EASTERN REGION

STATE FOREST LANDS

ANNUAL WORK PLAN

FISCAL YEAR 2012

Prepared:	(Forest Manager)	1-3-11 Date
Reviewed:	(Regional Manager)	1-4-11 Date
Reviewed:	(Land Acquisition & Planning)	1/10/11 Date
Approved:	(Environmental Specialist)	1·10·11

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DNR Interdisciplinary Team

Citizens Advisory Committee

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ANNUAL WORK PLAN SUMMARY

This document summarizes the proposed activities that will occur on all public forest lands (83,502 acres) managed by the Maryland Forest Service within the Eastern Region during the 2012 fiscal year. These lands include the Chesapeake Forest, Pocomoke State Forest, Wicomico Demonstration Forest and the Seth Demonstration Forest. The fiscal year runs from July 1, 2011 to June 30, 2012. 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 – Assists the Forest Manager in the designs and implementation of management activities on the donated portion of 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 Chesapeake Bay Foundation – Identifies sites for future water quality improvement projects and assists in the implementation by providing volunteers for reforestation.

- 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.

- 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.

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 undergo general maintenance to maintain access for forest management activities (i.e. logging, prescribed burning and wildfire control). Interior roads within each complex will be brush hogged where possible by the MFS & the WHS. Many of the roads have grown shut and require special heavy equipment to remove the larger trees. Brushing of these roads will improve access for the public and help maintain firebreaks for communities at risk from wildfire.

- 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.

- National Recreational Trail (NRT) Grant: Chesapeake Forest, Wicomico Demonstration Forest and Seth Demonstration Forest / Trail Maintenance and Rehabilitation – Utility Vehicle

  The Forest Service is responsible for the upkeep and maintenance of approximately 286 miles of recreation trails and 17 designated public parking areas. The trail systems are used for equestrian purposes, mountain biking, bird watching, hunting access and hiking. Many overgrown sections of the trails (14 + known miles) have not been maintained due to the lack of proper equipment. Maintenance to these sections are typically conducted by hand crews using brush axes and chainsaws in order to maintain access and trail connectivity. The purchase of a UTV with a dump bed will improve our ability and efficiency in maintaining the trail network; particularly remote areas by allowing us to transport heavy tools and gravel to trail locations. The acquisition of a UTV will allow access to areas that have been previously inaccessible with motorized equipment due to size and weight constraints. As an example, in 2007 a four foot wide nature trail system was established by a NRT Grant on the CF Tyler tract along the Nanticoke River. This trail system requires continued maintenance with brushing, gravel and sign replacement in order to maintain public access and use. The small utility bed on the all terrain vehicle will allow the distribution of gravel or crushed shells in low wet areas of the trail system. The hydraulic quick connect system will enable the use of a power auger for installing sign posts along the trails. The overall compact size and versatility of the UTV will improve our trail maintenance program.

  Project total cost: $16,500

Recreation:

- Develop, improve and post public parking areas for the 46,000 acres designated for public use.

- Host the annual Chesapeake Forest 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, Geocahing, etc.

- National Recreational Trail Grant: CF 2011 Marshyhope Trail Enhancement Project

  Maintain the existing 19.5 miles of hiking, horseback riding and birding trails within the 3,355 acre CF Marshyhope tract (see attached map). The trail system is used frequently by hikers, bird watches, horseback riders and hunters. This site is one of the largest public recreation areas in eastern Dorchester County and is located along 3.2 miles of the Marshyhope Creek. Forest trails are located along old woods roads that require routine maintenance to provide users with a quality outdoor experience. There is also a 1.2 mile single track trail for bird watching that requires maintenance. Trail sections are blocked by over hanging branches, brush, downed trees and vines that need to be cleared to make them passable.

  The project will involve maintaining all 19.5 miles of existing trail, creating 1.8 miles of additional single track trail along the scenic Marshyhope Creek, and establishing 2 primitive camp sites along the river accessible by kayak or canoe. There is a public launch 1.4 miles upstream in Federalsburg population (2,620). Trail maintenance will be conducted with a flail axe mower, removing overhanging vegetation and brush; downed trees and vines will be removed by hand with chainsaws. New trail construction will be conducted by hand crews using brush axes and chainsaws with the aid of a Utility Terrain Vehicle (UTV). Parking areas at the 7 trail heads will be improved for trail access, by adding additional gravel where needed, clearing brush from around the edges, and removing trash. New parking and trail signage will be added as needed. An updated map highlighting the new trail sections and remote primitive camping sites will be placed on the Chesapeake Forest web site.

  Project total cost: $33,600

- National Recreational Trail Grant: PSF 2011 Trail\Stabilization Project

  This project will improve the existing trail/road system in the Tarr Tract (8 miles), Hudson Tract (4 miles) and Colbourne Tract (7 miles). These areas contain approximately 19 miles of road/trails. The road/trails are utilized by numerous user groups including hunters, hikers, mountain bikers and bird watchers. This project benefits the recreational trail user by improving access and road/trail conditions.

  Seasonal labor would mow roads with a tractor and bush-hog, remove over-hanging vegetation with hand tools and cut back roads/trails with hand and mechanical tools. Three parking lots would also be improved through brush removal, sign posting and gate construction. Personal would also remove invasive plants growing along roads, trails and parking areas. Planning and design is completed. A portion of the project is adjacent to Wildlands and some road/trails travel through High Value Conservation Forest. This project will enhance eco-tourism opportunities as it involves improvement work on a mountain bike trail and hiking trails. These areas can be accessed from the Beach to Bay Indian Trail.

  Project Total 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.

- Collect native genotype pond pine (*Pinus serotina*) and short-leaf pine (*Pinus echinata*) on the forest in an effort to aid future management objectives on the Pocomoke and Chesapeake Forests.

- Provide assistance to the State Tree Nursery with maintenance of Seed Orchards on the Pocomoke State Forest.

Silvicultural Activity Overview

Table 2 summarizes the proposed silvicultural activities for the 2012 annual work plan on approximately 1601 acres (2%) of the Regional State Forests.

Table 2. 2012 Silvicultural Activity Overview.

Activity	Acres
Final/Variable Retention Harvest	177.1
Shelterwood Harvest	67.0
Seed Tree Harvest	114.8
1st Commercial Thinning	1126.0
2nd Commercial Thinning	105.9
Pre-Commercial Thinning	10.4
Total	**1601.2**

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 chemicals (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 5^{th} 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

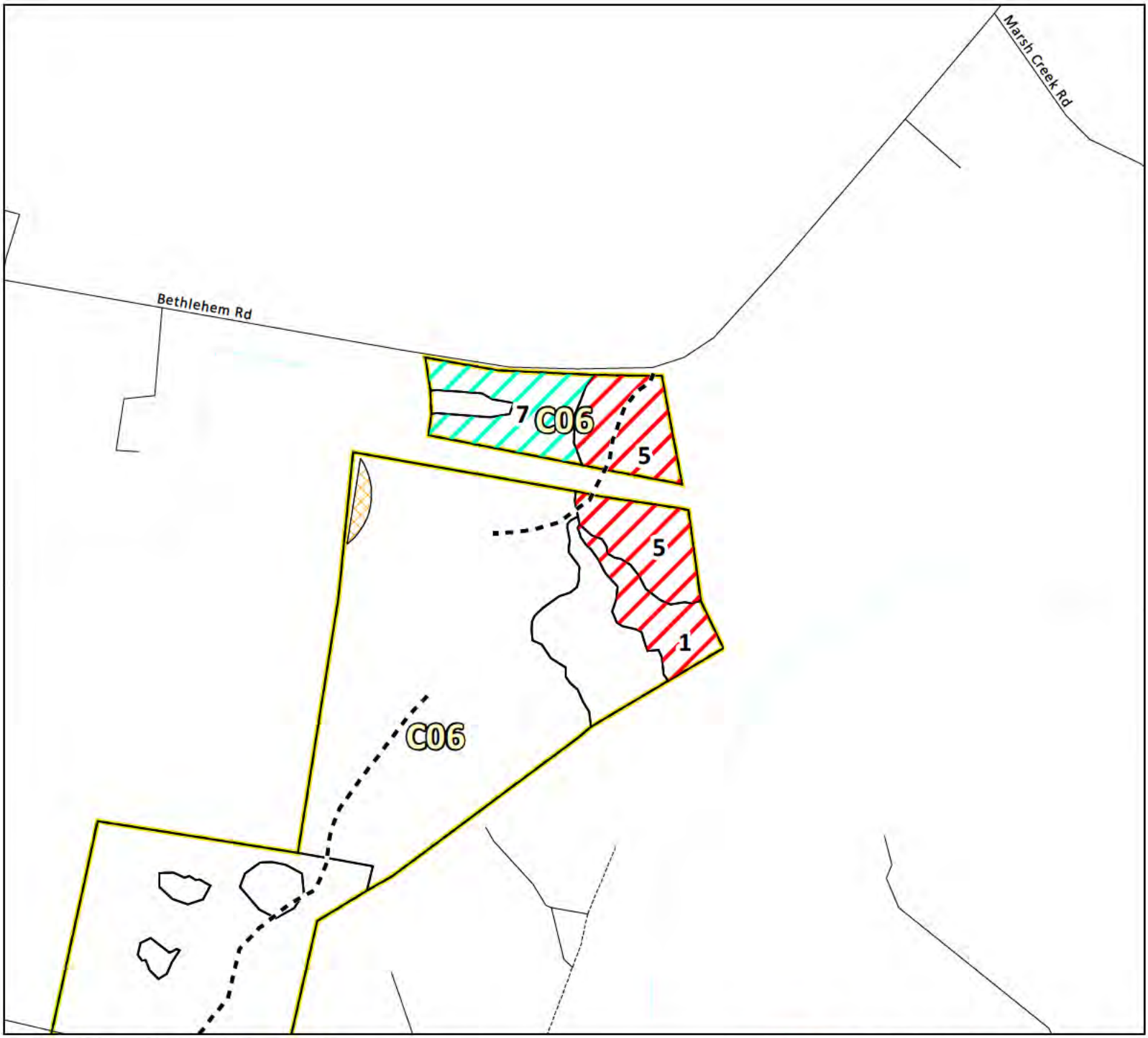
Description of 2012 Activities – Caroline County

Complex C06 Cedar Lane

A final harvest is proposed for stands 1 & 5. Both stands occupy 12.7 acres and contain naturally regenerated loblolly pine that was established in 1921 and 1973. These stands are adjacent to one another and will be hand planted the following spring post harvest. Herbicide application will be conducted on an as needed basis post regeneration monitoring. A 100 foot visual buffer will be retained along Bethlehem road.

A first thinning is proposed for stand 7. Stand 7 is a 5.5-acre loblolly pine plantation that was established in 1983.

Both stands are located within the General Management Area.



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1 inch = 660 feet

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Chesapeake Forest

FY12 Annual Work Plan Map for CF-C06-1/5/7
Cedar Lane Complex
First Thinning Area: 5.5 Acres
Final Harvest Area: 12.7 Acres
ASC-DNR Forest Service 10/2010

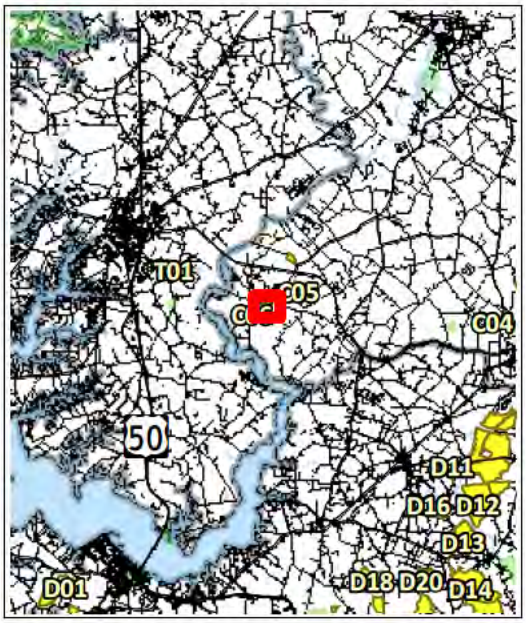
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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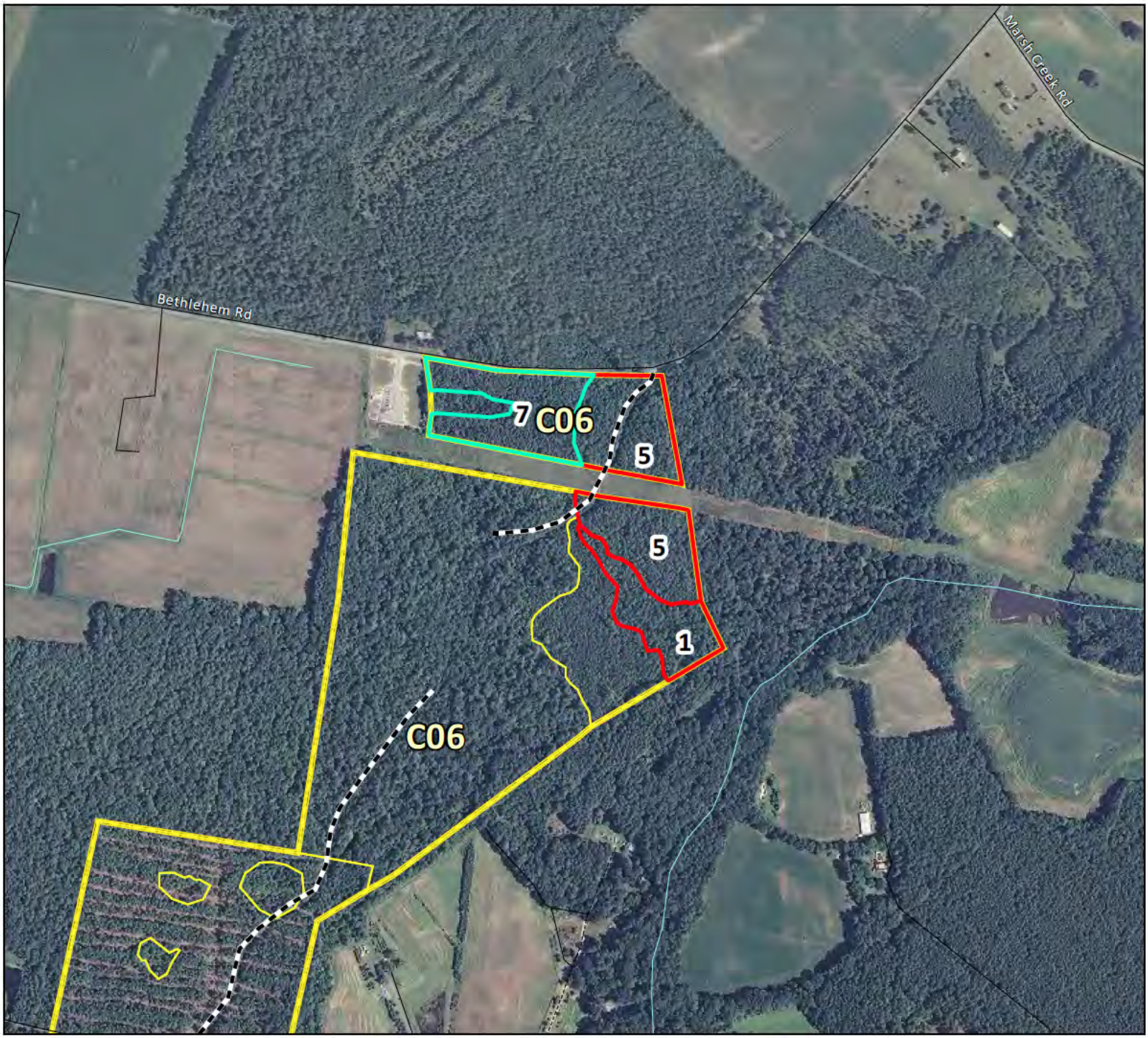

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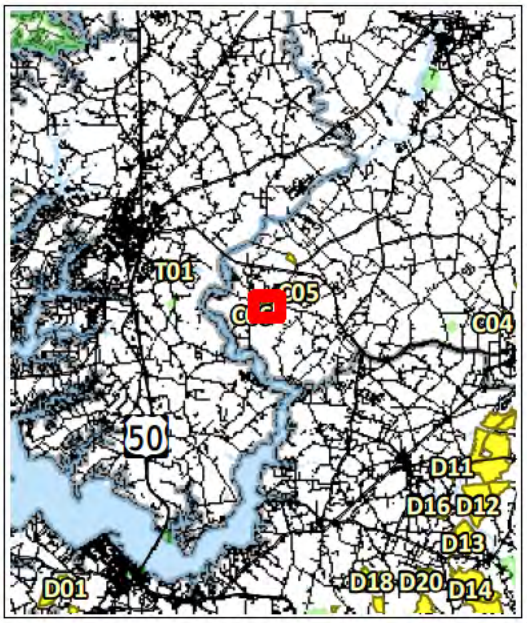
Chesapeake Forest

FY12 Annual Work Plan Map for CF-C06-1/5/7
Cedar Lane Complex
First Thinning Area: 5.5 Acres
Final Harvest Area: 12.7 Acres
ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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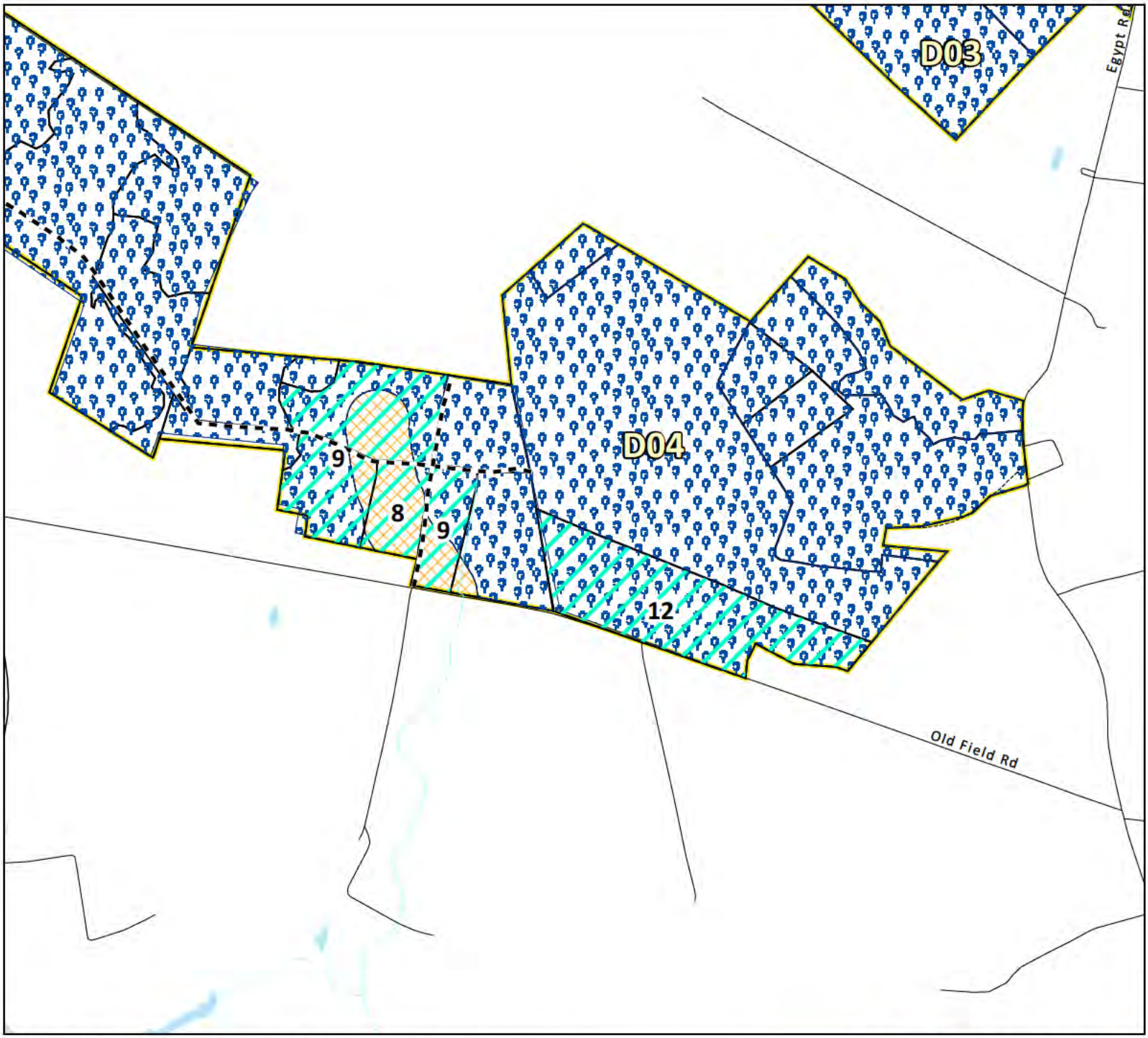
Description of 2012 Activities – Dorchester County

Complex D04 W.T. Willis/Linder

A first thinning is proposed for stands 8, 9 & 12. Stands 8 & 9 are a 63.5-acre loblolly pine plantation, which was established in 1992 & 1990 respectfully. Stand 12 is a 48.3-acre natural loblolly stand. All these stands contain a significant amount of oak species that are co-dominant or suppressed in the forest canopy. Oak species observed on the site include: white oak, willow oak, swamp chestnut oak and s. red oak. Yellow poplar was also observed. A commercial thinning in these stands will reduce the loblolly pine component and create canopy gaps for the residual oaks to take a more dominant place in the stand composition. These stands are located within a DFS Management Area and are part of a recent land acquisition by the State.

Complex D24 Warner

A variable retention harvest is proposed for stand 5. Stand 5 is a 32.7-acre loblolly pine plantation, which was established in 1977 and last thinned in 2002. This stand contains well established beech and oak (s. red oak & willow oak) that will be retained across the site. Natural regeneration is the preferred method in reforesting the site. However, if monitoring proves this unsuccessful, hand planting of the site will take place. This stand is located within the General Management Area.



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1 inch = 1,320 feet

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Chesapeake Forest

FY12 Annual Work Plan Map for CF-D04-8/9/12
W.T. Willis Complex
First Thinning Area: 111.8 Acres

ASC-DNR Forest Service 10/2010

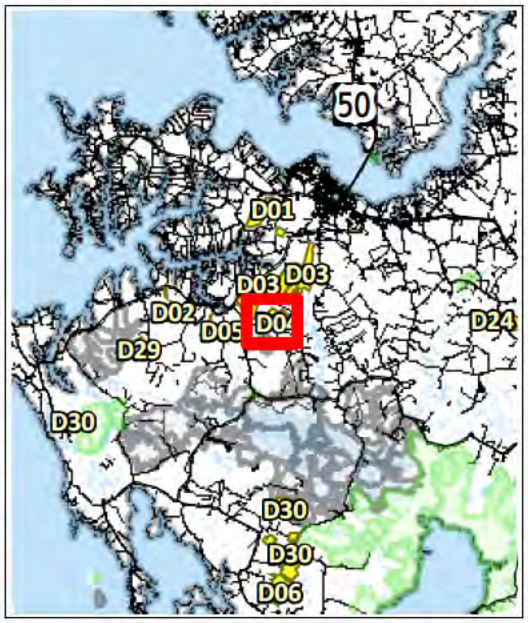
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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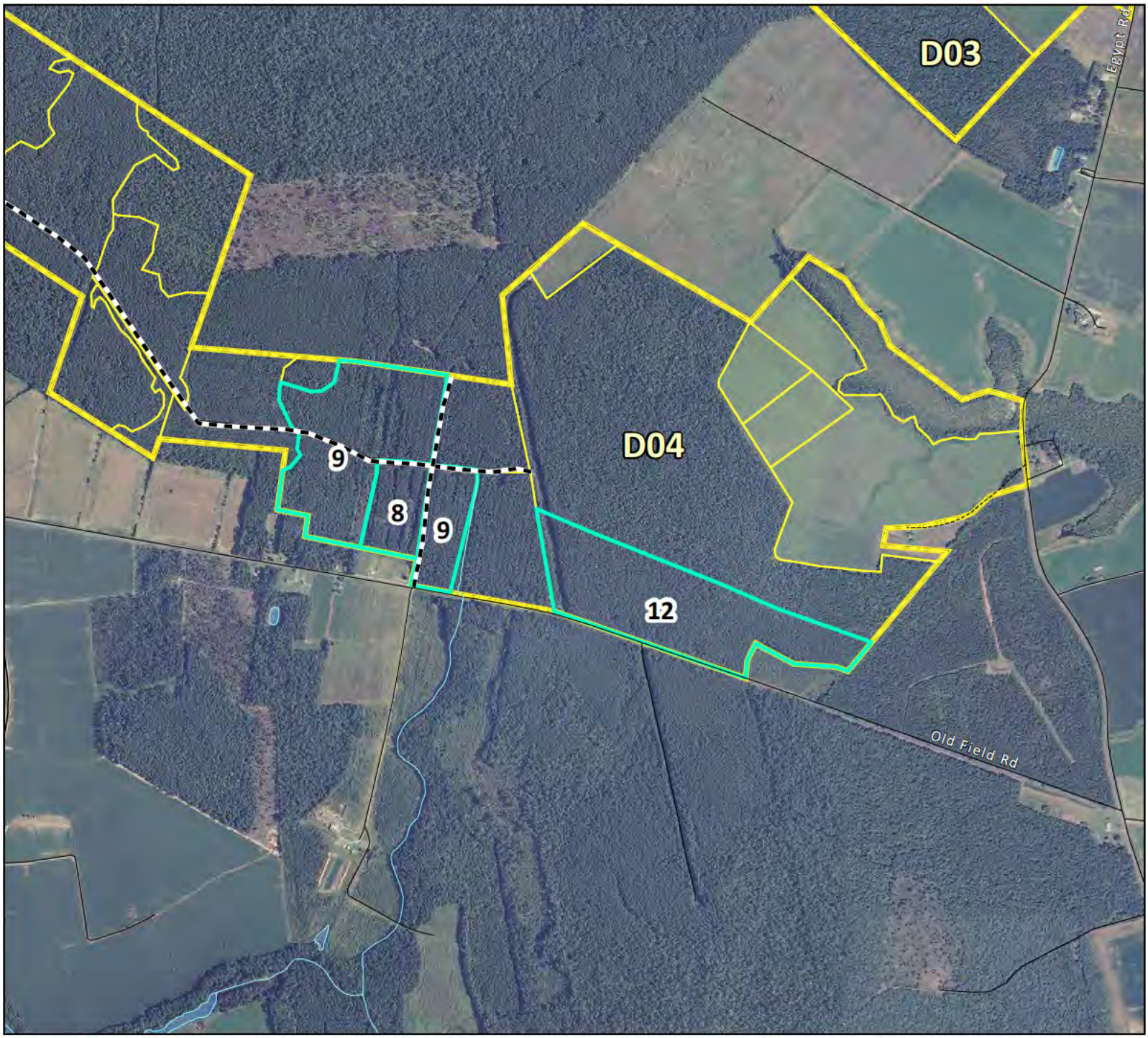

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1 inch = 1,320 feet

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Chesapeake Forest

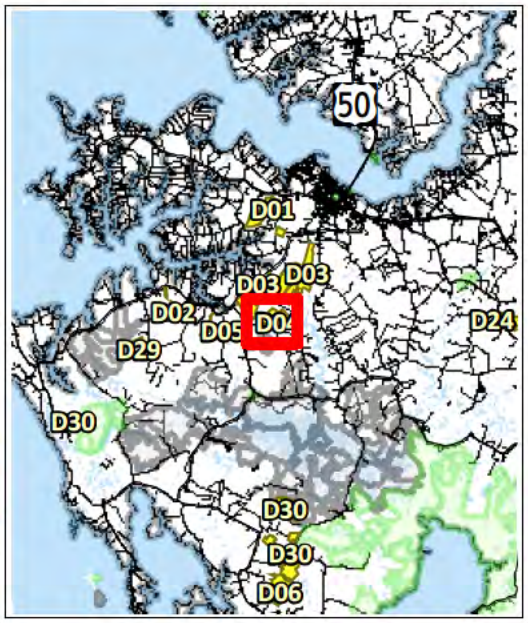
FY12 Annual Work Plan Map for CF-D04-8/9/12
W.T. Willis Complex
First Thinning Area: 111.8 Acres

ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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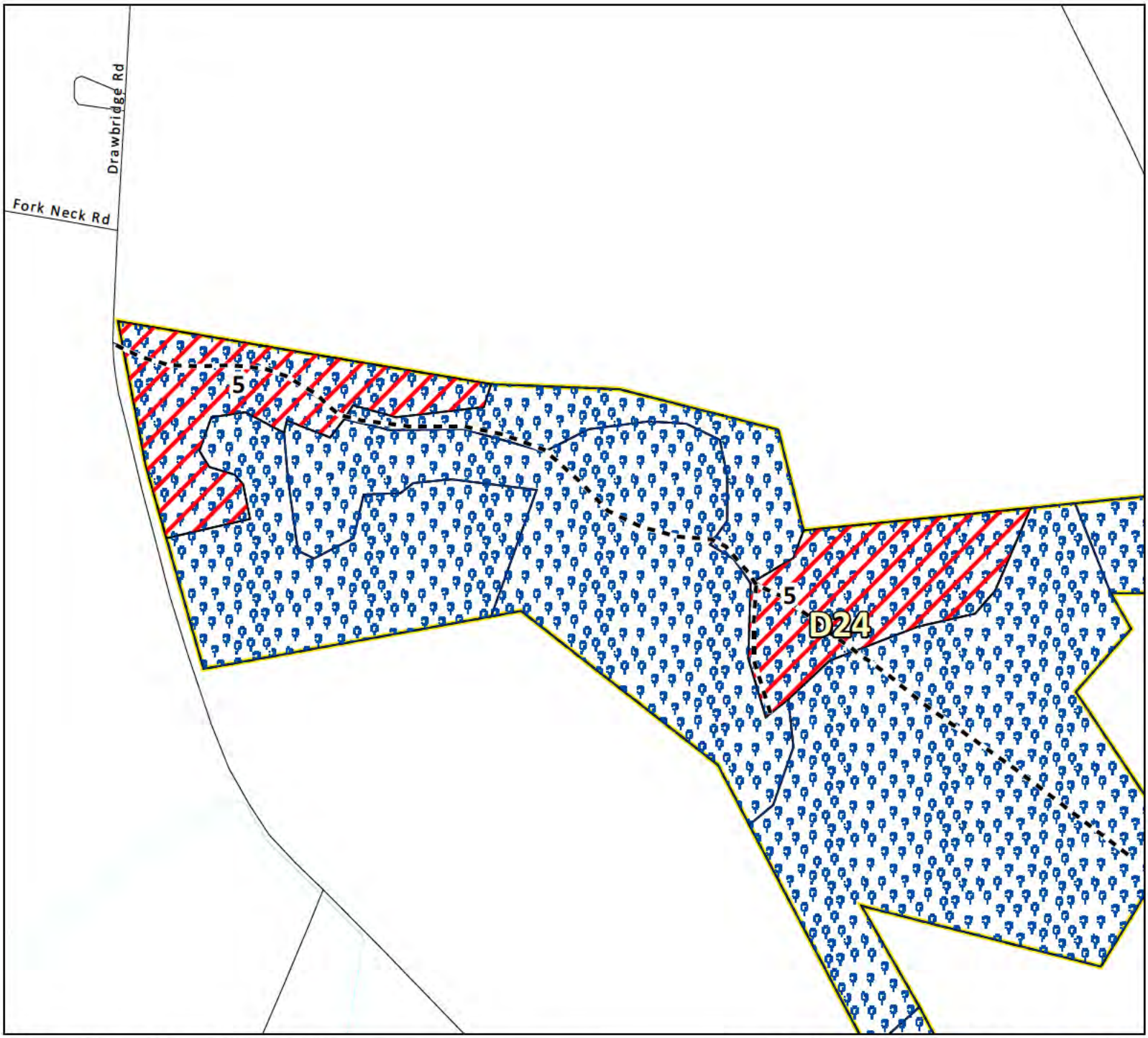

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1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-D24-5

Warner Complex

Variable Retention Harvest Area: 32.7 Acres

ASC-DNR Forest Service 10/2010

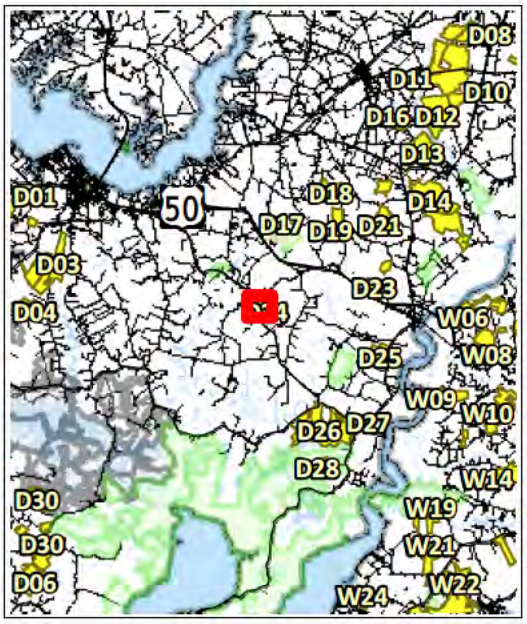
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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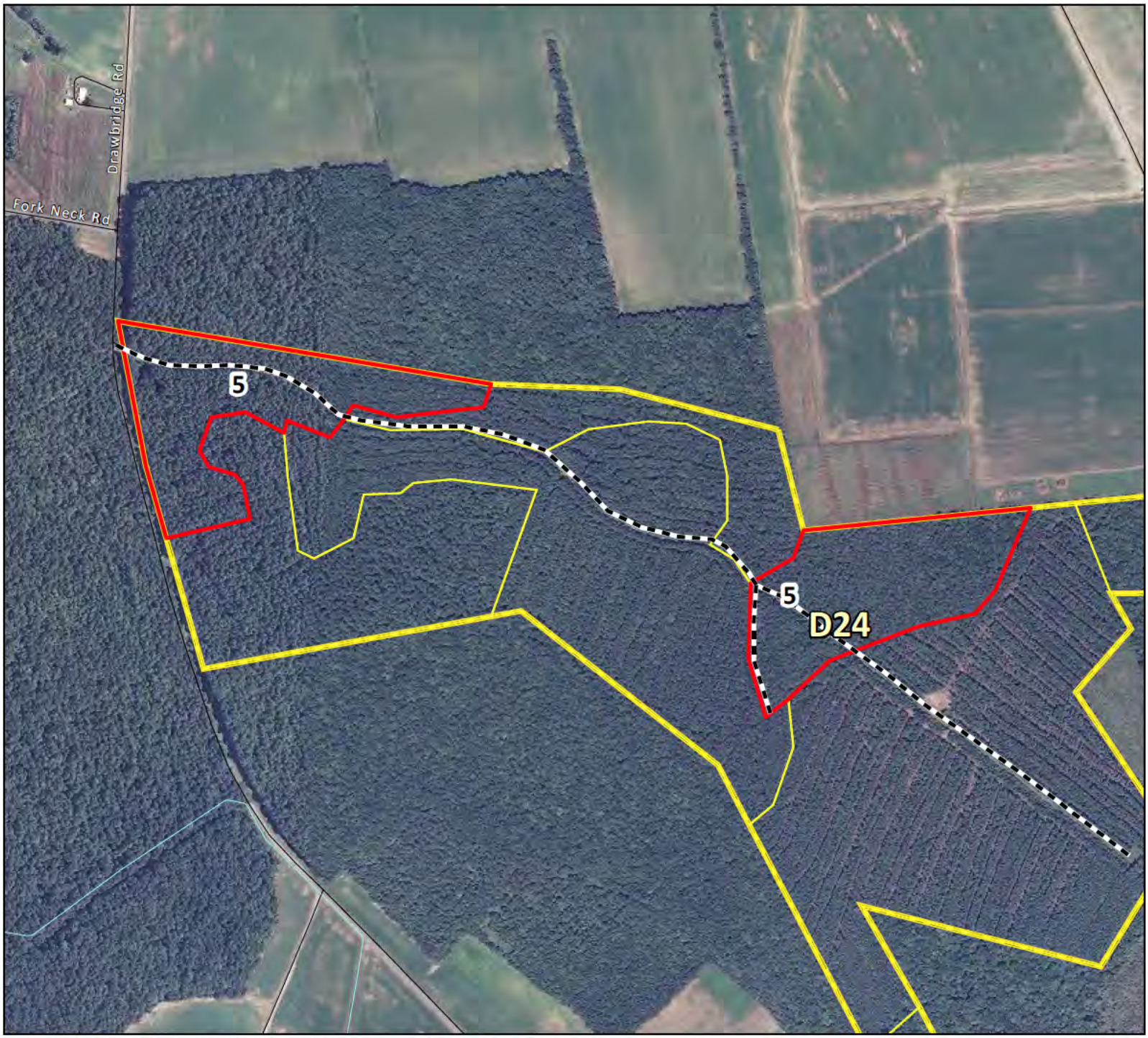

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1 inch = 660 feet

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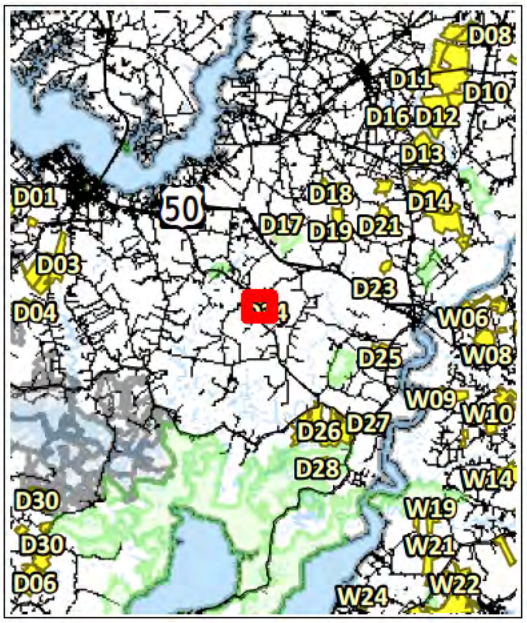
Chesapeake Forest

FY12 Annual Work Plan Map for CF-D24-5
Warner Complex
Variable Retention Harvest Area: 32.7 Acres
ASC-DNR Forest Service 10/2010



Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE

Description of 2012 Activities – Worcester County

Complex WR01 Timmons

A first thinning is proposed for Stands 3, 8 & 10. Stands 3 & 8 were established in 1991 and stand 10 in 1988. The total area to be thinned is 153 acres. Thinning will occur within the riparian buffer portion of the HCVF and not the ESA. The riparian buffer thinning objective is to reestablish a mixed forest type by reducing the pine component and creating growing space for hardwood species. These stands are located within the General Management Area.

Complex WR08 Godfrey

A pre-commercial thinning is proposed for stand3. Stand 3 is a 10.3 acre loblolly pine plantation that was established in 2005. This stand is within the General Management Area.

Complex WR09 Perkins

A first thinning is proposed for stands 1 and 2 which total 49.2 acres. Stand 1 is a loblolly pine plantation that was established in 1993, and stand 2 is a loblolly pine plantation that was established in 1992.

A shelterwood harvest is proposed for stand 3 which is 47.7 acres. Stand 3 is a loblolly pine plantation established in 1976, first thinned in 1995, and second thinned in 2003.

Stands 1, 2 and 3 are located within the General Management Area.

Complex WR12 Purnell

A final harvest is proposed for stand 2 within the ESA Zone3 (pulpwood management) and a first thinning is proposed within the remainder of stand 2 (outside ESA Zone 3). Stand 2 is a 73.9-acre ecotonal loblolly pine plantation that was established in 1992 along a xeric sand ridge. There is an abundance of oaks, hickory, sedges and ferns where sunlight has penetrated the pine canopy. The proposed treatments will release the oaks and aid in the re-establishment of a natural community; particularly where the stand transitions from low wet woods to the xeric sand ridge. Stand 2 is located within an ESA Zone 3 & General Management Area.

*An onsite meeting will occur with Heritage staff to discuss specific management options and landing zone locations prior to harvesting.

Complex WR19 Pricilla Pusey

A first thinning is proposed for stands 3 and 5 which total 43.5 acres. Stands 3 and 5 are loblolly pine plantations that were established in 1990 and 1991 respectively.
Both stands are located within the General Management Area.

Complex WR22 Whitesburg

A first thinning is proposed for stand 5 which totals 48.9 acres. Stand 5 is a loblolly pine plantation that was established in 1993. This stand is located within the General Management Area.

Complex WR23 Apgar

A first thinning is proposed for stands 1, 3, and 4 which total 166.8 acres. Stands 1, 3 and 4 are loblolly pine plantations that were established in 1969, 1993 and 1974 respectfully. These stands are located within ESA and DFS Future Core Areas.

Complex WR24 Johnson and Johnson

A variable density harvest mimicking a natural disturbance is proposed for stand3 which will total 89.6 acres. Stand 3 is a loblolly pine plantation that was established in 1966.

A 37.5 acre final harvest is proposed in the southern most section, a 32.8 acre seed tree harvest is proposed in the middle section, and a 19.3 acre shelterwood harvest is proposed for the northern section.

Harvesting activities will not occur in the ESA Zone 1 adjacent to Sand road. Stand 3 is located within the DFS Future Core Area.

Complex WR25

A seed tree harvest is proposed for 40 acres of stand 11. Stand 11 is a loblolly pine plantation that was established in 1965 and first thinned in 1994. A 150 foot buffer will be retained along Whitesburg road. Stand 11 is located in a DFS Future Core Area.

Complex WR37 Trader

A second thinning is proposed for stands 1 & 2. Stands 1 & 2 are loblolly pine plantations that were established in 1983 & 1986 respectfully. The 88-acres to be thinned has been prescribed burned within the last three years and was first commercially thinned in 2001. There are oaks in the sub canopy that should respond well to an additional thinning and continued burning. These stands are located within the DFS Management Area.

Complex WR40 Dunn Swamp

A final harvest is proposed for 40 acres of stand 3. Stand 3 is a loblolly pine plantation that was established in 1970 and was first thinned in 1994 and second thinned in 2001. A 75 foot buffer will be retained along a large ditch on the southern side of the harvest.

The harvest area will be monitored for natural regeneration. If this does not occur, the site will be prepared and hand planted with loblolly pine. Stand 3 is located within the General Management Area.

Complex WR45-1 – Foster Estate

A first thinning is proposed for stand 1. Stand 1 is a loblolly pine plantation that was established in 1991 and is 25.1 acres.

Stand 1 is located in an ESA Zone 1, G3 (Inland Sand Dune), and Core FIDS area.

Complex WR45-2 – Foster Estate

A first thinning is proposed for stands 9 and 42. Stand 9 is a loblolly pine plantation that was sprayed in 1992, established in 1993 and is 61.1 acres. Stand 42 is a loblolly pine plantation that was established in 1993 and is 3.2 acres.
Stands 9 and 42 are located in an ESA Zone 1 and Core FIDS area.

*Logging equipment will not enter the open powerline area.

Complex WR45-3 – Foster Estate

A first thinning is proposed for stands 18, 36, 48, part of 55, 75, and 108 totaling 183.7 acres. Stand 55 was established in 1972, stand 18 was established in 1975, stand 36 was established in 1983, stands 48 and 108 were established in 1985, and stand 75 was established in 1988.

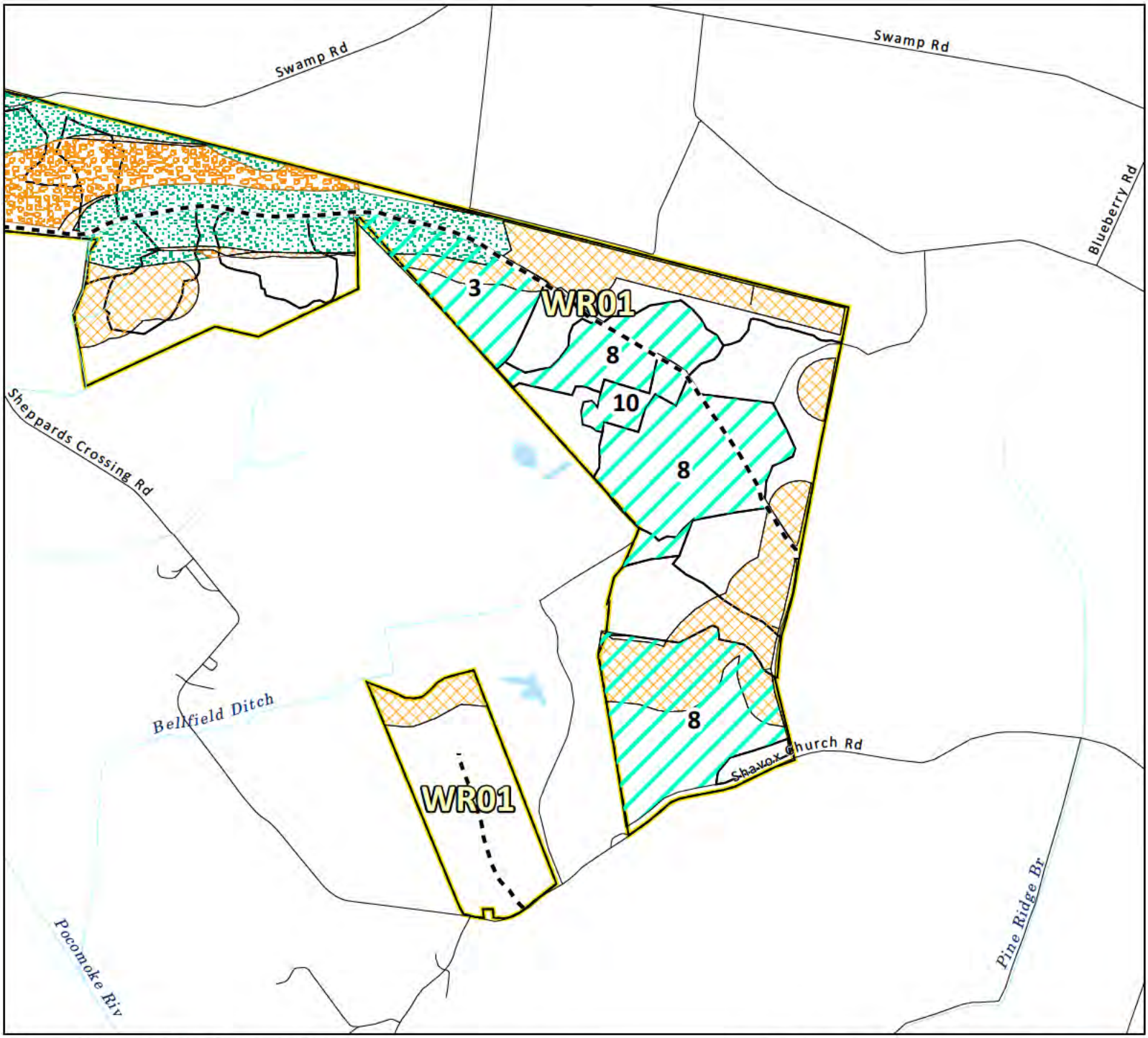
Stand 55 will retain a higher basal area than the other stands due to higher initial stocking of both pine and hardwood species.

Stands 36 and 108 are located within an HCVF (Inland Sand Dune) area. Removal of loblolly pine and retention of shortleaf pine, pitch pine, hickory, and oak species is expected for these stands. All stands are located in a Core FIDS area, and stands 36, 55, and 75 have portions in an ESA Zone 1.

*Logging equipment will not enter the open powerline area.

Complex WR45-4 – Foster Estate

A first thinning is proposed for stand 14. Stand 14 was established in 1986 and is 36.7 acres. A higher residual basal area is expected due to higher initial stocking and hardwood component. Portions of stand 14 are located within an HCVF area. The majority of the stand is located in a Future Core DFS area, and the remainder is located in a Core FIDS area.



0 660 1,320 1,980 2,640 Feet

1 inch = 1,320 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR01-3/8/10
Timmons-Donaway Complex
First Thinning Area: 153 Acres

ASC-DNR Forest Service 10/2010

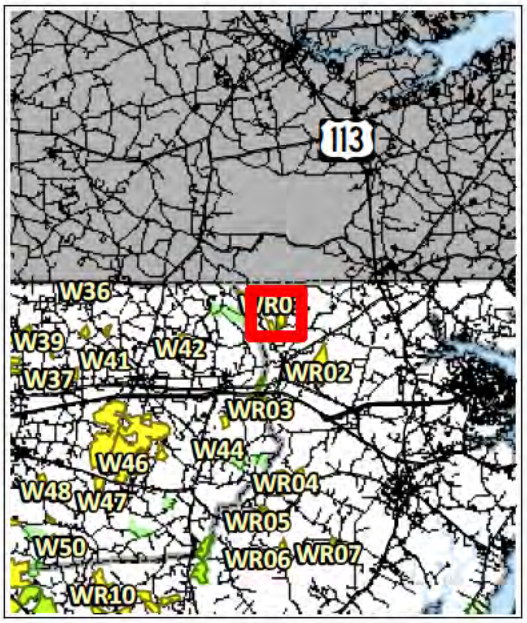
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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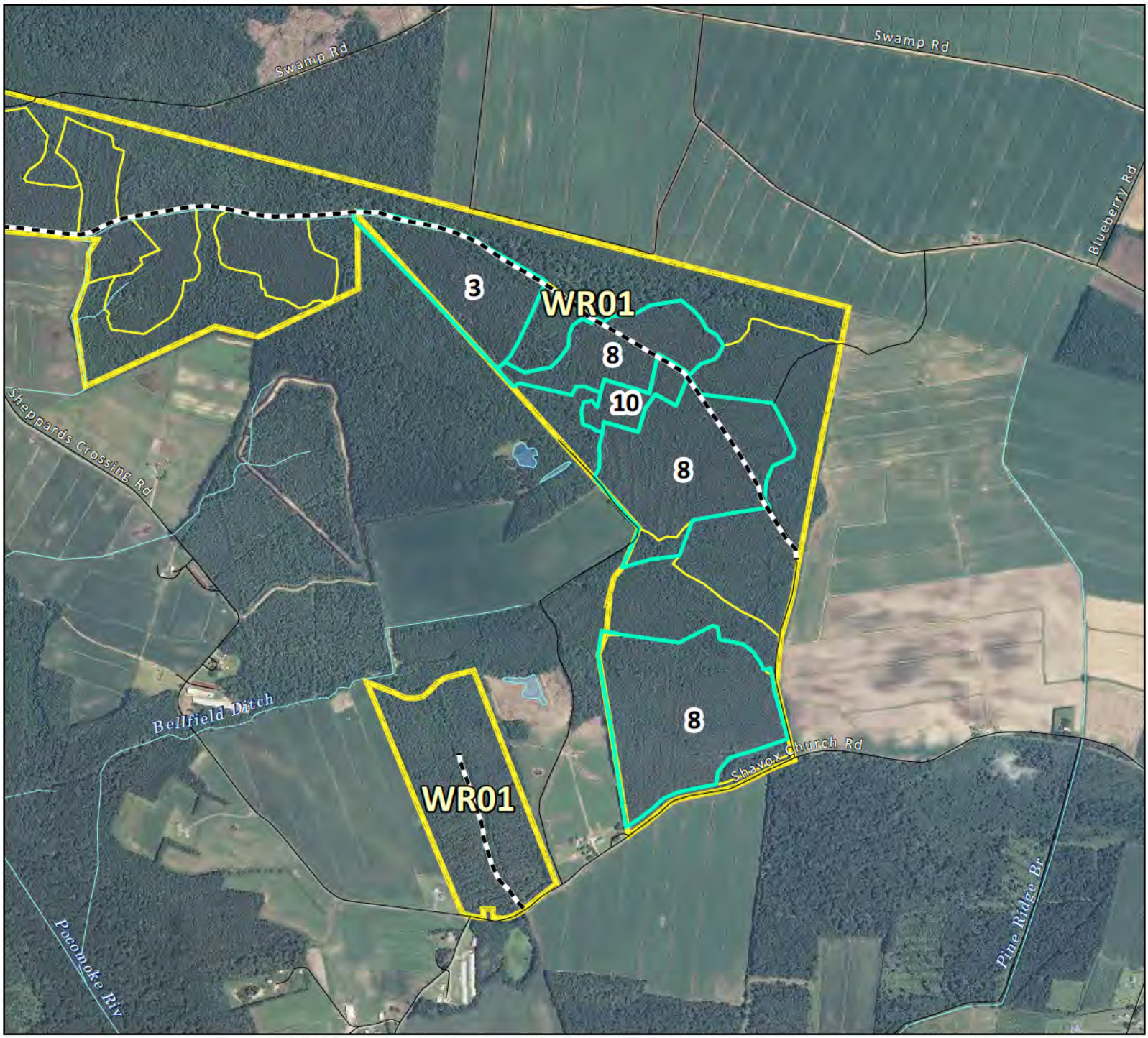
MARYLAND DNR FOREST SERVICE



0 660 1,320 1,980 2,640 Feet

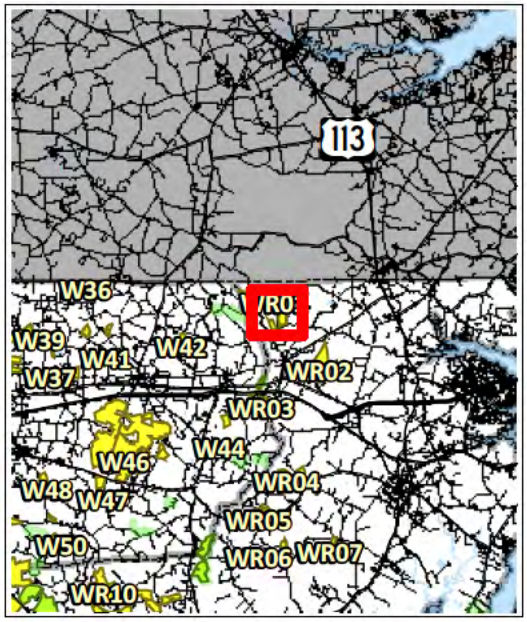
1 inch = 1,320 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR01-3/8/10
Timmons-Donaway Complex
First Thinning Area: 153 Acres

ASC-DNR Forest Service 10/2010



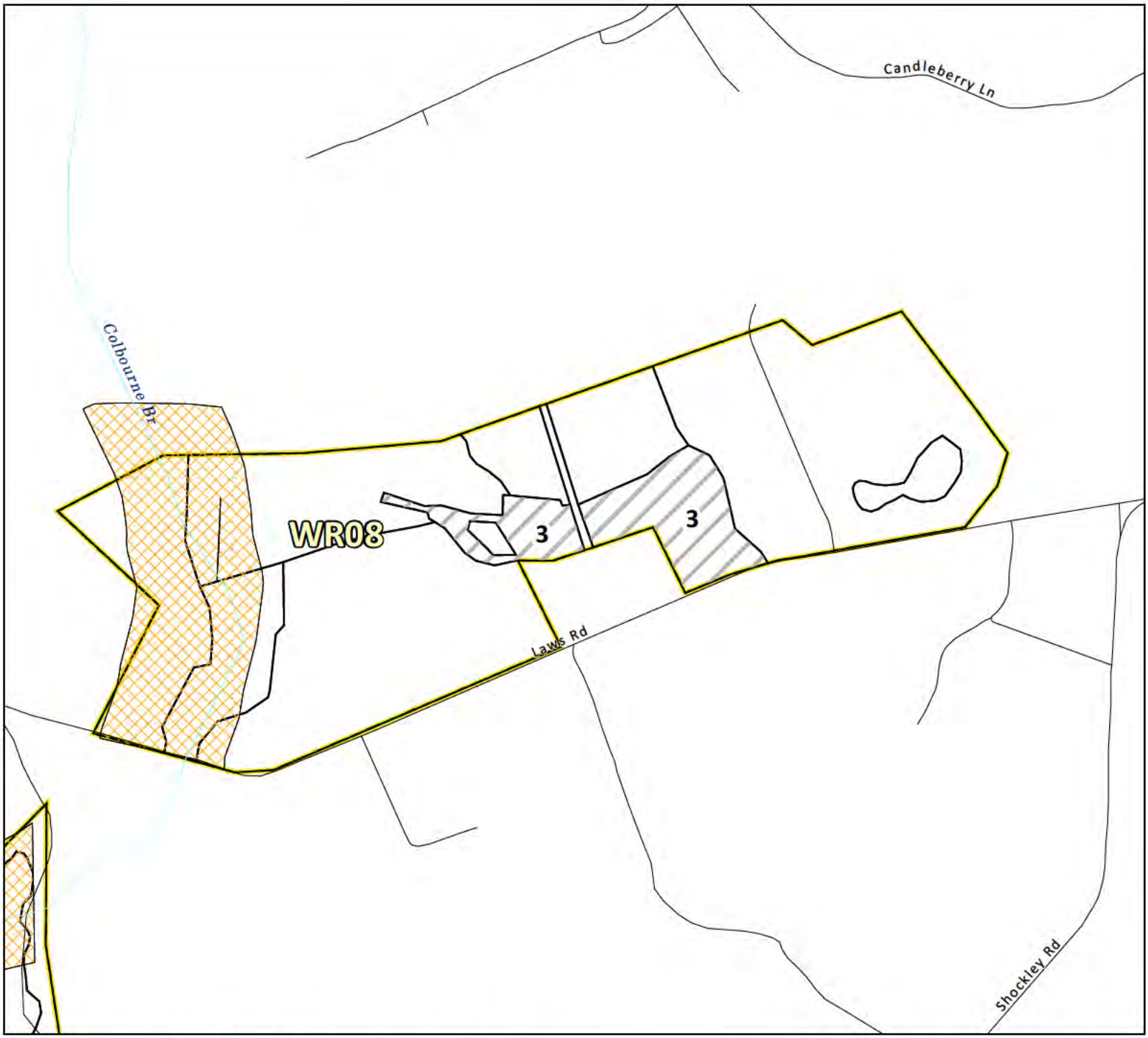
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR08-3
Godfrey Complex
PCT Area: 10.4 Acres

ASC-DNR Forest Service 10/2010

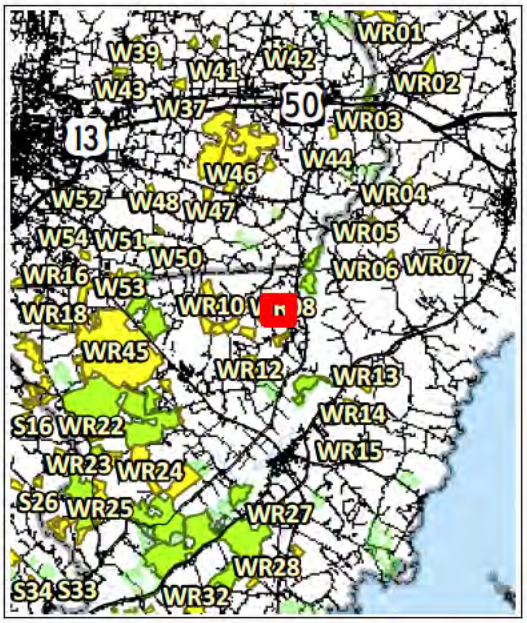
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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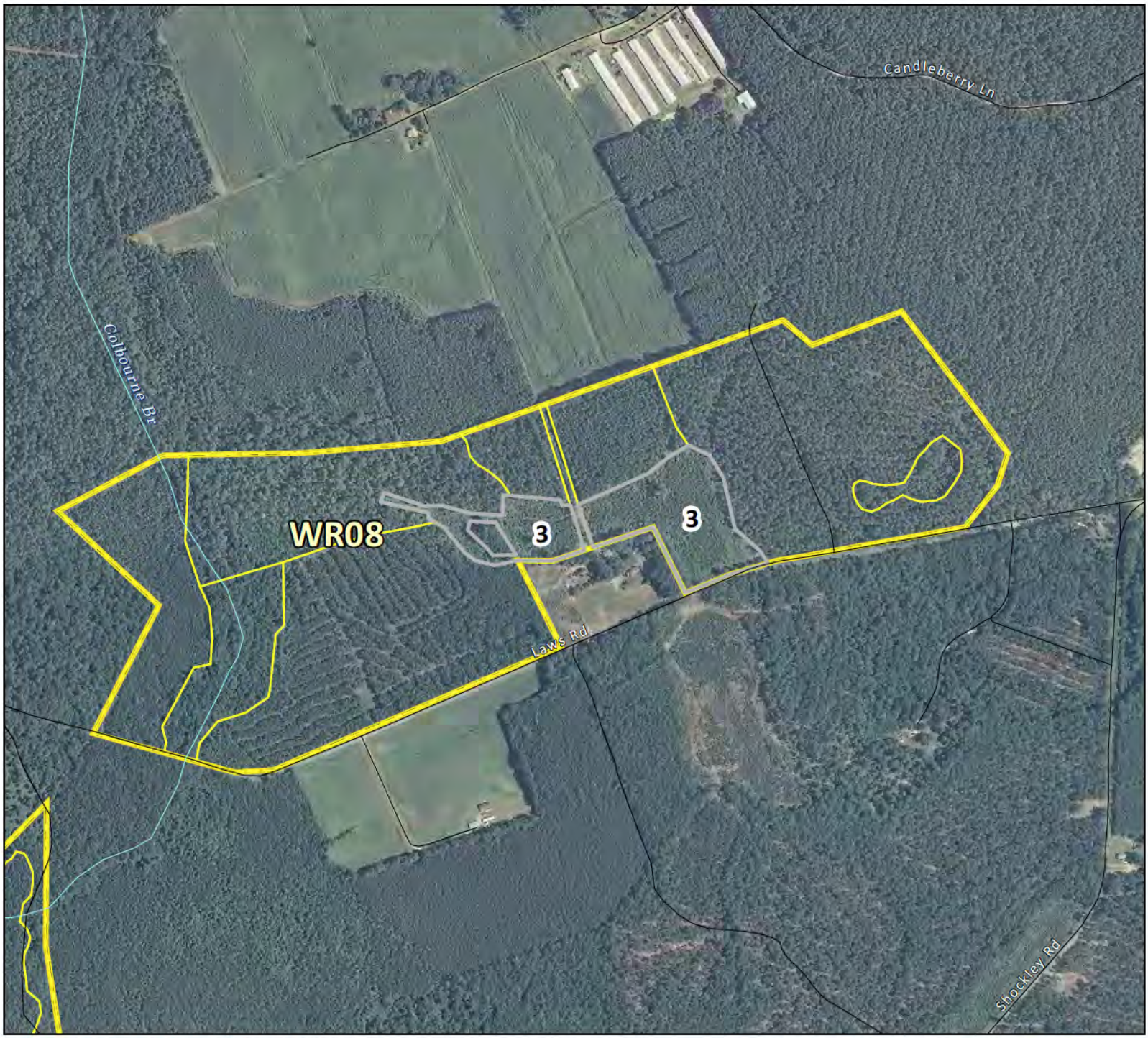


0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

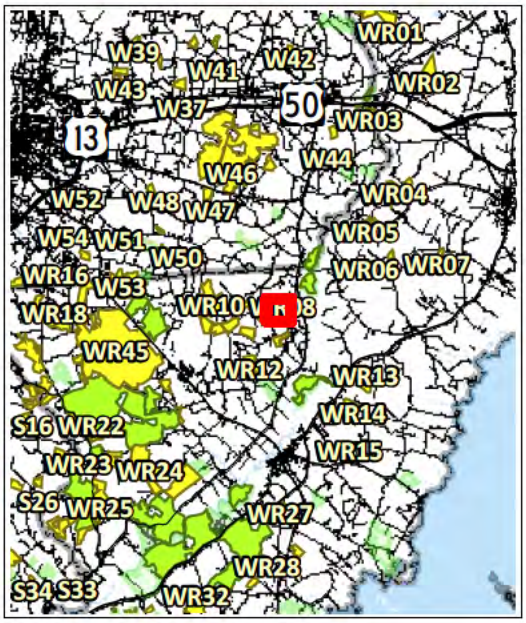
FY12 Annual Work Plan Map for CF-WR08-3
Godfrey Complex
PCT Area: 10.4 Acres

ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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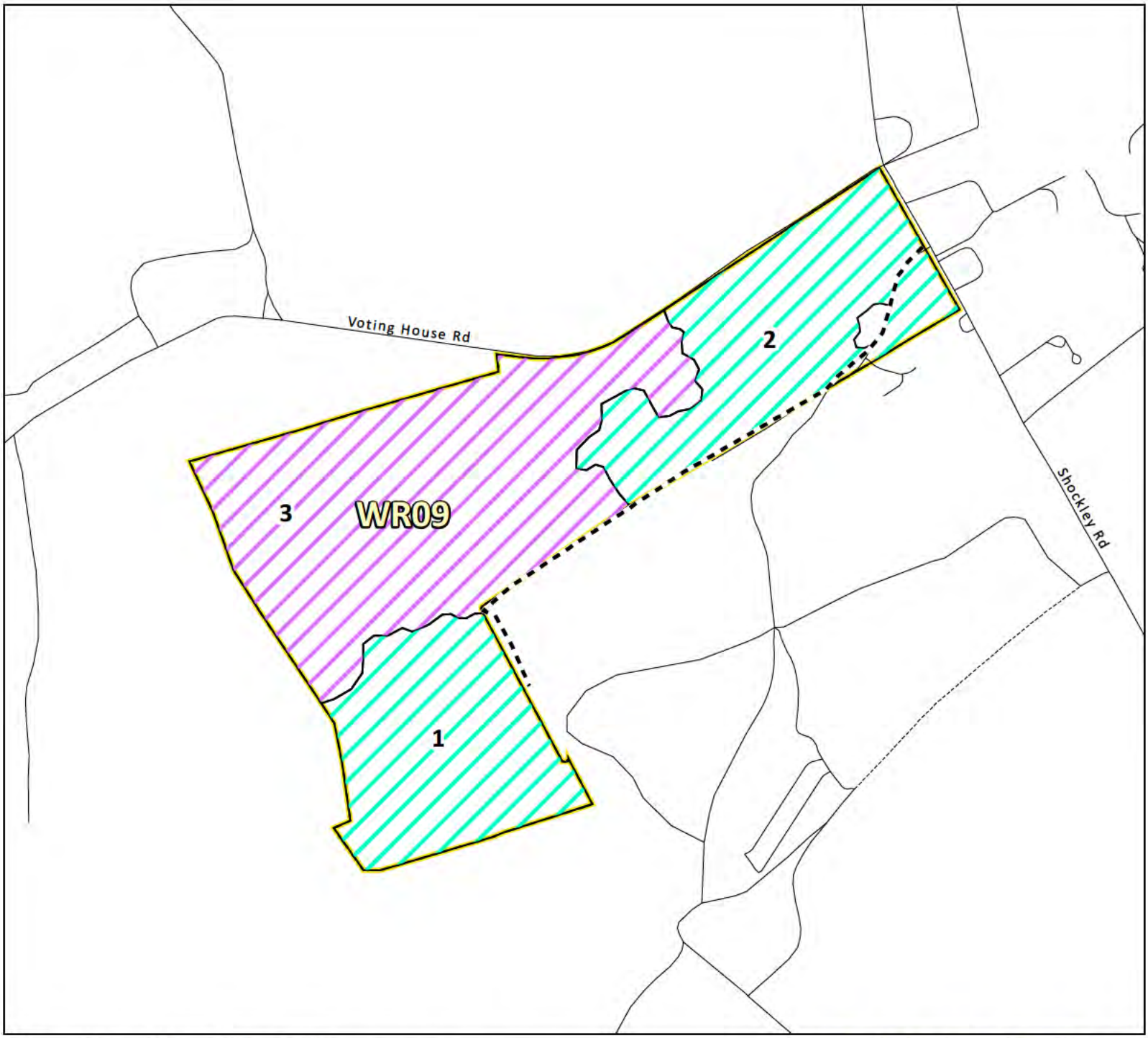
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR09-1/2/3
Perkins Complex
First Thinning Area: 49.2 Acres
Shelterwood Harvest Area: 47.7 Acres
ASC-DNR Forest Service 10/2010

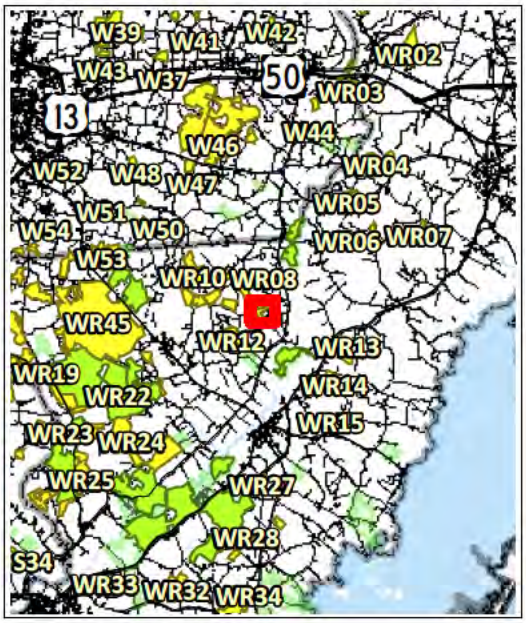
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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0 330 660 990 1,320 Feet

1 inch = 660 feet

N

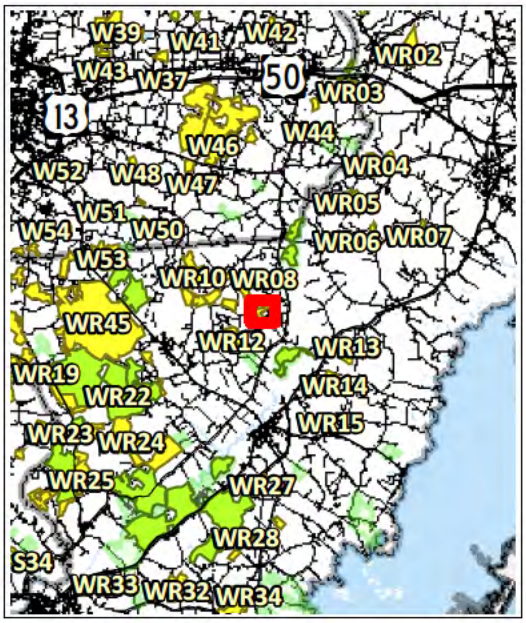
Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR09-1/2/3
Perkins Complex
First Thinning Area: 49.2 Acres
Shelterwood Harvest Area: 47.7 Acres
ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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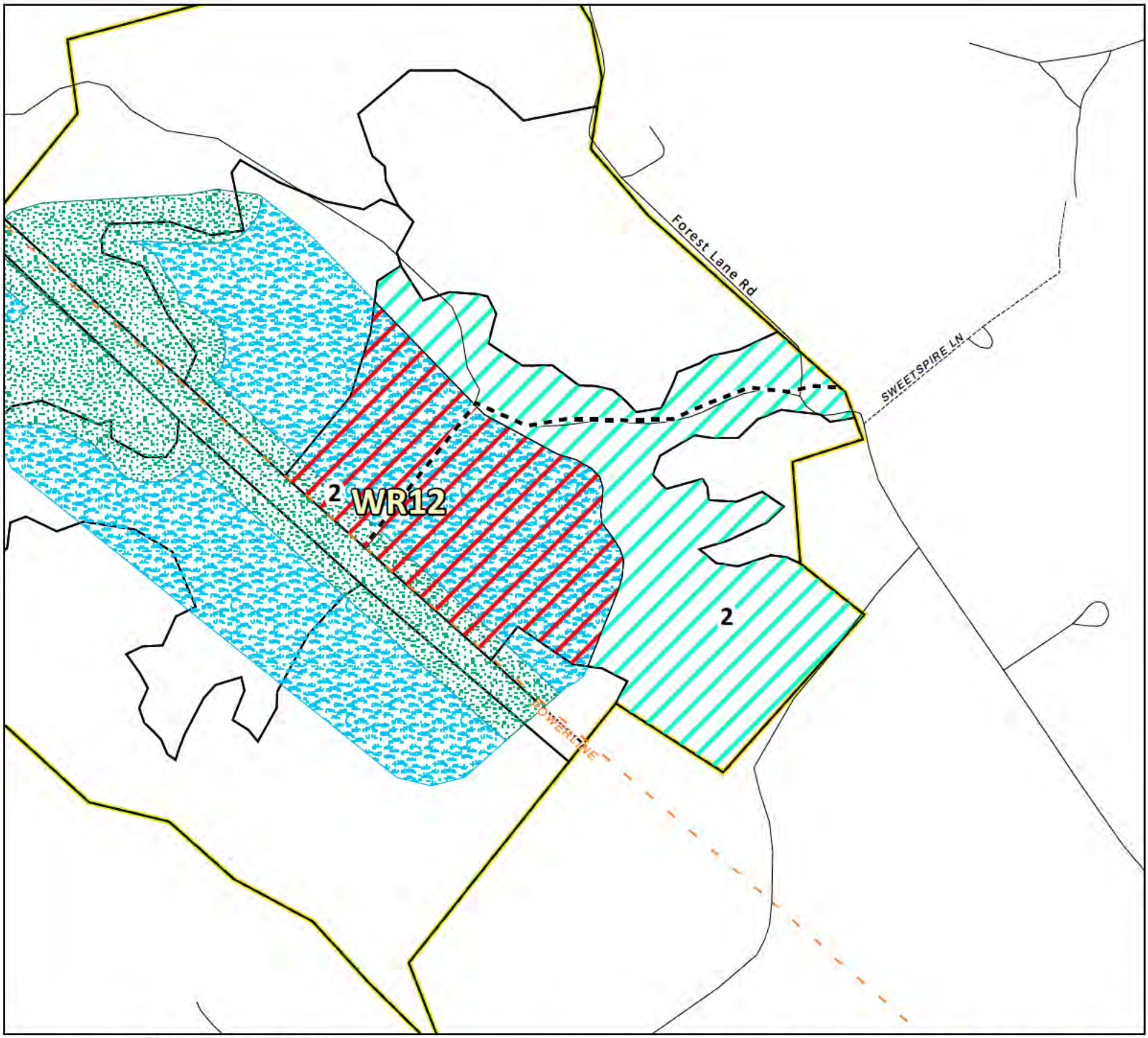
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR12-2
Purnell Complex
First Thinning Area: 46.2 Acres
Final Harvest Area: 32.3 Acres
ASC-DNR Forest Service 10/2010

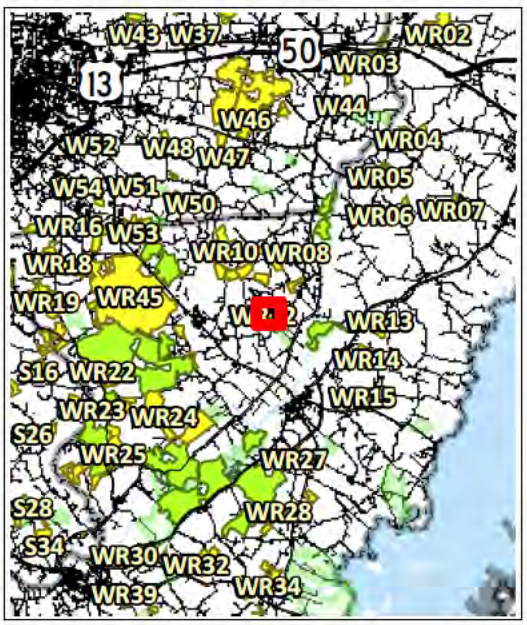
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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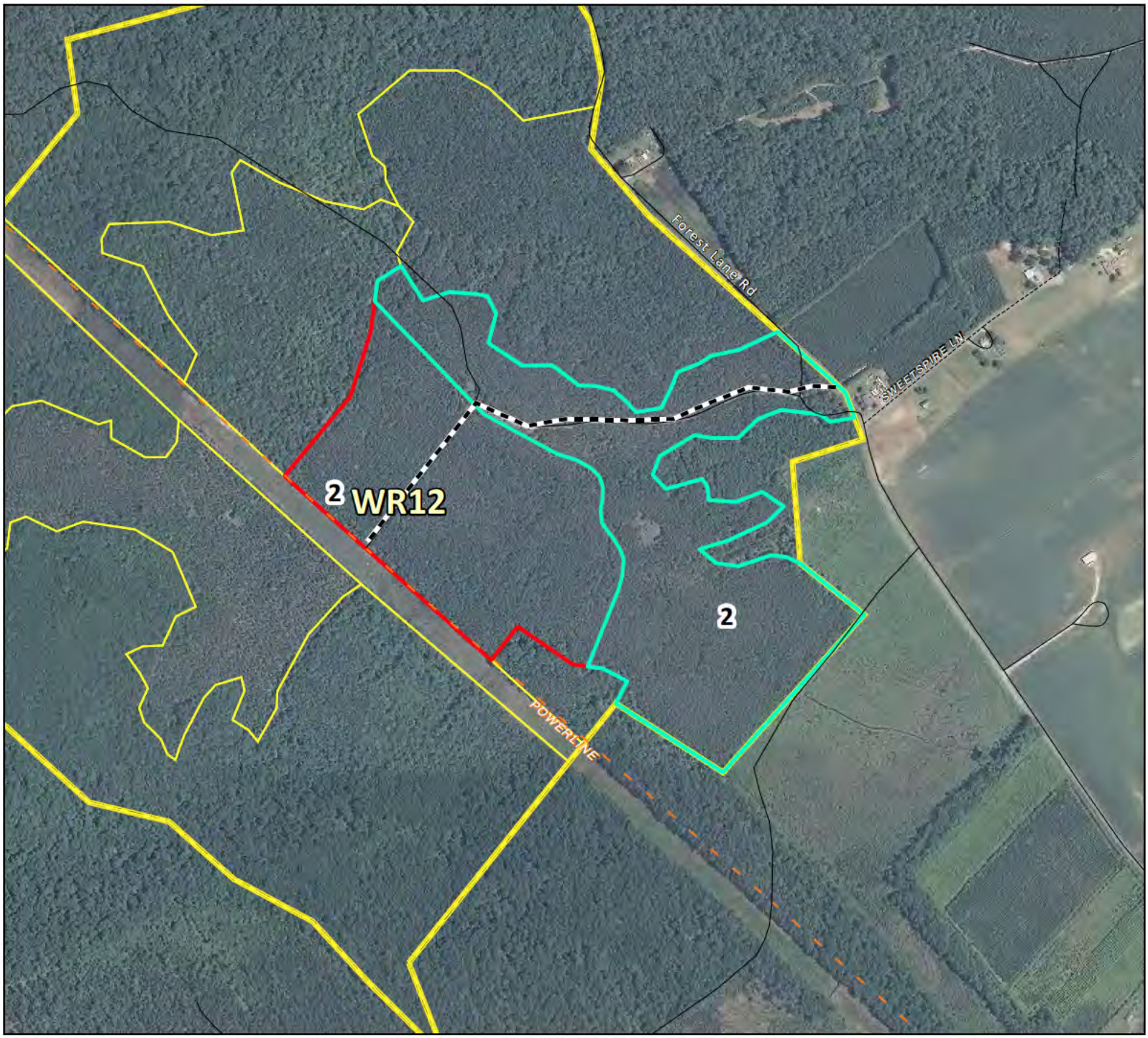
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

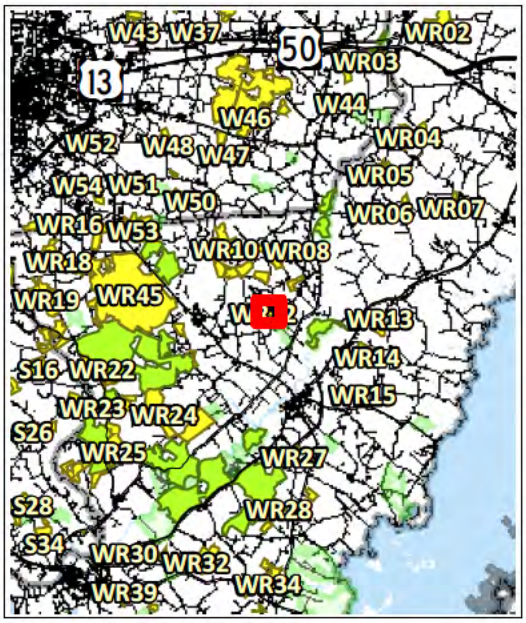
Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR12-2
Purnell Complex
First Thinning Area: 46.2 Acres
Final Harvest Area: 32.3 Acres
ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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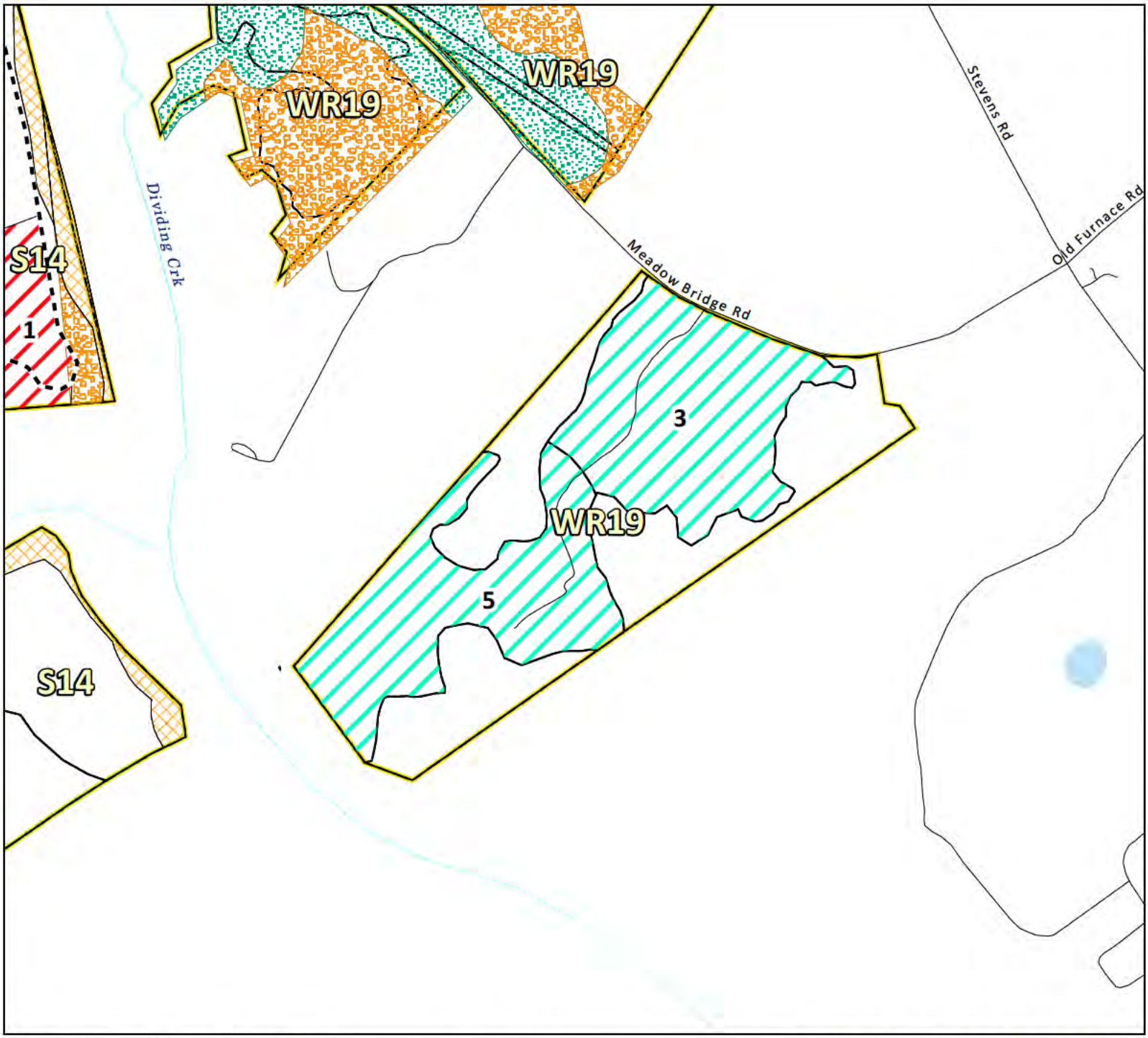


0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR19-3/5
Priscilla Pusey Complex
First Thinning Area: 43.5 Acres

ASC-DNR Forest Service 10/2010

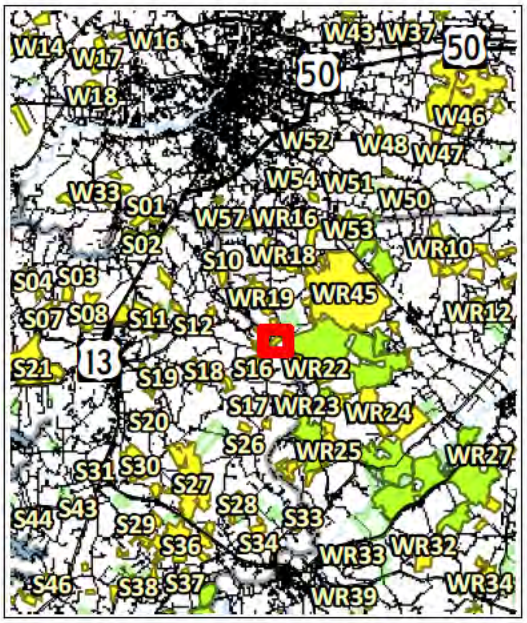
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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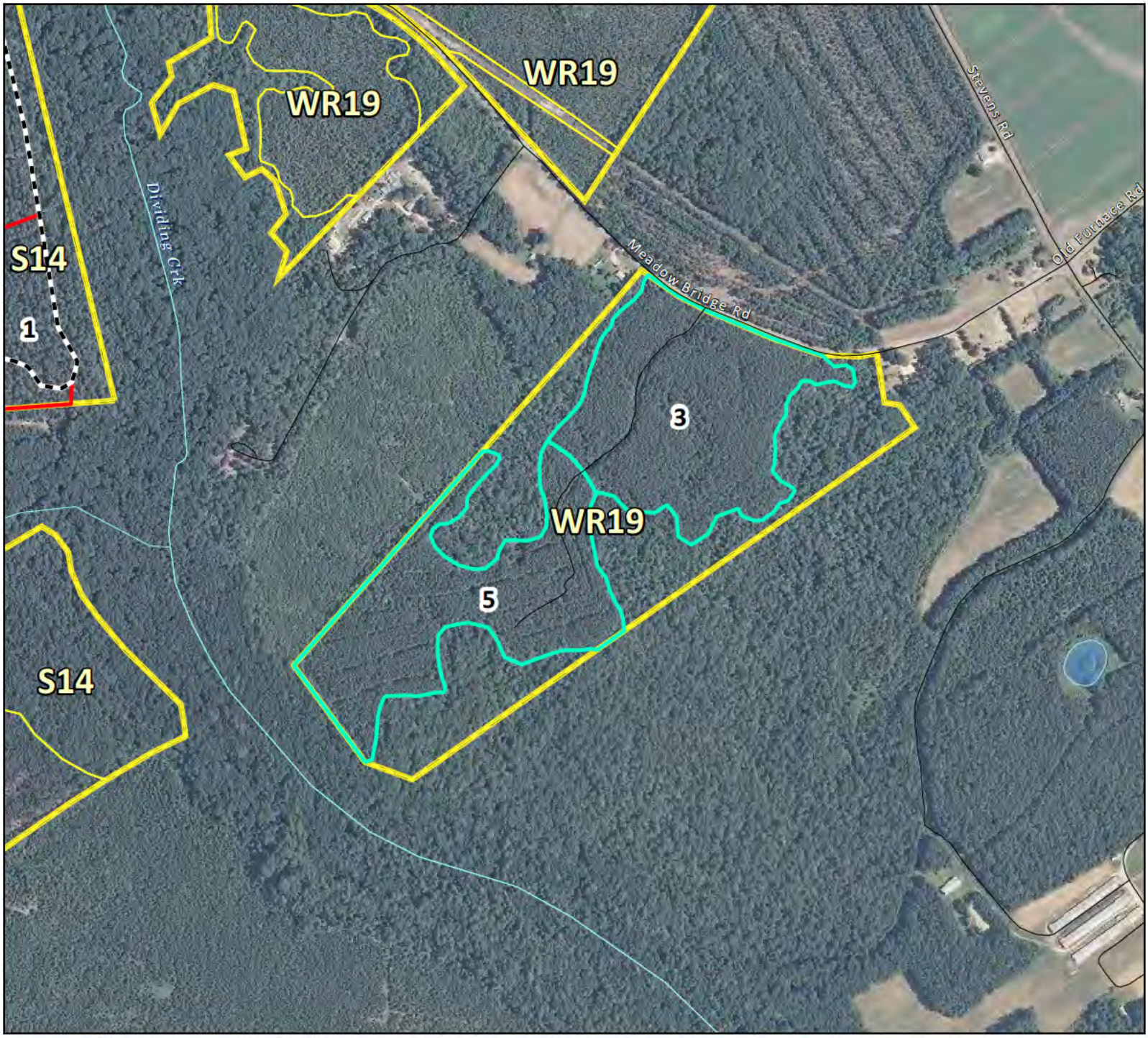
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

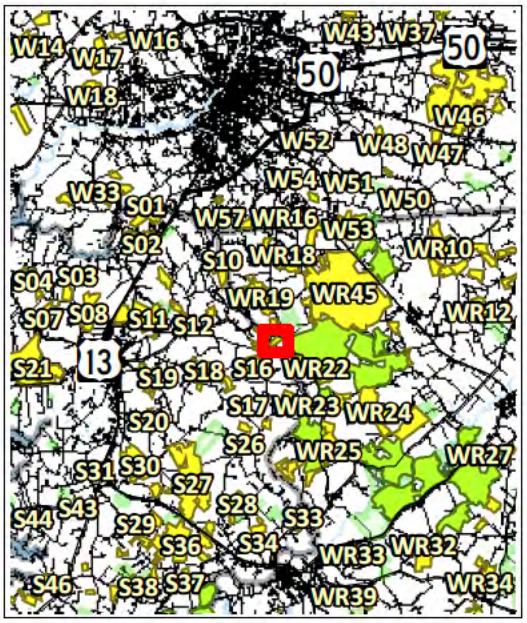
FY12 Annual Work Plan Map for CF-WR19-3/5
Priscilla Pusey Complex
First Thinning Area: 43.5 Acres

ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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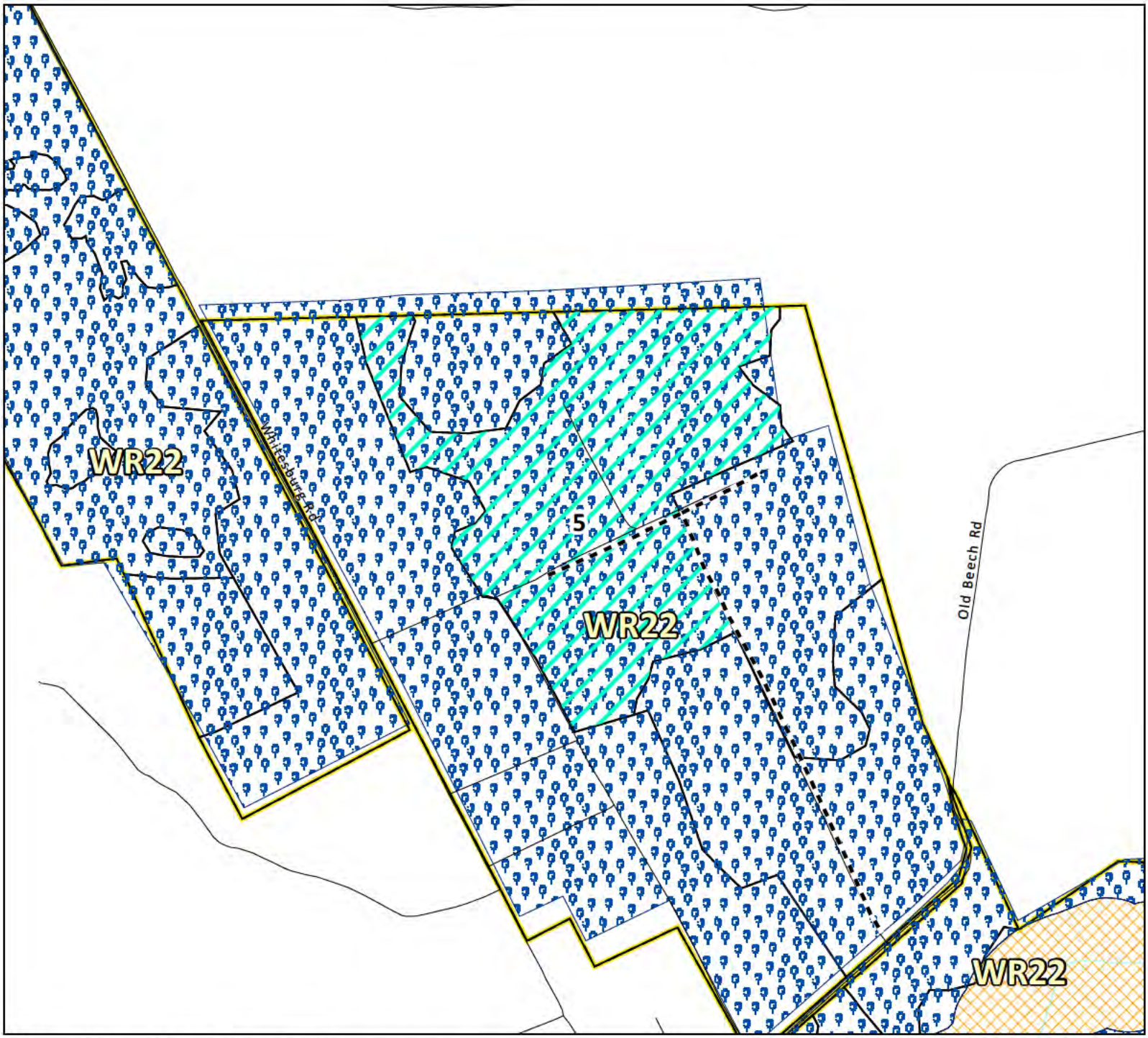
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR22-5
Whitesburg Complex
First Thinning Area: 48.9 Acres

ASC-DNR Forest Service 10/2010

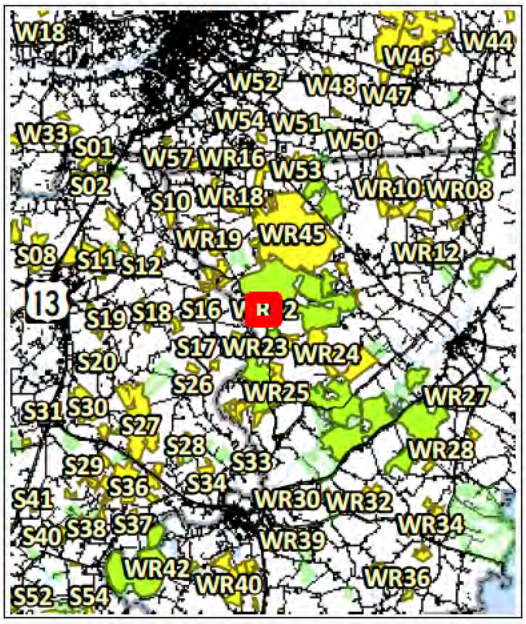
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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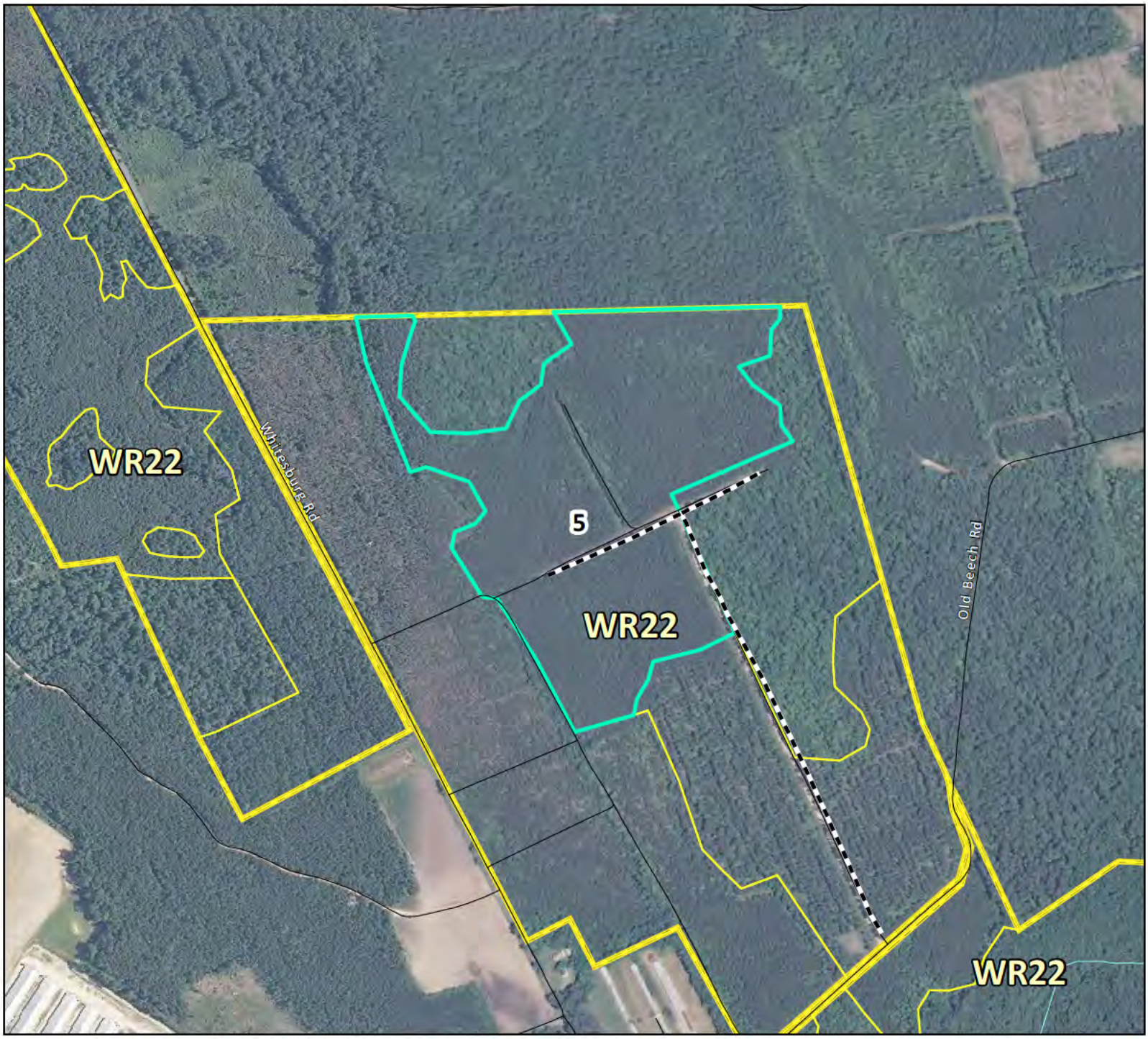
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

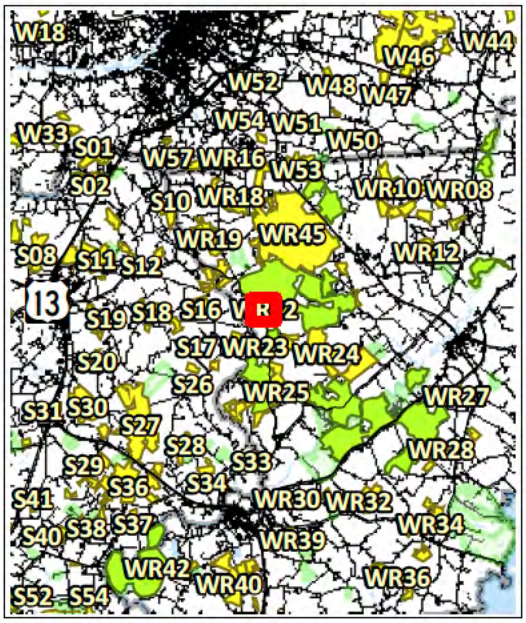
FY12 Annual Work Plan Map for CF-WR22-5
Whitesburg Complex
First Thinning Area: 48.9 Acres

ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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MARYLAND DNR FOREST SERVICE

0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR23-1/3/4
Agpar Complex
First Thinning Area: 166.8 Acres

ASC-DNR Forest Service 10/2010

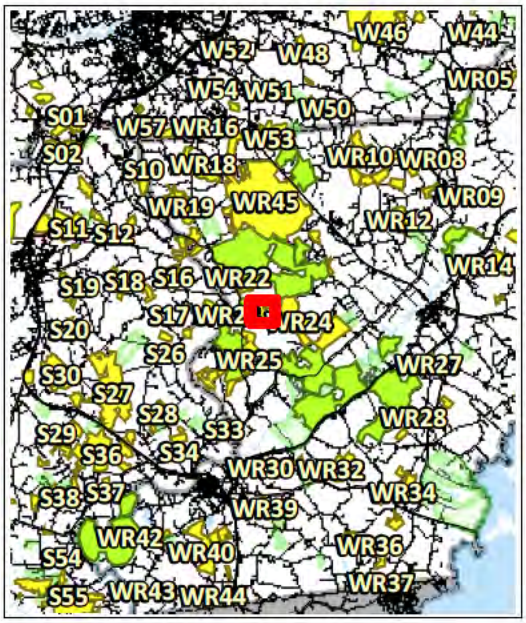
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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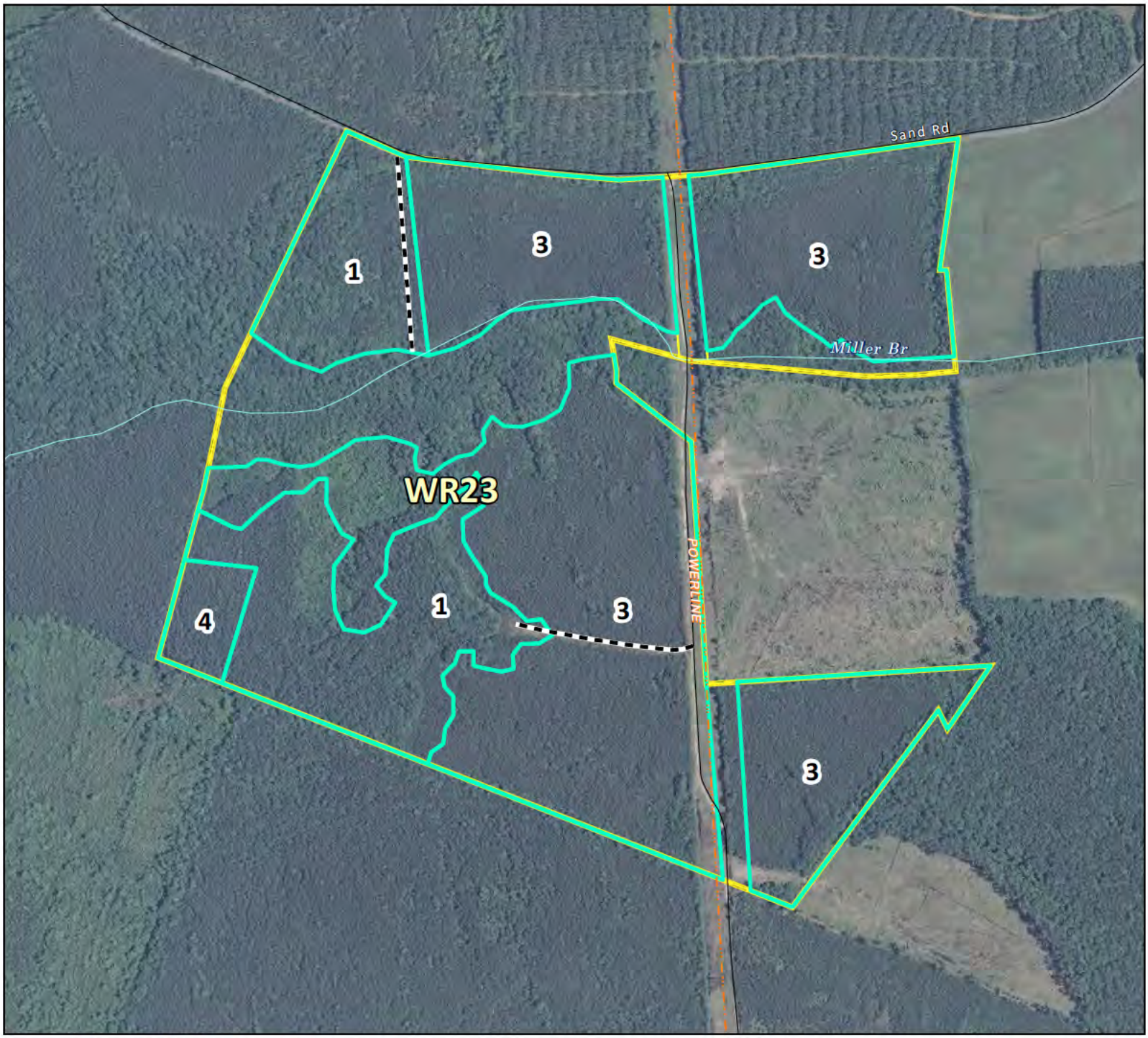
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

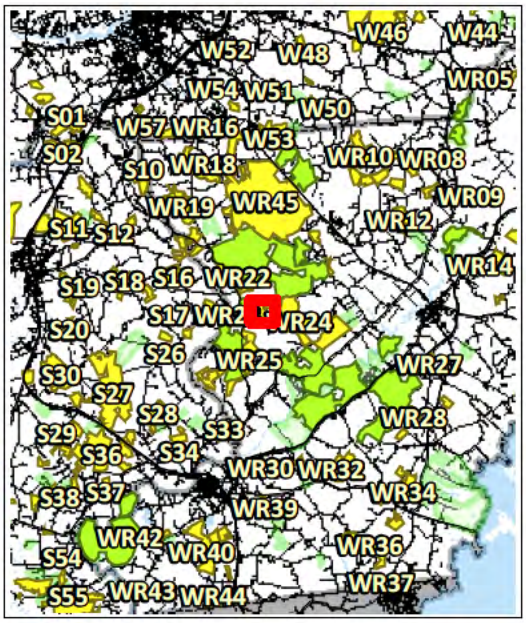
FY12 Annual Work Plan Map for CF-WR23-1/3/4
Agpar Complex
First Thinning Area: 166.8 Acres

ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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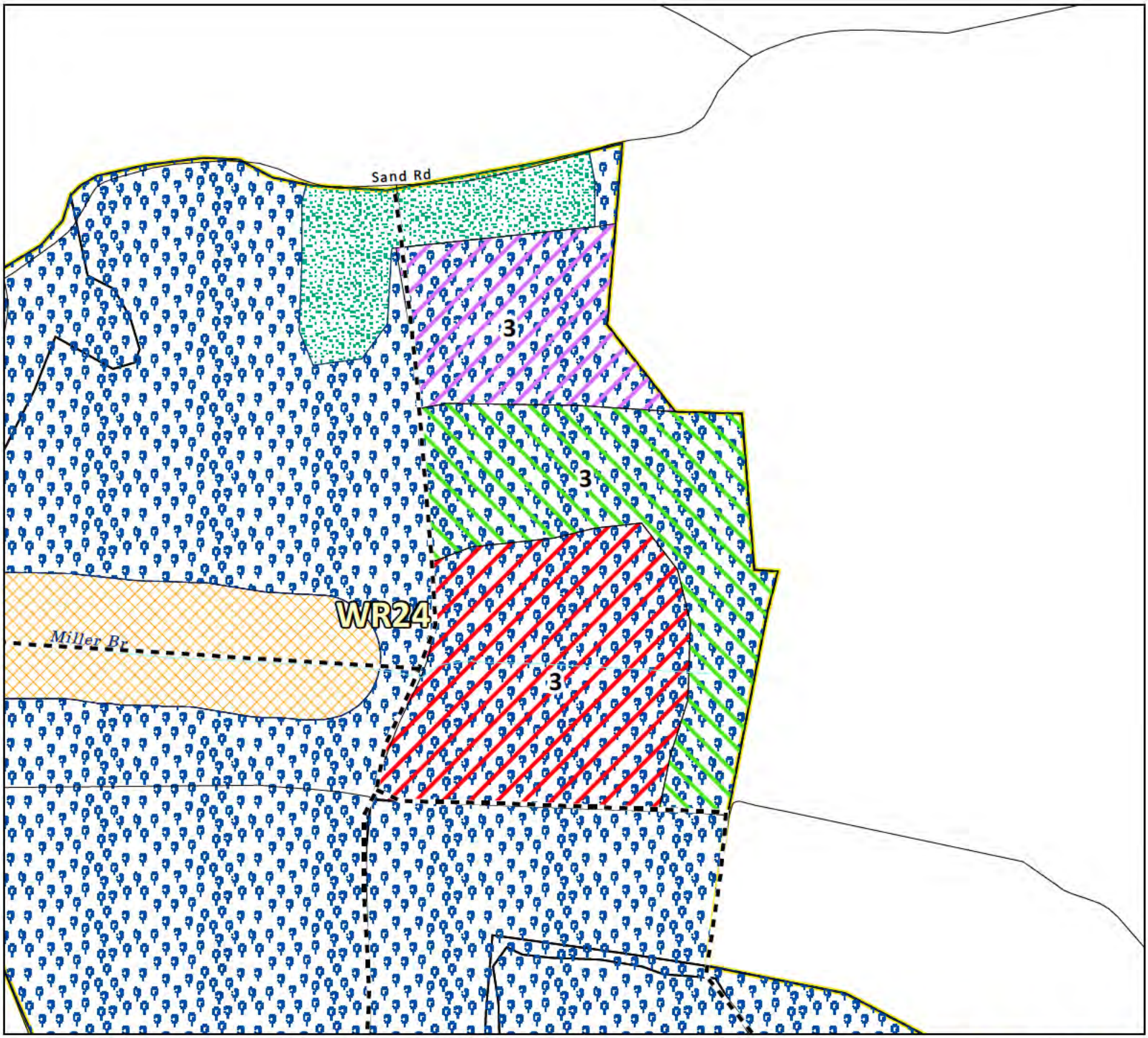
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR24-3
Johnson and Johnson Complex
Final Harvest Area: 37.5 Acres
Seed Tree Harvest Area: 32.8 Acres
Shelterwood Harvest Area: 19.3 Acres
ASC-DNR Forest Service 10/2010

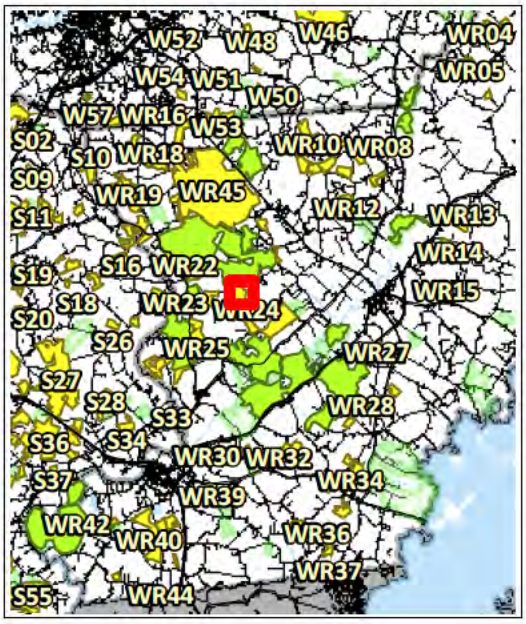
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

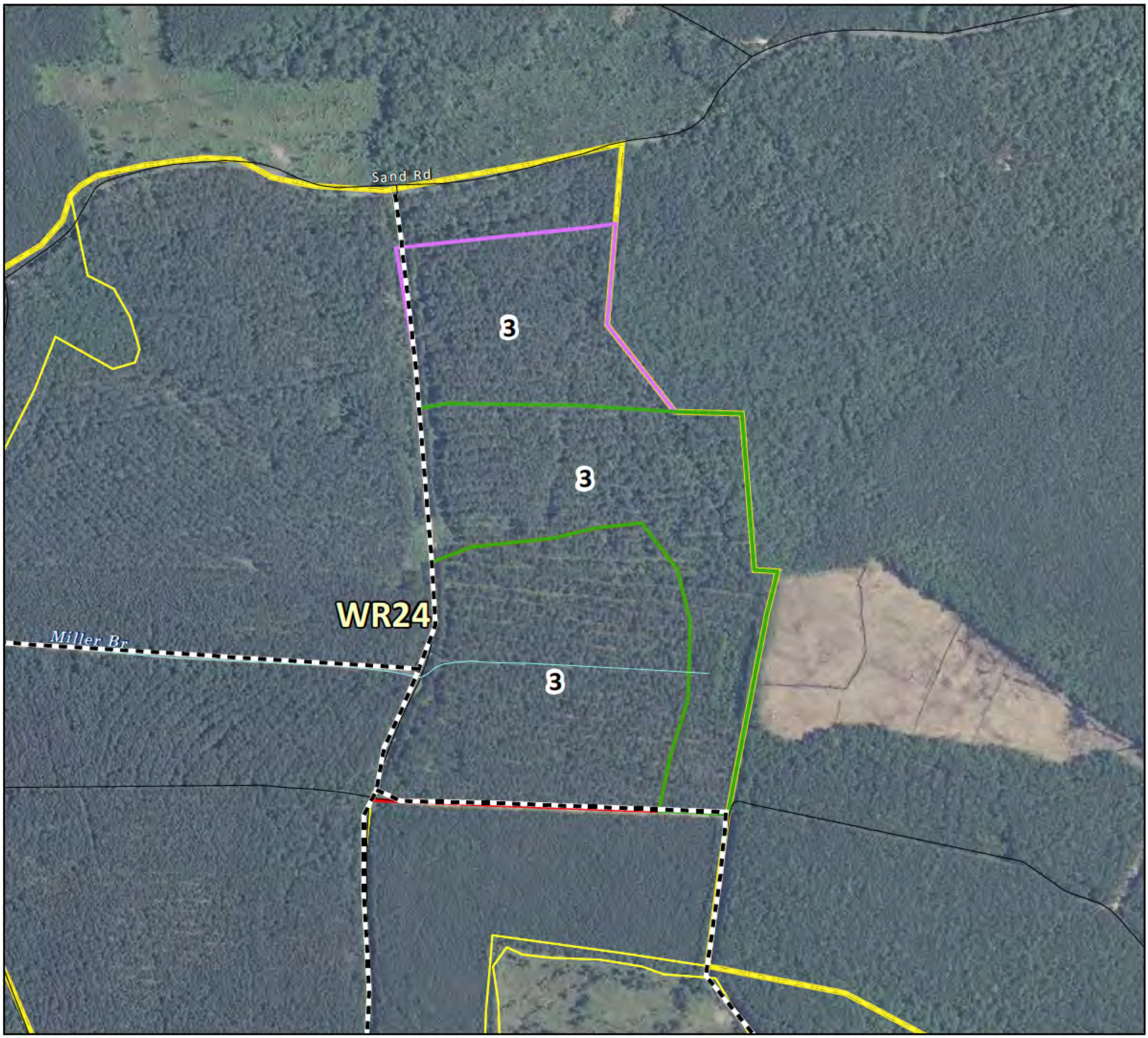
Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

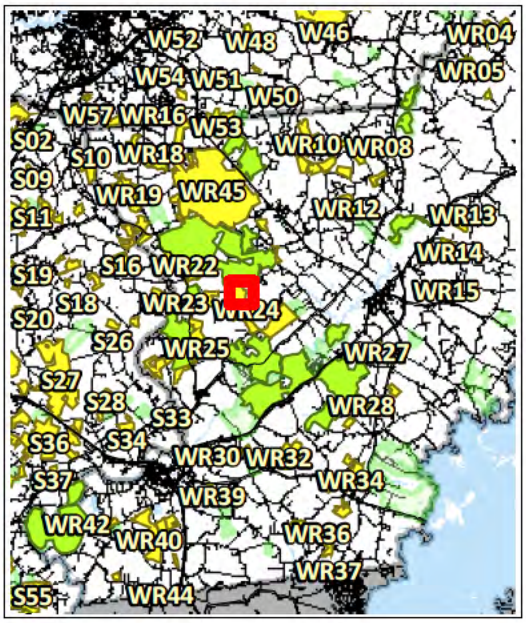
Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR24-3
Johnson and Johnson Complex
Final Harvest Area: 37.5 Acres
Seed Tree Harvest Area: 32.8 Acres
Shelterwood Harvest Area: 19.3 Acres
ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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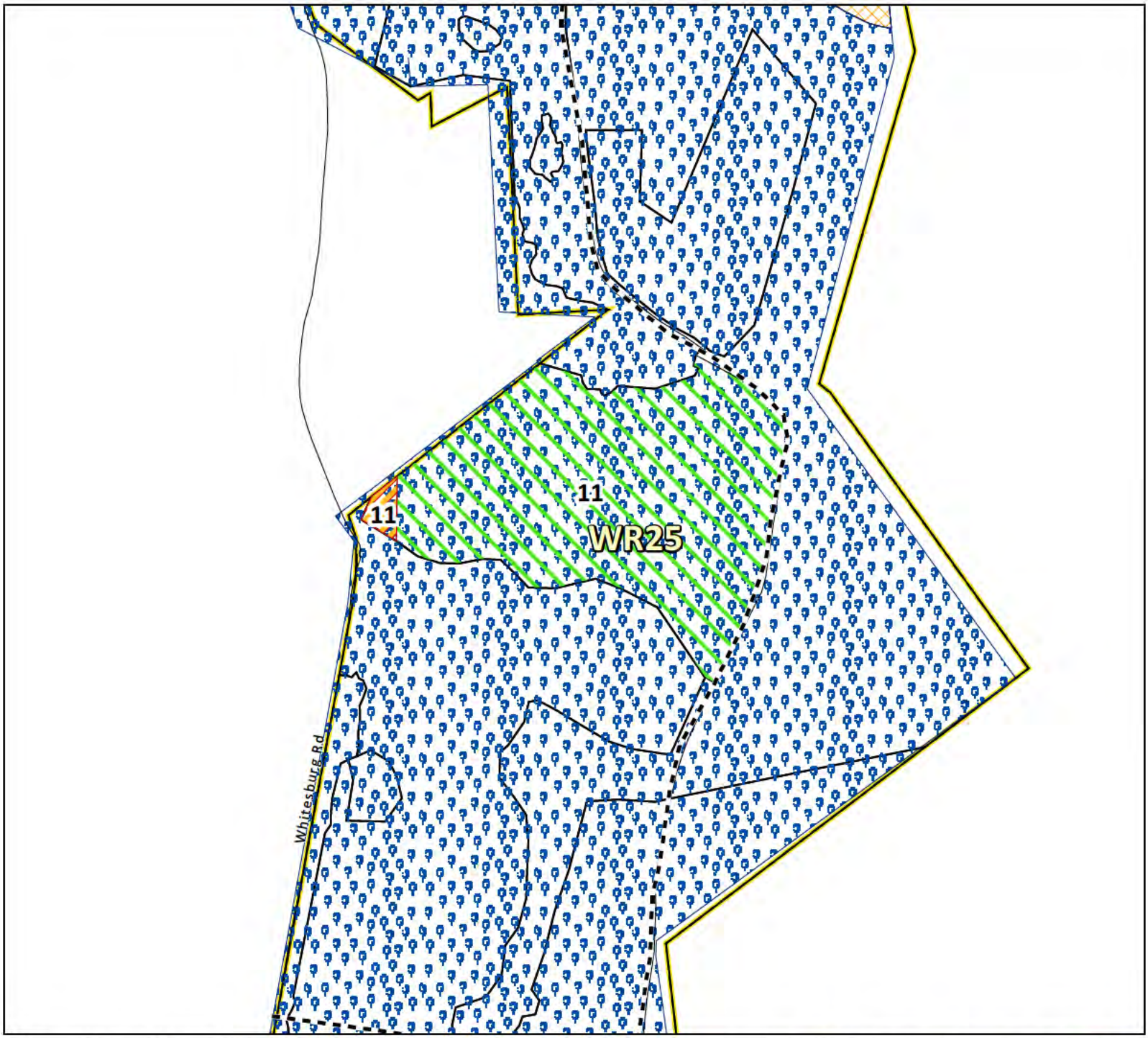
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR25-11
Creek Complex
Seed Tree Harvest Area: 40.0 Acres

ASC-DNR Forest Service 10/2010

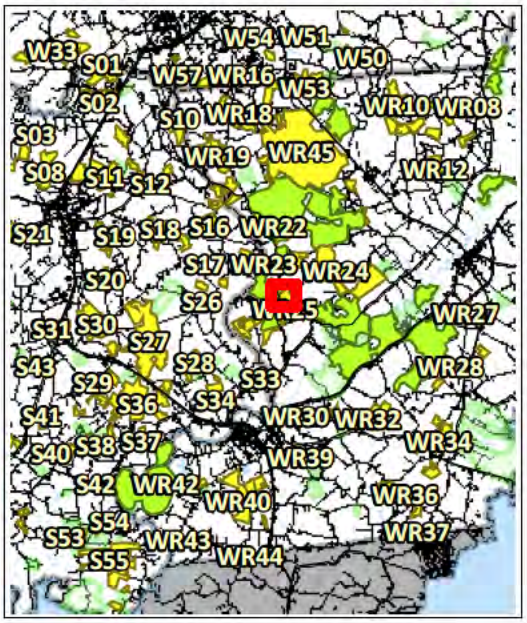
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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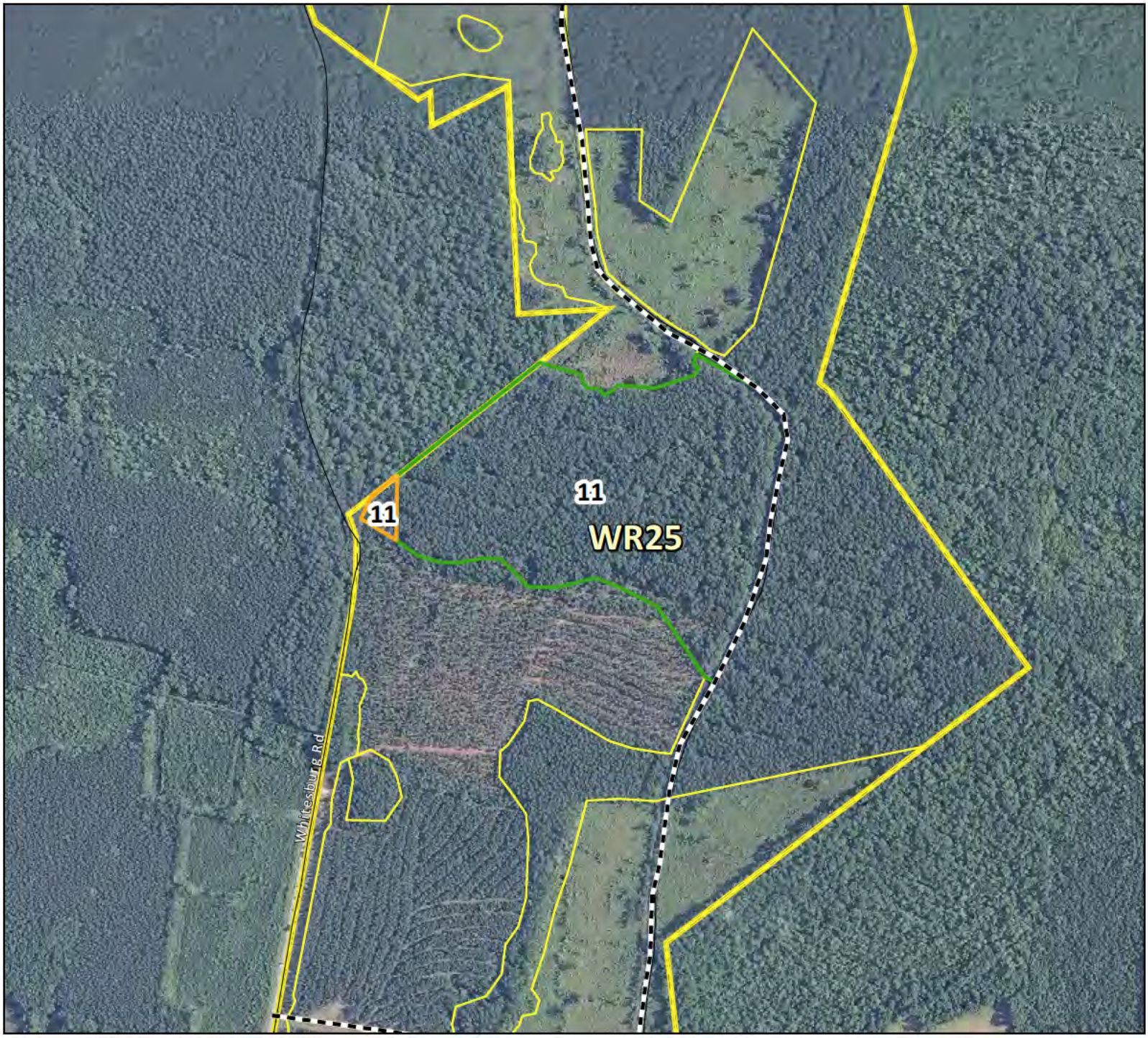
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

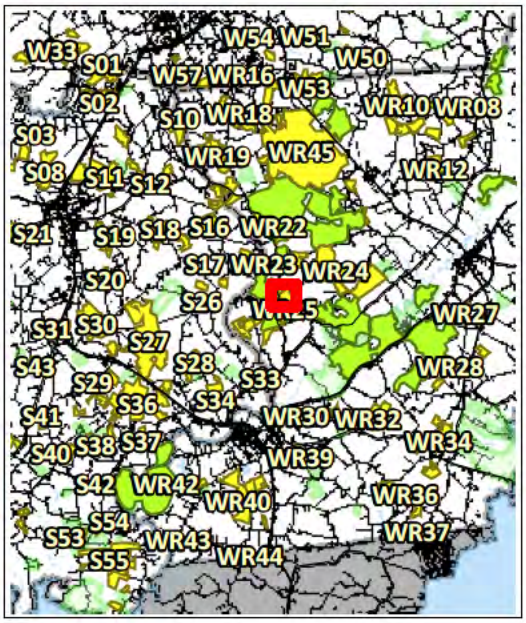
FY12 Annual Work Plan Map for CF-WR25-11
Creek Complex
Seed Tree Harvest Area: 40.0 Acres

ASC-DNR Forest Service 10/2010

Legend

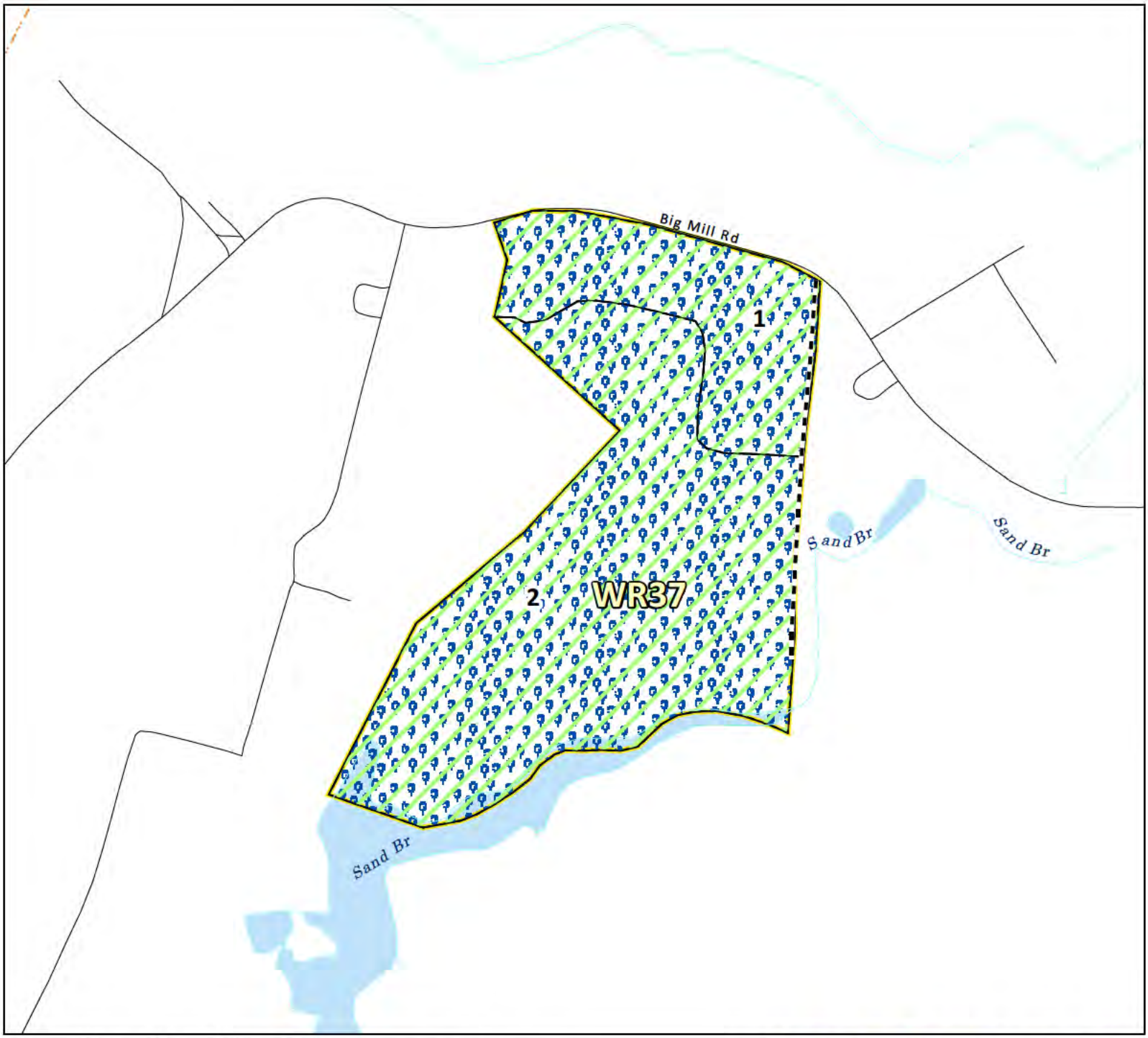
AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR37-1/2
Trader Complex
Second Thinning Area: 88.0 Acres

ASC-DNR Forest Service 10/2010

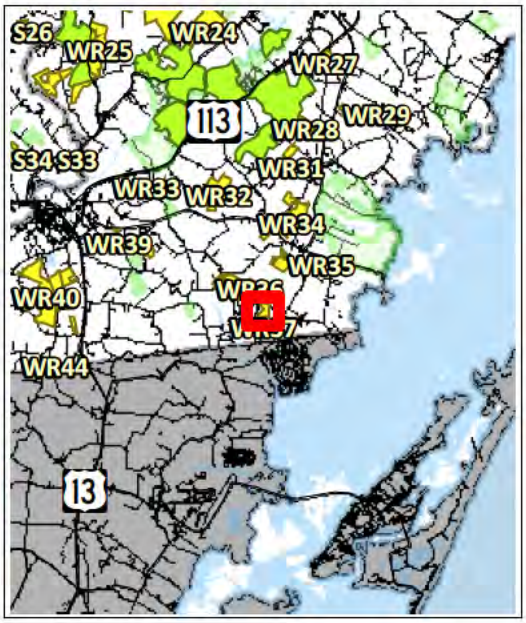
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE

0 330 660 990 1,320 Feet

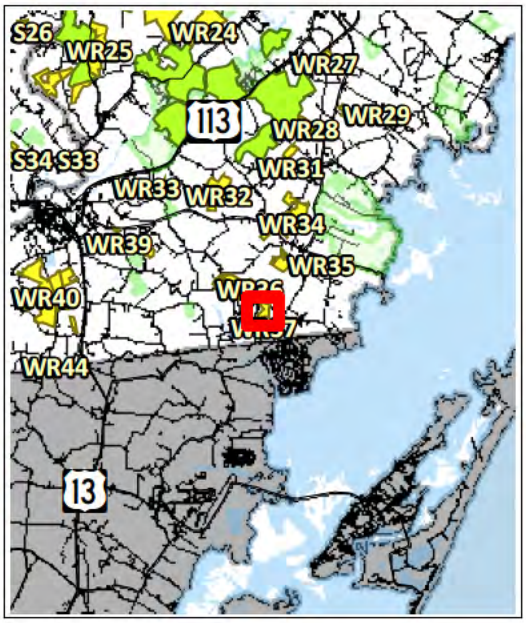
1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR37-1/2
Trader Complex
Second Thinning Area: 88.0 Acres

ASC-DNR Forest Service 10/2010



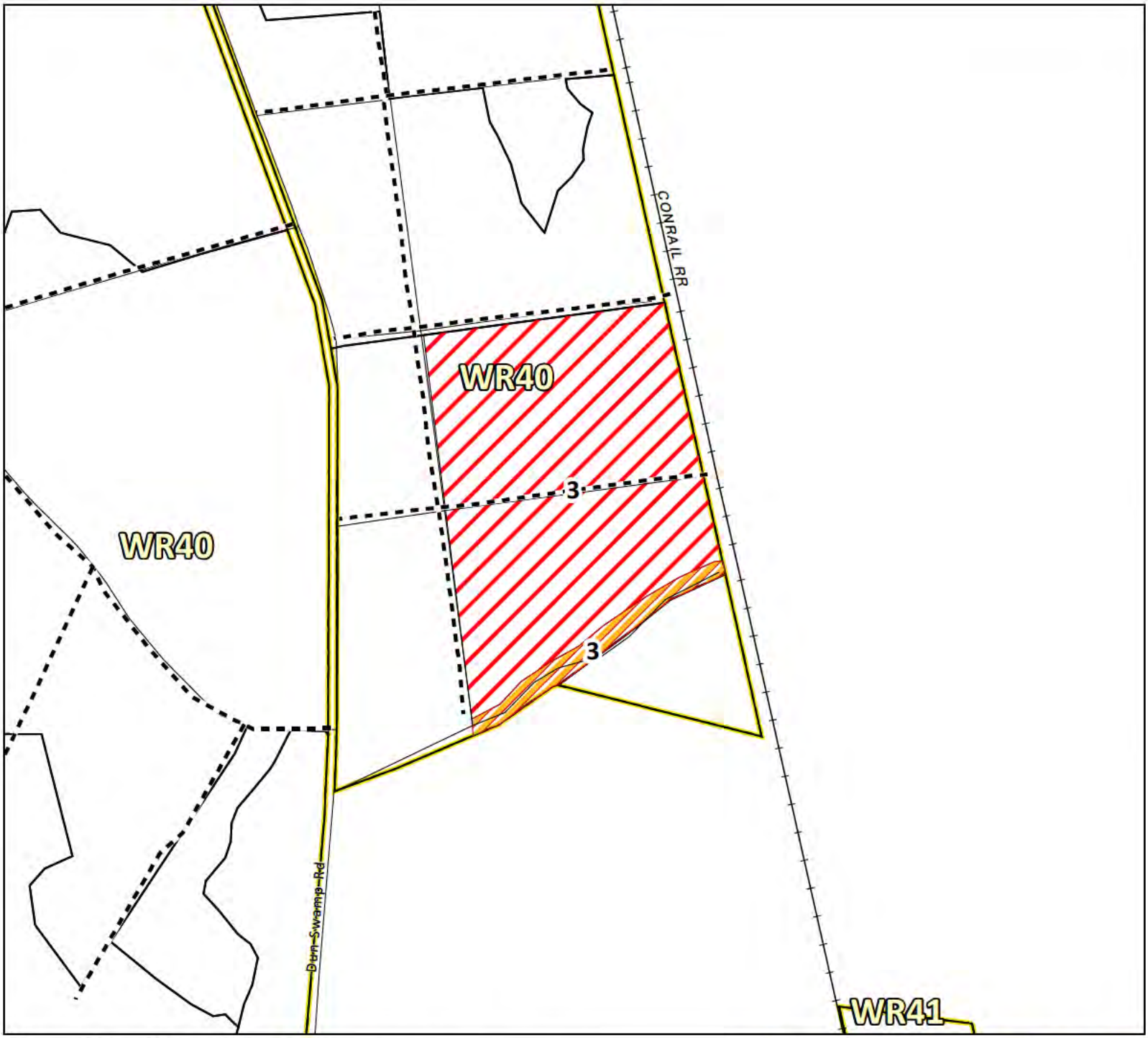
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR40-3
Dunn Swamp Complex
Final Harvest Area: 40.0 Acres

ASC-DNR Forest Service 10/2010

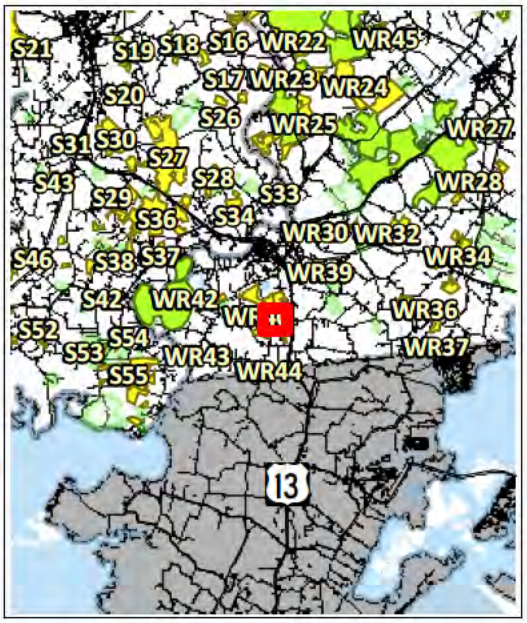
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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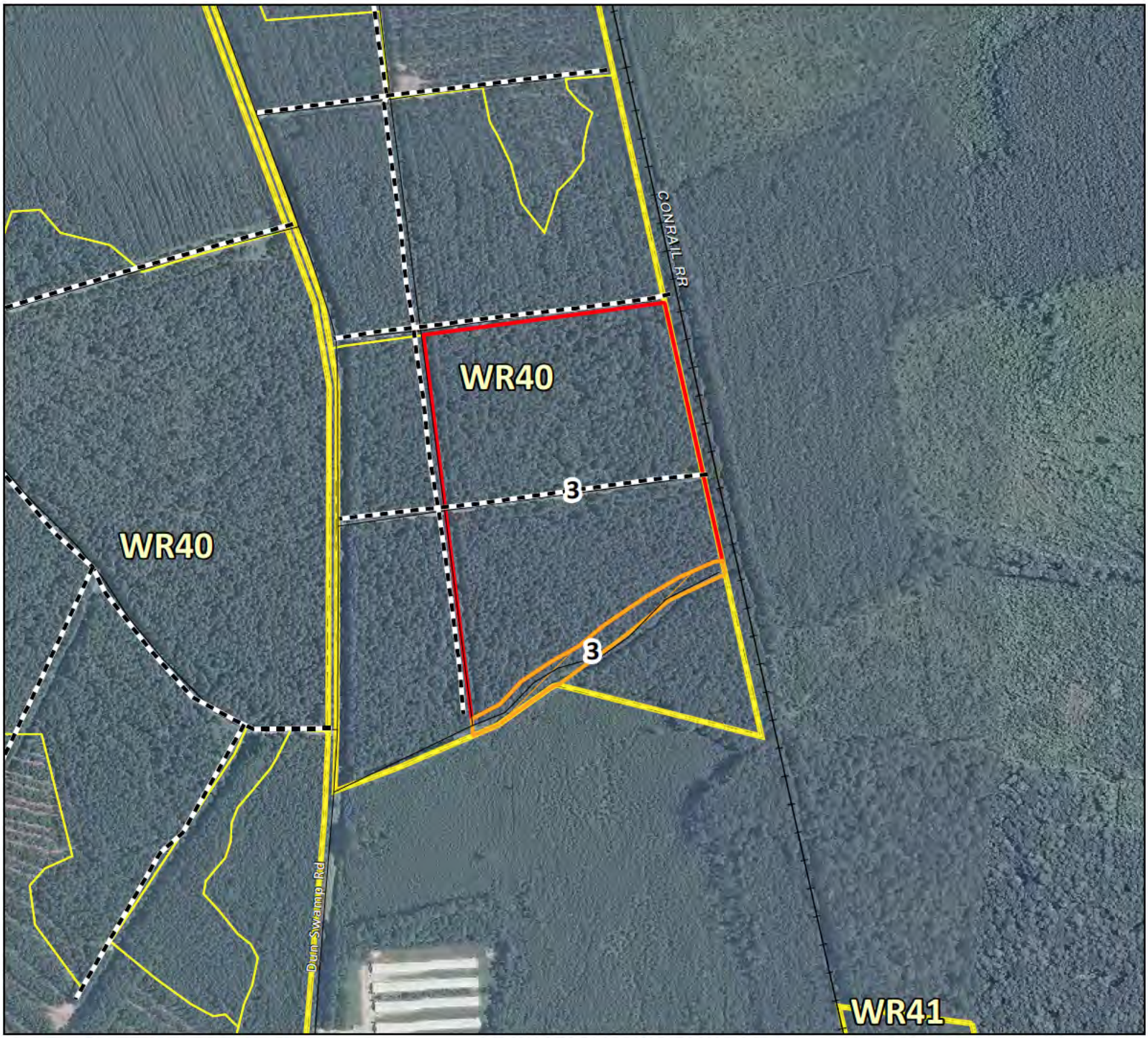
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

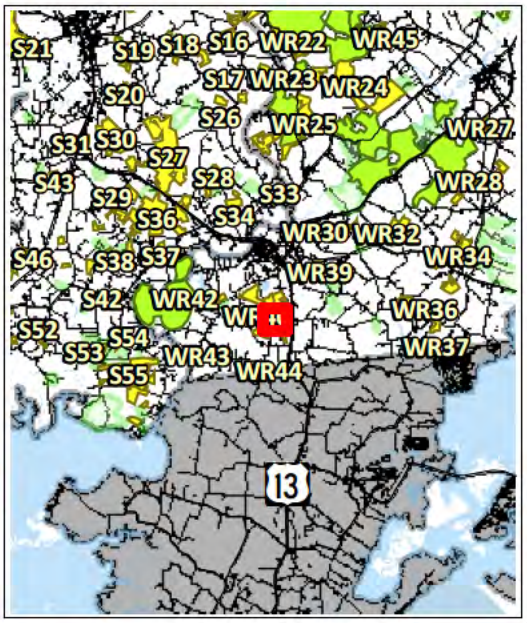
FY12 Annual Work Plan Map for CF-WR40-3
Dunn Swamp Complex
Final Harvest Area: 40.0 Acres

ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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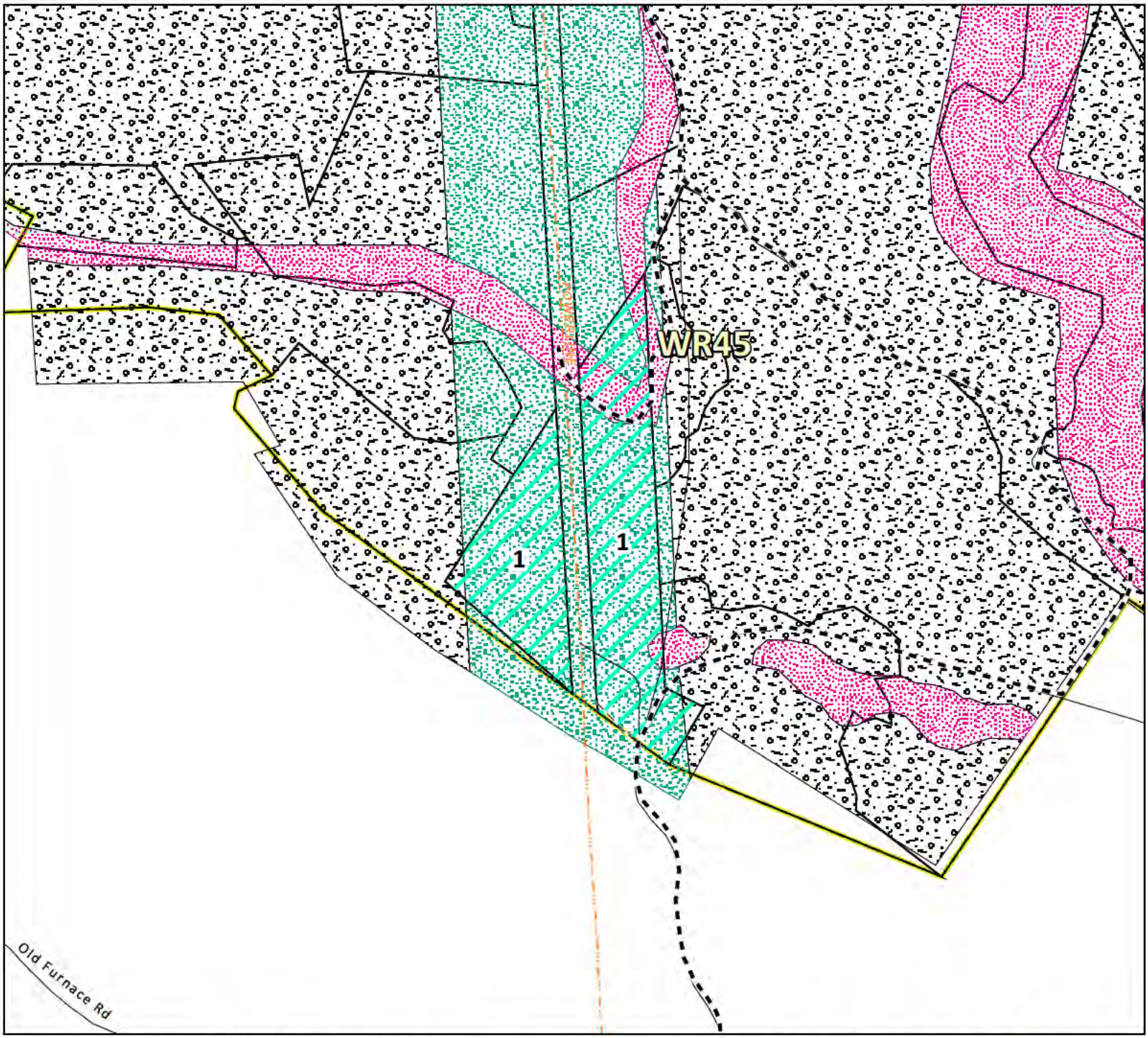
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR45-1
Foster Estate Complex
First Thinning Area: 25.1 Acres

ASC-DNR Forest Service 10/2010

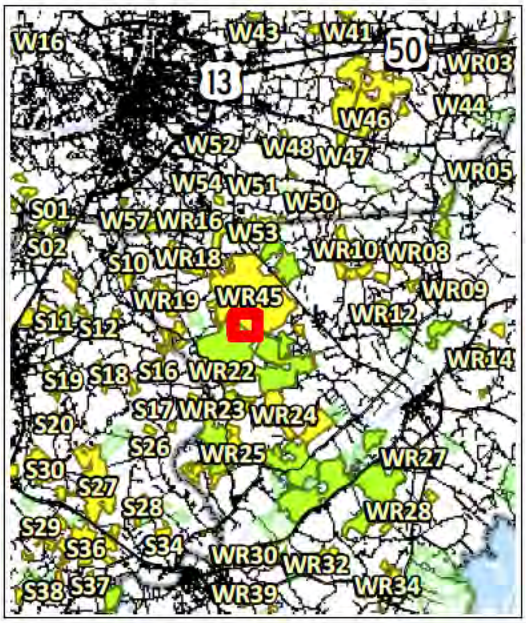
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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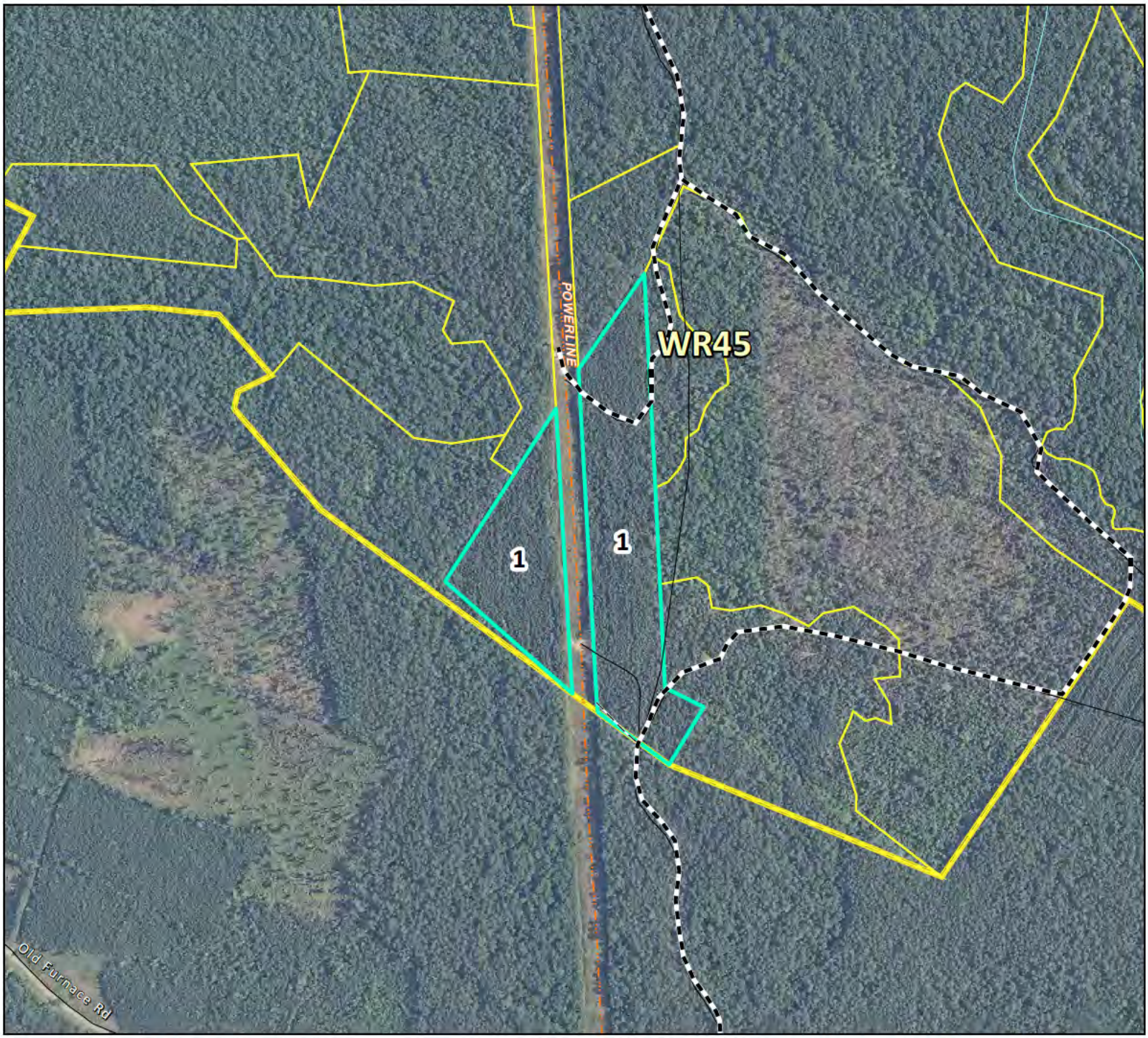
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

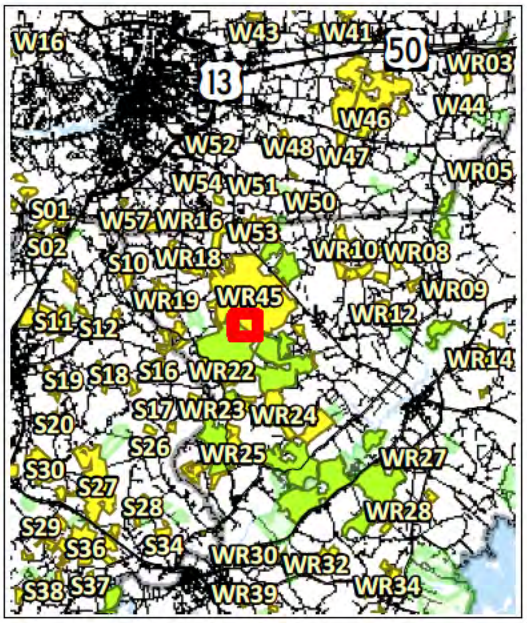
1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR45-1
Foster Estate Complex
First Thinning Area: 25.1 Acres

ASC-DNR Forest Service 10/2010



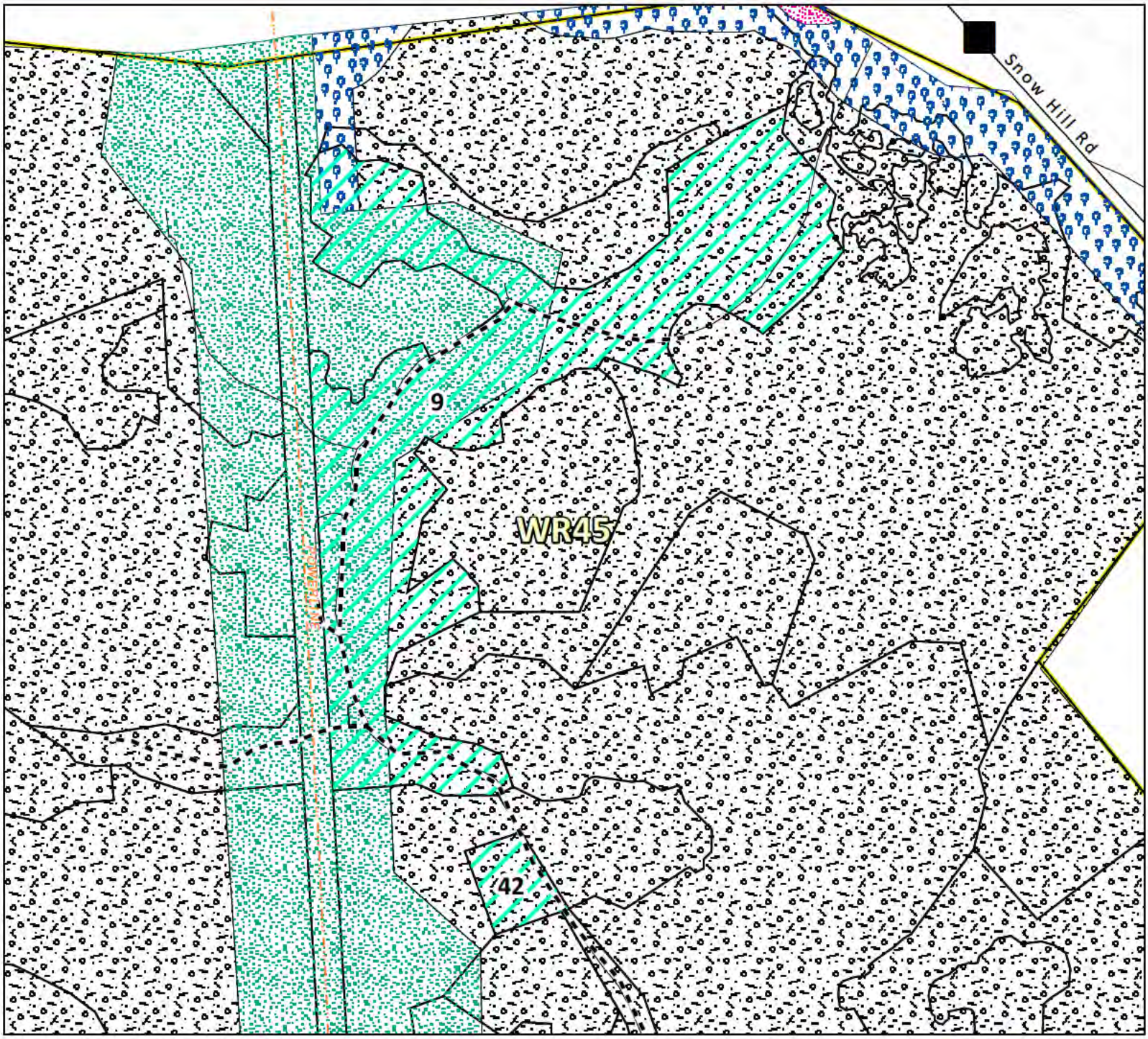
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR45-9/42
Foster Estate Complex
First Thinning Area: 64.3 Acres

ASC-DNR Forest Service 10/2010

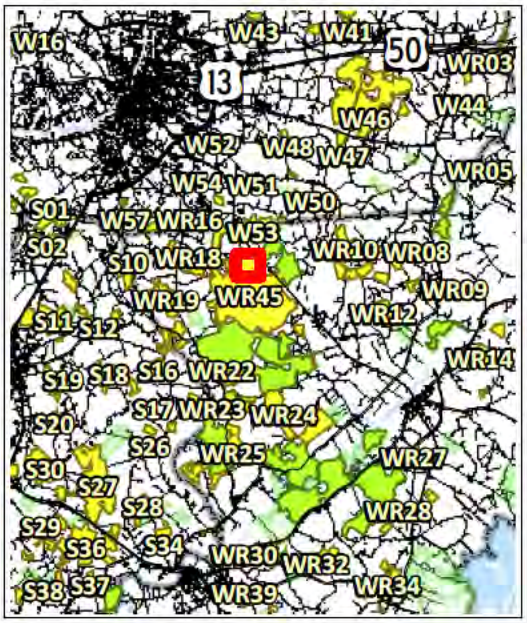
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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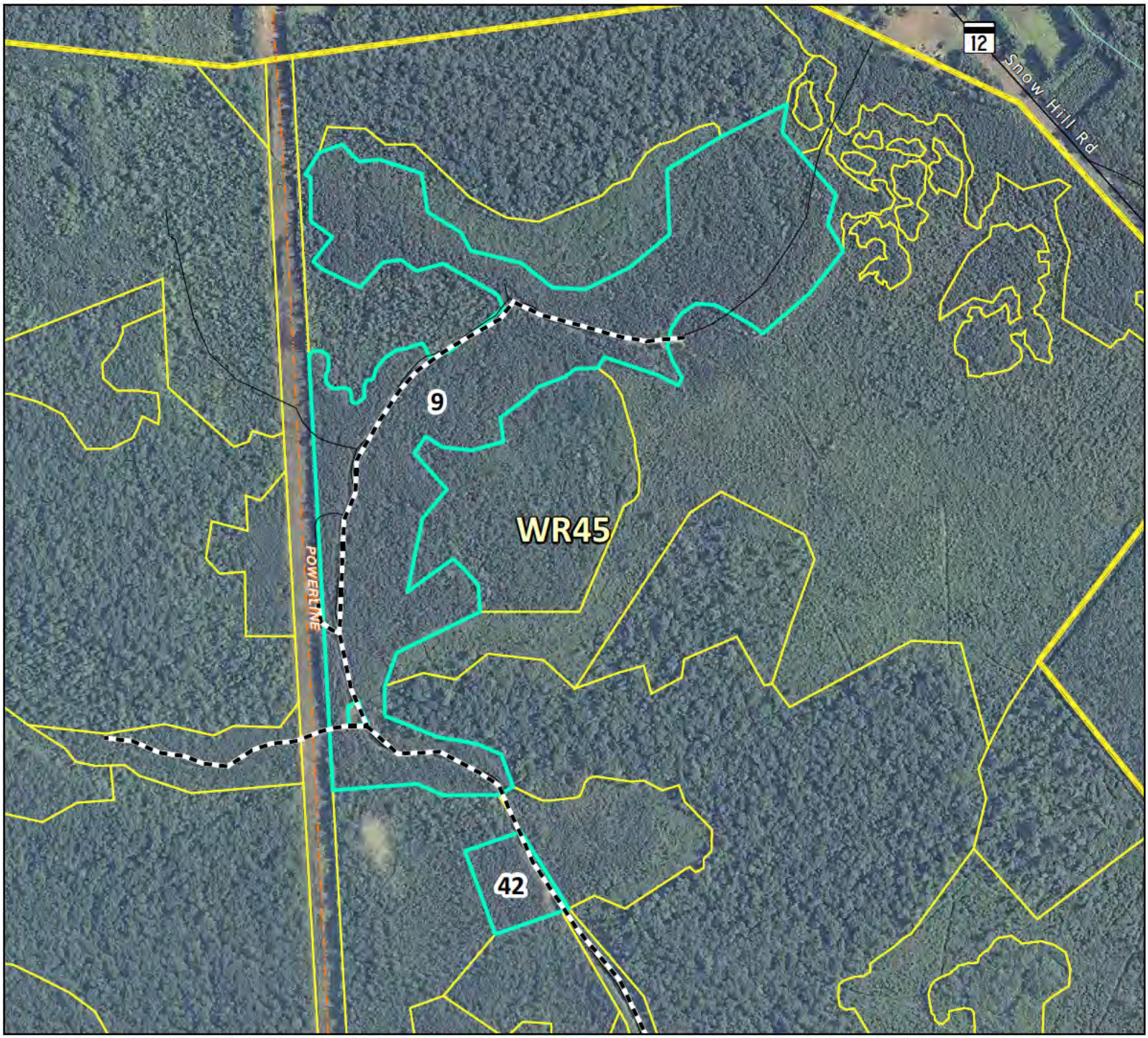
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

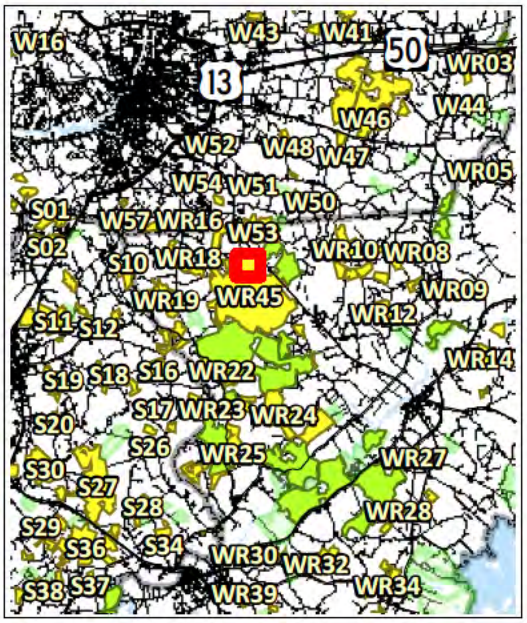
FY12 Annual Work Plan Map for CF-WR45-9/42
Foster Estate Complex
First Thinning Area: 64.3 Acres

ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



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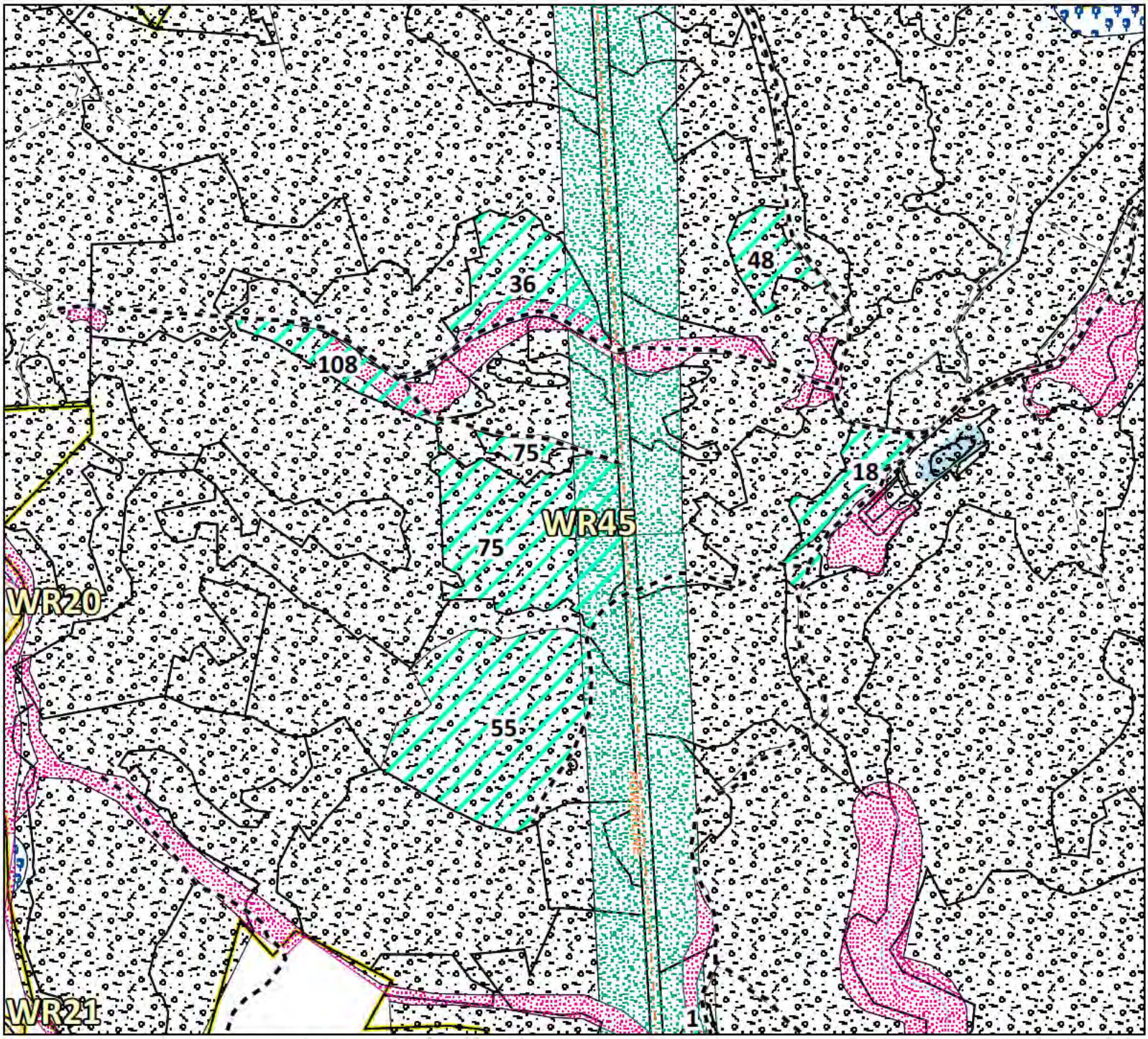
MARYLAND DNR FOREST SERVICE



0 660 1,320 1,980 2,640 Feet

1 inch = 1,320 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR45
18/36/48/55/75/108
Foster Estate Complex
First Thinning Area: 183.7 Acres
ASC-DNR Forest Service 10/2010

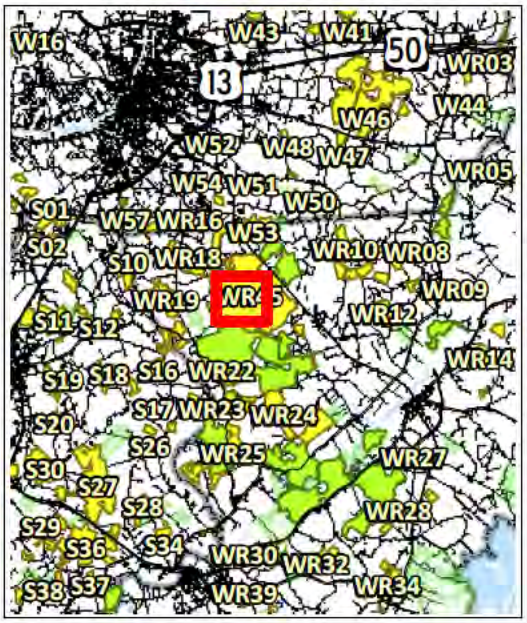
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



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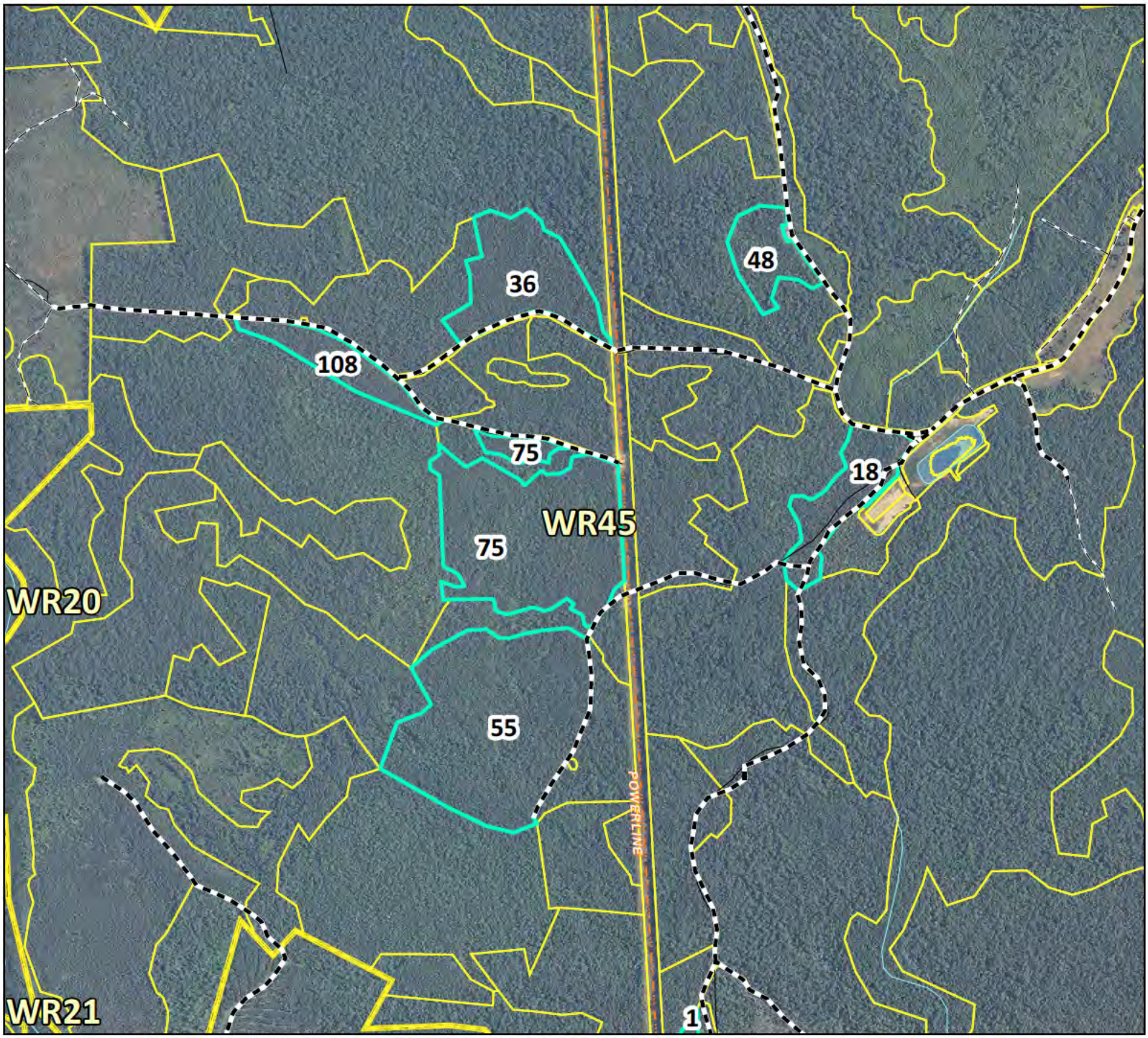
MARYLAND DNR FOREST SERVICE



0 660 1,320 1,980 2,640 Feet

1 inch = 1,320 feet

N

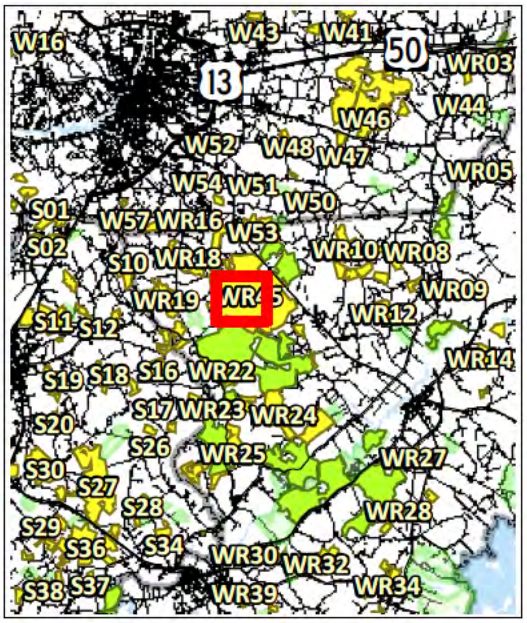
Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR45
18/36/48/55/75/108
Foster Estate Complex
First Thinning Area: 183.7 Acres
ASC-DNR Forest Service 10/2010

Legend

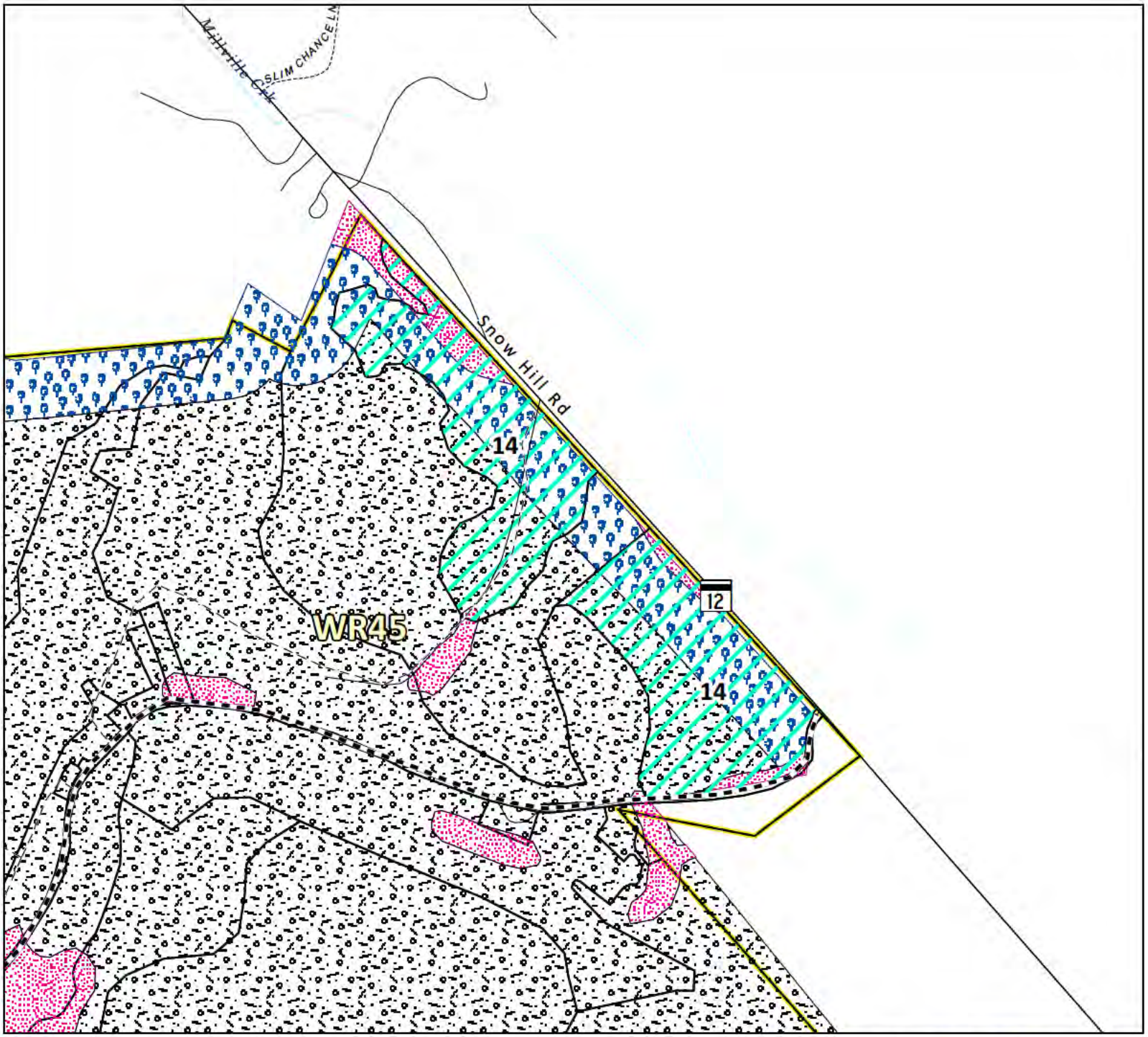
AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-WR45-14
Foster Estate Complex
First Thinning Area: 36.7 Acres

ASC-DNR Forest Service 10/2010

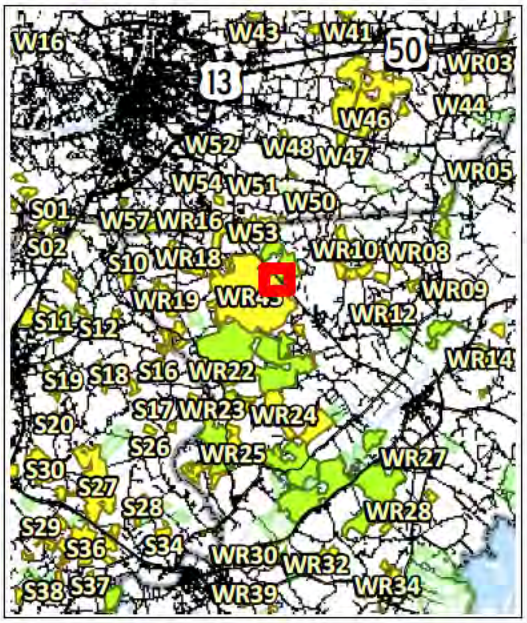
Legend

AWP

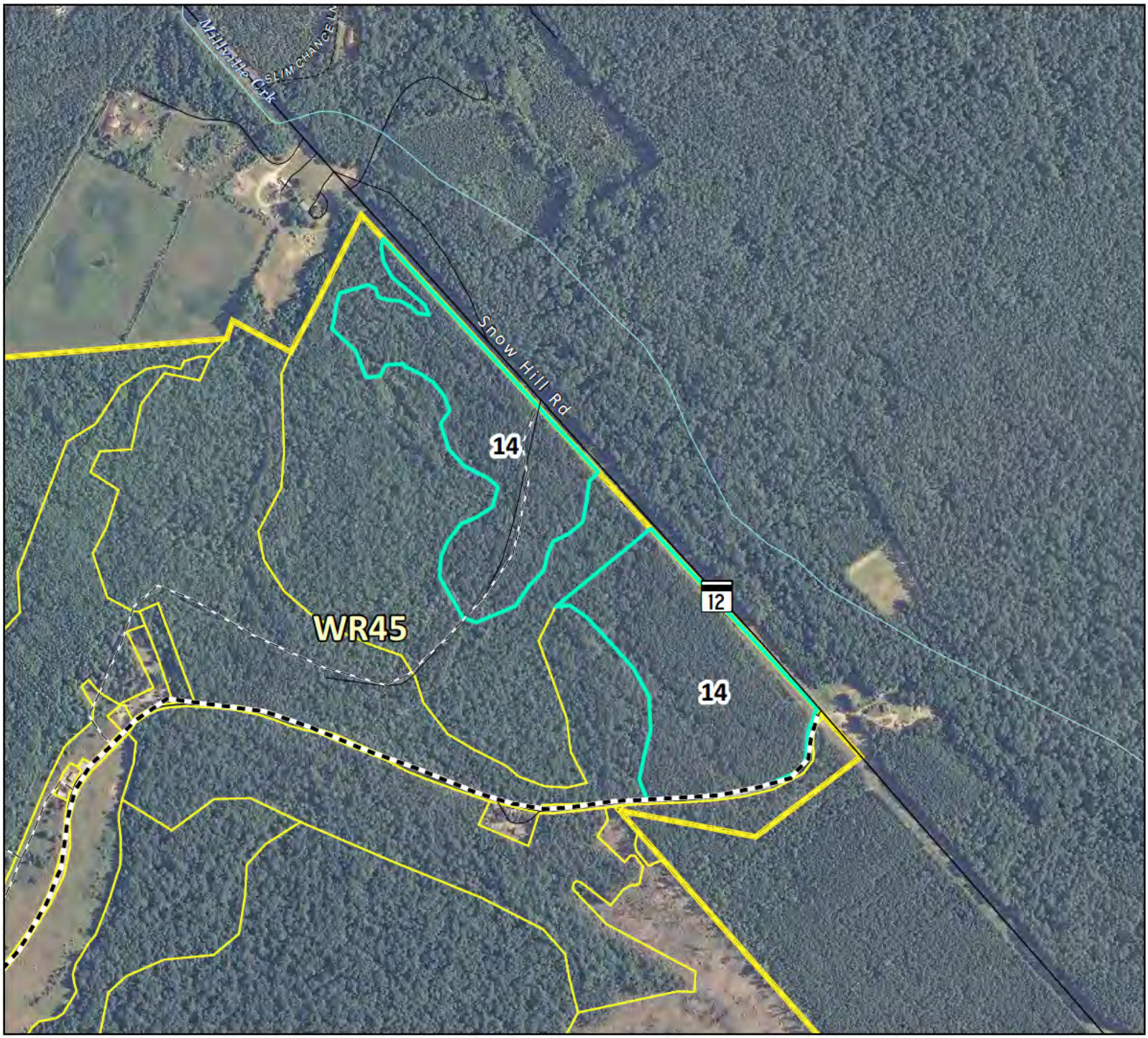
- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

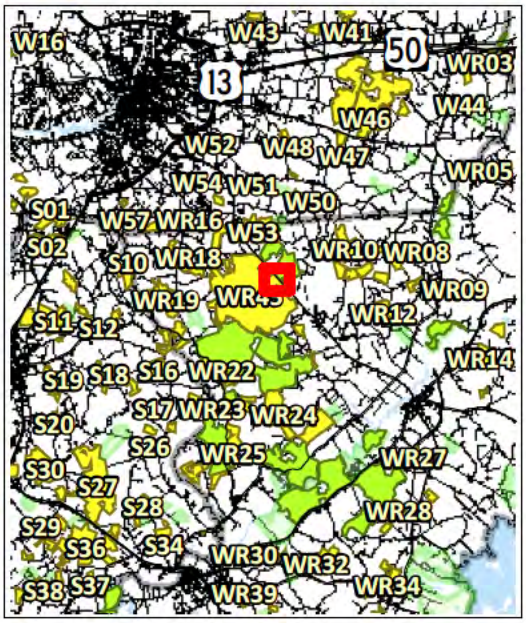
FY12 Annual Work Plan Map for CF-WR45-14
Foster Estate Complex
First Thinning Area: 36.7 Acres

ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE

Description of 2012 Activities - Pocomoke State Forest

Nazareth Church Tract 4 – Stand 7

A final harvest is proposed for this 20.2 acre loblolly pine plantation. This stand was established in 1961 and commercially thinned in 1998. Mast producing hardwood will be retained to help promote a future mixed forest community. A 100 foot "no-cut" buffer will be retained along Whitesburg road for aesthetics. A 300 foot "no-cut" buffer will be retained along the stream within the sale area. This stand will be allowed to regenerate naturally per DFS guidelines within the Sustainable Forest Management Plan (SFMP). This stand is within the Future DFS Management Area.

Dividing Creek Tract 13 - Stand 18

A final harvest is proposed for this 13.2-acre loblolly pine plantation. This stand was established in 1961 and sprayed in 1964 to eliminate hardwood competition. Hydrophytic oaks (*Quercus Phellos*) and other mast producing hardwoods identified on this site will be retained to ensure future stand diversity. The objective of this harvest is to convert this plantation to a natural mixed forest community type. This stand is located within the Future DFS and an ESA Zone 3 (sawtimber) Management Area.

Milburn Landing Tract 16 – Stand 7

A seed-tree harvest is proposed for this 42-acre natural loblolly pine stand. This stand was established in 1960, pre-commercially thinned in 1969 and commercially thinned in 1999. A 100 foot "no-cut" buffer will be retained along Nassawango road for aesthetics. Additionally, a buffer will be retailed along the Milburn Landing Hiking Trail, which borders the sale area. An interpretive sign will be placed along the trail informing the public on sustainable forest management practices. There is a network of abandoned agricultural ditches functioning as streams within the sale area. These artificial streams/ditches will be evaluated by Fishery Service and the Forest Service to determine significance and appropriate buffer placement. All buffered streams will be mapped and recorded in the forest GIS. This stand will be allowed to regenerate naturally per DFS guidelines within the Sustainable Forest Management Plan (SFMP). Dominant and co-dominant oaks within the stand will be retained as seed trees to benefit wildlife (DFS) and promote stand diversity. This stand is located within the Future DFS and an ESA Zone 3 (sawtimber) Management Area.

Milburn Landing Tract 17 – Stand 1

A first thinning is proposed for this 12.6 acre loblolly pine plantation which was established in 1987 after heavy site prep. Any mast producing hardwoods will be favored as retention trees over loblolly pine. This stand is located within the Future DFS Management Area.

Nazareth Church Tract 5 – Stand 4

A first thinning is proposed for this 9.3 acre natural pine/hardwood stand which was established in 1979 and sprayed to eliminate hardwood competition. Any mast producing hardwoods will be favored as retention trees over loblolly pine. This stand is located within the Future DFS Management Area.

Nazareth Church Tract 5 – Stand 5

A first thinning is proposed for this 11.9 acre loblolly pine plantation that was established in 1979 after heavy site prep. Thinning will occur across the site (including within the 300 foot buffer along the Pusey Branch) to promote a mixed forest community per DFS guidelines within the SFMP. This stand is located within the Future DFS Management Area.

Nazareth Church Tract 8 – Stand 4

A first thinning is proposed for this 11.3 acre loblolly pine plantation which was established in 1982 after heavy site prep. Any mast producing hardwoods will be favored as retention trees over loblolly pine. This stand is located within the Future DFS Management Area.

Nazareth Church Tract 10 – Stand 1

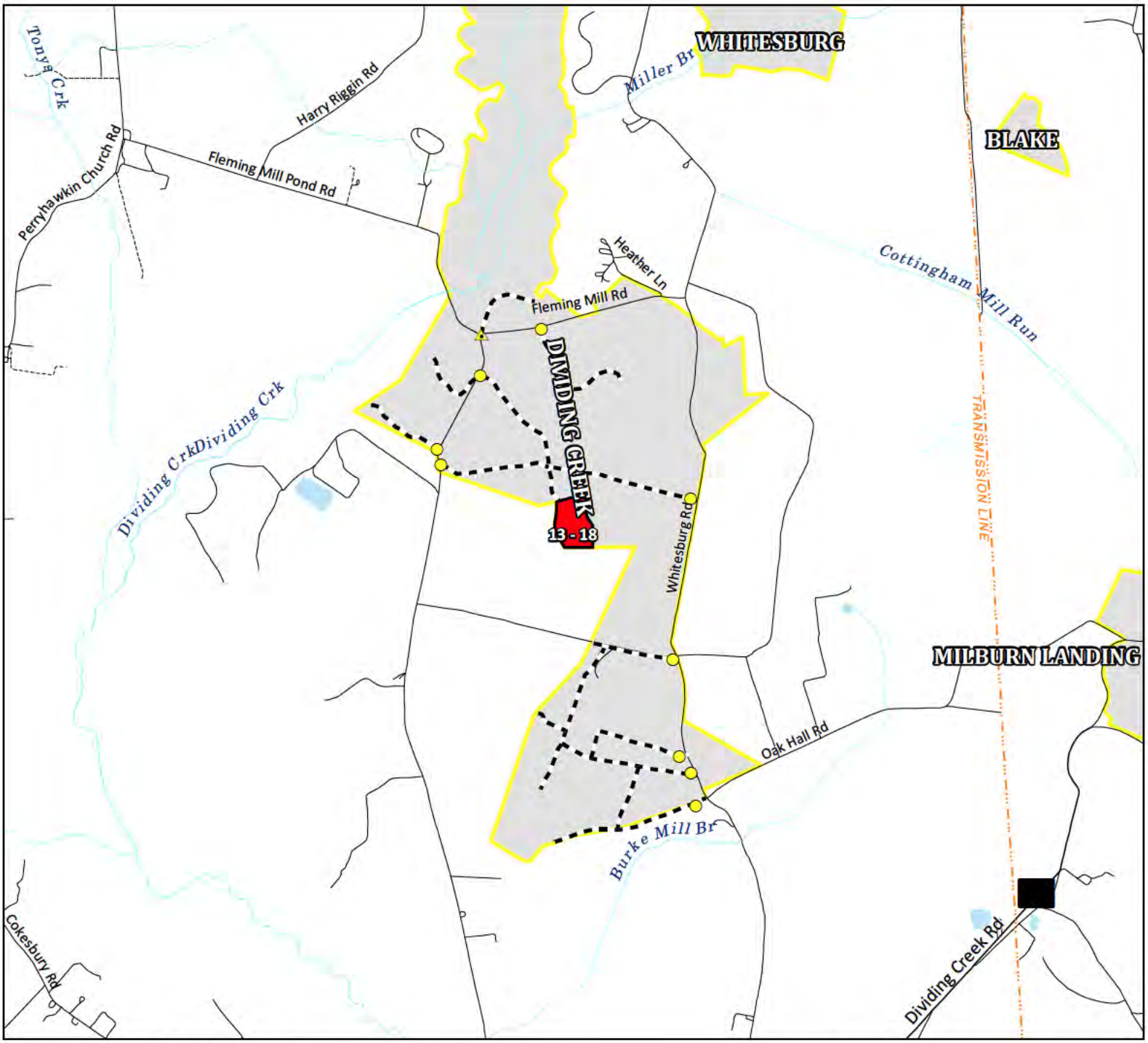
A first thinning is proposed for this 20.4 acre loblolly pine plantation which was established in 1982 and sprayed in 1983 to eliminate hardwood competition. Any mast producing hardwoods will be favored as retention trees over loblolly pine. Thinning this stand will improve the associated ESA sand ridge community attributes. This stand is located within the Future DFS and an ESA Zone 1 Management Area.

Tarr Tract 19 – Stand 29

A first thinning is proposed for this 31.3 acre natural loblolly pine stand which was established in 1980 and sprayed to eliminate hardwood competition in 1984. Any mast producing hardwoods will be favored as retention trees over loblolly pine. This stand is located within an ESA Zone 1, FIDS and the Future DFS Management Area.

Hudson Tract 20 – Stand 11

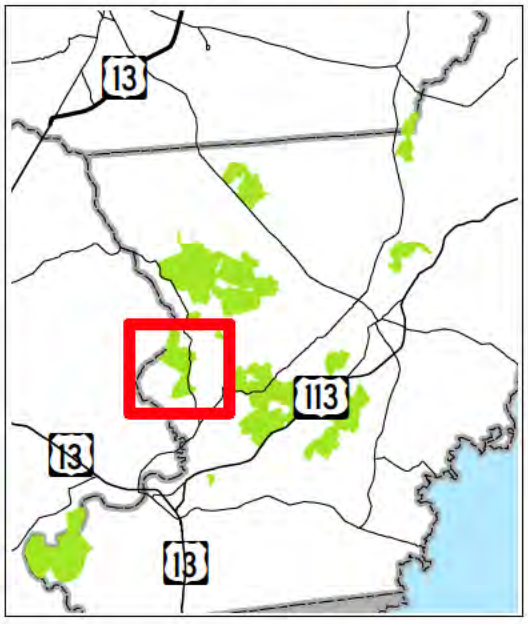
A first thinning is proposed for this 23.5 acre natural pine/hardwood stand which was established in 1989 and sprayed to eliminate competition in 1990. Any mast producing hardwoods will be favored as retention trees over loblolly pine. Thinning this stand will improve the associated ESA sand ridge community attributes. This stand is located within the ESA Zone 1, FIDS and Future DFS Management Area.



0 0.25 0.5 0.75 1 Miles

1 inch = 0.5 miles

N



Pocomoke State Forest

FY 2012 AWP

Dividing Creek Tract Activities

ASC-DNR Forest Service 09/2010

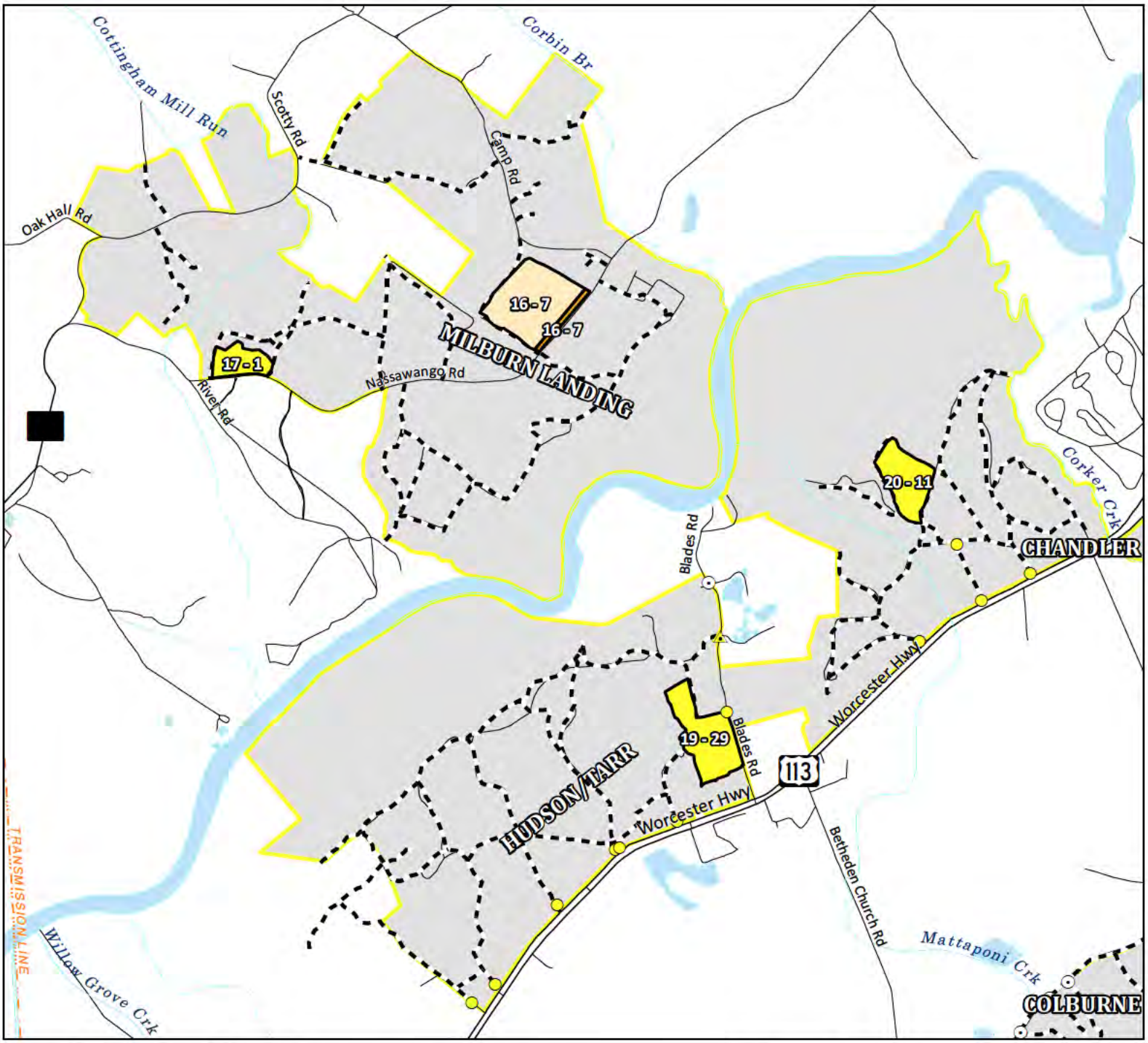
Legend

AWP

- 2012 Buffer
- 2012 FH
- 2012 Seed Tree
- 2012 T1
- Pocomoke State Forest
- Major Roads
- Forest Trails

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 0.25 0.5 0.75 1 Miles

1 inch = 0.5 miles

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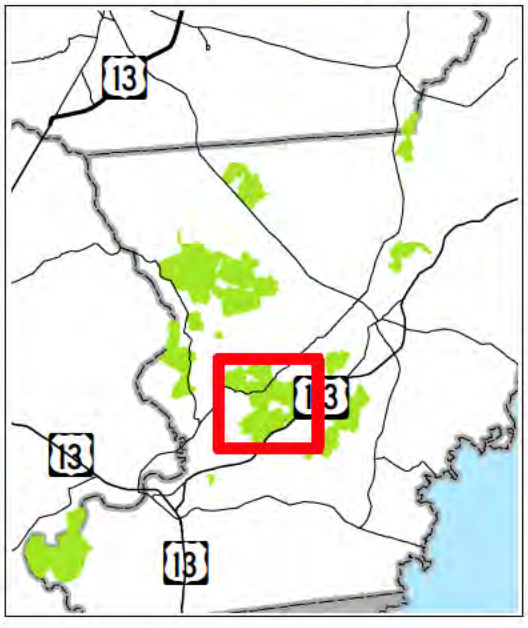


Pocomoke State Forest

FY 2012 AWP

Milburn Landing & Hudson/Tarr

Tract Activities

ASC-DNR Forest Service 09/2010

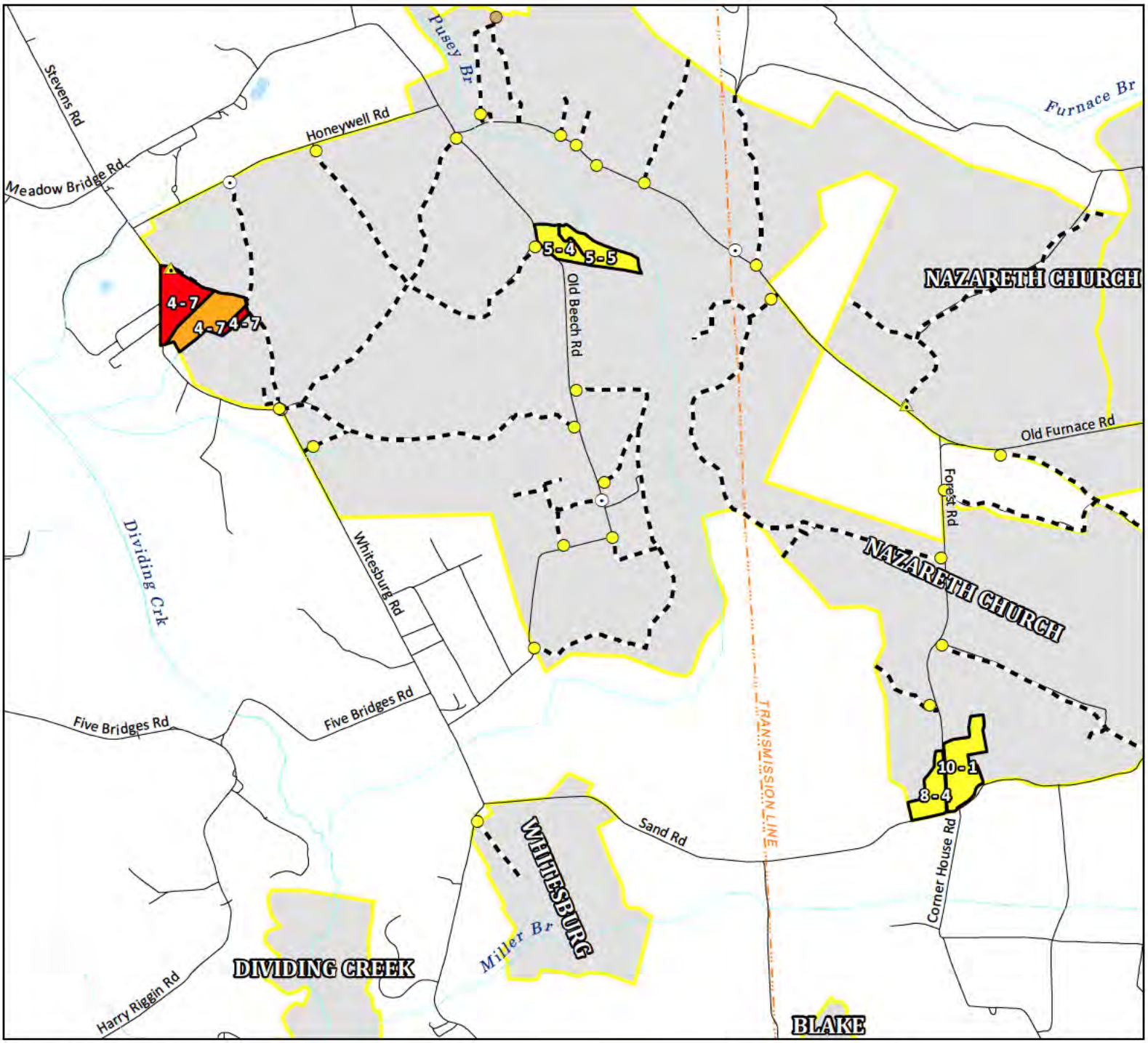
Legend

AWP

- 2012 Buffer
- 2012 FH
- 2012 Seed Tree
- 2012 T1
- Pocomoke State Forest
- Major Roads
- Forest Trails

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 0.25 0.5 0.75 1 Miles

1 inch = 0.5 miles

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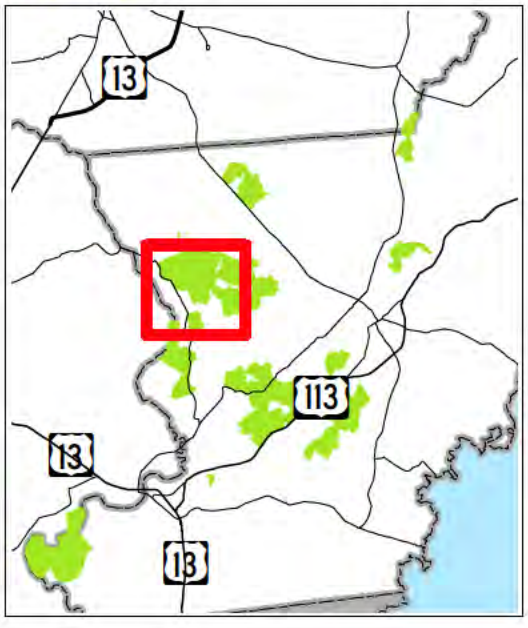


Pocomoke State Forest

FY 2012 AWP

Nazareth Church Tract Activities

ASC-DNR Forest Service 09/2010

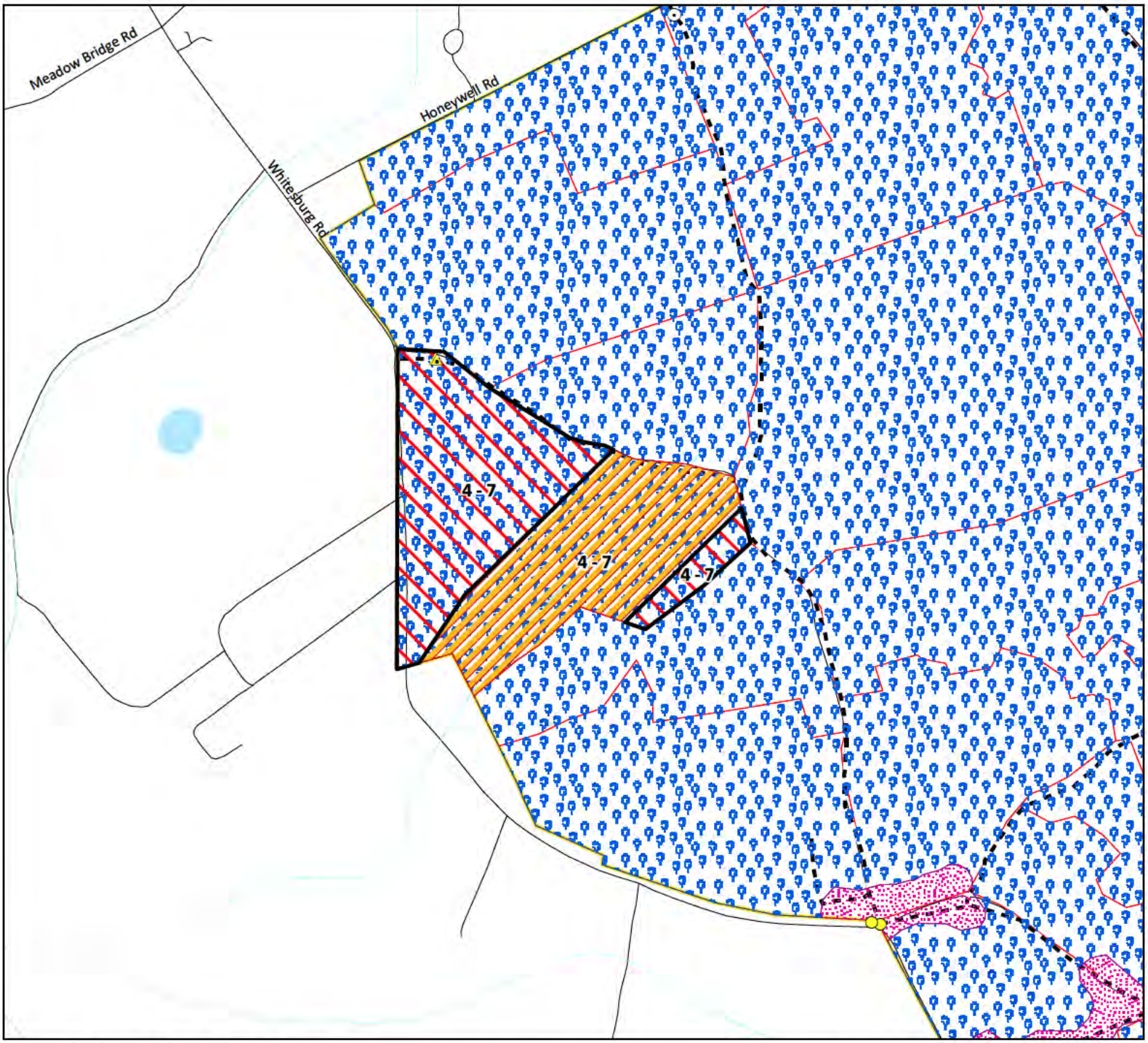
Legend

AWP

- 2012 Buffer
- 2012 FH
- 2012 Seed Tree
- 2012 T1
- Pocomoke State Forest
- Major Roads
- Forest Trails

MARYLAND DEPARTMENT OF NATURAL RESOURCES

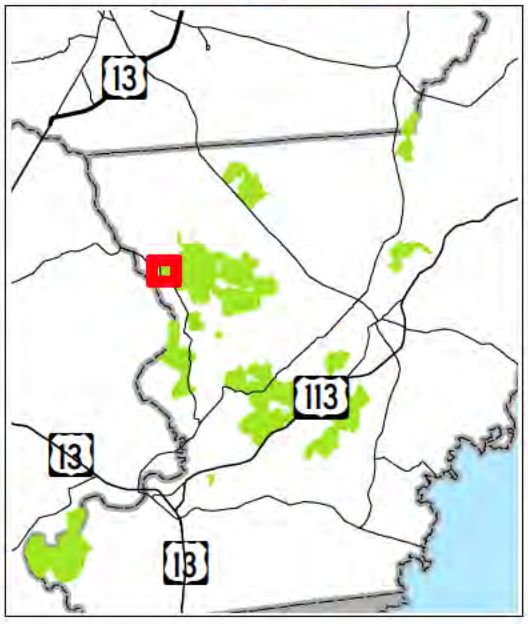
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N



Pocomoke State Forest

FY 2012 AWP
P02 - Nazareth Church Tract (4)
Stand 7
Final Harvest Area: 20.2 Acres
Buffer Area: 17.0 Acres
ASC-DNR Forest Service 09/2010

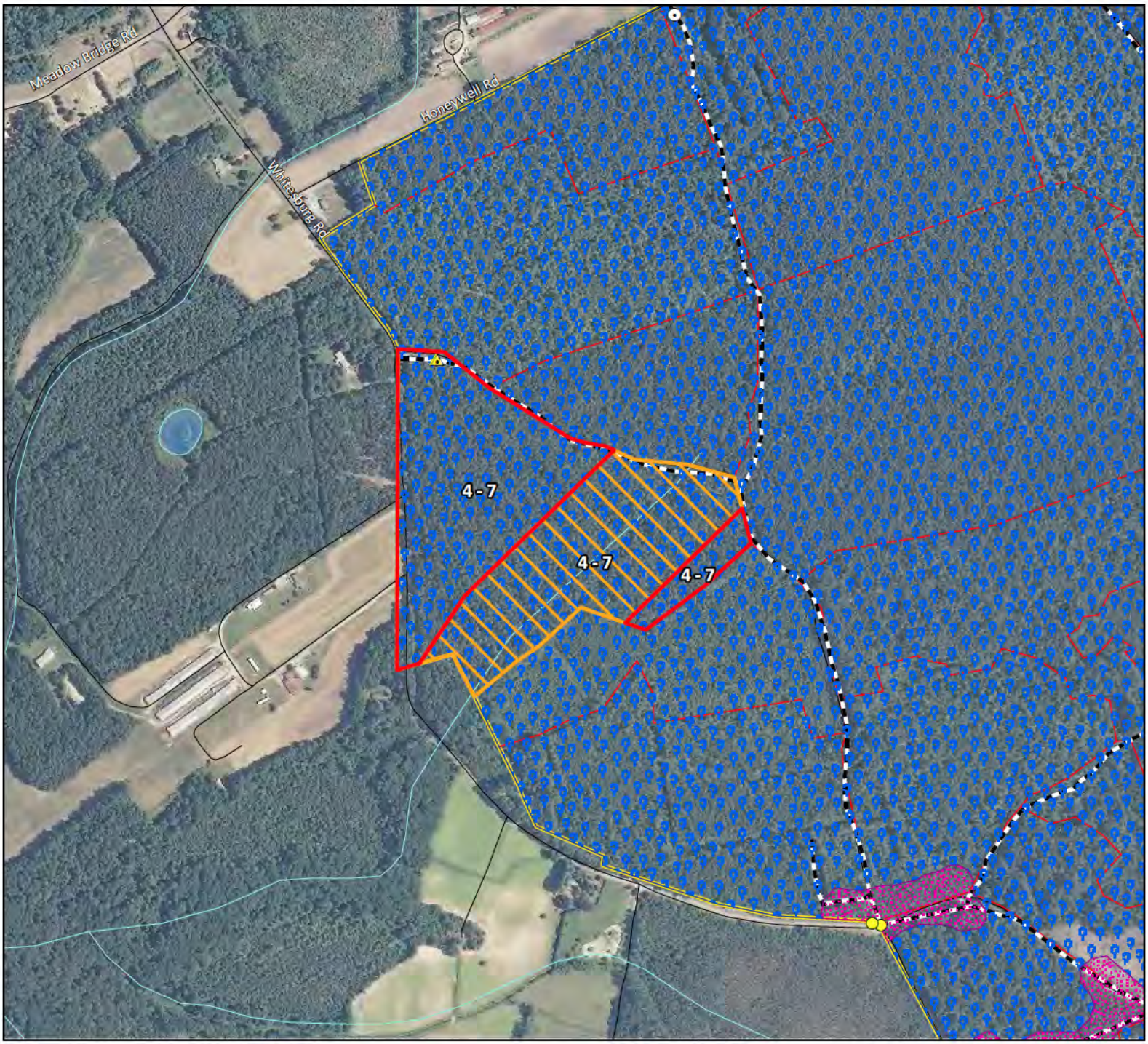
Legend

AWP
- 2012 FH
- 2012 Buffer

PSF Draft Management Zones
- Core FIDS
- Delmarva Fox Squirrel
- ESA & Protected Lands
- Forested Riparian Buffers
- Rare Community - Soil Types

MARYLAND DEPARTMENT OF NATURAL RESOURCES

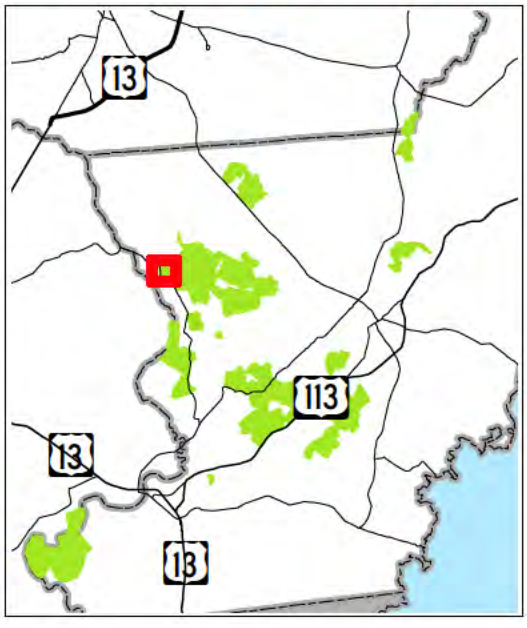
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N



Pocomoke State Forest

FY 2012 AWP
P02 - Nazareth Church Tract (4)
Stand 7
Final Harvest Area: 20.2 Acres
Buffer Area: 17.0 Acres
ASC-DNR Forest Service 09/2010

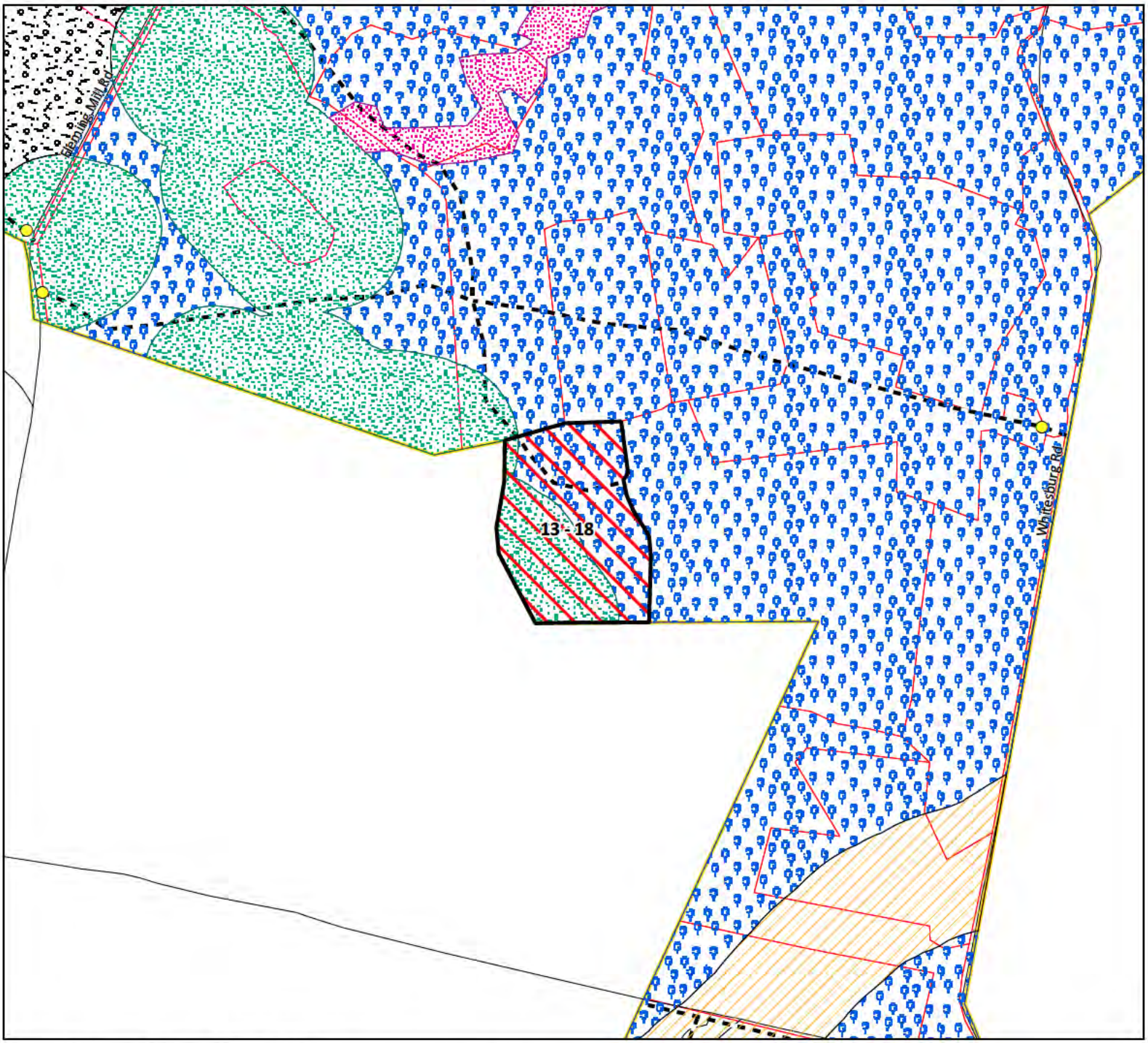
Legend

AWP
- 2012 FH
- 2012 Buffer

PSF Draft Management Zones
- Core FIDS
- Delmarva Fox Squirrel
- ESA & Protected Lands
- Forested Riparian Buffers
- Rare Community - Soil Types

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Pocomoke State Forest

FY 2012 AWP

P04 - Dividing Creek Tract (13)

Stand 18

Final Harvest Area: 13.2 Acres

ASC-DNR Forest Service 09/2010

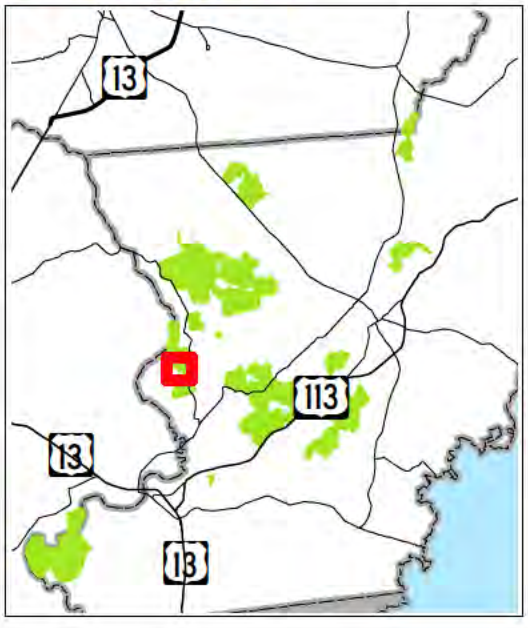
Legend

AWP

- 2012 FH

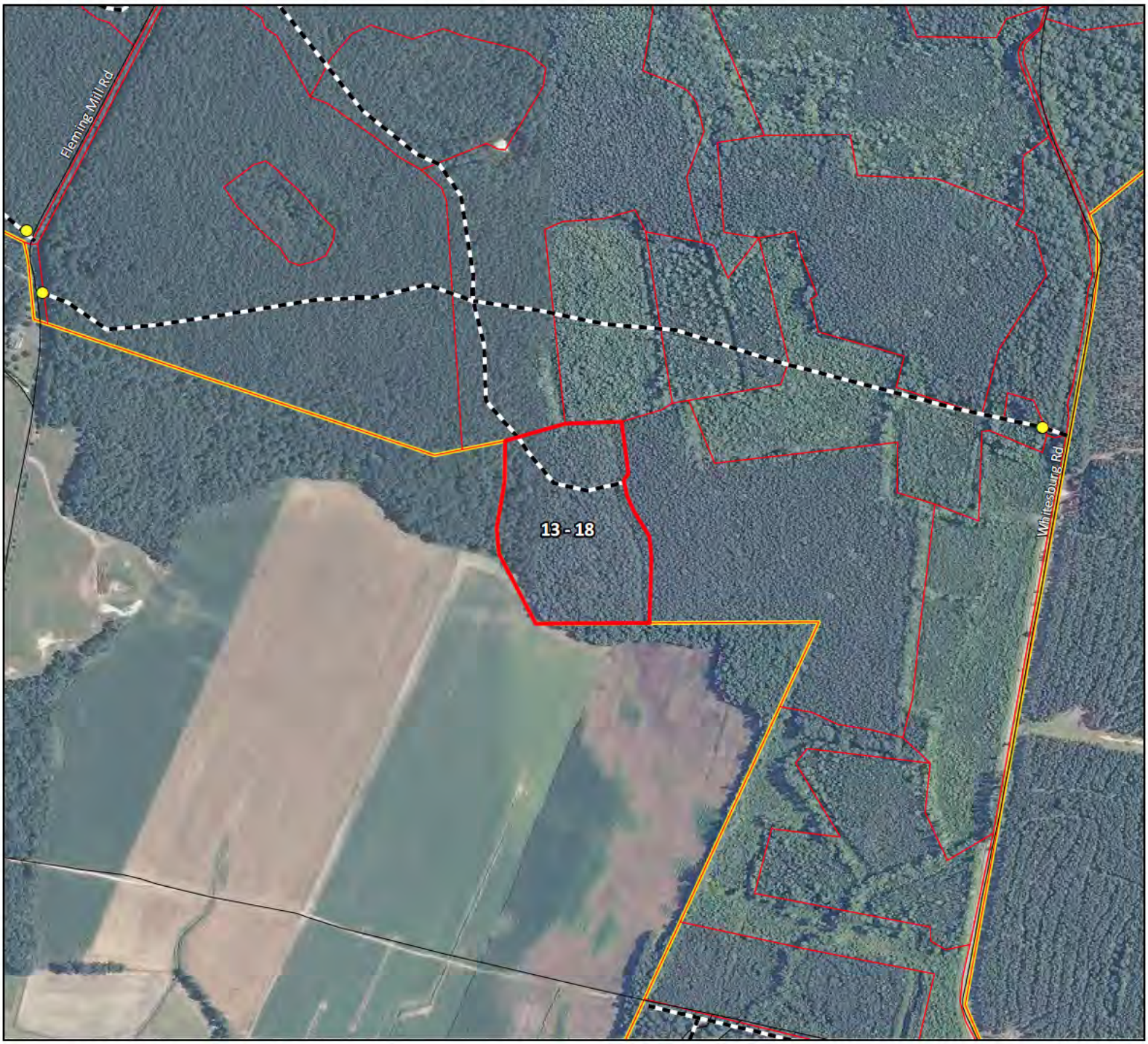
PSF Draft Management Zones

- Core FIDS
- Delmarva Fox Squirrel
- ESA & Protected Lands
- Forested Riparian Buffers
- Rare Community - Soil Types



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



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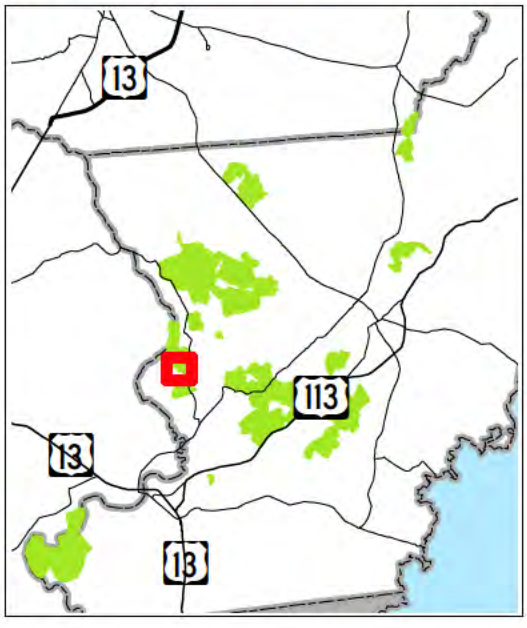


Pocomoke State Forest

FY 2012 AWP
P04 - Dividing Creek Tract (13)
Stand 18
Final Harvest Area: 13.2 Acres
ASC-DNR Forest Service 09/2010

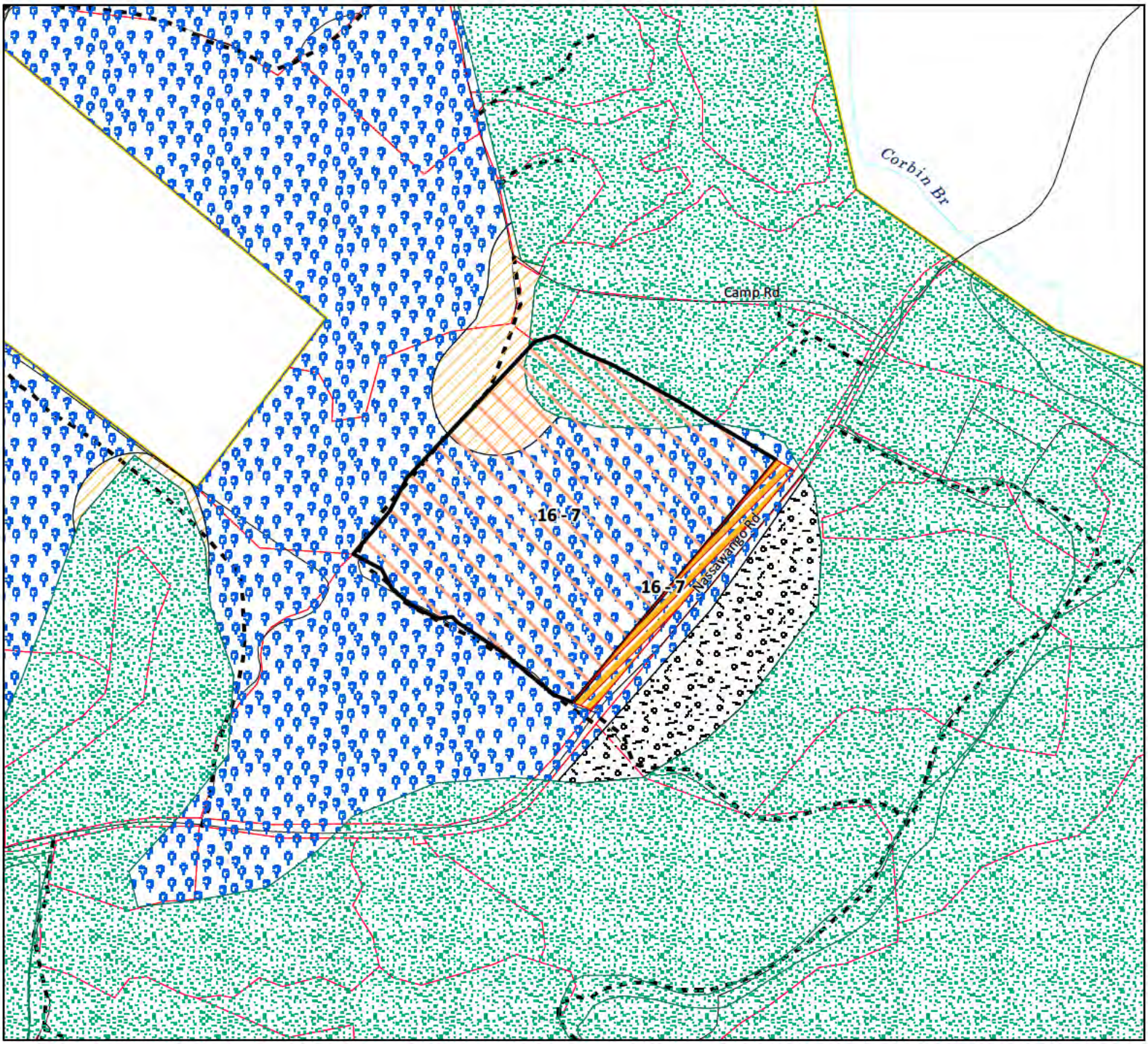
Legend

AWP

2012 FH

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



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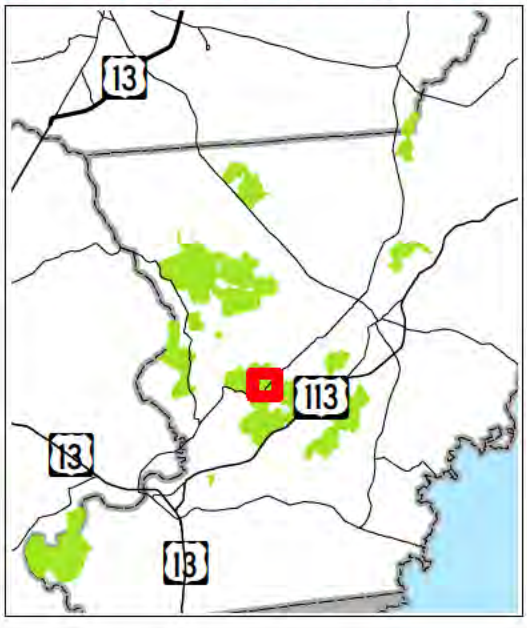


Pocomoke State Forest

FY 2012 AWP
P05 - Milburn Landing Tract (16)
Stand 7
Seed Tree Harvest Area: 42.0 Acres
Buffer Area: 3.2 Acres
ASC-DNR Forest Service 09/2010

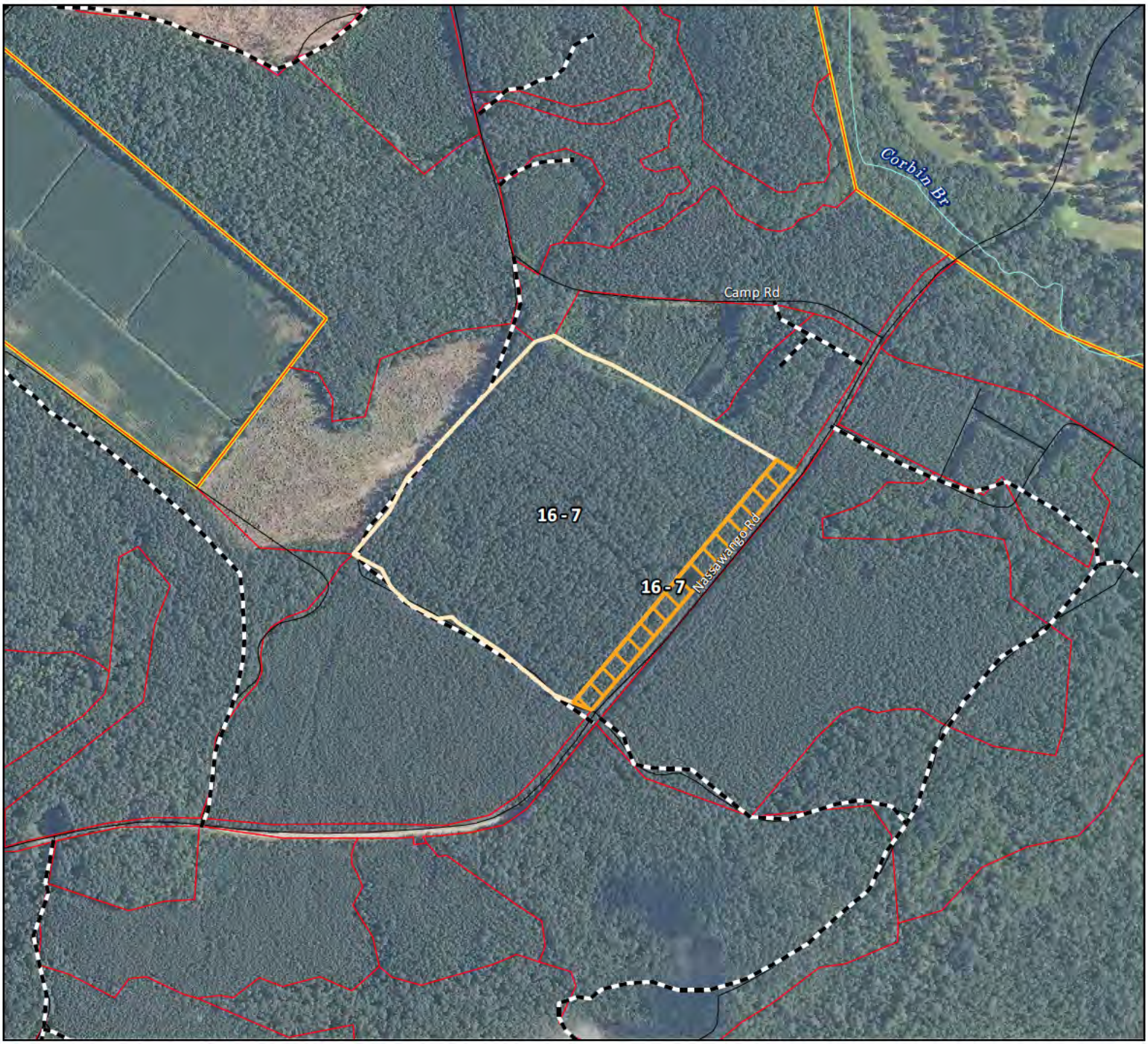
Legend

AWP
- 2012 Seed Tree
- 2012 Buffer

PSF Draft Management Zones
- Core FIDS
- Delmarva Fox Squirrel
- ESA & Protected Lands
- Forested Riparian Buffers
- Rare Community - Soil Types

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



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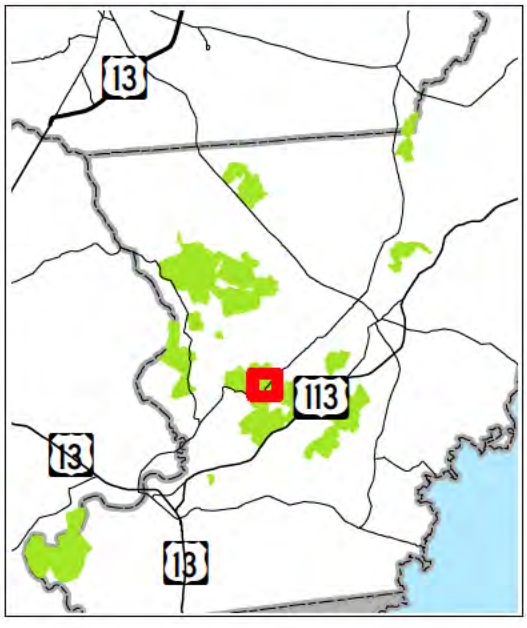
N



Pocomoke State Forest

FY 2012 AWP
P05 - Milburn Landing Tract (16)
Stand 7
Seed Tree Harvest Area: 42.0 Acres
Buffer Area: 3.2 Acres
ASC-DNR Forest Service 09/2010

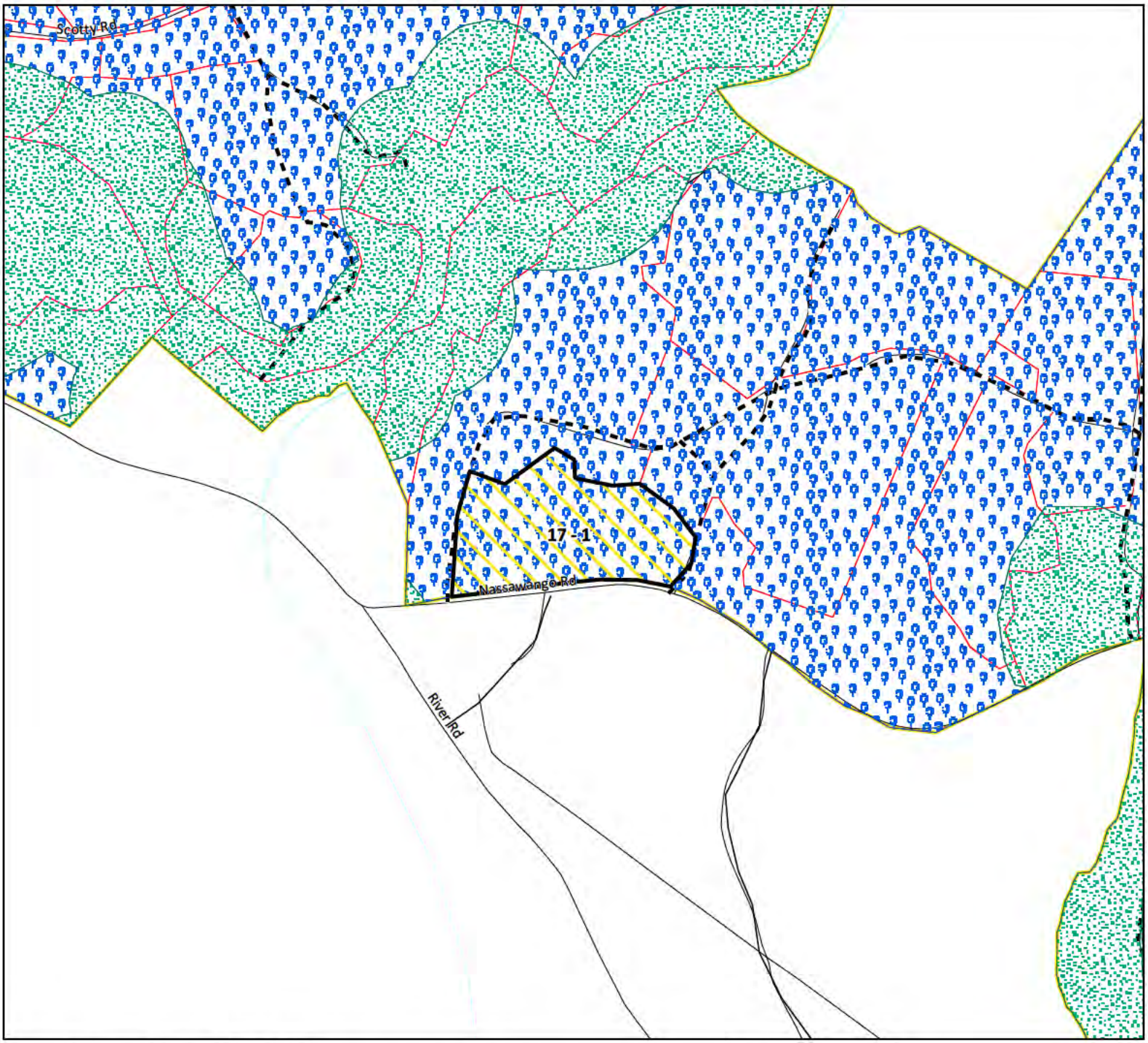
Legend

AWP

- 2012 Seed Tree
- 2012 Buffer

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Pocomoke State Forest

FY 2012 AWP
P05 - Milburn Landing Tract (17)
Stand 1
Thinning Area: 12.6 Acres
ASC-DNR Forest Service 09/2010

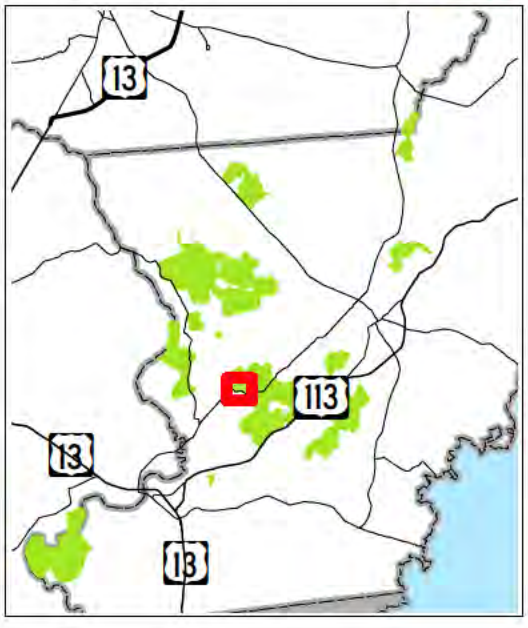
Legend

AWP

2012 T1

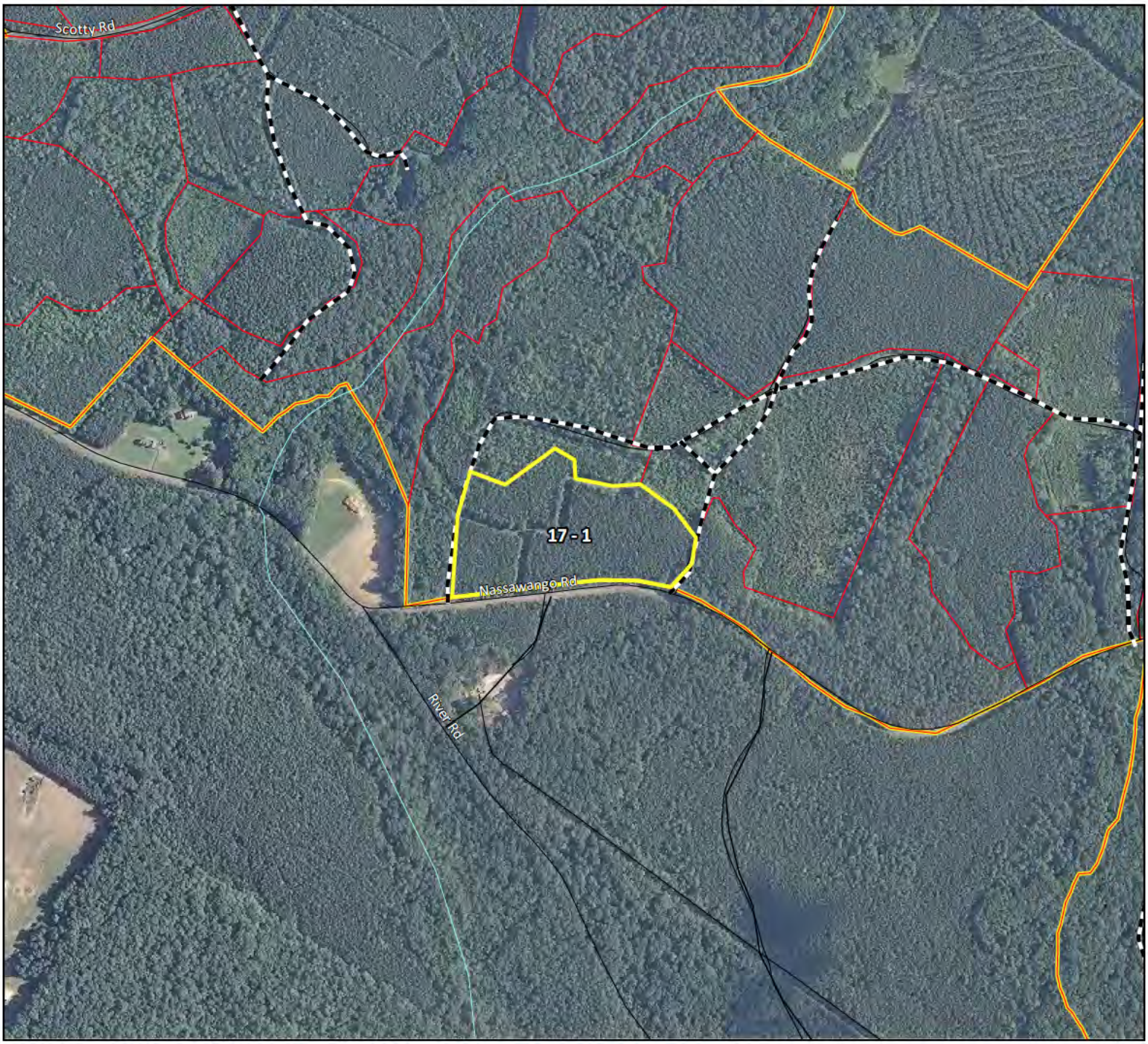
PSF Draft Management Zones

- Core FIDS
- Delmarva Fox Squirrel
- ESA & Protected Lands
- Forested Riparian Buffers
- Rare Community - Soil Types



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



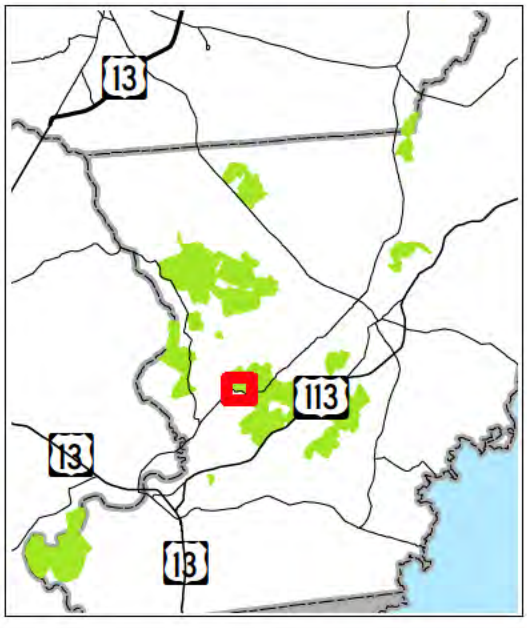
0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Pocomoke State Forest

FY 2012 AWP
P05 - Milburn Landing Tract (17)
Stand 1
Thinning Area: 12.6 Acres
ASC-DNR Forest Service 09/2010



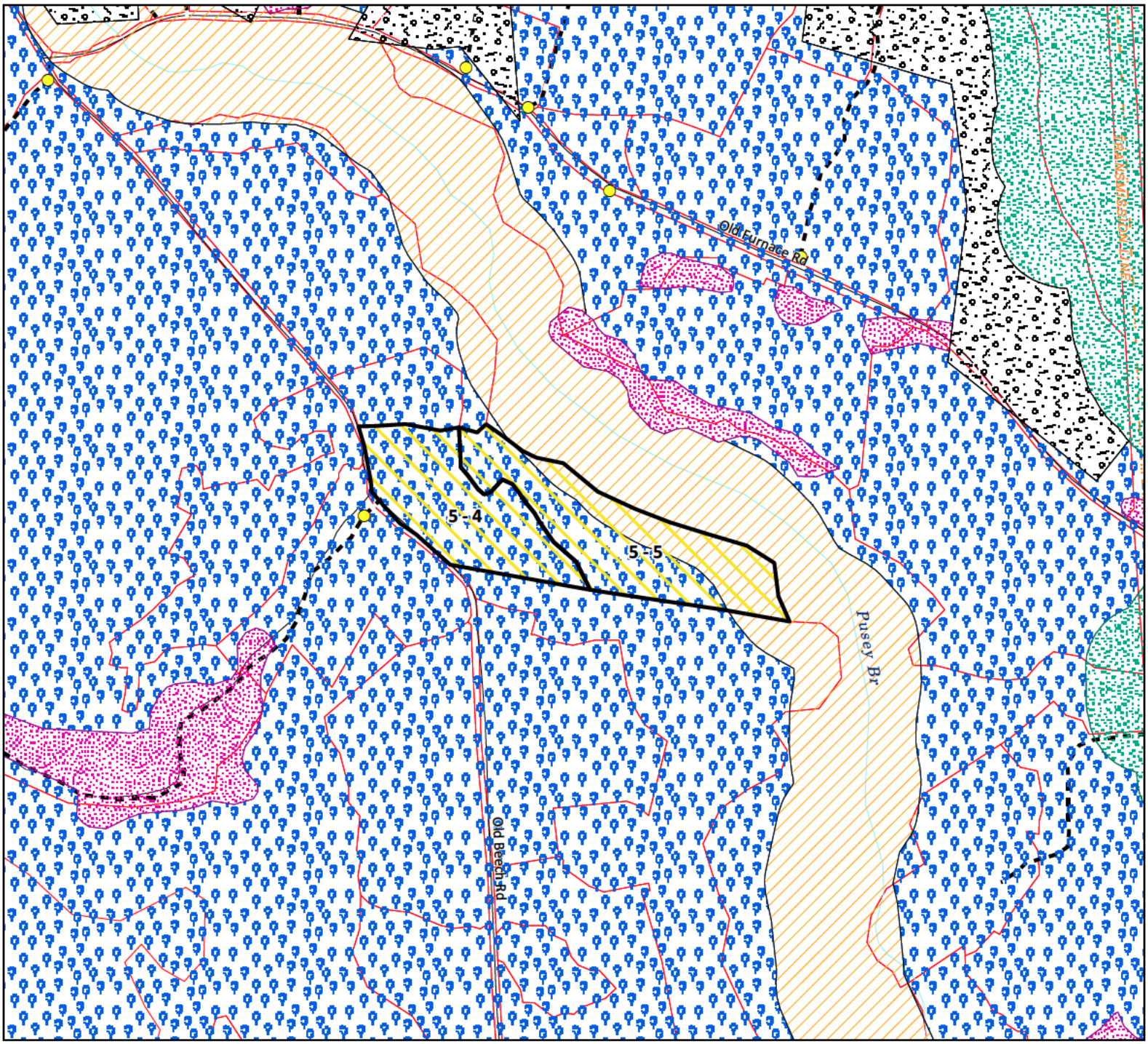
Legend

AWP

2012 T1

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



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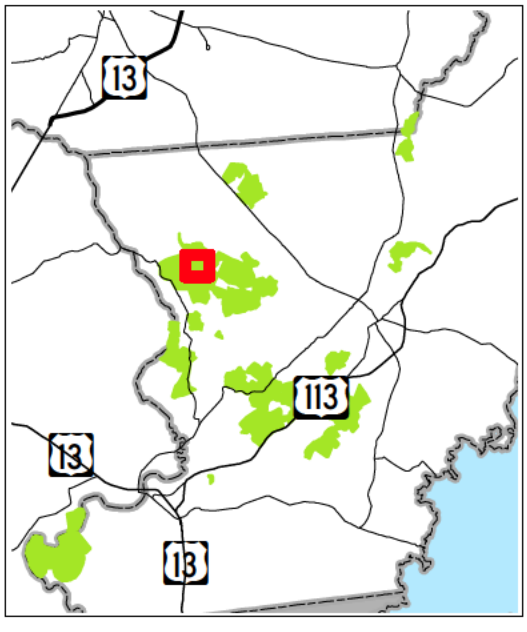
1 inch = 660 feet

N



Pocomoke State Forest

FY 2012 AWP

P02 - Nazareth Church Tract (5) - Stands 4 & 5

Thinning Area: 21.2 Acres

ASC-DNR Forest Service 09/2010

Legend

AWP

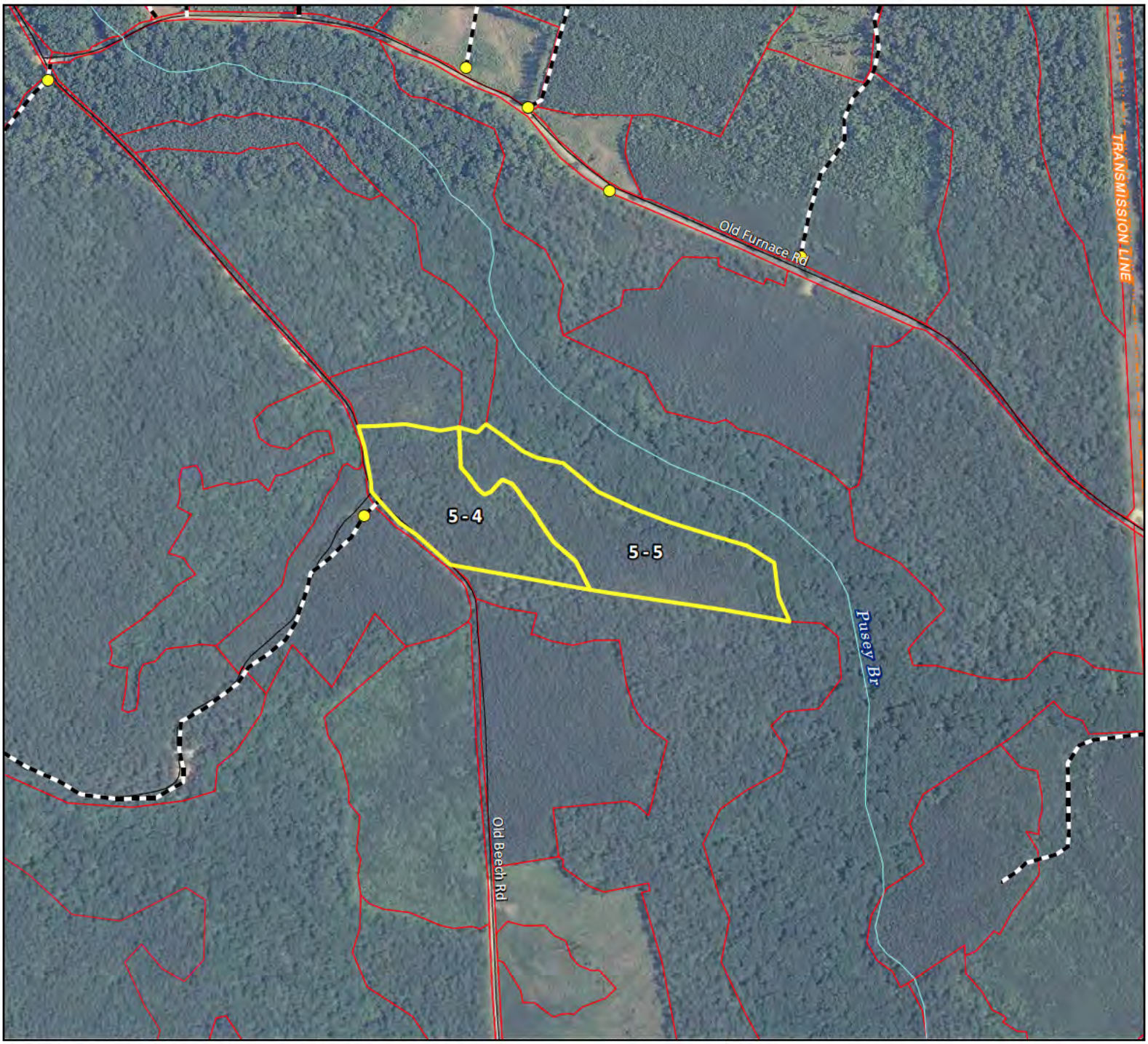
- 2012 T1

PSF Draft Management Zones

- Core FIDS
- Delmarva Fox Squirrel
- ESA & Protected Lands
- Forested Riparian Buffers
- Rare Community - Soil Types

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

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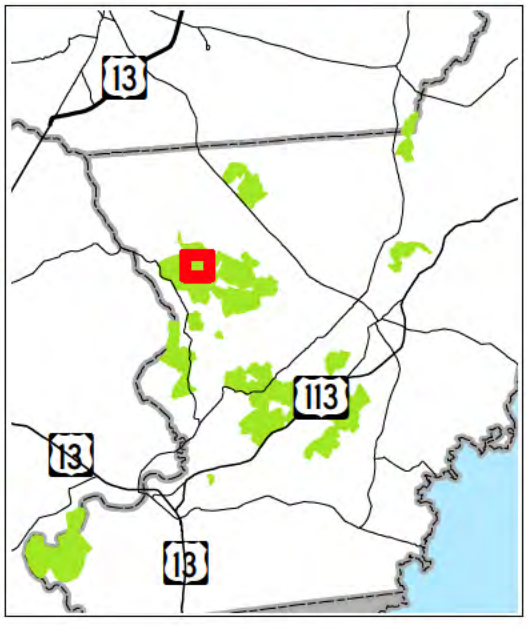


Pocomoke State Forest

FY 2012 AWP

P02 - Nazareth Church Tract (5) - Stands 4 & 5

Thinning Area: 21.2 Acres

ASC-DNR Forest Service 09/2010

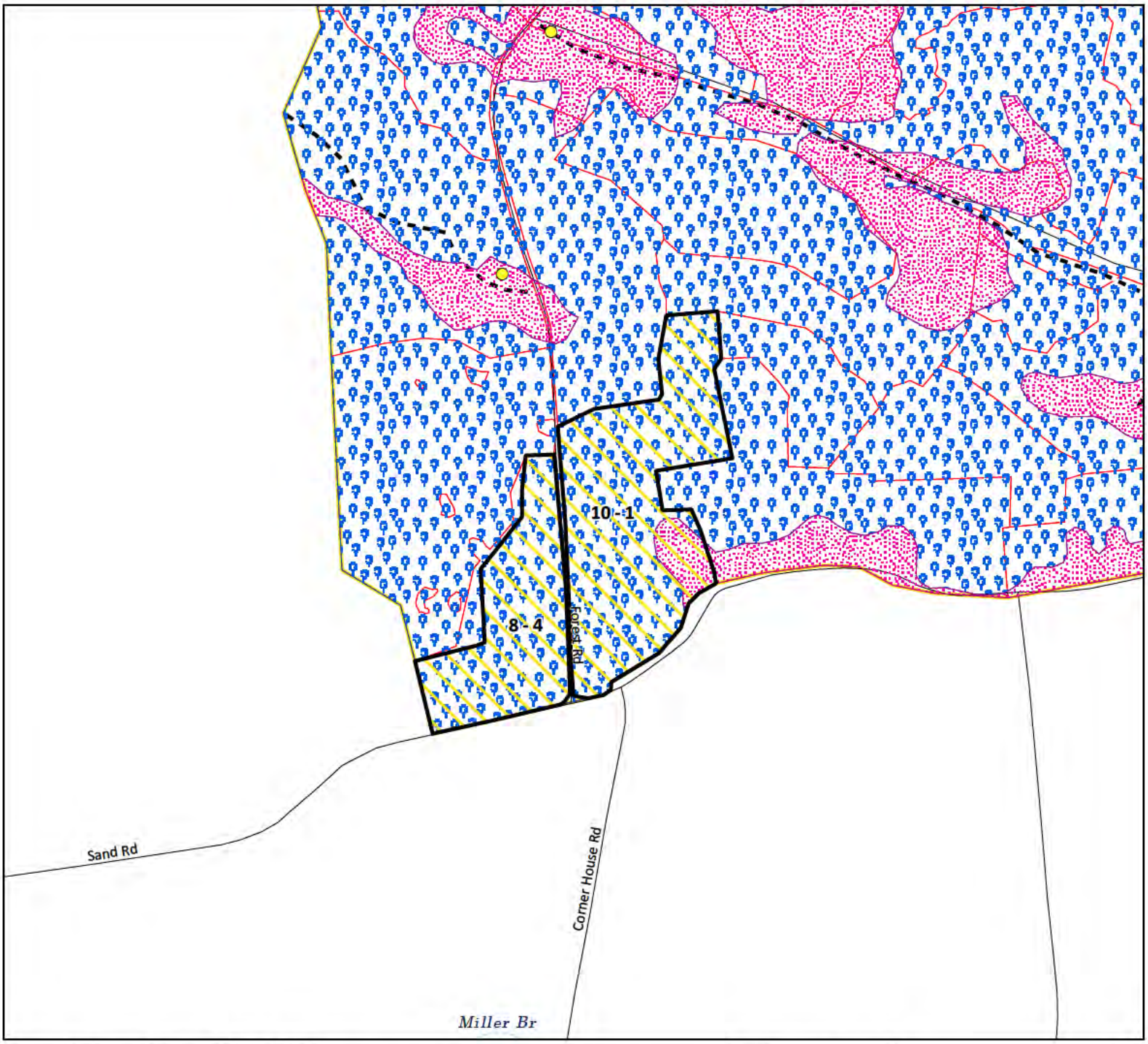
Legend

AWP

2012 T1

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

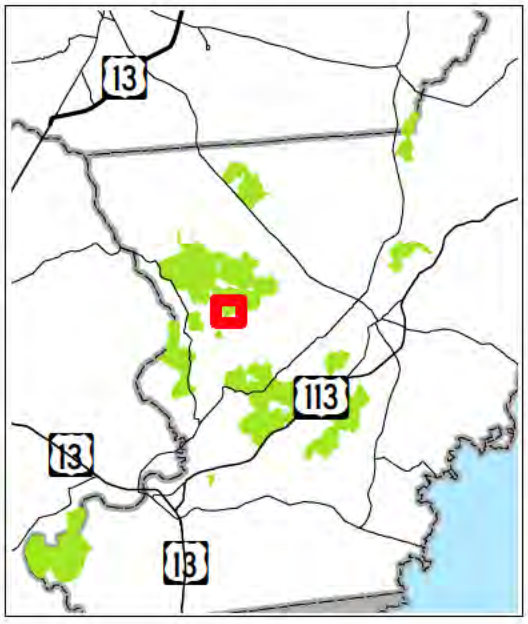
Pocomoke State Forest

FY 2012 AWP
P02 - Nazareth Church Tract (8 & 10)
Stands 4 & 1
Thinning Area: 31.7 Acres
ASC-DNR Forest Service 09/2010

Legend

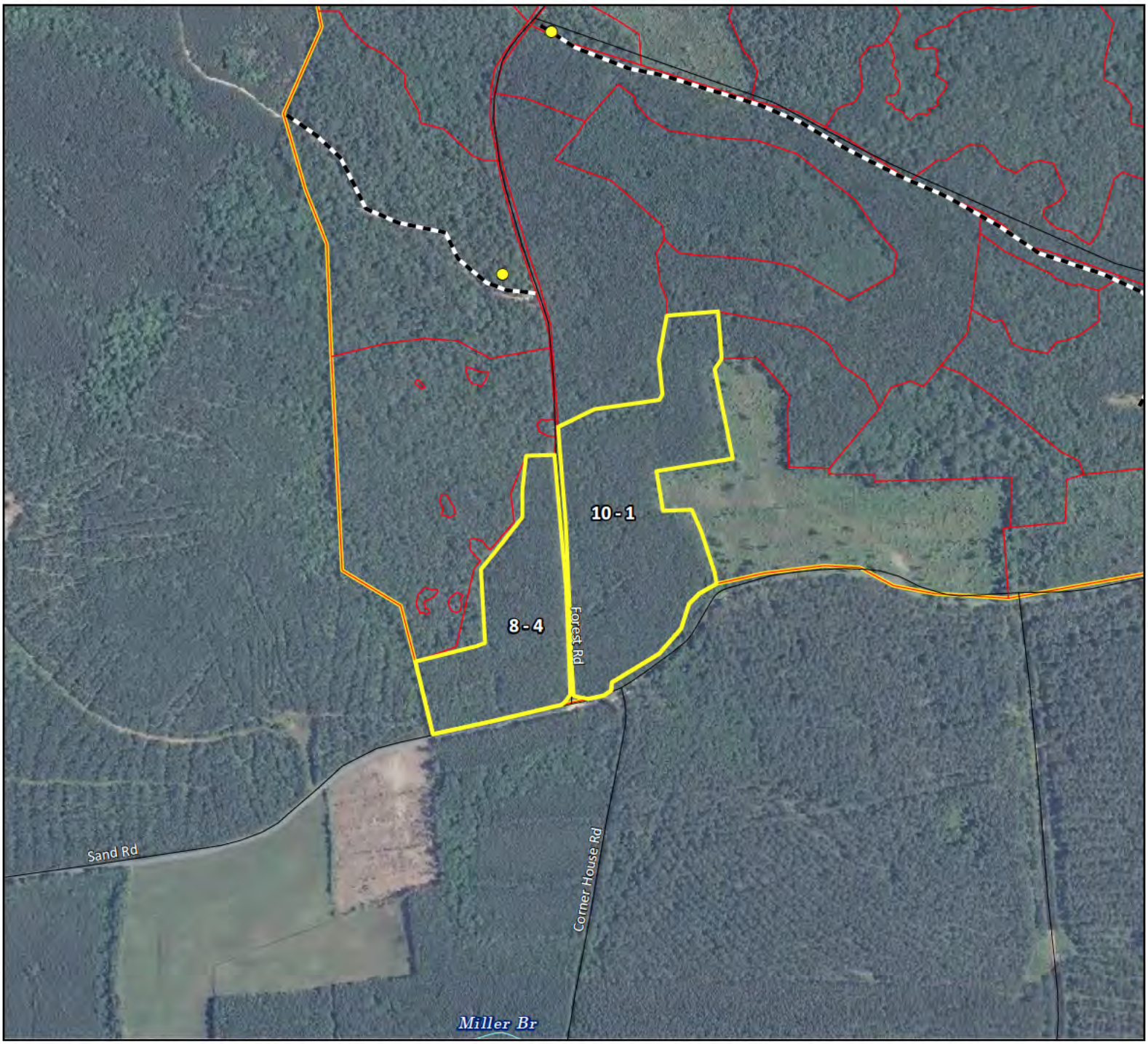
AWP
- 2012 T1

PSF Draft Management Zones
- Core FIDS
- Delmarva Fox Squirrel
- ESA & Protected Lands
- Forested Riparian Buffers
- Rare Community - Soil Types



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



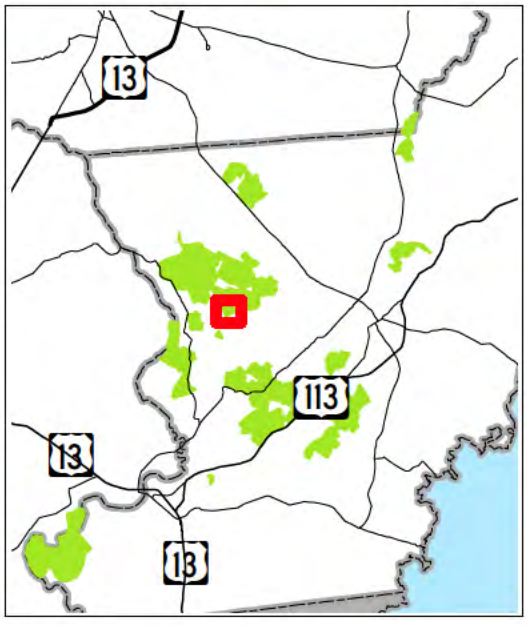
0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Pocomoke State Forest

FY 2012 AWP
P02 - Nazareth Church Tract (8 & 10)
Stands 4 & 1
Thinning Area: 31.7 Acres
ASC-DNR Forest Service 09/2010



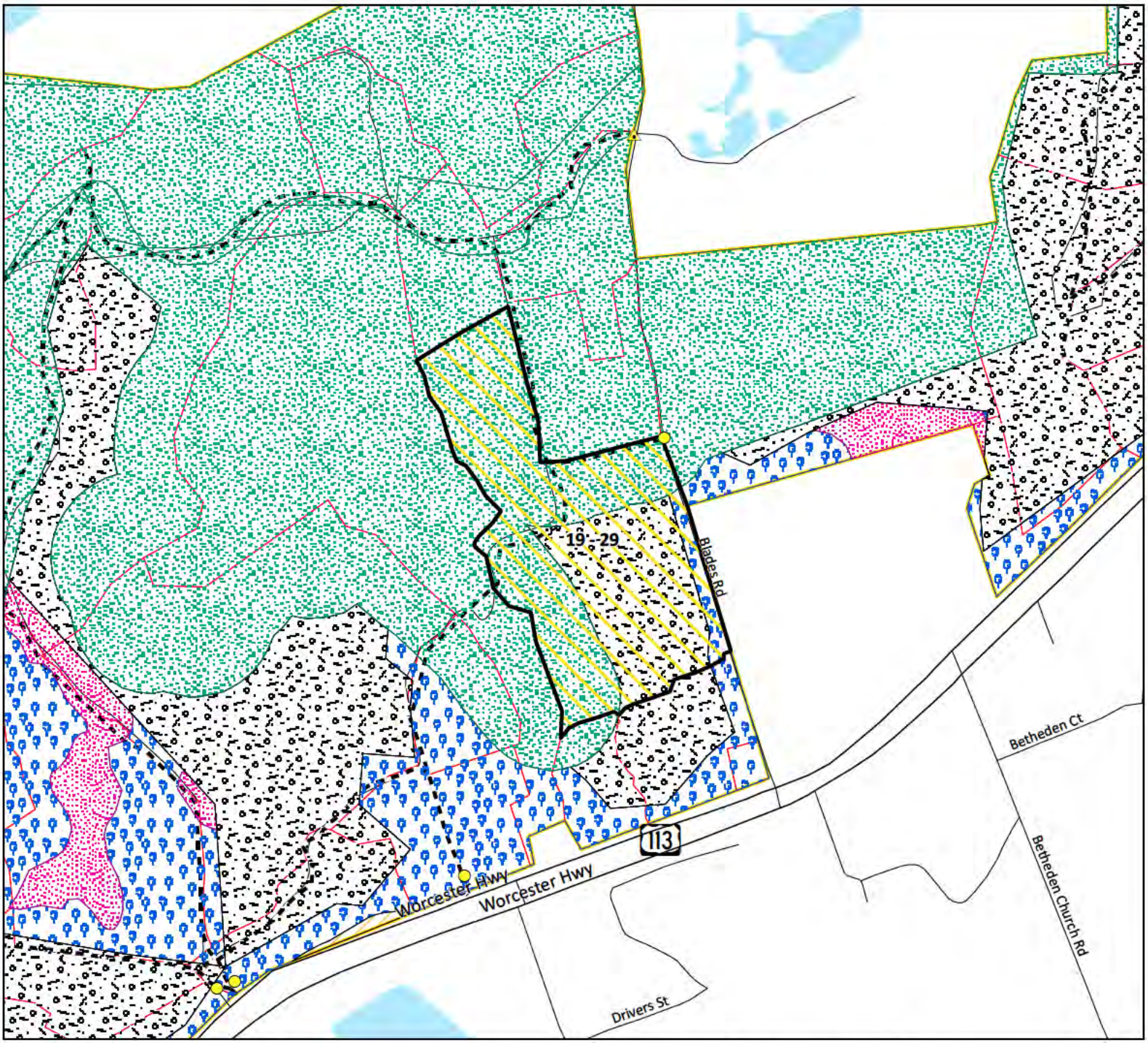
Legend

AWP

2012 T1

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



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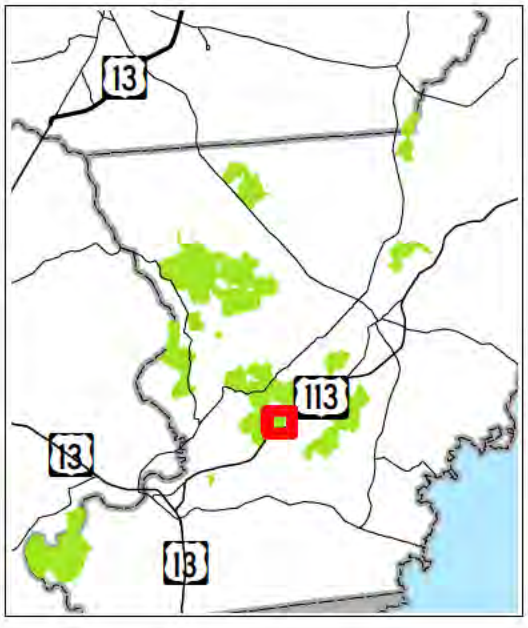


Pocomoke State Forest

FY 2012 AWP
P06 - Tarr Tract (19)
Stand 29
Thinning Area: 31.3 Acres
ASC-DNR Forest Service 09/2010

Legend

AWP

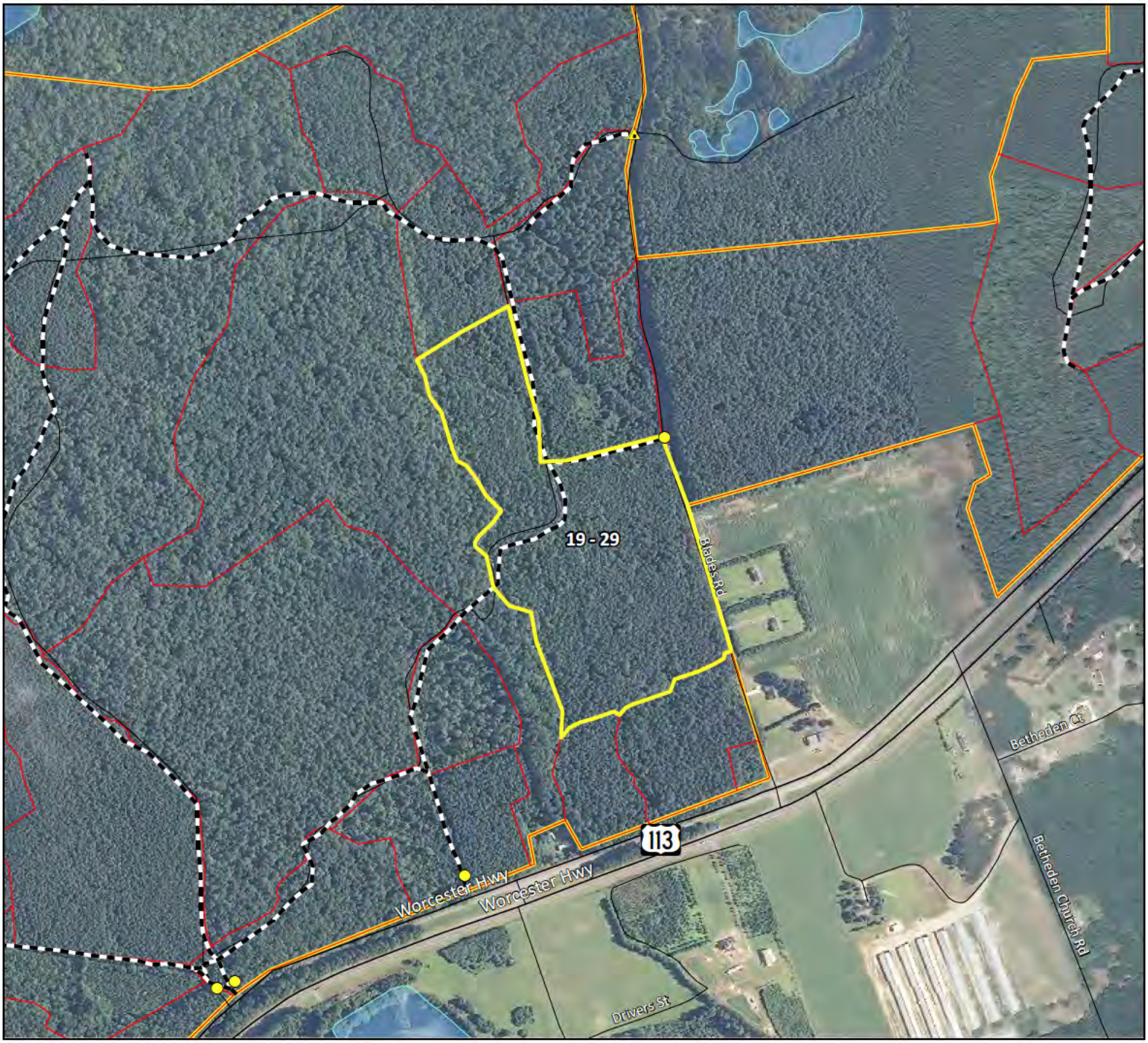
2012 T1

PSF Draft Management Zones

- Core FIDS
- Delmarva Fox Squirrel
- ESA & Protected Lands
- Forested Riparian Buffers
- Rare Community - Soil Types

MARYLAND DEPARTMENT OF NATURAL RESOURCES

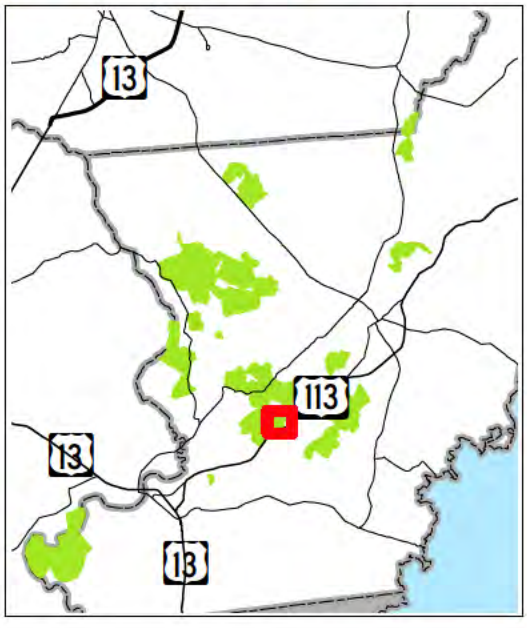
MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N



Pocomoke State Forest

FY 2012 AWP

P06 - Tarr Tract (19)

Stand 29

Thinning Area: 31.3 Acres

ASC-DNR Forest Service 09/2010

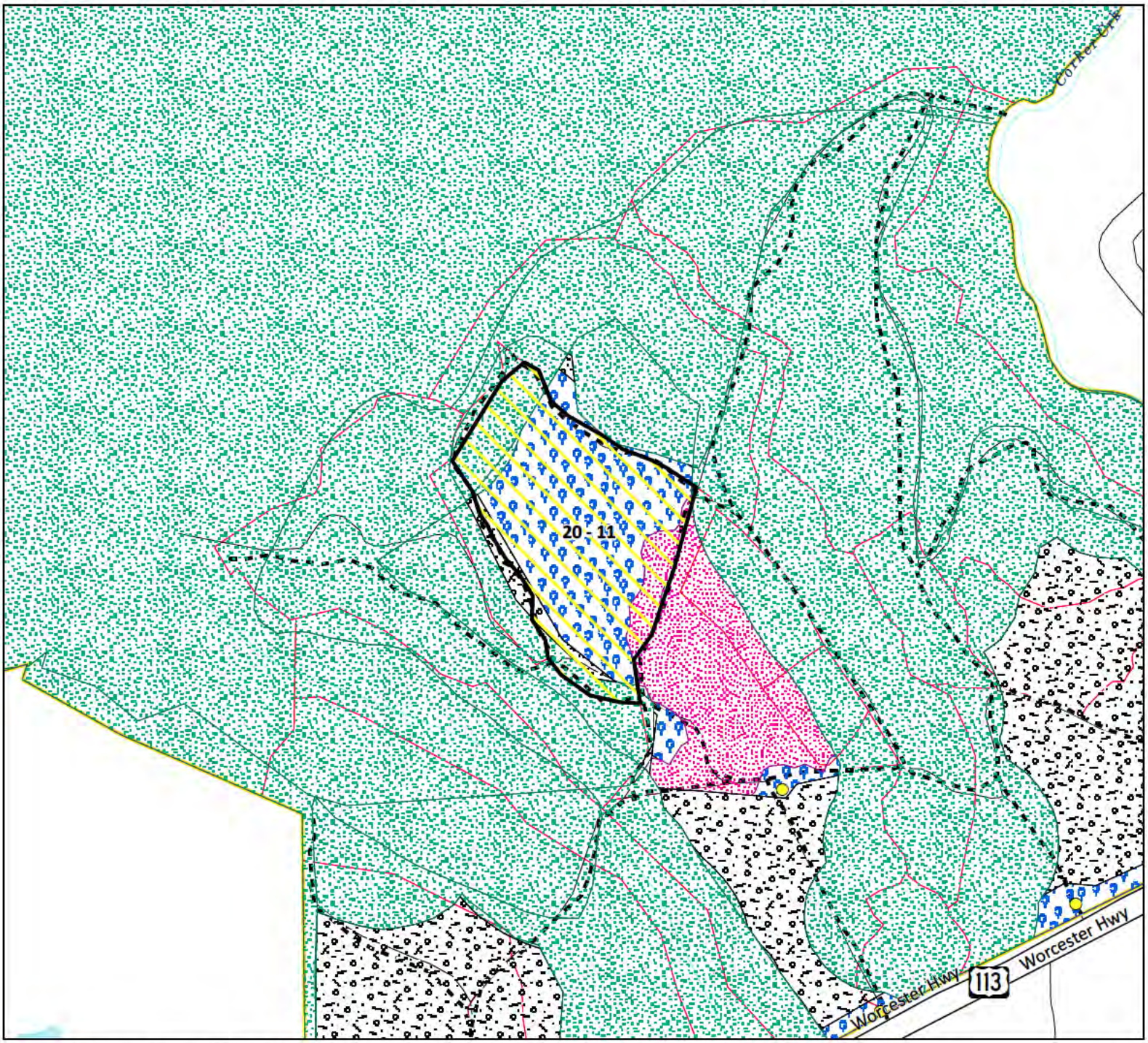
Legend

AWP

2012 T1

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



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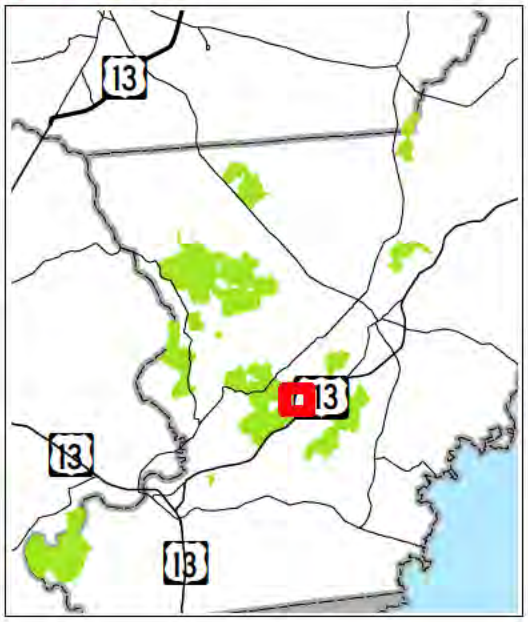


Pocomoke State Forest

FY 2012 AWP
P06 - Hudson Tract (20)
Stand 11
Thinning Area: 23.5 Acres
ASC-DNR Forest Service 09/2010

Legend

AWP

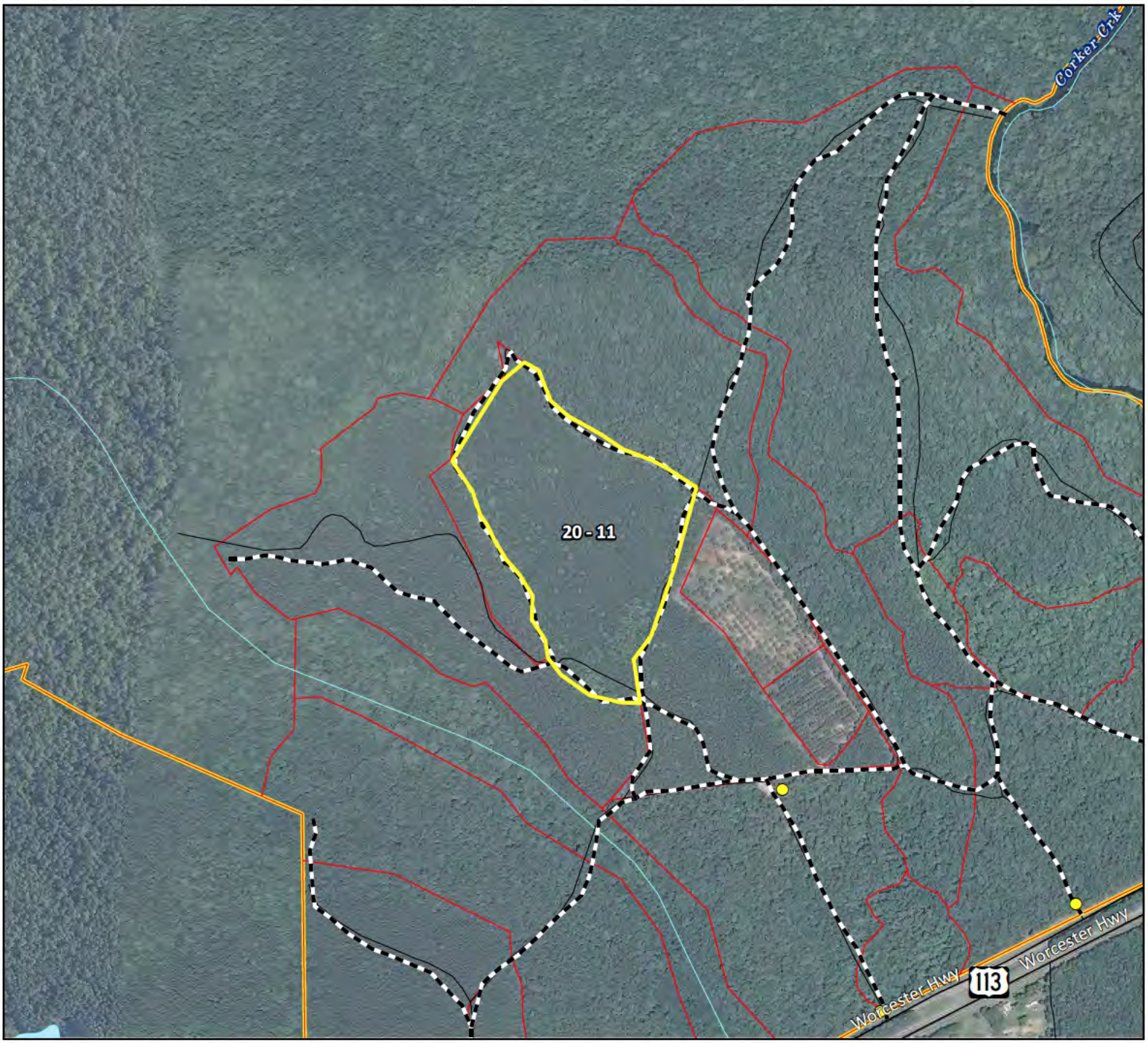
2012 T1

PSF Draft Management Zones

- Core FIDS
- Delmarva Fox Squirrel
- ESA & Protected Lands
- Forested Riparian Buffers
- Rare Community - Soil Types

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



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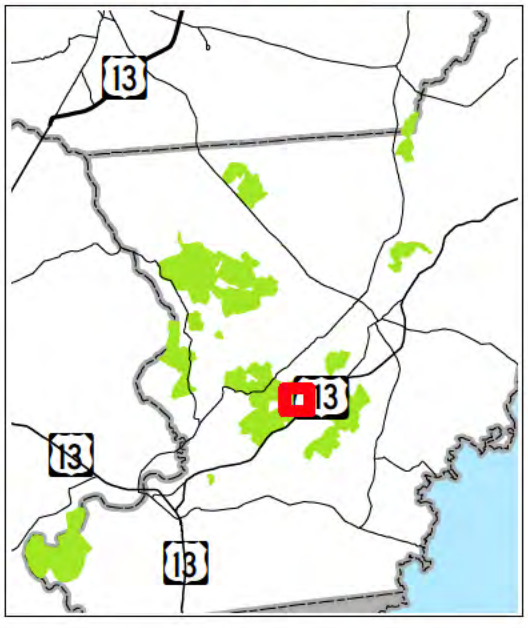


Pocomoke State Forest

FY 2012 AWP
P06 - Hudson Tract (20)
Stand 11
Thinning Area: 23.5 Acres
ASC-DNR Forest Service 09/2010

Legend

AWP

2012 T1

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE

Description of 2012 Activities – Somerset County

Complex S14 West Post Office

A final harvest is proposed for parts of Stand 1 which total 21.2 acres. Stand 1 was established in 1969, first thinned in 1996, and second thinned in 2004.

The areas retained in stand 1 will act as a seed source for the harvested areas. The harvested area will be monitored for natural regeneration. If this does not occur, the site will be prepared and hand planted with loblolly pine.

Only areas within the General Management Area will be harvested.

Complex S49 Handy

A first thinning is proposed for the majority of stand 1. These parts of stand 1 total 38.3 acres, were established in 1990, and were pre-commercially thinned in 2001.

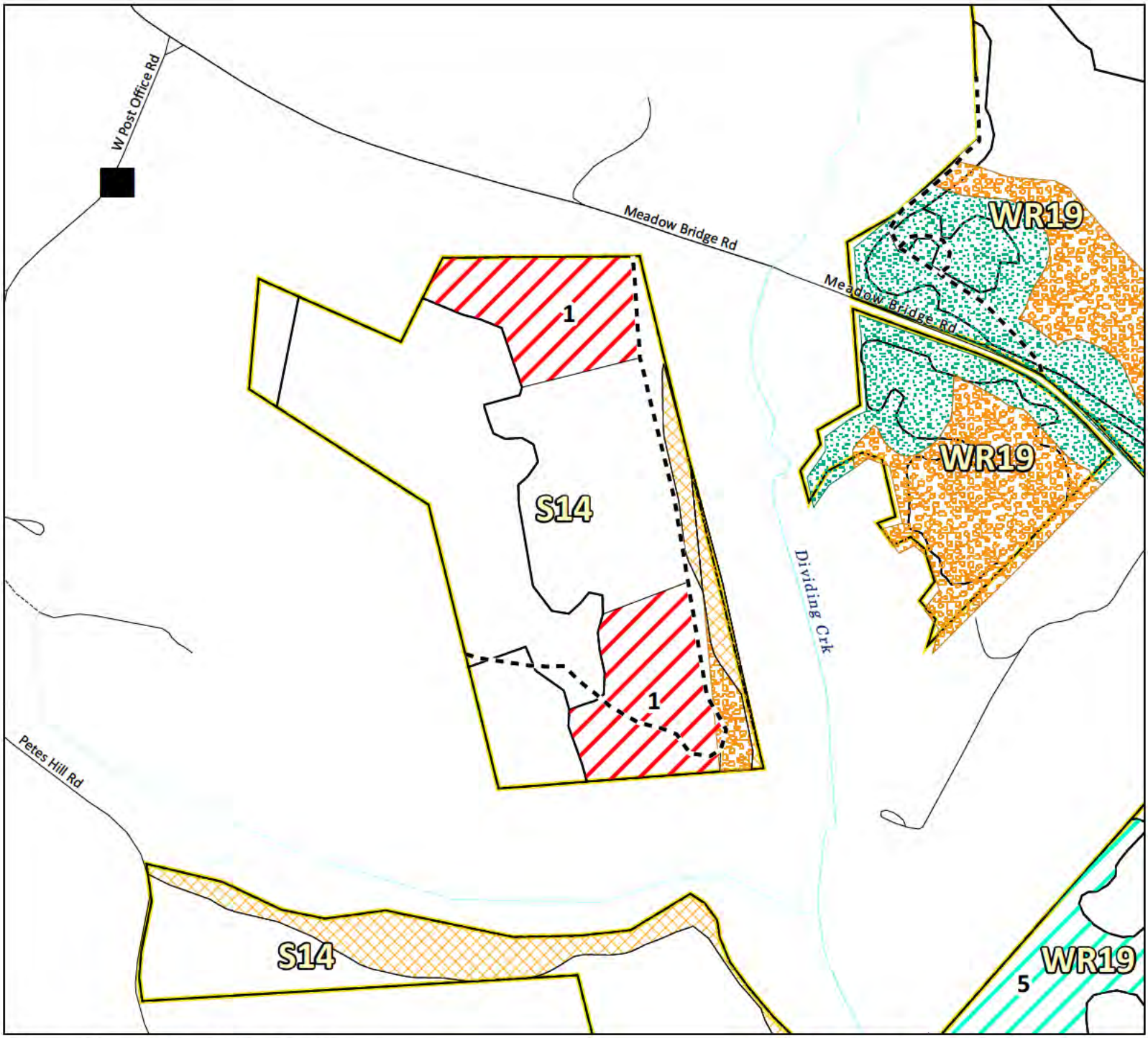
This stand is in the General Management Area.

Note: The fourth block of stand 1 located to the north was included in the FY 2007 AWP.

Complex S55 Marumsco

A second thinning is proposed for parts of stand 3 which is 17.9 acres. Stand 3 was established in 1981 and first thinned in 2000.

This stand is within the General Management Area.



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-S14-1
West Post Office Complex
Final Harvest Area: 21.2 Acres

ASC-DNR Forest Service 10/2010

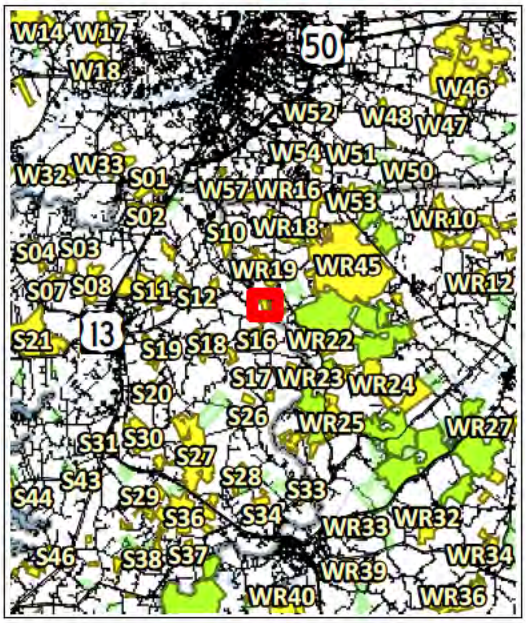
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

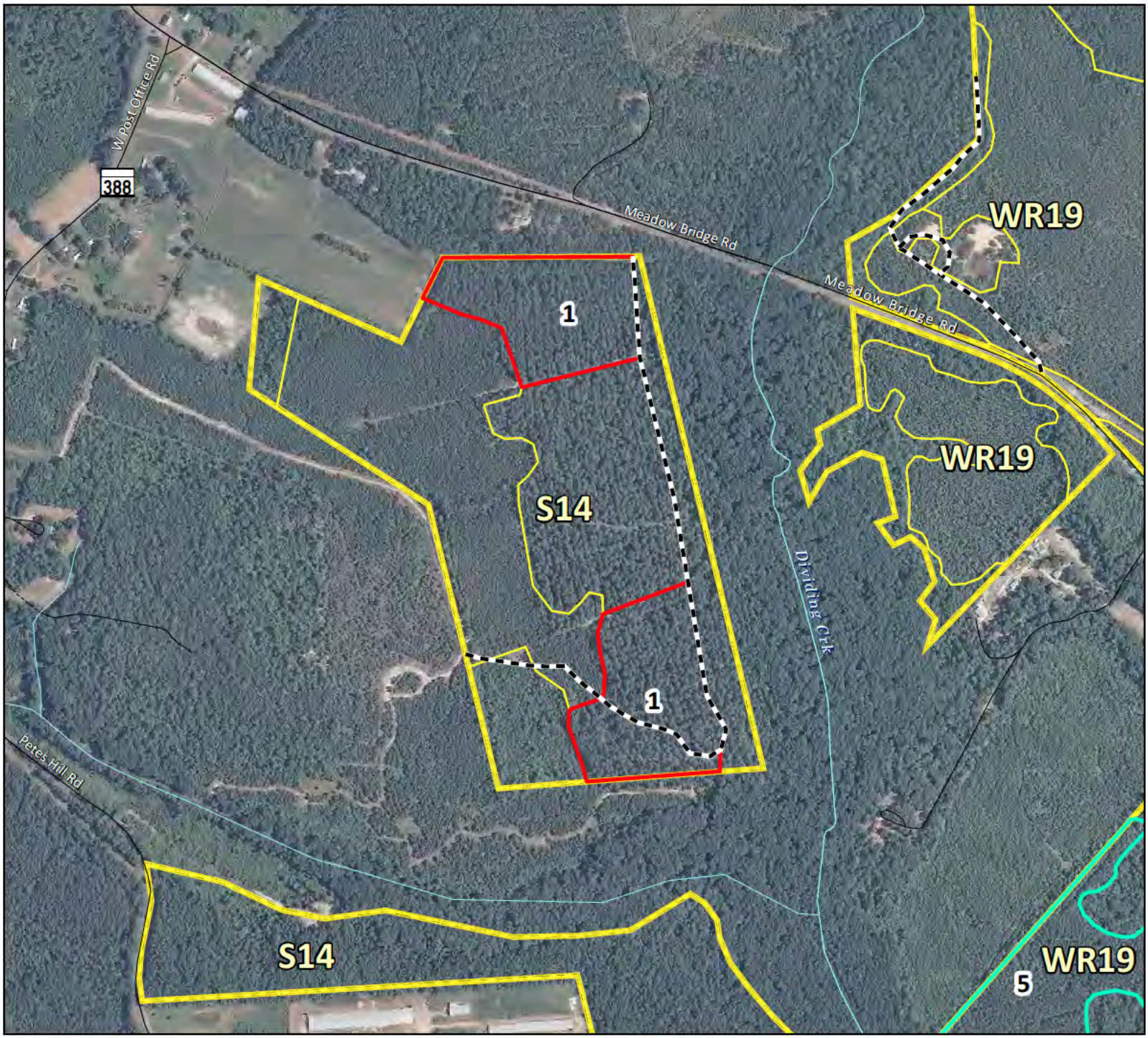
Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

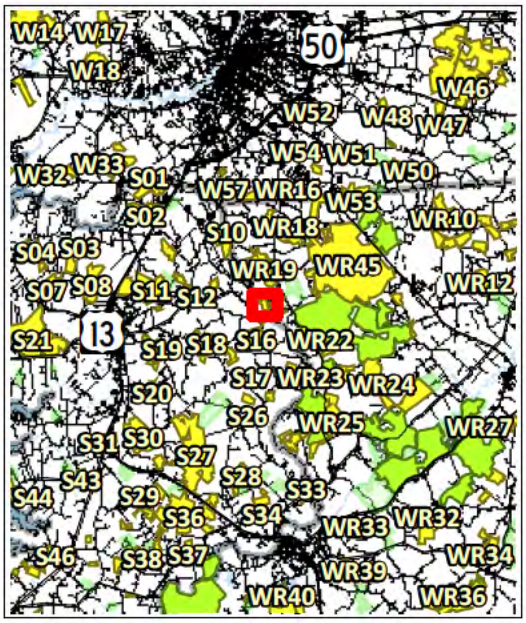
FY12 Annual Work Plan Map for CF-S14-1
West Post Office Complex
Final Harvest Area: 21.2 Acres

ASC-DNR Forest Service 10/2010

Legend

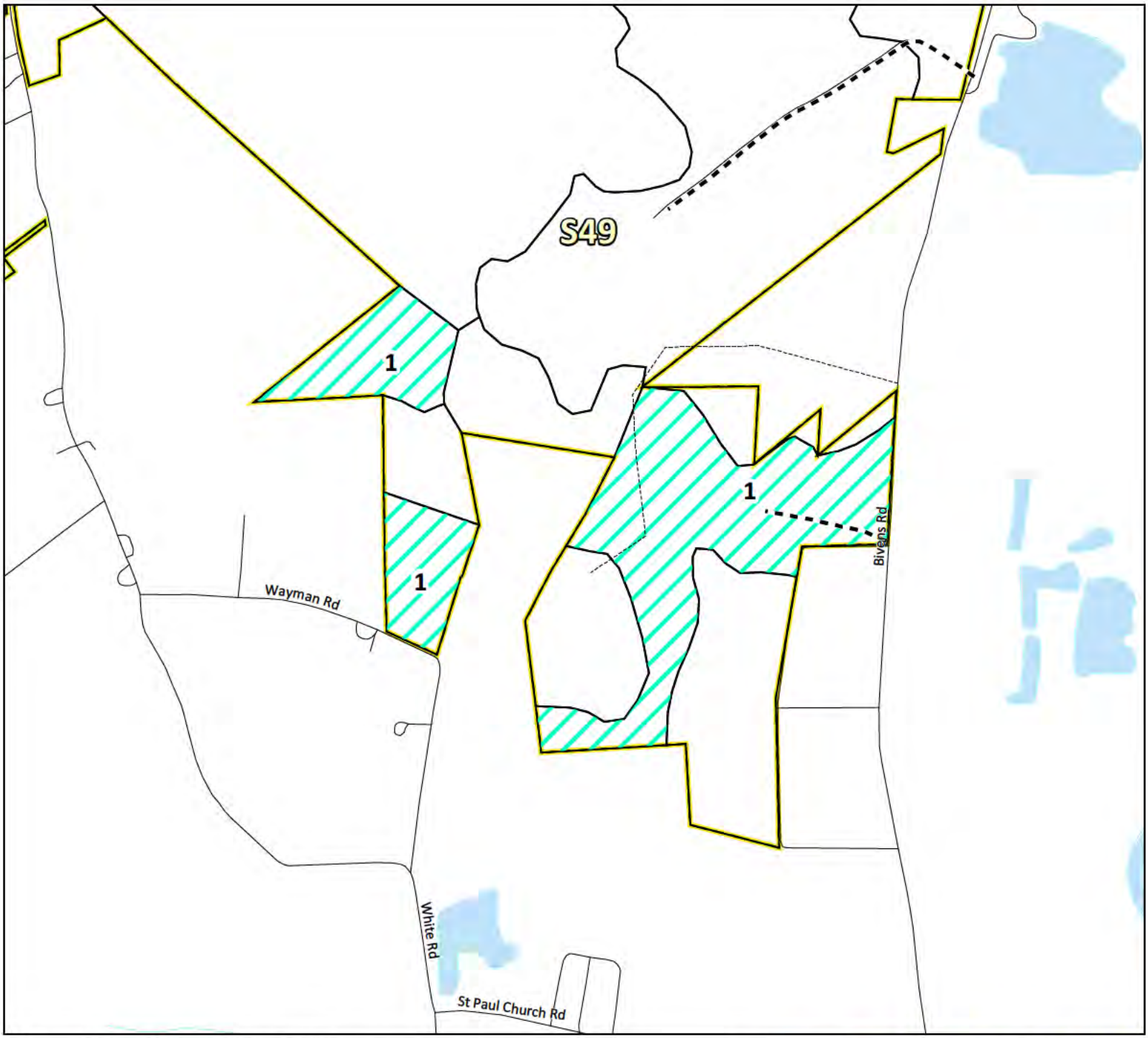
AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-S49-1
Handy Complex
First Thinning Area: 38.3 Acres

ASC-DNR Forest Service 10/2010

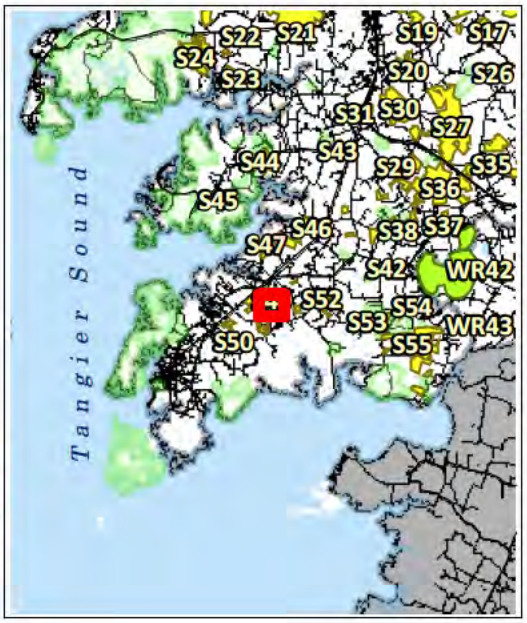
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

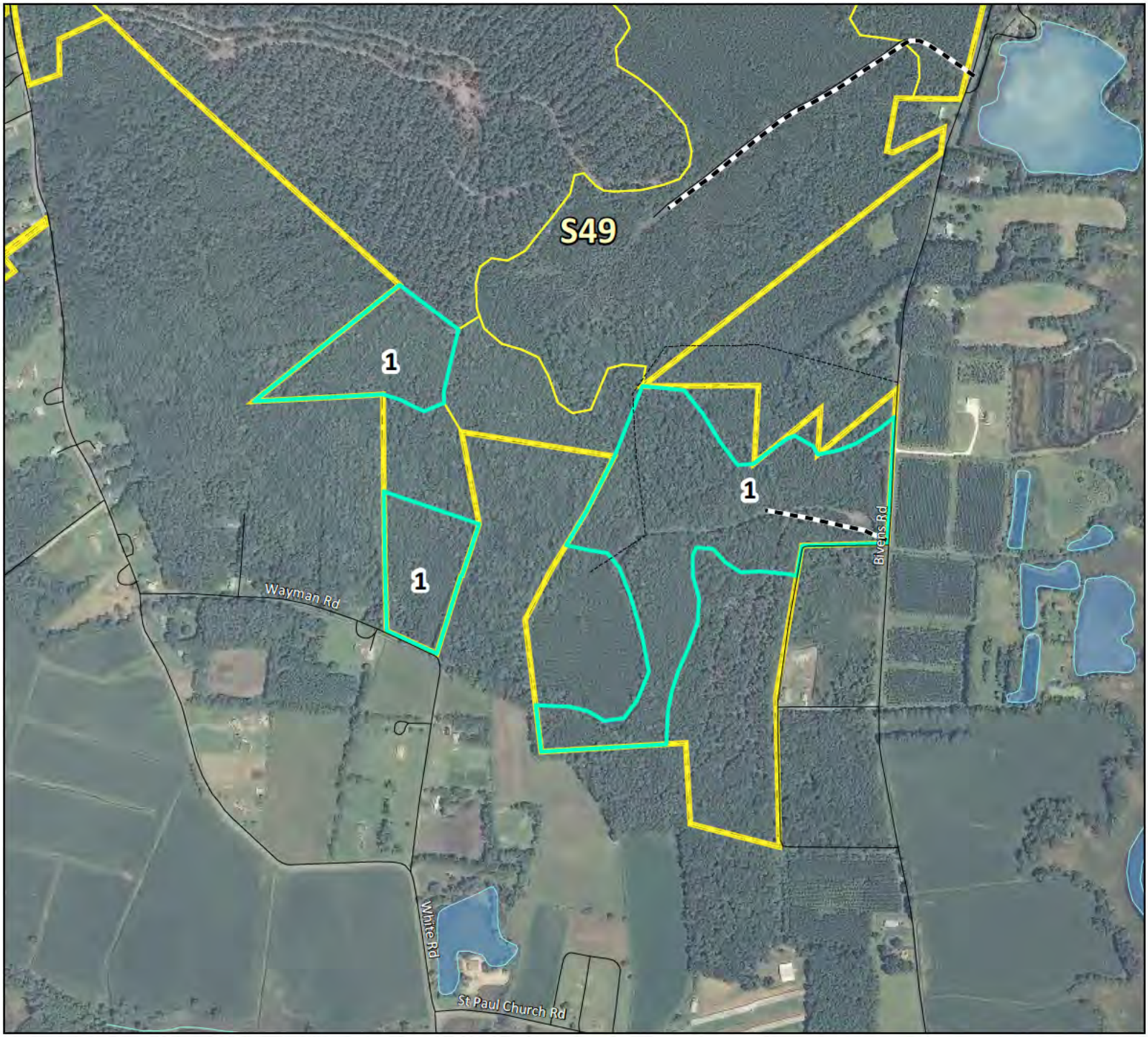
Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

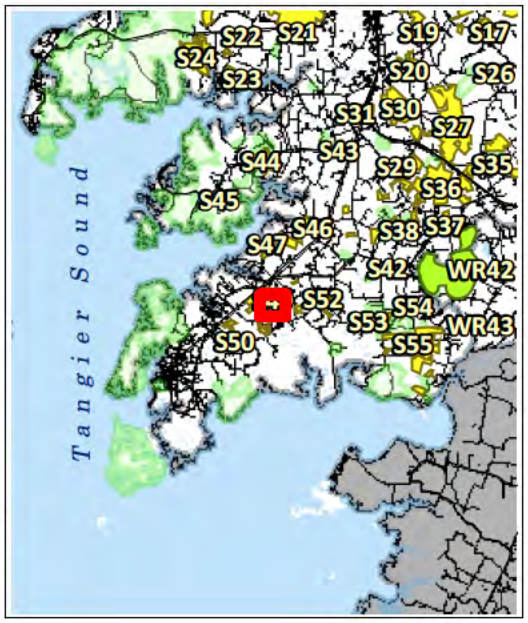
1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-S49-1
Handy Complex
First Thinning Area: 38.3 Acres

ASC-DNR Forest Service 10/2010



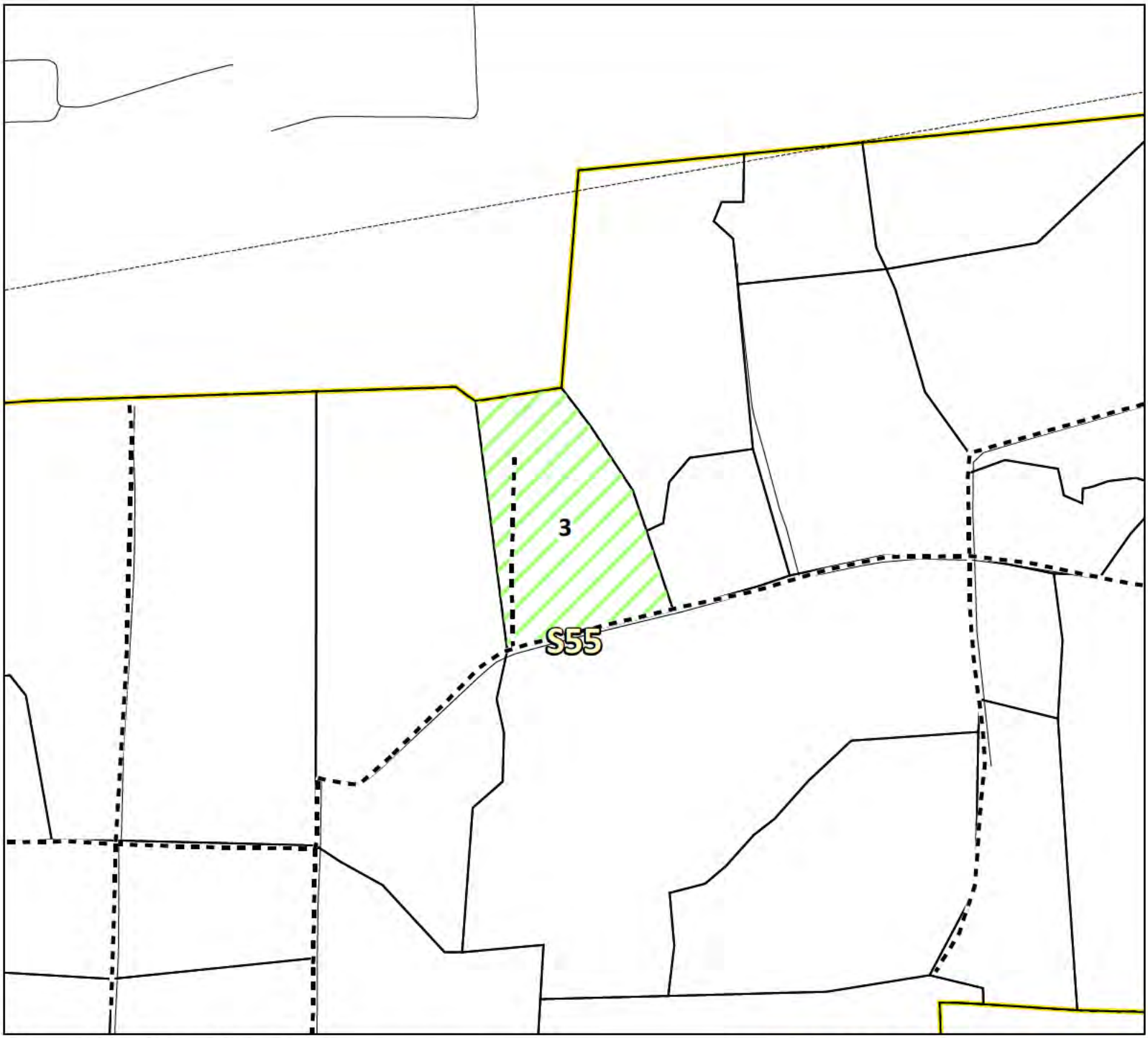
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

FY12 Annual Work Plan Map for CF-S55-3
Marumsco Complex
Second Thinning Area: 17.9 Acres

ASC-DNR Forest Service 10/2010

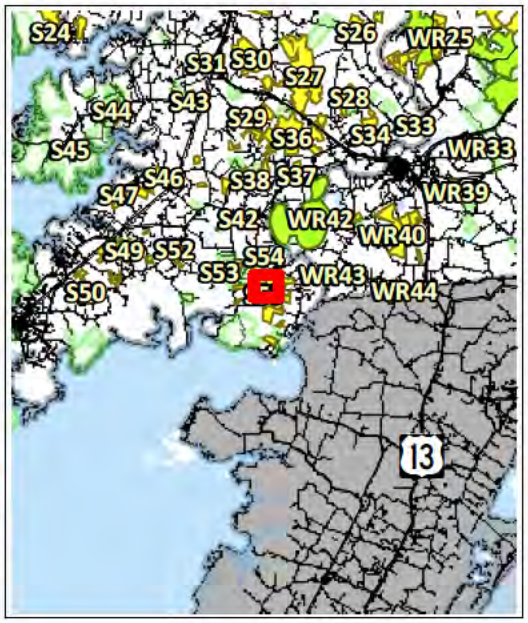
Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer

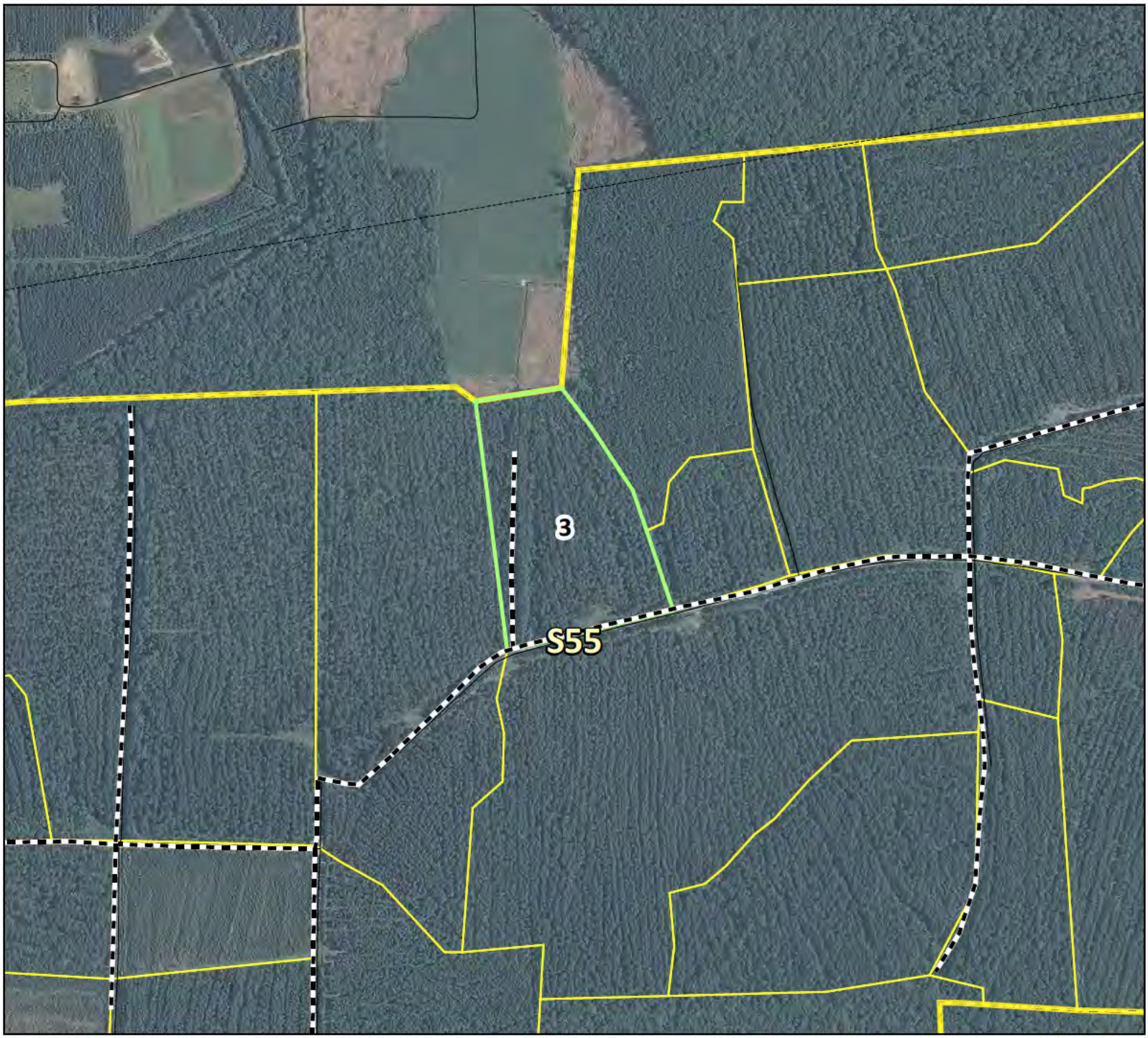
Management

- DFS
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3 Pulpwood
- ESA Zone 3 Saw Timber
- FIDS
- HCVF
- Stream Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE



0 330 660 990 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

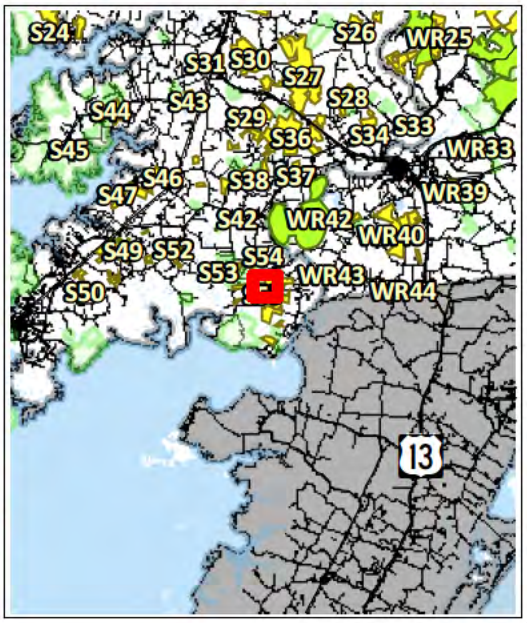
FY12 Annual Work Plan Map for CF-S55-3
Marumsco Complex
Second Thinning Area: 17.9 Acres

ASC-DNR Forest Service 10/2010

Legend

AWP

- PreCommercial Thin
- First Thinning
- Second Thinning
- Final/Variable Ret.
- Seed Tree
- Shelterwood
- Buffer



MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE

Locations & Descriptions
Of
Restoration Projects

Brookview Ponds ESA Restoration

By Wayne Tyndall, Restoration Ecologist

Prescribed burning will continue on one or more burn units pending the outcome of monitoring results for the unit burned in FY 11. Invasive species monitoring and control will continue in the Carolina bay marshes, which are currently being managed for woody plants and non-native invasive control. Hydrologic restoration studies will continue by Watershed Services and results reviewed for potential implementation options. The potential role of pine thinning in upland restoration efforts will continue to be considered in conjunction with prescribed burning effects, invasive species management capacity, and hydrologic restoration options.

It is anticipated that a Watershed Improvement Project (WIP) will be forthcoming from Watershed Services following on-site surveys of the area. The WIP should appear in the FY 2013 AWP.

See attached prescribe burn plan and map of the restoration area on the next page.

Brookview Ponds ESA

PLAN NO._____

MARYLAND DNR FOREST SERVICE
Prescribed Burning Plan

I LOCATION

Region 4 County: Dorchester
Property Owner & Address: MD DNR Forest Service
Chesapeake Forest Lands
6572 Snow Hill Rd Snow Hill, MD 21863
Property Location (MD. Grid and Written Description) Indiantown Complex, Brookview Ponds

Purpose and Objective:

Purpose:

__	Site Preparation	X	Hazard Reduction
__	Wildlife Habitat Improvement	__	Understory Pine Mgt.
X	Other:(specify) Wetland Restoration/		

Objective: Primary objectives of the Rx burn are to kill reestablishing maples, gums, and pines along the perimeter of each wetland and to consume fallen trees deliberately killed during 2005-2007. A secondary objective is to begin the process of oak release in surrounding uplands by killing as many pines, gums, and maples as the low fuel load will permit.

II DESCRIPTION OF BURN AREA

Acres 63.0

Overstory (Type, Density, Size) Consists mainly of pole sized loblolly pine with scattered red maple, sweetgum and mixed oaks.

Understory (Type, Density Size) Consists mainly of sapling sized loblolly pine, holly, mixed oaks, sweetgum and red maple. There is a small amount of poison ivy at variuos locations throughout the burn unit.

Fuels(Type, Density, Age) Main carrier of the fire will be leaf, needle litter and herbaceous material. The herbaceous fuel load is moderate to heavy in the pond areas and light to moderate on the perimeter of the pond areas. Fuel load in the remainder of the pine stand is light to moderate.

III WEATHER CONDITIONS

Wind (direction and speed)(Min. & Max.) N to S 5 to 15, NW preferred.
Relative Humidity (Min. & Max.) 25 to 50
Temperature:(Min. & Max.) 30 to 75
Drought Index (Min. & Max.) 50 to 300
Fine Fuel Moisture (1 hour)(Min. & Max.) 6 to 15
10 hour fuel moisture (Min. & Max.) 10 to 20
100 hour fuel moisture (Min. & Max.) 10 to 20
Mixing Height(Min. & Max.) > 1500
Transport Wind Direction(s) N to S
Live Fuel Moisture (Min. & Max.) Herbaceous n/a
Woody 80 to 120

Probability of Ignition of Adjacent Fuels moderate

IV SMOKE MANAGEMENT PLAN (Attach Smoke Vectoring Map)

Distance and direction from smoke sensitive area(s): Community of Brookview is located 1 mile to the northeast of the burn unit. Various residences and several chicken houses are located on Indiantown Rd. to the north and east of the unit. Smoke impacts will be minimized to the extent possible through the use of backing fires and favorable wind and atmospheric conditions.

NOTE: BURNING SHOULD NOT BE CONDUCTED DURING POLLUTION ALERTS AS DETERMINED BY THE NATIONAL WEATHER SERVICE.

V. PRE-BURN FACTORS

Line Construction: Feet to Plow

Exterior	0	Interior	0	Total	0

Line Firing: Feet

Exterior	4000	Interior	as needed	Total	4000

NOTE: EXTERIOR LINES SHOULD BE NOT LESS THAN 10 FEET IN WIDTH.

Test Fire Location & Procedures The initial test fire will be lit on the downwind side of the burn unit near the 4 way intersection of the roads. Fire Intensity and smoke will be monitored and determined to be satisfactory and sufficient enough to meet objectives before continuing the burn.

Firing Method/Procedures An initial backing fire will be lit along the control line on the downwind side of the unit to create a blackline. Once the downwind perimeter is secured the unit will be fired using strip head firing. A second firing team may be used to fire the interior pond areas if conditions and personnel warrant.

Expected Rate of Spread in Burn Area (chains/hr.) 4 to 7
In Adjacent Fuels 4 to 7
Expected Flame Length in Burn Area 2 to 10 In Adjacent Fuels 2 to 10
Estimated Burn Duration: 6 hrs
Starting Time 1100 Estimated Time of Completion 1700
Time of Year October through March
Equipment Required On Site: 2 type 6 engines
1 type 4 engine
1 ATV
2 UTV's with tank and pump
1 Tractor Plow

Burn Crew Organization:

Person in Charge: Burn Boss Chris Robertson
Firing Boss Designee
Holding Boss Designee
Weather Observer Designee
Number of Additional Personnel Required On Site 7

Reinforcements Available (location, contacts, phone numbers) Church Creek 410-228-1861
Martinak Forestry 410-479-1623, Powellville 410-543-1950
911

Notification: ***(24 hours in advance of burn)***

Property Owners (name, and phone numbers) Dennis Reid
Air Quality Officer (name, address & phone number) Jay Bozman
Fire Department (first due company & phone number) Eldorado- Brookview 410-943-4004
County Emergency Operations Center (name & phone number) Dorchester Central 410-228-2222
Maryland DNR Forest Service Project Office & phone number) 410-228-1861
Regional Fire Manager (name & phone number) Chris Robertson (on site)
Other CFL Manager 410-632-3732, Regional Forester 410-713-3862
Rx Burn Hazard Signs (number & location) 2 - Kelly Rd. at intersection of MD 331, Kelly Rd. at intersection of Jones Thicket Rd.

Control Procedures The burn unit is bounded to the north by agricultural fields, to the northwest by Kelly Rd. and on all other sides by CFL roads. The CFL roads have recently been mowed. These will serve as primary control lines. There should be no need for interior control lines. A network of roads on the CFL tract will serve as contingency lines and escape routes. The stand directly to the south of this unit is also scheduled to be burned and should not pose any problems if the fire were to jump the control line to the south and west.

Mop-up Procedures The fire perimeter will be mopped up a minimum of 10' inside the fireline prior to leaving the site. Any nuissance smoke will be eliminated if necessary.

Special Precautions Keep fire contained to the burn unit. Smoke must be monitored to ensure that impacts to residences and chicken farms are minimal. Limit use of mechanized equipment to roads.

Attachments: Map of Burn Area x
Smoke Vectoring Map x
Pre-ignition or Go/No Go Checklist x
Prescribed Burning Agreement (private property) n/a

Prepared By: Chris Robertson Date:_____

Approved By:_____Date:_____
Regional Fire Manager

Approved By:_____Date:_____
Regional Forester

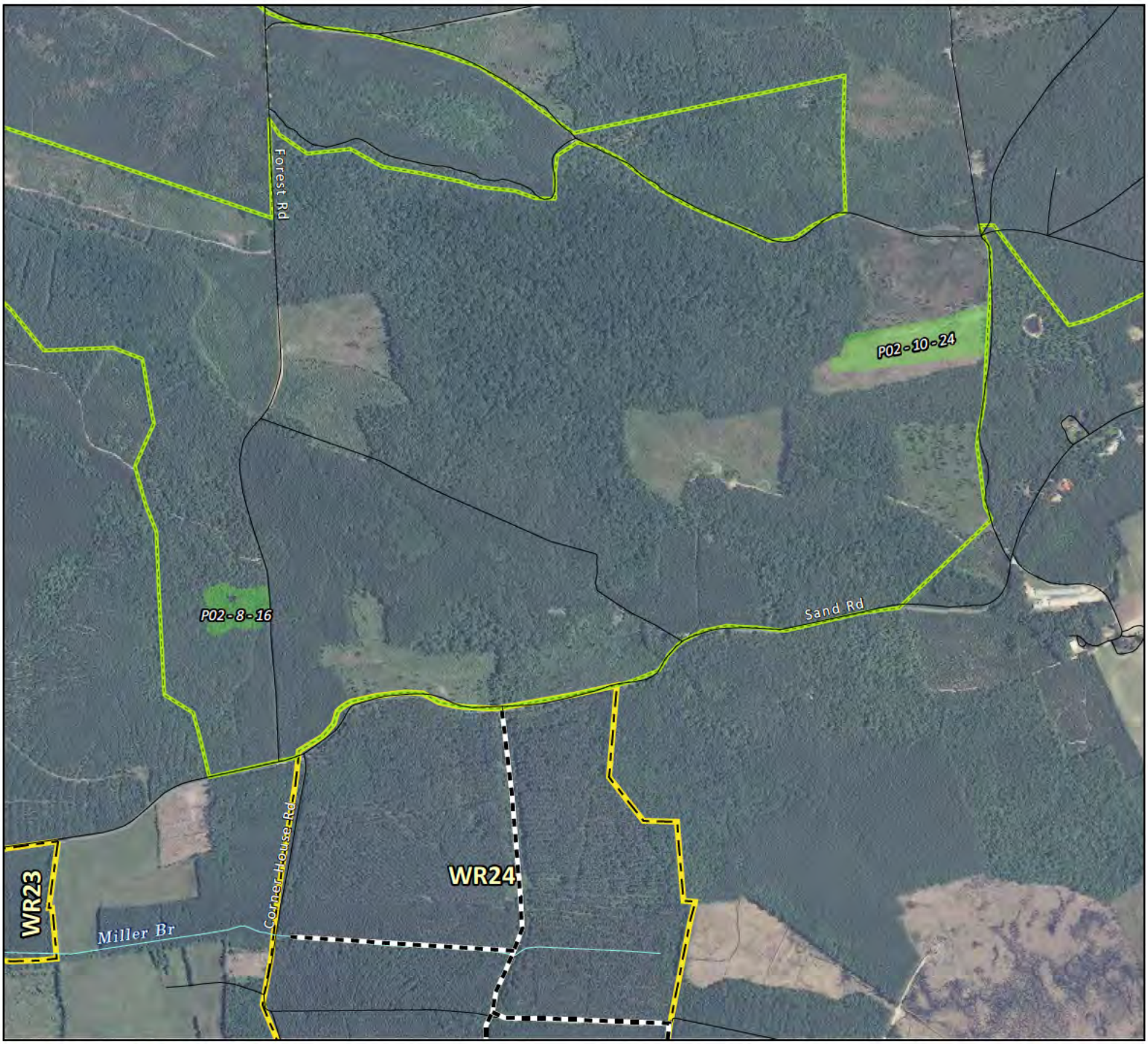
Shortleaf Pine (*Pinus echinata*) Restoration Planting
Maryland Forest Service

In the fall of 2009, the Maryland Forest Service in conjunction with Wildlife and Heritage felled 10-12 mature shortleaf pine trees in the Pocomoke State Forest in order to collect their cones and seed. This seed was sown at the State Nursery, which resulted in approximately 20,000 to 30,000 seedlings. This amount of seedlings will allow the Forest Service to plant about 28 acres in the spring of 2011.

An analysis was performed to determine the best available sites to plant the shortleaf pine seedlings. Only areas that were recently harvested or were already open could be considered in order to plant the sites in the spring of 2011 using the available seedling stock. From an ecological perspective, sites needed to meet a soil series criteria established from Wildlife and Heritage studies, the silvics of the species (http://www.na.fs.fed.us/pubs/silvics_manual/Volume_1/pinus/echinata.htm), and other documented habitat requirements.

From this review we have selected three sites for potential planting, which is more acreage than we have seedlings for. Over the next few months we will refine these areas, some of which may need site preparation, i.e. burning.

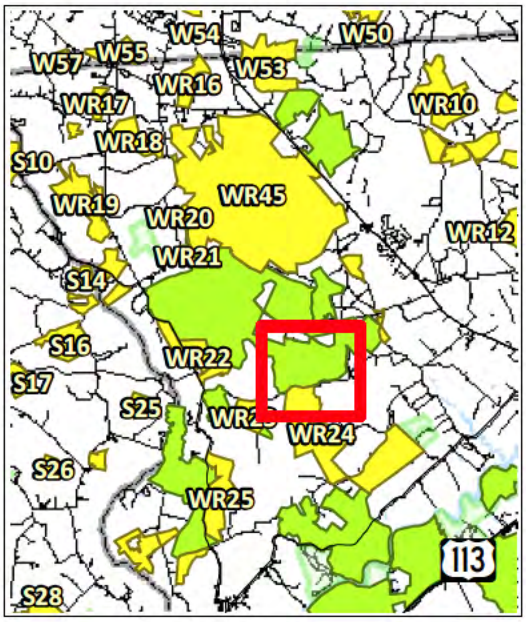
The three potential site maps are located on the following pages.



0 660 1,320 1,980 2,640 Feet

1 inch = 1,320 feet

N



Pocomoke State Forest

P02 - Nazareth Church Tract
Location Map
P02-8-16: 5.5 Acres
P02-10-24: 12.8 Acres
ASC-DNR Forest Service 10/2010

Legend

- Chesapeake Forest
- Pocomoke State Forest
- Shortleaf Planting Site

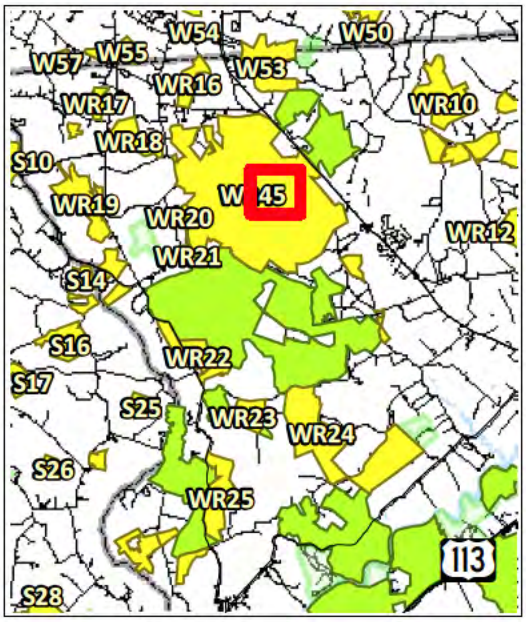
MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE

0 330 660 990 1,320 Feet

1 inch = 660 feet

N



Chesapeake Forest

WR45 - Foster Estate Tract
Aerial Photo Map
Stand 32: 21.6 Acres
Stand 105: 1.3 Acres
Stand 106: 2.0 Acres
ASC-DNR Forest Service 10/2010

Legend

- Chesapeake Forest
- Pocomoke State Forest
- Shortleaf Planting Site

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND DNR FOREST SERVICE

Wango Pines Restoration Plan

by

Wesley M. Knapp
Maryland Department of Natural Resources
Wildlife and Heritage Service

Background:

The Wango Pines Ecologically Significant Area is located SSE the town of Salisbury in Wicomico County, MD. This ESA comprises ca. 293 acres of loblolly pine plantation, depressinoal swamps, sand ridge communities, and interdunal swales (Fig. 1). This ESA formerly supported 6 Rare, Threatened and Endangered (RTE) species including one species of globally rare butterfly, the Frosted Elphin (*Callophrys irus* G3/S1 Endangered). The diversity of this area was first documented in the 1980s when botanists conducted surveys after a recent clear-cut. The clear-cut mimicked a natural disturbance event and provided the ecological cues necessary for these RTE species to proliferate. Subsequent to clear-cutting the area was windrowed, bedded, and planted as an industrial pine plantation. Over the next decade of succession all of the RTE species found on site were disappeared due to canopy closure and succession (Fig. 2).

Ecologically Significant Areas are designated because they support RTE species and include habitat that could support them if given the appropriate management. All ESA's on CF lands are classified into different zones to help guide management. This ESA contains two zones. Zone 1 directly supports the RTE species and Zone 3 is an area that is predicted to support these RTE species given appropriate management (Fig. 3). ESAs are drawn using best available data which include: aerial maps, topo maps, wetland maps, soils layers, and occasionally LIDAR photography.

Under FSC guideline 6.3g only 40 acres may be clear-cut at a time. If this guideline were followed the restoration of this area would take an inordinate amount of time to complete the removal of loblolly pine. Therefore, the decision was made to pursue a large scale restoration project.

Wango Pines is best described as a complex of upland ridges and ancient interdunal swales (i.e. lower wetter areas). In a natural system this area would constitute one management unit and will be discussed as one in the preceding document.

Management Criteria and Justification:

In an effort to develop sound restoration criteria, a literature review was conducted and expert opinion was gathered for the RTE species of this ESA. As stated above, the Frosted Elfin Butterfly is globally rare and constitutes the single most significant RTE

species on site. The Frosted Elfin's host plant, the state-threatened wild lupine (*Lupinus perennis*) and the wild indigo (*Baptisia tinctoria*) were used to help guide management in the upland portions of the habitat.

Management of wild lupines has been the subject of a number of research projects given its relative rarity in the northeast and its importance to the federally listed Karner blue butterfly (*Lycaeides melissa samuelis*), a species we don't get in Maryland but for which lupine is the sole host plant. Information contained in the existing literature can help guide lupine management at Wango Pines and help to ensure the persistence of this species as well the persistence of the state endangered Frosted Elfin. While the literature on frosted elfin management is scant, a great deal of research has been completed for Karner blues; the management of both butterfly species is presumed to be similar given that they are in the same family (Lycaenidae), occupy overlapping habitat, and are dependent on the same host (Albanese et al. 2007, NatureServe 2010).

The major considerations for ensuring the persistence of lupine involve determining the appropriate patch size and the percentage of canopy cover. Smallidge et al. (1996) found that enhancing populations of wild lupine involves reducing trees and shrubs and increasing light intensity to an optimal value of 60-70%. They found that 95-100% light intensity reduced the density of lupine clumps, the number of flowers and the number of leaves. They also found that lupine population size increased with increasing habitat area and with more frequent vegetation management to reduce canopy cover. This study did not take into effect the shaded soils generated by downed woody debris.

Factors correlated with high abundances of Karner blues (and presumably Frosted Elfins) included increasing temperatures, decreasing site canopy and increasing host plant abundance (Swengel & Swengel 1996). Smallidge et al. (1996) found that adult butterflies were numerous in areas of high light intensity of 95-100%. However, this was based on the number of observed adults, and did not necessarily represent preferred oviposition sites. Grundel et al. (1998) showed that Karner blue larvae feeding on shaded lupines develop faster. Reduced development time is advantageous in minimizing predation and parasitism risk (see Jefferies & Lawton 1984) and may help Karner blue larvae avoid senescent plants. They reference additional studies that found an increase in the number of flowers for lupines growing in moderate shade as opposed to full sun or full shade, providing a longer lasting food source.

The major difference between the Wango Pines ESA and any site discussed in the literature cited above is the past management history condition as a loblolly pine monoculture. Though loblolly pine is native to Maryland, and historically only located on the Talbot Terrace (Shreve et. al 1910), where Wango Pines is located, its presence as a dominant upland forest tree is completely artificial and the cause of upland forest conversion by man. The results of an ongoing study by J. Frye (MD NHP) examining wild lupine, Frosted Elfin, and clearcutting loblolly pine at a private property are currently being conducted just 10 miles from Wango Pines. This study clearly shows that both species can significantly benefit from the clear cutting the loblolly pine monoculture.

Pre-settlement conditions of the forest of Maryland's Eastern Shore can never be accurately determined, but what is certainly clear is that loblolly pine dominated forests are completely artificial (Shreve et. al 1910), as previously mentioned. One very important piece to the puzzle is the pre-settlement fire regime which would have shaped the forest and helped drive succession. The only work detailing fire regimes of the Delmarva Peninsula is Frost (1966). In this paper Frost hypothesizes that a 7-12 or 4-6 year regime would have been favored.

Given the current condition of the site (loblolly pine monoculture), the ability of loblolly to successfully recruit into newly created adjacent habitats (Schultz 1997), and the requirement of large patch size for Elfin host plants and frosted Elfin, a large management unit was selected over a small unit. Selecting a larger unit for restoration activities helps promote a more complete system for restoration, favors the feasibility for a prescribed burn (to mimic natural conditions) due to the existing road system surrounding the harvest area and helps move the seemingly invasive seed source of loblolly pine away from habitats that could supports RTE species. The proposed area of clearcut provides the removal of trees from previously occupied RTE species habitat and moves the source of invasive loblolly pine seed back from the RTE species (Gooley 1994). This increased size will help ensure the long-term viability of these species by helping to prevent loblolly pine colonization.

Management Recommendations

Though fire is not detailed in the studies pertaining to Lupine and Elfins, fire is a natural and absent component of the ecosystem. The remaining 5 RTE species yet to be discussed that are known from Wango Pines are all early successional in nature and occupy obviously pyrophytic community types through their range (Weakley 2010). None of these are globally rare and subsequently scant literature exists about these individually. The communities these species are found within have a little more supporting literature and in the south are frequent in burnt over pine (longleaf)-oak savannahs (Weakley 2010).

Given all the information gathered an ad hoc committee of Heritage staff and outside experts were consulted to discuss management. These individuals were: Gwen Brewer (NHP Science Program Director), Chris Frye (State Botanist), Jen Frye (Invertebrate Ecologist), Jason Harrison (Community Ecologist), Jim McCann (NHP Zoologist), Scott Smith (NHP Herpetologist), Bill McAvoy (Delaware NHP Botanist/Ecologist), and Ronald Wilson (independent consultant).

This committee of staff made the following recommendations based upon their collective knowledge, literature review, and their vast natural history experience the following management activities.

1. Remove the dominant and non-indigenous loblolly pine monoculture currently located in the Wango Pines management area (ca. 143 acres) but retain any mast producing hardwoods on site,
2. Remove or control the vast Red Maple's located atop the windrows,
3. Implement a natural fire regime of 5-7 years and allow natural succession dictate what species composition returns, and
4. Annually/biannually survey the restoration area to document RTE response and succession.

Future Considerations

To the south of the harvest area a non-riverine stand of Atlantic White Cedar (*Chamaecyparis thyoides*) was discovered. This stand is located in upland depressional swamps. All other known stands of Atlantic White Cedar in Maryland are known from riparian systems and are not known from this area of Wicomico County (Beaven and Oosting 1939; Harrison 2011). Further investigations into this community way reveal it warrants conservation and management at Wango Pines.

Literature Cited

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February 2010. Retrieved March 2010

<http://www.herbarium.unc.edu/flora.htm>

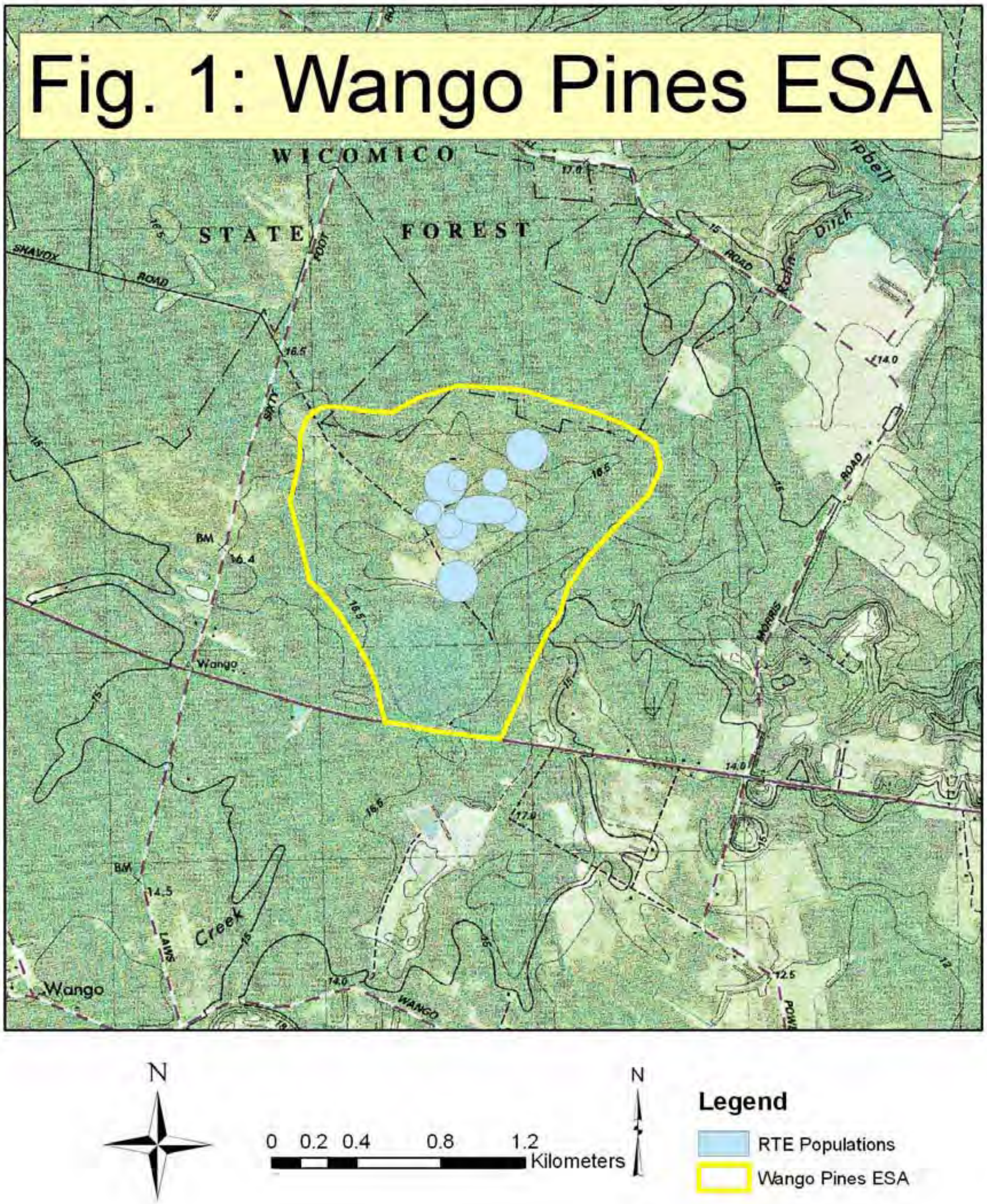
Fig. 1: Wango Pines ESA
WICOMICO
STATE
FOREST
SHAVOX
ROAD
Wango
Creek
LAWS
WANGO
ROAD
MORRIS
Ditch
N
0 0.2 0.4 0.8 1.2
Kilometers
Legend
RTE Populations
Wango Pines ESA

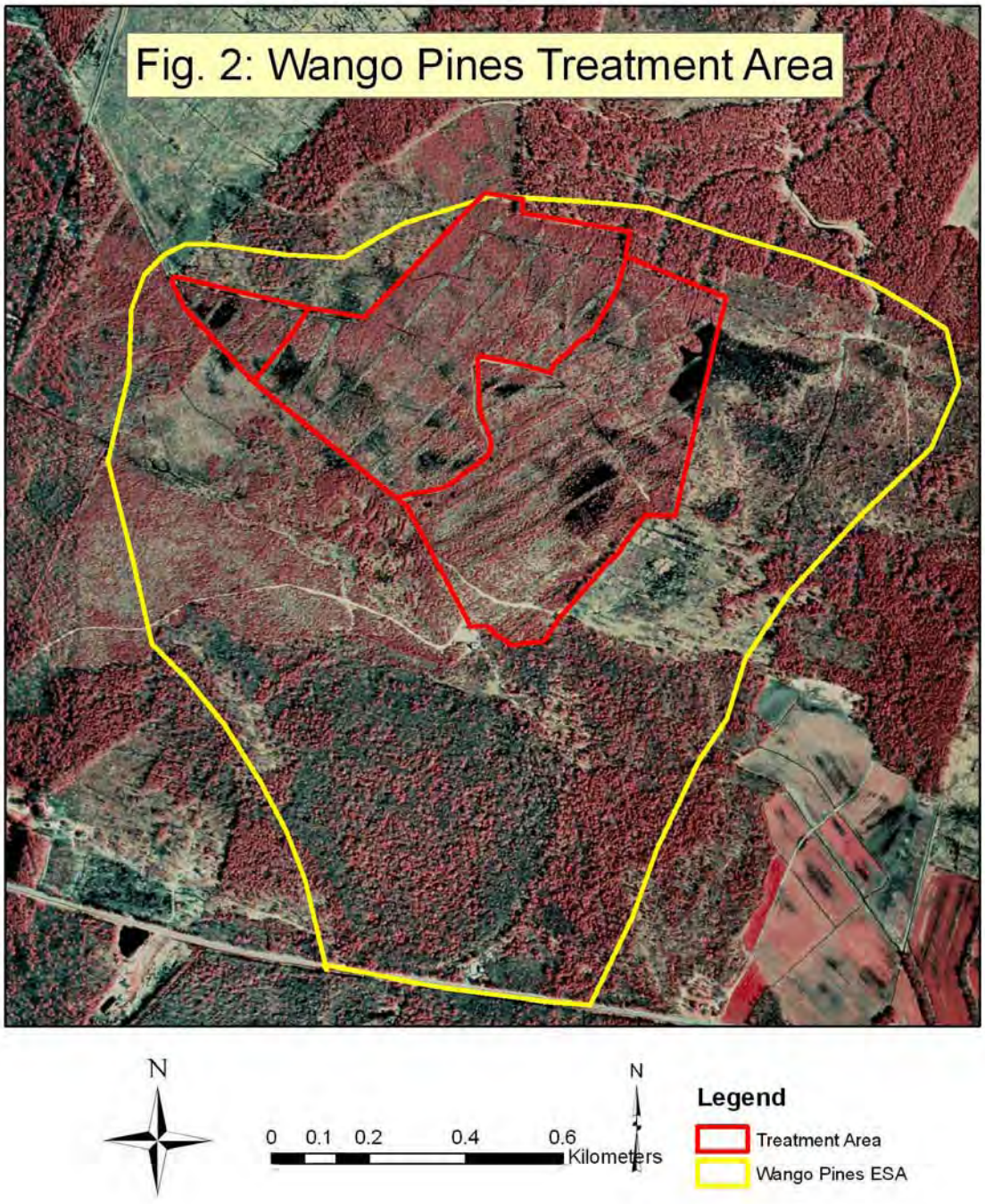
Fig. 2: Wango Pines Treatment Area
N
0 0.1 0.2 0.4 0.6
Kilometers
N
Legend
Treatment Area
Wango Pines ESA

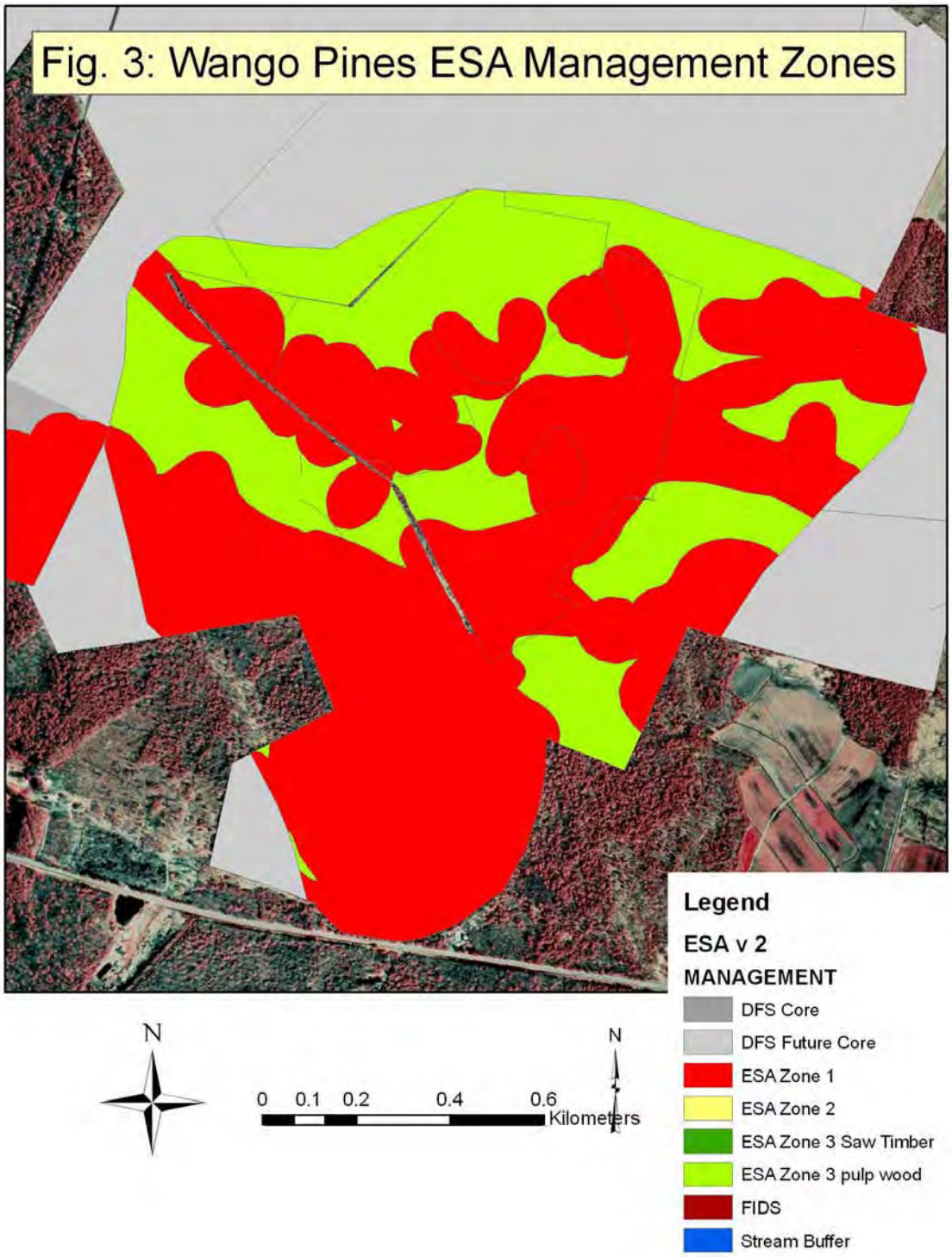
Fig. 3: Wango Pines ESA Management Zones
N
0 0.1 0.2 0.4 0.6
Kilometers
N
Legend
ESA v 2
MANAGEMENT
DFS Core
DFS Future Core
ESA Zone 1
ESA Zone 2
ESA Zone 3 Saw Timber
ESA Zone 3 pulp wood
FIDS
Stream Buffer

Projected Annual Budget

FOREST FY 2011 PROJECTED BUDGET

Cost of Management *(*Costs will vary from year to year)*	
State CF Salaries & Contract Management	$ 500,000
Land Operation	$ 422,000
Inventory & Monitoring Program	$ 70,000
Sustainable Forest Certification	$ 20,500
Watershed Improvement & Other Restoration Projects	$ 80,000
County Payment (15% of revenues)	$ 227,500
Fixed Cost (ditch drainage payments to counties)	$ 8,000
TOTAL COST	$1,328,000

Operating Revenues & State Funding	
Forest Product Sale Revenues	$ 1,020,000
Hunt Club Revenues	$ 332,000
Off Road Vehicle Funds	$ 14,500
Recreational Trail Grants	$ 83,700
TOTAL REVENUES & FUNDING	$1,450,200

Interdisciplinary Team Comments

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Chesapeake Forest & Pocomoke State Forest
FY2012 Annual Work Plan Review
October 26, 2010

Attendee Name: (Please Print)	Unit: / Email address:
Jack Perdue	Unit: Forest Service Email address:
Rob Feldt	Unit: FOREST SERVICE Email address: rfeldt@dnr.state.md.us
K.P Powers	Unit: Forest Service Email address: kpowers@dnr.state.md.us
Anne Hairston-Strang	Unit: Forest Service - hydrologist Email address: astrang@dnr.state.md.us
Alexander E. Clark	Unit: Forest Service Email address: aclark@dnr.state.md.us
Britt Coakley	Unit: Fishery Email address: bcoakley@...
Russ Hill	Unit: WHS Email address: rhill@dnr.state.md.us

Chesapeake and Pocomoke State Forests - 6572 Snow Hill Road, Snow Hill, Maryland 21863
Telephone (410) 632-3732 Fax (410) 632-3730 • www.dnr.maryland.gov • TTY users call via Maryland Relay

Chesapeak Forest &

Pocomoke State Forest
FY2012 Annual Work Plan Review
October 26, 2010

Attendee Name: (Please Print)	**Unit:** Forest Service **Email address:**
Mike Schofield	
Gary Adelhardt	**Unit:** Maryland Park Service **Email address:** gadelhardt@dnr.state.md.us
Russ Hill	**Unit:** WHS **Email address:** rhill@dnr.state.md.us
Wesley Knapp	**Unit:** WHS **Email address:** wknapp@dnr.state.md.us
Bizz Cheesman	**Unit:** Vision Forestry LLC **Email address:** wcheesman@visionforestry.com
KENNY REES	**Unit:** VISION FORESTRY LLC **Email address:** KENNY REES @ VISION FORESTRY. COM
LARRY WALTON	**Unit:** VISION FORESTRY, LLC **Email address:** safe4u@intercom.net

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[redacted]

[redacted]

201004621

S
DMK

B Cole

DLM

From: Schofield, Mike [MSchofield@dnr.state.md.us]
Sent: Wednesday, October 20, 2010 10:54 AM
To: Adelhardt, Gary; Bennett, Sam; B Cole; Coakley, Brett; Hairston-Strang, Anne; Hill, Russ; Jolly, Kenneth; Knapp, Wesley M.; Perdue, Jack; Powers, Kip; Smith, Kevin M.; Wilson, John F.
Cc: Tyndall, Wayne
Subject: FW: FY 12 AWP
Attachments: FY 12 AWP.docx

Attached is an additional document that Wayne Tyndall from WHS would like to include for your review in the 2012 AWP. This pertains to his work at Brookview Ponds ESA on the D14 Indiantown Complex. prescribed burning

I look forward to meeting with you next Wednesday for the AWP Review. WO Co.

Michael G. Schofield
Chesapeake Forest Manager
6572 Snow Hill Road
Snow Hill, Maryland 21863
(410)632-3732
K3MGS

Register all newly planted trees today!
www.trees.maryland.gov

-----Original Message-----
From: Knapp, Wesley M.
Sent: Wednesday, October 20, 2010 6:46 AM
To: Schofield, Mike
Subject: FW: FY 12 AWP

Mike,

Can you send this out to the ID Team? Wayne would like this included to cover any activities during this work plan.

Wes

From: Tyndall, Wayne
Sent: Friday, October 15, 2010 2:08 PM
To: Knapp, Wesley M.
Subject: FY 12 AWP

For your review...

The Maryland Historical Trust has determined that this undertaking will have no adverse effect on historic properties.
Dixie Henry Date 10/28/10

Archeo.
DLH
10/28/10

Citizen Advisory Committee Comments

October 26, 2010

Greetings Citizens Advisory Committee Member:

This letter is to remind you of the **meeting on November 9** at the Salisbury University to review the Pocomoke State Forest (PSF) Sustainable Forest Management Plan, the PSF 2012 Annual Work Plan and the Chesapeake Forest (CF) 2012 Annual Work Plan. The meeting will begin at **7:00 pm** in the Nanticoke room in the University Center. This meeting will be open to the public, so your participation is strongly encouraged.

The agenda will include the following items:

- Review of the Draft PSF 2012 Annual Work Plan
- Presentation of the PSF FY2012 Annual Work Plan
- Presentation of the CF FY2012 Annual Work Plan

Please bring your copy of the Draft PSF Sustainable Forest Management Plan. If you do not have a copy, you can download one on the PSF website at http://www.dnr.state.md.us/publiclands/eastern/pocomokeforest.asp

Copies of the 2012 forest AWPS's will be available on line for your review by October 29th after the Interdisciplinary Team completes its review. Both plans will be combined into a single document, which can be retrieved from either the PSF or CF web site.

The website for the CF is as follows, www.dnr.state.md.us/forests/chesapeakeforestlands.asp . Enclosed with this letter is a map of Salisbury University. I have circled the Nanticoke room on the map.

Please RSVP by Thursday, November 4 by calling me at 410-632-3732 x100 or emailing me @ dsnyder@dnr.state.md.us .

Thank you,

Denise Snyder, Office Secretary

October 27, 2010

Dear CAC Member;

I have recently been assigned the additional duties and responsibilities of the Pocomoke State Forest. In an attempt to simplify the management and review process, I have combined all Forest Service Lands on the Eastern Shore (Chesapeake Forest, Pocomoke State Forest, Wicomico Demo Forest and Seth Demo Forest) into one document.

Enclosed is a copy of the **2012 Eastern Region State Forest Lands Annual Work Plan** for your review. I apologize for getting this out so late, but the ID Team was unable to meet until October 25th due to unforeseen circumstances.

I look forward to seeing you at our annual meeting on the 9th at Salisbury University in the University Center, Nanticoke Room at 7pm to discuss the plan. You will have 30 days to submit written comments to me, which I will include within the final document.

Please make every effort to attend this meeting as it is open to the public.

If you have any questions or concerns please feel free to contact me at (410)632-3732.

Sincerely,

Michael G. Schofield
Forest Manager

CITIZENS ADVISORY COMMITTEE
SIGN-IN SHEET

Pocomoke State Forest (PSF) Sustainable Forest Management Plan, the PSF 2012 Annual Work Plan and the Chesapeake Forest 2012 Annual Work Plan
Meeting November 9, 2011

Attendee Name: (Please Print)	Address, Telephone number & Email address:
CHIEF SEWELL E. WINTER/HAWK FITZHUGH	2363 ELLIOTT ISLAND ROAD VIENNA, MD 21869 410-376-3889
Ellen Lawler	Address, Telephone number & Email address: 412 Monticello Ave. Salisbury, MD 21801 emlawler@salisbury.edu
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William M Giese JR	Address, Telephone number & Email address: work 410-228-2692 ext 129 4275 Maple Dam Rd Cambridge, MD 21613 410-228-0637 bill_giese@fws.gov
Cal Lubben	Address, Telephone number & Email address: 3227 Aydelotte Rd 410 957-4058 Pocomoke City, MD 21851 cdlubben@yahoo.com
Larry Beauchamp	Address, Telephone number & Email address: 32484 Rehobeth Rd. Pocomoke, Md. 21851
ARTHUR EGOLF	Address, Telephone number & Email address: 36642 HORSEY CHURCH RD DELMAR, DE 19940 302-846-0634
	Address, Telephone number & Email address:

Minutes – CAC and Public Meeting – 11/9/10

- Discussion of PSF SFMP
    - OG Mgmt Zones
    - John Smith Trail: Does it impact Pocomoke River/Nanticoke River forested areas
- Discussion of PSF combined into Mike's duties
- Public comment period is open for 30 days
- ORV Trail issues and rejuvenation
    - Paul Pedito's ATV report
- TFG land sale
- Holly Grove land swap (Somerset Co)
- Discussion of AWP(s)
- DFS (Future vs Core)
- Invasives
    - treat when small and localized before it gets out of hand
- Public Hunting – new tracts
    - Addition of no hunting areas? (ala state park experience)
- Horseback riding areas
- Trails – make more visible for public (advertising on the website, etc)
- Leased tracts and public use on them
- Hunt club lottery
- Budget – no issues

Mike,

Here are my comments on the 2011 Chesapeake Forest annual work plan. I came up with these after talking to several loggers. I have also sent this letter to numerous loggers so they can review it and make any additional comments. I will try to get any additional comments to you by December 10. I also hope to get this letter signed by as many loggers as possible.

Thanks,

Arthur Egolf

These comments are in response to the 2011 Chesapeake Forest annual work plan.

While the plan deals only with the management on the forest, there should be some consideration for the logging industry that has to implement the harvesting portions of the plan. Every year when the annual work plan is released, there are more management categories that lead to logging restrictions or prohibition on more acres. At the rate the forest is being fragmented, it will soon no longer be economically feasible to harvest some areas without additional compensation.

While those involved with managing the forest have received raises, logging rates have seen no increases in over 5 years while the costs of doing business have risen dramatically. Additionally, many of the requirements of forest certification are passed down to loggers without compensation. All loggers working on the forest are required to spend their time and money to initially become and then remain master loggers but receive no benefits. Some loggers have gone one step further by spending $200.00 to become master logger companies but have gotten nothing more than a $10.00 plaque in return. If there are no benefits then these requirements are just a waste of loggers time and money.

The plan calls for 1100 acres of thinning during the upcoming year. Only a fraction of this will likely get done because the two loggers who did the majority of the harvesting on the forest in recent years both ceased operations this past year.

Instead of spending all their time figuring out how to protect every element of the ecosystem, the Chesapeake forest managers need to put some effort into helping the industry that pays their salaries. Logging on the forest generates annual revenues of approximately $1,000,000.00. Without these revenues the forest would operate at a loss and it would be difficult to justify any of these management positions.

Hi Mike:

Here are my comments on the 2012 annual work plans for the Cheseapeake and Pocomoke Forests.

Dec. 3, 2010

I attended the public meeting for discussion of these work plans on Nov. 9, 2010 and was pleased to have the chance to catch up on the management plans for these forests since my term as a member of the Citizen's Advisory Committee for the Chesapeake Forest ended a few years ago.

I am pleased that one of the main criteria for recent and future land acquisitions is location and the ability of new tracts to connect with existing state forest lands. Large tracts of forest with connecting green corridors are vital for maintaining ecosystem integrity and viable populations of many species (such as forest interior dwelling birds) that are dependent on adequate areas of suitable habitat. I am also pleased that the Forest Service is working together with Heritage and Wildlife on identifying and mapping ecologically sensitive areas (ESA'a) and developing specific restoration plans for these important areas. The increased effort to identify and map vernal pools is also very valuable.

I was glad to hear at the meeting of the new state-wide goal of identifying areas of "potential old growth" forest of 500 plus acres in size. And that one such area (a cypress swamp tract in Worcester County) has been closed to ORV traffic. The state-wide study of ORV use in the state forests is also an important endeavor.

As I mentioned at the meeting, I am concerned that relatively few people outside the hunting community know about, let alone visit, the various trails and tracts of state forest lands on the eastern shore. Among local birders, most only know about the Tom Tyler Trail and the trails within the Wicomico Demonstration Forest. Hopefully the state's new emphasis on hiking trails, beginning with the recent Maryland Trail Summit, will result in increased exposure and the availability of good trail maps on-line and these will lead to increased use of state forests for a variety of recreational activities in addition to hunting. I do think that many birders, hikers, etc. are hesitant to visit state forests that are open to hunting and although hunting only takes place at certain times of the year, those times are often the times most conducive (weather wise) for hiking in the woods. I would like to see a few more non-hunting trails available for such recreational purposes.

I was disappointed at the very small attendance at the public meeting on Nov. 9. I know it is difficult to get people (who are busy with many things) out to attend such a meeting; but perhaps increased publicity would help. I may have missed it, but I did not see a notice of the meeting or of the comment period in the Salisbury Daily Times and didn't hear any mention of either on the local TV (WBOC) news.

I was also pleased to learn that Mike Schofield will be managing the Pocomoke Forest as well as the Chesapeake Forest – congratulations and best wishes, Mike!

Thank you for this opportunity to express my comments with regard to the management of these important natural resources.

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Public Comments

Mr. Michael Schofield
Chesapeake and Pocomoke State Forest Manager
MD DNR Forest Service
6572 Snow Hill Rd
Snow Hill, MD 21863

November 16, 2010

Dear Mike,

I appreciate the opportunity to comment on the FY 2012 Draft Eastern Region State Forest Working Lands, and Annual Work Plan.

Chesapeake Forest Lands:

I have two site specific concerns;

1) The Trader Complex, shown as WR37-1/2. There appears to be no stream buffer to protect Sand Branch from logging activity and sediment runoff. This may be an oversight in mapping but a buffer should be established and maintained as such.
2) The Foster Estate Complex, shown as WR45-14. I would suggest maintaining a wooded buffer (100' in width) along the length of this work area parallel to Rt. 12, the Snow Hill to Salisbury Rd. This would primarily serve as an aesthetic feature while traveling along the road.

Other than those above I see no issues regarding the tracts proposed for silvicultural activities in this plan, as presented. Continued involvement and cooperation with DNR Heritage will provide protection for those ESA's embedded within the larger forest area/s scheduled for thinning/harvest activities.
It will remain incumbent on the forest manager/s and their contractors to fully delineate wetland buffers, and ensure strict compliance from their contractors to protect all wetlands, streams, creeks and watercourses from sediment and other forms of runoff.

It should also be a priority to ensure that all logging and maintenance equipment entering onto these properties is thoroughly clean and free of invasive seed and plant material.

It was very good to see continued emphasis placed on the recreational use of the Chesapeake Lands, other than for hunting purposes. I was especially pleased to see the inclusion of the proposed canoe/kayak primitive camping areas along the Marshyhope Creek. I would encourage you to develop more such areas and access sites on the shore, on both the Chesapeake Lands and Pocomoke State Forest Lands.

To that end I would be glad to work with you and your staff on prioritizing and developing these sites.

Pocomoke State Forest:

Overall I have no specific concerns regarding these tracts under consideration other than the continuance of managing these areas to achieve a more natural mixed hardwood/pine forest type.

As with the Chesapeake Forest; it should also be a priority for any work on Pocomoke Forest lands to ensure that all logging and maintenance equipment entering onto these properties is thoroughly clean and free of invasive seed and plant material.

To reiterate my comments from the FY 11 work plans:

Maintaining scenic buffers along roads and water bodies is to be commended and encouraged.

The restoration of hydrological function (ditch plugging etc) to the extent possible on the Chesapeake and Pocomoke Forest Lands should be encouraged, as should the continued use of controlled burns. Both have been proven to improve plant and animal biodiversity and restore ecological function.

Using natural [pine] regeneration should be the preferred alternative to re-establish more natural mixed hardwood/pine stands, and to the extent possible plantings of native hardwoods should be encouraged.

And finally, the *limited use of aerial spraying* to control invasive and undesirable species is strongly encouraged.

Submitted by;

Joseph W. Fehrer
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