EASTERN REGION

STATE FOREST LANDS

ANNUAL WORK PLAN

FISCAL YEAR 2016

Prepared:	(Forest Manager)	3/4/15 Date
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DNR Interdisciplinary Team

Citizens Advisory Committee

Promoting Sustainable Forestry
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www.sfiprogram.org

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A. FOREST OVERVIEW

CHESAPEAKE FOREST AND POCOMOKE STATE FOREST

The Chesapeake Forest which is owned by the State of Maryland and managed by the Maryland Forest Service through the Department of Natural Resources originally consisted of 58,000 acres of forest land. These lands were part of a 1999 divestment by the Chesapeake Forest Products Corporation. At that time, a partnership between the State of Maryland, The Conservation Fund, and Hancock Timber Resources Group moved to purchase the forests. The original 1999 plan was prepared by a 10-person technical team assembled by The Sampson Group, Inc. Oversight and decision making for the technical team was provided by a Steering Committee composed of representatives from Maryland Department of Natural Resources, The Conservation Fund, the Chesapeake Bay Foundation, and the local forest industry.

The Chesapeake Forest currently consists of 67,761 acres divided into 185 Management Units distributed across six counties. Chesapeake Forest also includes the Seth Demonstration Forest in Talbot County, Wicomico Demonstration Forest in Wicomico County, and Fred W. Besley Demonstration Forest in Dorchester County. In spite of this scattered character, the forests include some of the last large segments of unbroken forest in a region that is largely agricultural in nature. Chesapeake Forest Lands include more than 6,000 acres of wetlands or swamps and comprise portions of 23 separate watersheds, many of which have been given a high priority for conservation action under the Maryland Clean Water Action Plan. They contain established populations of threatened and endangered species, including the Delmarva fox squirrel (*Sciurus niger cinereus*), bald eagle, and some 150 other species that have been identified as rare, threatened, or endangered in the region. Abundant populations of deer, turkey, and waterfowl create the basis for extensive hunting opportunities and other recreational activities on the land.

The 17,772 acre Pocomoke State Forest is almost entirely contained within Worcester County, except for 429 acres in Somerset County and 145 acres in Wicomico County. The Chesapeake Forest has 17,613 acres within Worcester County, and several tracts from both Chesapeake Forest and Pocomoke State Forest adjoin each other offering greater habitat and recreational management opportunities. In addition, since both forests contain similar forest types, many of the same management guidelines and principles are used. There are differences between the two forests, however. Pocomoke State Forest contains many older tracts of forestland still in their natural state, nearly 5,000 acres of cypress and hardwood forest that borders a state scenic river, and areas of state designated Wildlands.

For additional information about Chesapeake Forest and Pocomoke State Forest please visit their respective web pages located at: http://www.dnr.state.md.us/forests/mdforests.asp.

HISTORIC FOREST CONDITIONS AND THE ROLE OF FIRE

The average pre-European-settlement fire frequency was on the order of 7-12 years for forests of the Eastern Shore of Maryland, with higher frequencies of 4-6 years in the southeastern Maryland counties of Wicomico, Worcester, Somerset, and Dorchester (Frost, 1998). These frequencies are high compared to most areas of the Northeast. Since it is unlikely that lightning was a significant contributor to these fires, Native American populations must have been. A conclusion is that fire in the Northeast was predominantly a phenomenon associated with human activity (Pyne, 1982).

The forest that covered the Eastern Shore in Indian times was primarily a hardwood one, though increasingly mixed with pine to the southward (Rountree & Davidson, 1997). The large patches of pine-dominated woods today are largely second growth, the result of extensive clearing in historic times. In aboriginal times, the woods of the Eastern Shore were likely to be oak-hickory, oak-gum, or oak-pine types, all of which still exist in second-growth form.

Captain John Smith said in the early seventeenth century, "A man may gallop a horse amongst these woods any waie, but where the creekes or Rivers shall hinder". Father Andrew White wrote that the woods around St. Mary's were so free of underbrush that a "coach and fower horses" could be driven through them (Rountree & Davidson, 1997). The open conditions could be partly attributed to the closed canopies of these mature forests, which shaded out undergrowth, but it is also likely that periodic fire helped to maintain the park-like conditions.

It is reasonable to assume that Eastern Shore tribes also used fire to periodically burn the marshes that were important sources of mollusks, fish, furbearers, waterfowl, edible tubers, and reeds for housing. Fire would have been useful for herding game, enhancing visibility or access, or retarding invasion of woody growth. More often than not, these fires would have spread into adjacent woodlands and, if of sufficient intensity, created the open seedbed conditions conducive to establishment of loblolly pine. Even today the pattern of loblolly pine "islands" and "stringers" in and adjacent to marshes of the lower Eastern Shore is common.

If, as Rountree and Davidson suggest, oaks were the most prevalent species in pre-settlement times, then the possible role of fire in maintaining these forest types must also be considered. Frost stated, "Light, understory fires may have been the norm for millions of hectares of eastern hardwood forest..." (Frost, 1998). Oak species range from slightly tolerant to intolerant of shade, indicating that disturbance is desirable to promote regeneration and growth. Furthermore, acorn germination and initial seedling establishment are most successful where light understory burns have scarified the seedbed and reduced competition (Burns & Honkala, 1990). The extensive presence of oaks on the Shore was an indicator that low-intensity understory fires were common, either intentionally set by Indians to create "open woods" or drive game, or the incidental result of land-clearing.

Natural stands of loblolly pine (*Pinus taeda*) became much more widespread around the turn of the 20th Century, particularly in the counties south of the Choptank River, largely due to the influence of economic factors. First was the abandonment of agricultural fields as farmers moved to more lucrative jobs in the towns and cities. Loblolly pine is an opportunistic species, which found the recently abandoned fields prime sites for reproduction by natural seeding. The second factor was the rise of large-scale commercial lumbering. Steam locomotives, often used to haul logs from the woods, were notorious for throwing sparks along the tracks and starting fires. Both the clearing of the forests by large-scale logging and the subsequent fires resulted in large areas of open, scarified land suitable for pine regeneration. By the middle of the twentieth century, loblolly pine had become the predominant forest cover type in the lower counties of the Eastern Shore.

FOREST TYPES AND SIZE CLASSES

Young loblolly pine forests mostly established since the early 1980's are what characterize a high proportion of the Chesapeake Forest. Mixed pine and hardwood forests still occupy some of the lands, and many riparian areas and flood plains contain stands of mixed hardwoods. In general, the mixed pine-hardwood and hardwood stands are older, mature forests.

Mature mixed pine-hardwood, bottomland hardwood, and bald-cypress forests comprise the majority of the Pocomoke State Forest. In general, the mixed pine-hardwood, hardwood, and bald cypress stands are older, mature forests, while loblolly pine stands are more evenly distributed across all age classes.

Table 1 provides a habitat diversity matrix of both Eastern Region State Forests that provides a current baseline from which future changes in age structure or forest type diversity can be assessed for potential habitat or biodiversity effects.

Table 1. Forest Diversity Analysis

Acres of forest type and forest structure by structural groups, with percent of total area in each forest type/structure group combination.

Forest type	Structure stage							Total Area
	Open 0 - 5 yrs	Sapling 5 - 15 yrs	Growing 15 - 25 yrs	Maturing 25 - 35 yrs	Mature 35 - 50 yrs	Big Trees 50 - 75+ yrs	Uneven Aged	
Atlantic White Cedar	4	3	0	0	0	0	0	**7**
(Percent)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***0.01%***
Loblolly Pine	1,185	9,557	21,016	12,644	7,312	1,617	407	**53,737**
(Percent)	*1.40%*	*11.28%*	*24.81%*	*14.93%*	*8.63%*	*1.91%*	*0.48%*	***63.44%***
Shortleaf Pine	0	0	0	0	0	255	0	**255**
(Percent)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***0.30%***
Mixed Pine/ Hardwood	721	886	933	717	1,563	7,568	22	**12,410**
(Percent)	*0.85%*	*1.05%*	*1.10%*	*0.85%*	*1.85%*	*8.94%*	*0.03%*	***14.65%***
Mixed Hardwoods	439	296	237	101	200	9188	12	**10,471**
(Percent)	*0.52%*	*0.35%*	*0.28%*	*0.12%*	*0.24%*	*10.85%*	*0.01%*	***12.36%***
Bottomland Hardwoods/ Bald Cypress	0	0	0	0	20	3,855	0	**3,875**
(Percent)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.02%*	*4.55%*	*0.00%*	***4.57%***
Marsh/Field/ Power lines	3,946	0	0	0	0	0	0	**3,946**
(Percent)	*4.66%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***4.66%***
Total	**6,295**	**10,741**	**22,186**	**13,462**	**9,095**	**22,483**	**441**	**85,533**
(Percent)	***7.43%***	***12.68%***	***26.19%***	***15.89%***	***10.74%***	***26.54%***	***0.52%***	***100.00%***

UNIQUE COMMUNITY TYPES

Xeric sand dunes are found primarily in the lower Eastern Shore counties. They are located on very well drained sand ridges deposited by historical flood tides. These sand ridges support a variety of rare and threatened insect and plant species. The primary species in this community are shortleaf pine (*Pinus echinata*), Virginia pine (*Pinus virginiana*), and various oak species (*Quercus spp.*), with an understory comprised of lowbush blueberry (*Vaccinium pallidum*) and an assortment of ericaceous plants. Xeric sand dunes have been identified and mapped either as an Ecologically Significant Area (ESA) or as a Globally Rare (G3) Community.

Pond pine (Pinus serotina) forests are typically found in swamps and other poorly drained areas. Pond pine can be found along with pitch and loblolly pine, and it can hybridize with those species. During periods of drought, these forests can be subject to intense fires. Pond pine needs fire to open the serotinous cones and release the seeds to facilitate natural regeneration.

Delmarva bays and associated life zones are isolated depressional wetlands that serve the needs of wetland breeding animals and support several species of rare plants. Delmarva bays can vary in their ecological quality,

primarily due to past management practices. The hydrology of many bays was altered for agriculture or to attempt to increase forest production. Therefore, many of these bays may require restoration to get the bay back to a more natural state. Delmarva bays and the associated life zone have their own ESA designations identified and mapped.

Riparian swamps

Atlantic white cedar (*Chamaecyparis thyoides*) swamps are nontidal forests that border on rivers or headwaters of streams.

Bald cypress (*Taxodium distichum*) swamps and forests can be tidal or nontidal. These forests are known for their pronounced microtopography of hollows and hummocks.

Vernal pools and seasonal wetlands are temporary wetlands present in late winter and spring that support amphibian reproduction. These can be found throughout the eastern shore region.

B. ANNUAL WORK PLAN SUMMARY

INTRODUCTION

This section summarizes the proposed activities that will occur on all public forest lands (84,762 acres) managed by the Maryland Forest Service within the Eastern Region during the 2016 fiscal year. These lands include the Chesapeake Forest, Pocomoke State Forest, Wicomico Demonstration Forest, Seth Demonstration Forest, and Fred W. Besley Demonstration Forest. The fiscal year runs from July 1, 2015 to June 30, 2016. 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.

NETWORKING WITH DNR AND OTHER AGENCIES

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.
- Land Acquisition & 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.

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.
- Third party forest certification via annual audits
    - Sustainable Forestry Initiative (SFI)
    - Forest Stewardship Council (FSC)
- 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.

C. MAINTENANCE PROJECTS

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. Areas with faded DNR paint will be repainted. Signs will be placed along the boundary lines designating the type of public access to the property. New acquisitions will be converted from their previous ownership markings to the DNR yellow band markings.

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.

D. RECREATION PROJECTS

- 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, geocaching, etc.
- Continue work on active Recreational Trails Grants
    - Algonquin Cross County Trail

Submit and execute Recreational Trails Grants. Appendix A contains copies of the following grant applications for Calendar Year 2014-15:

- Chesapeake Forest – D03 – Little Blackwater Soft Launch
- Chesapeake Forest – D26 – Lewis/Island Pond Soft Launch
- Pocomoke State Forest – P06 – Hudson/Tarr Handicapped Hunting Trail
- Chesapeake Forest – W02 – Aughty Naughty Handicapped Hunting Trail

E. 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.

F. SILVICULTURAL PROJECTS

SILVICULTURAL ACTIVITY OVERVIEW

Tables 1 and 2 summarize the proposed silvicultural activities for the 2016 annual work plan on approximately 2044 acres (3.0%) of the Chesapeake Forest and 165 acres (0.9%) of Pocomoke State Forest, for a total of 2209 acres (2.6%) on both forests.

Table 2. 2016 Chesapeake Forest Silvicultural Activity Overview.

Activity	Acres
First Commercial Thinning	1262.0
Second Commercial Thinning	709.9
Prescribed Fire	71.7
Total	**2043.7**

Table 3. 2016 Pocomoke State Forest Silvicultural Activity Overview.

Activity	Acres
Final Harvest	26.1
Pre Commercial Thinning	45.1
First Commercial Thinning	93.9
Total	**165.1**

DEFINITIONS OF SILVICULTURAL ACTIVITIES

- **Reforestation** – Reforestation reestablishes forest cover either naturally or artificially (hand planting), and may be 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 and/or hardwoods as the management zone dictates.

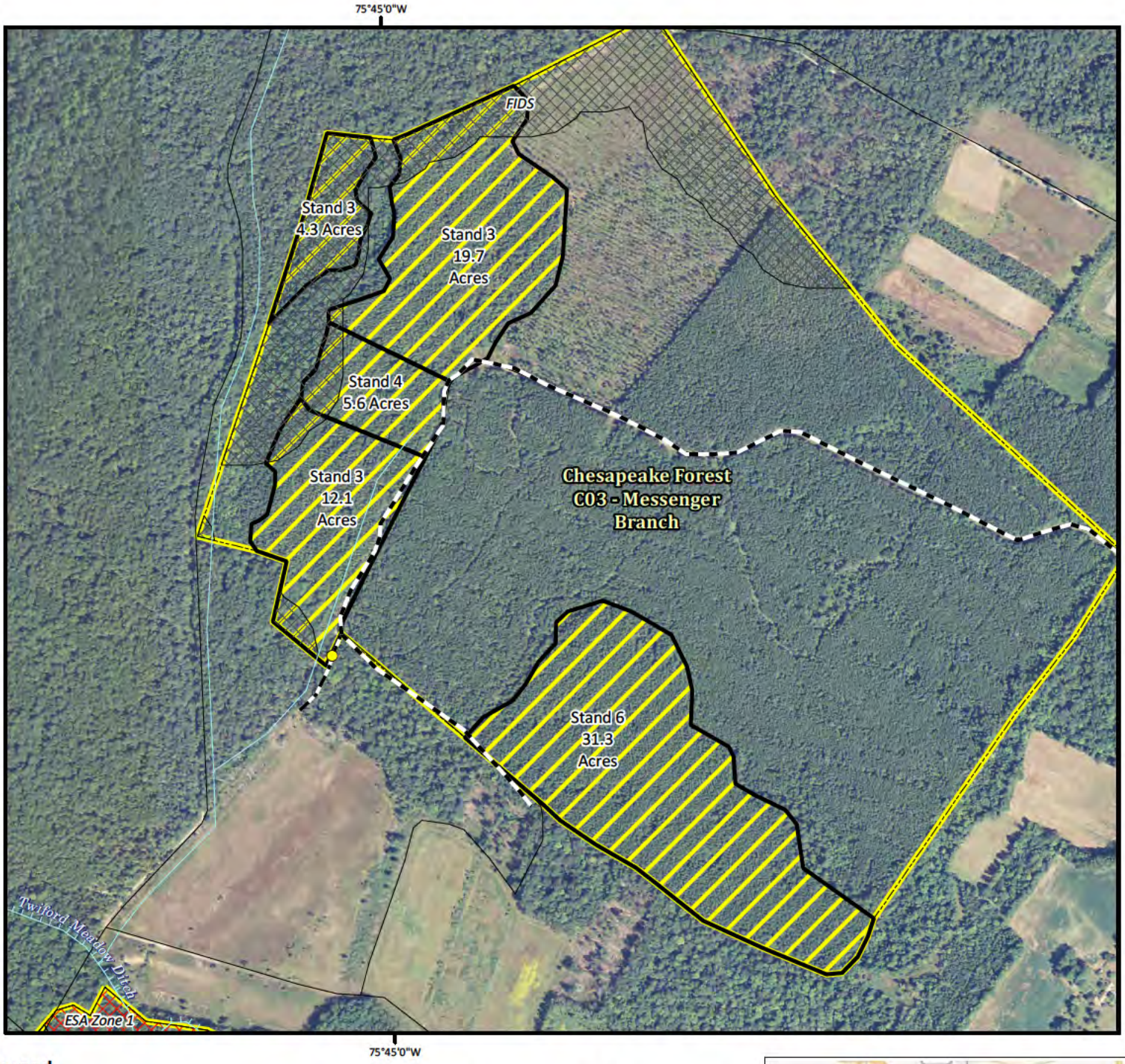
- **Pre-Commercial Thinning** – Pre-commercial thinning is the removal of trees to reduce overcrowded conditions within a stand. This type of thinning concentrates growth on more desirable trees while improving the health of the stand. This treatment is usually done on stands 6 to10 years of age. The 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 20-25 years old. The objective is to facilitate forest health and promote development of larger trees over a shorter period of time. This is accomplished in plantations by removing every 5th row of trees and selectively thinning (poor form & unhealthy trees) between rows. In naturally regenerated stands, thinning corridors will be established every 50 feet and the stand will be selectively thinned along both sides of the corridor. Approximately 30-40% of the total stand volume will be removed in this process. Stocking levels are determined using a loblolly pine stocking chart based on the basal area, DBH, and trees per acre of the stand (USDA Forest Service, 1986). Crown ratio and site index are other factors that are used to decide whether to thin or not.
- **Second Commercial Thinning** – Usually performed on stands 35-40 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 25-30% 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, 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 shelterwood method works best when overstory trees are more than 30 years old and in their prime period of seed production potential (Schulz, 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, but can be removed once sufficient pine regeneration is achieved. The seed tree method regenerates loblolly pine effectively and inexpensively in the Coastal Plain, where seed crops are consistently heavy (Schulz, 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/or 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 Harvest (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, about 20% of the two forests 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 in specially designated wetland areas or within 150 feet of riparian 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 for 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.

SILVICULTURAL ACTIVITIES

CAROLINE COUNTY

SITE MAPS



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

0 660 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

C03 - Messenger Branch

ASC-DNR Forest Service 06/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

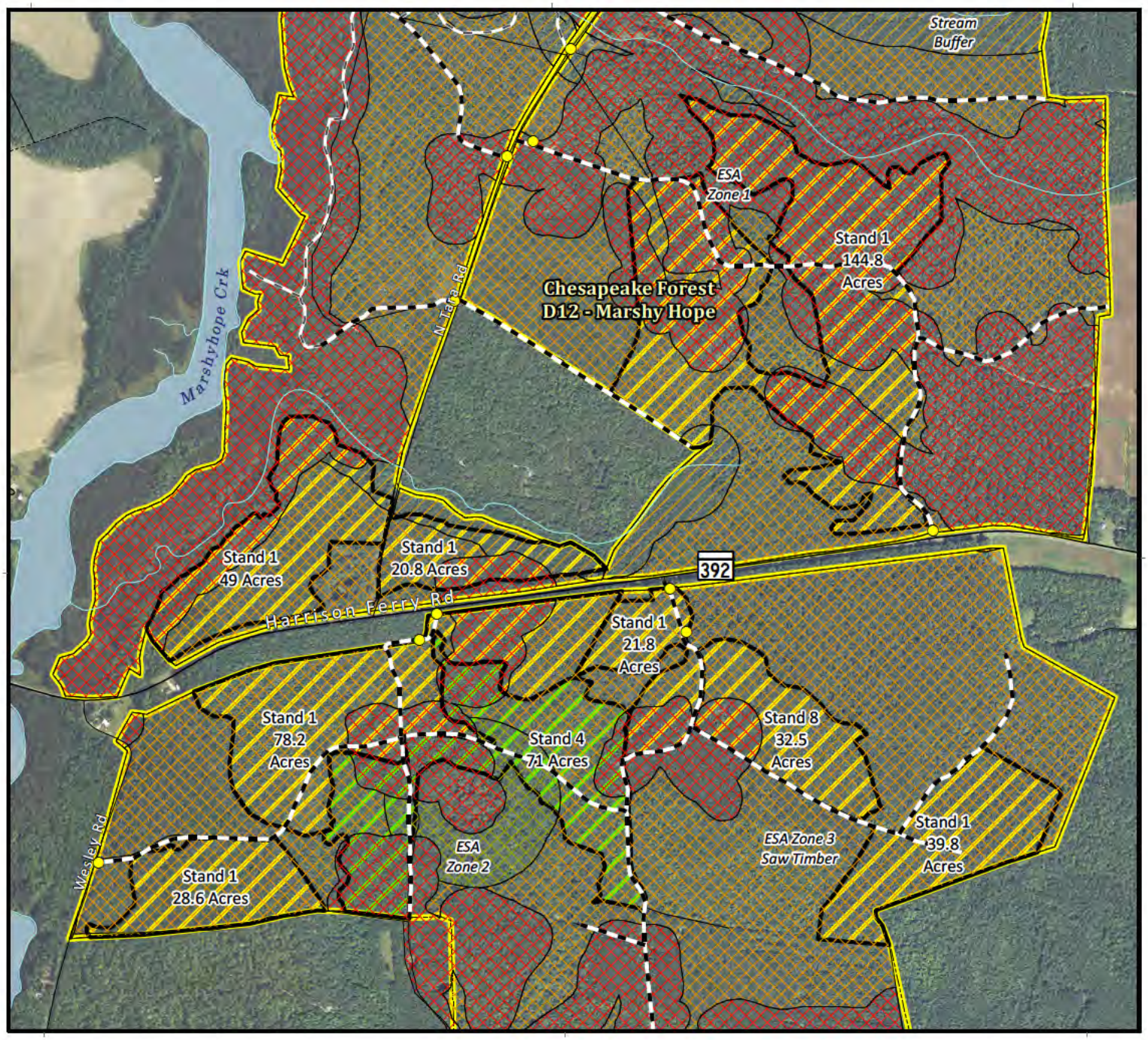
MARYLAND FOREST SERVICE

SILVICULTURAL PRESCRIPTIONS & STAND DATA

C01 – MESSENGER BRANCH

A first thinning is proposed for stands 3, 4 and 6. Stand 3 is an overstocked 36.1-acre loblolly pine plantation that was established in 1994. Stand 4 is an overstocked 5.6-acre loblolly pine plantation that was established in 1992. Stand 6 is an overstocked 31.3-acre loblolly pine plantation that was established in 1993. All three stands were sprayed and grass controlled in 1995. It is located in ESA Zone 1, Stream Buffer, and General Management areas. Stand 2 is an overstocked 74.5 acre naturally regenerated loblolly pine stand that was established in 1992. Stands 3 and 4 are located in Core FIDS and General Management areas, and stand 6 is located in General Management. Soil series found in these stands are CdA, CdB, EwB, FaA, GaB, GAE, and RoA.

SITE MAPS



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

0 1,320 2,640 Feet

1 inch = 1,320 feet

N

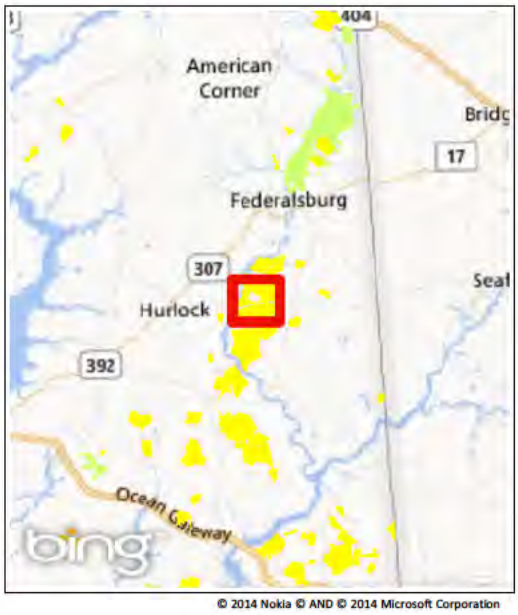
Chesapeake Forest

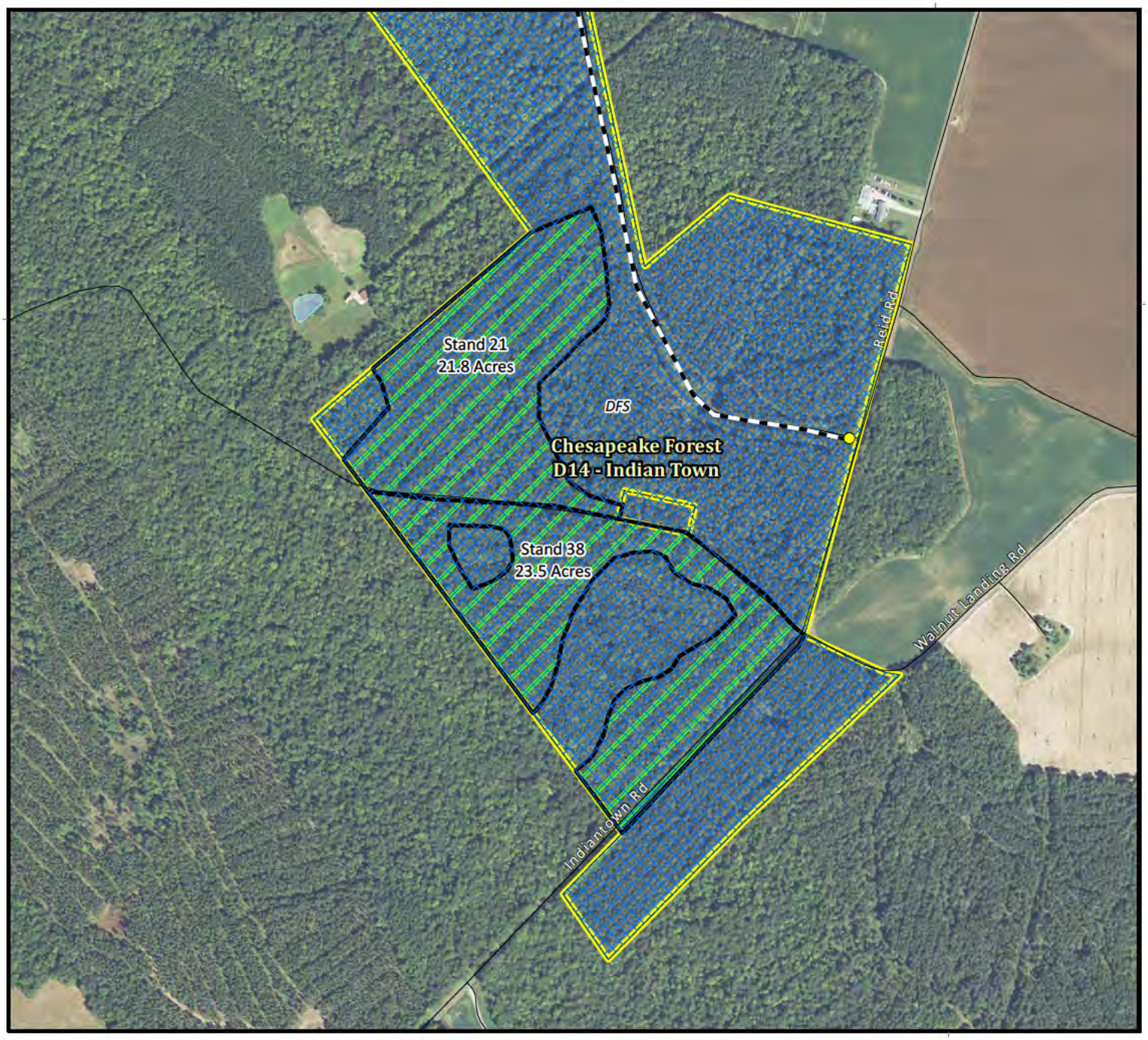
D12 - Marshyhope

ASC-DNR Forest Service 06/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE





Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

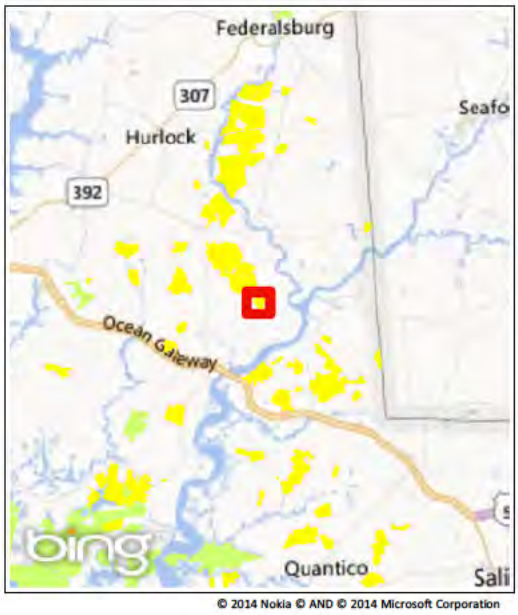
0 660 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

D14 - Indiantown



ASC-DNR Forest Service 06/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE

D12 – MARSHYHOPE

A first thinning is proposed for stands 1 and 8. Stand 1 is an overstocked 383-acre loblolly pine plantation that was established in 1994 and sprayed and controlled for grass in 1996. Stand 8 is an overstocked 32.5-acre loblolly pine plantation that was established in 1993. These stands are located in ESA Zone 1, ESA Zone 2, ESA Zone 3 Saw Timber, stream buffer, and DFS Core areas. Soil series found in these stands are EwC, GaA, GaB, HvA, KgB, PmA, PnA, RsA, RsB, and Za.

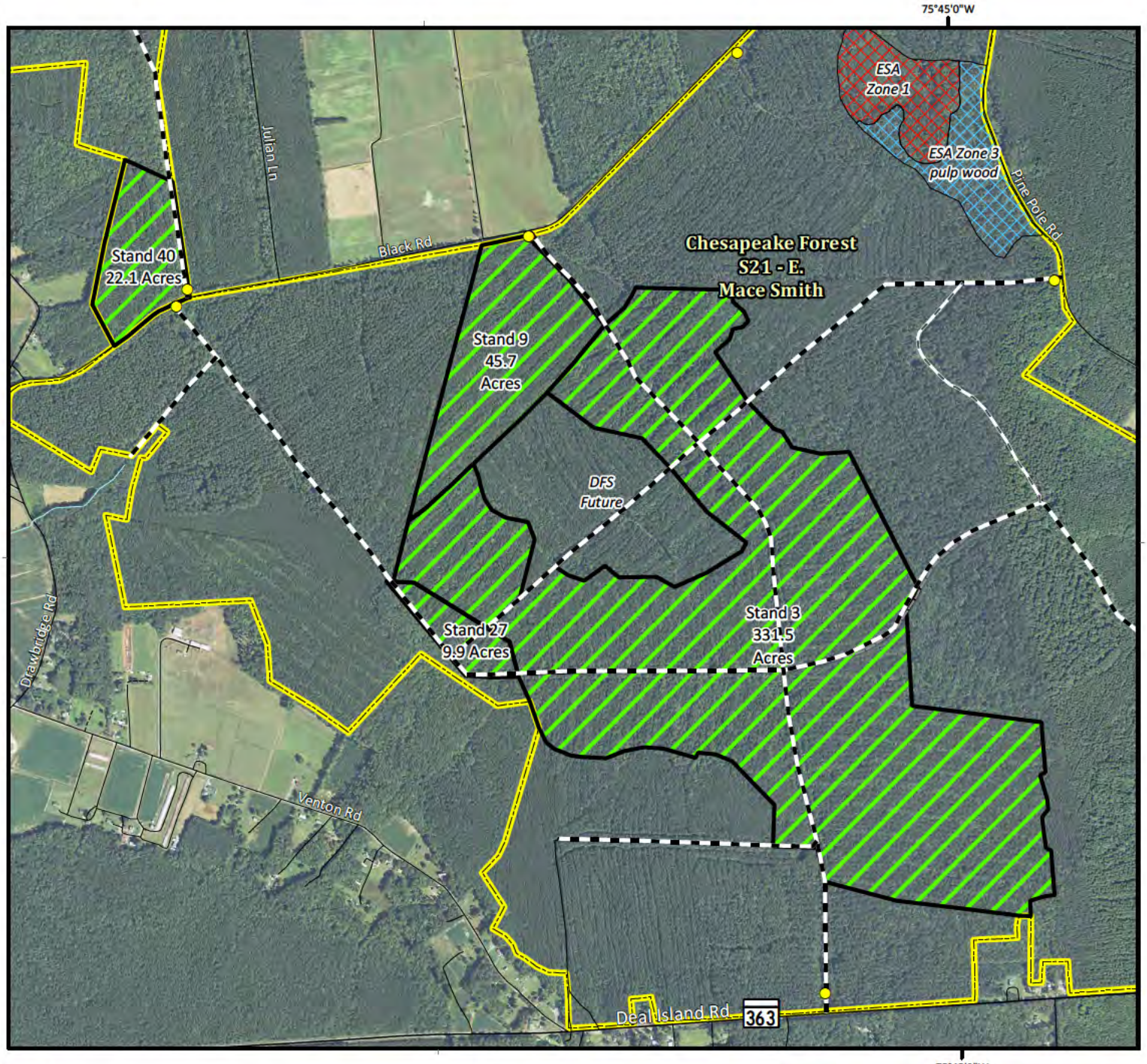
A second thinning is proposed for stand 4. Stand 4 is an overstocked 71-acre loblolly pine plantation that was established in 1963 and first thinned in 1998. It is located in ESA Zone 1, ESA Zone 2, ESA Zone 3 Saw Timber, and DFS Core areas. Soil series found in these stands are EwC, GaA, GaB, HvA, KgB, PmA, PnA, RsA, and RsB.

D14 – INDIANTOWN

A second thinning is proposed for stands 21 and 38. Stand 21 is an overstocked 21.8-acre loblolly pine plantation that was established in 1982 and first thinned in 1996. Stand 38 is an overstocked 23.5-acre pine-hardwood plantation that was established in 1982 and first thinned in 1996. Both stands are located in a DFS Core area. Soil series found in these stands are FaA, FmA, HnA, HvA, KgB, and PmA.

SOMERSET COUNTY

SITE MAPS



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

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- 2016 T2

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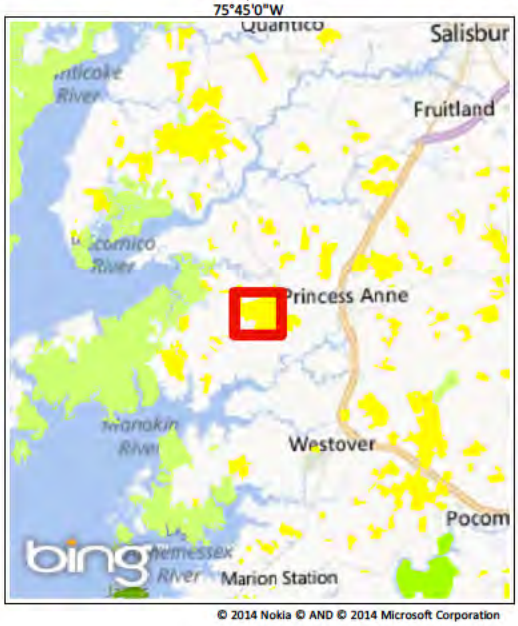
1 inch = 1,320 feet

N

Chesapeake Forest

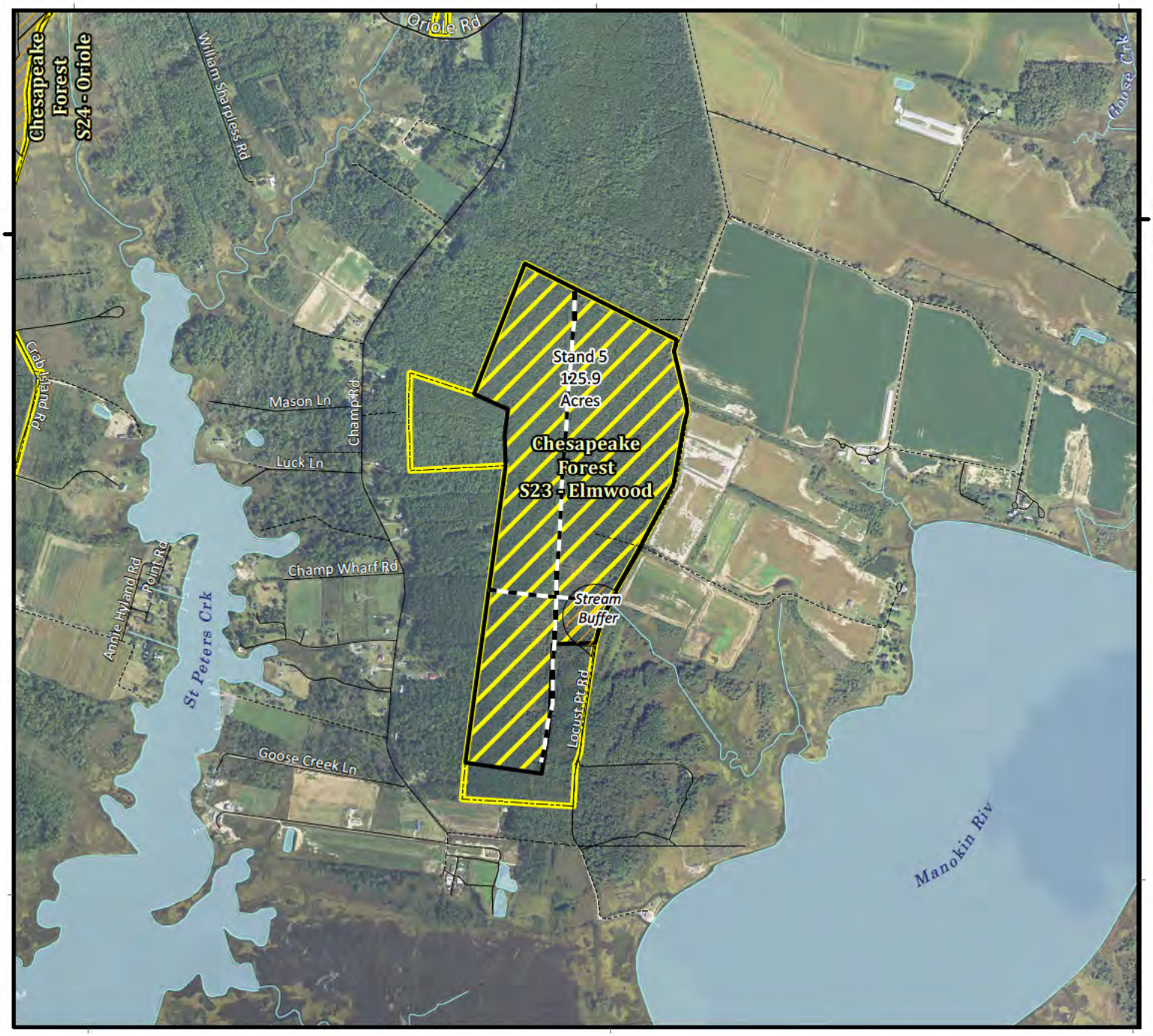
S21 - E. Mace Smith



ASC-DNR Forest Service 06/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

0 1,320 2,640 Feet

1 inch = 1,320 feet

N

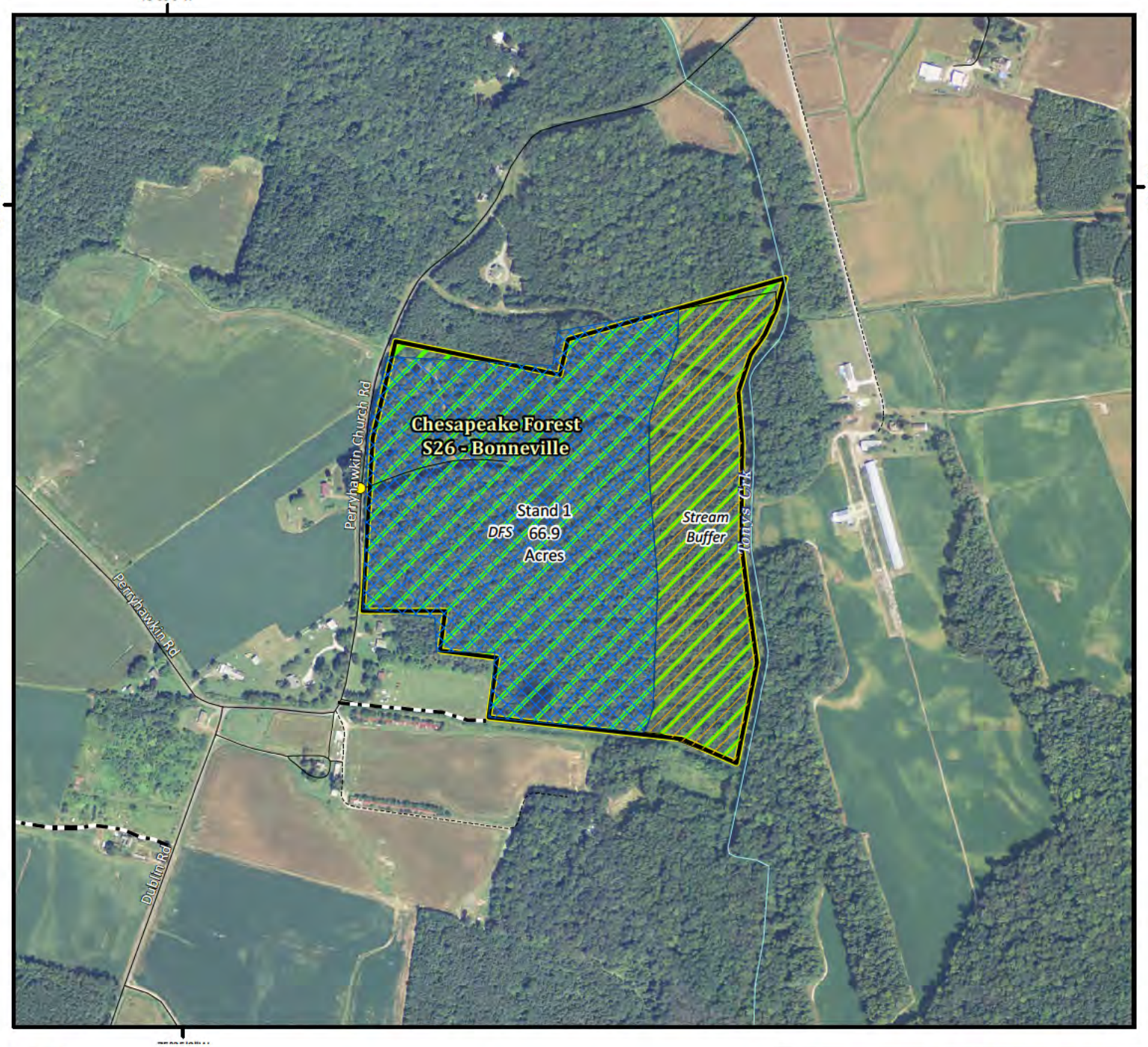
Chesapeake Forest

S23 - Elmwood

ASC-DNR Forest Service 06/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

0 660 1,320 Feet

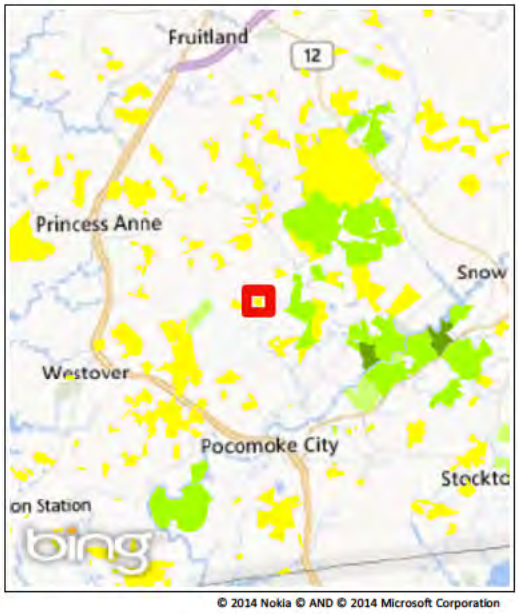
1 inch = 660 feet

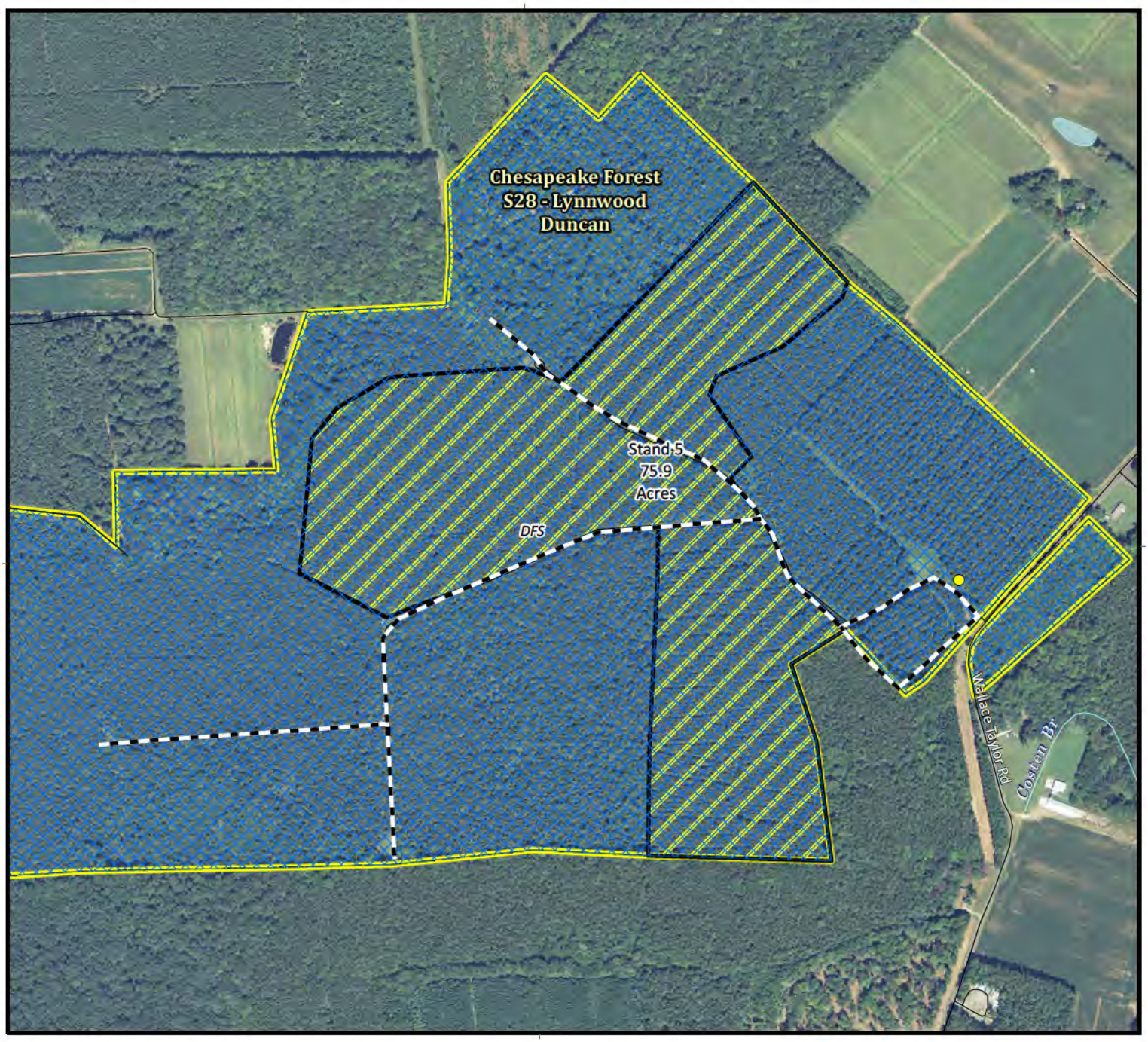
N

Chesapeake Forest

S26 - Bonneville

ASC-DNR Forest Service 06/2014





Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

0 660 1,320 Feet

1 inch = 660 feet

N

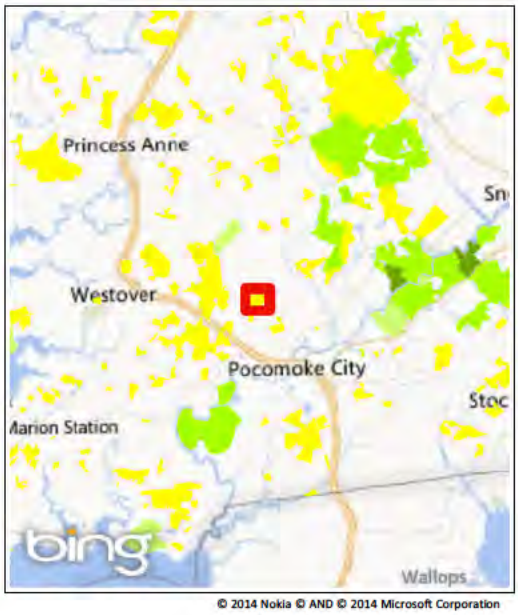
Chesapeake Forest

S28 - Lynnwood Duncan

ASC-DNR Forest Service 06/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE



S21 – E MACE SMITH

A second thinning is proposed for stands 3, 9, 27, and 40. Stand 3 is an overstocked 331.5-acre loblolly pine plantation that was established in 1982, grass controlled in 1986, first thinned in 2001, and sprayed in 2002. Stand 9 is an overstocked 45.7-acre loblolly pine plantation that was established in 1984, grass controlled and released in 1984, and first thinned in 2001. Stand 27 is a 9.9-acre loblolly pine plantation that was established in 1982, grass controlled and released in 1986, and first thinned in 2001. Stand 40 is an overstocked 22.1-acre loblolly pine plantation that was established in 1982 and first thinned in 2002. All of these stands are located in a DFS Core area. Soil series found in this stand are FhA, MdA, OKA, OtA, and QuA.

S23 – ELMWOOD

A first thinning is proposed for stand 5. Stand 5 is an overstocked 125.9-acre loblolly pine plantation that was established in 1994 and sprayed and controlled for grass in 1996. This stand is located in stream buffer and general management areas. Soil series found in these stands are FhA, OtA, and QuA.

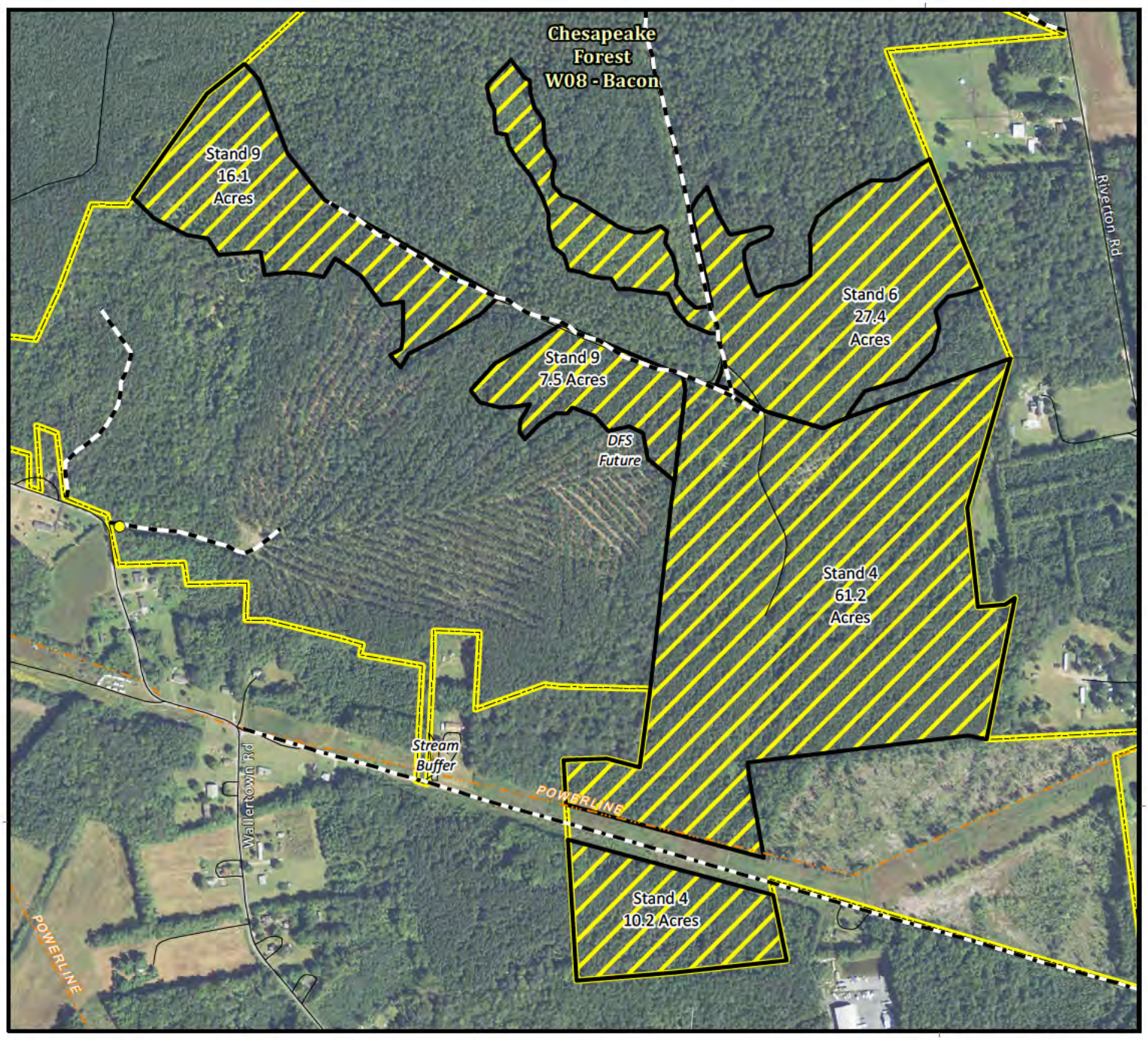
S26 – BONNEVILLE

A second thinning is proposed for stand 1. Stand 1 is an overstocked 66.9-acre loblolly pine plantation that was established in 1983, sprayed and controlled for grass in 1982, and first thinned in 1999. It is located in DFS Core and stream buffer areas. Soil series found in this stand are DoB, HmA, HvA, IgB, KgB, LO, MuA, and WpA.

S28 – LYNNWOOD DUNCAN

A first thinning is proposed for stand 5. Stand 5 is an overstocked 75.9-acre loblolly pine plantation that was established in 1994. It is located in a DFS Core area. Soil series found in this stand are FgA, FhA, OKA, and QuA.

SITE MAPS



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

0 660 1,320 Feet

1 inch = 660 feet

N

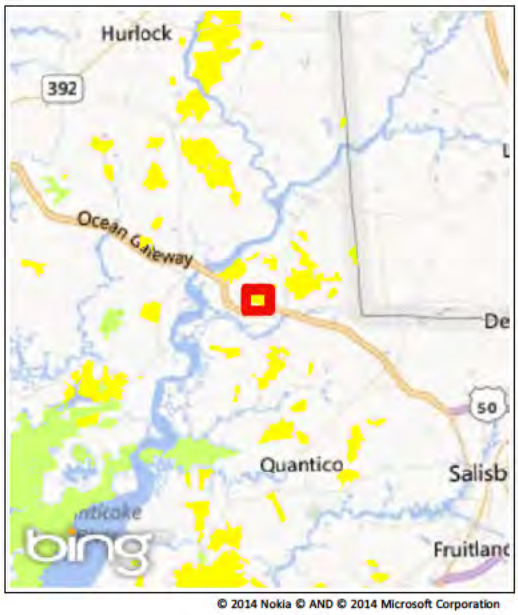
Chesapeake Forest

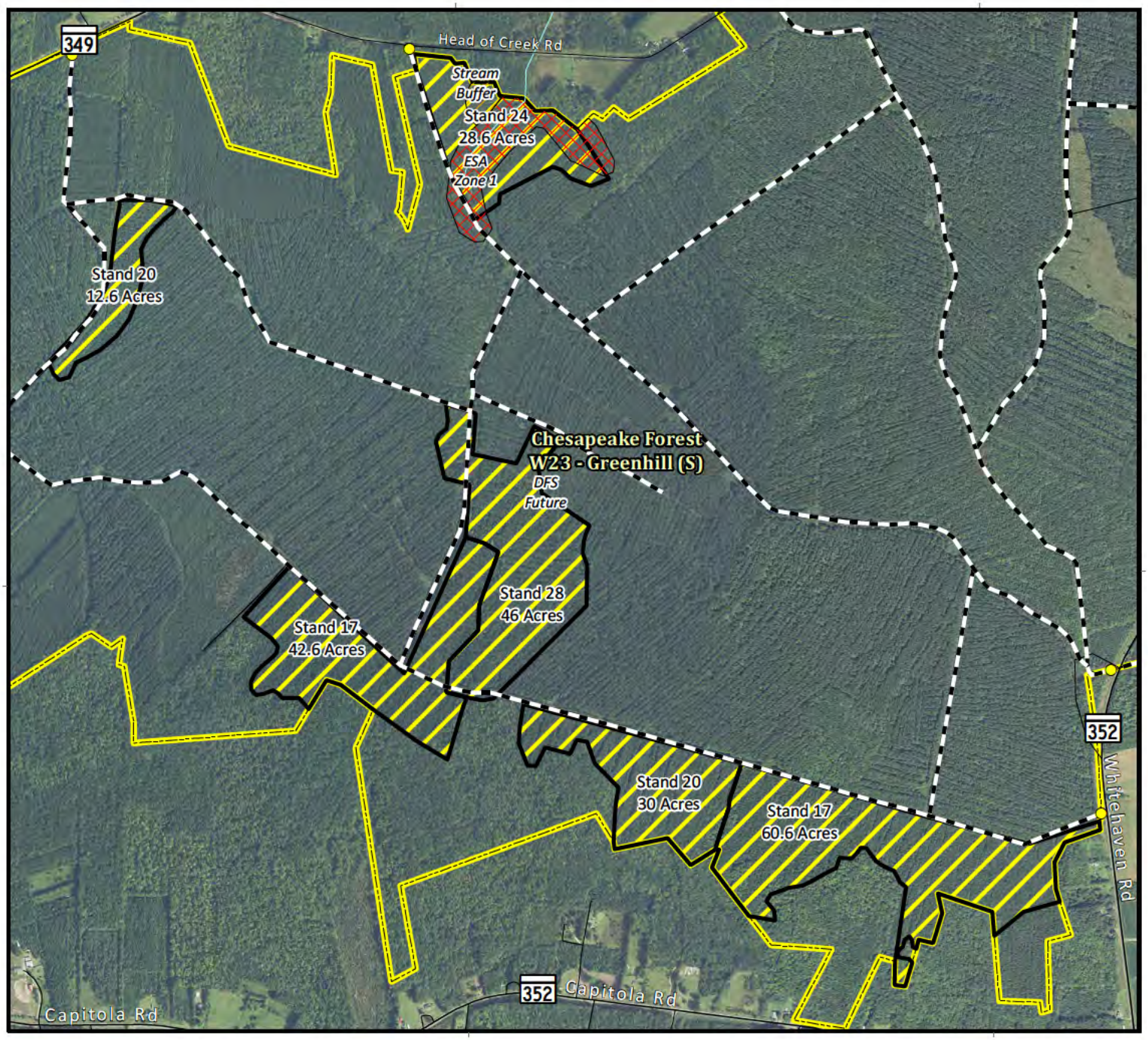
W08 - Bacon

ASC-DNR Forest Service 06/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE





Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

0 1,320 2,640 Feet

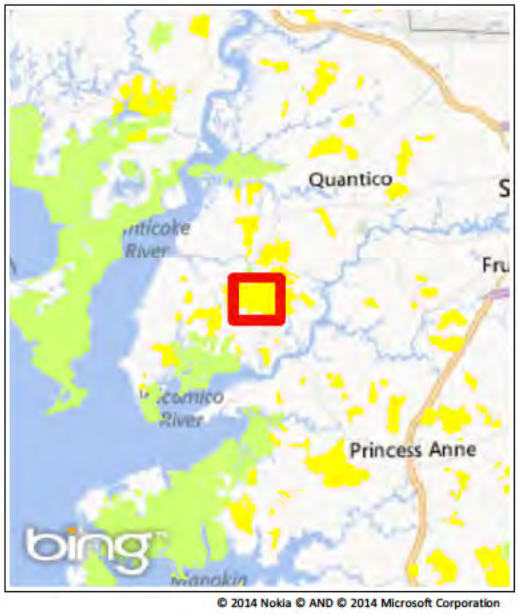
1 inch = 1,320 feet

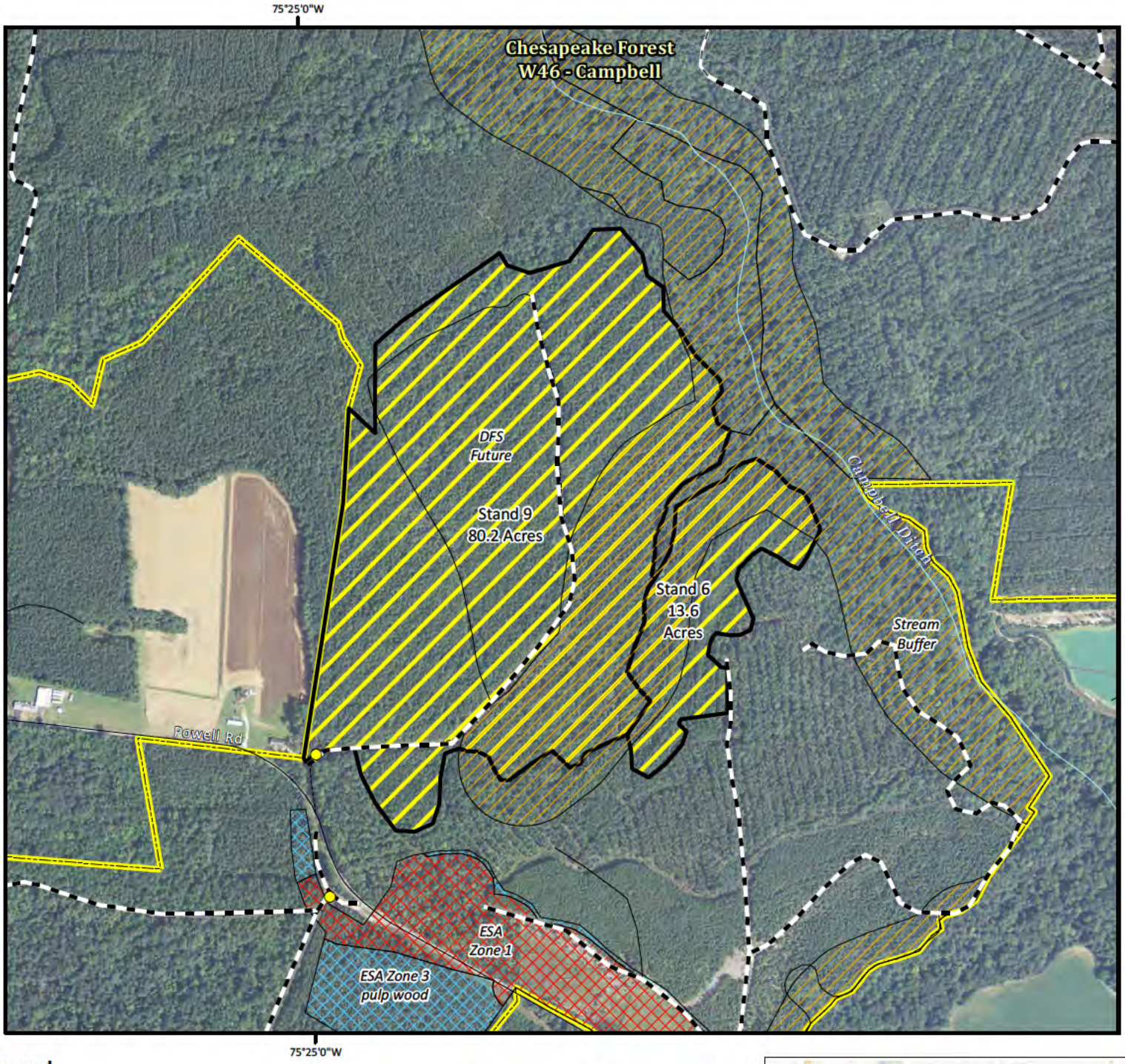
N

Chesapeake Forest

W23 - Greenhill

ASC-DNR Forest Service 06/2014





Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

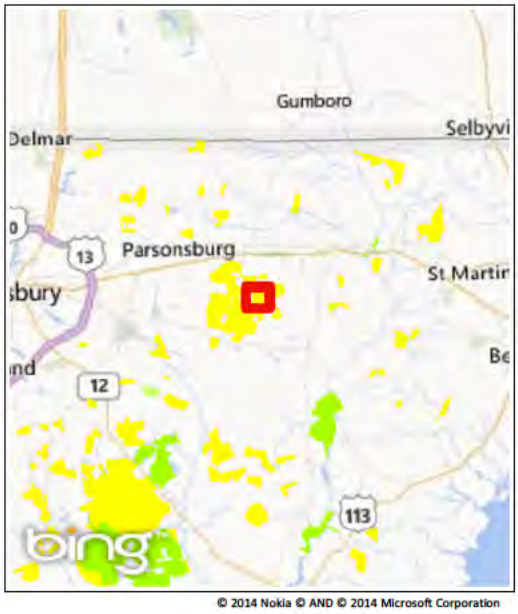
0 660 1,320 Feet

1 inch = 660 feet

N

Chesapeake Forest

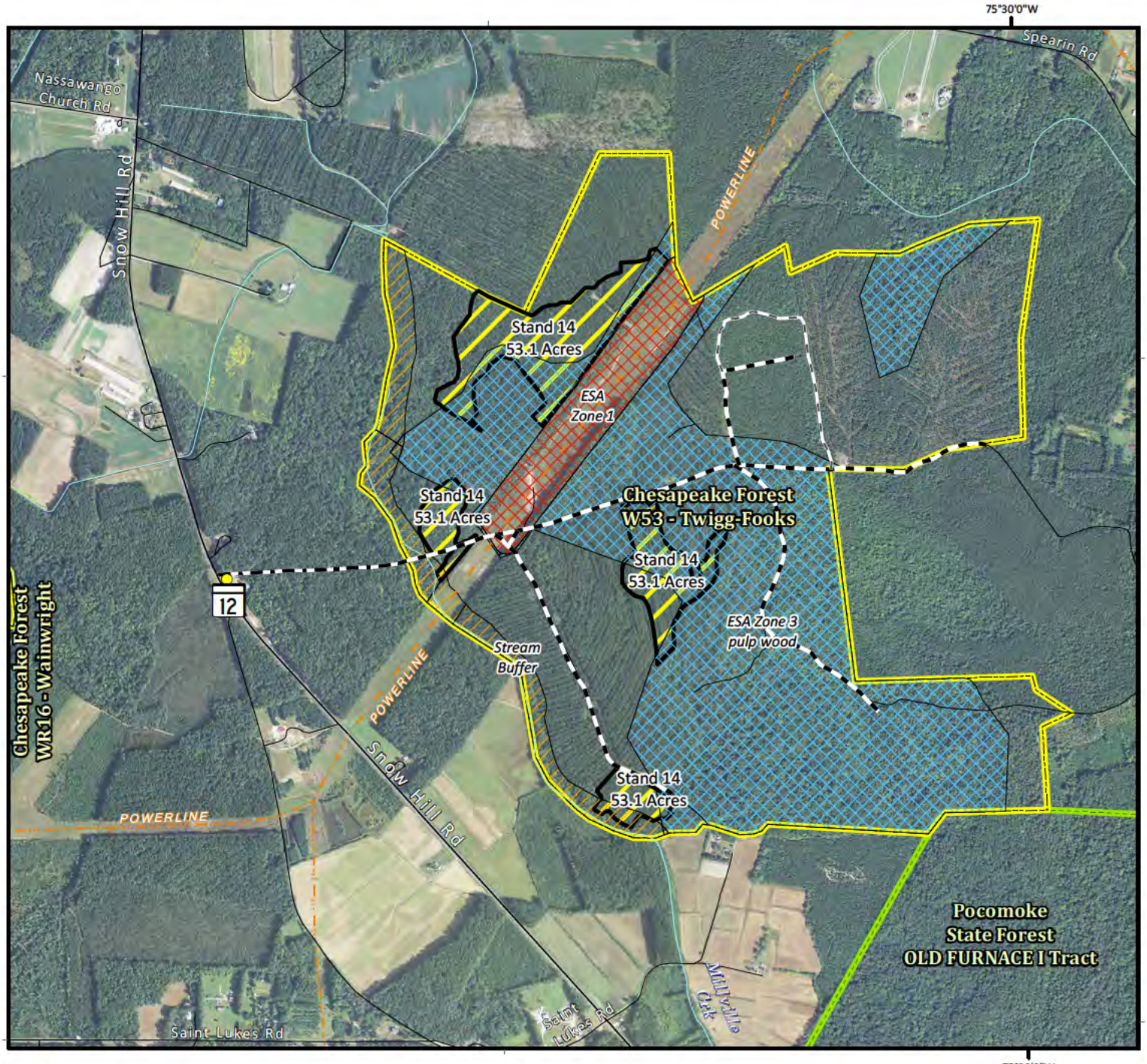
W46 - Campbell



ASC-DNR Forest Service 06/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

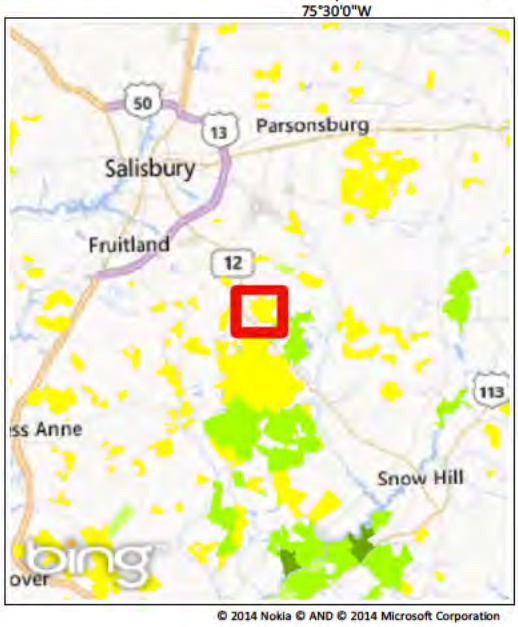
0 1,320 2,640 Feet

1 inch = 1,320 feet

N

Chesapeake Forest

W53 - Twigg-Fooks



ASC-DNR Forest Service 06/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE

W08 – BACON

A first thinning is proposed for stands 4, 6, and 9. Stand 4 is an overstocked 71.4-acre loblolly pine plantation that was established in 1998. Stands 6 and 9 are overstocked 27.4-acre loblolly pine plantations that were established, released, and controlled for grass in 1996. All stands are located in a DFS Future Core area and stand 6 is located in a DFS Future Translocation area. Soil series found in this stand are AsA, BhA, HnA, KgB, MuA, RsA, RsB, RwA, and RwB.

W23 – GREENHILL

A first thinning is proposed for stands 17, 20, 24, and 28. Stand 17 is an overstocked 103.2-acre loblolly pine plantation that was established in 1995. Stands 20 and 24 are overstocked loblolly pine plantations that were established in 1994 and total 71.2 acres. Stand 28 is a 46-acre loblolly pine stand that was naturally regenerated in 1984, sprayed and controlled for grass in 1989, and pre commercially thinned in 1990. All stands are located in a DFS Future Core area. Additionally, Stands 17, 20, and 24 are located in a DFS Future Translocation area, and stand 28 contains an ESA Zone 1 and a stream buffer. Soil series found in these stands are FgA, MtA, OKA, and OtA.

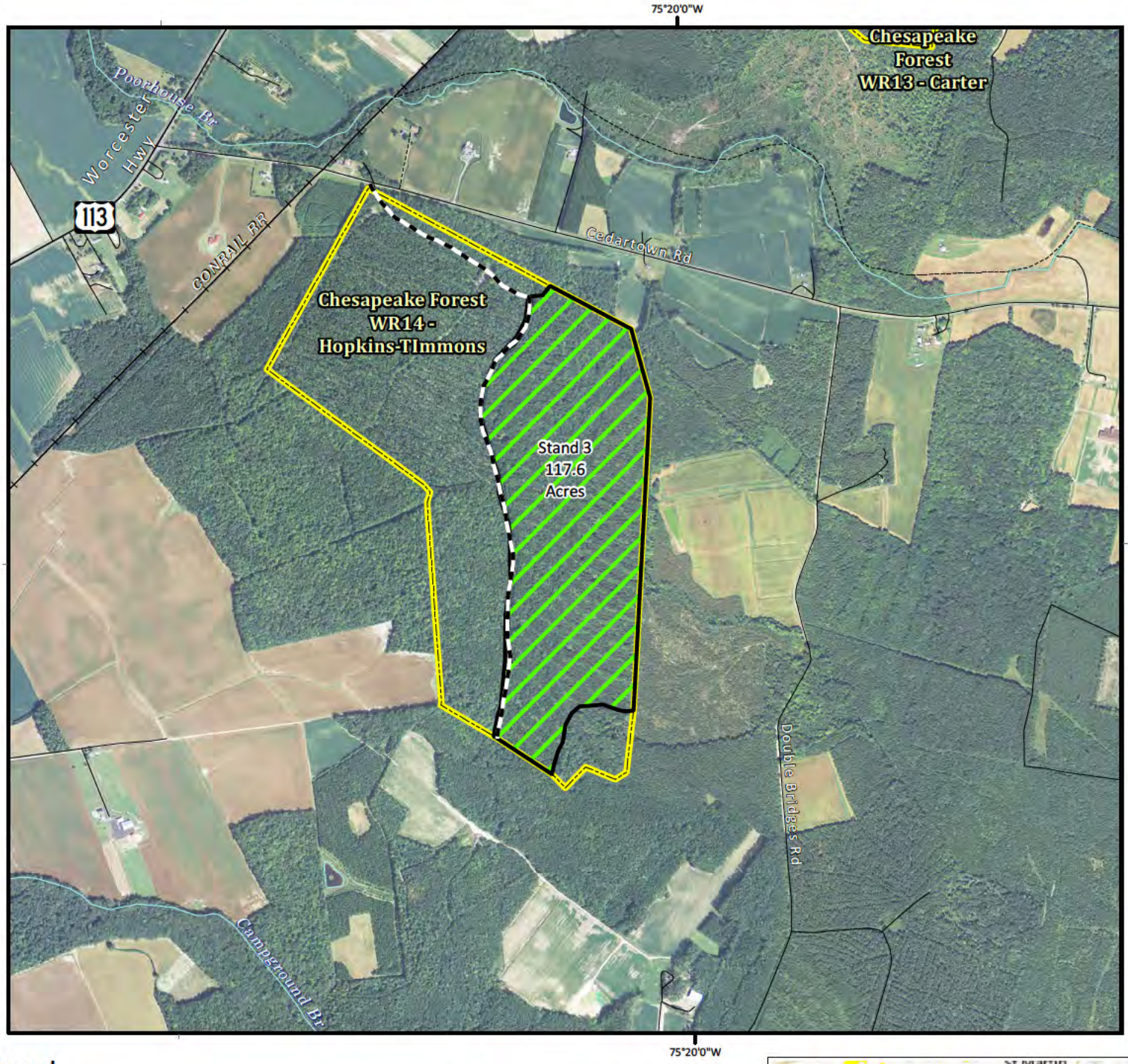
W46 – WICOMICO DEMONSTRATION FOREST/CAMPBELL

A first thinning is proposed for stands 6 and 9. Stand 6 is an overstocked 13.6-acre loblolly pine plantation that was established in 1992. Stand 9 is an overstocked 80.2-acre loblolly pine stand that was naturally regenerated in 1989 and controlled for grass and sprayed in 1990. Both stands are located in DFS Future Core and DFS Future Translocation areas. Soil series found in these stands are BhA, EwB, KgB, RsA, RsB, and Zk.

W53 – TWIGG-FOOKS

A first thinning is proposed for stand 14. Stand 14 is an overstocked 53.1-acre loblolly pine plantation that was established in 1991 and controlled for grass and sprayed in 1994. This stand is located in ESA Zone 1, ESA Zone 3 pulpwood, stream buffer, and general management zones. Soil series found in this stand are AsA, CoA, EkA, HuA, KeA, KgB, KsA, KsB, LgA, Ma, MpA, MuA, and WdA.

SITE MAPS



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

0 1,320 2,640 Feet

1 inch = 1,320 feet

N

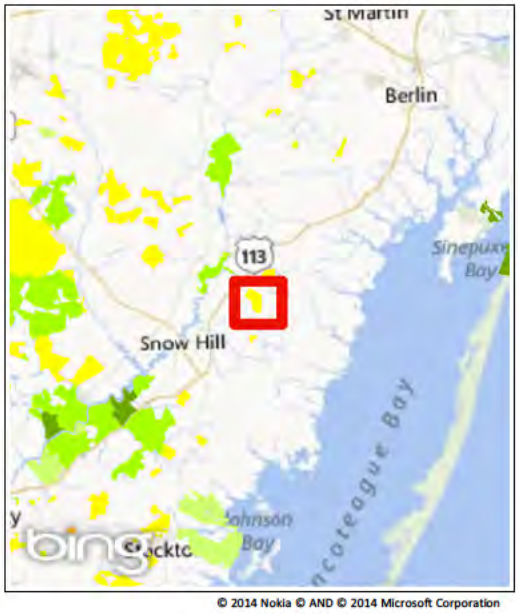
Chesapeake Forest

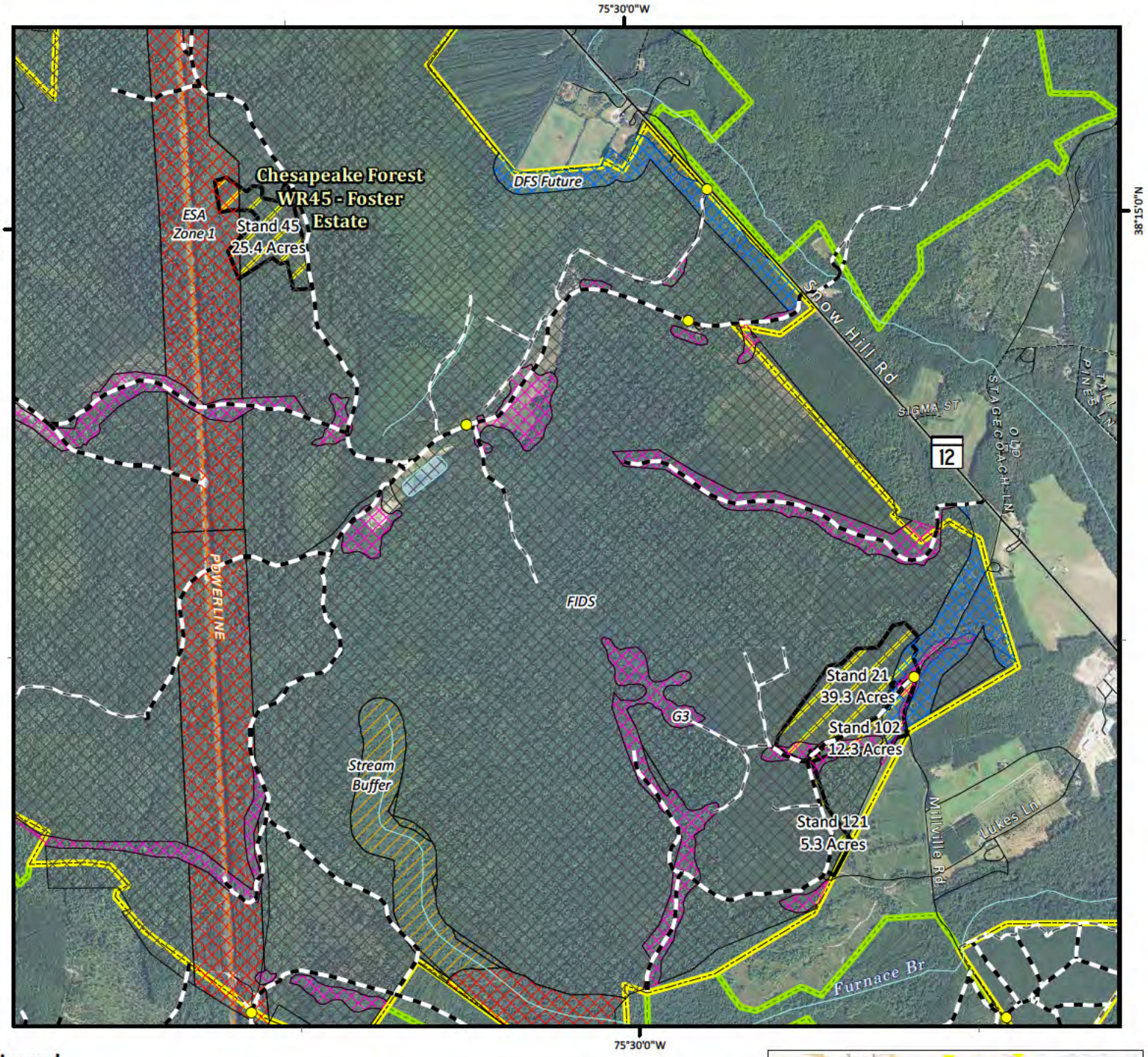
WR14 - Hopkins-Timmons

ASC-DNR Forest Service 06/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE





Legend

- Chesapeake Forest
- Pocomoke State Forest

Management Zones

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

AWP

- 2016 T1
- 2016 T2

0 2,000 4,000 Feet

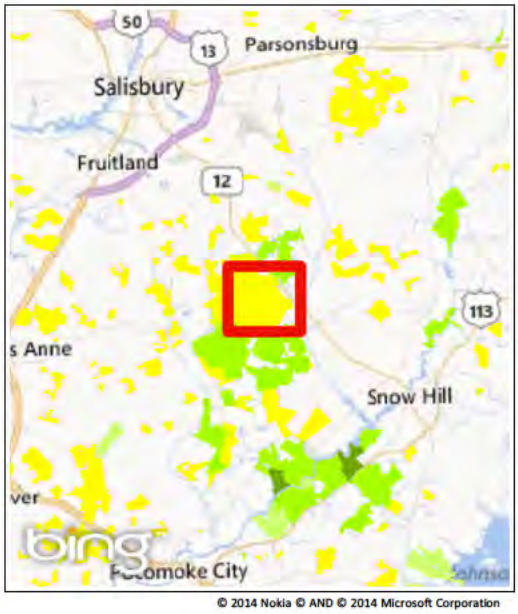
1 inch = 2,000 feet

N

Chesapeake Forest

WR45 - Foster Estate

ASC-DNR Forest Service 06/2014



SILVICULTURAL PRESCRIPTIONS & STAND DATA

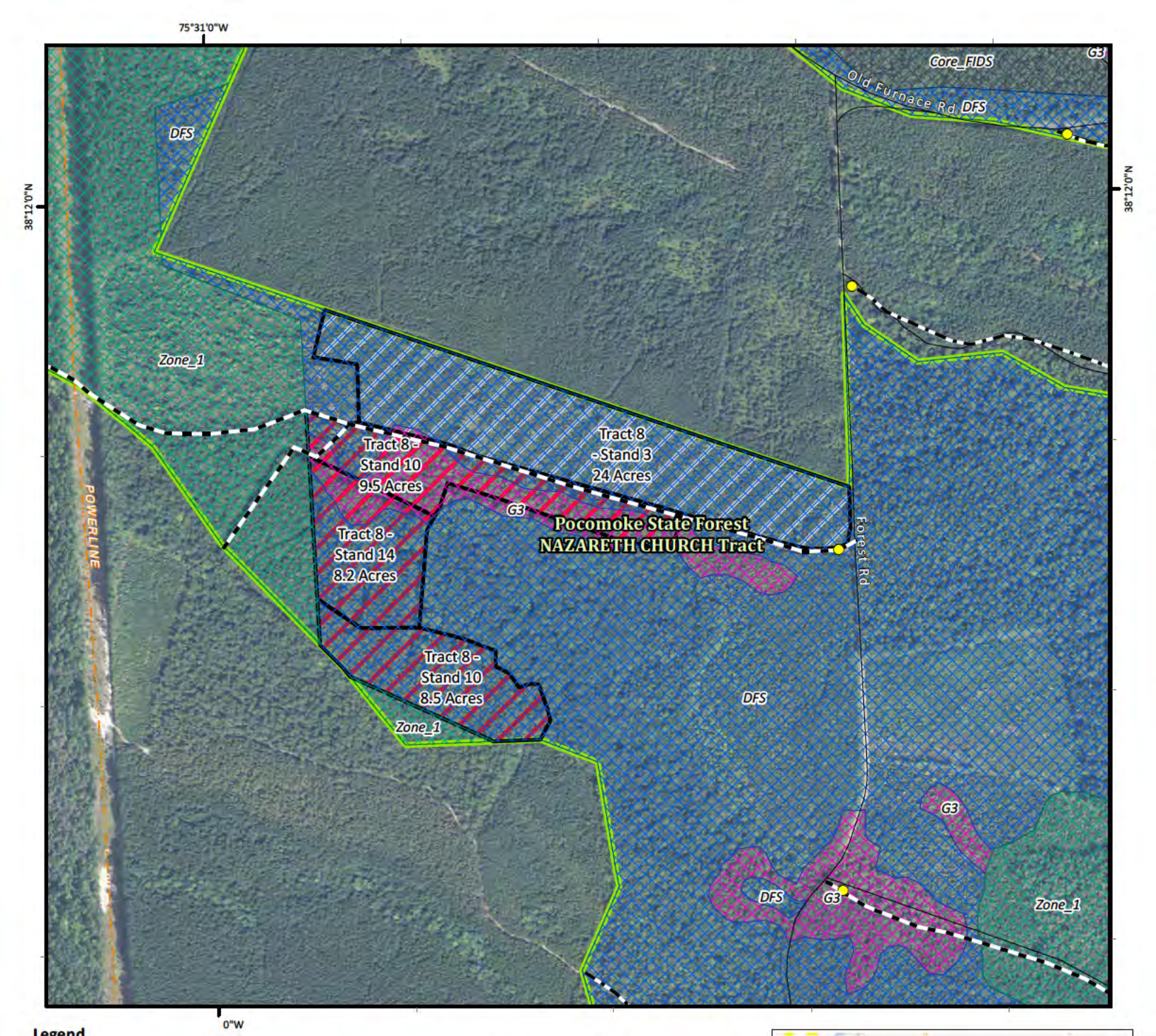
WR14 – HOPKINS-TIMMONS

A second thinning is proposed for stand 3. Stand 3 is an overstocked 117.6-acre loblolly pine plantation that was established in 1982, first thinned in 2001 and sprayed in 2002. This stand is located in a General Management zone. Soil series in this stand are KeA, OtA, and Za.

WR45 – FOSTER ESTATE

A first thinning is proposed for stands 21, 45, 102, and 121. Stand 21 is an overstocked 39.3- acre loblolly pine plantation that was established in 1993. Stand 45 is an overstocked 25.4-acre loblolly pine plantation that was established in 1985. Stands 102 and 121 are overstocked 12.3-acre loblolly pine plantations that were established in 1991. All stands are located in Core FIDS and Future Core DFS areas. Stands 21, 102, and 121 area also contain G3 community areas, and Stand 45 is located in an ESA Zone 1 area. Soil series in these stands are AsA, BhA, CeA, CeB, EvB, EvD, KsA, KsB, MuA, RuA, and RuB.

SITE MAPS



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management

- Core FIDS
- DFS
- G3
- Stream
- WSSC
- Zone_1
- Zone_2
- Zone_3

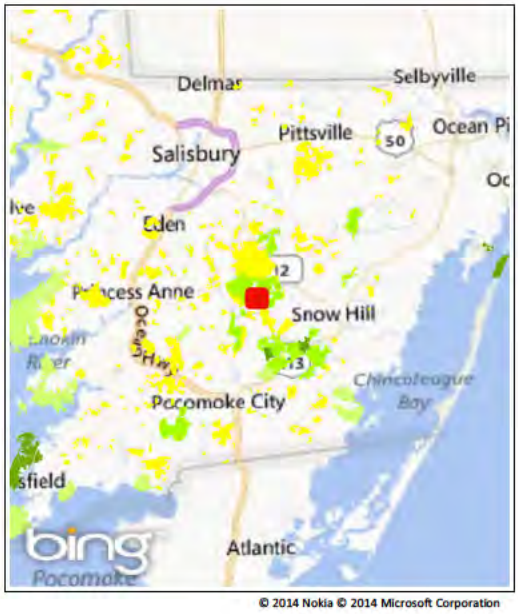
AWP

- 2016 FH
- 2016 PCT
- 2016 RX
- 2016 T1

0 660 1,320 Feet

1 inch = 660 feet

N



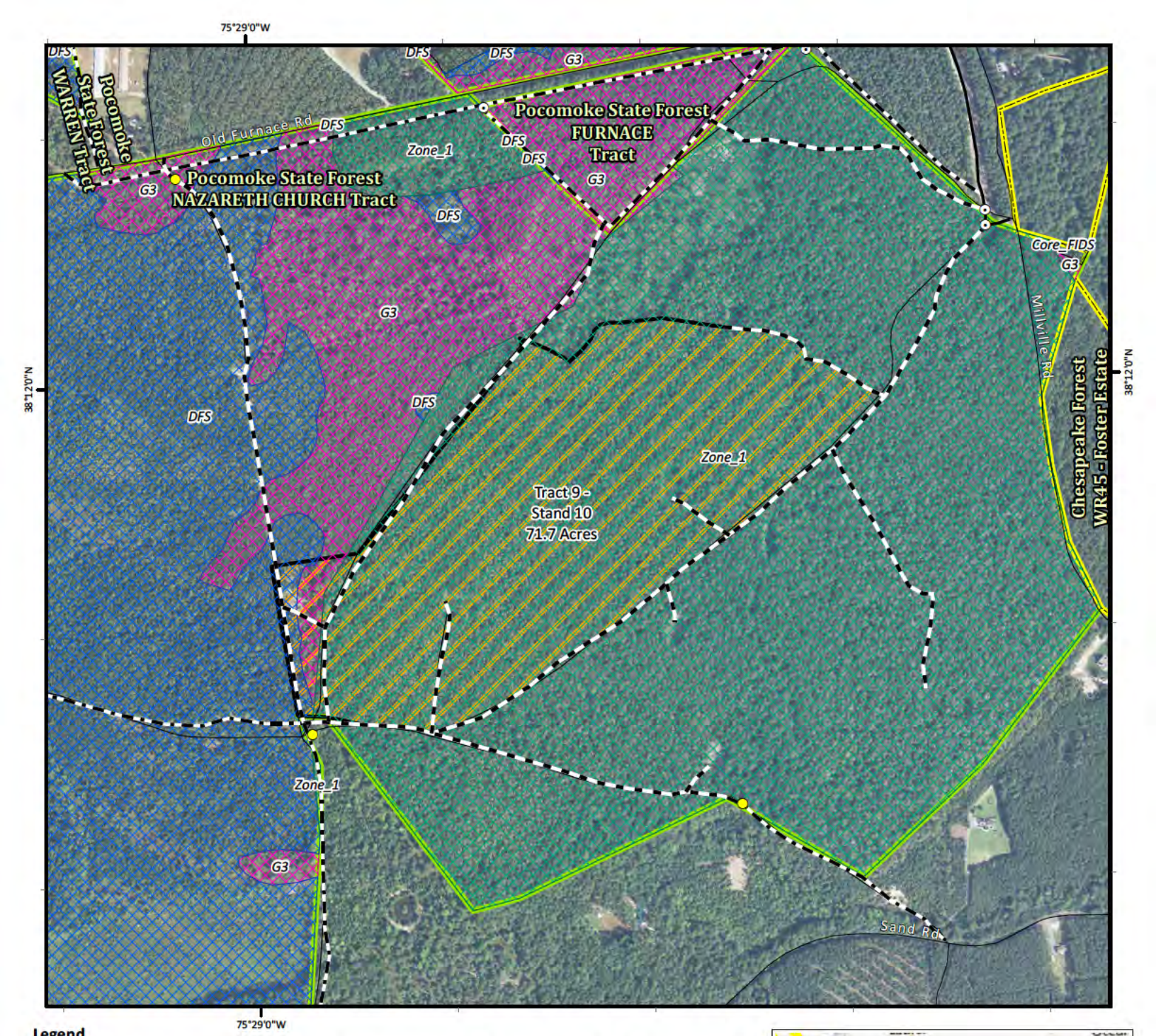
Pocomoke State Forest

P02 - Nazareth Church
Tract 8

ASC-DNR Forest Service 10/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management

- Core FIDS
- DFS
- G3
- Stream
- WSSC
- Zone_1
- Zone_2
- Zone_3

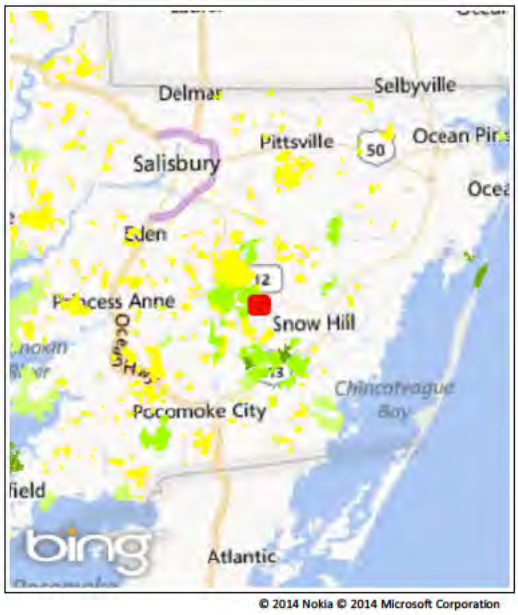
AWP

- 2016 FH
- 2016 PCT
- 2016 RX
- 2016 T1

0 660 1,320 Feet

1 inch = 660 feet

N



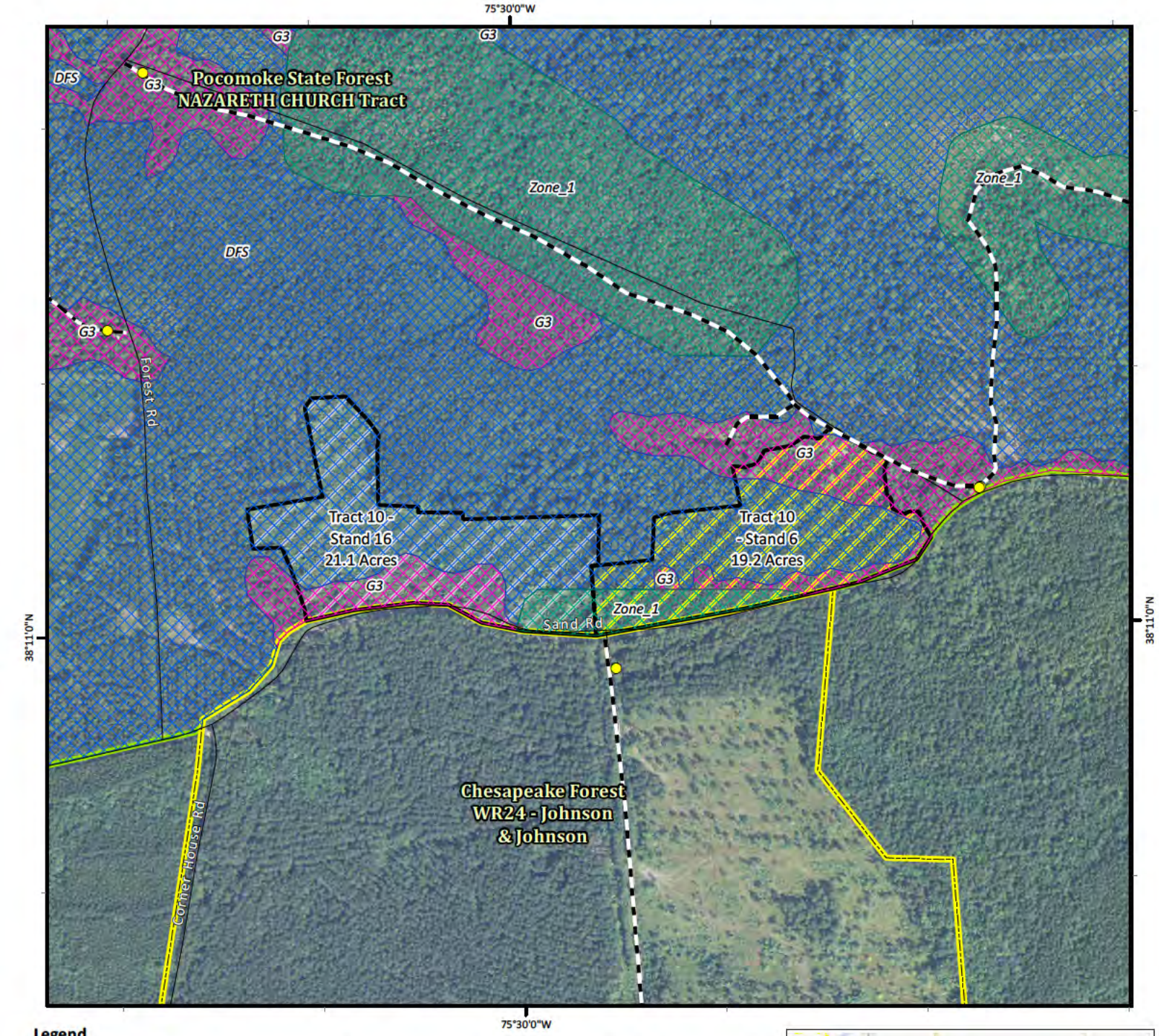
Pocomoke State Forest

P02 - Nazareth Church
Tract 9

ASC-DNR Forest Service 10/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management

- Core FIDS
- DFS
- G3
- Stream
- WSSC
- Zone_1
- Zone_2
- Zone_3

AWP

- 2016 FH
- 2016 PCT
- 2016 RX
- 2016 T1

0 660 1,320 Feet

1 inch = 660 feet

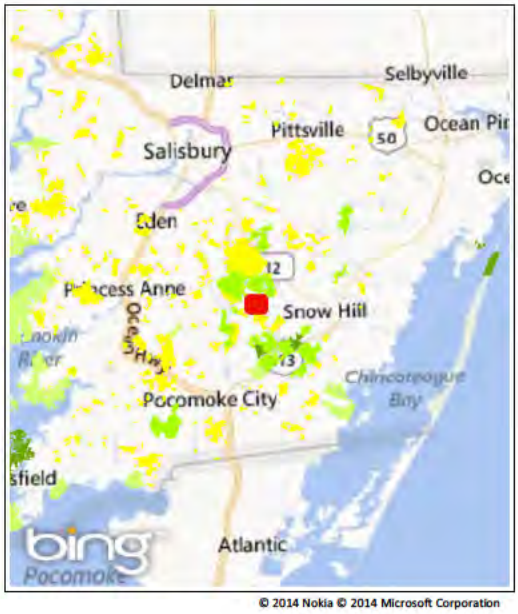
N

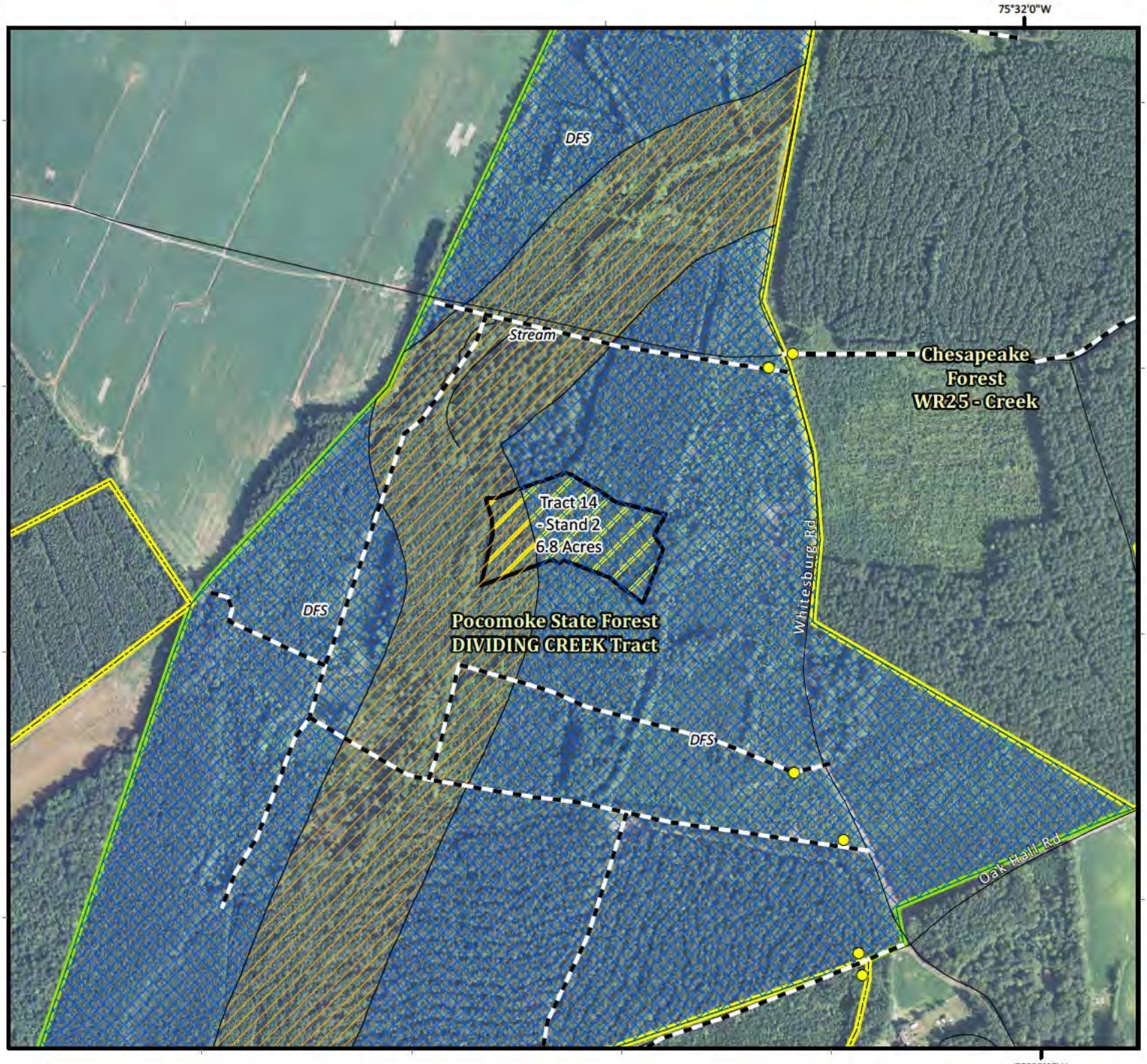
Pocomoke State Forest

P02 - Nazareth Church

Tract 10

ASC-DNR Forest Service 10/2014





Legend

- Chesapeake Forest
- Pocomoke State Forest

Management

- Core FIDS
- DFS
- G3
- Stream
- WSSC
- Zone_1
- Zone_2
- Zone_3

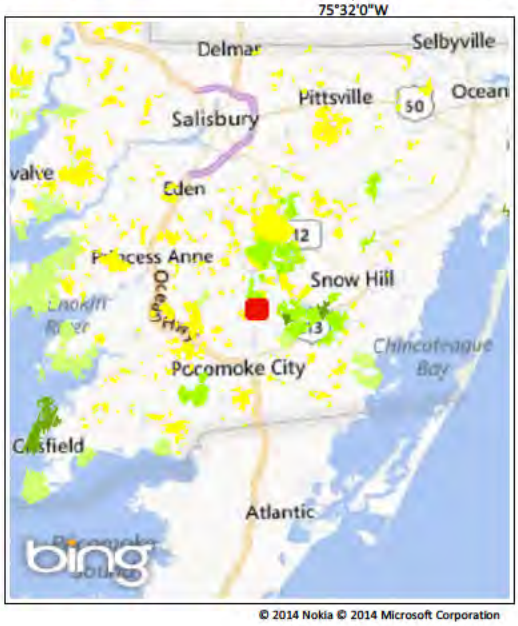
AWP

- 2016 FH
- 2016 PCT
- 2016 RX
- 2016 T1

0 660 1,320 Feet

1 inch = 660 feet

N



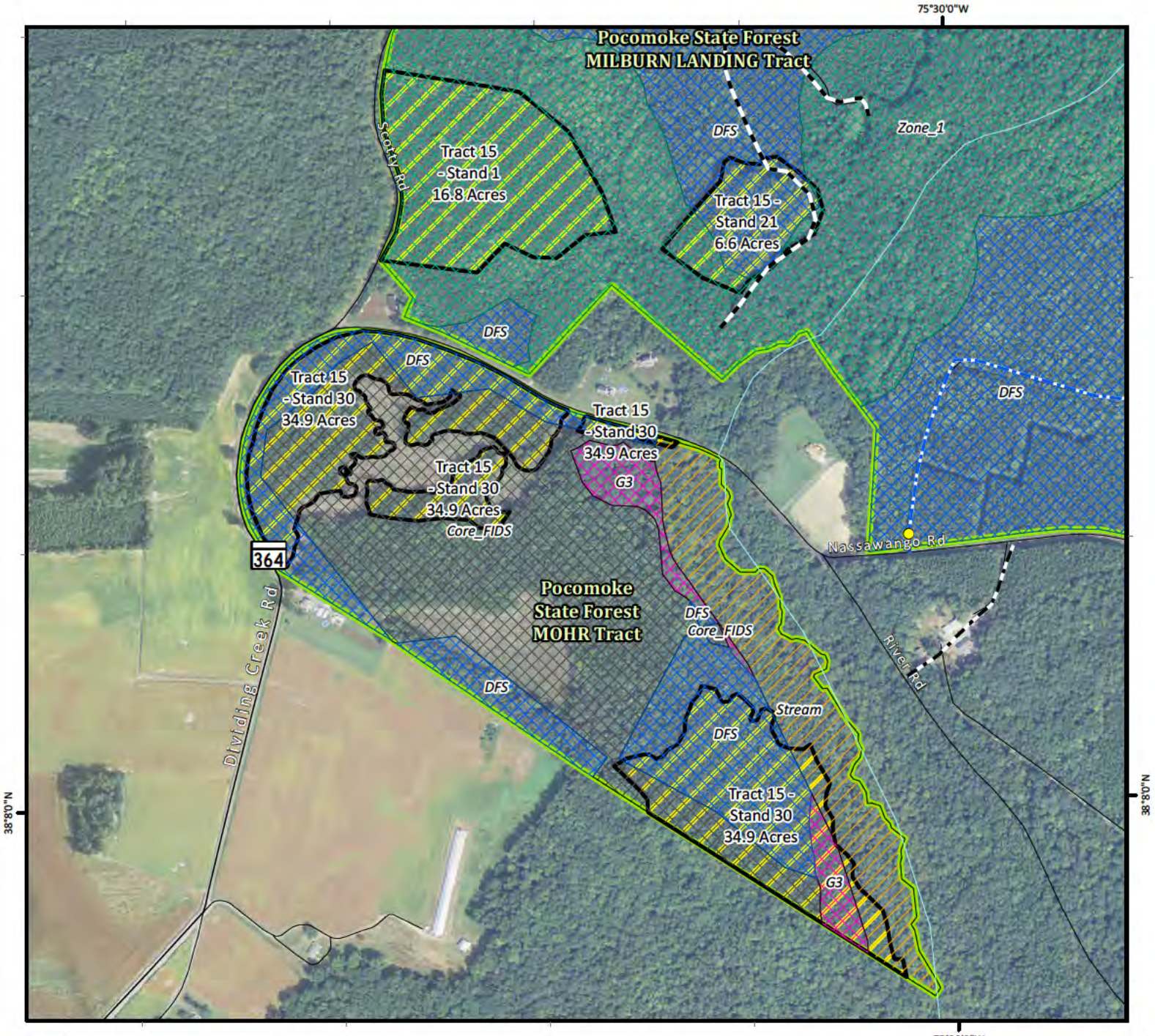
Pocomoke State Forest

P04 - Dividing Creek
Tract 14

ASC-DNR Forest Service 10/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management

- Core FIDS
- DFS
- G3
- Stream
- WSSC
- Zone_1
- Zone_2
- Zone_3

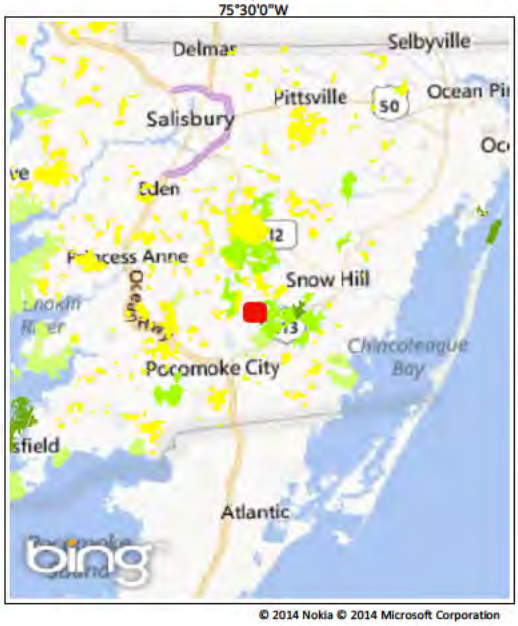
AWP

- 2016 FH
- 2016 PCT
- 2016 RX
- 2016 T1

0 660 1,320 Feet

1 inch = 660 feet

N



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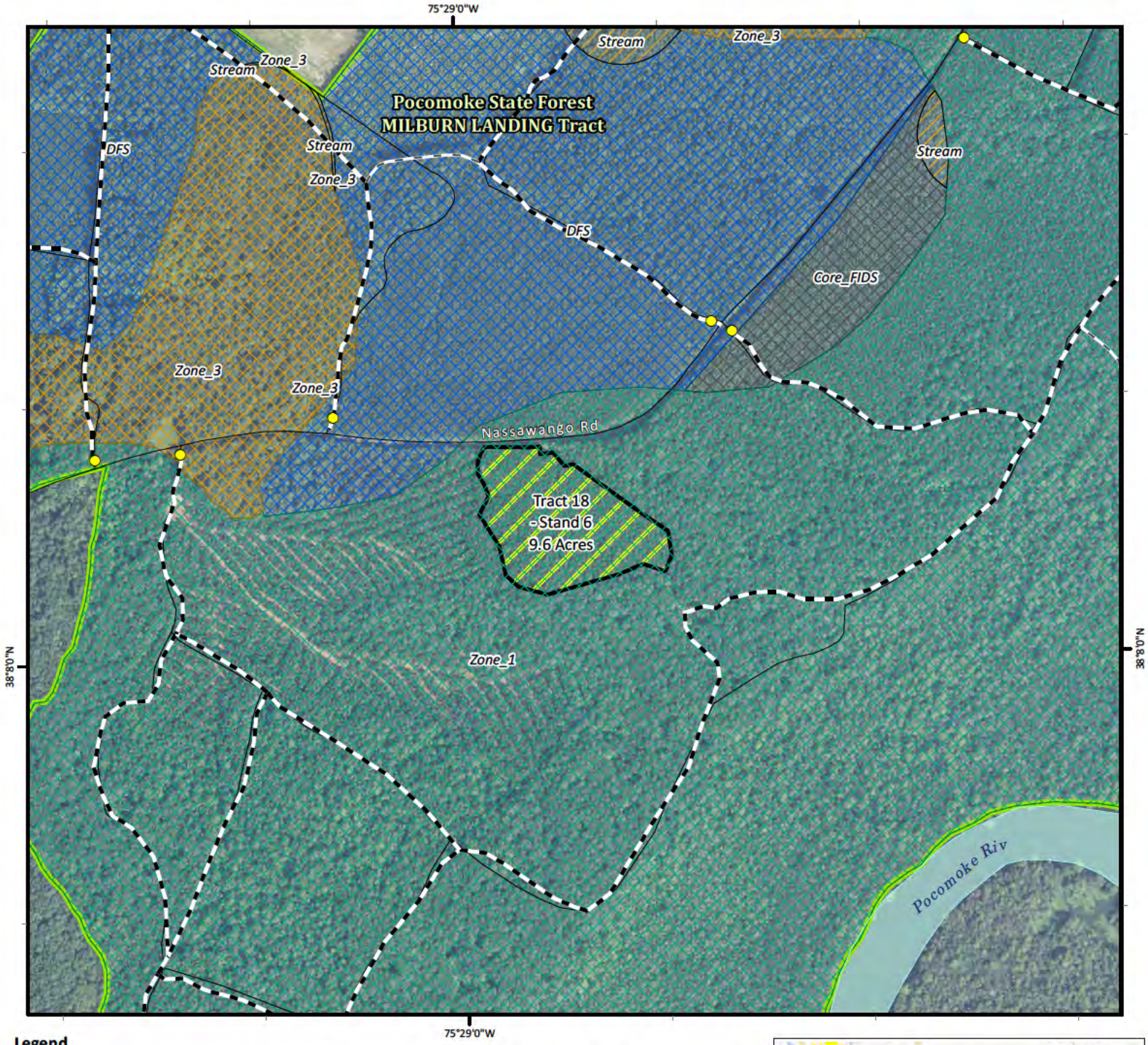
Pocomoke State Forest

P05 - Milburn Landing
Tract 15

ASC-DNR Forest Service 10/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE



Legend

- Chesapeake Forest
- Pocomoke State Forest

Management

- Core FIDS
- DFS
- G3
- Stream
- WSSC
- Zone_1
- Zone_2
- Zone_3

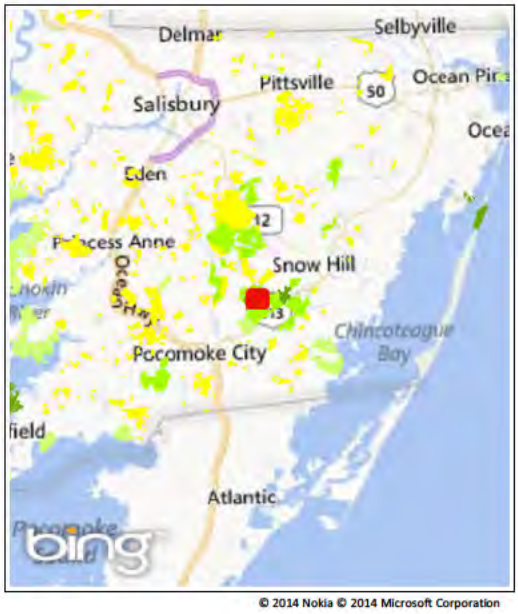
AWP

- 2016 FH
- 2016 PCT
- 2016 RX
- 2016 T1

0 660 1,320 Feet

1 inch = 660 feet

N



Pocomoke State Forest

P05 - Milburn Landing

Tract 18

ASC-DNR Forest Service 10/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE

P02 – NAZARETH CHURCH – TRACT 8

A pre commercial thinning is proposed for stand 3. Stand 3 is an overstocked 24.0-acre loblolly pine stand that naturally regenerated in 2006. Residual tree spacing will be 10x10. This stand is located in a G3 and a DFS Future Core management area, so any oaks and mast producing species will be retained and favored over loblolly pine. If possible, pitch, pond, and shortleaf pine will be retained and favored over loblolly pine. Soil series found in this stand are AsA, BhA, EvB, KsA, KsB, MuA, RuA, and RuB.

A final harvest is proposed for a portion of stands 10 and 14. Stand 10 is a mature 17.9-acre loblolly pine stand that naturally regenerated in 1920. Stand 14 is a mature 8.2-acre loblolly pine stand that as planted in 1936 and first thinned in 1956. Dominant pitch, pond, shortleaf pine as well as mast producing hardwood species should be retained as either seed trees or green tree retention areas to facilitate natural regeneration. These stands are located in G3 and DFS Future Core areas. The ESA Zone 1 area to the west of the proposed harvest area will not be harvested unless the Wildlife and Heritage Service advises us to do so. Soil series in these stands are AsA, BhA, EvB, EvD, HuA, KsA, MuA, RuA, and RuB.

P02 – NAZARETH CHURCH – TRACT 9

A prescribed fire is proposed for a 71.7-acre portion of stand 10. Stand 10 is a mature shortleaf pine/oak stand that naturally regenerated in 1944. This stand is currently stressed by various factors, including drought, high stocking levels, natural predators such as littleleaf disease and pine beetles, and competition from other species. A prescribed fire will benefit this globally rare community type and improve the health of the shortleaf pine. This stand is located in an ESA Zone 1 and G3 community. The fire lines will be placed on existing roads and on the boundary of the recent seed tree harvest in order to limit disturbance to potential rare species. Since this is an ESA Zone 1 area, all equipment will be power washed before entering the site. Soil series found in this stand are AsA, EvA, EvB, EvD, GaB, KsA, KsB, RoB, RuA, and RuB. **NOTE: Wildlife and Heritage comments advise that this site should not be burned before other more significant ESA sites have been burned.**

P02 – NAZARETH CHURCH – TRACT 10

A first thinning is proposed for stand 6. Stand 6 is an overstocked 19.2-acre loblolly pine stand that naturally regenerated in 1996. It is located in a DFS Future Core management area, so any oaks and mast producing species will be retained and favored over loblolly pine. In addition, pitch, pond, and shortleaf pine will be retained and favored over loblolly pine. Soil series found in this stand are EvB, EvD, GaB, Ma, MuA, and RuB.

A pre commercial thinning is proposed for stand 16. Stand 16 is an overstocked 21.1-acre loblolly pine stand that naturally regenerated in 2006. Residual tree spacing will be 10x10. It is located in a DFS Future Core management area, so any oaks and mast producing species will be retained and favored over loblolly pine. If possible, pitch, pond, and shortleaf pine will be retained and favored over loblolly pine. Soil series found in this stand are AsA, EvB, GaB, KsA, and MuA.

A final harvest is proposed for a portion of stand 17. Stand 17 is a mature 13.8-acre loblolly pine stand that naturally regenerated in 1939. Dominant pitch, pond, shortleaf pine as well as mast producing hardwood species should be retained as either seed trees or green tree retention areas to facilitate natural

regeneration. **NOTE: Due to a potential ecologically representative forest community type found in tract 10 stand 17, this proposal has been removed from the FY2016 AWP.**

P04 – DIVIDING CREEK – TRACT 14

A first thinning is proposed for stand 2. Stand 2 is an overstocked 6.8- acre loblolly pine plantation that was site prepared in 1982 and regenerated naturally in 1983. This stand is located in DFS Future Core and Stream Buffer areas. Soil series in these stands are FaA, MuA, and WdA.

P05 – MILBURN LANDING – TRACT 15

A first thinning is proposed for stands 1 and 21. Stand 1 is an overstocked 16.8-acre loblolly pine stand naturally regenerated in 1988, sprayed in 1989, and pre commercially thinned in 1999. Stand 21 is an overstocked loblolly pine stand that naturally regenerated in 1971 and pre commercially thinned in 1978. Stand 1 is located in an ESA Zone 1 area, and stand 21 is located in ESA Zone 1 and DFS Future Core areas. Soil series in these stands are MtA, NnB, NsA, OtA, and Za.

P05 – MOHR – TRACT 15

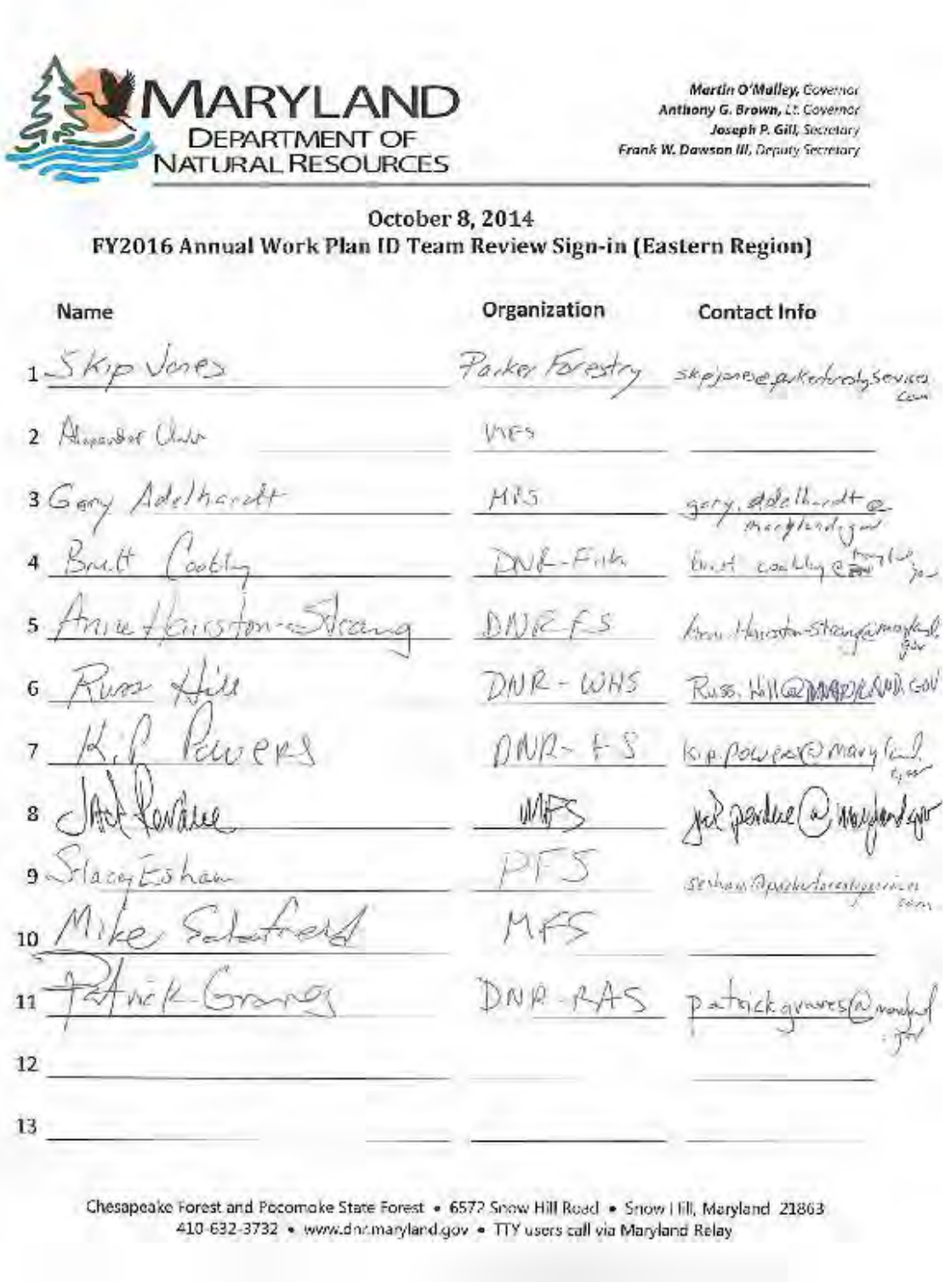
A first thinning is proposed for stand 30. Stand 30 is an overstocked 34.9-acre loblolly pine plantation that was established in 1990. This stand is located in FIDS, G3, stream buffer, and DFS Future Core areas. Since it is located in a DFS Future Core management area, any oaks and mast producing species will be retained and favored over loblolly pine. In addition, pitch, pond, and shortleaf pine will be retained and favored over loblolly pine. Soil series in this stand are GaC, HbB, LO, Ma, MeB, MpA, MtA, NnA, and OtA.

P05 – MILBURN LANDING – TRACT 18

A first thinning is proposed for stand 6. Stand 6 is an overstocked 9.6-acre loblolly pine stand that was naturally regenerated in 1965. This stand is located in an ESA Zone 1 area and a DFS Future Core management area. Any oaks and mast producing species will be retained and favored over loblolly pine. In addition, pitch, pond, and shortleaf pine will be retained and favored over loblolly pine. Soil series in this stand are FaA, MkB, MtA, NsA, OtA, SaC, and Za.

REVIEW PROCESS

INTERDISCIPLINARY TEAM COMMENTS



MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
Joseph P. Gill, Secretary
Frank W. Dawson III, Deputy Secretary

October 8, 2014
FY2016 Annual Work Plan ID Team Review Sign-in (Eastern Region)

	Name	Organization	Contact Info
1	Skip Jones	Parker Forestry	skipjones@parkerforestryservices.com
2	Alexander Clark	VHS	
3	Gary Adelhardt	MFS	gary.adelhardt@maryland.gov
4	Brett Cobley	DNR-Fish	brett.cobley@maryland.gov
5	Anne Hairston-Strang	DNR FS	Anne.Hairston-Strang@maryland.gov
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7	K.P. Powers	DNR - FS	k.p.powers@maryland.gov
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10	Mike Sakofski	MFS	
11	Patrick Graves	DNR-RAS	patrick.graves@maryland.gov
12			
13			

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Brett Coakley -DNR- <brett.coakley@maryland.gov> Fri, Sep 19, 2014 at 2:22 PM

To: Mike Schofield -DNR- <mike.schofield@maryland.gov>, Alexander S Clark -DNR- <aclark@dnr.state.md.us>

Mike and Alex,

Fisheries has no major comments with the 2016 proposed workplan. The overwhelming majority of the proposed work are thinnings with an emphasis on creating stand diversity. Creating a diverse, mixed hardwood/softwood stand is beneficial in many ways. Additionally, we have no other comment on the proposed final harvests as long as BMP's are followed by the contractor.

Sorry for the delay,

Brett

--
Brett Coakley
Fisheries Biologist
Inland Fisheries, Eastern Region
MD DNR
(o) 410-928-3643 x104

From: **Patrick Graves -DNR-** <patrick.graves@maryland.gov>
Date: Mon Sep 8 2014 at 10:16 AM
Subject: Re: Chesapeake Pocomoke FY2016AWP Review
To: Mike Schofield -DNR- <mike.schofield@maryland.gov>

Mike,

Viewing the the FY2016 tracts in GIS revealed three tracts that appear to have streams flowing through them that do not show up on the maps created by Alex but do show up using the stream layer provided by Environmental Review (see attached maps). These tracts are as follows:

WR14-Hopkins-Timmons: Unnamed tributary (UT) to Poorhouse Branch

PO2-Tract 8, Stand 14-Nazareth Church: UT Pusey Branch

PO5-Tract 15, Stand 1-Milburn Landing: UT Cottingham Mill Run

The layer used by ER is the 2012 MDE Designated Uses 'Rivers' layer which uses NHD 1:24k as source data. Judging by the aerial imagery I'm not sure if these streams are perennial, intermittent, or a ditch as it is difficult to pick up and follow a channel throughout their course. I'm hoping groundtruthing will answer this question and a stream buffer will be applied if they are found to be flowing. Of the three tracts, RTE species have only been found in the vicinity of WR14-Hopkins-Timmons [banded sunfish (S2) and swamp darter (S2, I) have been observed ~1.5 km downstream of WR14].

RTE fish species have been recorded in the vicinity of three other tracts as well. Please adhere to the stream buffer rules at all sites, but especially these as to minimize any potential disturbance to these RTE species. Banded sunfish, bluespotted sunfish (S3S4), and mud sunfish (S2, I) have been found ~2.5 km upstream of S26-Bonneville, and it is possible these species occur in the segment adjacent to the project area. Banded sunfish and bluespotted sunfish have been recorded at a site ~100m from W46-Stand 6-Campbell. Mud sunfish have been observed at the NASS-108 Sentinel Site ~3km downstream of W53-Twigg-Fooks. (Sentinel Sites are high quality reference streams that are monitored annually by the Maryland Biological Stream Survey, a division of RAS, to assess natural variability in stream conditions). NASS-108 has been sampled annually since 2000. While 1st thinning practices,

even with an established stream buffer, are unlikely to affect a site ~3 km downstream, as a precautionary measure we feel it necessary to point out any Sentinel Sites that are in the vicinity.

Finally, for the stream buffer areas that also contain yellow stripes indicating 1st thinning activity (W46, for example), will these stream buffer areas be undergoing a thinning as outlined in the Sustainable Forest Management Plan for Chesapeake Forest Lands document?

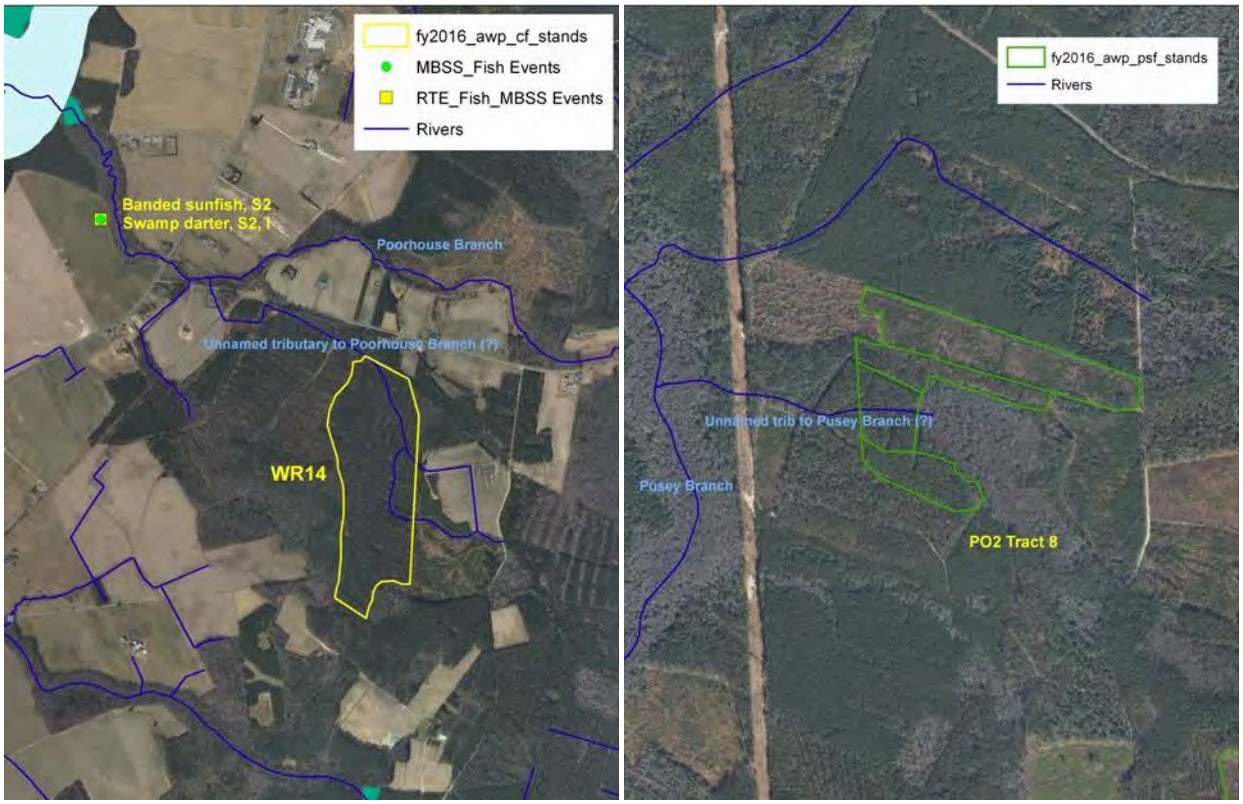
Mike, thank you for the opportunity to comment on these projects. I would also like to thank Alex and the others at Forest Service for providing maps of all the project areas. It makes the review process much more efficient. If you have any questions please call or email me.

Patrick

Patrick Graves

RAS-MANTA

410-260-8608



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MARYLAND

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DNR
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Chesapeake Pocomoke FY2016AWP Review

Mike Schofield -DNR- <mike.schofield@maryland.gov> Mon, Jul 7, 2014 at 9:05 AM
To: "Adelhardt, Gary" <gadelhardt@dnr.state.md.us>, Beth Cole <bcole@mdp.state.md.us>, "Clark, Alexander S" <aclark@dnr.state.md.us>, "Coakley, Brett" <bcoakley@dnr.state.md.us>, "Graves, Patrick" <pgraves@dnr.state.md.us>, "Hairston-Strang, Anne" <astrang@dnr.state.md.us>, "Hill, Russ" <rhill@dnr.state.md.us>, "Jolly, Kenneth" <kjolly@dnr.state.md.us>, "Knapp, Wesley M." <wknapp@dnr.state.md.us>, "McLaughlin, Erin" <emclaughlin@dnr.state.md.us>, "Payne, Stephen W." <spayne@dnr.state.md.us>, "Perdue, Jack" <jperdue@dnr.state.md.us>, "Powers, Kip" <kpowers@dnr.state.md.us>, Skip Jones <skipjones@parkerforestryservices.com>, "Smith, Kevin M." <kmsmith@dnr.state.md.us>, "Wilson, John F." <jfwilson@dnr.state.md.us>

MD

The fy2016 Annual Work Plan (AWP) for the Chesapeake & Pocomoke Forest is ready for your your review and comments. I have attached it to this e-mail. However, if you would like to view the plan & associated shape files, they have also been placed at H:\aclark\FY2016 AWP

The AWP field review will be held October 14th, 9am at the Chesapeake Forest Office located off Rt.12. Please try to have your comments/recommendations back to me by September 8th.

Mike Schofield
Forest Manager
Maryland DNR Forest Service
6572 Snow Hill Road
Snow Hill, MD 21863
Office:410-632-3732

FY2016_AWP_DRAFT_20140703.pdf
9431K

(*) give log # + the plan and then see tabs for each project that needs a # 20140346 8

The Maryland Historical Trust has determined that this undertaking will have no adverse effect on historic properties.
Date 8/6/14

Archeo. JLH 8/6/14 2na

CITIZEN'S ADVISORY COMMITTEE COMMENTS

MARYLAND DEPARTMENT OF NATURAL RESOURCES

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
Joseph P. Gill, Secretary
Frank W. Dawson III, Deputy Secretary

FRIDAY, NOVEMBER 14, 2014
CHESAPEAKE & POCOMOKE FOREST FY2016 ANNUAL WORK PLAN MEETING ATTENDEES

	NAME	ORGANIZATION	CONTACT INFORMATION
1.	Anthony DiPaolo	Glatfelter	anthony.dipaolo@glatfelter.com
2.	K.P. Powers	DNR Forest Service	kp.powers@maryland.gov
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4.	Larry Beauchamp	Landowner	lbeauchamp@hotmail.com
5.	Mary Fines		maryfines@huges.net
6.	Mike Schofield	MFS	mike.schofield@maryland.gov
7.	[illegible]	MFS	[illegible]
8.			
9.			
10.			
11.			
12.			

Chesapeake and Pocomoke State Forests · 6572 Snow Hill Road, Snow Hill, Maryland 21863
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17 November 2014

Mike Schofield
Forest Manager
MD DNR Forest Service

Dear Mike:

Find below my comments on the FY 2016 Annual Work Plan for the Eastern Region State Forest Lands. I read through the document and benefited from discussion of the proposed activities at the meeting held at your office. As always, thank you for the opportunity to participate and provide feedback as the ecological representative on the committee.

General Comments-

Thank you for including a table summarizing the recent history of management activities on the forest- I find it useful despite the many qualifications that need to be placed on information condensed in this way. Another wish-list item I had for this document was inclusion of some highlights of the previous year's audit, and specifically whether any new issues were identified, and/or resolution of past CARs and the like (I don't imagine this would be more than a couple of bullet points). This would just be a convenience for people who were interested in these details, as they can be found elsewhere in the related documentation you make publically available.

Proposed Silvicultural Activities-

In general I don't have any concerns with the harvests proposed in the plan for FY-2016. However, there are some ongoing issues related to balancing age class distributions across the ownership and the implications it has for sustained yields over the long term. You appear to be addressing this, at least in part, through extending rotations with additional intermediate treatments, i.e. planning for a third thinning before final harvest. While this approach may well satisfy your objective as it relates to wood products, this decision has the side effect of exacerbating the issues related to the general shortage of early successional habitats. I recognize this is a difficult problem to address as it would require regenerating some pine stands that are not yet financially mature. There are a number of partial harvesting options available that could allow you to strike a reasonable compromise between these competing objectives.

I commend you for backing off the plans to harvest Stand 17 in the Nazareth Church block due to Heritage identifying it as an ecologically representative forest community dominated by

pond pine. This indicates to me that your internal ID team relationships are working and there seems to be agreement about retaining unique community types when identified in the field. When this project area was brought up at the meeting we also discussed the idea of 'sharing' ecologically representative areas across ownerships. We (TNC) are interested to share these resources where opportunities exit, and this is something I will follow up with Heritage about when I have a chance.

A prescribed fire is proposed for the Stand 16 within the same area, and which contains a rare fire adapted community type that has been identified as threatened by fire exclusion. I hope this is a project you are able to carry out as I'm sure the ecological benefits will be substantial. The only caution I would provide here is that there are some risks associated with burning in areas from which fire has long been excluded, primarily related to fuel accumulations and fine roots in the surface organic layer. These issues can be mitigated to some extent through choices about when to burn and using different firing techniques- individual trees can be protected by raking/leaf blowing and through firing techniques. This is something we are concerned about on our lands when returning fire to areas with an desirable overstory composition.

Special Projects-

You guys are doing a great job at enhancing the recreational opportunities across the ownership. This appears to be something the public is aware of and appreciates. I hope you are successful in obtaining the new round of grants that will allow you to continue and expand this work.

Let me know if you have any questions, and I look forward to participating in the annual audit.

Sincerely,

David Ray
The Nature Conservancy
116 S Saratoga St
Salisbury, MD 21804
850.241.6837
d_ray@tnc.org

To: billbethgiese@gmail.com, Anthony DiPaolo <Tonyd02@comcast.net>, cdlubben@yahoo.com, llbeauchamp <llbeauchamp@hotmail.com>, egoart1@yahoo.com, rhorsey@yahoo.com, Accohannock@verizon.net, Chiefwhawk@hotmail.com, Joseph Fehrer <jfehrer@tnc.org>, David Ray <d_ray@tnc.org>, marylpines@hughes.net

Below is the link to review the 2016 Annual Work Plan for the Chesapeake & Pocomoke Forest

http://www.dnr.maryland.gov/forests/workplans/

Denise Snyder
Department of Natural Resources
Forest Service
6572 Snow Hill Road
Snow Hill, Maryland 21863
denise.snyder@maryland.gov
410-632-3732 Phone
410-632-3730 Fax

[Quoted text hidden]

Bill & Beth Giese <billbethgiese@gmail.com> Thu, Nov 13, 2014 at 3:47 PM
To: Denise L Snyder -DNR- <denise.snyder@maryland.gov>

Denise

I will not be able to attend the Work Plan review meeting tomorrow. I have reviewed the plans and they look fine to me. I commend the planners for developing this plan and am pleased to see the grant proposal for the Little Blackwater property soft launch and the handicapped trail rehab work. The Department continues to manage these properties with a number of objectives very effectively.

My only other comment is that noxious weeds and invasive species need to be controlled when ever possible, to minimize the impact of these species.

Thank you for a chance to comment.

Bill Giese
[Quoted text hidden]

Bill will not attend, but sent this message.

PUBLIC COMMENTS

Date: Fri, Dec 5, 2014 at 3:46 AM
Subject: Annual Work Plans for Maryland State Forests for Fiscal Year 2016
To: jack.perdue@maryland.gov

The following comments are for all 4 Maryland State Forests annual work plans for fiscal year 2016,including Green Ridge State Forest,Savage River State Forest,Potomac & Garrett State Forest and the Chesapeake & Pocomoke State Forest. They are general comments for all the forest work plans in Maryland and not specific to each work plan. I'm very experience about Green Ridge Forest,spending much time hiking and exploring the forest and h king the Green Ridge Trail-starting in Pa. along 15 mile creek and other public lands,all the way to the C&O Canal and Potomac River. I have also commented at many public hearings at Green Ridge and other places in Maryland about Maryland forests and other public lands. I also have spent time in the Savage River Forest and it's trails and other areas. The Potomac/Garrett Forest areas I have visited but have spent less time there, as well as a few trips to the Pocomoke Forest. I oppose all of the work plans,as I do not agree on how Maryland and the DNR do there so called management plans. My first area,of comments, is all about the so called economic value and benefits to the state and it's citizens,taxpayers and to local and regional communities. The state forests are under attack by logging/timber companies,many from other states,and not from Maryland. Contracts awarded to these mostly out of state companies,does not provide much economic value to Maryland citizens and taxpayers,and local employment to Maryland workers. The finished wood products,pulpwood and saw timber goods are often made from out of state producers(mills and factories) or even sent as raw material to oversea countries. The use of public lands for forest goods directly competes with the private land owners and their ability to profit from their own private property. Another aspect is that is deters more acquisition and protection of forest lands in Maryland by private ownership,which would benefit the environment,wildlife and tax base for Maryland citizens and taxpayers. There is much more economic value,for Maryland citizens and taxpayers, coming from recreational,tourism and increase property values,that are year long lasting and not from a short term time frame natural resource extraction,such as logging that has a negative impact on the environment and wildlife. There have been many economic reports and studies to back this up,for positive policies that benefits from environmental sound practices versus negative use of public lands and forests. State timber and logging contracts(based on state forest management plans by state employees) are also approved by some of the same state employees and politicians,who may benefit,either directly or indirectly, from such actions. They have an inherit conflict of interests,of being to closed to the logging and timber industries,who are awarded contracts,with potential personal,business,financial and political ties,including going to work or as personal consultants,for these companies,later on after leaving the employment for the state of Maryland. The state of Maryland should not ever be in direct business competition with the private land and forest owners.of Maryland citizens and taxpayers for economic gain,advantage and profit. Maryland and DNR- must stop using this economic bias, as a reason for timber and logging,on our public lands,as a benefit for it's citizens,taxpayers and certainly not to promote forest health. The only true winners at the money table are the timber companies,consultants and maybe some state employees or politicians for Maryland.The forests,wildlife,habitats,biodiversity and the environment,along with the citizens,taxpayers and local communities,end up as the big losers of these forest plans. While I have listed that the economics of Maryland state forest plans are a negative reason for opposition to all 4 plans,it is the least of the my concerns, on the over all, DNR and states so called management of our public forests and public lands. The following issue points,listed next,starting with the most destructive,first- now allowed under current management practices and policies of the state of Maryland and DNR for all state forest and public lands are my objections to each and every one of these forest plans.

1- Logging/timber resource extraction(listed in plans under many names of silviculture harvesting practices)
2-Road building and all other permanent man made structures/activities
3-Off road and all other motorized trails
4-All other types of resource extraction operations
5-Use of chemicals,herbicides and pesticides
6-Allowing very intensive and damaging high level activities with large numbers of participants and motor vehicles
7-Connections to educational institutions(example-Allegheny College of Maryland-Forestry Program and its Summer Harvesting Course)-while preaching a multi-use and even age stand forest practices and then setting aside public lands for them to timber and harvest as an experimental project. Public land use should not be used this way, allowing only this certain practice as the only way.
8-Any and all other private development and or use of public lands

Commercial logging and timber harvesting, along with the above mentioned items-should never be allowed on our forest and other public lands in Maryland.They are destructive practices that bring many threats to a natural forest ecosystem and all living processes within. We must do all we can to protect the biodiversity of these forests,and it's wildlife,birds,reptiles,amphibians,fish,other aquatic species.bats and other pollinators,plants,flowers,rare,threatened and endanger species-in other words all flora and fauna. The above mentioned 8 items,also bring problems by use of heavy industrial equipment,skid(logging)staging areas,runoff,erosion,pollution of waterways,lack of strong regulations and enforcement of buffers,steep slope activities,compaction of soils, and poor oversight,before,during and after logging. The percentage of Maryland public state lands,compared to that in private ownership in Maryland and to other states is very small and needs to be use for other purposes that private ownership does not provide,for the common good and benefits of all citizens and not for resource extractions

or very damaging environmental practices. They also have a negative impact on migration routes(air-water-land),hiking trails,fire safety,hunting,and historical sites. Still more they open up areas for invasive and non-native species,reduce larger tracts of land space for interior forests dwelling species that need it to breed,raise it's young,food sources, and shelter so they may survive and flourished and to prevent devastating impact from outside activities and edge forest type predators. These activities also create noise,light,air and visual pollution,mar scenic sites-all of which can last for a long time and have negative consequences for forest inhabitants and their daily and seasonal activities. Trees may be the major component and most visible of forest systems-but to survive it needs many others-different layers of flora and fauna from the top canopy to beneath the ground and soils-decaying matter-snags-insects-fungi-bacteria-worms-pollinators-seed carriers-root systems-many different animals-birds and plants-all interconnected to a living,vibrant community that has a symbiotic relationship for a healthy natural and diverse forest. Long before many of the early inhabitants of this country and state set foot on this land-we had immense large tracts and intact old growth forests that stretch from the Atlantic to prairie states and plains-fill with large and abundant species of many sizes and quantities,in our forests and in our waterways and skies-doing just find without a management plan. It has been mainly human activities that have brought the diseases,even insects and drought,along with greedy consumption of resources-both of flora and fauna-without considering the carrying capacity of the lands,waters and skies-for a more sustainable presence and to share with future generations. The Maryland DNR can call it what ever they l ke-timber-logging-even age management-multi use(more like abuse)-monoculture-silviculture practices(retention harvest-timber stand improvement-variable retention-clear cut(not so much now-this label-because of public outcry)-commercial thinning-shelterwood-understory control-culling and whatever else they come up with),all of which equals to treating our public lands-l ke a plantation crop and nothing more-even though they try to throw in a few crumbs of environmental hype-here and there-calling it mixed use. They also come up with such names as managed areas-harvest areas-general management areas to cover up their board feet quotas to satisfy a so called sustainable management plan/principles/practices-which it is not. I believe you can not have a healthy forest-using their current practices-for a species to survive-like the American Chestnut-you don't keep on logging-until you reach a point of no return(if you would really know or care)-and destroy all the surrounding components so that a species is no longer healthy enough to survive a blight and pass on its genetic diversity to a next generation of American Chestnut.We could have save it and others-if not for greed and ignorance. Lastly, I will give my opinions on how and what the state of Maryland and DNR can really do-to protect-preserve and enjoy the wonders of our states public forests and public lands.

Positive actions and steps for a healthy,sustainable,natural forest ecosystem

1-Stop all of the harmful and destructive actions-mentioned in my 8 points above
2-Protect against all the negative issues and practices-mentioned above
3-Increase and enforce stronger environmental regulations to preserve biodiversity,habitats,species,wildlife and protect our water-air-land from pollution and degradation
4-Increase budgets for all public lands and-forests acquisitions and protection
5-Increase the areas and sites for wildlands
6-Acquisitions priorities-connection to already owed lands-inholdings-larger intact tracts-adjoining to other states public lands and trails-to missing links and migration routes(air-land-water)
7-Change Program Open Space Funding-so that all funds go to land acquisitions and none to development-giving larger tracts and sensitive areas-top priority
8-Increase old growth forests-by various means
9-Provide more incentives for private land owners to invest in forest(large tracts) and practice sound environmental and long lasting sustainable practices and policies,if they log and harvest their lands.
10-Provide more incentives for in state manufacturers,sawmills and factories to produce sustainable and environmental friendly local wood products,from those private forest lands-yes it can be done
11-Eliminate any and all conflict of interest issues between state employees and politicians of the State of Maryland,from personal,business,relatives,financial and political connections.
12-Have a much more open and public disclosure of all Maryland public land issues,by various news media(all types),weekly updates and disclosures,county by county monthly public meetings,all public meetings and hearings announced 2-3 months in advance and weekly notices the last 4 weeks before those meetings and hearings-at least 60 days for all comment periods-frequent communications with organizations and groups that have l ke concerns with land issues and wildlife in Maryland with DNR.The meetings and hearings should be held at places and times,that most citizens and working fo ks can attend in each and every county in Maryland and not at the Holidays(esp.- Nov.15 to Jan.7-or holiday weekends) and postpone with adequate notification because of bad weather- I included all of these examples-because of my past experiences with local-state and federal officials and agencies.

We can reverse all the negative environmental accumulative impacts from past policies and practices of Maryland's and DNR State Forests and other public lands,only if we start the process now-for it will not happen overnight and may need adjustments and additions.

We all need to work together for a brighter and more healthy future for the generations to come,so all can share the joy and wonder of our Forests and all public lands in Maryland ,to protect,explore and enjoy the natural world and all its gifts.

Thank You for the opportunity to voice my opinions,share my concerns and comments on Maryland's State Forest Work Plans.

FOREVER WILD/FOREVER FREE

Joseph S.

From: **Don Haynes** <dhaynes8320@gmail.com>
Date: Thu, Dec 4, 2014 at 7 06 AM
Subject: Comment on DNR 2016 Forestry Work Plan
To: jack.perdue@maryland.gov

To: Maryland Department of Natural Resources, Forestry Division

Attached please find a letter commenting on DNR's proposed 2016 fiscal year work plan for Potomac Garrett, Green Ridge, Savage River, Chesapeake and Pocomoke State Forests.

The Mid-Atlantic Council of Trout Unlimited represents over 2500 members in Maryland and the immediate environs. We are always watchful of any activities that might have any impact on our cold water resources, particularly when our native brook trout are in the planned area of any such activities.

We have reviewed the plans for FY 2016 for the Savage River State Forest. This forest protects the only relatively secure population of wild, native brook trout in the state and the immediate area. The loss of any forest cover over any stream inhabited by trout could mean a serious thermal impact to those fish. From our review of the plans for this forest, we do not see any significant impacts to the native brook trout in the Savage River watershed.

Thank you for the opportunity to comment.

Don Haynes
Chair, Mid-Atlantic Council, Trout Unlimited
dhaynes8320@gmail com

Date: Sat, Nov 29, 2014 at 9:10 PM
Subject: Comment on FY 2016 MD State Forest Annual Work Plans for Green Ridge, Savage River, Potmac-Garrett, Chesapeake Forest/Pocomoke State Forests
To: jack.perdue@maryland.gov

Dear Mr. Purdue:

I advocate the cutting of mature trees in accordance with timber management best practices. The cutting of mature trees will help regenerate young forest habitant, and promote much desired biodiversity in plant species and wildlife species within the region. A mature forest is a dying forest. A healthy forest will provide benefits for all concerned.

As a father, I want my children and their children to be able to experience the benefits of a healthy, regenerating forest system. As a bird hunter, I am a user of the forest, and want it to be able to support my activities.

I'd like to thank the MD DNR Forest Service for all of their great work in the past, and encourage their initiative. Thank you for the opportunity to comment.

Sincerely,

Dan G.

From: **Chip Heaps** <cheaps@ducks org>
Date: Wed, Nov 26, 2014 at 8:41 AM
Subject: FY 2016 MD State Forest Annual Work Plans
To: "jack.perdue@maryland.gov" <jack perdue@maryland gov>

Good morning Jack,

I would like to make a couple of quick comments on the upcoming FY 2016 MD State Forest Annual Work Plans for Green Ridge State Forest, Savage River State Forest, Potomac-Garrett State Forest and Chesapeake Forest/Pocomoke State Forest.

I am an upland bird and turkey hunter and a user of the Forests in Maryland and I would like to thank MD DNR Forest Service for their past work and the opportunity to provide comments on the management of your State Forests.

I support the creation of more Young Regenerating Forest Habitat through timber management and stress the importance of varying stand age and structure to increasing overall forest health. This type of habitat is necessary for a variety of declining wildlife species within the region.

Thanks again for the opportunity to comment.

Sincerely,

Chip Heaps

DUCKS UNLIMITED

CHIP HEAPS
Director of Development - South-Atlantic
Delaware, DC, Maryland, Virginia, West Virginia
136 Goucher Way, Churchville, MD 21028-1218
Bus 410 399 4093 Mobile 410 688 0161
cheaps@ducks.org

Mid-Atlantic Council Trout Unlimited

P.O. Box 2865
Wheaton, MD. 20715
www.mac-tu.org

Chapters: Maryland, National Capital, Nemacolin, Patapsco Valley, Potomac-Patuxent, Seneca Valley, Youghiogheny

December 4, 2014

Maryland Department of Natural Resources
Forestry Division
Annapolis, MD
Sent via email: jack.perdue@maryland.gov

The Maryland Department of Natural Resources (DNR) is seeking public comment on the proposed 2016 fiscal year work plan for Potomac Garrett, Green Ridge, Savage River, Chesapeake and Pocomoke State Forests. The State Forest annual work plans identify the work that is to be accomplished on the forest in the next fiscal year within the scope of the forest's long-range management plan. The plans will address establishment, growth, composition, health and quality forest management operations, along with maintenance and construction projects, and other required work. Comments will be received through December 5, 2014.

The Mid-Atlantic Council of Trout Unlimited represents over 2500 members in Maryland and the immediate environs. We are always watchful of any activities that might have any impact on our cold water resources, particularly when our native brook trout are in the planned area of any such activities.

We have reviewed the plans for FY 2016 for the Savage River State Forest. This forest protects the only relatively secure population of wild, native brook trout in the state and the immediate area. The loss of any forest cover over any stream inhabited by trout could mean a serious thermal impact to those fish. From our review of the plans for this forest, we do not see any significant impacts to the native brook trout in the Savage River watershed.

We would appreciate being kept informed of any changes to these or any other plans for this forest.

Sincerely,

Don Haynes, Chair
Mid-Atlantic Council Trout Unlimited

G. WATERSHED IMPROVEMENT PROJECTS

Foster Estate Pond Restoration

The Foster tract includes an existing pond (approximately 2.5 acres in size) that was built to process waste from a hog operation. The hog operation has been gone for a number of years and much of the pond has been vegetated with phragmites and cattail. There is some open water (approximately 50% of the pond area) and the pond does provide some habitat benefits but could be enhanced to improve water quality and habitat attributes.

After looking at the pond and discussing possible enhancement alternatives, we have come to the conclusion that the best method to enhance this area would be to make the pond more of a functioning wetland and to provide more of a hydrological connection to the existing wooded floodplain/wetland complex that lies to the south and east. This is a floodplain to the headwaters of Furnace Branch, which drains to Nassawango Creek then to the Pocomoke River.

We are currently tracking down good lidar data and will be requesting a topographic survey from the DNR survey crew so we can begin the design process. We have put a placeholder in the FY 16 budget for funds from the Chesapeake and Coastal Bay Trust though we have not put a price tag on the project. We will be able to do that once we get the topographic information and develop a preliminary plan.

In the meantime, it would be good to spray the phrag in the pond. We are getting late into the season for phrag spraying, but I think we still have a small window which would allow us to get a good kill. So, I would suggest getting the phrag spraying done in short order. This will probably need to be done by truck since the phrag is intermixed (to some degree) with the existing cattails.

We will also need to get some soil samples at the site to determine the nature of the soils/mucks that are in the bottom of the pond. If this area was used as a waste lagoon for hog manure, we may need to address this issue in some form or fashion.

We are hoping that the survey crew can get out to the site in the next 3 - 4 weeks. At that time we can get back to you with a better number for the enhancement work. However, a very rough estimate for the cost of the work to be accomplished can be set at $150,000. If the Forest Service has some existing funds which can be directed towards that project, that would be very helpful.

H. SPECIAL WILDLIFE HABITAT PROJECTS

None proposed for this work plan.

I. ECOSYSTEM RESORATION PROJECTS

Furnace Tract Management Plan
Wesley Knapp & Jen Frye

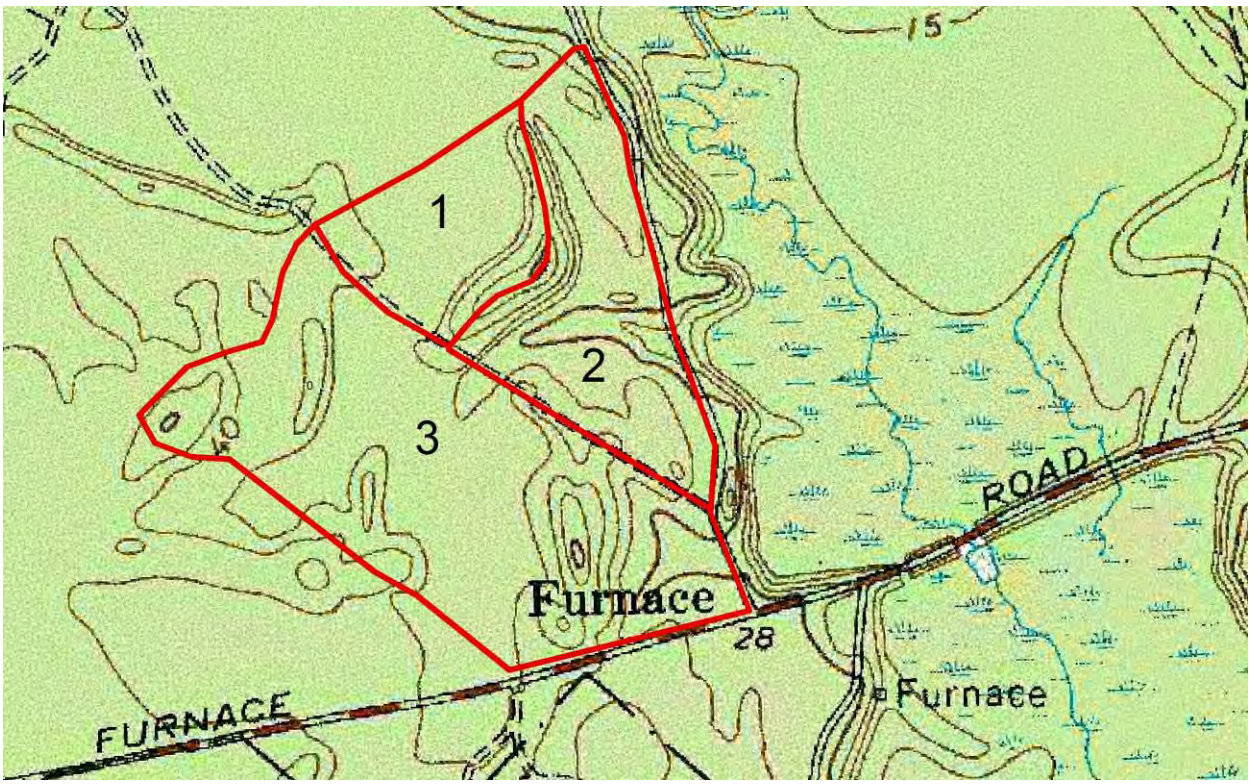
The Furnace Tract was purchased by the State of Maryland in 2013 with the intent to manage the property to ensure the long-term viability of the many rare species present. Therefore, the following management activities are proposed:

Management Unit 2: This area supports a large population of *Lupinus perennis* but this area is quickly changing due to woody plant succession. This area should be burned to reduce woody plant competition and promote the viability of *Lupine.* A firebreak will have to be created between Unit 1

and Unit 2. The proposed location of this break is on the attached map and is located on the top of the prominent sand ridge which bisects the two largest *Lupine* patches on site. Burning at this site should be conducted in the fall.

Management Unit 3: This area is a ca. 10 year old loblolly pine stand. We proposed the loblolly be cleared from this entire unit and then be followed by a prescribed fire when fuel loads dictate. This stand is very dry and entirely surrounded by logging roads, which make suitable firebreaks. Minimal site prep should be needed to complete such a burn. A deer exclosure may be constructed around areas of dense *Lupine* repopulation. Before this stand became so dense *Lupine* was known from this stand. These activities should promote *Lupine* in this unit.

Management Unit 1: Management Unit 1 currently supports the best population of *Lupinus perennis* at the site due. A small area within Unit 1 has been managed to promote *Lupine.* This area has an electric fence constructed and removed annually to protect lupine from deer herbivory. This area has also been manually cut to control woody plant succession. No management activities are proposed at this time. If Lupine response is sufficient in Management Unit 2 and 3, future management may include prescribed fire.



J. MONITORING PROJECTS

The Continuous Forest Inventory (CFI) for Chesapeake Forest and Pocomoke State Forest was started in the summer of (calendar year) 2014. A staff of at 5 crew is being utilized to collect plot data. The CFI will resume in the spring-fall of 2015.

K. BUDGET

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

Operating Revenues & State Funding	
Forest Product Sale Revenues	$ 650,000
Hunt Club Revenues	$ 400,000
State Funding	$ 100,000
Total	**$1,150,000**

APPENDIX A - RECREATION TRAIL GRANTS

CHESAPEAKE FOREST – D03 – LITTLE BLACKWATER SOFT LAUNCH

Project Title:

Little Blackwater Soft Launch

Trail Uses

Check all the apply

☐ Diverse ☐ Motorized Recreational ☒ Non-motorized Recreational ☐ Transportation Trail

Project Types

Check only one category

☐ Maintenance and restoration ☐ Development and rehabilitation of facilities
☐ Purchase and lease of equipment ☒ Construction ☐ Acquisition of easements
☐ Assessment ☐ Iinterpretive/educational programs

Project Cost:

$40,000	**$8,000**	**$48,000**
RTP Funding Request	Matching Funds	Total Project Cost

Project Sponsor (Applicant)

Project Sponsor Entity	Department of Natural Resources
Project Manager	Michael Schofield
Title	Forest Manager
Organization	Forest Service
Address 1	6572 Snow Hill Road, Snow Hill, MD 21863
Address 2	
Telephone	(410)632-3732
Cell Phone	(410)713-5091
Fax	(410)632-3730
E-mail	mschofield@dnr.state.md.us

All questions related to application content, contact tmaxwell@sha.state.md.us

Project Location The project is located in the tidal waters of the Little Blackwater River within the city limits of Cambridge, Maryland in Dorchester County (see attached map).

2. Project Abstract *Complete the following sentences…then add additional information*

This project will….. create a new public water access point for canoes and kayaks. The closest water access point to this new launch site is 6.6 miles away (USFWS Blackwater National Wildlife Refuge, Key Wallace Dr.)

Benefits the trail user by…..providing convenient water trail access within city limits to a remote area.

This proposed canoe soft launch site is located in the Critical Area (CA) and a Wetland of Special State Concern (WSSC). The project designed was completed by DNR-Boating Services in 2010 after being approved through the Chesapeake Forest 2009 Annual Work Plan review process. An approved MDE permit was obtained in 2011 (see attached). An approval letter was also received by the CA Commission in 2013 (see attached).

This project does sustain an existing 24.6 mile water trail system by providing 6.6 miles of new paddling/boating opportunities to the public. This new water access point/trail connects a city of 12,500 citizens directly to a Chesapeake Gateway (Blackwater National Wildlife Refuge). This project will also enhance tourism to the city of Cambridge since its location is within the city limits.

3. Project Summary

Task No. & Name		Task Description
1.	Install new floating pier	Install new 30' long X 4' wide floating pier
2.	Install fencing	Split rail fencing installed to restrict vehicle access to pier location
3.	Improve road and parking	Install clean limestone gravel on existing access road and parking area.
4.	Install trail head sign	Install new trail head sign highlighting the new water trail/access point
5.	Install parking area sign	Sign installed to designate parking for boat launching

4. Project Property Owner

This project is located on State of Maryland property, which is managed by the Department of Natural Resources, Maryland Forest Service (Project Sponsor).

5. Project length

New pier is 30'X4', 2,300' access road/path, 6.6 miles of new paddling trail

6. Prior Projects

RT07-41 *Tom Tyler Demonstration Forest & Nature Trail, $3,500 reimbursed for trail enhancement supplies & materials. Project completed.*
RT08-26 *WDF & CF Trail Enhancement Project, $28,000 reimbursed for labor used to maintain and enhance existing horseback trails. Project completed.*
RT09-25 *CF 2009 Green Hill Trail Enhancement Project, $26,052 reimbursed for labor used to maintain and enhance existing multi-use trails. Project completed.*
RT07-46 *Foster Trail Enhancement Project, $12,000 reimbursed for labor used to enhancement trail system. Project completed.*
RT10-31 *Milburn Landing, Dividing Creek & Whitesburg Trail Enhancement Project, $30,000 reimbursed for labor used to enhance existing trail system. Project completed.*
RT11-32 *UTV Trail Enhancement Project, $20,000 reimbursed for the purchase of a utility vehicle and attachments used for trail maintenance and construction. Project completed.*
RT11-34 *Marshyhope Trail Enhancement Project, $30,000*

reimbursed for labor and supplies used to enhance existing trail system. Project completed.
***RT12-28** Equestrian Trail Enhancement Project, $32,000 reimbursed for labor and supplies used to enhance existing trail system. Project completed.*
***RT12-31** PSF Mountain Bike Trail Enhancement, $30,000 reimbursed for labor and supplies used to enhance existing bike trail system. Project is complete. Close out paperwork has been submitted.*
***RT12-31** Algonquin Cross County Trail Establishment, $25,000 awarded for labor and supplies to enhance existing trail and to create new connecting sections of trail. This project is being implemented.*
***RT13-51** Wicomico Demonstration Forest Trail Enhancement, $23,000 awarded for labor and supplies to enhance existing trail system. This project being implemented and is 50% complete.*
RT13-54 Mattoponi Soft Launch, $17,000 awarded for labor and supplies used to establish a new water access point along the Pocomoke River. This project is currently being implemented and will be complete this fiscal year.

---

7. Project Work Plan

Task No. & Name	Start Date	Duration	Responsible Party	Justification
1. NEPA Approval	11/2014	7 months	Ken Jolly	Approval
2. PCA Codes Assigned	5/2015	1 month	Shenika Dyson	Tracking grant expenditures
3. Hire Contractual Staff	5/2015	4 months	Mike Schofield	Hiring process
4. Purchase Materials/Supplies	6/2015	2 months	Mike Schofield	Procurement process
5. Implement Trail Work	9/2015	12 months	Mike Schofield	Work through contract period
6. Grant Close Out	9/2016	1 month	Mike Schofield Shenika Dyson	Documentation submitted to HQ

8. Project Budget

Task No. & Name	Requested Funds 80%	Sponsor Match 20%	Total Task Cost 100%
1. Seasonal labor @ $15/hour (1288 hrs)	$19,326	$3,865	$23,191
2. Trail Head Sign, posts & lumber	$2,500	$500	$3,000
3. (30) Loads of gravel/stone @ $200/load	$6,000	$1,200	$7,200
4. Floating 30'X4' pier and hardware	$11,874	$2,375	$14,249
5. 100' wooden split rail fence @ $30 per 10'	$300	$60	$360
Total Cost	$40,000	$8,000	$48,000

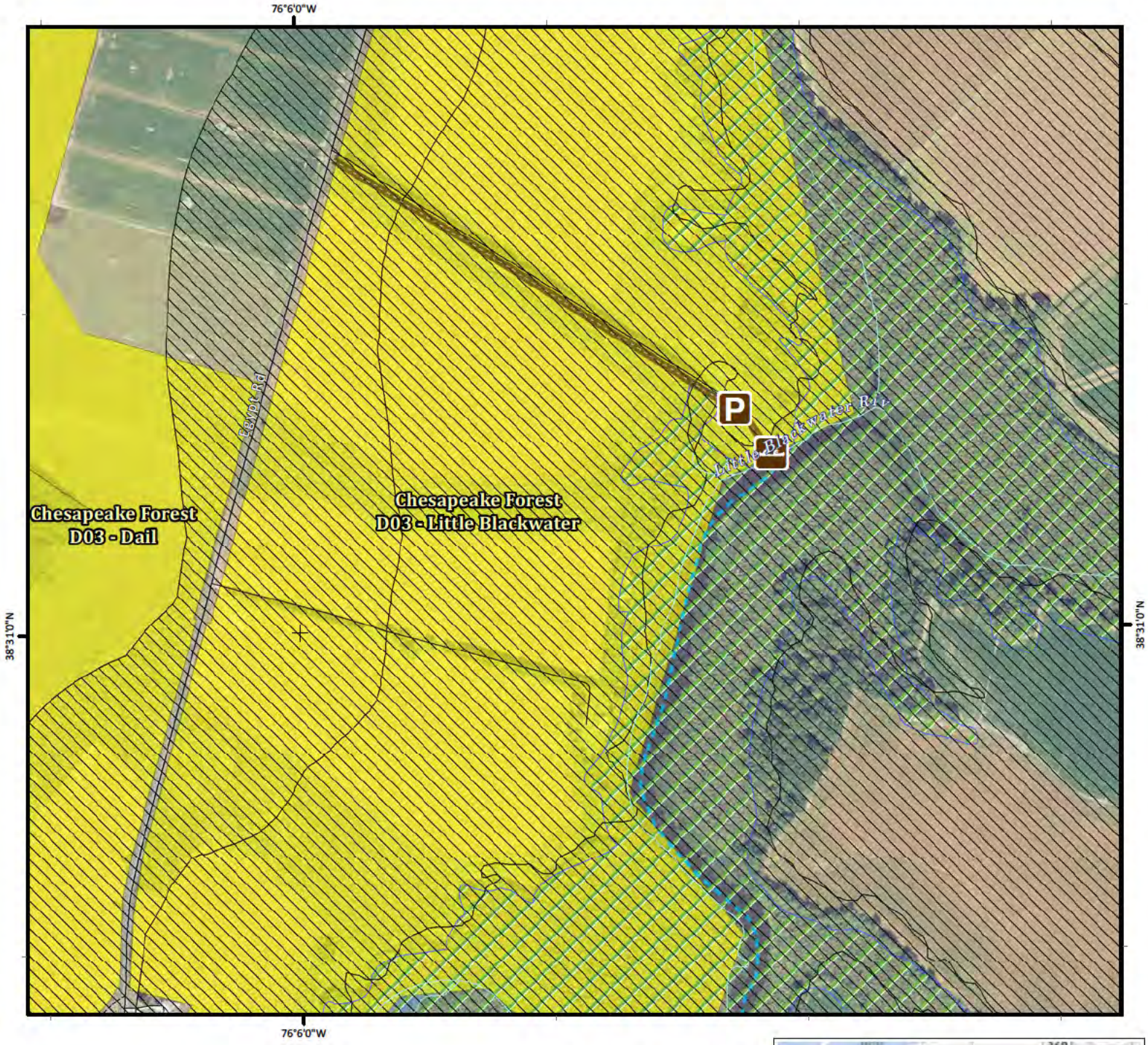
Funds requested for projects cannot exceed $40,000 for trail construction and $30,000 for non-construction. (For the FY14 solicitation, we will consider lifting the $40K cap for construction projects that score exceedingly high with our criteria)

9. Matching Funds (20%)

Task	Source	Type (Cash or In-kind)	Description Including Hours and Rate	Amount
Supervision	MD Forest Service	In kind	50hrs. @ $40/hr.	$2,000
Labor	MD Forest Service	In kind	240hrs. @ $25/hr.	$6,000
Total				$8,000

10. Location Map

See attach location map.



0 660 1,320 Feet

1 inch = 660 feet

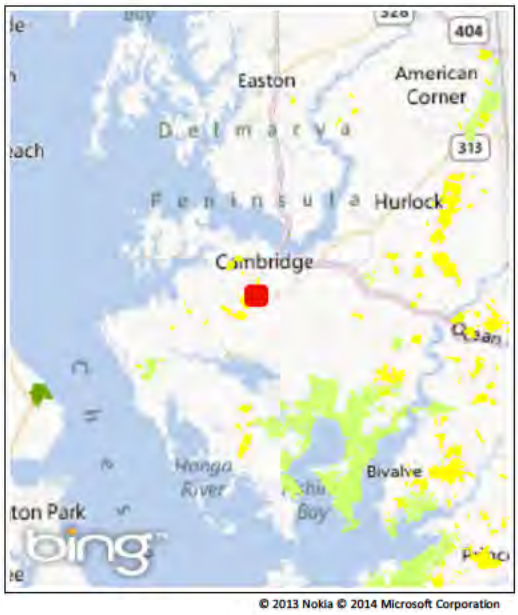
N

Chesapeake Forest

D03 - Little Blackwater
Soft Launch

Legend

- Soft Launch
- Parking
- Water Trail
- Access Road
- Chesapeake Forest
- WSSC
- Critical Area



ASC-DNR Forest Service 03/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE

CHESAPEAKE FOREST – D26 – LEWIS/ISLAND POND SOFT LAUNCH

Project Title:

Island Pond Soft Launch

Trail Uses

Check all the apply

☐ Diverse ☐ Motorized Recreational ☒ Non-motorized Recreational ☐ Transportation Trail

Project Types

Check only one category

☐ Maintenance and restoration ☐ Development and rehabilitation of facilities
☐ Purchase and lease of equipment ☒ Construction ☐ Acquisition of easements
☐ Assessment ☐ Iinterpretive/educational programs

Project Cost:

$40,000	**$8,000**	**$48,000**
RTP Funding Request	Matching Funds	Total Project Cost

Project Sponsor (Applicant)

Project Sponsor Entity	Department of Natural Resources
Project Manager	Michael Schofield
Title	Forest Manager
Organization	Forest Service
Address 1	6572 Snow Hill Road, Snow Hill, MD 21863
Address 2	
Telephone	(410)632-3732
Cell Phone	(410)713-5091
Fax	(410)632-3730
E-mail	mschofield@dnr.state.md.us

All questions related to application content, contact tmaxwell@sha.state.md.us

Project Location The project is located in the tidal waters of Island Pond just 6 miles south of Vienna, Maryland in Dorchester County (see attached map).

2. Project Abstract *Complete the following sentences…then add additional information*

This project will….. create a new public water access point for canoes and kayaks. The closest water access point to this new launch site is 8.6 miles away (Fishing Bay WMA, Elliott Is. Rd.)

Benefits the trail user by…..providing water trail access to a remote area that is a unique tidal estuary.

This proposed canoe soft launch site is located in the Critical Area (CA), Wetland of Special State Concern (WSSC) and is located within the Savanna Lake Natural Heritage Area (NHA).The project designed was completed

by DNR-Boating Services in 2011 and was approved through the DNR project review process (2011-DNR-065 Island Pond). Subsequently, approval was obtained from the DNR, Eastern Region Heritage Ecologist (see attached letter). An approved MDE permit was obtained in 2012 (see attached). An approval letter was also received by the CA Commission in 2013 (see attached).

This project does sustain a trail system by providing new paddling/boating opportunities to the public. This project will also enhance tourism to the small town of Vienna, which visitors must pass through to reach the soft launch site. This new water access point is a new water trail for Island Pond and Island Creek, which pass through the Fishing Bay WMA and could be added to the State Transportation Trail Network.

3. Project Summary

Task No. & Name	Task Description
6. Old pier removal	Remove and dispose existing 225' dilapidated pier
7. Install new floating pier	Install new 20' long X 4' wide floating pier
8. Install new access gate	New access gate will create additional room for parking and off loading of boats
9. Improve road and parking	Install clean limestone gravel to existing access road and parking area.
10. Install trail head sign	Install new trail head sign highlighting the new water trail/access point

4. Project Property Owner

This project is located on State of Maryland property, which is managed by the Department of Natural Resources, Maryland Forest Service (Project Sponsor).

5. Project length

Existing access road is 3000' long, new pier is 20'X4', 8.6 miles of new water trail

6. Prior Projects

RT07-41 *Tom Tyler Demonstration Forest & Nature Trail, $3,500 reimbursed for trail enhancement supplies & materials. Project completed.*
RT08-26 *WDF & CF Trail Enhancement Project, $28,000 reimbursed for labor used to maintain and enhance existing horseback trails. Project completed.*
RT09-25 *CF 2009 Green Hill Trail Enhancement Project, $26,052 reimbursed for labor used to maintain and enhance existing multi-use trails. Project completed.*
RT07-46 *Foster Trail Enhancement Project, $12,000 reimbursed for labor used to enhancement trail system. Project completed.*
RT10-31 *Milburn Landing, Dividing Creek & Whitesburg Trail Enhancement Project, $30,000 reimbursed for labor used to enhance existing trail system. Project completed.*
RT11-32 *UTV Trail Enhancement Project, $20,000 reimbursed for the purchase of a utility vehicle and attachments used for trail maintenance and construction. Project completed.*
RT11-34 *Marshyhope Trail Enhancement Project, $30,000*

reimbursed for labor and supplies used to enhance existing trail system. Project completed.
***RT12-28** Equestrian Trail Enhancement Project, $32,000 reimbursed for labor and supplies used to enhance existing trail system. Project completed.*
***RT12-31** PSF Mountain Bike Trail Enhancement, $30,000 reimbursed for labor and supplies used to enhance existing bike trail system. Project is complete. Close out paperwork has been submitted.*
***RT12-31** Algonquin Cross County Trail Establishment, $25,000 awarded for labor and supplies to enhance existing trail and to create new connecting sections of trail. This project is being implemented.*
***RT13-51** Wicomico Demonstration Forest Trail Enhancement, $23,000 awarded for labor and supplies to enhance existing trail system. This project being implemented and is 50% complete.*
RT13-54 Mattoponi Soft Launch, $17,000 awarded for labor and supplies used to establish a new water access point along the Pocomoke River. This project is currently being implemented and will be complete this fiscal year.

---

7. Project Work Plan

Task No. & Name	Start Date	Duration	Responsible Party	Justification
7. NEPA Approval	11/2014	7 months	Ken Jolly	Approval
8. PCA Codes Assigned	5/2015	1 month	Shenika Dyson	Tracking grant expenditures
9. Hire Contractual Staff	5/2015	4 months	Mike Schofield	Hiring process
10. Purchase Materials/Supplies	6/2015	2 months	Mike Schofield	Procurement process
11. Implement Trail Work	9/2015	12 months	Mike Schofield	Work through contract period
12. Grant Close Out	9/2016	1 month	Mike Schofield Shenika Dyson	Documentation submitted to HQ

8. Project Budget

Task No. & Name	Requested Funds 80%	Sponsor Match 20%	Total Task Cost 100%
6. Seasonal labor @ $15/hour (1,483 hrs)	$22,250	$4,450	$26,700
7. Trail Head Sign, posts & lumber	$2,500	$500	$3,000
8. (20) Loads of gravel/stone @ $200/load	$4,000	$800	$4,800
9. Floating 20'X4' pier and hardware	$11,250	$2,250	$13,500
Total Cost	$40,000	$8,000	$48,000

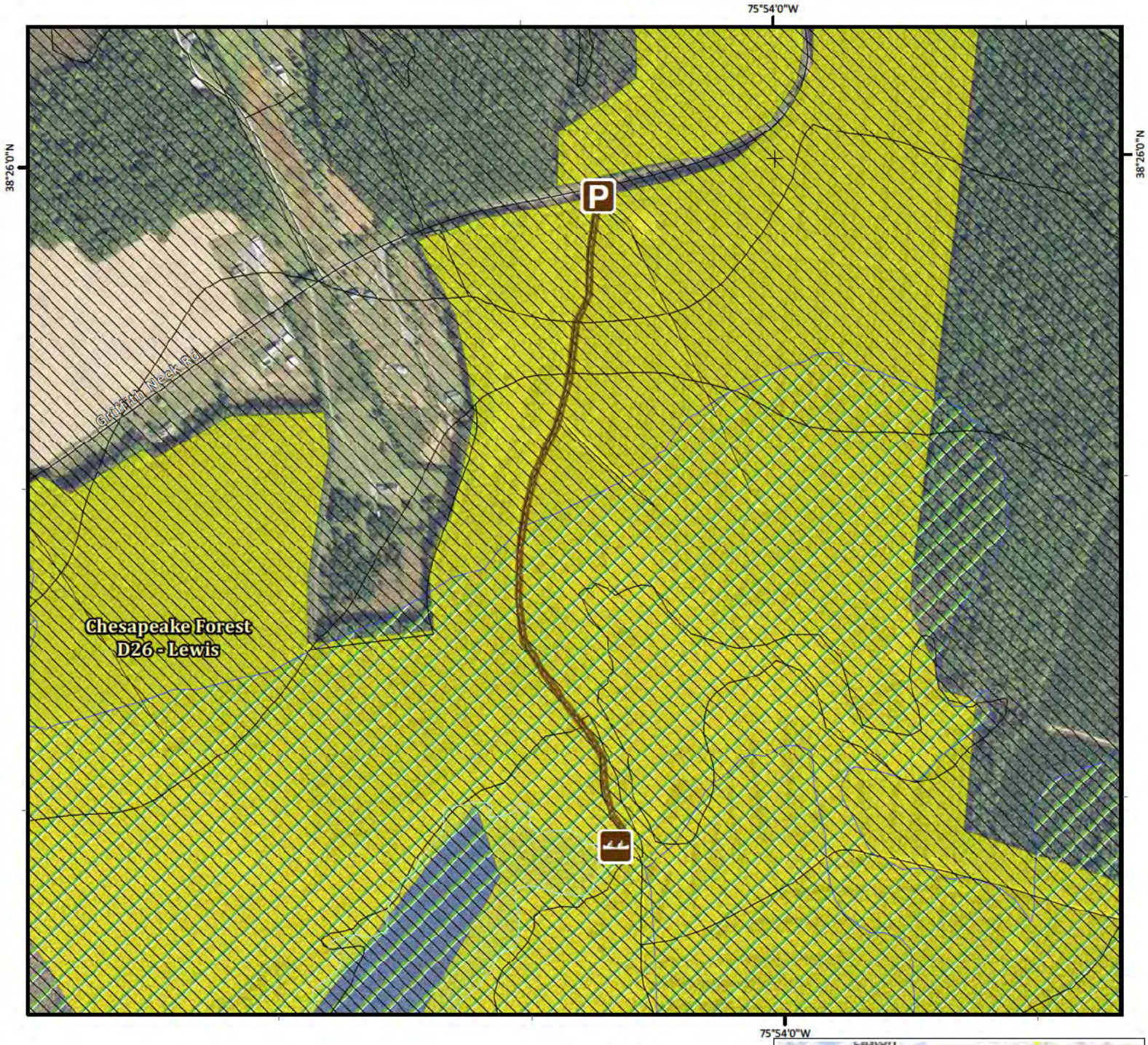
Funds requested for projects cannot exceed $40,000 for trail construction and $30,000 for non-construction. (For the FY14 solicitation, we will consider lifting the $40K cap for construction projects that score exceedingly high with our criteria)

9. Matching Funds (20%)

Task	Source	Type (Cash or In-kind)	Description Including Hours and Rate	Amount
Supervision	MD Forest Service	In kind	50hrs. @ $40/hr.	$2,000
Labor	MD Forest Service	In kind	240hrs. @ $25/hr.	$6,000
Total				$8,000

10. Location Map

See attach location map.



0 660 1,320 Feet

1 inch = 660 feet

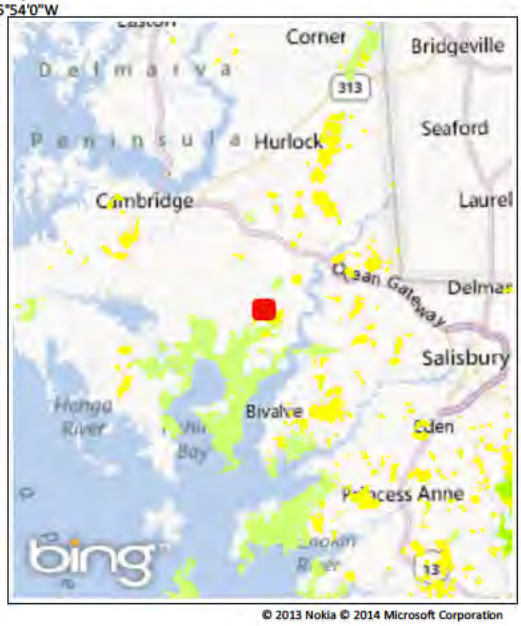
N

Chesapeake Forest

D26 - Lewis
Soft Launch

Legend

- Soft Launch
- Parking
- Water Trail
- Access Road
- Chesapeake Forest
- WSSC
- Critical Area



ASC-DNR Forest Service 03/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE

POCOMOKE STATE FOREST – P06 – HUDSON/TARR HANDICAPPED HUNTING TRAIL

Project Title:

Pocomoke State Forest Handicap Hunting Trail

Trail Uses

Check all the apply

☐ Diverse ☒ Motorized Recreational ☐ Non-motorized Recreational ☐ Transportation Trail

Project Types

Check only one category

☒ Maintenance and restoration ☐ Development and rehabilitation of facilities
☐ Purchase and lease of equipment ☐ Construction ☐ Acquisition of easements
☐ Assessment ☐ Iinterpretive/educational programs

Project Cost:

$40,000	**$8,000**	**$48,000**
RTP Funding Request	Matching Funds	Total Project Cost

Project Sponsor (Applicant)

Project Sponsor Entity	Department of Natural Resources
Project Manager	Michael Schofield
Title	Forest Manager
Organization	Forest Service
Address 1	6572 Snow Hill Road, Snow Hill, MD 21863
Address 2	
Telephone	(410)632-3732
Cell Phone	(410)713-5091
Fax	(410)632-3730
E-mail	mschofield@dnr.state.md.us

All questions related to application content, contact tmaxwell@sha.state.md.us

Project Location The project is located on the Pocomoke State Forest, between Pocomoke City and Snow Hill, Maryland in Worcester County (see attached map).

2. Project Abstract *Complete the following sentences…then add additional information*

This project will….. Enhance an existing motorized vehicle hunting trail for handicap hunters.

Benefits the trail user by…..providing a convenient trail for disabled hunters to access a remote forested area.

This trail system is an established 2.3 mile motorized vehicle trail for disabled hunters participating in the Hunt from a Vehicle program. The trail system was established in the 1980's and is in current need of repairs due to heavy use. The trail system is located only 7.5 miles from the small town of Snow Hill and only 7 miles from

Pocomoke City, Maryland on the Lower Eastern Shore. The trail is located within 1 mile of Pocomoke River State Park, which is a popular tourism destination. Enhancing this popular trail system will increase tourism to the Worcester County area.

This project is not within an environmentally sensitive area and requires no permits.

3. Project Summary

Task No. & Name	Task Description
11. Clear trail system	Remove brush and vegetation blocking and encroaching motorized trail system
12. Improve road and parking	Install clean limestone gravel to existing trail and parking area.
13. Install trail head sign	Install new trail head sign highlighting access points
14. Install gate signs	Post signs on gates warning other forest users not to block.

4. Project Property Owner

This project is located on State of Maryland property, which is managed by the Department of Natural Resources, Maryland Forest Service (Project Sponsor).

5. Project length

2.3 miles of dirt forest road

6. Prior Projects

RT07-41 *Tom Tyler Demonstration Forest & Nature Trail, $3,500 reimbursed for trail enhancement supplies & materials. Project completed.*
RT08-26 *WDF & CF Trail Enhancement Project, $28,000 reimbursed for labor used to maintain and enhance existing horseback trails. Project completed.*
RT09-25 *CF 2009 Green Hill Trail Enhancement Project, $26,052 reimbursed for labor used to maintain and enhance existing multi-use trails. Project completed.*
RT07-46 *Foster Trail Enhancement Project, $12,000 reimbursed for labor used to enhancement trail system. Project completed.*
RT10-31 *Milburn Landing, Dividing Creek & Whitesburg Trail Enhancement Project, $30,000 reimbursed for labor used to enhance existing trail system. Project completed.*
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RT11-34 *Marshyhope Trail Enhancement Project, $30,000 reimbursed for labor and supplies used to enhance existing trail system. Project completed.*
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RT13-51 *Wicomico Demonstration Forest Trail Enhancement, $23,000 awarded for labor and supplies to enhance existing trail system. This project being implemented and is 50% complete.*
RT13-54 Mattoponi Soft Launch, $17,000 awarded for labor and supplies used to establish a new water access point along the Pocomoke River. This project is currently being implemented and will be complete this fiscal year.

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7. Project Work Plan

Task No. & Name	Start Date	Duration	Responsible Party	Justification
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8. Project Budget

Task No. & Name	Requested Funds 80%	Sponsor Match 20%	Total Task Cost 100%
10. Seasonal labor @ $15/hour (1833 hrs)	$27,500	$5,500	$33,000
11. Trail Head Sign, posts & lumber	$2,500	$500	$3,000
12. (50) Loads of gravel/stone @ $200/load	$10,000	$2,000	$12,000
Total Cost	$40,000	$8,000	$48,000

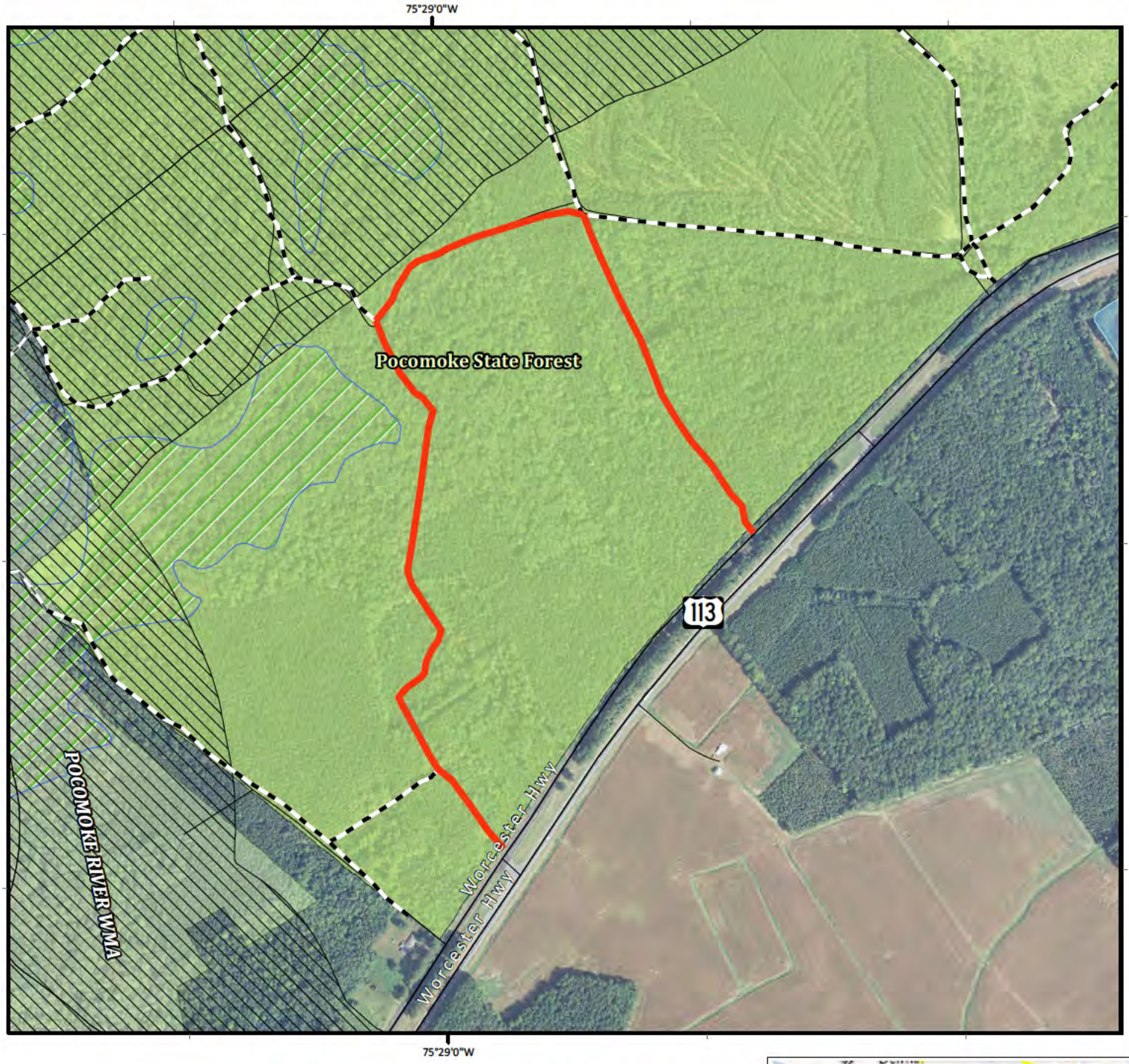
Funds requested for projects cannot exceed $40,000 for trail construction and $30,000 for non-construction. (For the FY14 solicitation, we will consider lifting the $40K cap for construction projects that score exceedingly high with our criteria)

9. **Matching Funds (20%)**

Task	Source	Type (Cash or In-kind)	Description Including Hours and Rate	Amount
Supervision	MD Forest Service	In kind	50hrs. @ $40/hr.	$2,000
Labor	MD Forest Service	In kind	240hrs. @ $25/hr.	$6,000
Total				$8,000

10. **Location Map**

See attach location map.



0 660 1,320 Feet

1 inch = 660 feet

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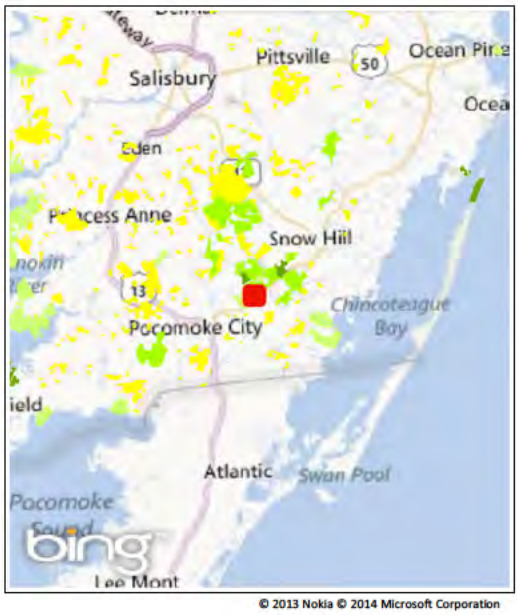

Pocomoke State Forest

P06 - Hudson/Tarr

Legend

- Vehicle Accessible Handicapped Area
- Chesapeake Forest
- Pocomoke State Forest
- WSSC
- Critical Area

ASC-DNR Forest Service 03/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE

CHESAPEAKE FOREST – W02 – AUGHTY NAUGHTY HANDICAPPED HUNTING TRAIL

Project Title:

Chesapeake Forest Handicap Hunting Trail

Trail Uses

Check all the apply

☐ Diverse ☒ Motorized Recreational ☐ Non-motorized Recreational ☐ Transportation Trail

Project Types

Check only one category

☒ Maintenance and restoration ☐ Development and rehabilitation of facilities
☐ Purchase and lease of equipment ☐ Construction ☐ Acquisition of easements
☐ Assessment ☐ Iinterpretive/educational programs

Project Cost:

$40,000	**$8,000**	**$48,000**
RTP Funding Request	Matching Funds	Total Project Cost

Project Sponsor (Applicant)

Project Sponsor Entity	Department of Natural Resources
Project Manager	Michael Schofield
Title	Forest Manager
Organization	Forest Service
Address 1	6572 Snow Hill Road, Snow Hill, MD 21863
Address 2	
Telephone	(410)632-3732
Cell Phone	(410)713-5091
Fax	(410)632-3730
E-mail	mschofield@dnr.state.md.us

All questions related to application content, contact tmaxwell@sha.state.md.us

Project Location The project is located on the Chesapeake Forest, Aughty Naughty Tract near Mardella Springs, Maryland in Wicomico County (see attached map).

2. Project Abstract *Complete the following sentences…then add additional information*

This project will….. Enhance an existing motorized vehicle hunting trail for handicap hunters.

Benefits the trail user by…..providing a convenient trail for disabled hunters to access a remote forested area.

This trail system is an established 3.3 mile motorized vehicle trail for disabled hunters participating in the Hunt from a Vehicle program. The trail system was established in 2003 and has not been maintained since despite heavy use. The trail system is located only 0.5 miles from the small town of Mardella Springs, Maryland on the Lower Eastern Shore. Enhancing this popular trail system will increase tourism to the area.

This project is not within an environmentally sensitive area and requires no permits.

3. Project Summary

Task No. & Name	Task Description
15. Clear trail system	Remove brush and vegetation blocking and encroaching motorized trail system
16. Improve road and parking	Install clean limestone gravel to existing trail and parking area.
17. Install trail head sign	Install new trail head sign highlighting access points
18. Install gate signs	Post signs on gates warning other forest users not to block.

4. Project Property Owner

This project is located on State of Maryland property, which is managed by the Department of Natural Resources, Maryland Forest Service (Project Sponsor).

5. Project length

3.3 miles of dirt forest road

6. Prior Projects

RT07-41 *Tom Tyler Demonstration Forest & Nature Trail, $3,500 reimbursed for trail enhancement supplies & materials. Project completed.*
RT08-26 *WDF & CF Trail Enhancement Project, $28,000 reimbursed for labor used to maintain and enhance existing horseback trails. Project completed.*
RT09-25 *CF 2009 Green Hill Trail Enhancement Project, $26,052 reimbursed for labor used to maintain and enhance existing multi-use trails. Project completed.*
RT07-46 *Foster Trail Enhancement Project, $12,000 reimbursed for labor used to enhancement trail system. Project completed.*
RT10-31 *Milburn Landing, Dividing Creek & Whitesburg Trail Enhancement Project, $30,000 reimbursed for labor used to enhance existing trail system. Project completed.*
RT11-32 *UTV Trail Enhancement Project, $20,000 reimbursed for the purchase of a utility vehicle and attachments used for trail maintenance and construction. Project completed.*
RT11-34 *Marshyhope Trail Enhancement Project, $30,000 reimbursed for labor and supplies used to enhance existing trail system. Project completed.*
RT12-28 *Equestrian Trail Enhancement Project, $32,000 reimbursed for labor and supplies used to enhance existing trail system. Project completed.*
RT12-31 *PSF Mountain Bike Trail Enhancement, $30,000 reimbursed for labor and supplies used to enhance existing bike trail system. Project is complete. Close out paperwork has been submitted.*

RT12-31 *Algonquin Cross County Trail Establishment, $25,000 awarded for labor and supplies to enhance existing trail and to create new connecting sections of trail. This project is being implemented.*
RT13-51 *Wicomico Demonstration Forest Trail Enhancement, $23,000 awarded for labor and supplies to enhance existing trail system. This project being implemented and is 50% complete.*
RT13-54 Mattoponi Soft Launch, $17,000 awarded for labor and supplies used to establish a new water access point along the Pocomoke River. This project is currently being implemented and will be complete this fiscal year.

---

7. Project Work Plan

Task No. & Name	Start Date	Duration	Responsible Party	Justification
19. NEPA Approval	11/2014	7 months	Ken Jolly	Approval
20. PCA Codes Assigned	5/2015	1 month	Shenika Dyson	Tracking grant expenditures
21. Hire Contractual Staff	5/2015	4 months	Mike Schofield	Hiring process
22. Purchase Materials/Supplies	6/2015	2 months	Mike Schofield	Procurement process
23. Implement Trail Work	9/2015	12 months	Mike Schofield	Work through contract period
24. Grant Close Out	9/2016	1 month	Mike Schofield Shenika Dyson	Documentation submitted to HQ

8. Project Budget

Task No. & Name	Requested Funds 80%	Sponsor Match 20%	Total Task Cost 100%
13. Seasonal labor @ $15/hour (1833 hrs)	$27,500	$5,500	$33,000
14. Trail Head Sign, posts & lumber	$2,500	$500	$3,000
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Total Cost	$40,000	$8,000	$48,000

Funds requested for projects cannot exceed $40,000 for trail construction and $30,000 for non-construction. (For the FY14 solicitation, we will consider lifting the $40K cap for construction projects that score exceedingly high with our criteria)

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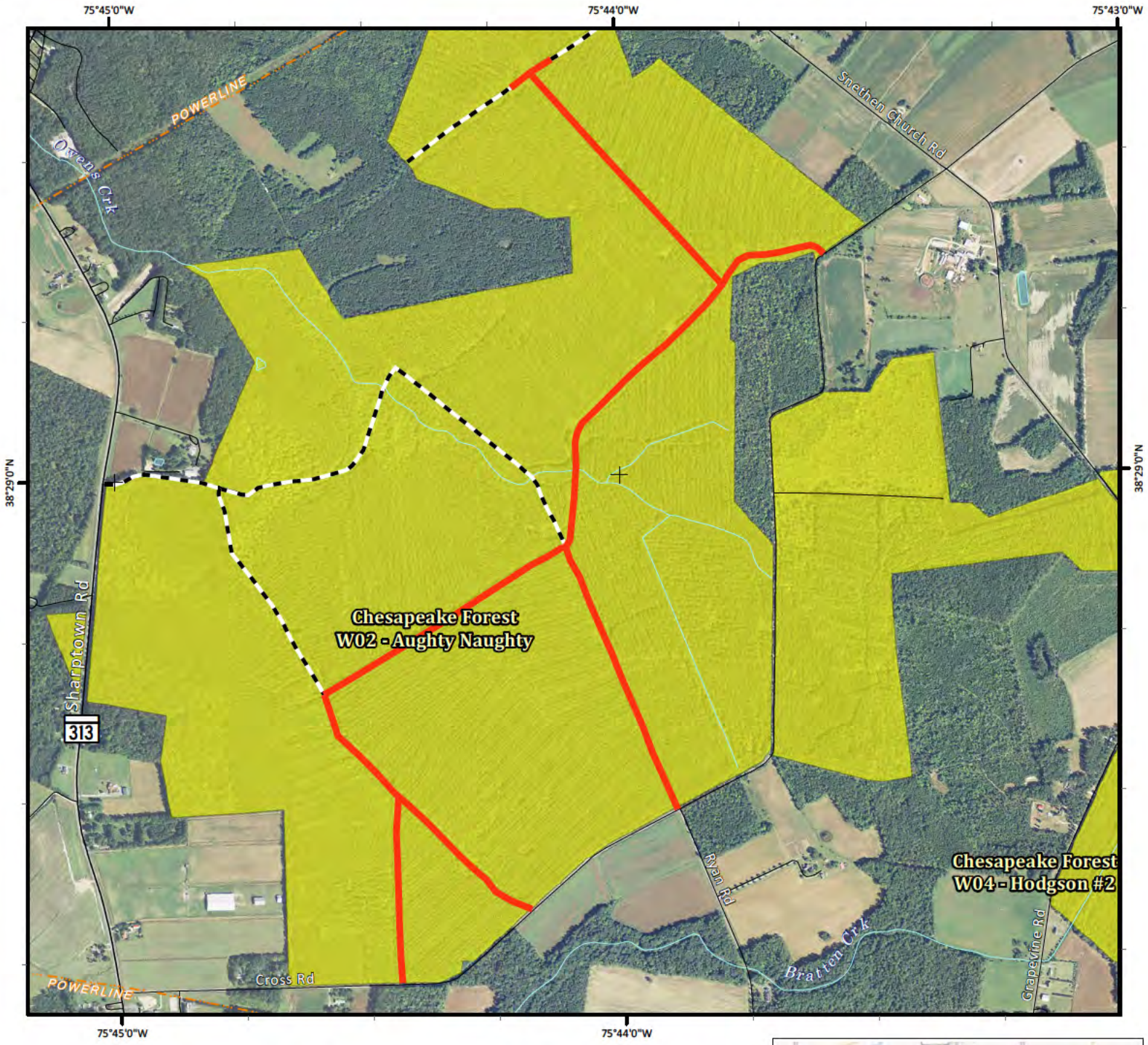


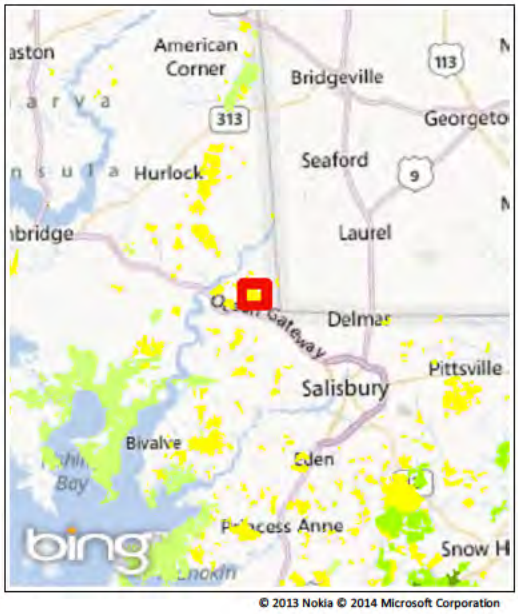
0 1,320 2,640 Feet

1 inch = 1,320 feet

N

Chesapeake Forest

W02 - Aughty Naughty



Legend

- Vehicle Accessible Handicapped Area
- Chesapeake Forest
- Pocomoke State Forest
- WSSC
- Critical Area

ASC-DNR Forest Service 03/2014

MARYLAND DEPARTMENT OF NATURAL RESOURCES

MARYLAND FOREST SERVICE

APPENDIX B - SOIL SERIES ABBREVIATIONS AND SYMBOLS

Soil Series	MG	Caroline	Dorchester	Somerset	Wicomico	Worcester
Acquango sand	4					AcB, AcC
Annemessex-Manokin complex	1			AoA, AoB		
Askecksy loamy sand	1	AsA			AsA	As
Askecksy-Urban land complex	1				AtA	
Beaches	-		Be	Be	Be	Be
Berryland mucky loamy sand	2				BhA	BhA
Bestpitch and Transquaking	5		BT			
Boxiron and Broadkill soils	1			BX		BX
Broadkill mucky silt loam	1					Br
Brockatonorton sand	3					BkA, BkB
Cedartown loamy sand	4	CdA, CdB			CdA	
Cedartown-Rosedale complex	4					CeA, CeB
Chicone mucky silt loam	5		Ch			Ch
Corsica and Fallsington soils	2			CRA		
Corsica mucky loam	1	CoA			CoA	
Corsica mucky loam, Carolina Bay	1	CrA				
Downer loamy sand	3		DnC			
Downer sandy loam	3		DoA, DoB	DoA, DoB		
Elkton loam	1		EkA			
Elkton mucky silt loam	1		EoA			
Elkton sandy loam	1					EkA
Elkton silt loam	1	EmA	EmA	EmA		EmA
Endoaquepts and Sulfaquepts	5			EQB	EQB	
Evesboro loamy sand	4					EvA, EvB, EvC
Evesboro sand	4	EwA, EwB	EwC, EwE		EwA, EwB, EwC	
Evesboro-Galestown complex	4			EzB		
Fallsington loam	2	FgA		FgA	FgA	
Fallsington sandy loam	2	FaA	FaA	FaA	FaA	FaA
Fallsinston-Glassboro complex	2			FhA		
Fort Mott loamy sand	3		FmA, FmB		FmA, FmB	FmA, FmB
Fort Mott, Evesboro, and Downer soils	3		FNE			
Fort Mott-Urban land complex	3				FuA, FuB	
Galestown loamy sand	4	GaA, GaB	GaA, GaB	GaB	GaA, GaB	GaA, GaB, GaC
Galestown and Rosedale soils	4	GAE				
Glassboro loam	2			GlA		
Hambrook loam	3	HcA	HcA, HcB	HcA		
Hambrook sandy loam	3	HbA, HbB, HbC		HbB	HbA, HbB	HbA, HbB
Hambrook-Sassafras complex	3					
Hammonton loamy sand	3			HmA		HmA, HmB
Hammonton sandy loam	3	HnA	HnA	HnA	HnA	
Hammonton-Fallsington-Corsica complex	2	HoB				
Hammonton-Glassboro complex	3			HgB		
Honga peat	5		Ho	Ho	Ho	
Hurlock loamy sand	2			HuA		HuA
Hurlock sandy loam	2	HvA	HvA	HvA	HvA	
Ingleside loamy sand	3	IeA, IeB, IeC			IeA, IeB	
Ingleside sandy loam	3	IgA, IgB, IgC	IgA, IgB	IgA, IgB		
Ingleside-Runclint complex	3			IkC		
Kentuck silt loam	5					KeA
Keyport fine sandy loam	3				KfA, KfB	
Keyport silt loam	3		KpA	KpA		
Klej loamy sand	2					KsA, KsB
Klej-Galloway complex	2	KgB	KgB	KgB	KgB	
Lenni loam	2	LgA			LgA	
Lenni sandy loam	2	LhA			LfA	
Longmarsh and Indiantown soils	5	LO		LO	LO	LO
Manahawkin muck	5	Ma		Ma	Ma	Ma
Manokin silt loam	3			MdA. MdB		
Matapeake fine sandy loam	3					MeA, MeB

Soil Series	MG	Caroline	Dorchester	Somerset	Wicomico	Worcester
Matapeake silt loam	3					MkA, MkB
Mattapex fine sandy loam	3		MpA		MpA	MpA, MpB
Mattapex silt loam	3	MtA, MtB	MtA, MtB		MtA, MtB	MtA, MtB
Miscellaneous water	-	M-W		M-W	M-W	
Mullica-Berryland complex	2			MuA	MuA	MuA
Nanticoke and Mannigton soils	5	NM	NM	NM	NM	NM
Nassawango fine sandy loam	3				NnA, NnB	NnA, NnB
Nassawango silt loam	3	NsA, NsB	NsA, NsB		NsA, NsB	NsA, NsB
Othello and Kentuck soils	1		OkA	OKA	OKA	
Othello silt loam	1		OtA	OtA	OtA	OtA
Othello silt loam, loamy substratum	1			OoA		
Othello-Fallsington complex	2			OvA		
Pepperbox-Rockawalkin complex	3				PrA, PrB	
Pone mucky loam	2		PmA			
Pone mucky sandy loam	2		PnA			
Puckum mucky peat	5	Pk	Pk	Pk	Pk	Pk
Purnell peat	5					Pu
Queponco loam	3			QbB		
Queponco silt loam	3			QeA, QeB		
Quindocqua silt loam	1			QuA		
Rockawalkin loamy sand	3	RkA			RkA, RkB	
Rockawalkin-Urban land complex	3				RnA, RnB	
Rosedale loamy sand	4	RoA, RoB			RoA	RoA, RoB
Runclint loamy sand	4				RuA, RuB	RuA, RuB
Runclint sand	4		RsA, RsB	RsB	RsA, RsB	
Runclint-Cedartown complex	4			RwB, RwC	RwA, RwB	
Runclint-Evesboro complex	4			RxB		
Runclint-Urban land complex	4				RzA, RzB	
Sassafras loam	3		SnA			
Sassafras sandy loam	3	SaA, SaB				SaA, SaB, SaC
Sunken mucky silt loam	5		SuA	SuA	SuA	SuA
Tangier mucky peat	5			Ta		
Transquaking and Mispillion soils	5	TP		TP	TP	TP
Udorthents	4	UbB, UfF, UoB	UzB	UbB, UfB, UfF, UgB, UoB, UwB	UbB, UfB, UoB	UzB
Unicorn-Sassafras complex	3					
Urban Land	-	Up			Up	UpB
Urban Land-Acquango complex	-					UcB
Urban Land-Askecksy complex	-					UmA
Urban Land-Brockatonorton complex	-					UnA
Urban Land-Evesboro complex	-				UrB	
Urban Land-Fort Mott complex	-				UsB	
Urban Land-Rockawalkin complex	-				UtB	
Urban Land-Runcline complex	-				UuB	
Urban Land-Udorthents complex	-				UwB	UwB
Water	-	W	W	W	W	W
Woodstown loam	3	WoA, WoB	WoA	WoA		
Woodstown sandy loam	3	WdA, WdB	WdA, WdB	WdA, WdB	WdA	WdA, WdB
Woodstown-Glassboro complex	3			WpA		
Zekiah sandy loam	5	Za	Za			Za
Zekiah silt loam	5				Zk	Zk

CHESAPEAKE FOREST/POCOMOKE STATE FOREST: SOIL MANAGEMENT GROUPS

This is a forest management grouping designed specifically for the Chesapeake Forest and Pocomoke State Forest Sustainable Forest Management Plans, based on the soil series descriptions contained in the six county surveys.

Management Group 1 – Poorly and very poorly drained medium textured soils with heavy subsoils.

Soils:
- Annemessex-Manokin complex
- Askecksy loamy sand
- Corsica mucky loam
- Corsica mucky loam, Carolina Bay
- Crosiadore silt loam
- Elkton loam
- Elkton mucky silt loam
- Elkton sandy loam
- Elkton silt loam
- Othello and Kentuck soils
- Othello silt loam
- Othello silt loam, loamy substratum
- Quindocqua silt loam

Description: These are poor and very poorly drained, medium textured soils that have a fine-textured subsoil. They are generally found in broad upland flats, depressions, and swales. Slopes are 0 to 2%. Ponding may occur after heavy rains, and high water table may limit access from December through May. These soils may have seasonal limitations for wetness, but the firm subsoils may allow mechanical operations, particularly with low-impact equipment, that allows them to be managed with intensive forestry methods.

Management Group 2 – Poorly and very poorly drained loam and sandy loam soils with sandy and medium textured subsoils.

Soils:
- Berryland mucky loamy sand
- Corsica and Fallsington soils
- Fallsington loam and sandy loam
- Fallsington-Glassboro complex
- Glassboro loam
- Hurlock loamy sand and sandy loam
- Klej loamy sand
- Klej-Galloway complex
- Klej-Hammonton complex
- Lenni loam and sandy loam
- Mullica-Berryland complex
- Othello-Fallsington complex
- Pone mucky loam and mucky sandy loam

Description: Medium and sandy-textured, poorly and very poorly drained soils on upland flats. Small areas in depressions will pond in very wet periods. Many of these soils lack firm subsoils, and when saturated may be very subject to soil rutting by equipment. This leads to shorter-season access, which may limit their use. With appropriate seasonal scheduling, these soils are suited for intensive forest management.

Management Group 3 – Well drained and moderately well drained sandy and loamy soils that formed in sandy materials and have sandy loam to silty or sandy clay subsoils.

Soils:
- Downer loamy sand and sandy loam
- Fort Mott loamy sand
- Hambrook loam and sandy loam
- Hambrook-Sassafras complex
- Hammonton loamy sand and sandy loam
- Hammonton-Glassboro complex
- Ingleside loamy sand and sandy loam
- Ingleside-Runclint complex
- Keyport fine sandy loam and silt loam
- Manokin silt loam
- Matapeake fine sandy loam and silt loam
- Mattapex fine sandy loam and silt loam
- Nassawango fine sandy loam and silt loam
- Pepperbox-Rockawalkin complex
- Queponco loam and silt loam
- Rockawalkin loamy sand
- Sassafras sandy loam
- Woodstown sandy loam
- Woodstown-Glassboro complex

Description: Well drained soils that are generally better-suited to pine than to hardwoods. These may occur on slopes of 0 to 10 percent. On the steeper slopes erosion potential needs to be addressed. Rutting and soil damage by machine operations

are minor problems and most sites will have good access and operability most of the year. These are the best suited soils for intensive forest management.

Management Group 4 – Deep, sandy soils that are well to excessively well drained.

Soils:	Cedartown loamy sand	Rosedale loamy sand
	Evesboro loamy sand and sand	Runclint loamy sand and sand
	Evesboro-Galestown complex	Runclint-Cedartown complex
	Galestown loamy sand	Runclint-Evesboro complex
	Galestown and Rosedale soils	Udorthents

Description: These sandy soils have few operating limitations due to soil wetness, and can provide sites for mechanical activities during wet seasons. Productivity is low, and some sites may be occupied by Virginia or shortleaf pine. Some may occur in a landscape pattern of sand ridges interspersed with low wet soils or Delmarva Bays, and provide an important habitat type, particularly for herpivores and invertebrates. Some may have slopes of up to 10-15%, which may limit management. Udorthents are soils that have been mechanically altered and may occur mainly as borrow pits, landfills, or other re-worked areas. Intensive forest management is probably limited on many of these soils.

Management Group 5 – Low-elevation, poorly and very poorly drained soils that formed in organic materials. They may lie in flood plains, freshwater wetlands, or areas that can be affected by tidal flooding.

Soils:	Chicone mucky silt loam	Nanticoke and Mannington soils
	Honga peat	Nanticoke silt loam
	Johnston loam	Puckum mucky peat
	Kentuck mucky silt loam	Sunken mucky silt loam
	Kentuck silt loam	Tangier mucky peat
	Longmarsh and Indiantown soils	Transquaking and Mispillion soils
	Manahawkin muck	Zekiah sandy loam and silt loam

Description: These poorly drained soils occupy flood plains and both fresh and brackish marshes. Some lie at elevations where flooding by salt water during high tides or storms is a possibility and trees may be affected by salt spray. The sites are marginal in terms of timber or pulpwood productivity, and access is often very restricted. Many of these areas will be riparian forests and other water-related areas that should be managed primarily for water quality and wildlife purposes.

Other types without Management Groups – Other map units that are too small, are comprised of minor soil types, or are not suitable for forest management.

Soils:	Beaches	Urban Land
	Miscellaneous water	Water

APPENDIX C. SILVILCULTURAL ACTIVITY SUMMARIES

The following summary compares the work scheduled in each annual work plan against the amount of work implemented/completed in the field. Annual Work Plans (AWP's) are developed 18 months in advance of any work being implemented in the field to allow time for an internal departmental and public review process. Activities listed in the AWP's are many times not accomplished due to several unforeseen factors. Rainfall has the greatest effect on limiting the implementation of forestry work on Delmarva each year with wet soil conditions frequently restricting access to approved harvest sites with heavy logging equipment. Another factor that affects commercial forestry practices is the limited number of trained logging crews available to carry out thinning operations. Other types of planned practices, such as site preparation, tree planting, herbicide applications, and fertilization are occasionally not implemented due to changes in the field since the plan was written. An example would be a harvested area that regenerated itself naturally (won't require planting) and experienced little or no competition with undesirable species (won't require herbicide application).

Chesapeake Forest Silvicultural Activity Summary By Annual Work Plan

Workplan Activity	2005		2006		2007		2008		2009		2010		2011		2012		2013		2014*		10 Year Total	
	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.
Final Harvests	378	260	209	202	579	449	244	35	294	47	152		239	256	180	94	81	84	96		***2,452***	***1,427***
Various Select Harvests &/or other treatments					135		52								139	121	22	31			***349***	***152***
First Thinning	2,319	701	1,011	478	1,655	431	1,831	385	1,847	986	1,602	387	924	956	970	729	117	505	451		***12,727***	***5,558***
Second Thinning	584	223	1,382	1,058	579	298	257	30	257	151	113	65	86	299	106	88	55	38	350		***3,769***	***2,250***
Site Preparation	130	89	593	32	135	68	167		106												***1,131***	***189***
Tree Planting	163	69	593	32	135	68	167				42			11		14					***1,100***	***194***
Regeneration Release	101	69	77	29	191	68	199														***568***	***166***
Grass Control	163										42						25				***230***	***-***
Mid Rotation Release	350	196			29		24		160	48											***563***	***244***
Fertilization	350	214							71												***421***	***214***
Natural Regeneration		30		149				87						62		181					***-***	***509***
Pre Commercial Thinning	50	50	24		388	178	573	298	573	197	139		81	94	10		186	125	49	49	***2,073***	***990***
Prescribed Fire	420			217	268	440	47	553	202		76			29		31		48		63	***1,013***	***1,381***
Boundary Maintenance		16,943		2,150		4,552		2,108		12,608		10,945		6,162		3,644					***-***	***59,112***
Restoration Projects	470	200	362		334		26	362					130	130	143	143	328	41			***1,793***	***876***
Watershed Imp. Projects			15		50		20	50	351	351											***436***	***401***
Work within HCVF areas†					2,815	695	1,384	447	1,782	883	1,651	454	1,235	599	566	321	391	380	335		***10,159***	***3,777***

* Acres for FY2014 are part a because act v t es are st ongo ng

† H gh Conservat on Va ue Forests (HCVF) were n t a y dent f ed and des gnated n 2007 on the Chesapeake forest. The current des gnat on nc udes Eco og ca y S gn f cant Areas (ESA) Zone 1 & 2, Core Forest nter or Dwe ng B rd (F DS) Hab tat, Core De marva Fox Squ rre (DFS) Hab tat, and R par an Forested Buffers. Management act v t es w th n the HCVF have been des gned to ma nta n or enhance the attr butes that def ne such forests. Act v t es thus far have nc uded the convers on of ob o y p ne p antat ons to natura m xed forest cond t ons for DFS hab tat or the remova of woody p ant mater a from xer c dune and Caro na bay commun t es (ESA Zone 1 & 2).

The following summary compares the work scheduled in each annual work plan against the amount of work implemented/completed in the field. Annual Work Plans (AWP's) are developed 18 months in advance of any work being implemented in the field to allow time for an internal departmental and public review process. Activities listed in the AWP's are many times not accomplished due to several unforeseen factors. Rainfall has the greatest effect on limiting the implementation of forestry work on Delmarva each year with wet soil conditions frequently restricting access to approved harvest sites with heavy logging equipment. Another factor that affects commercial forestry practices is the limited number of trained logging crews available to carry out thinning operations. Other types of planned practices, such as site preparation, tree planting, herbicide applications, and fertilization are occasionally not implemented due to changes in the field since the plan was written. An example would be a harvested area that regenerated itself naturally (won't require planting) and experienced little or no competition with undesirable species (won't require herbicide application).

Pocomoke State Forest Silvicultural Activity Summary By Annual Work Plan

Workplan Activity	2007		2008		2009		2010		2011		2012		2013		2014		8 Year Total	
	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.
Final Harvests	90	68	115	62	51		105	71	112	24	33	11	149	27	31		**687**	**263**
Various Select Harvests &/or other treatments					64		15	17	19		42		38	47	85		**264**	**64**
First Thinning	127		57		100				305		120	114	623	248	586		**1,918**	**362**
Second Thinning												26	120				**120**	**26**
Site Preparation																	**-**	**-**
Tree Planting		48								15							**-**	**63**
Regeneration Release																	**-**	**-**
Grass Control																	**-**	**-**
Mid Rotation Release																	**-**	**-**
Fertilization																	**-**	**-**
Natural Regeneration		14		77		44		62		43		46					**-**	**285**
Pre Commercial Thinning	36	69	21	20	20		21		59	59			18	18	45	45	**219**	**210**
Prescribed Fire										35		22					**-**	**57**
Boundary Maintenance				2,606				280						100		634	**-**	**3,620**
Restoration Projects													12				**12**	**-**
Watershed Imp. Projects																	**-**	**-**
Work within HCVF areas[†]							53	42	176	23	86	51	181	96	114		**609**	**211**

[*] Acres for FY2014 are part a because act v t es are st ongo ng

[†] H gh Conservat on Va ue Forests (HCVF) were n t a y dent f ed and des gnated n 2007 on the Chesapeake forest. The current des gnat on nc udes Eco og ca y S gn f cant Areas (ESA) Zone 1 & 2, Core Forest Inter or Dwe ng B rd (FIDS) Hab tat, Core De marva Fox Squ rre (DFS) Hab tat, and R par an Forested Buffers. Management act v t es w th n the HCVF have been des gned to ma nta n or enhance the attr butes that def ne such forests. Act v t es thus far have nc uded the convers on of ob o y p ne p antat ons to natura m xed forest cond t ons for DFS hab tat or the remova of woody p ant mater a from xer c dune and Caro na bay commun t es (ESA Zone 1 & 2).

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