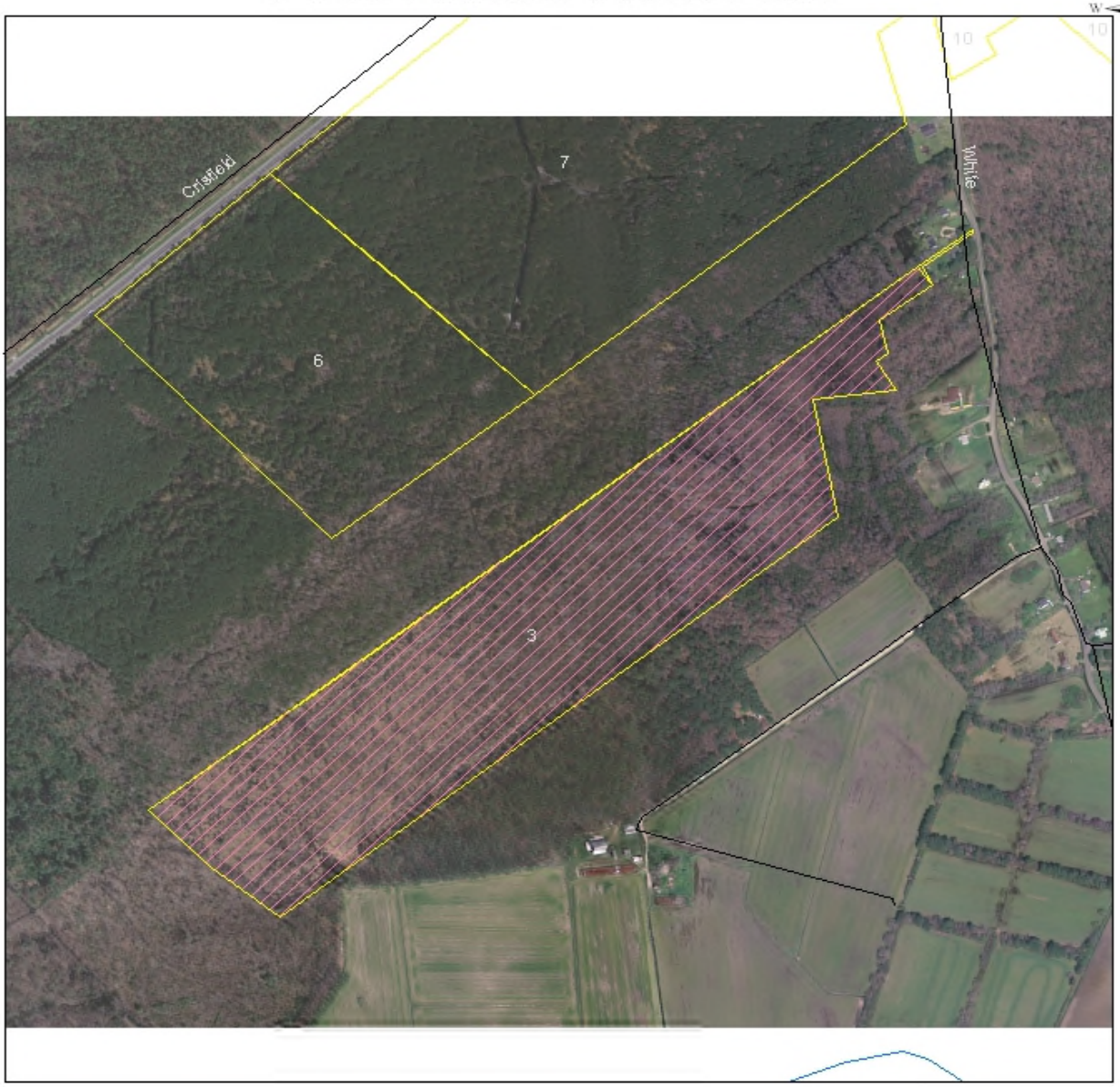
DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

A seed tree harvest is proposed for stand 1. Stand 1 is a 10.7 acre mature loblolly pine stand. This stand is within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 660 feet

Complex: S49 Handy

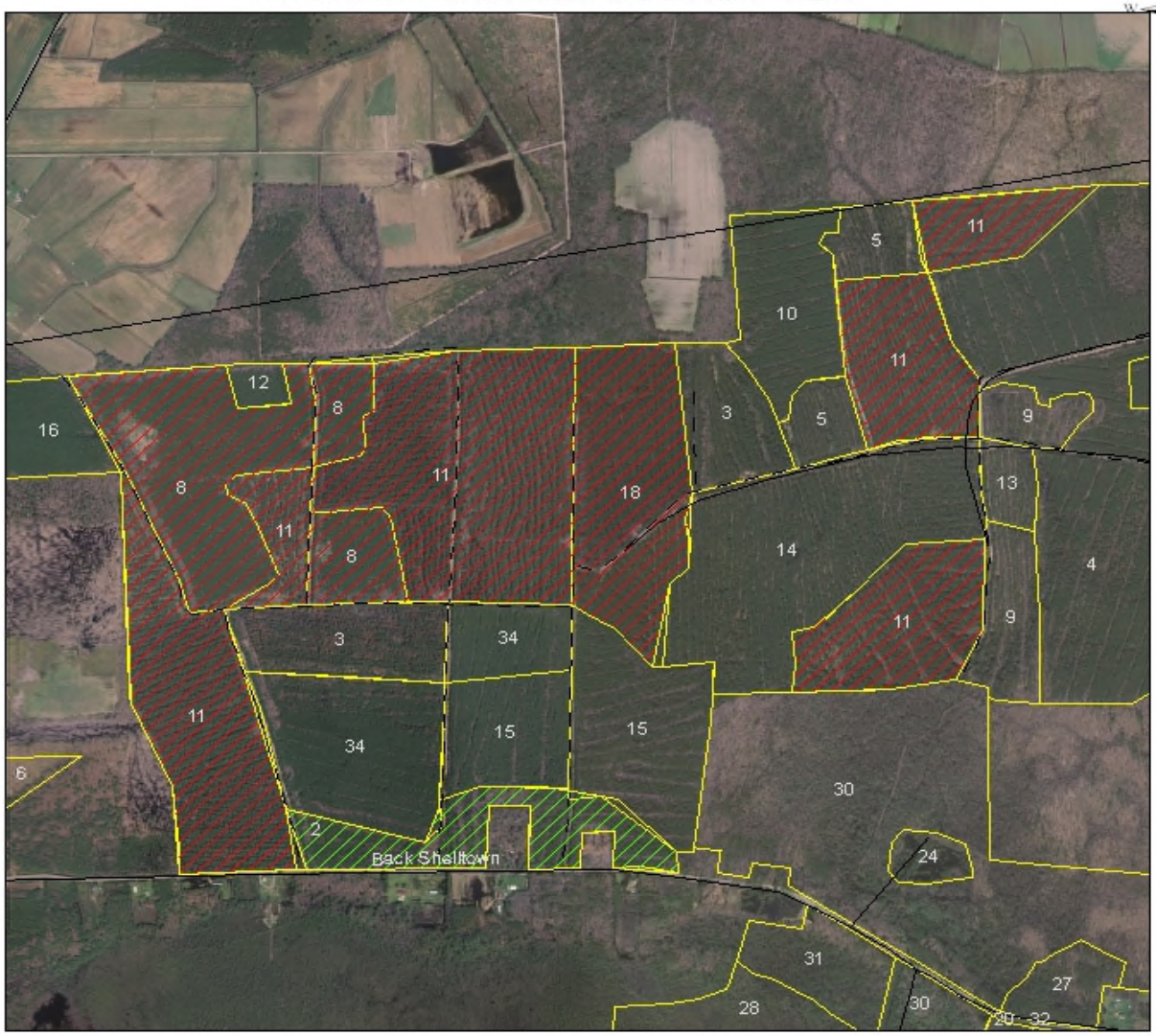
DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

An aerial spray is proposed for stand 3 to control competing hardwood vegetation. Stand 3 is a 43.6 acre loblolly pine plantation, which was established in 2002. Hand planting may be conducted to reinforce the plantation if an inadequate number of pine seedlings are discovered. This stand is within the General Management Area.

Guidelines:

FY09 Annual Work Plan



1 inch equals 1,320 feet

Complex: S55 Marumsco

DEB-DNR Forest Service 06/05/2007

Silviculture Prescription:

A first thinning is proposed for stand 2. Stand 2 is a 25.6 acre loblolly pine plantation, which was established in 1982.

A prescribed burn is proposed for stands 8, 11 & 18. All stands are 15 to 20 years of age and total 324.8 acres.

Both proposals are within the General Management Area.

Guidelines:

Locations & Descriptions
Of
Watershed Improvement Projects

Enhancement Plan

For

Blackwater Acquisition

General Overview

The Enhancement Plan for the Blackwater land acquisition incorporates a number of different activities and interest. The primary objective of the plan is to improve the quality of the waters entering Maple Dam Branch and the Little Blackwater River. The secondary objective is to enhance habitat for upland and aquatic fish and wildlife species. This plan provides for these improvements through the protection and enhancement of existing forest and stream buffers, and by the incorporation of wetlands and stream enhancements, reforestation and agriculture.

Site Specific Activities

A number of different preservation, enhancement and agricultural practices have been integrated into the plan. Each practice and the approximate associated acreage are described below:

Existing Buffer (141.2 Ac.) – The existing forested area which will be preserved and protected. Much of this area is adjacent to Maple Dam Branch and the Little Blackwater River and serves as a wildlife corridor.

New Stream Course (10,000 linear feet) –Existing drainage ditches will be restored to provide better habitat and treatment of runoff. Some new stream courses will be created to direct surface flow and provide treatment for run-off.

Buffer (93.6 Ac.) – Newly installed forest buffers to provide additional protection for waterways. Approximately 2/3 of this forest buffer will occur adjacent to the existing buffer which runs along Maple Dam Branch and the Little Blackwater River. The other 1/3 will be installed adjacent to the restored drainage ditches/streams, new streams and adjacent to the agricultural fields.

Warm Season Grasses (12.1 Ac.) – Warm season grasses are excellent habitat for upland birds such as sparrows and quail. They also have deep root systems which improve water quality and reduce soil erosion.

Passive Recreation Area (4.5 acres) – This is an existing grassed field which will be maintained for picnicking and access to the Little Blackwater River.

Wetland Restoration OW/EM (8.9 Ac.) – Very wet, open water or emergent marsh areas that will provide water quality improvements and habitat for a number of waterfowl, marsh birds and other aquatic species.

Wetland Restoration PFO (48.5 Ac) – Saturated (soggy) wetland areas that will be planted to native forest species. These areas are typically wet during certain times of the year and drier during others.

Pine Stand (23.9 Ac.) – Pine stands consisting of native species (loblolly pine, eastern red cedar, virginia pine and pitch pine) will be planted in appropriate areas to provide habitat diversity for wildlife and wind breaks.

Agriculture (235.8 Ac) – A number of farm fields will be maintained at the site to provide for the local economy, provide wildlife habitat and demonstrate agricultural best management practices.

Reforestation (159.8 Ac.) – These areas will be planted to native hardwood and pine species to provide water quality improvements, wildlife habitat and enhance habitat for endangered Delmarva fox squirrel.

Please note that the acreages detailed above are approximate and may change, to some degree, as the design plan develops.

Monitoring

Monitoring Projects:

- Forest wide monitoring of invasive plant species will continue with aggressive treatment where feasible. Invasive specie locations are identified mapped (GPS) and entered into the GIS data base. Recommended treatments are prescribed and carried out by a licensed Pesticide Applicator. Routine site visits follow treatment to determine effectiveness of the prescription.

- Monitoring of both commercial and non-commercial timber harvesting operations will be ongoing. Active sites are monitored by Registered Professional Foresters at least once per week. Sites are inspected for compliance with all laws, regulations and FSC/SFI certification requirements. Monitoring is documented via a Forest Harvest Operation-Harvest Site Review sheet. A copy of this review is maintained in the Forest Headquarters.

- Monitoring of game species harvested from the forest will continue. The WHS will provide an annual report of species harvested from the forest from both public hunting tracts and lease hunting tracts.

- Ongoing monitoring of ESA's will continue by WHS staff to determine the effectiveness of past restoration practices. Typically, transects are developed with permanent plots installed across the site. Data is collected and stored in the Heritage data base.

Projected Annual Budget

CHESAPEAKE FOREST FY 07 PROJECTED BUDGET

Cost of Management *(*Costs will vary from year to year)*	
State CF Salaries & Contract Management	$ 300,000
Land Operation	$ 400,000
Inventory & Monitoring Program	$ 70,000
Sustainable Forest Certification	$ 15,000
Watershed Improvement & Other Restoration Projects	$ 80,000
County Payment (15% of revenues)	$ 160,000
Fixed Cost (ditch drainage payments to counties)	$ 8,000
TOTAL COST	$1,033,000

Operating Revenues & State Funding	
Forest Product Sale Revenues	$ 750,000
Hunt Club Revenues	$ 280,000
State Funding	$ 100,000
TOTAL REVENUES & FUNDING	$1,130,000

Interdisciplinary Team Comments

Agenda for CF
2009 AWP ID Team Field Review
September 20, 2007

9:30 A.M. Meet at Nassawango – Discuss additions/changes to the SFMP

10:30 A.M. WR24 Johnson and Johnson PCT

11:30 A.M. W46 Campbell Powell Road Restoration Project

12:30 Noon Lunch

1:00 P.M. W23 Greenhill Eagle nest Site and ESA

2:30 P.M. Return to Nassawango

Citizen Advisory Committee
Comments

AGENDA
CITIZEN'S ADVISORY COMMITTEE TOUR
FRIDAY, OCTOBER 27, 2006

9:00 Meet at Nassawango (Public Lands Office)

9:00 - 9:30 Coffee and donuts. Plan/Tour overview

10:00 - 11:00 Campbell Complex (Chesapeake Forest)

- 1st. Thinning (active) – restoration project
  (Proposed Powell Road restoration project)
- 2nd. Thinning – Prescribed burn

11:45 - 12:15 O.R.V. Trail (Pocomoke Forest)

12:30 - 1:15 Lunch at Shad Landing (Pocomoke State Park) – provided

1:30 - 2:00 Pocomoke State Forest Compartment #10
Proposed Final Harvest

2:15 - 2:30 Pocomoke State Forest Compartment #5
Proposed Final Harvest

2:40 - 2:50 Pocomoke State Forest Compartment #16
Completed Final Harvest

3:00 Return to Nassawango (Public Lands Office)

Joan Maloof
4701 Whitehaven Rd
Quantico, MD 21856
jemaloof@salisbury.edu
December 5, 2007

Comments on the Proposed 2009 Annual Work Plan for the **Chesapeake Forest**

As the ecology representative of the Chesapeake Forest/ Pocomoke Forest citizen's advisory committee I have been asked to comment on the 2009 work plan. I appreciate the opportunity to comment and I make the following suggestions:

The document was very well prepared. Thank you for producing such a clear and easy to reference work plan. The color maps were especially useful. A table of contents and page numbers would make the document even better.

Relationship with the university is overstated. As a faculty member of Salisbury University I can speak for my colleagues when I say that we are very appreciative of the opportunity to do research in the Chesapeake Forest. All DNR employees and consultants have been completely helpful and cooperative and we feel that our research is welcomed and encouraged. Unfortunately we do not have as much time for research as we would like, and we do not want anyone to be misled when they read on page 2 that "Salisbury University – Conducts species monitoring, a vegetative cross study, and water quality improvement studies."

The studies we have done so far have been very limited in both area and time. Species monitoring, especially, is critically important in determining the impact of various management techniques. Given unlimited time and resources we would love to take on the task of species monitoring in the forest; however, we do not wish to take credit for it prematurely. Perhaps it would be more informative and useful if a few more specifics were included in this section, such as: which species were monitored, and for how long, and over what acreage.

Increase recreational opportunities. I was disappointed that the only (non-hunting) recreational component of the 2009 annual work plan was for a water trail. With a forest budget of over $1,000,000 it seems that we could invest more than $4,000 in recreation. I would like to see more trails and better advertising of where the forest lands are located. Other than hunters, and trail riders, few "average" citizens seem to know of any Chesapeake Forests Lands that they can visit and enjoy. The signage is spotty and it does not encourage recreation. Consider making a few locations hunter-free so they may be enjoyed seven days a week in the fall instead of just Sundays.

The overall forest plan should be publicly accessible. Under the section on special projects, bullet point 3 mentions a new updated forest-wide field map. I understand that the forest plan has been a work in progress, but I find it frustrating that the only way I can see exact locations of the various forest complexes and the type of management prescribed for them is by driving to Snow Hill during business hours. At the very least all members of the Citizen's Advisory Committee should have this information, but ideally it should be accessible to the public too.

Stop spraying herbicides on public forest land. Since 2002 I have been commenting that we should not be spraying herbicides on the Chesapeake Forest Lands. Herbicides are currently used in the forest to promote the growth of pine by killing competing vegetation or what managers call "undesirable hardwood." Sweet gum and maple are considered undesirable hardwoods because they have a low value in the marketplace. I object to the use of these sprays because they kill many other plants in addition to the sweet gums and maples. Many of the plant species that are killed would have produced nuts and berries and other important food for all types of wildlife from birds to butterflies.

Once again this plan calls for herbicide use (on between 200 and 400 acres). The work plan does not specify which herbicides will be used, a detail that has been requested previously. Although we are spraying these chemicals over the landscape there is incomplete information on how long they persist in the environment and what effects thy

might have. Some of the herbicides commonly used in forests persist for a long time in the ground (over three months). There is some evidence that one herbicide, Imazapyr, easily contaminates groundwater, yet it is difficult to test for, so we are not sure if our past spraying has already affected our groundwater. There is also some question about how the use of this herbicide affects the soil bacteria that are critical to nutrient cycling.

This work plan does not include any fertilization. I am very pleased to see that this plan does not include any fertilization of the forest. The Chesapeake Bay Foundation calls excess nutrients the number one problem in the Chesapeake Bay. The State is setting a positive example of environmental management that is good for the bay by not fertilizing the public forest lands.

Better advertising of public comment period. Please encourage public comments by improving the advertising of the public comment period. The DNR website says that there are public meetings about the forest, but to my knowledge it has been quite a few years since a publicly announced meeting has been held.

Make comments from the public and the advisory committee part of the final work plan. I was told that comments would become part of the final work plan, but in reviewing the plans posted on the website I see no comments.

Thank you for inviting me to comment. It is exciting to see the Chesapeake Forest management improve little by little each year. Although some of my comments may seem critical I do believe we are working together toward a common goal of making this publicly owned forest an important resource for all.

2009 Annual Work Plan Comments
12/20/2007

I find the draft FY 2009 Annual Work Plans for the Chesapeake Forest and the Pocomoke State Forest to be well organized and reasonably thought through. The proposed harvests include acceptable silvicultural prescriptions and should be pursued aggressively to completion for the health of the forest, local forest economies, wildlife, and other values.

I have several specific comments about the Chesapeake Work Plan.

There is a page entitled "Maintenance" which describes activity to maintain forest roads. I find this section weak on details on the current condition of roads, how many miles will be improved, and by what means. This may sound picky, but the problems related to deferred maintenance are understated given the current condition of most of the Chesapeake roads. They are so urgent and critical that most of the money in the budget for Watershed Improvement and Restoration Projects ($80,000) should be redirected for road maintenance. I do find the efforts by Mike and Dee in creating cooperative road maintenance arrangements with hunt clubs, and efforts to develop in house expertise and cost savings with the spray rig to be steps in the right direction. The rig can also be employed to control pine.

It seems that pre-commercial thinning is on the light side, given the propensity of loblolly pine to seed in prolifically. Any overstocked stands of appropriate age should be added to the list.

An exemption to the hunting lease lottery process should be given to the forest manager, within certain guidelines, so as to enable the the manager to lease the tract to adjoining landowners. There are situations where this would make obvious sense, but departmental policy doesn't allow it.

There is no forest fertilization. The budget may not allow much of this prescription to be done, but the Managers need to develop the organization's expertise and experience with this prescription, even if it is just a token amount.

There is a list of silvicultural definitions in the Chesapeake plan. Under "Reforestation", the word "chemicals" should be changed to "herbicides". This is a common mistake, but proper silvicultural techniques use herbicides. Uninformed public thinks foresters use chemicals, and we shouldn't encourage that wrong thought.

A section in the Chesapeake plan called "Silvicultural Activity Overview" has a subsection about adaptive management. I call attention to the words "... it may become necessary to slightly alter the prescription in order to maintain local economies". I think I know the spirit of the sentence, it doesn't directly say it. Does it mean the manager can change things in order to help out the local forest industry? I don't really think so. I'm for

the forest industry, but not to the point of changing a work plan. Or does it mean other local economies? Also, my copy of the Forest Management Plan only refers to adaptive management in regards to Delmarva fox squirrel. I don't think for a moment that the squirrel is the only situation in which the manager is encouraged to employ adaptive management. I would like to see a better description, a better sentence, or both.

A comment about the Pocomoke State Forest Work Plan:

I highly commend the harvest that sustains the short leaf pine species component in the future stand. There is not much short leaf pine on the Eastern Shore and the Pocomoke Forest owns some nice stands.

Sincerely,
Calvin Lubben

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Martin O'Malley, Gove
Anthony G. Brown, Lt. Gove
John R. Griffin, Secre
Eric Schwaab, Deputy Secre

January 10, 2008

Re: 2009 AWP Updates

Dear Chesapeake Forest CAC Member;

Thank you for taking the time to submit written comments on the draft 2009 Annual Work Plan. The following is a list of actions/changes that have taken place as a result of your comments:

1. I have deleted the reference to networking with Salisbury University (SU). This statement was unintentionally carried over from past management plans. In 2001 Harry Womack conducted water quality studies on the forest, and that study has been completed. Although there are no active SU projects currently, the Maryland Forest Service continues to seek monitoring and research proposals from the various Universities.

2. I have added a recently funded forest recreation project to the plan. This project will enhance 26 miles of existing trail located on both the Wicomico Demo Forest & the CF. Funding is being sought through a 2008 National Recreational Trails Grant.

3. I have received requests for copies of the CF field maps both for the CAC and the public. The most updated maps with stand level data will be posted on the forest web site by the end of February.

4. Comments from the CAC will be posted on the web site as part of the AWP.

5. I have deleted the paragraph describing "Adaptive Management". This short paragraph was included into the 2008 AWP as a result of a 2006 compliance audit and has caused much confusion. Although it was not required by the auditing team to include this statement, the intent was to demonstrate our compliance with certain certification principals. Adaptive Management is an important component and will continue to be a part of how the forest is operated, however it is best described within the context of the overarching Sustainable Forest Management Plan.

6. I have replaced the word, "chemical" with "herbicide" wherever found to more accurately portray the work being done.

7. The forest web site will be updated in a way which clearly defines the public comment period.

Each year I receive a few comments regarding the use of herbicides on the forest. The Department has worked very hard to reduce the amount of herbicides used with much success. Therefore I would like to clarify on the limited use of this important management tool. Herbicides are not used within any of the ESA's, Core FID, and HCVF areas (18,501 acres/37% of the forest). In DFS areas (20,158 acres/34% of the forest) only ground applications may be used to enhance habitat, which will not kill overstory hardwoods. Furthermore, it is important to realize that the Department has drastically reduced both the annual application rate from 16oz. to 8oz. and the area from 5000 acres to 200 acres historically treated on

the forest. That's a 96% reduction in acres treated per year. The continual need for the use of herbicides is largely based on the abundant regeneration of sweetgum and red maple as a result of wildfire suppression and the abundance of invasive species. It is also important to mention that all current herbicides applications conform to FSC guidelines.

I would like to thank you each of you again for your time and energy that you have put into the AWP process. Your involvement has helped shape the management of the Chesapeake Forest for the better. Please feel free to update me throughout the year on any issue you feel necessary. I would encourage you to review our web site once we make the noted changes for the public review process and let me know what you think.

Sincerely,

Michael G. Schofield
Forest Manager

Public
Comments

November 14, 2007

Mike Schofield and Sam Bennett
Chesapeake Forest Lands
6572 Snow Hill Rd.
Snow Hill, MD 21863

Dear Mr. Schofield,

The following are my comments on the draft **Annual Work Plans** for the **Chesapeake Forest**. Please consider these comments as you revise the drafts of these documents.

Chesapeake Forest FY2009 AWP

General Comments

1) According to Maryland's federally mandated Wildlife Diversity Conservation Plan (WDCP), Maryland has only 1,679 acres of old growth forest. Ninety-five percent of this land is owned by the state, and all of it is in western Maryland. Due to the high conservation value of old growth forests, the WDCP goes on to list specific conservation action to be carried out by MD DNR. Actions listed include the following (bold italics added for emphasis):

- ***Conserve large blocks of contiguous forest*** where appropriate
- Protect all old growth forest habitat and adequate forested buffers
- ***Increase old growth forest habitats where feasible***
- Establish and maintain landscape-scale protected habitat and movement corridors
- Incorporate forest conservation actions into land use and land planning efforts by local, state, and federal agencies
- ***Minimize fragmentation of large, contiguous forest blocks***
- ***Identify areas that will become future old growth forests***

Given the critical role of the state in protecting old growth forests, and the complete absence of such forests on the eastern shore, what is being done on Chesapeake Forest land to implement the conservation actions listed in the MD WDCP?

2) As a related question, what is being done to assess the impact of Chesapeake Forest land management practices on "Species of Greatest Conservation Need" (GCN) and on biodiversity as a whole? This ties in well with the Forest Stewardship Council's Principals 6.1 and 8.2. Specifically, Principal 6.1 states that, "Assessment of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management and the uniqueness of the affected resources -- and adequately integrated into management systems … Environmental impacts shall be assessed prior to commencement of site-disturbing operations." Principal 8.2 states "Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators: … c) Composition and observed changes in the flora and fauna." Effort should be made to obtain sound scientific data on how different management

practices affect wildlife, and which ones are least harmful to GCN species and local biodiversity.

Specific Comments

1) The summary states that there is networking with Salisbury University "conducting species monitoring, a vegetative cross-sectional study, and water quality improvement studies." What is the nature of this work and is it ongoing? In speaking to my colleagues at SU, I have found no indication that these projects are ongoing. Furthermore, the projects that were carried out were extremely limited in scope and did not effectively address the issue of how management strategies are impacting species diversity and community structure within these forests. This entry should be significantly modified so as not to give the mistaken impression that these projects satisfy FSC Principles 6.1 and 8.2. To meet these guidelines, steps should be taken to rigorously monitor the impact of different management strategies on biodiversity and community structure within Chesapeake Forest Lands. Ideally this should be done by setting aside large tracts of old, unmanaged forests with a species composition approximating that of pre-colonial times, and using this as a control group against which managed plots are compared.

2) Regarding recreation, more activity in developing hiking trails would be warmly welcomed by local communities on the lower shore. Hiking trails are sorely lacking on the Eastern Shore, especially on CF property, and those that do exist are not effectively publicized.

3) Under the Silvicultural Activity Overview, Adaptive Management, you state that "in keeping with the spirit of the Adaptive Management approach within the … Forest Stewardship Council's Principal 4.1, it may become necessary to slightly alter the prescription in order to maintain local economies." Principal 4.1 does not address adaptive management, and any concern over adhering to Principal 4.1 can seemingly be addressed within the action plan itself. Furthermore, it is unclear why adaptive management is being invoked for maintaining the local economy rather than to "enhance the value of forest services and resources such as watersheds and fisheries" (Principal 5.5), maintain, enhance, or restore ecological functions (Principal 6.3), "control erosion; minimize forest damage during harvesting" (Principal 6.5), and so on. In fact, adaptive management for maintaining the ecological integrity and biological diversity of these forests would seemingly be more in keeping with the spirit of FSC principals.

3) Several ESA zones 1 and 2 are being thinned, sometimes for a second time. The most troubling of these is D20 Trice. Without having visited this site or having read the FY2004 AWP, it is hard to comment on the appropriateness of the planned thinning. It is hoped that thinning in this 30 year old ESA habitat is meant to enhance the ecological value of this site, consistent with sound scientific evidence that it will do so. If not, the planned thinning seems inappropriate.

4) Aerial spraying: There is a considerable amount of planned spraying of herbicides. Such intensive management runs counter to the spirit of FSC guidelines (though not specifically prohibited by them).

If you require clarification of any of these comments, or have additional questions, please feel free to contact me. Thank you for your time and consideration.

Regards,

Aaron Hogue
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Salisbury University
Salisbury, MD 21801
410-677-5476