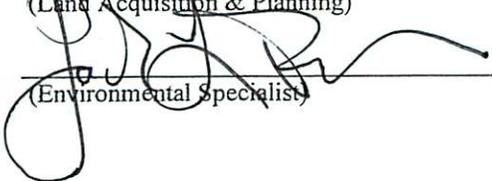


EASTERN REGION
STATE FOREST LANDS
ANNUAL WORK PLAN
FISCAL YEAR 2015

Prepared:	 _____ (Forest Manager)	<u>4/4/14</u> Date
Reviewed:	 _____ (Regional Manager)	<u>4/4/14</u> Date
Reviewed:	 _____ (Land Acquisition & Planning)	<u>5/7/14</u> Date
Approved:	 _____ (Environmental Specialist)	<u>5.9.14</u> Date

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DNR Interdisciplinary Team

Citizens Advisory Committee



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The mark of responsible forestry

Certificate SCS-FM/COC-00069P

FSC Supplier

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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 67,786 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 16,976 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	84,702
(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 species in this community consist of shortleaf pine (*Pinus echinata*), Virginia pine (*Pinus virginiana*), and southern red oak (*Quercus falcata*), with an understory comprised of lowbush blueberry (*Vaccinium pallidum*) and various ericaceous plants. Xeric sand dunes have been identified and mapped as either 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 2015 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, 2014 to June 30, 2015. 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.
- Public Lands Policy & Planning – Provides assistance in the development of plans, facilitates meetings with various management groups, develops Geographic Information System (GIS) maps for public review, and conducts deed research and boundary recovery. Also participates on the ID Team.
- Maryland Conservation Corps (MCC) – Assists in painting boundary lines, installing gates and trash removal.
- State Forest & Park Service – Participates on the ID Team.
- Chesapeake & Coastal Watershed Service – Develops watershed improvement projects, assists in the development of a forest monitoring programs and participates on the ID Team.

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
 - Wicomico Demonstration Forest Trail Marking Project
 - PSF Mountain Bike Trail
 - Algonquin Cross County Trail
 - Mattaponi Soft Boat Launch

Submit and execute Recreational Trails Grants. Appendix A contains copies of the following grant applications for Calendar Year 2013-14:

- Chesapeake Forest/Pocomoke State Forest – Boom Arm & Mower Equipment
- Chesapeake Forest/Pocomoke State Forest – Trail Maps
- Pocomoke State Forest/Pocomoke River State Park – Elevated Path
- Pocomoke State Forest – Chandler tract: Road and trail maintenance and marking, and road abandonment
- Pocomoke State Forest – Milburn Landing Trail Enhancement

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.
- Seek permitting to build a foot bridge across Corker's Creek to connect the trail systems of the Chandler and Colburne tracts. The bridge will use the existing abutments and the historic road. A map and description of the project showing the approximate location of the bridge and trail is located in Appendix E of the FY2014 AWP.
- Continue permitting process for Corker's Creek elevated boardwalk and trail connection to Pocomoke River State Park.

F. SILVICULTURAL PROJECTS

SILVICULTURAL ACTIVITY OVERVIEW

Tables 1 and 2 summarize the proposed silvicultural activities for the 2015 annual work plan on approximately 2,494 acres (3.7%) of the Chesapeake Forest and 300 acres (1.7%) of Pocomoke State Forest, for a total of 2,794 acres (3.3%) on both forests.

Table 2. 2015 Chesapeake Forest Silvicultural Activity Overview.

Activity	Acres
Final Harvest	51.6
First Commercial Thinning	2,036.0
Second Commercial Thinning	330.8
Pre-Commercial Thinning	75.6
Total	2,494.0

Table 3. 2015 Pocomoke State Forest Silvicultural Activity Overview.

Activity	Acres
Variable Retention Harvest	225.5
First Commercial Thinning	74.7
Total	300.2

In addition to the activities shown above, there are two aerial spray applications proposed:

- 22.4 acres for red maple and sweetgum control
- 37.7 acres for one of the second thinning stands

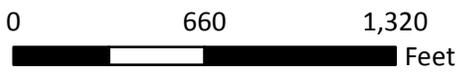
DEFINITIONS OF SILVICULTURAL ACTIVITIES

- **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 to 10 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. 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 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 manufacturer's 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 show each pass of the aircraft and are provided by the contractor to demonstrate precision application. Aerial applications are not allowed over High Conservation Value Forest (HCVF) areas, riparian buffers or wetland areas on the forest.
- **Prescribed Fire** – Prescribed fires are set deliberately by MFS personnel, under proper weather conditions, to achieve a specific management objective. Prescribed fires are used 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.



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

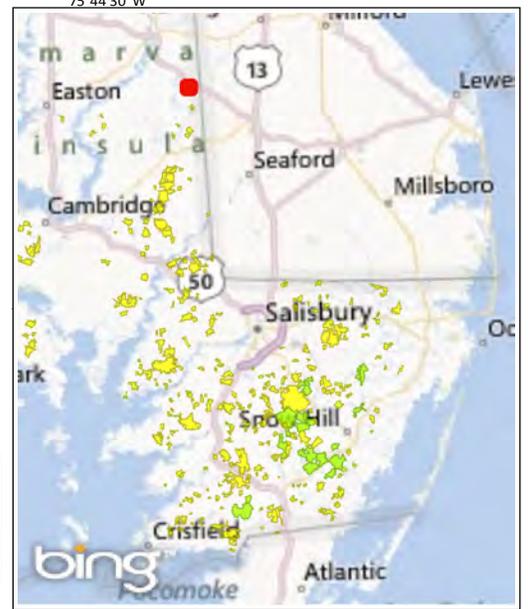
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Caroline County, MD
 C01 - Merrikan Gordy Complex
 FY2015 AWP

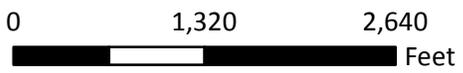
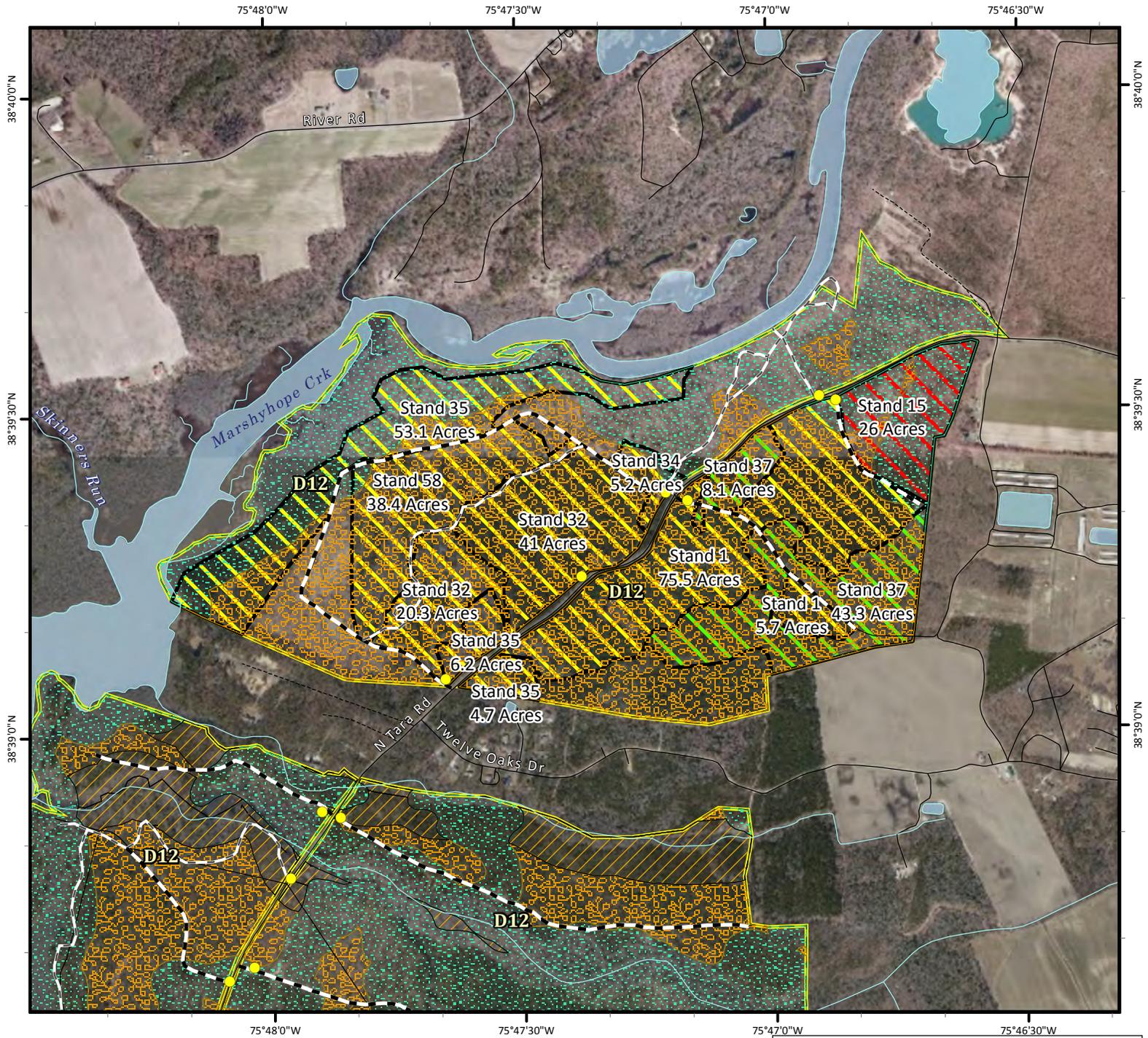
ASC-DNR Forest Service 09/2013



SILVICULTURAL PRESCRIPTIONS & STAND DATA

C01 – MERRIKAN & GORDY

A first thinning is proposed for stands 1 and 2. Stand 1 is an overstocked 30.8 acre loblolly pine plantation that was established 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. It is located in ESA Zone 1, Stream Buffer, and General Management areas. Soil series found in these stands are FgA, HbA, and Za.



1 inch = 1,320 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

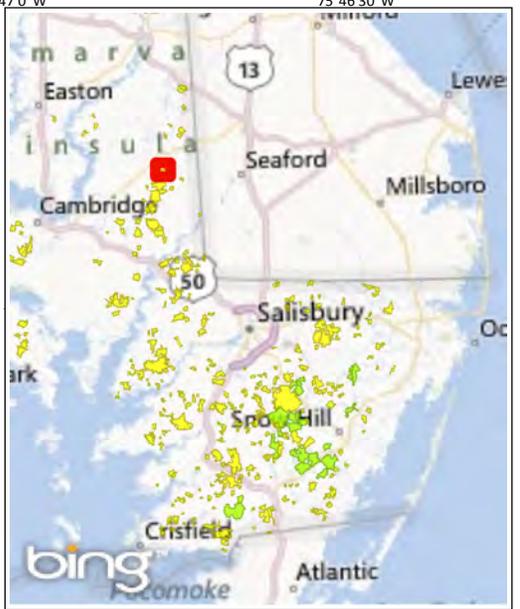
AWP

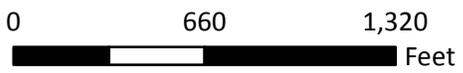
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Dorchester County, MD
 D12 - Marshyhope Complex
 FY2015 AWP

ASC-DNR Forest Service 11/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

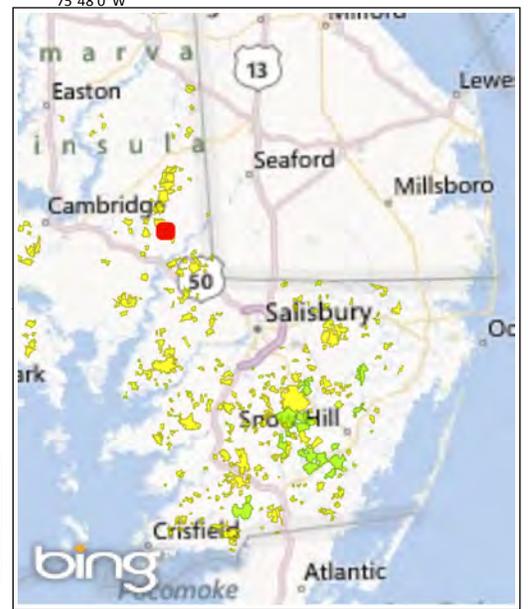
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Dorchester County, MD
 D14 - Indiantown Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



75°51'0"W

75°50'30"W

38°33'0"N

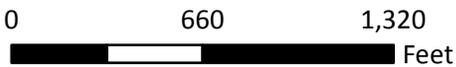
38°33'0"N

38°32'30"N

38°32'30"N

75°51'0"W

75°50'30"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

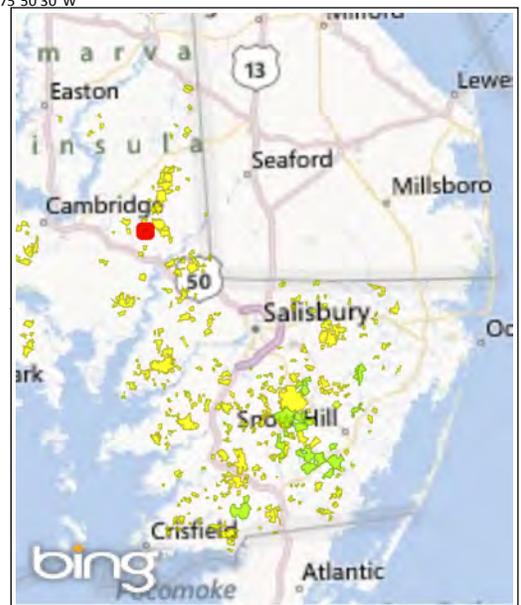
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Dorchester County, MD
 D21 - LeCompte Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



SILVICULTURAL PRESCRIPTIONS & STAND DATA

D12 – MARSHYHOPE

A first thinning is proposed for stands 1, 32, 34, 35, and 58. Stand 1 is an overstocked 81.2 acre loblolly pine plantation that was established in 1994 and sprayed and controlled for grass in 1996. Stand 32 is an overstocked 61.3 acre loblolly pine plantation that was established in 1999. Stand 34 is an overstocked 5.2 acre naturally regenerated loblolly pine stand that was established in 1988. Stand 35 is an overstocked 64 acres naturally regenerated loblolly pine stand that was established in 1950. Stand 58 is an overstocked 38.4 acre loblolly pine stand that was naturally regenerated in 1965. These stands are located in ESA Zone 1, ESA Zone 3 Saw Timber, and DFS Core areas. Soil series found in these stands are EwC, EwE, FmA, GaA, GaB, KgB, PnA, RsA, and RsB.

A second thinning is proposed for stand 37. Stand 37 is an overstocked 51.4 acre loblolly pine plantation that was established in 1980 and first thinned in 1998. It is located in ESA Zone 1, ESA Zone 3 Saw Timber, and DFS Core areas. Soil series found in these stands are EwC, GaA, GaB, RsA, and RsB.

A final harvest is proposed for stand 15. Stand 15 is a 26 acres loblolly pine plantation that was established in 1971, first thinned in 1991, and second thinned in 2008. It is located in ESA Zone 1, ESA Zone 3 Saw Timber, and DFS Core areas. Soil series found in these stands are EwC and GaB.

D14 – INDIANTOWN

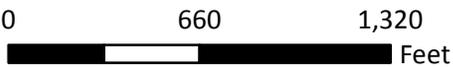
A first thinning is proposed for stand 8. Stand 8 is an overstocked 39.1 acre loblolly pine plantation that was established in 1991. It is located in ESA Zone 3 Pulp Wood and DFS Core areas. Soil series found in this stand are HnA, HvA, and PmA.

D21 – LECOMPTE

A first thinning is proposed for stand 2. Stand 2 is an overstocked 16.4 acre loblolly pine plantation that was established in 1982. It is located in ESA Zone 2, ESA Zone 3 Saw Timber, and DFS Core areas. Soil series found in this stand are HnA, HvA, and PmA.

75°41'0"W

75°40'30"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

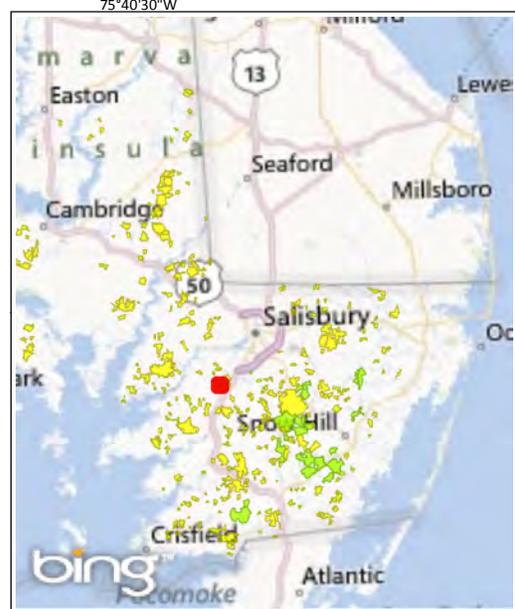
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Somerset County, MD
 S02 - Kemp Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013

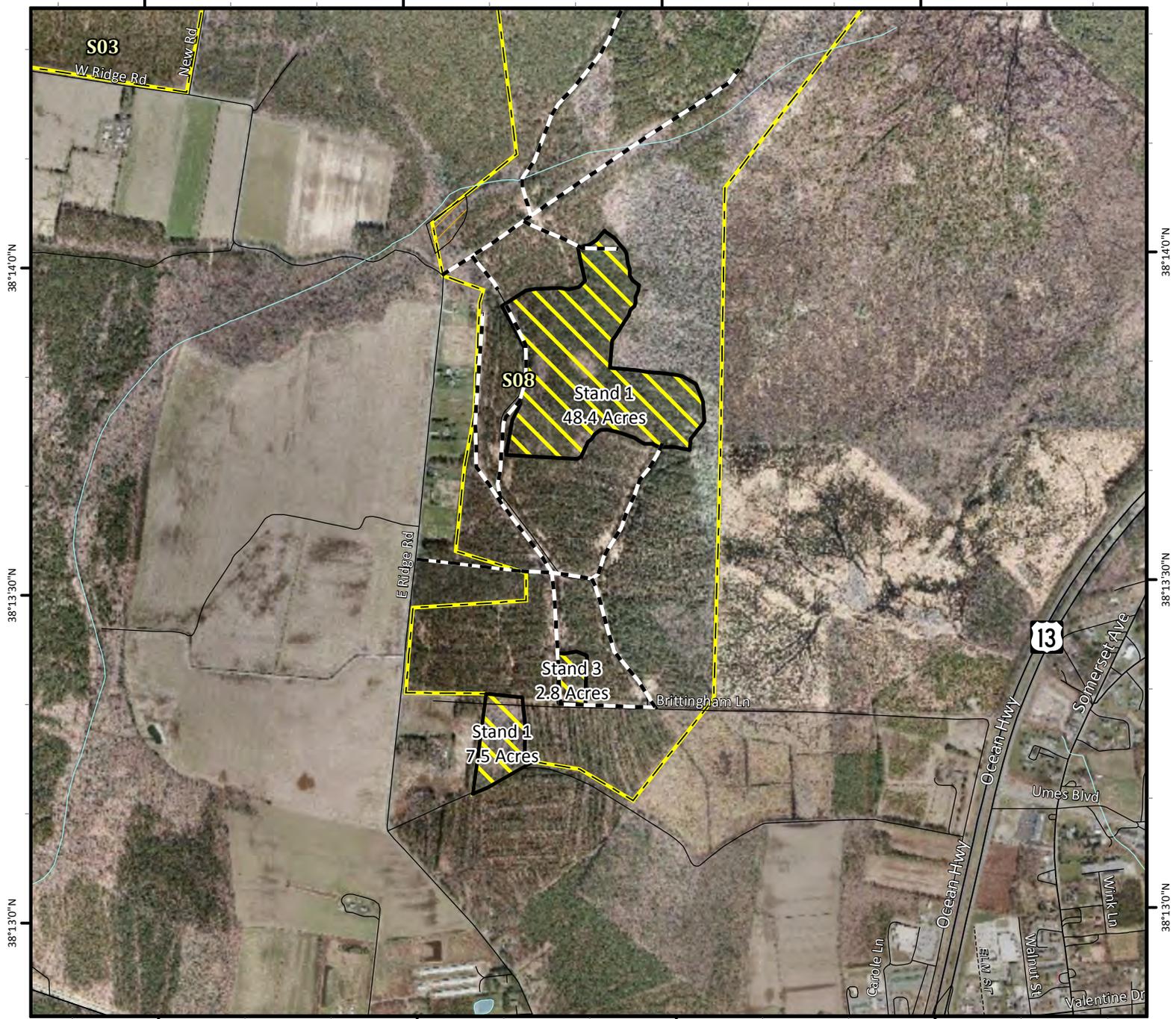


75°43'30"W

75°43'0"W

75°42'30"W

75°42'0"W



38°14'0"N

38°13'30"N

38°13'0"N

38°14'0"N

38°13'30"N

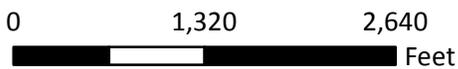
38°13'0"N

75°43'30"W

75°43'0"W

75°42'30"W

75°42'0"W



1 inch = 1,320 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

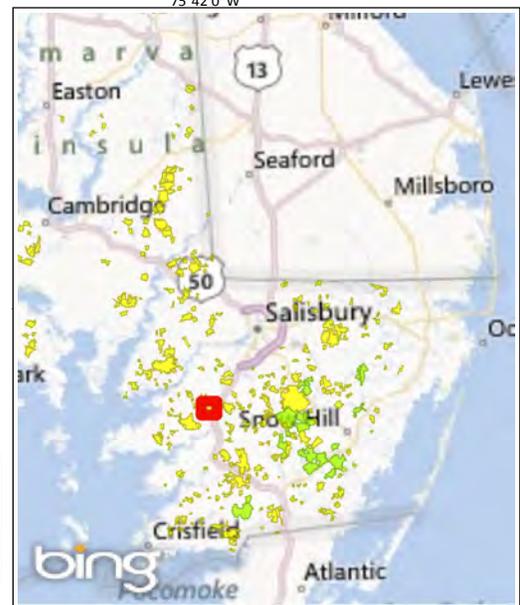
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Somerset County, MD
 S08 - White Pusey Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013

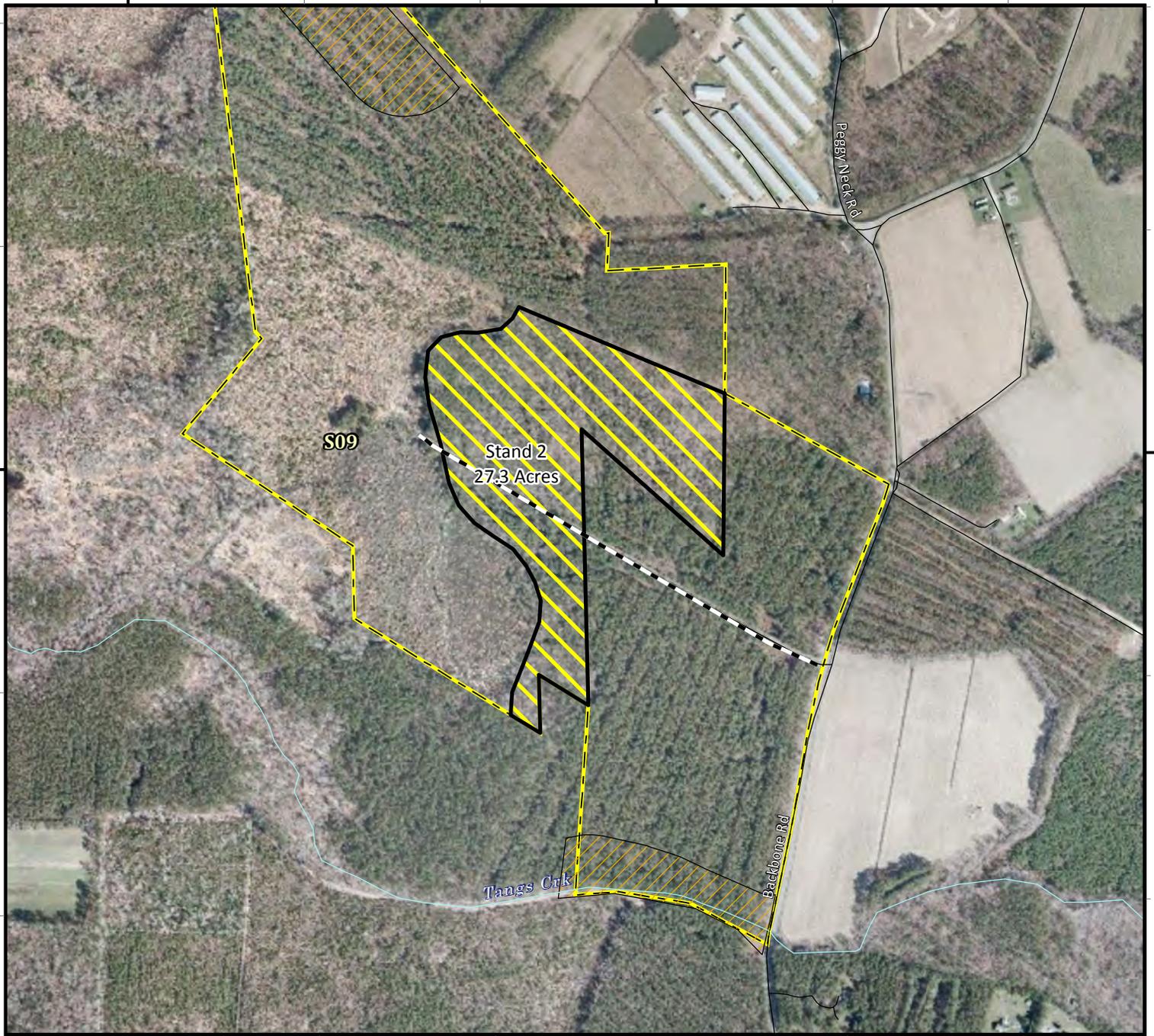


75°39'30"W

75°39'0"W

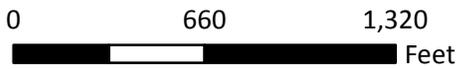
38°15'0"N

38°15'0"N



75°39'30"W

75°39'0"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

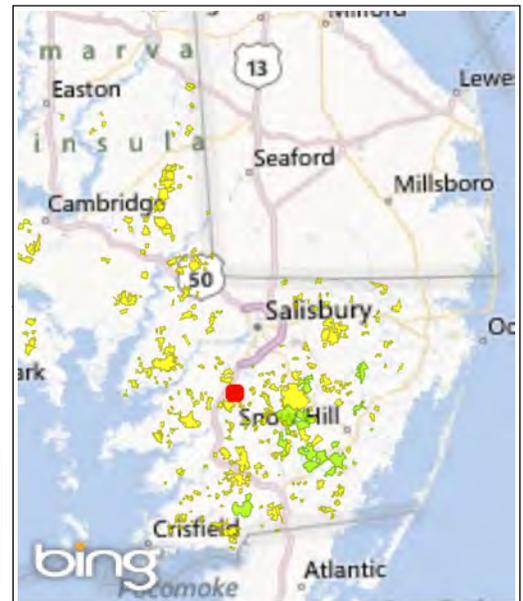
AWP

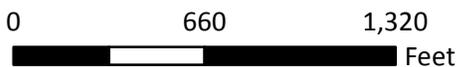
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Somerset County, MD
 S09 - Adkins Porter Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

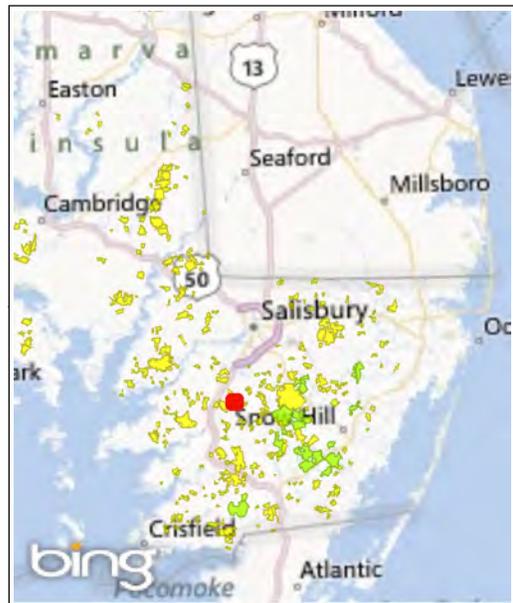
AWP

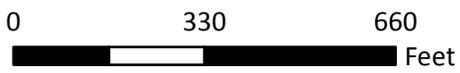
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Somerset County, MD
 S12 - Green Polk Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 330 feet



Legend

Management Zones

-  DFS
-  ESA Z1
-  ESA Z2
-  ESA Z3 Pulpwood
-  ESA Z3 Saw Timber
-  FIDS
-  G3
-  Stream Buffer

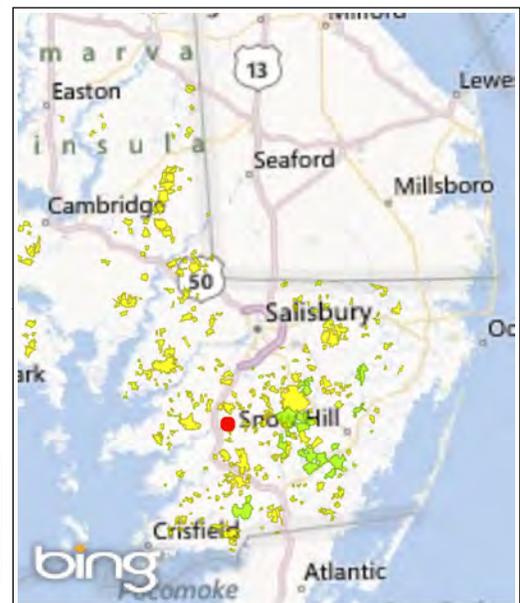
AWP

-  2015 PCT
-  2015 T1
-  2015 T2
-  2015 FH
-  2015 SPR
-  2015 T2 SPR

Chesapeake Forest

Somerset County, MD
 S19 - Freetown Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



75°36'0"W

75°35'30"W

38°10'0"N

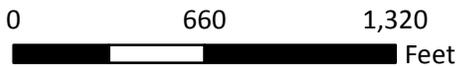
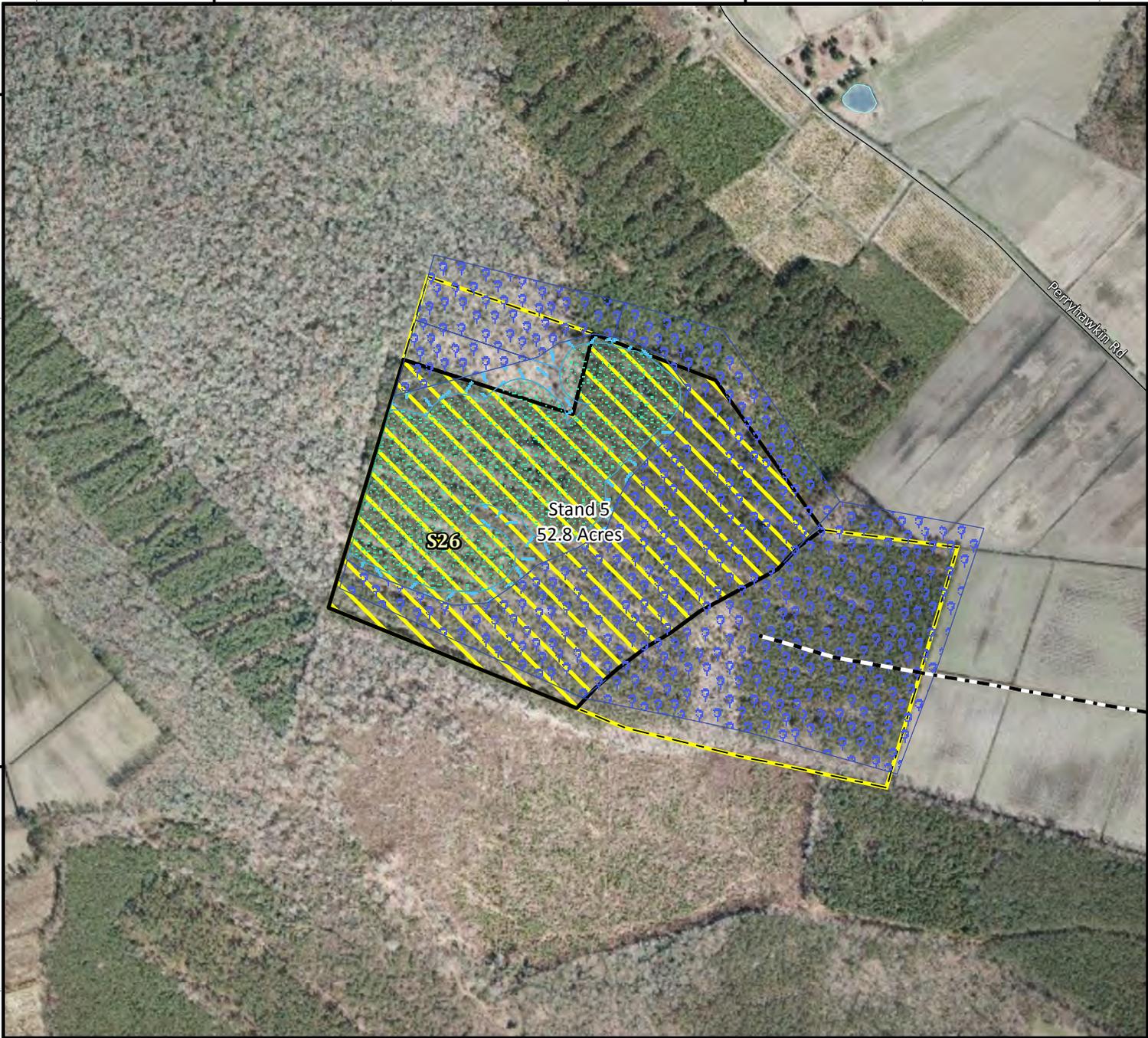
38°10'1.8"N

38°9'30"N

38°9'30"N

75°36'0"W

75°35'30"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

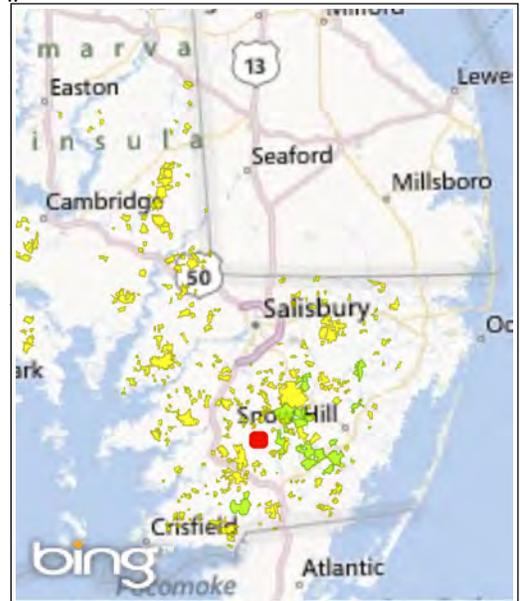
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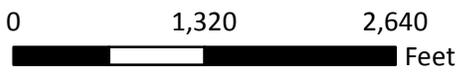
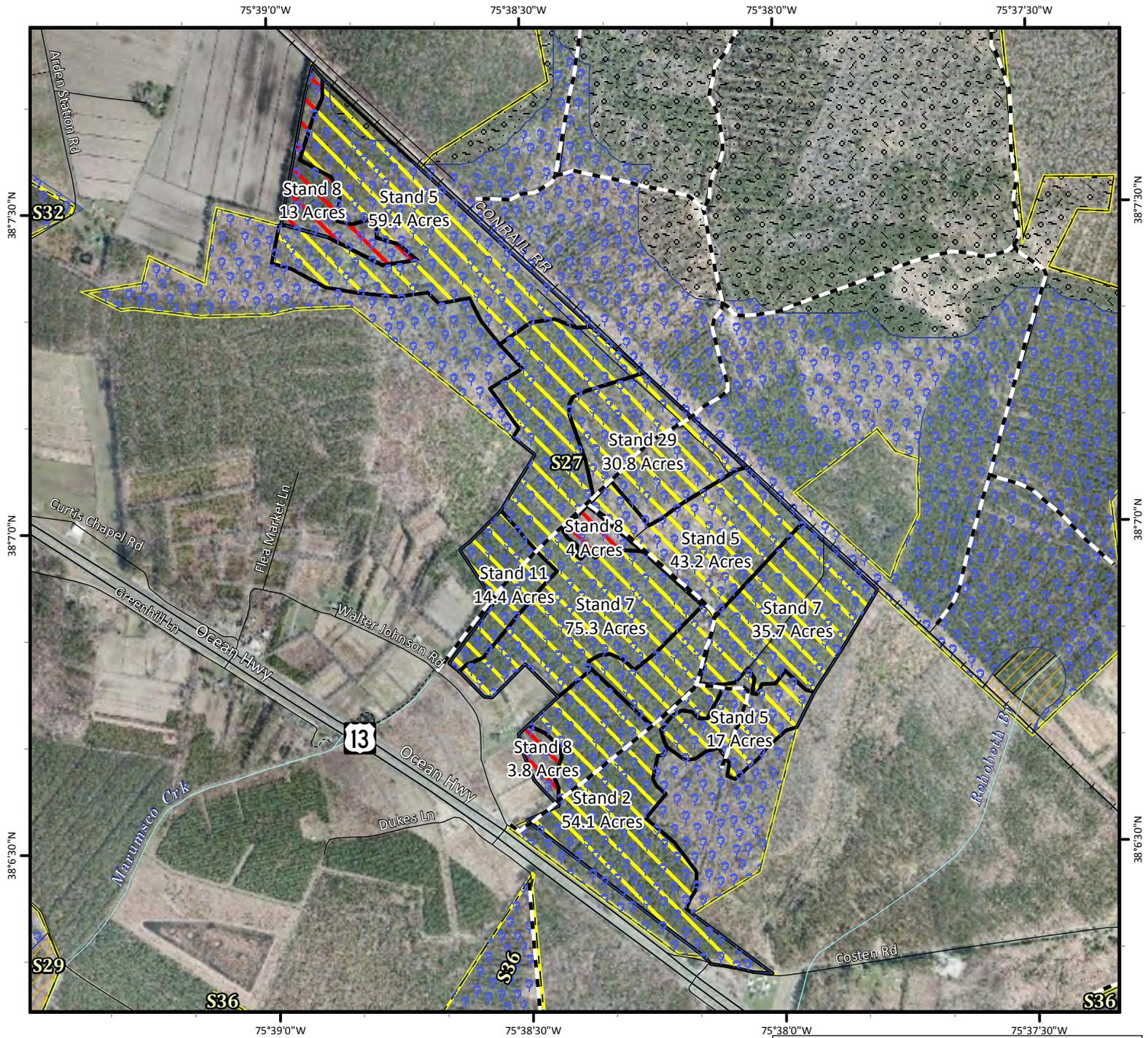
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Somerset County, MD
 S26 - Bonneville Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 1,320 feet



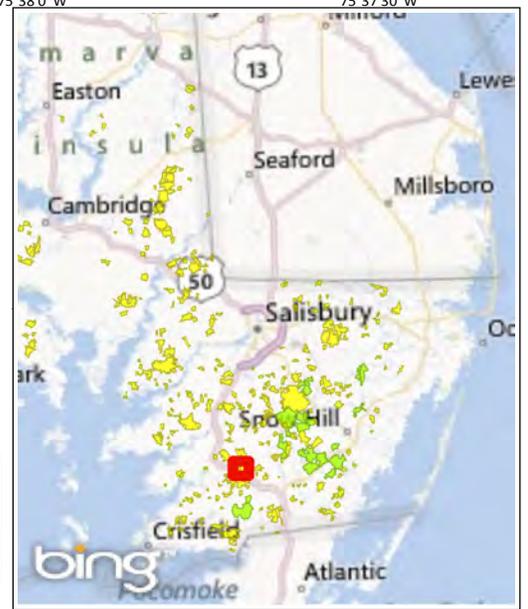
- Legend**
- Management Zones**
- DFS
 - ESA Z1
 - ESA Z2
 - ESA Z3 Pulpwood
 - ESA Z3 Saw Timber
 - FIDS
 - G3
 - Stream Buffer

- AWP**
- 2015 PCT
 - 2015 T1
 - 2015 T2
 - 2015 FH
 - 2015 SPR
 - 2015 T2 SPR

Chesapeake Forest

Somerset County, MD
S27 - Wells Complex
FY2015 AWP

ASC-DNR Forest Service 09/2013



75°39'0"W

75°38'30"W

Kings Crk

Mitchell Rd

Stand 26
4.9 Acres

Stand 25
31.6 Acres

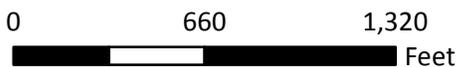
S27

75°39'0"W

75°38'30"W

38°9'0"N

38°9'0"N



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

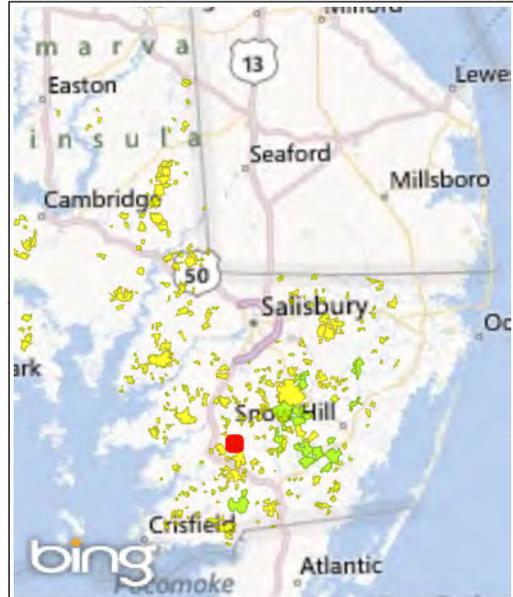
AWP

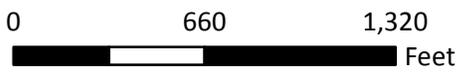
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Somerset County, MD
S27 - Wells Complex
FY2015 AWP

ASC-DNR Forest Service 09/2013





Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

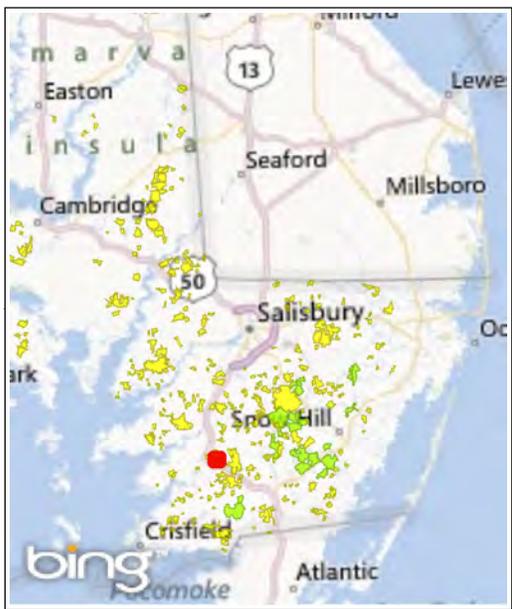
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Somerset County, MD
S30 - Hamlet Complex
FY2015 AWP

ASC-DNR Forest Service 09/2013



75°39'0"W

75°38'30"W

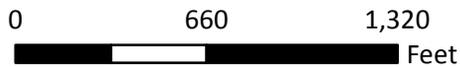


38°5'0"N

38°5'0"N

75°39'0"W

75°38'30"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

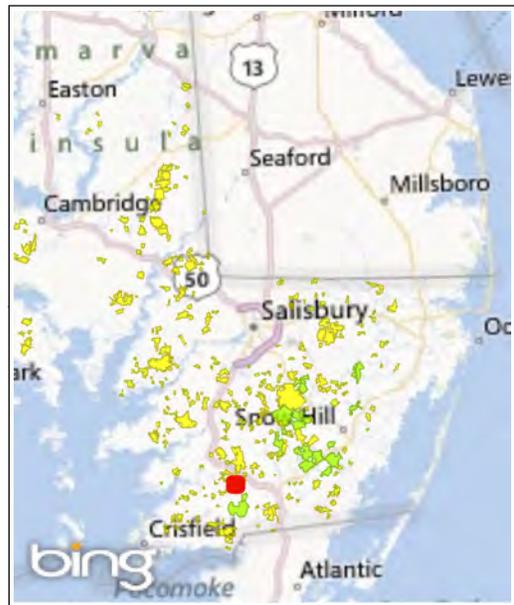
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Somerset County, MD
 S36 - Strickland Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



75°40'0"W

75°39'30"W

38°0'30"N

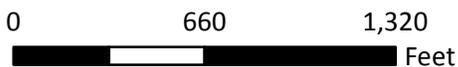
38°0'30"N

38°0'0"N

38°0'0"N

75°40'0"W

75°39'30"W



1 inch = 660 feet



Legend

Management Zones

-  DFS
-  ESA Z1
-  ESA Z2
-  ESA Z3 Pulpwood
-  ESA Z3 Saw Timber
-  FIDS
-  G3
-  Stream Buffer

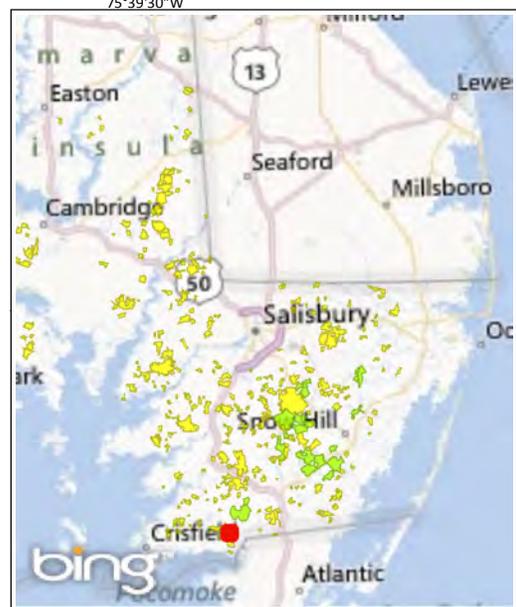
AWP

-  2015 PCT
-  2015 T1
-  2015 T2
-  2015 FH
-  2015 SPR
-  2015 T2 SPR

Chesapeake Forest

Somerset County, MD
 S55 - Marumsco Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



SILVICULTURAL PRESCRIPTIONS & STAND DATA

S02 – KEMP

A first thinning is proposed for stand 8. Stand 8 is an overstocked 65.4 acre loblolly pine plantation that was established in 1992. It is located in ESA Zone 1, ESA Zone 3 Pulp Wood, and DFS Core areas. Soil series found in this stand are FgA, FhA, OoA, QuA, WdA, and WdB.

S08 – WHITE PUSEY

A first thinning is proposed for stands 1 and 3. Stands 1 and 3 are overstocked 58.7 acre loblolly pine plantations that were established in 1985. Both stands are located in a General Management area. Soil series found in these stands are FgA, OKA, OtA, and QuA.

S09 – ADKINS PORTER

A first thinning is proposed for stand 2. Stand 2 is an overstocked 27.3 acre loblolly pine stand that was naturally regenerated in 1988. It is located in a General Management area. Soil series found in this stand are FgA, FhA, MuA, and QuA.

S12 – GREEN POLK

A pre commercial thinning is proposed for stand 6. Stand 6 is an overstocked 40.8 acre loblolly pine plantation that was planted and site prepared in 2008. Residual tree spacing will be 10x10. It is located in a General Management area. Soil series found in this stand are FhA, HmA, HvA, IgB, MdA, and WpA.

A first thinning is proposed for stand 8. Stand 8 is an overstocked 13.1 acre loblolly pine stand that was naturally regenerated in 1988. It is located in a General Management area. Soil series found in this stand are CRA and HvA.

S19 – FREETOWN

A final harvest is proposed for stand 5. Stand 5 is a 4.8 acre loblolly pine stand that was naturally regenerated in 1930. It is located in a General Management area. The soil series found in this stand is QuA.

S26 – BONNEVILLE

A first thinning is proposed for stand 5. Stand 5 is an overstocked 52.8 acre loblolly pine plantation that was established in 1988. It is located in ESA Zone 1, ESA Zone 3 Pulp Wood, and DFS Core areas. Soil series found in this stand are FhA, HvA, IgB, MuA, and QuA.

S27 – WELLS

A first thinning is proposed for stands 2, 5, 7, 11, 25, and 26. Stand 2 is an overstocked 54.1 acre loblolly pine stand that was naturally regenerated in 1989 and controlled for grass in 1995. Stand 5 is an overstocked 119.6 acre loblolly pine stand that was naturally regenerated in 1994. Stand 7 is an overstocked 111 acre loblolly pine plantation that was established in 1993 and controlled for grass in 1995. Stand 11 is an overstocked 14.4 acre

loblolly pine plantation that was established in 1991 and was controlled for grass in 1995. Stand 25 is an overstocked 31.6 acre loblolly pine plantation that was established in 1992. Stand 26 is an overstocked 4.9 acre loblolly pine plantation that was established in 1992. Stands 2, 5, 7, and 11 are located in DFS Core management areas. Stands 25 and 26 are located in Core FIDS management areas. Soil series found in these stands are FgA, OKA, OoA, and QuA.

A first thinning is proposed for stand 29. Stand 29 is an overstocked 30.8 acre loblolly pine plantation that was established in 1982. This stand is located in a DFS Core management area. Soil series found in this stand are OKA and QuA.

A final harvest is proposed for stand 8. Stand 8 is comprised of three loblolly pine stands that total 20.8 acres that were naturally regenerated in 1955. This stand is located in a DFS Core management area. Soil series found in this stand are FgA, OKA, and QuA.

S30 – HAMLET

A pre commercial thinning is proposed for stand 15. Stand 15 is an overstocked 34.8 acre loblolly pine stand naturally regenerated in 2005 and sprayed for release in 2005. Residual tree spacing will be 10x10. It is located in a DFS Core management area, so any oaks and mast producing species will be retained and favored over loblolly pine. Soil series found in this stand are FgA, OKA, and QuA.

S36 – STRICKLAND

A second thinning is proposed for stand 3. Stand 3 is an overstocked 70.2 acre loblolly pine plantation that was established in 1982 and first thinned in 2000. It is located in DFS Core and Stream Buffer management areas. Soil series found in this stand are AoB, FgA, LO, and QuA.

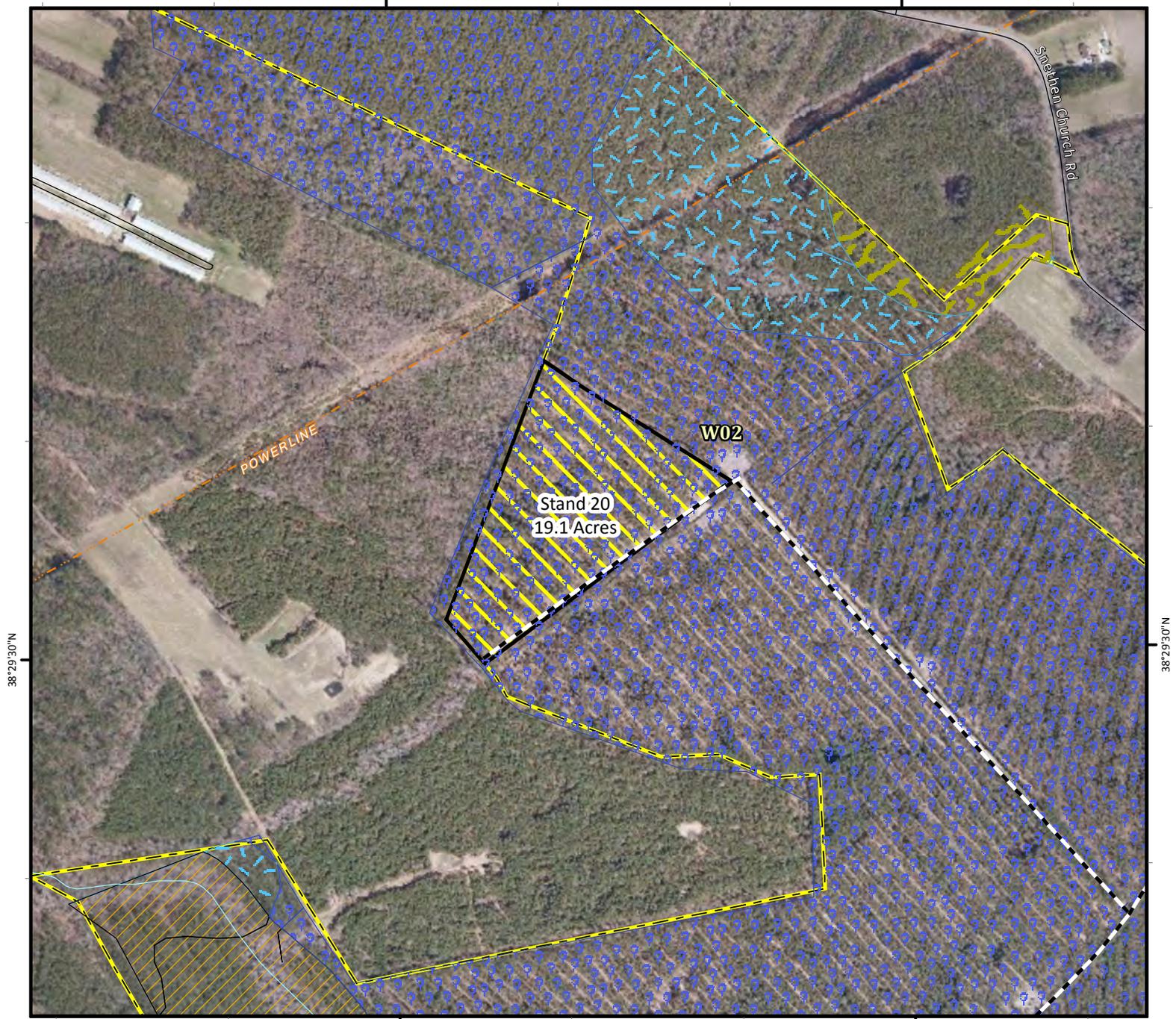
A first thinning is proposed for stand 10. Stand 10 is an overstocked 21.6 acre loblolly pine plantation that was established in 1990 and controlled for grass in 1992. It is located in DFS Core and Stream Buffer management areas. Soil series found in this stand are AoB and QuA.

S55 – MARUMSCO

A first thinning is proposed for stand 10. Stand 10 is an overstocked 27.1 acre loblolly pine plantation that was established in 1994 and released and grass controlled in 1995. It is located in a General Management area. Soil series found in this stand are OKA and QuA.

75°44'30"W

75°44'0"W

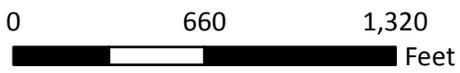


38°29'30"N

38°29'30"N

75°44'30"W

75°44'0"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

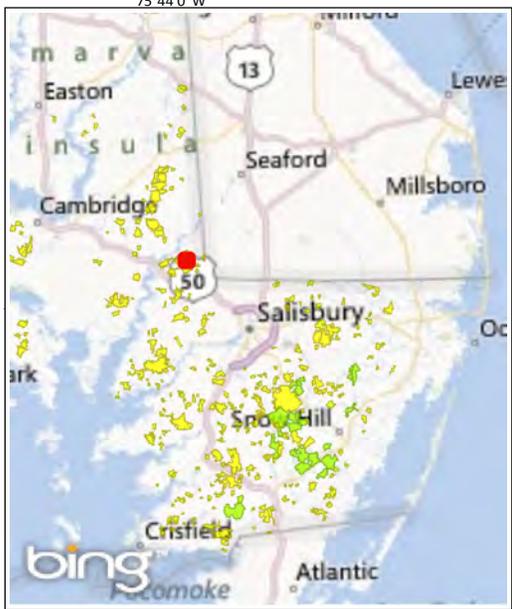
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Wicomico County, MD
 W02 - Aughty Naughty Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



75°45'30"W

75°45'0"W

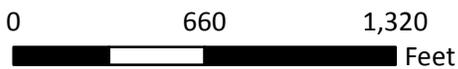
38°23'30"N

38°23'30"N



75°45'30"W

75°45'0"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

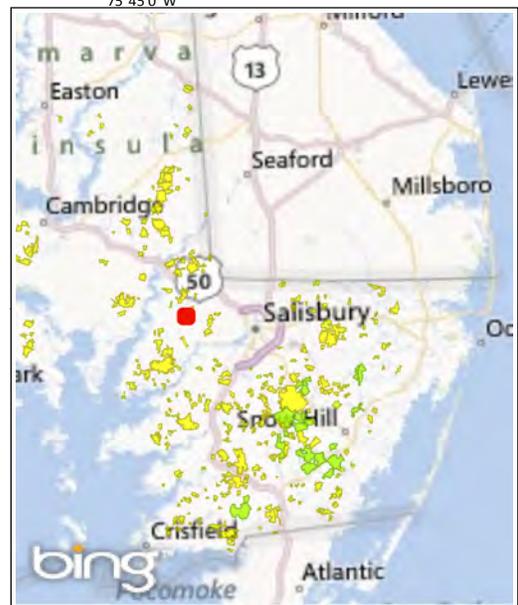
AWP

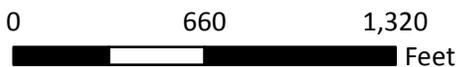
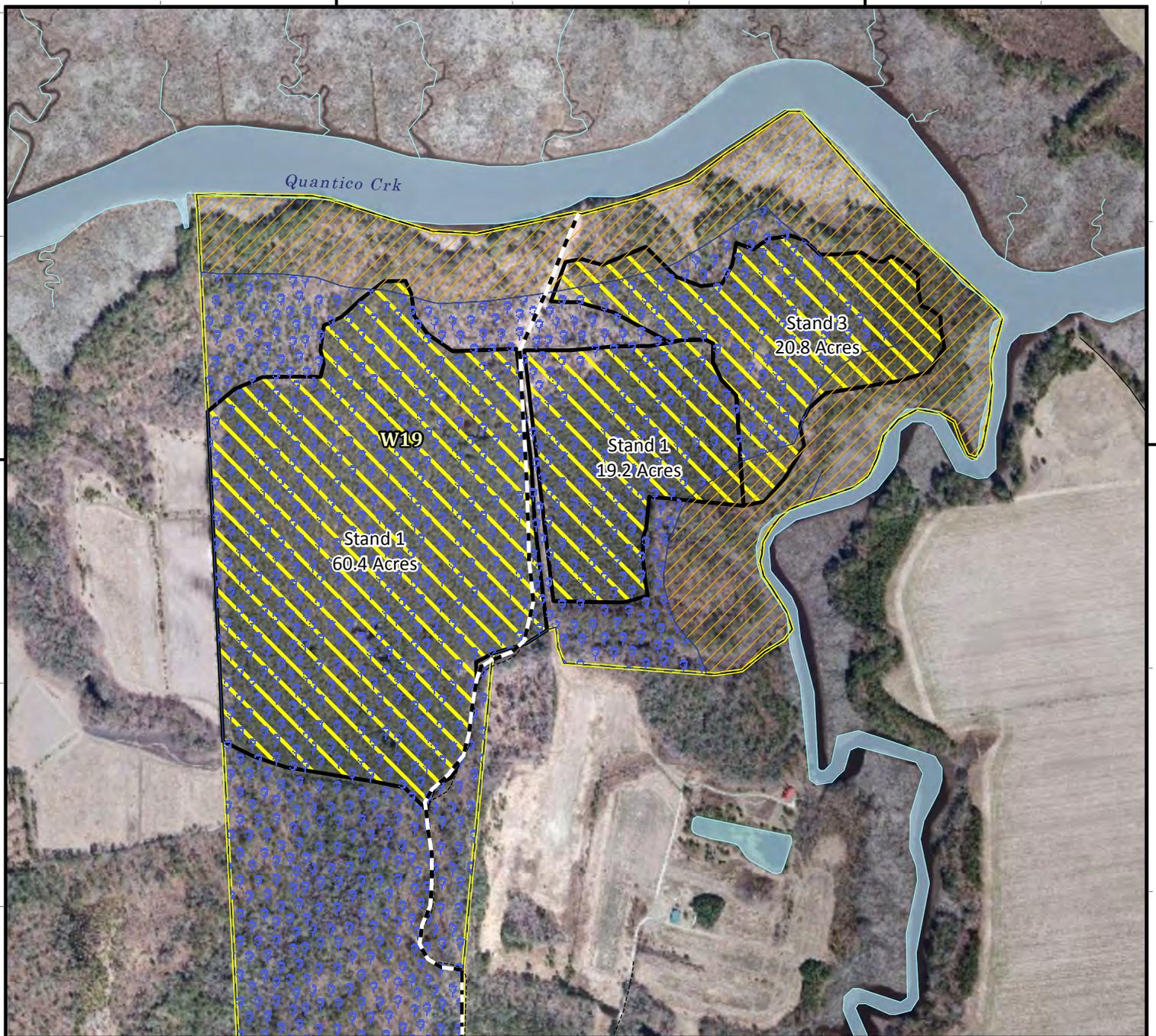
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Wicomico County, MD
 W14 - Helmick Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

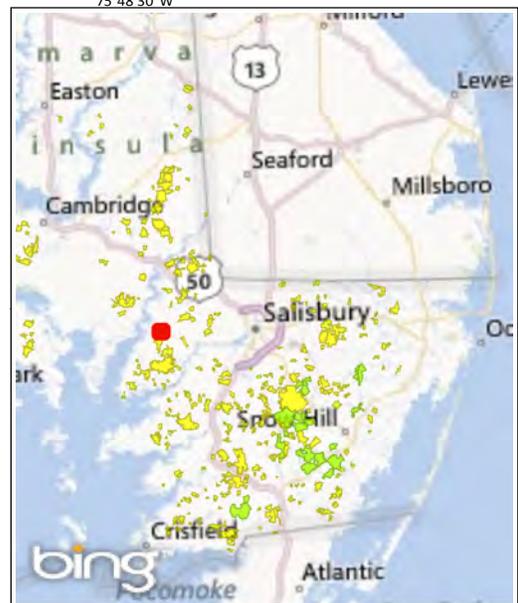
AWP

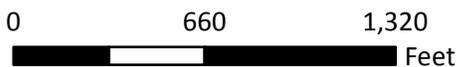
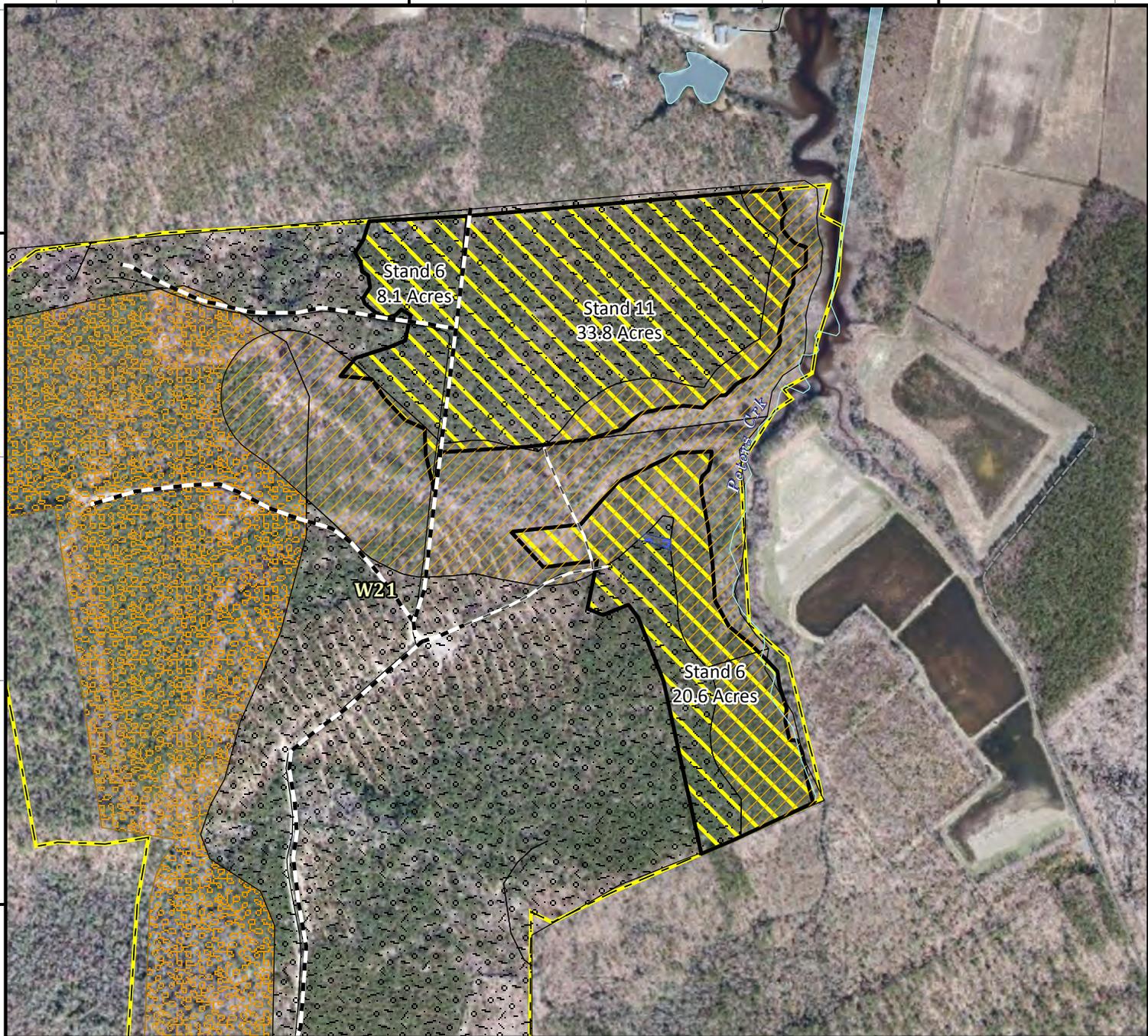
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Wicomico County, MD
 W19 - King's Misfortune Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

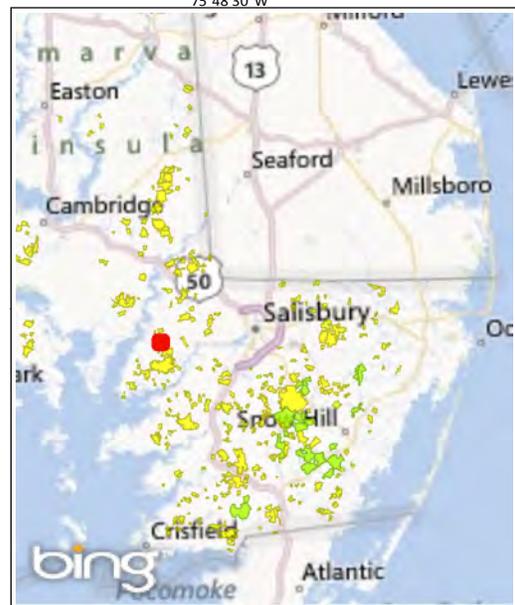
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Wicomico County, MD
 W21 - Louis Horner Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



75°42'0"W

75°41'30"W

38°18'0"N

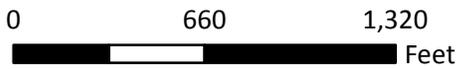
38°18'0"N

38°17'30"N

38°17'30"N

75°42'0"W

75°41'30"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

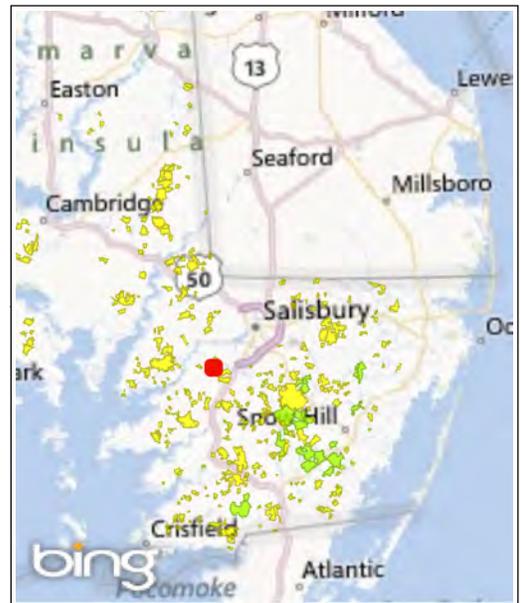
AWP

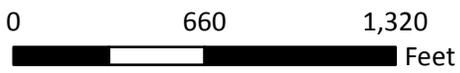
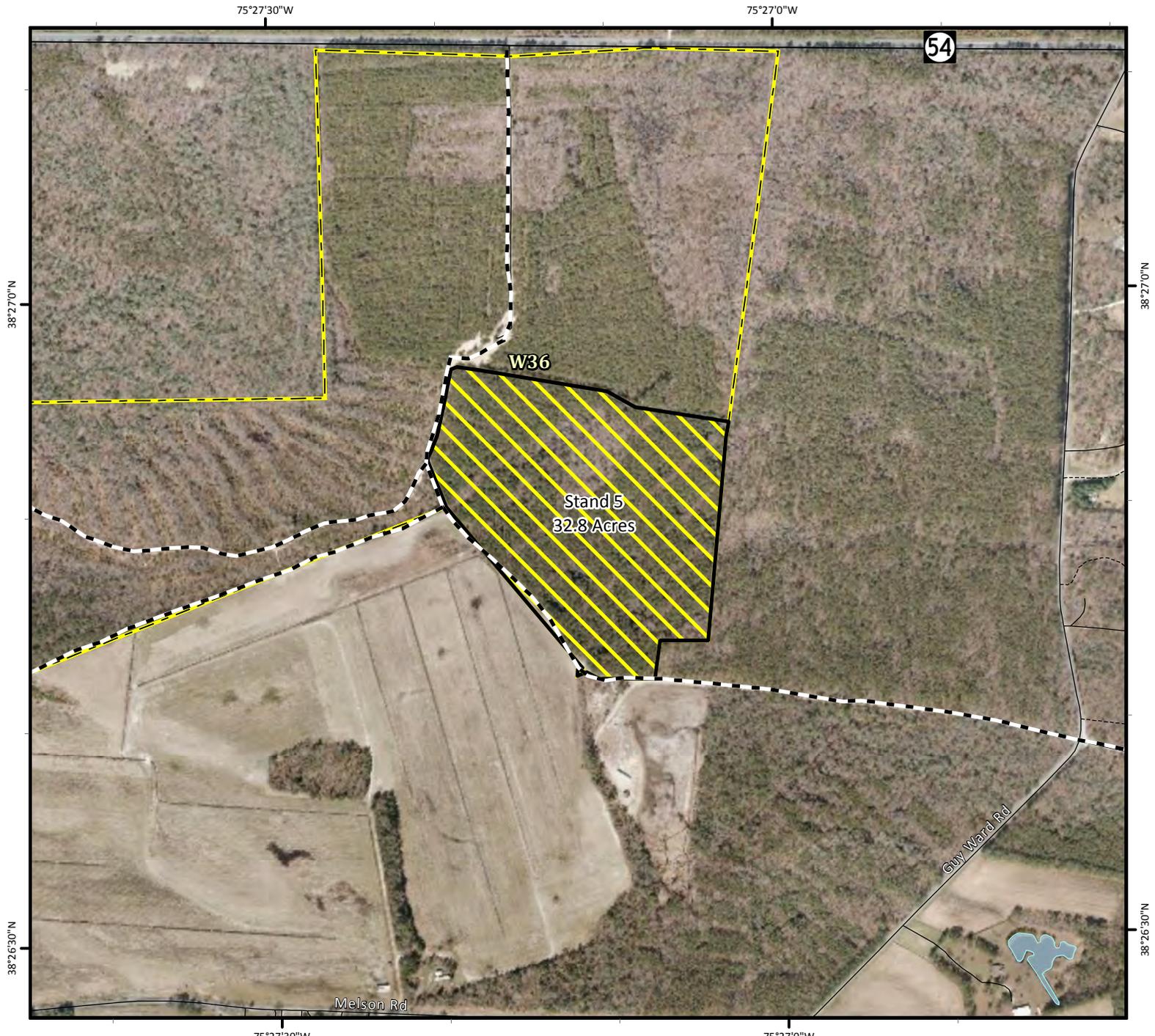
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Wicomico County, MD
 W33 - Phillips Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

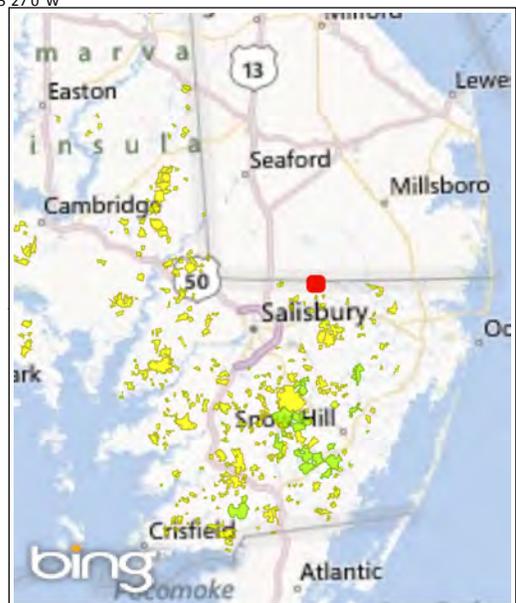
AWP

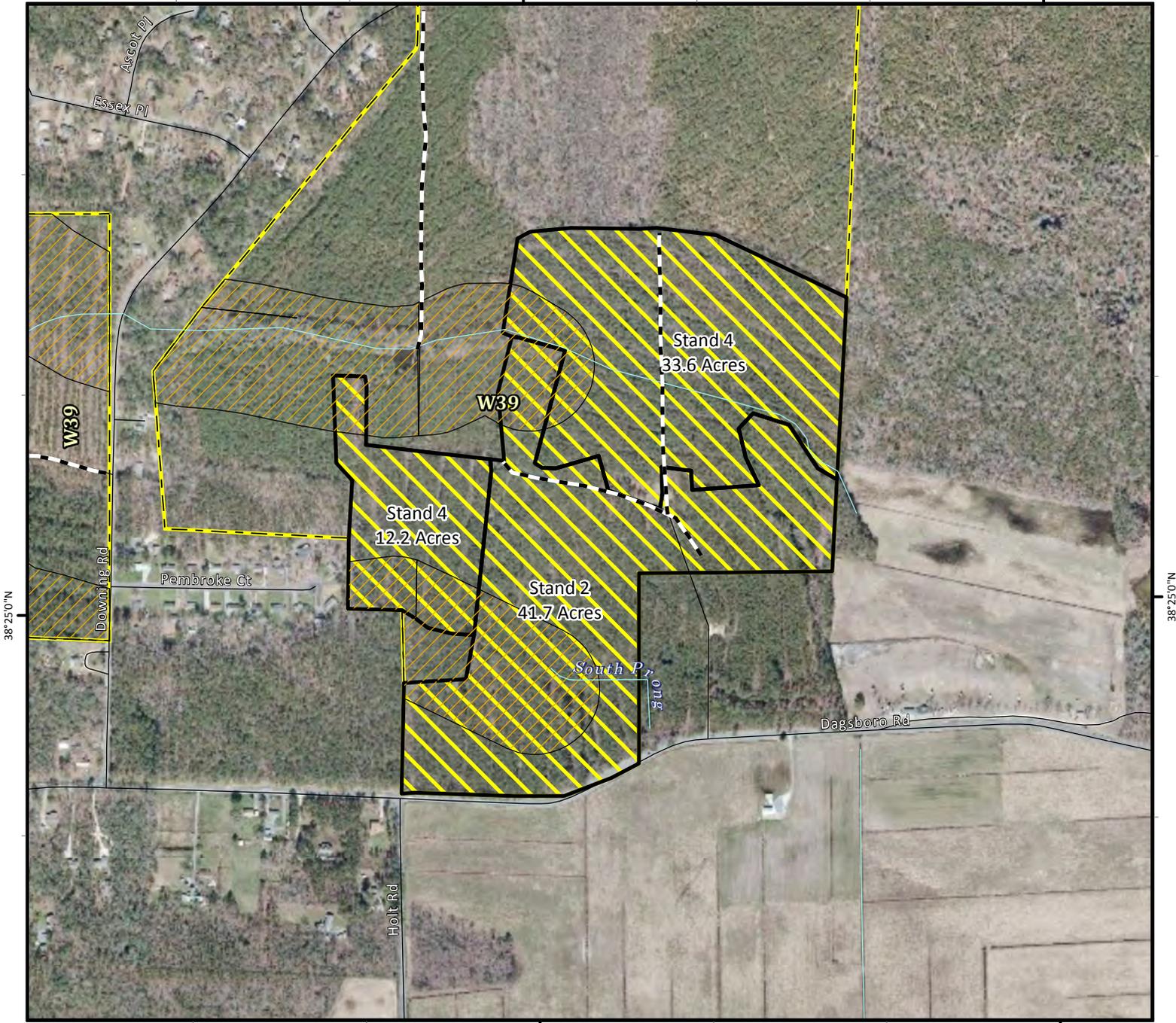
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Wicomico County, MD
 W36 - Sturgess Complex
 FY2015 AWP

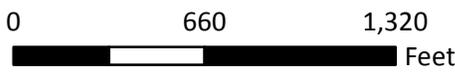
ASC-DNR Forest Service 09/2013





38°25'0"N

38°25'0"N



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

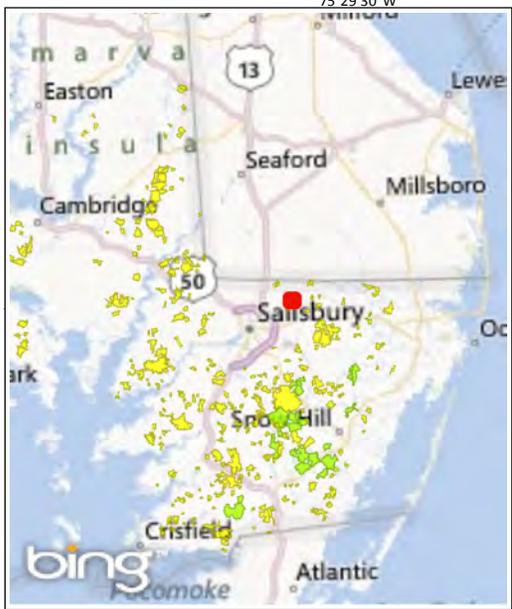
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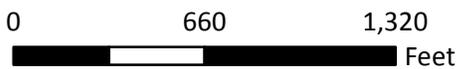
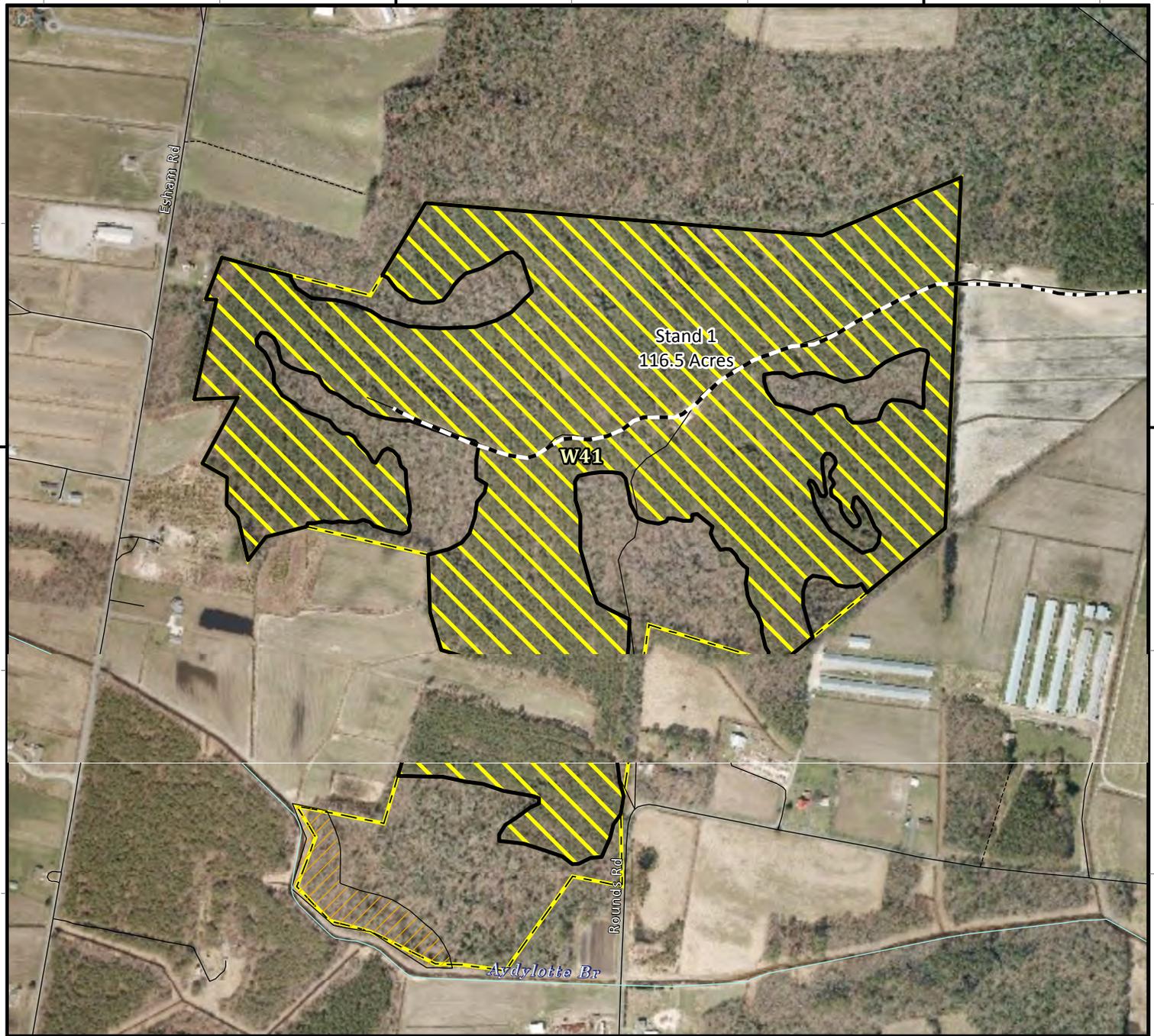
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Wicomico County, MD
 W39 - Dr. Dick Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

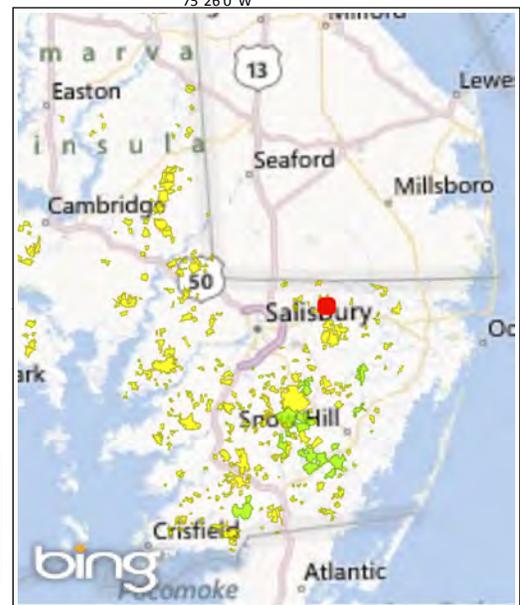
AWP

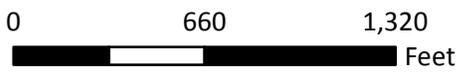
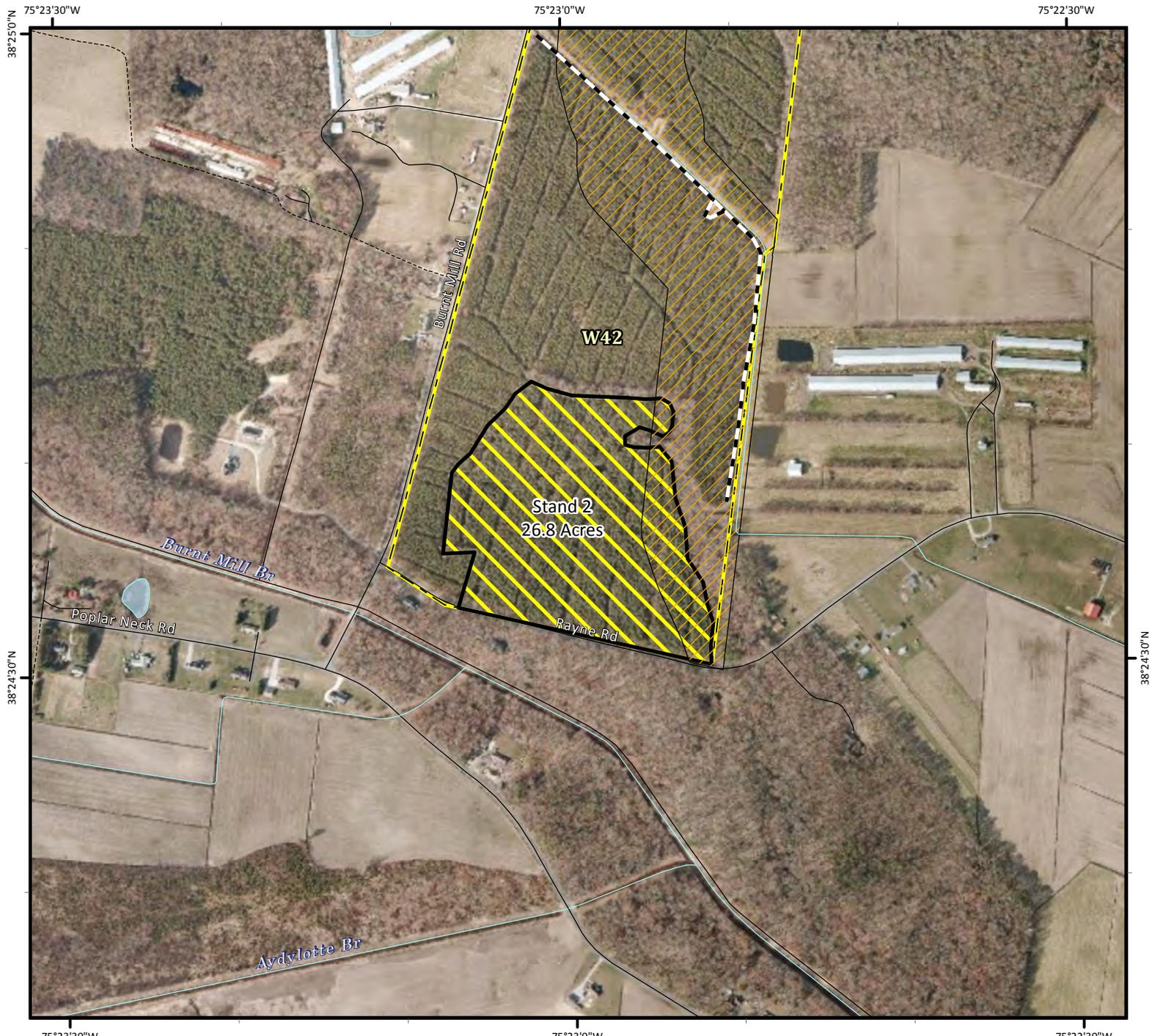
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Wicomico County, MD
 W41 - Addie Davis Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

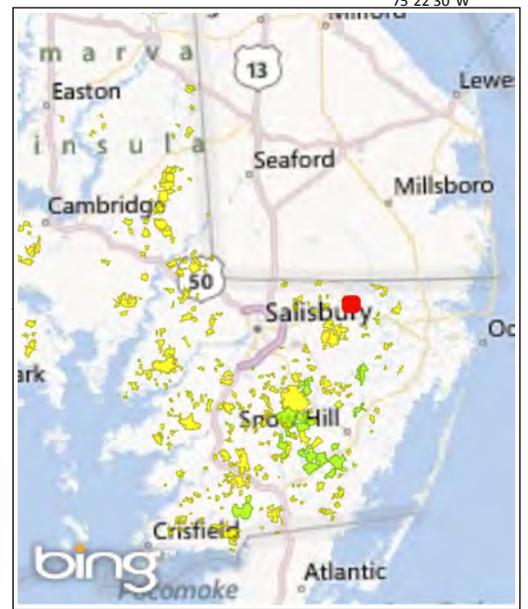
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Wicomico County, MD
 W42 - Hearn Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



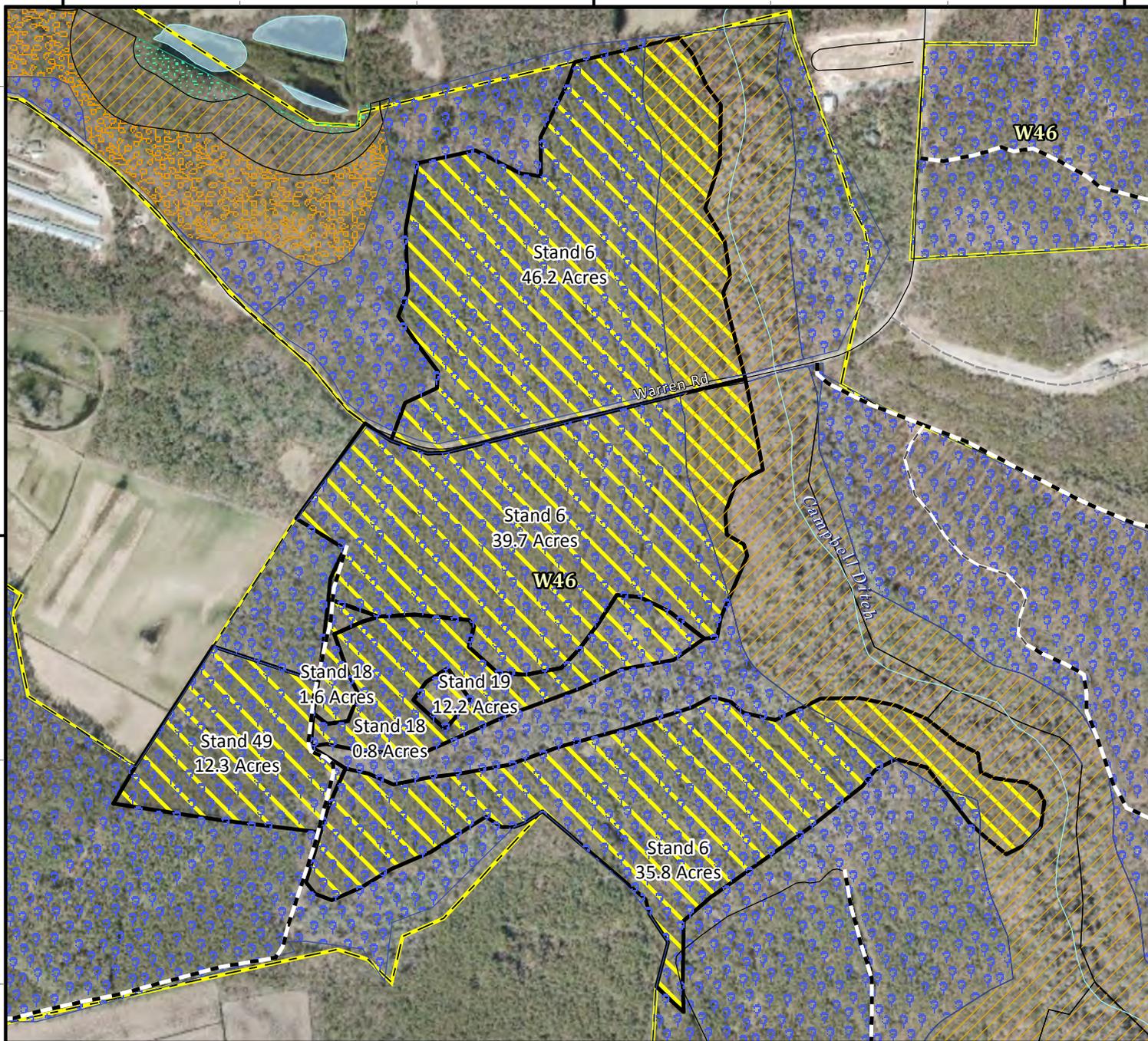
75°25'30"W

75°25'0"W

75°24'30"W

38°22'0"N

38°22'0"N



75°25'30"W

75°25'0"W

75°24'30"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

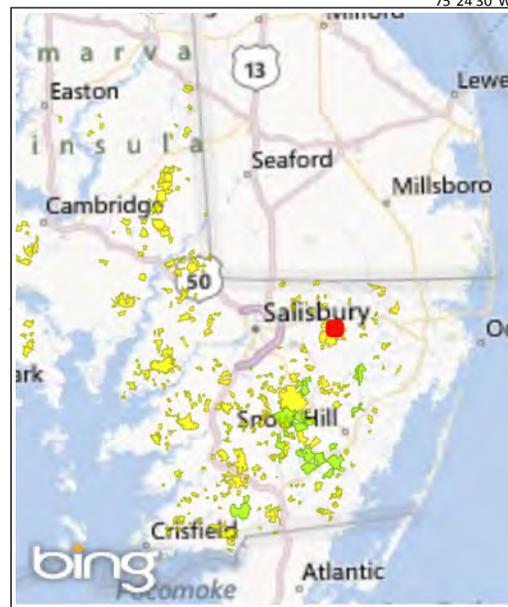
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Wicomico County, MD
 W46 - Campbell Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



SILVICULTURAL PRESCRIPTIONS & STAND DATA

W02 – AUGHTY NAUGHTY

A first thinning is proposed for stand 20. Stand 20 is an overstocked 19.1 acre loblolly pine plantation that was established in 1987 and controlled for grass in 1989. It is located in a DFS Future Core area. Soil series found in this stand are HvA, LgB, MuA, and Rwb.

W14 – HELMICK

A first thinning is proposed for stand 9. Stand 9 is an overstocked 22.8 acre loblolly pine plantation that was established in 1992. It is located in a General Management area. The soil series found in this stand is OtA.

W19 – KING'S MISFORTUNE

A first thinning is proposed for stands 1 and 3. Stand 1 is an overstocked 79.6 acre loblolly pine plantation that was established in 1994 and controlled for grass in 1996. Stand 3 is an overstocked 20.8 acre loblolly pine plantation that was established in 1988 and was controlled for grass in 1991. Both stands are located in DFS Future Core and Stream Buffer areas. Soil series found in these stands are AsA, CdA, EwC, HnA, HvA, Kgb, RuA, and Rwa.

W21 – LOUIS HORNER

A first thinning is proposed for stands 6 and 11. Stands 6 and 11 are overstocked 62.5 acre loblolly pine plantations that were established in 1992. Both stands are located in Core FIDS, DFS Future Core, and Stream Buffer areas. Soil series found in these stands are HnA, HvA, IaA, IbB, Kgb, MuA, OtA, Rwb, and Zk.

W33 – PHILLIPS

A first thinning is proposed for stand 2. Stand 2 is an overstocked 44 acre loblolly pine plantation that was established in 1988. It is located in a DFS Core area. Soil series found in this stand are CoA, FaA, and HbB.

W36 – STURGESS

A first thinning is proposed for stand 5. Stand 5 is an overstocked 32.8 acre loblolly pine plantation established in 1991. It is located in a General Management area. Soil series found in this stand are EwB, HvA, Kgb, MuA, RsB, and RuB.

W39 – DR. DICK

A first thinning is proposed for stands 2 and 4. Stand 2 is an overstocked 41.7 acre loblolly pine plantation established in 1992. Stand 4 is an overstocked 45.8 acre loblolly pine plantation established in 1988. Both stands were controlled for grass in 1994. Both stands are located in Stream Buffer and General Management areas. Soil series found in these stands are BhA, CoA, Kgb, LgA, MuA, PrA, PrB, and RkA.

W41 – ADDIE DAVIS

A first thinning is proposed for stand 1. Stand 1 is an overstocked 116.5 acre loblolly pine plantation established in 1993 and controlled for grass in 1995. It is located in a General Management area. Soil series found in this stand are BhA, HvA, KgB, and RsA.

W42 – HEARN

A first thinning is proposed for stand 2. Stand 2 is an overstocked 26.8 acre loblolly pine plantation established in 1995 and released in 2000. It is located in Stream Buffer and General Management areas. Soil series found in this stand are AsA, FaA, and KgB.

W46 – WICOMICO DEMONSTRATION FOREST/CAMPBELL

A first thinning is proposed for stands 6, 18, 19, and 49. Stand 6 is an overstocked 121.7 acre loblolly pine plantation that was established in 1992 and controlled for grass in 1994. Stand 18 is an overstocked 2.4 acre loblolly pine plantation that was established in 1969. Stand 19 is an overstocked 12.2 acre loblolly pine plantation that was established in 1972. Stand 49 is an overstocked 12.3 acre loblolly pine plantation that was established in 1985 and pre commercially thinned in 1991. These stands are located in a DFS Future Core and Stream Buffer area. Soil series found in these stands are BhA, KgB, MuA, RsB, and Zk.



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

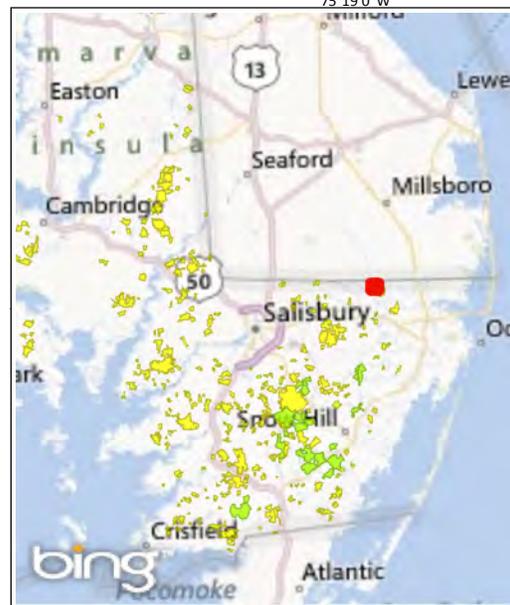
AWP

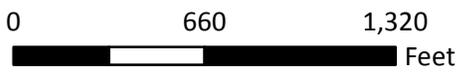
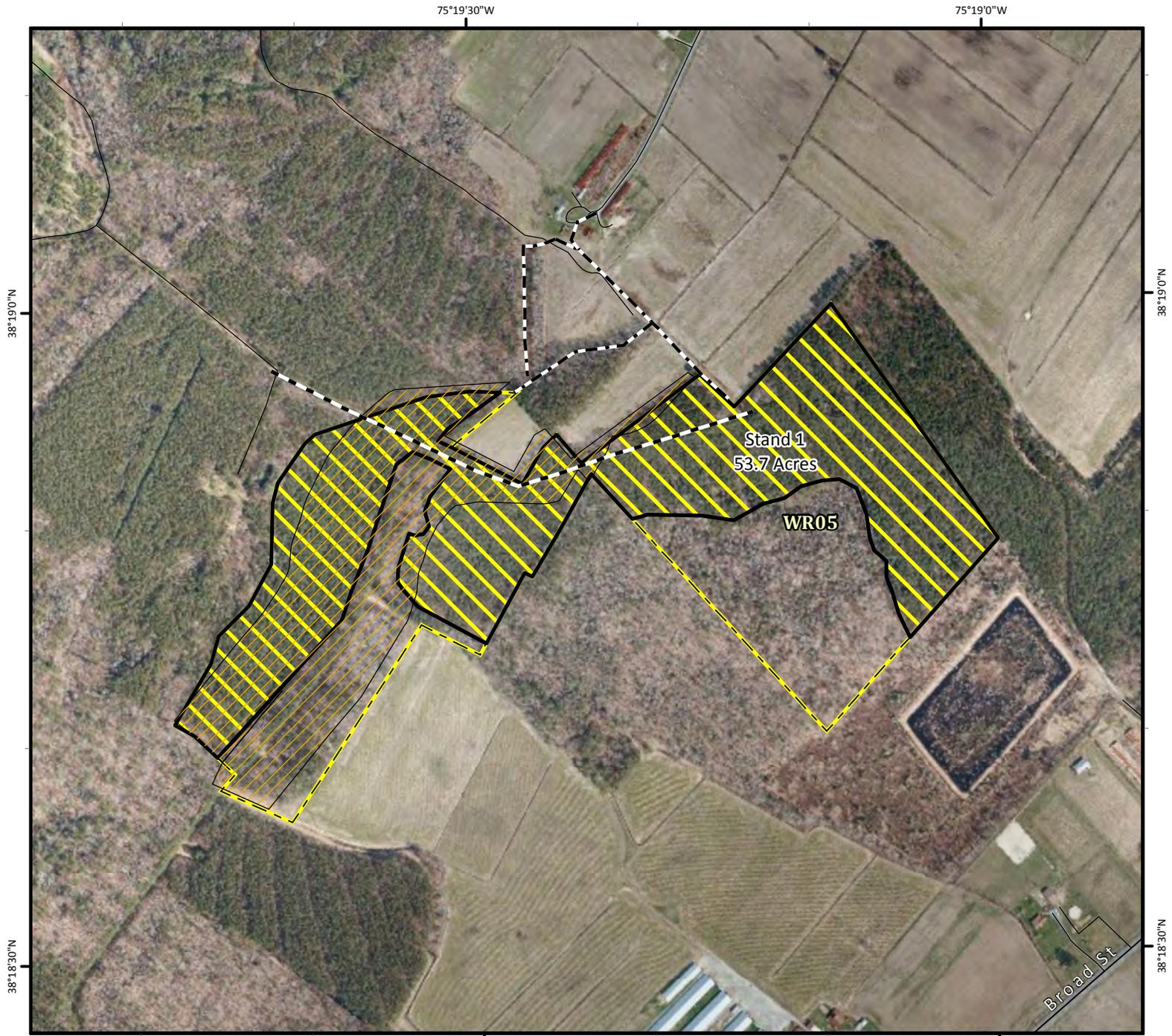
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Worcester County, MD
 WR01 - Timmons Donaway Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

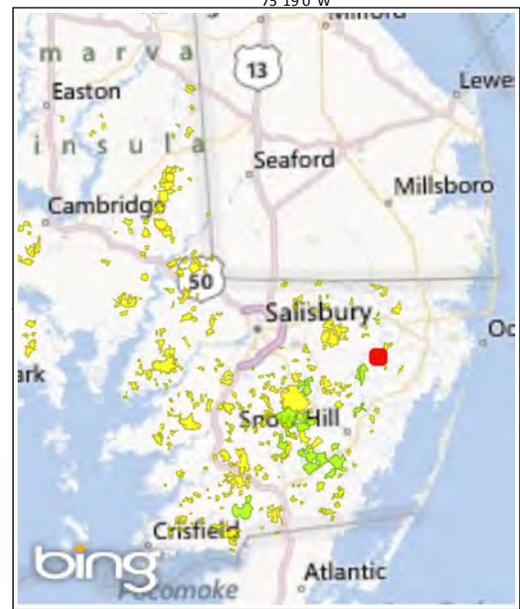
AWP

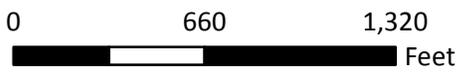
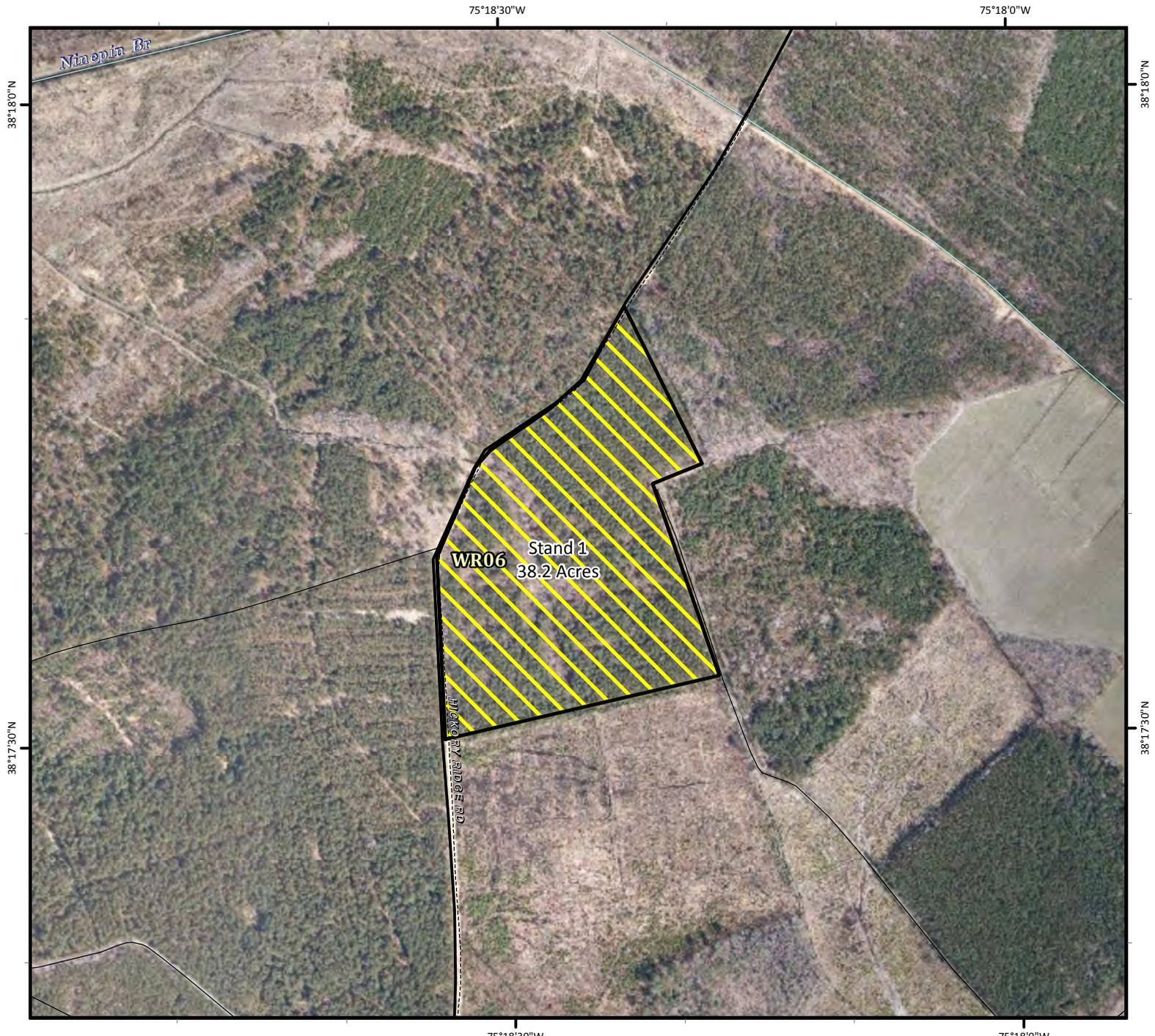
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Worcester County, MD
 WR05 - Dales Acres Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

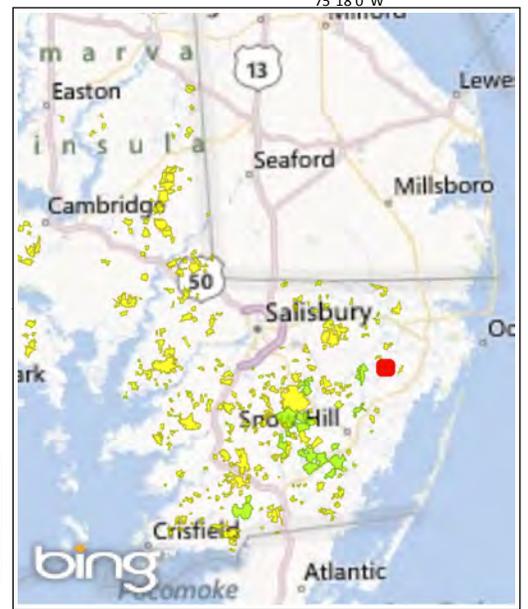
AWP

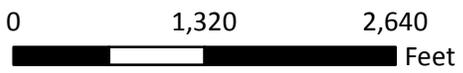
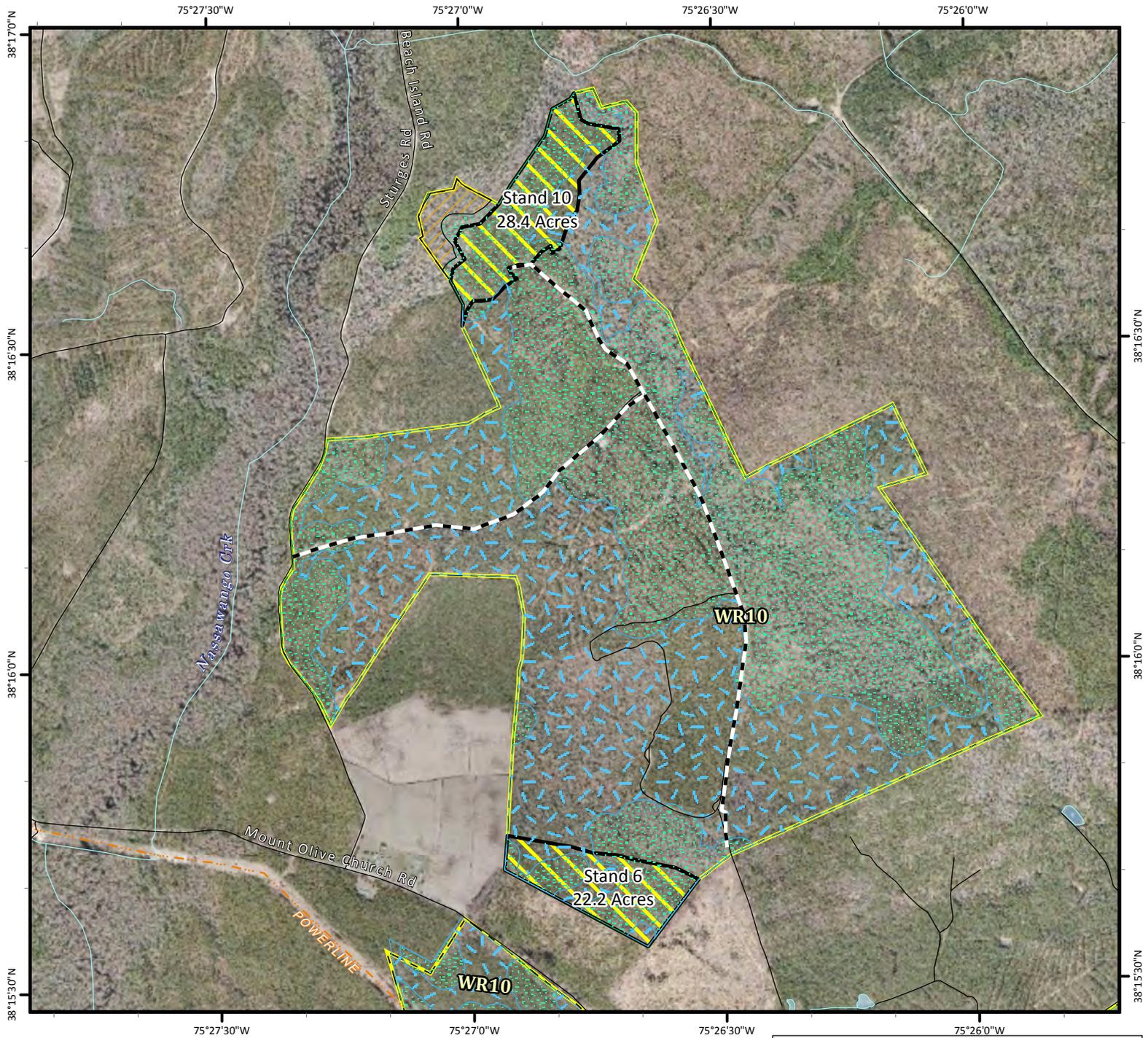
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Worcester County, MD
 WR06 - Dan Massey Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 1,320 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

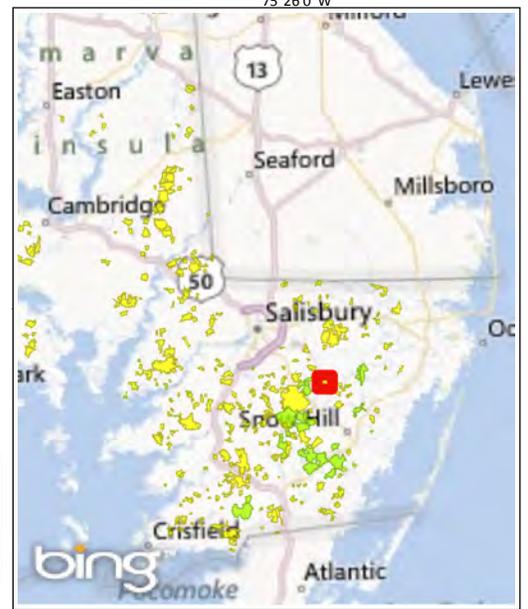
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Worcester County, MD
 WR10 - Cordery Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



75°20'0"W

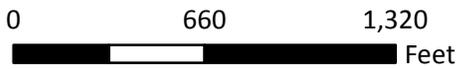
75°19'30"W

38°13'0"N

38°13'0"N

75°20'0"W

75°19'30"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

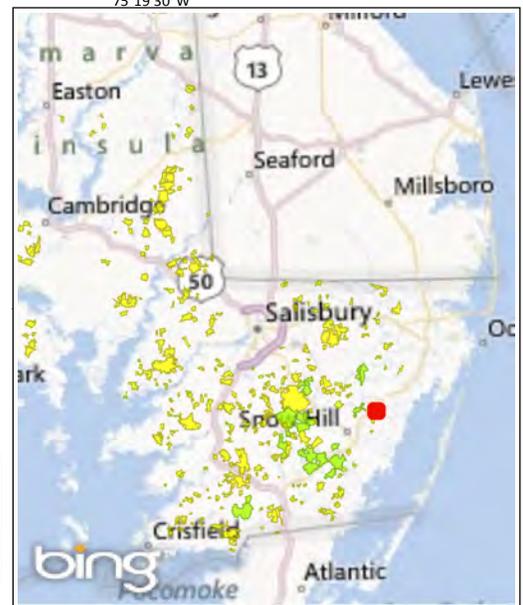
AWP

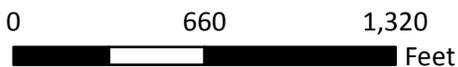
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Worcester County, MD
 WR13 - Carter Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

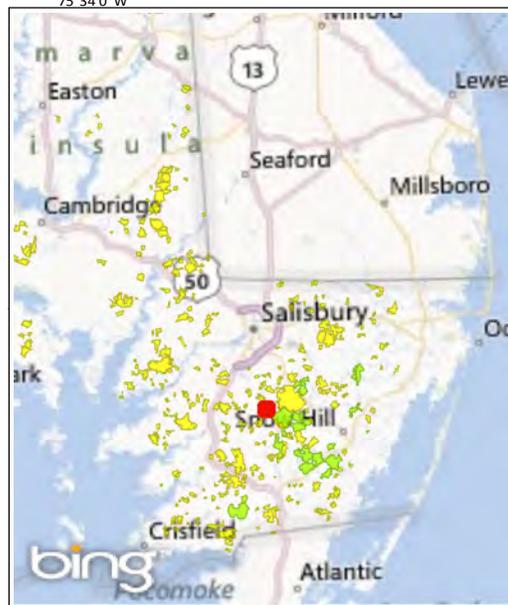
AWP

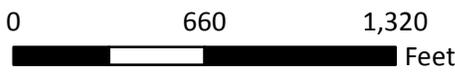
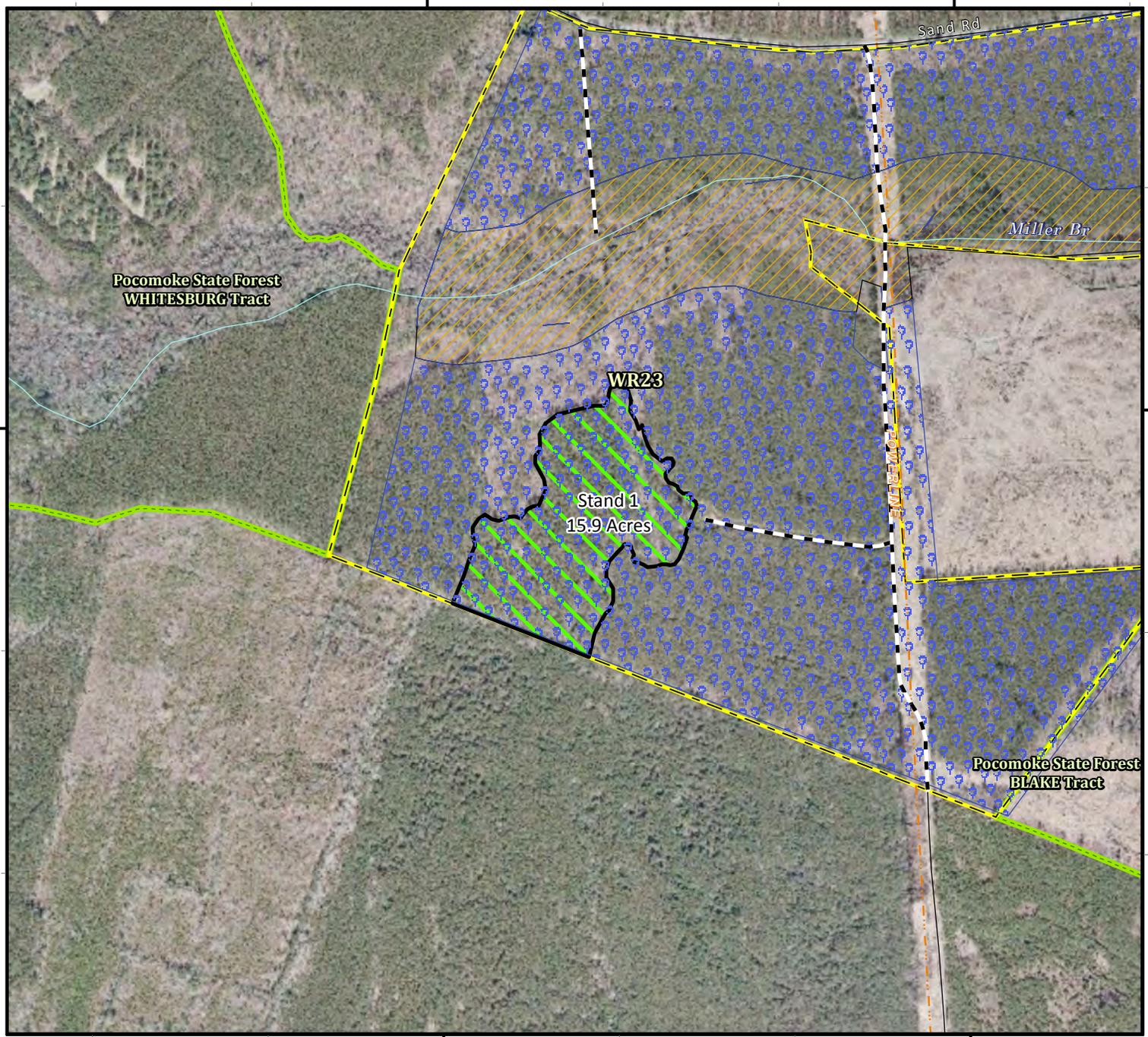
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Worcester County, MD
 WR19 - Priscilla Pusey Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

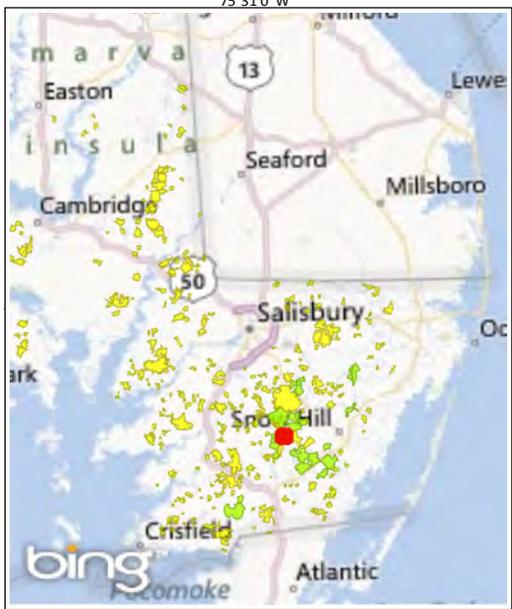
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Worcester County, MD
 WR23 - Apgar Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013

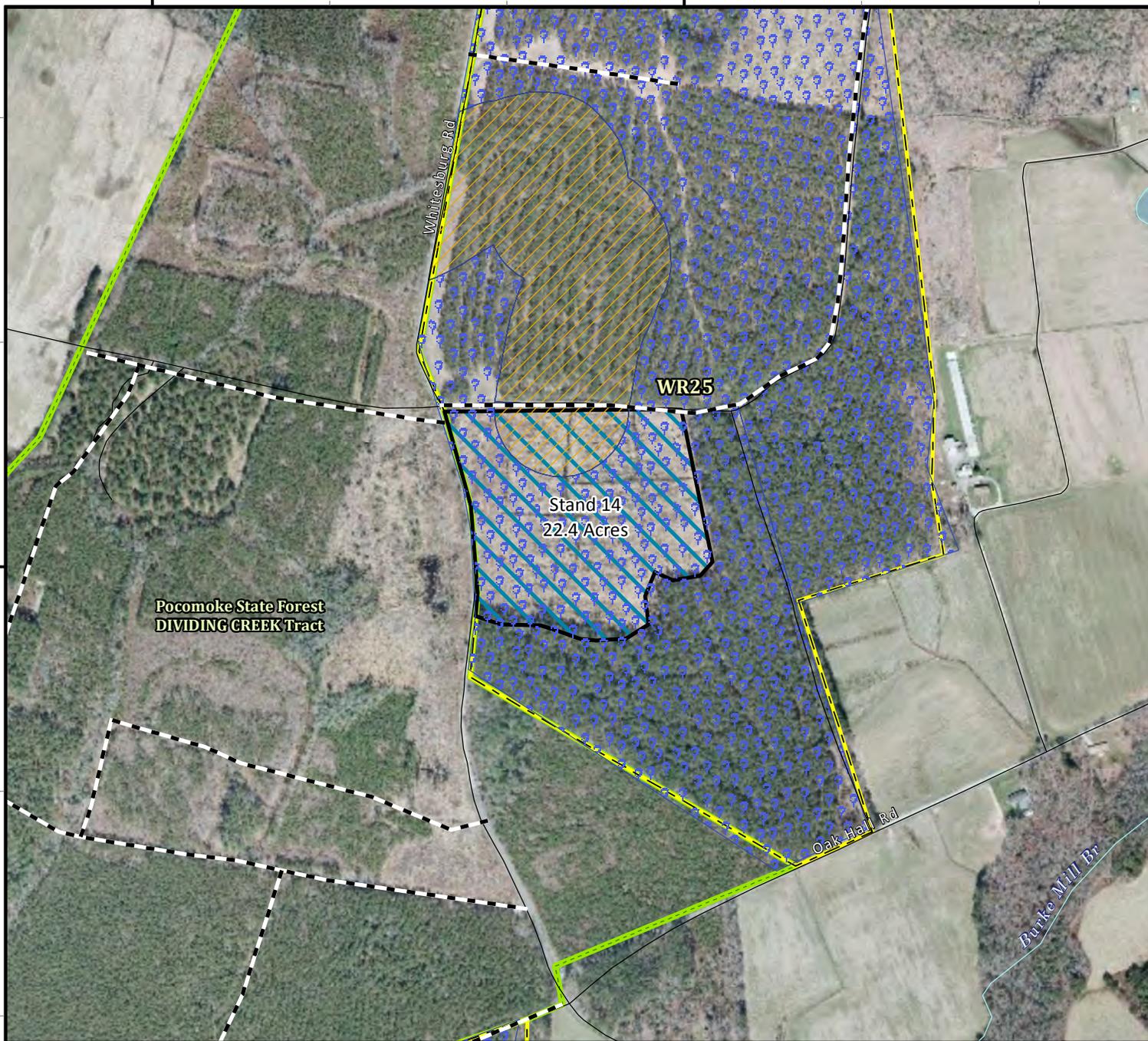


75°32'30"W

75°32'0"W

38°8'30"N

38°8'30"N



Pocumoke State Forest
DIVIDING CREEK Tract

WR25

Stand 14
22.4 Acres

Whitesburg Rd

Oak Hill Rd

Burke Mill Br

75°32'30"W

75°32'0"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

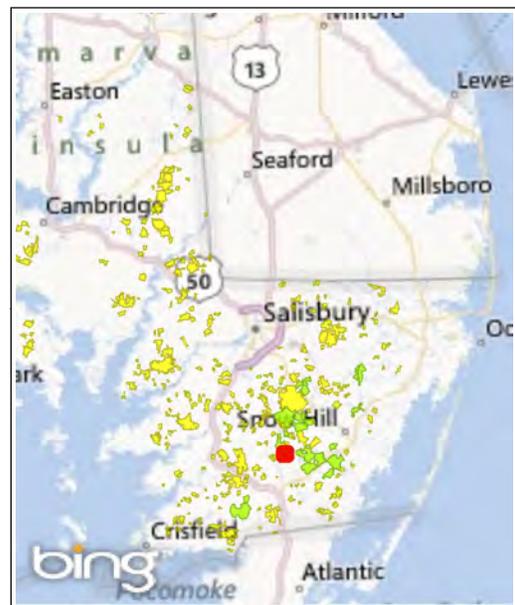
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Worcester County, MD
WR25 - Creek Complex
FY2015 AWP

ASC-DNR Forest Service 09/2013



75°30'0"W

75°29'30"W

38°5'30"N

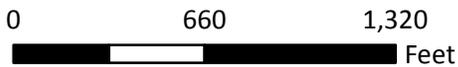
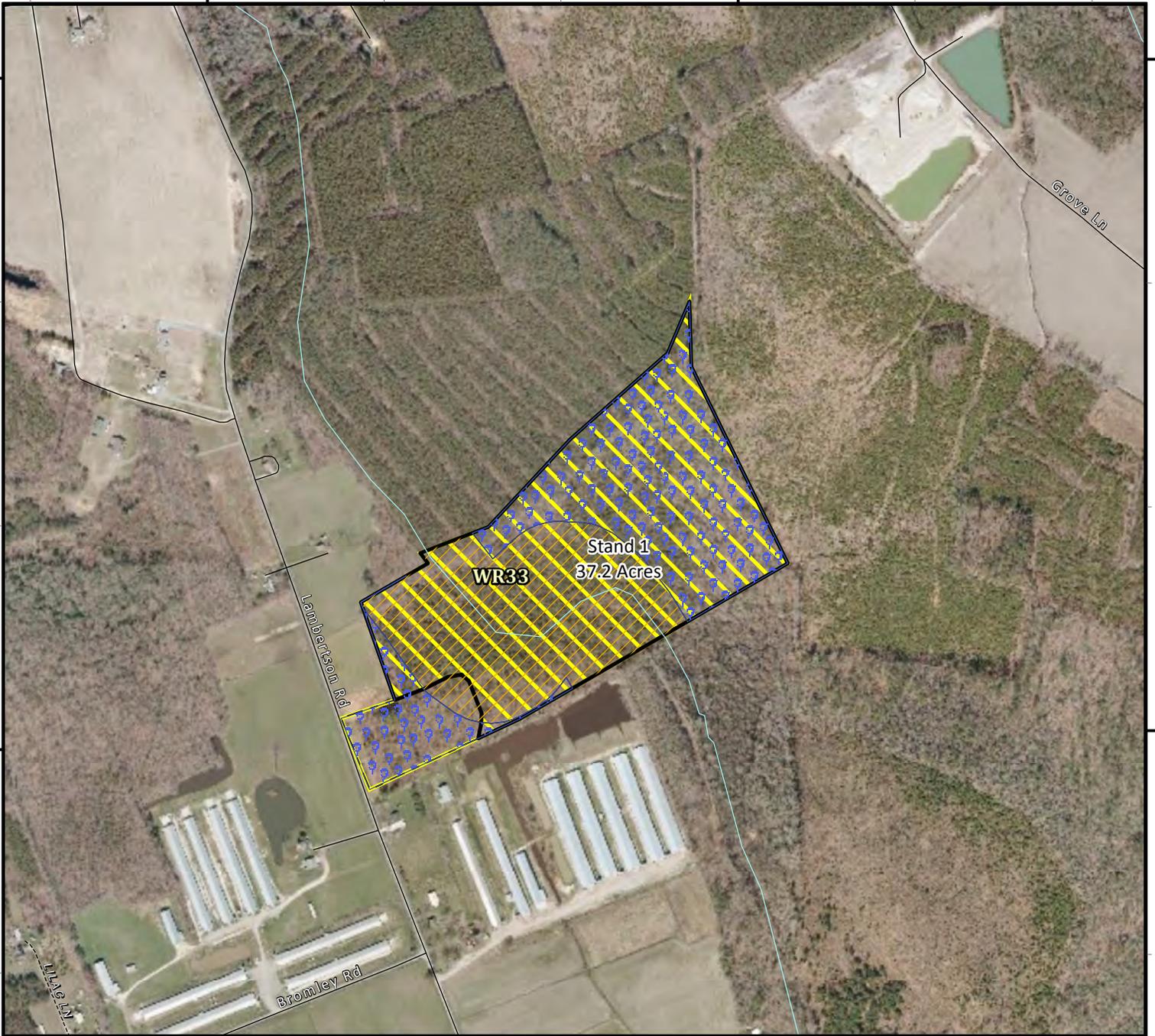
38°5'30"N

38°5'0"N

38°5'0"N

75°30'0"W

75°29'30"W



1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

AWP

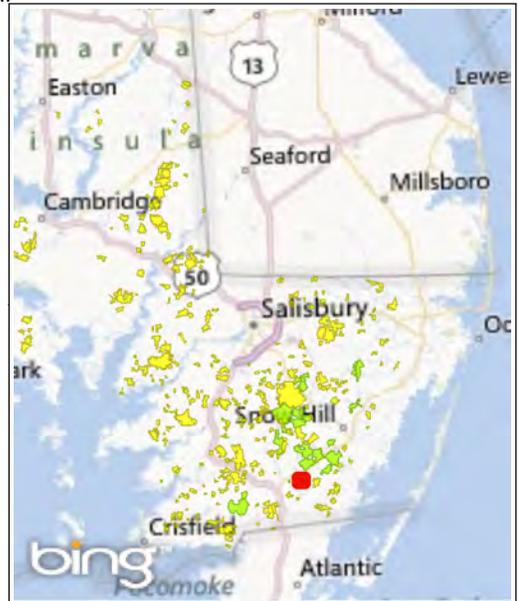
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

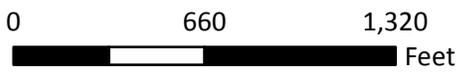
Chesapeake Forest

Worcester County, MD

WR33 - John Purnell Complex
FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

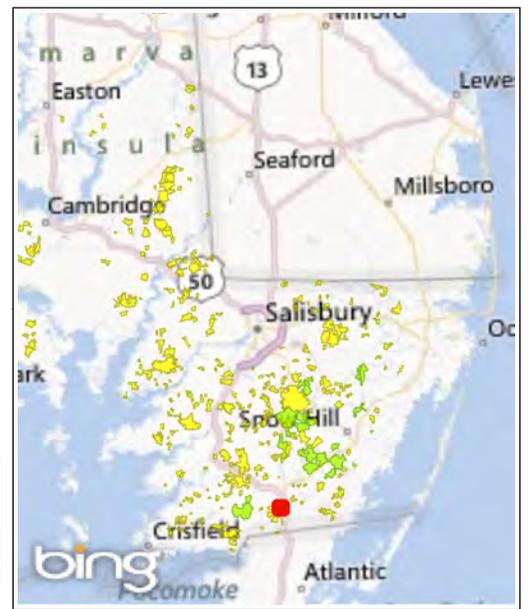
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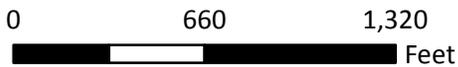
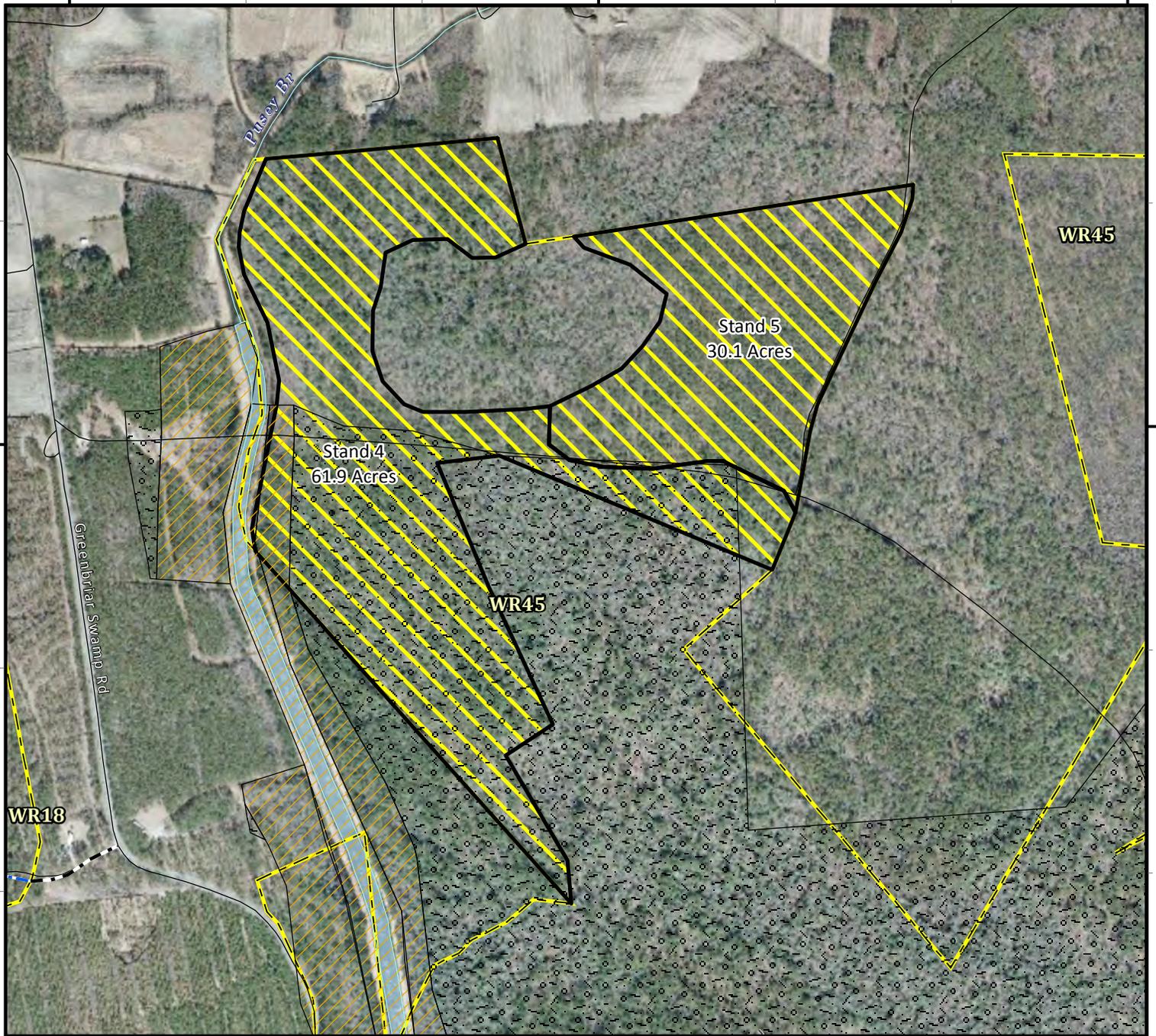
- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Worcester County, MD
 WR40 - Dunn Swamp Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

- DFS
- ESA Z1
- ESA Z2
- ESA Z3 Pulpwood
- ESA Z3 Saw Timber
- FIDS
- G3
- Stream Buffer

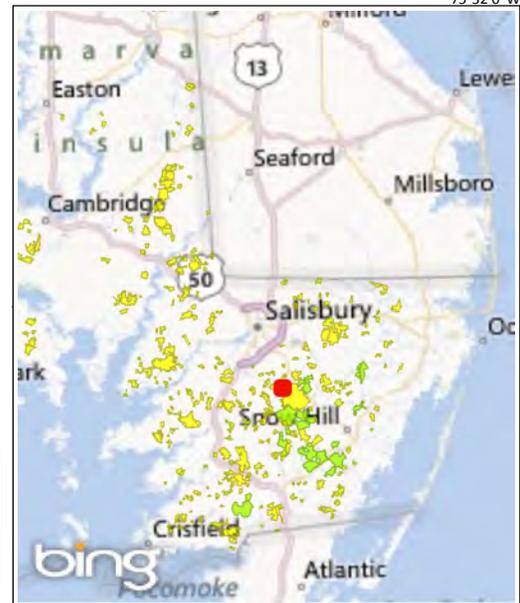
AWP

- 2015 PCT
- 2015 T1
- 2015 T2
- 2015 FH
- 2015 SPR
- 2015 T2 SPR

Chesapeake Forest

Worcester County, MD
 WR45 - Foster Estate Complex
 FY2015 AWP

ASC-DNR Forest Service 09/2013



SILVICULTURAL PRESCRIPTIONS & STAND DATA

WR01 – TIMMONS DONNAWAY

A first thinning is proposed for stands 3 and 7. Stand 3 is an overstocked 15.9 acre loblolly pine plantation that was established in 1991. Stand 7 is an overstocked 16.7 acre loblolly pine stand that was naturally regenerated in 1988. Both stands are in ESA Zone 1, ESA Zone 3 Saw Timber, Stream Buffer, and General Management areas. Soil series in these stands are AsA, HuA, Ma, Mua, and Pk.

A second thinning is proposed for stand 4. Stand 4 is an overstocked 37.5 acre loblolly pine plantation that was established in 1981 and first thinned in 1998. It is located in ESA Zone 1, ESA Zone 3 Saw Timber, Stream Buffer, and General Management areas. Soil series in these stands are AsA, BhA, KsA, Ma, MuA, and Pk.

WR05 – DALES ACRES

A first thinning is proposed for stand 1. Stand 1 is an overstocked 53.7 acre loblolly pine plantation that was established in 1993. It is located in Stream Buffer and General Management areas. Soil series in these stands are EkA, KeA, MpB, and OtA.

WR06 – DAN MASSEY

A first thinning is proposed for stand 1. Stand 1 is an overstocked 38.2 acre loblolly pine plantation that was established in 1990 and controlled for grass in 1992. It is located in a General Management area. Soil series in these stands are EmA, KeA, and OtA.

WR10 – CORDERY

A first thinning is proposed for stands 6 and 10. Stand 6 is an overstocked 22.2 acre loblolly pine stand that was naturally regenerated in 1992 and pre commercially thinned in 2005. Stand 10 is an overstocked 28.4 acre loblolly pine plantation that was established in 1993. Both stands are located in ESA Zone 1 and ESA Zone 3 Pulp Wood areas. Soil series in these stands are AsA, HmA, KsA, LO, MuA, and Pk.

WR13 – CARTER

A second thinning is proposed for stand 1. Stand 1 is an overstocked 118.1 acre loblolly pine plantation that was established in 1970 and first thinned in 2001 and sprayed in 2004. A portion of the stand is in Stream Buffer management on the northern edge. The remainder of the stand is in a General Management zone. Soil series in these stands are CeB, HmB, HuA, KeA, LO, MpA, MpB, MtA, OtA, WdB, and Za. A 2014 spring survey will be conducted by Wildlife & Heritage Service to determine the size and scope of a possible vernal pool.

WR19 – PRISCILLA PUSEY

A first thinning is proposed for stand 12. Stand 12 is an overstocked 27.4 acre loblolly pine plantation that was established in 1990 and controlled for grass in 1970. It is in a General Management area. Soil series in these stands are CeB, HmA, KsA, Ma, MuA, RuA, and Za.

WR23 – APGAR

A second thinning is proposed for stand 1. Stand 1 is an overstocked 15.9 acre loblolly pine plantation that was first thinned in 1993. It is located in a DFS Future Core area. Soil series in these stands are FaA, KeA, OtA, and RoB.

WR25 – CREEK

An aerial spray is proposed for stand 14 to remove red maple and sweet gum regeneration. Stand 14 is a 22.4 acre pine/hardwood stand that was naturally regenerated in 2007. It is located in a DFS Future Core and Stream Buffer areas. Reduced chemical rates will be used on this stand to preserve any oak regeneration. Soil series in this stand are HdB, HuA, MuA, and WdA.

WR33 – JOHN PURNELL

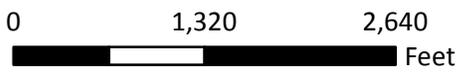
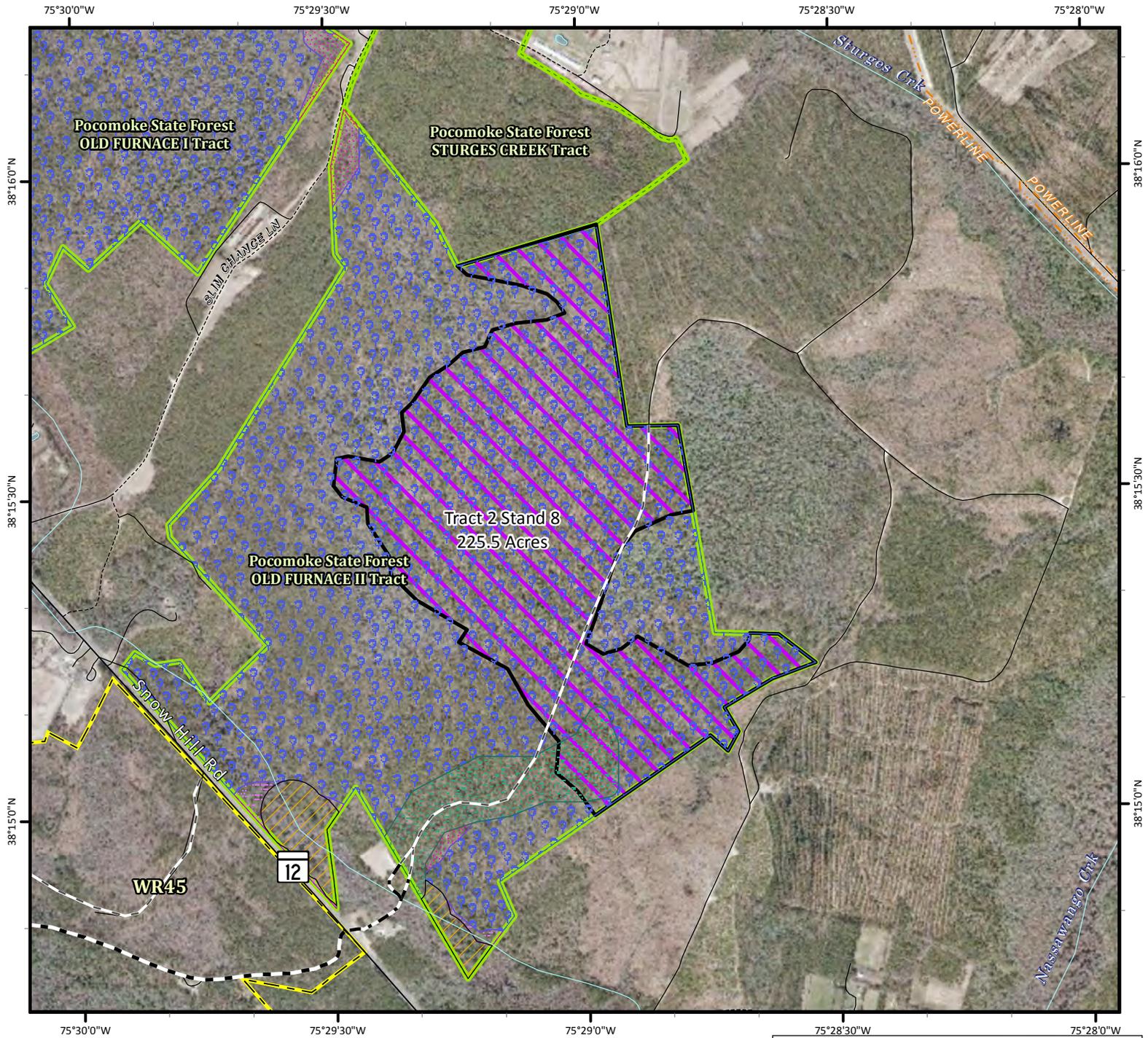
A first thinning is proposed for stand 1. Stand 1 is an overstocked 37.2 acre loblolly pine plantation that was established in 1990. It is located in DFS Future Core and Stream Buffer area. Soil series in this stand are FaA, KeA, MuA, and OtA.

WR40 – DUNN SWAMP

A second thinning and an aerial spray is proposed for stand 21. Stand 21 is an overstocked 37.7 acre loblolly pine plantation that was established in 1971 and first thinned in 1997. It is located in Stream Buffer and General Management areas. Soil series in this stand are FaA and OtA.

WR45 – FOSTER ESTATE

A first thinning is proposed for stands 4 and 5. Stand 4 is an overstocked 61.9 acre loblolly pine stand that was naturally regenerated in 1978. Stand 5 is an overstocked 30.1 acre loblolly pine plantation that was established in 1980. Both stands are located in Core FIDS, Future Core DFS, and Stream Buffer areas. Access to these stands will be arranged via existing roads through Dorchester Lumber property off St. Lukes Road. Soil series in these stands are AsA, BhA, HuA, KsA, KsB, Ma, MuA, RuB, UzB, and W.



1 inch = 1,320 feet



Legend

Management Zones

- Core FIDS
- DFS
- G3
- Stream
- WSSC
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3

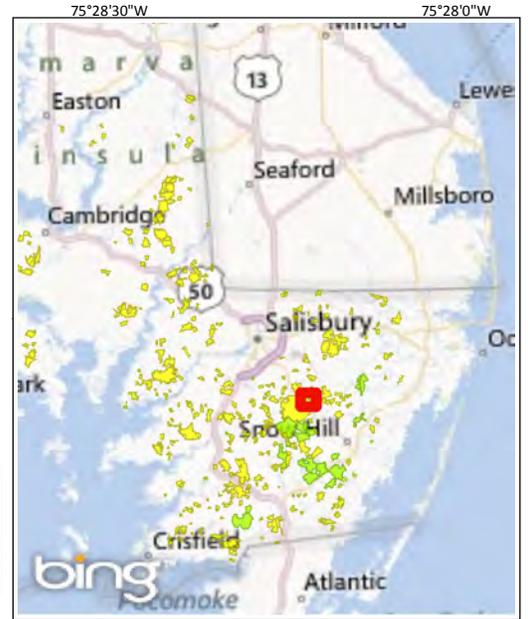
AWP

- 2015 T1
- 2015 VR

Pocomoke State Forest

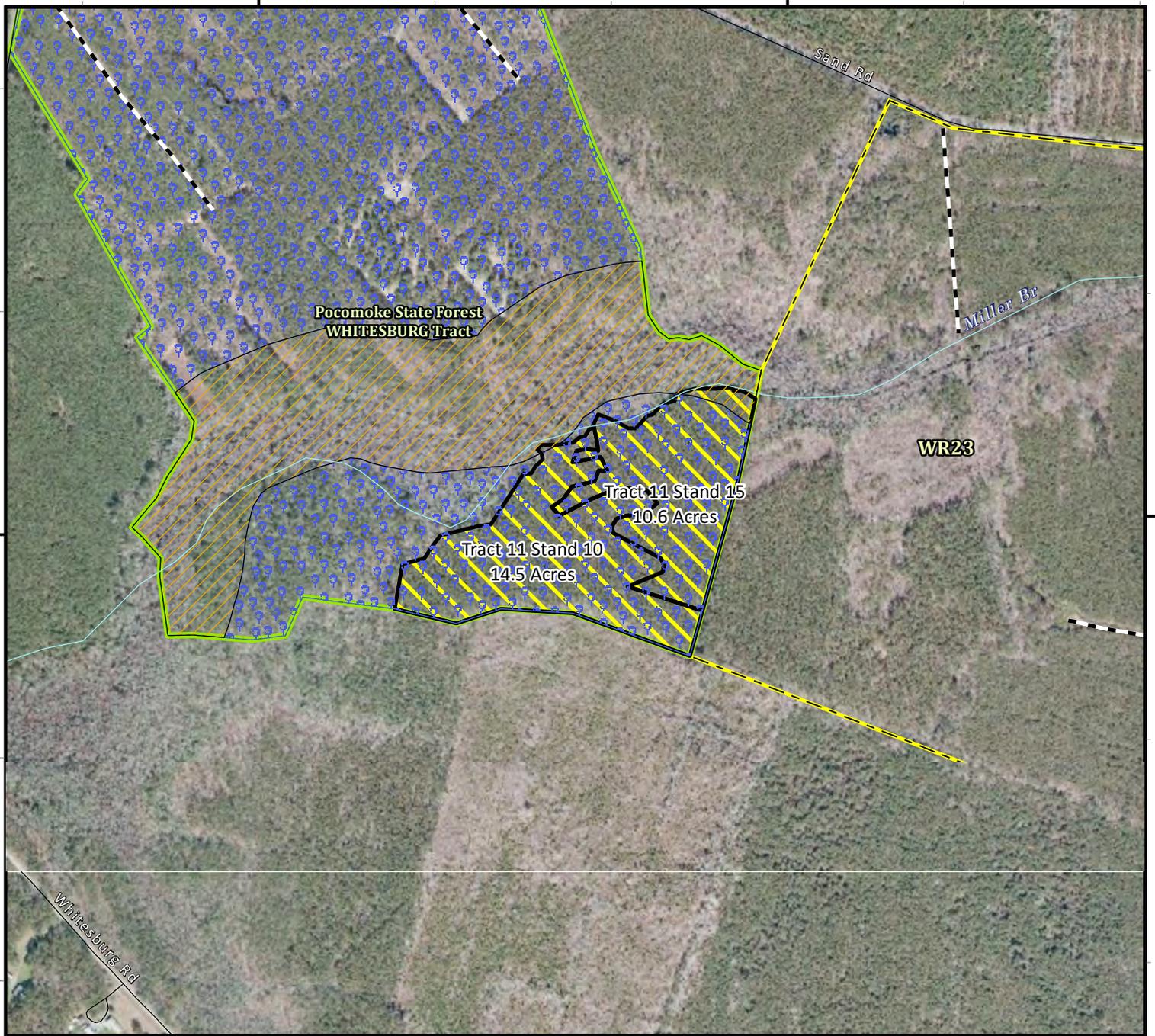
Worcester County, MD
 P01 - Old Furnace II
 FY2015 AWP

ASC-DNR Forest Service 09/2013



75°32'0"W

75°31'30"W

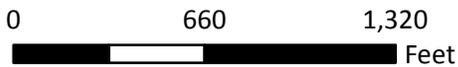


38°10'30"N

38°10'30"N

75°32'0"W

75°31'30"W



1 inch = 660 feet



Legend

Management Zones

- Core FIDS
- DFS
- G3
- Stream
- WSSC
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3

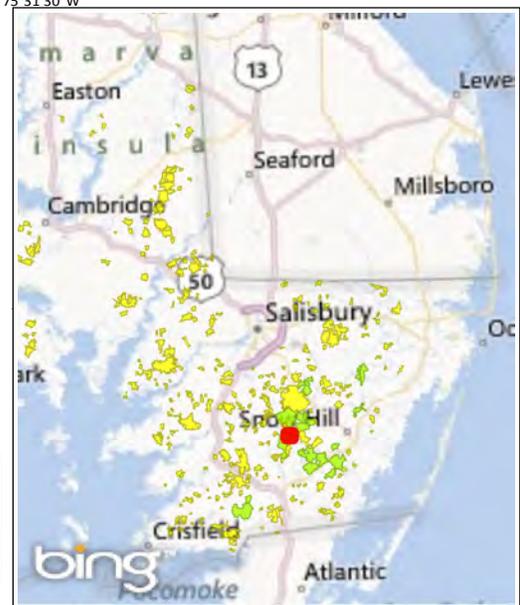
AWP

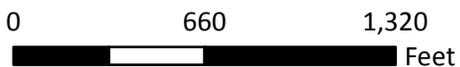
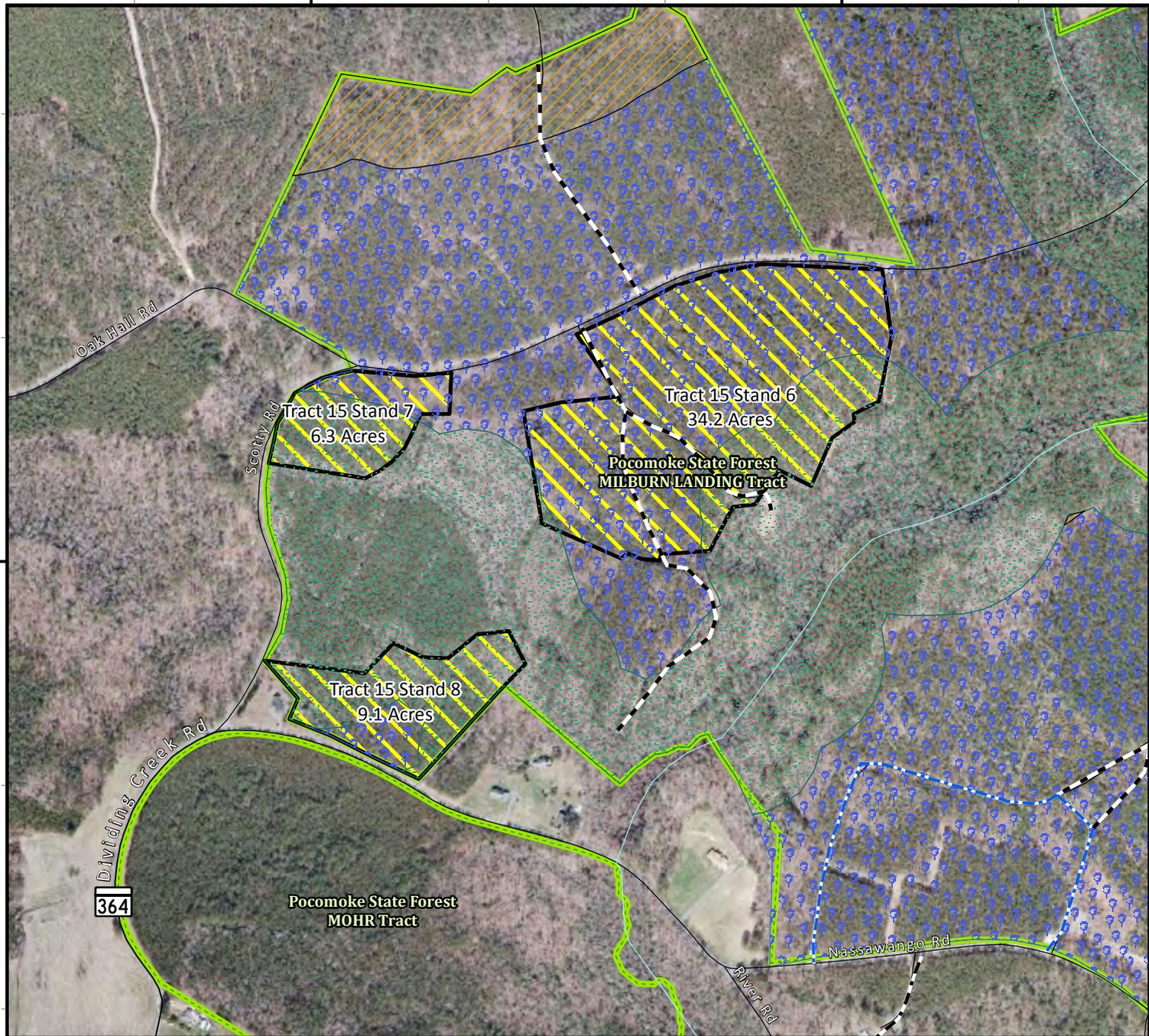
- 2015 T1
- 2015 VR

Pocomoke State Forest

Worcester County, MD
 P03 - Whitesburg
 FY2015 AWP

ASC-DNR Forest Service 09/2013





1 inch = 660 feet



Legend

Management Zones

AWP

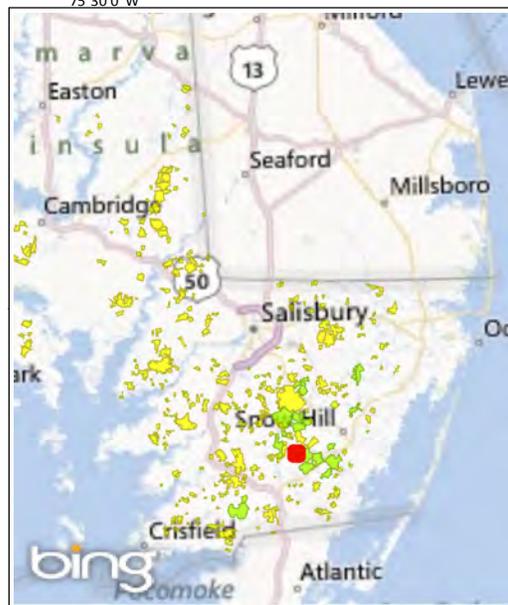
- Core FIDS
- DFS
- G3
- Stream
- WSSC
- ESA Zone 1
- ESA Zone 2
- ESA Zone 3

- 2015 T1
- 2015 VR

Pocomoke State Forest

Worcester County, MD
 P05 - Milburn Landing
 FY2015 AWP

ASC-DNR Forest Service 09/2013



SILVICULTURAL PRESCRIPTIONS & STAND DATA

P01 – OLD FURNACE II – TRACT 2

A variable retention harvest is proposed for a portion of stand 8. Stand 8 is a mature 225.5 acre pine/hardwood stand that naturally regenerated in 1911. This stand is located in ESA Zone 1 and DFS Future Core areas. Soil series in this stand are AsA, BhA, HmB, HuA, KsA, KsB, LO, Ma, MuA, RuB, and Za. This stand is comprised of scattered pockets of various pine species such as loblolly, pitch, pond, and shortleaf pine. The specific stand boundaries will be determined in the field based on micro habitat conditions. The total contiguous area that is harvested will not exceed FSC and SFI guidelines. Dominant pitch, pond, shortleaf pine as well as mast producing hardwood species will be retained to facilitate natural regeneration.

P03 – WHITESBURG – TRACT 11

A first thinning is proposed for stands 10 and 15. Stand 10 is an overstocked 14.5 acre loblolly pine plantation that was site prepared and planted in 1973 and sprayed in 1977. Stand 15 is an overstocked 10.6 acre loblolly pine plantation that was site prepared and planted in 1973 and sprayed in 1977. Both stands are located in DFS Future Core and Stream Buffer areas. Soil series in these stands are FaA, HmA, OtA, RoB, and WdA.

P05 – MILBURN LANDING – TRACT 15

A first thinning is proposed for stands 6, 7, and 8. Stand 6 is an overstocked 34.2 acre loblolly pine stand naturally regenerated in 1993 and pre commercially thinned in 1999. Stands 7 and 8 are overstocked pine/hardwood stands naturally regenerated in 1993 totaling 15.3 acres. All stands are located in ESA Zone 1 and DFS Future Core areas. Soil series in these stands are HbB, MtA, MtB, NnA, NnB, NsA, OtA, and Za.

REVIEW PROCESS

REVIEW SUMMARY

INTERDISCIPLINARY TEAM COMMENTS (COLLECTIVE)

CITIZEN'S ADVISORY COMMITTEE COMMENTS

PUBLIC COMMENTS

Original proposal from the FY2011 AWP:

45

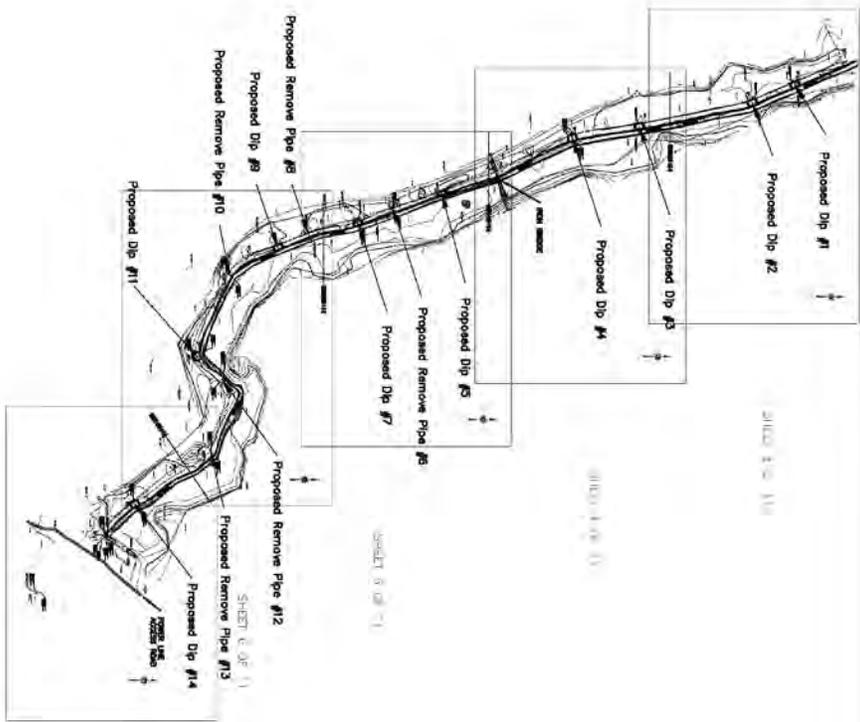
Horsebridge Creek
Watershed Improvement Project
by Joe Fehrer, TNC – Nassawango Project

Horsebridge Creek, located in Wicomico County was first channelized in the late 1950's to aid with farming (draining the fields) in the area, then abandoned for a period of time until when in the early 1980's it was re-ditched and is now a "tax ditch" with the Horsebridge Creek PDA Assoc. assuming control of maintenance etc. The Nature Conservancy has been working in the Nassawango Creek watershed since 1978 to protect and preserve the rare and unique habitats found there and presently owns 10,000 acres spanning Worcester and Wicomico Counties. Horsebridge Creek is the only tax ditch which flows directly into Nassawango Creek and as such is the greatest direct contributor of nutrient and sediment loads to the Nassawango, these creeks meet immediately upstream of Twilley Bridge in Wicomico County.

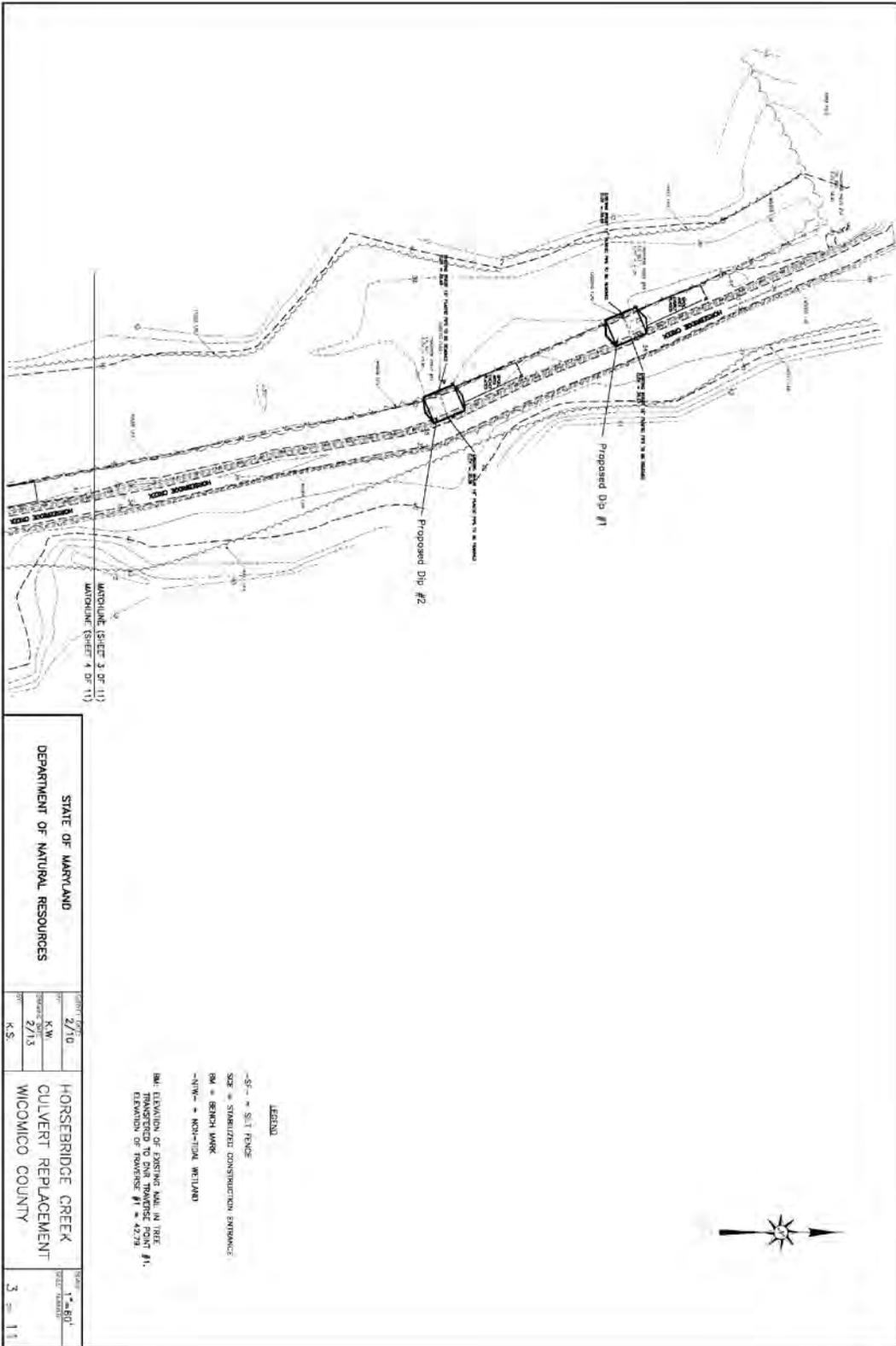
The goal of this project is to allow for the seasonal flooding regimen to occur behind the large earthen berm (the now cut-off floodplain) presently in place and consisting of the dredge spoils from the creek/ditch. We hope that by installing large (3 foot) dia. culvert pipes strategically along and through the berm we will achieve not only the restoration of some flow but also the settling out of some nutrient/s and sediment/s that now flow unabated into the Nassawango, we also expect this diversion of floodwater will slow the flow of storm water entering the Nassawango as well.

While the immediate project of installing culverts will be a first step, eventually it's hoped that a total restoration of the creek to a more natural state can be achieved all the while maintaining the benefit to the farming community upstream.

Since the berm was established there has been no seasonal natural flooding of the floodplain to the south of Horsebridge Creek, this area is dominated by a mix of cypress, black and tupelo gum and red maple and is dependant on the cyclical flooding of the bottomland hardwood forest there. To recap, the primary reason in pursuing this restoration project is to restore flow but equally as important, to remove some of the nutrient and sediment loads before they reach the main stem of the Nassawango Creek.

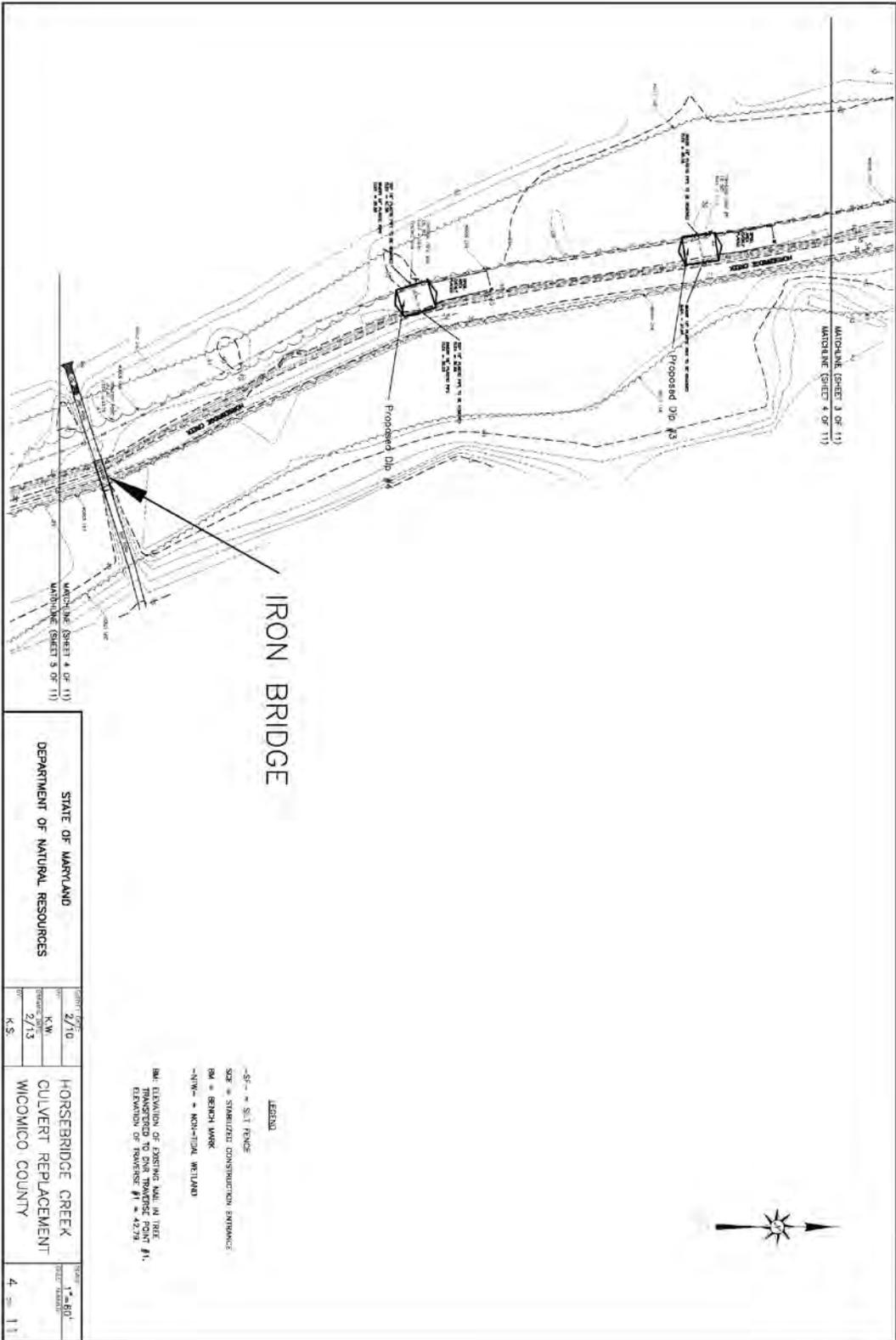


STATE OF MARYLAND		HORSEBRIDGE CREEK	
DEPARTMENT OF NATURAL RESOURCES		CULVERT REPLACEMENT	
DATE: 2/10	BY: K/W	SCALE: 1" = 400'	
DATE: 2/13	BY: K.S.	SCALE: 1" = 400'	
WICOMICO COUNTY		SHEET 6 OF 11	



- LEGEND**
- S- = SILT FENCE
 - SP = STABILIZED CONSTRUCTION ENTRANCE
 - BM = BENCH MARK
 - N- = NON-TIDAL WETLAND
 - BM: ELEVATION OF EXISTING NAIL IN TREE
 - BM: ELEVATION OF EXISTING POWER POLE #1
 - ELEVATION OF SURFACE 1' = 42.9'

STATE OF MARYLAND		DATE: 2/10	
DEPARTMENT OF NATURAL RESOURCES		BY: K.W.	
		CHECKED: 2/13	
		APP: K.S.	
HORSEBRIDGE CREEK CULVERT REPLACEMENT		SCALE: 1"=80'	
WICOMICO COUNTY		SHEET: 3 OF 11	

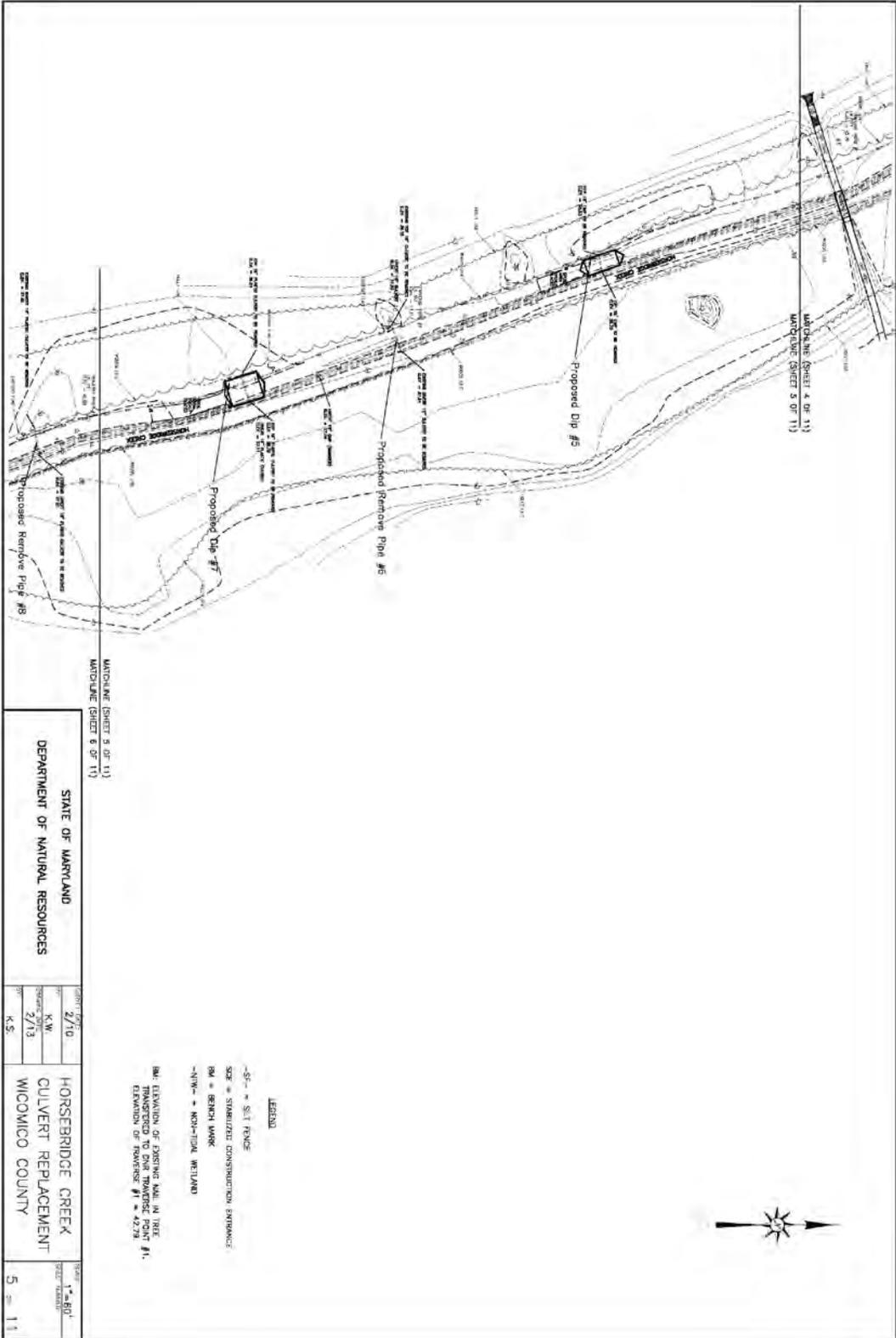


IRON BRIDGE

STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES

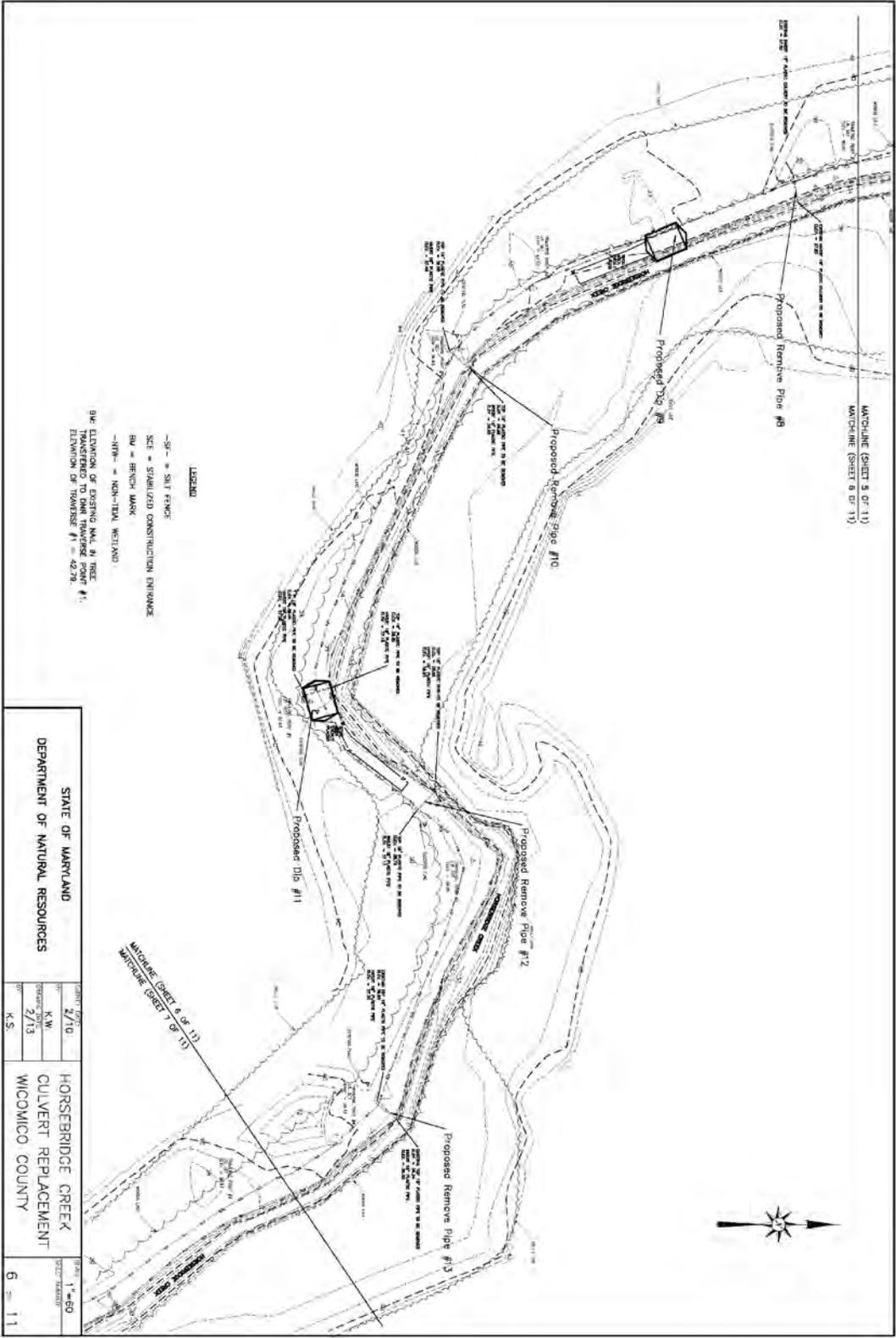
DATE	2/10	PROJECT	HORSEBRIDGE CREEK CULVERT REPLACEMENT
BY	K.W.	NO.	WICOMICO COUNTY
APP'D	2/13		
SCALE	4:5		

- LEGEND**
- S- = SILT FENCE
 - S-C = STABILIZED CONSTRUCTION SWAMP
 - BM = BENCH MARK
 - N-W = NON-TIDAL WETLAND
- BM: ELEVATION OF EXISTING NAIL IN TREE
ELEVATION OF SURFACE = 42.9'



- LEGEND**
- SF- = SALT FENCE
 - SE = STABILIZED CONSTRUCTION ENTRANCE
 - BM = BENCH MARK
 - N/W- = NON-TIDAL WETLAND
 - BM: ELEVATION OF EXISTING NAIL IN TREE
ELEVATION OF TREE TOP = 42.1
ELEVATION OF SURFACE = 42.9

STATE OF MARYLAND		DATE	2/10
DEPARTMENT OF NATURAL RESOURCES		BY	K.W.
		DATE	2/13
		BY	K.S.
HORSEBRIDGE CREEK CULVERT REPLACEMENT		SCALE	1"=80'
WICOMICO COUNTY		SHEET	5 OF 11



MATCHLINE (SHEET 8 OF 11)
MATCHLINE (SHEET 6 OF 11)

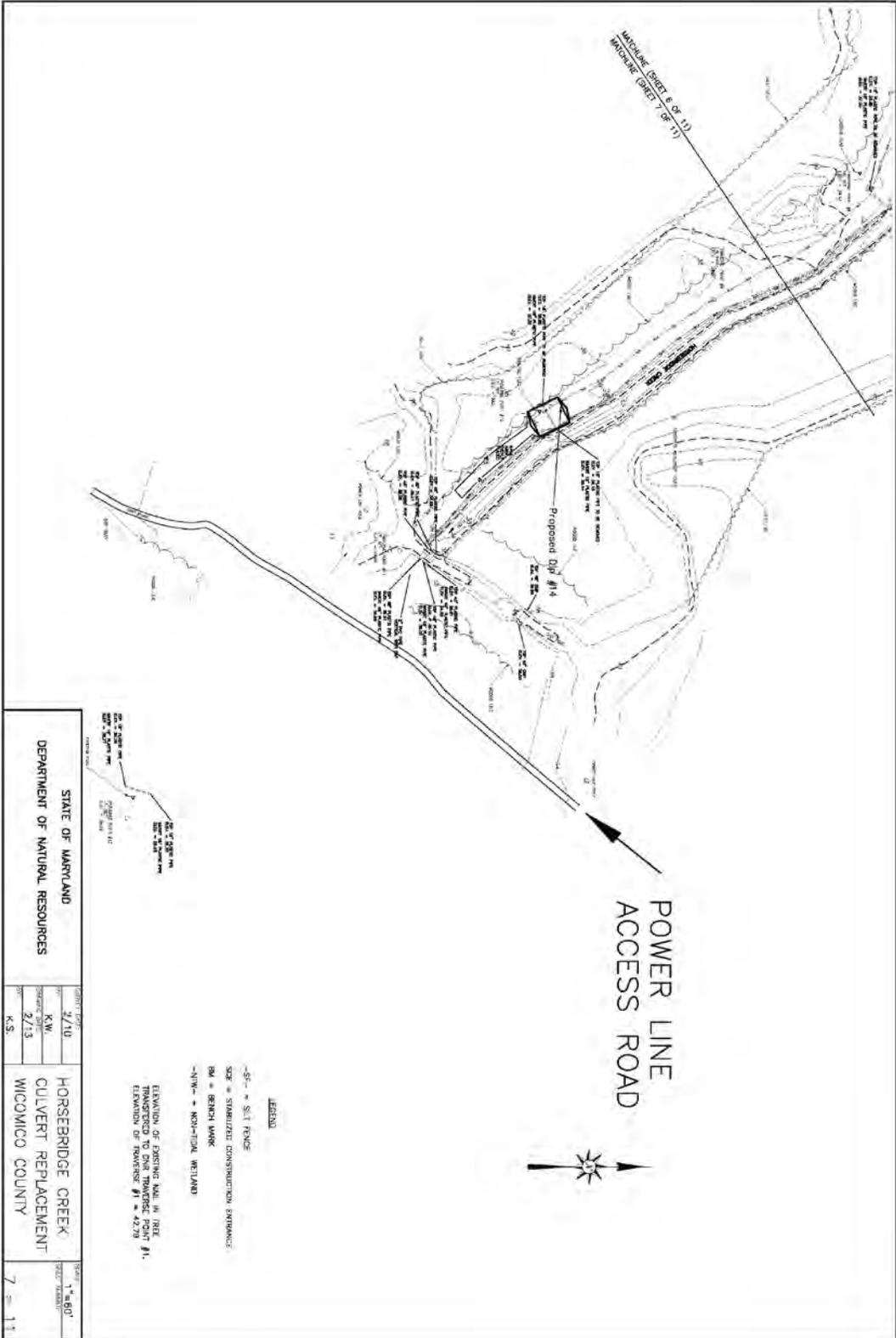
LEGEND

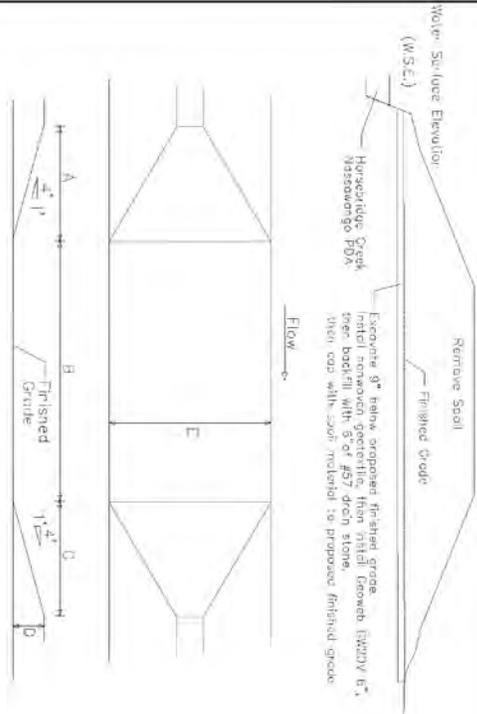
- SF- = SILT FENCE
- SC- = STABILIZED CONSTRUCTION ENTRANCE
- BM- = BENCH MARK
- NM- = NON-TOTAL WETLAND

SEE ELEVATION OF CROSSING POINT AT TREE TRANSFERRED TO DRAIN TRAVELER POINT #1. ELEVATION OF TRAVELER #1 = 42.78.

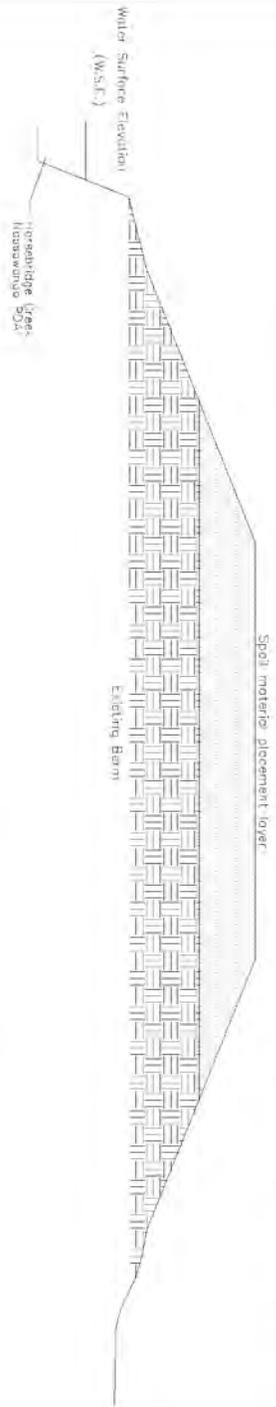


STATE OF MARYLAND		DATE: 2/10	HORSEBRIDGE CREEK CULVERT REPLACEMENT	SHEET: 6 OF 11
DEPARTMENT OF NATURAL RESOURCES		K/M: 2/13		
WICOMICO COUNTY		K/S:	SCALE: 1" = 60'	





TYPICAL CROSS SECTIONS - NOT TO SCALE



Excavation Dimensions (feet) and Quantities

	A	B	C	D	E	Finished Grade	Volume (Cu. Yd.)
Culvert #1	8	30	8	2	42	39	226
Culvert #2	8	50	6	1.5	42	39.5	174
Culvert #3	8	50	8	2	42	39	226
Culvert #4	8	20	8	3	42	39	226
Culvert #5	10	30	10	2.5	24	36.5	160
Culvert #6	-	-	-	-	41	PULL PIPE	-
Culvert #7	5.4	50	6.4	1.5	40	38.4	175
Culvert #8	-	-	-	-	42	PULL PIPE	-
Culvert #9	8	30	8	2	42	39	226
Culvert #10	-	-	-	-	41	PULL PIPE	-
Culvert #11	8	50	6	1.5	41	37.5	170
Culvert #12	-	-	-	-	41	PULL PIPE	-
Culvert #13	-	-	-	-	41	PULL PIPE	-
Culvert #14	5.2	30	5.2	1.3	39	37.7	155

WETLAND	TEMPORARY IMPACT	PERMANENT IMPACT
WETLAND BUFFER	0.10	NONE
	0.81	NONE

STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES

DATE: 2/10
BY: K.W.
PROJECT: 2/13
K.S.

HORSEBRIDGE CREEK
CULVERT REPLACEMENT
WICOMICO COUNTY

SCALE: 1"=100'
DATE: 8-11

INTERMITTENT FLOW CHANNELS



STONE CELL SIZES

CELL TYPE	CELL LENGTH (ft)	CELL WIDTH (ft)	CELL DEPTH (ft)	CELL AREA (sq ft)	CELL PERCENTAGE OF CHANNEL WIDTH
STANDARD	10.0	1.0	1.0	10.0	10%
LONG	15.0	1.0	1.0	15.0	15%
WIDE	10.0	1.5	1.0	15.0	15%
DEEP	10.0	1.0	1.5	15.0	15%
LONG WIDE	15.0	1.5	1.0	22.5	22.5%
LONG DEEP	15.0	1.0	1.5	22.5	22.5%
WIDE DEEP	15.0	1.5	1.5	33.75	33.75%

NOTE: ALL DIMENSIONS ARE IN FEET AND ARE SUBJECT TO MANUFACTURING TOLERANCES

STONE CELL SECTION SIZES

CELL TYPE	CELL LENGTH (ft)	CELL WIDTH (ft)	CELL DEPTH (ft)	CELL AREA (sq ft)	CELL PERCENTAGE OF CHANNEL WIDTH
STANDARD	10.0	1.0	1.0	10.0	10%
LONG	15.0	1.0	1.0	15.0	15%
WIDE	10.0	1.5	1.0	15.0	15%
DEEP	10.0	1.0	1.5	15.0	15%
LONG WIDE	15.0	1.5	1.0	22.5	22.5%
LONG DEEP	15.0	1.0	1.5	22.5	22.5%
WIDE DEEP	15.0	1.5	1.5	33.75	33.75%



NOTE: ALL DIMENSIONS ARE IN FEET AND ARE SUBJECT TO MANUFACTURING TOLERANCES



STAGGERED STONE SECTIONS
TRENCH WITH RODS TO BE INSTALLED

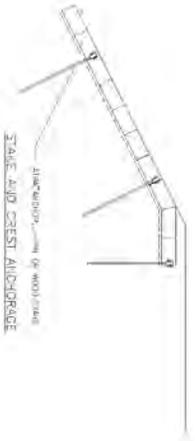
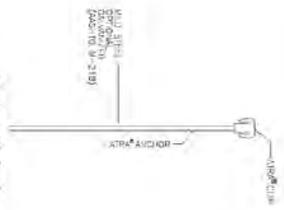
- INSTALLATION NOTES:**
1. STONE CELL SECTIONS SHALL BE LAYED WITH A SLOPED SURFACE WITH AN ANGLE WHICH IS SUITABLE FOR THE MATERIAL COMPOSITION FOR THE SECTION OF THE CHANNEL.
 2. STONE CELL SECTIONS SHALL BE LAYED WITH THE SURFACE OF THE CHANNEL TO BE PROTECTED BY THE STONE CELL SECTIONS.
 3. STONE CELL SECTIONS SHALL BE LAYED WITH THE SURFACE OF THE CHANNEL TO BE PROTECTED BY THE STONE CELL SECTIONS.
 4. STONE CELL SECTIONS SHALL BE LAYED WITH THE SURFACE OF THE CHANNEL TO BE PROTECTED BY THE STONE CELL SECTIONS.

- NOTE FOR STAIRSTEP CONNECTIONS BETWEEN STONE CELL SECTIONS:**
1. ALL STAIRSTEP CONNECTIONS SHALL BE CONSTRUCTED WITH A SLOPE OF 1:1.
 2. THE TOP EDGES OF ADJACENT CELL WALLS SHALL BE FINISHED WITH A SLOPE OF 1:1.
 3. THE JOINTS BETWEEN ADJACENT CELL WALLS SHALL BE FINISHED WITH A SLOPE OF 1:1.
 4. THE JOINTS BETWEEN ADJACENT CELL WALLS SHALL BE FINISHED WITH A SLOPE OF 1:1.

TYPICAL TENDON DETAIL



TYPICAL STAKE DETAILS



STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES

PROJECT NO.	27/10	HORSEBRIDGE CREEK	DATE	11/11
SCALE	1"=100'	CULVERT REPLACEMENT	DRAWN BY	KS
DATE	2/13	WICOMICO COUNTY	CHECKED BY	
SCALE	KS		DATE	

H. SPECIAL WILDLIFE HABITAT PROJECTS

I. ECOSYSTEM RESORATION PROJECTS

J. MONITORING PROJECTS

The 2nd Continuous Forest Inventory (CFI) for Chesapeake Forest is planned to begin in the summer of (calendar year) 2014. A staff of at least 4 crew will be utilized to collect plot data.

K. BUDGET

<i>Cost of Management (*Costs will vary from year to year)</i>	
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

<i>Operating Revenues & State Funding</i>	
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/POCOMOKE STATE FOREST – BOOM ARM & MOWER EQUIPMENT

2014 NATIONAL RECREATIONAL TRAILS FUNDING APPLICATION

1. Project Sponsor (Applicant): _____

Please provide contact information for entity and project manager.

Government / non-profit entity: State of Maryland

Name of project manager: Michael Schofield

Title: Forest Manager

Organization: Department of Natural Resources, Forest Service

Address: 6572 Snow Hill Road, Snow Hill, MD 21863

Phone: (410) 632-3732

Fax: (410) 632-3730

E-mail: mschofield@dnr.state.md.us

2. Project name: Boom Arm & Mower

3. Project location

The project area is the Chesapeake Forest and the Pocomoke State Forest. The size of the project is 84,762 acres with 382 miles of forested trails and roads.

4. Trail Type

May check more than one.

Motorized Trail

Diversified Trail

Non-motorized Trail

Transportation Trail (diversified trail designed for bicyclists and pedestrians to connect destinations. Go to <http://www.mdot.maryland.gov/Planning/Trails/trails.html> for more information)

5. Project Type

Maintenance / Restoration of existing trail

Construction of new trails

Relocation of existing trail

Development and rehabilitation of trailside facilities and trail linkages

- Purchase and lease of trail construction equipment
- Lease or acquisition of easements or property for recreational trails or corridors
- Implementation of interpretive/educational programs to promote intrinsic qualities, alternative transportation, safety, and environmental protection, as those objectives relate to the use of recreational trails

6. Abstract

This project will enhance portions of the existing trails within the Milburn Landing Tract of the Pocomoke State Forest by removing brush, small trees and grass from the existing trail system. Most of the trails are blocked by wind thrown trees from Hurricane Sandy. This project benefits the recreational trail user by maintaining the extensive trail system used by Park patrons.

7. Project Summary

This project will maintain 3.6 miles of existing trail by removing vegetation from the trail surface. Large trees that were blown across the trails will be removed by hand with chainsaws. Smaller brush will also be clipped back using hand tools. Two benches will be installed along the trail at different locations for visitors to rest and observe wildlife. Broken or missing trail side markers will also be replaced along the trail leading from the Park. The parking areas will also be touched up with small stone, which will not hurt horse feet. Mowing will only occur during the mid-late summer months.

8. Project property ownership

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

9. Project Length, Width, Surface

The project length is 3.6 miles of trail, approximately 4 to 8 feet in width.

10. Prior Projects

The Chesapeake Forest has been awarded the following grants since 2007:

RT07-41 Tom Tyler Demonstration Forest & Nature Trail, \$3,500 reimbursed for trail enhancement supplies & materials.

RT08-26 WDF & CF Trail Enhancement Project, \$28,000 reimbursed for labor used to maintain and enhance existing horseback trails

RT09-25 CF 2009 Green Hill Trail Enhancement Project, \$26,052 reimbursed for labor used to maintain and enhance existing multi-use trails.

RT09-25 Green Hill Trail Enhancement, \$26,052 reimbursed for labor used to maintain and enhance multi-use trails.

RT07-46 Foster Trail Enhancement, \$10,000 reimbursed for labor used to maintain and enhance multi-use trails.

RT11-32 UTV Equipment Purchase, \$20,000 reimbursed for equipment purchased for trail maintenance.

RT11-34 Marshyhope Trail Maintenance, Grant is currently 50% complete. Reimbursement request of \$28,000 for labor and materials used to maintain the trail will be submitted by July 2013.

RT12-28 CF Wells Equestrian Trail, Grant is 80% complete. Reimbursement request of \$28,000 for labor and materials used to maintain the trail will be submitted by July 2013.

RT12-31 PSF Mt. Bike Trail, Trail work will begin in March 2013. Reimbursement request of \$28,000 for labor and materials used to maintain the trail will be submitted by October 2013.

12. Work Plan

The following table is provided as a guide to developing a realistic project schedule. Although program does not cover, please include planning and design, if not completed yet. Please consider all required permits discussed within these guidelines.

Milestone/ Task	Start Date	Duration	Responsible Party	Justification
PCA Assigned	Feb. 2014	1 Month	Shenika Allen	Applies to Accounting for number
Solicit bids	June 2014	1 Month	Mike Schofield	Procurement process
Purchase Equipment	July 2014	1 Month	Mike Schofield	Equipment installed by vendor
Paperwork Completed	August 2014	1 Month	Mike Schofield	Paperwork sent to Regional Office for review
Paperwork Reviewed Regional	September 2014	1 Month	Kip Powers	Paperwork reviewed for accuracy and sent to Forest Service HQ.
Paperwork Processed	October 2014	1 Month	Ken Jolly	Paper checked – close out match sent to SHA
Grant Closed	Fall 2014	1 Month		

12. Budget

Funds requested for projects cannot exceed \$40,000 for trail construction and \$30,000 for non-construction. Cost Breakdown for Federal Funds Requested (80%)

#	Description	Amount Requesting (80%)	Required Match (20%)	Total (100%)
1	18' Boom Arm	20,000	4,000	24,000
1	60" Rotary Mower Head	10,000	2,000	12,000
	Total	30,000	6,000	36,000

Matching Funds (20%)

Source	Type (cash or in-kind)	Description including Hours and rate	Total
Chesapeake Forest Budget	Cash	Allocated funds for equipment replacement in budget	6,000
Total			6,000

13. Location Map

See attached description of equipment and quote.

2014 NATIONAL RECREATIONAL TRAILS FUNDING APPLICATION

1. Project Sponsor (Applicant):

Please provide contact information for entity and project manager.

Government / non-profit entity: State of Maryland

Name of project manager: Michael Schofield

Title: Forest Manager

Organization: Department of Natural Resources, Forest Service

Address: 6572 Snow Hill Road, Snow Hill, MD 21863

Phone: (410) 632-3732

Fax: (410) 632-3730

E-mail: mschofield@dnr.state.md.us

2. Project name: CF/PSF Trail Map

3. Project location

The project area includes the Pocomoke State Forest (PSF) and Chesapeake Forest (CF) in Worcester County, Maryland near the Pocomoke River. The site is located adjacent to the Pocomoke River State Park (128,617 visitors annually), and 3.5 miles north from Pocomoke City (population 4,184) and 15 miles east from the town of Salisbury, Maryland (population 30,343).

4. Trail Type

May check more than one.

Motorized Trail

Diversified Trail

Non-motorized Trail

Transportation Trail (diversified trail designed for bicyclists and pedestrians to connect destinations. Go to <http://www.mdot.maryland.gov/Planning/Trails/trails.html> for more information)

5. Project Type

Maintenance / Restoration of existing trail

Construction of new trails

Relocation of existing trail

Development and rehabilitation of trailside facilities and trail linkages

Purchase and lease of trail construction equipment

Lease or acquisition of easements or property for recreational trails or corridors

- Implementation of interpretive/educational programs to promote intrinsic qualities, alternative transportation, safety, and environmental protection, as those objectives relate to the use of recreational trails

6. Abstract

This project will enhance the users trail experience by providing a weatherproof trail map for trails adjacent to the Pocomoke River stretching north through the Chesapeake and Pocomoke State Forests. This project benefits the recreational trail user by providing necessary information in a colorful map, which will highlight trails, parking areas and other points of interest.

7. Project Summary

This project will put updated, weather proof colored maps of hiking trails in the hands of trail users. There are currently no maps available to the public highlighting the various trail systems adjacent to the Pocomoke River within the Chesapeake and Pocomoke State Forest. Trail maps will be distributed through the Pocomoke River State Park, the Chesapeake and Pocomoke State Forest Office and the Worcester Office of Tourism.

8. Project property ownership

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

9. Project Length, Width, Surface

N/A

10. Prior Projects

The Chesapeake Forest has been awarded the following grants since 2007:

RT07-41 Tom Tyler Demonstration Forest & Nature Trail, \$3,500 reimbursed for trail enhancement supplies & materials.

RT08-26 WDF & CF Trail Enhancement Project, \$28,000 reimbursed for labor used to maintain and enhance existing horseback trails

RT09-25 CF 2009 Green Hill Trail Enhancement Project, \$26,052 reimbursed for labor used to maintain and enhance existing multi-use trails.

RT09-25 Green Hill Trail Enhancement, \$26,052 reimbursed for labor used to maintain and enhance multi-use trails.

RT07-46 Foster Trail Enhancement, \$10,000 reimbursed for labor used to maintain and enhance multi-use trails.

RT11-32 UTV Equipment Purchase, \$20,000 reimbursed for equipment purchased for trail maintenance.

RT11-34 Marshyhope Trail Maintenance, Grant is currently 50% complete. Reimbursement request of \$28,000 for labor and materials used to maintain the trail will be submitted by July 2013.

RT12-28 CF Wells Equestrian Trail, Grant is 80% complete. Reimbursement request of \$28,000 for labor and materials used to maintain the trail will be submitted by July 2013.

RT12-31 PSF Mt. Bike Trail, Trail work will begin in March 2013. Reimbursement request of \$28,000 for labor and materials used to maintain the trail will be submitted by October 2013.

12. Work Plan

The following table is provided as a guide to developing a realistic project schedule. Although program does not cover, please include planning and design, if not completed yet. Please consider all required permits discussed within these guidelines.

Milestone/ Task	Start Date	Duration	Responsible Party	Justification
NEPA Started	Jan. 1 2014	3 Months	Ken Jolly	Grant List submitted
PCA Assigned	June 1 2014	1 month	Shaneka Allen	Applies to Acct for number
Develop Map	June 2014	1 month	Mike Schofield	Use GIS software
Develop Brochure	July 2014- May 2015	11 months	Office of Communication	Develop written portion with logos
Paperwork Completed	May 2015	1 month	Mike Schofield	Paperwork tabulated checked acct. sent to Regional for review
Paperwork Reviewed Regional	May 2015	1 month	Kip Powers	Paperwork reviewed for accuracy and sent to Forest Service HQ
Paperwork Processed	June 2015	1 month	Ken Jolly	Paper checked-closeout sheet match expenditure sent to SHA
Grant Closed	Summer 2015	1 month		Checks over paperwork

12. Budget

Funds requested for projects cannot exceed \$40,000 for trail construction and \$30,000 for non-construction. Cost Breakdown for Federal Funds Requested (80%)

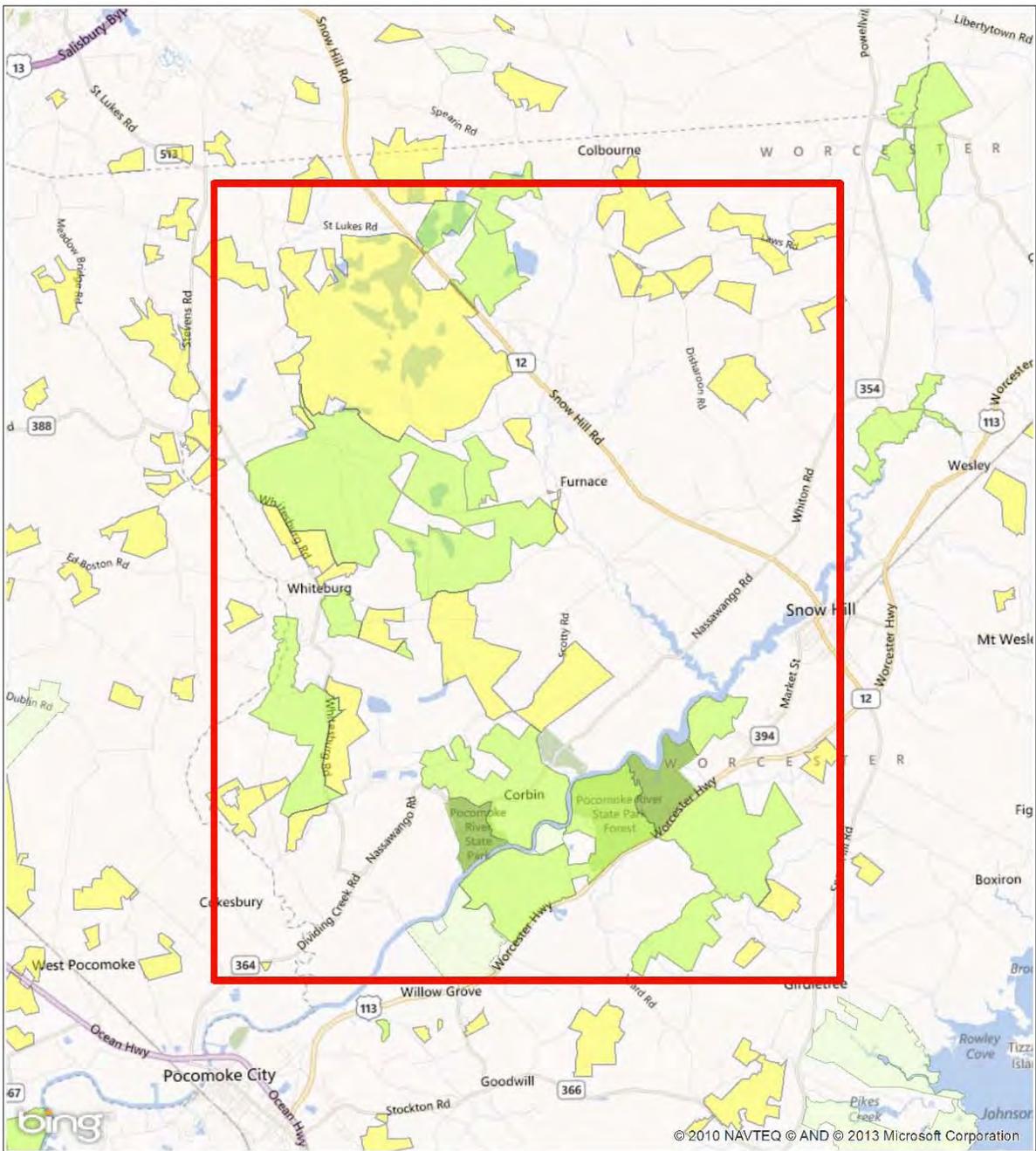
#	Description	Amt. Request Total	Required Match (20%)	Total (100%)
5000	19"X25" waterproof Brochure/map (\$2.30 ea.)	\$11,500	\$2,300	\$13,800
	Total	\$11,500	\$2,300	\$13,800

Matching Funds (20%)

Source	Type (cash or in-kind)	Description including Hours and rate	Total
CF/PSF Budget	Cash		\$2,300
Total			\$2,300

13. Location Map

See attached map.



Legend

-  Chesapeake Forest Lands
-  Pocomoke State Forest

0 0.5 1 2 3 4 Miles

1 in = 2 miles



Chesapeake Forest
Pocomoke State Forest
 Approximate Trail Map Extent

2014 NATIONAL RECREATIONAL TRAILS FUNDING APPLICATION

1. Project Sponsor (Applicant): _____

Please provide contact information for entity and project manager.

Government / non-profit entity: State of Maryland

Name of project manager: Michael Schofield

Title: Forest Manager

Organization: Department of Natural Resources, Forest Service

Address: 6572 Snow Hill Road, Snow Hill, MD 21863

Phone: (410) 632-3732

Fax: (410) 632-3730

E-mail: mschofield@dnr.state.md.us

2. Project name: PSF Elevated Foot Bridge

3. Project location

The project area is on the Pocomoke State Forest, Hudson Tract. The site is adjacent to the Pocomoke River State Park, Shad Landing (128,617 visitors annually), 3.0 miles from Pocomoke City (population 4,098) and 15 miles east from the town of Salisbury, Maryland (population 23,743).

4. Trail Type

May check more than one.

Motorized Trail

Diversified Trail

Non-motorized Trail

Transportation Trail (diversified trail designed for bicyclists and pedestrians to connect destinations. Go to <http://www.mdot.maryland.gov/Planning/Trails/trails.html> for more information)

5. Project Type

Maintenance / Restoration of existing trail

Construction of new trails

Relocation of existing trail

Development and rehabilitation of trailside facilities and trail linkages

Purchase and lease of trail construction equipment

- Lease or acquisition of easements or property for recreational trails or corridors
- Implementation of interpretive/educational programs to promote intrinsic qualities, alternative transportation, safety, and environmental protection, as those objectives relate to the use of recreational trails

6. Abstract

This project will provide a critical link between 14.2 miles of existing trails on the Pocomoke State Forest and the Pocomoke River State Park trail system. In addition, trail users will also be able to access the Pocomoke River Wildlife Management Area adjacent to the Pocomoke State Forest. This project benefits the recreational trail user by linking three separate management units together and creating unique opportunities to Park visitors

7. Project Summary

This project will establish a 65' long elevated foot path from the Pocomoke State Forest to the edge of Corker's Creek. The elevated path will utilize stainless steel screw pilings and a wooden deck. A 305' section of new trail will be constructed from the elevated foot path to the existing forest trail system. The new trail segment will be 4 to 6 feet in width with a natural dirt surface. Forest Service and Park Service labor will be used to install the foot path. Volunteers from the local International Mountain Bike Association will build the new 305' section of trail.

The Pocomoke River Park Manager will submit a Recreational Trail Grant request to cover the elevated foot path from the Park to the edge of Corkers Creek. Capital improvement funds from the Department of Natural Resources will be used for the construction and placement of the bridge connecting the two foot paths.

8. Project property ownership

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

9. Project Length, Width, Surface

65 foot elevated wooden foot path and a 305 foot dirt surface trail both with a width of 4 to 6 feet.

10. Prior Projects

The Chesapeake Forest has been awarded the following grants since 2007:

RT07-41 Tom Tyler Demonstration Forest & Nature Trail, \$3,500 reimbursed for trail enhancement supplies & materials.

RT08-26 WDF & CF Trail Enhancement Project, \$28,000 reimbursed for labor used to maintain and enhance existing horseback trails

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12. Work Plan

The following table is provided as a guide to developing a realistic project schedule. Although program does not cover, please include planning and design, if not completed yet. Please consider all required permits discussed within these guidelines.

Milestone/ Task	Start Date	Duration	Responsible Party	Justification
NEPA Started	Jan 2014	3 Months	Ken Jolly	Grant list submitted
PCA Assigned	Feb. 2014	1 Month	Shenika Allen	Applies to Accounting for number
Solicit bids	June 2014	1 Month	Mike Schofield	Procurement process
Purchase Equipment	July 2014	1 Month	Mike Schofield	Equipment installed by vendor
Work Starts	August 2014	11 Months	Mike Schofield	Staff installs elevated path
Paperwork Completed	May 2015	1 Month	Mike Schofield	Paperwork sent to Regional Office for review
Paperwork Reviewed Regional	May 2015	1 Month	Kip Powers	Paperwork reviewed for accuracy and sent to Forest Service HQ.
Paperwork Processed	June 2015	1 Month	Ken Jolly	Paper checked – close out match sent to SHA
Grant Closed	Summer 2015	1 Month		

12. Budget

Funds requested for projects cannot exceed \$40,000 for trail construction and \$30,000 for non-construction. Cost Breakdown for Federal Funds Requested (80%)

#	Description	Amount Requesting (80%)	Required Match (20%)	Total (100%)
1	Screw Pilings	30,000	6,000	36,000
1	Deck Material and fasteners	10,000	2,000	12,000
	Total	40,000	8,000	48,000

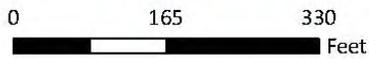
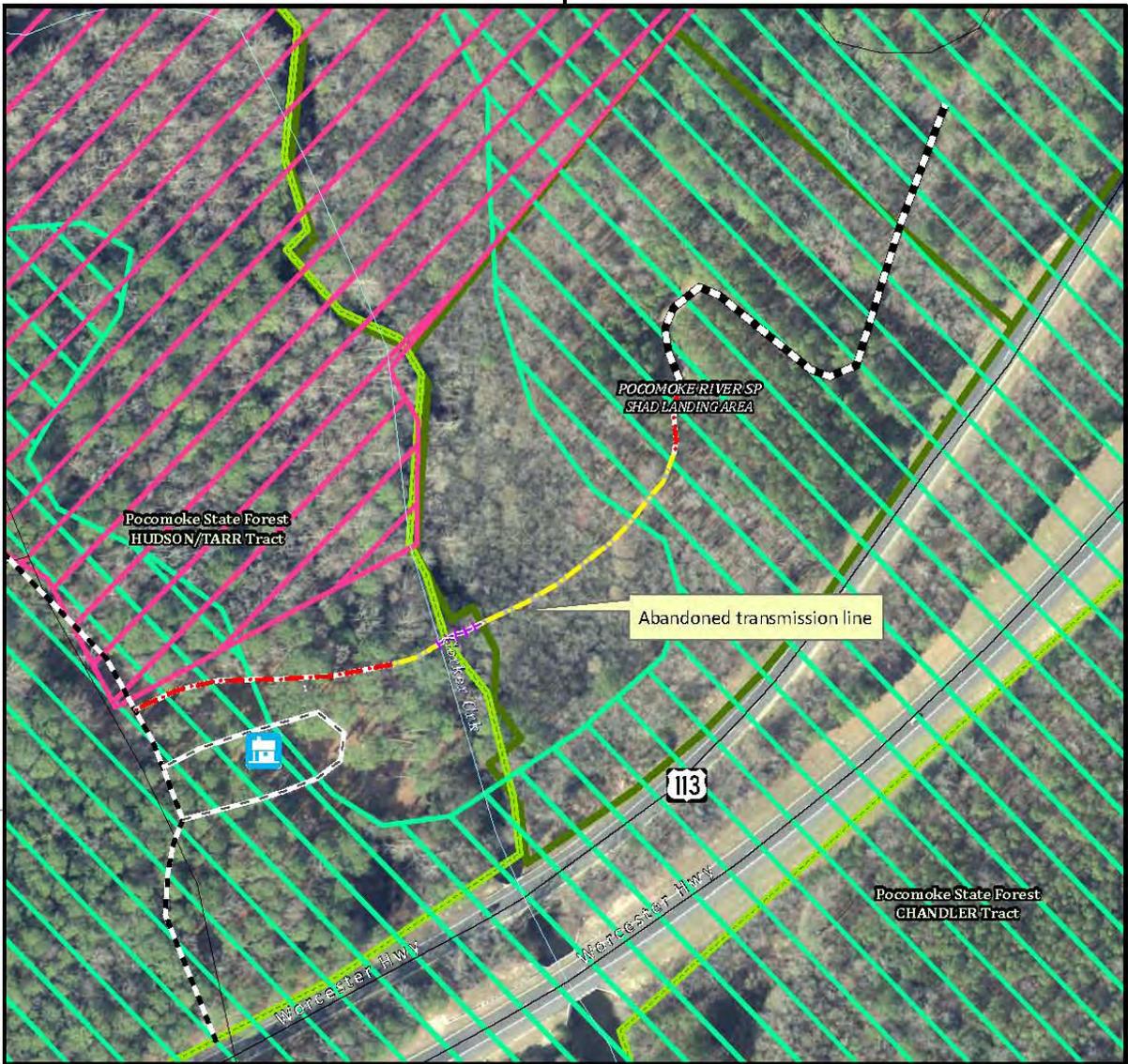
Matching Funds (20%)

Source	Type (cash or in-kind)	Description including Hours and rate	Total
MD FS Staff Labor	In-kind	Project Supervision @ \$41.44/hr X 19.3 hrs	\$800
MD FS Staff Labor	In-kind	Project Implementation @ \$26.57/hr X 75.3 hrs	\$2000
MD FS Staff Labor	In-kind	Project Implementation @ \$26.57/hr X 75.3 hrs	\$2000
MD FS Staff Labor	In-kind	Project Implementation @ \$12.53/hr X 85 hrs	\$1067
MD FS Staff Labor	In-kind	Project Implementation @ \$12.53/hr X 85 hrs	\$1067
MD FS Staff Labor	In-kind	Project Implementation @ \$12.53/hr X 85 hrs	\$1067
Total			8,000

13. Location Map

See attached map and equipment and quote.

75°26'30"W



1 inch = 165 feet

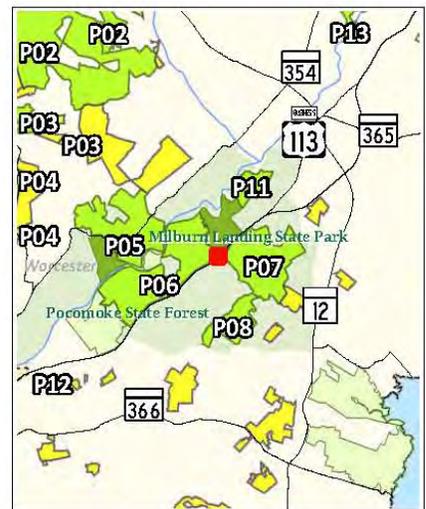


Legend

- Bridge
- Existing Trail (~645 ft)
- New Trail (~415 ft)
- New Boardwalk (~380 ft)
- Wildlands
- Critical Area
- DNR Lands**
- State Park
- Pocomoke State Forest

Pocomoke State Forest
Pocomoke River State Park
 Corker's Creek Trail and Crossing
 Aerial Photo Map

ASC-DNR Forest Service 02/2013



POCOMOKE STATE FOREST – CHANDLER TRACT: ROAD AND TRAIL MAINTENANCE AND MARKING, AND ROAD ABANDONMENT

2014 NATIONAL RECREATIONAL TRAILS FUNDING APPLICATION

1. Project Sponsor (Applicant):

Please provide contact information for entity and project manager.

Government / non-profit entity: State of Maryland

Name of project manager: Michael Schofield

Title: Forest Manager

Organization: Department of Natural Resources, Forest Service

Address: 6572 Snow Hill Road, Snow Hill, MD 21863

Phone: (410) 632-3732

Fax: (410) 632-3730

E-mail: mschofield@dnr.state.md.us

2. Project name: PSF Elevated Foot Bridge

3. Project location

The project area is on the Pocomoke State Forest, Hudson Tract. The site is adjacent to the Pocomoke River State Park, Shad Landing (128,617 visitors annually), 3.0 miles from Pocomoke City (population 4,098) and 15 miles east from the town of Salisbury, Maryland (population 23,743).

4. Trail Type

May check more than one.

Motorized Trail

Diversified Trail

Non-motorized Trail

Transportation Trail (diversified trail designed for bicyclists and pedestrians to connect destinations. Go to <http://www.mdot.maryland.gov/Planning/Trails/trails.html> for more information)

5. Project Type

Maintenance / Restoration of existing trail

Construction of new trails

Relocation of existing trail

Development and rehabilitation of trailside facilities and trail linkages

- Purchase and lease of trail construction equipment
- Lease or acquisition of easements or property for recreational trails or corridors
- Implementation of interpretive/educational programs to promote intrinsic qualities, alternative transportation, safety, and environmental protection, as those objectives relate to the use of recreational trails

6. Abstract

This project will provide a critical link between 14.2 miles of existing trails on the Pocomoke State Forest and the Pocomoke River State Park trail system. In addition, trail users will also be able to access the Pocomoke River Wildlife Management Area adjacent to the Pocomoke State Forest. This project benefits the recreational trail user by linking three separate management units together and creating unique opportunities to Park visitors

7. Project Summary

This project will establish a 65' long elevated foot path from the Pocomoke State Forest to the edge of Corker's Creek. The elevated path will utilize stainless steel screw pilings and a wooden deck. A 305' section of new trail will be constructed from the elevated foot path to the existing forest trail system. The new trail segment will be 4 to 6 feet in width with a natural dirt surface. Forest Service and Park Service labor will be used to install the foot path. Volunteers from the local International Mountain Bike Association will build the new 305' section of trail.

The Pocomoke River Park Manager will submit a Recreational Trail Grant request to cover the elevated foot path from the Park to the edge of Corkers Creek. Capital improvement funds from the Department of Natural Resources will be used for the construction and placement of the bridge connecting the two foot paths.

8. Project property ownership

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

9. Project Length, Width, Surface

65 foot elevated wooden foot path and a 305 foot dirt surface trail both with a width of 4 to 6 feet.

10. Prior Projects

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RT12-31 PSF Mt. Bike Trail, Trail work will begin in March 2013. Reimbursement request of \$28,000 for labor and materials used to maintain the trail will be submitted by October 2013.

12. Work Plan

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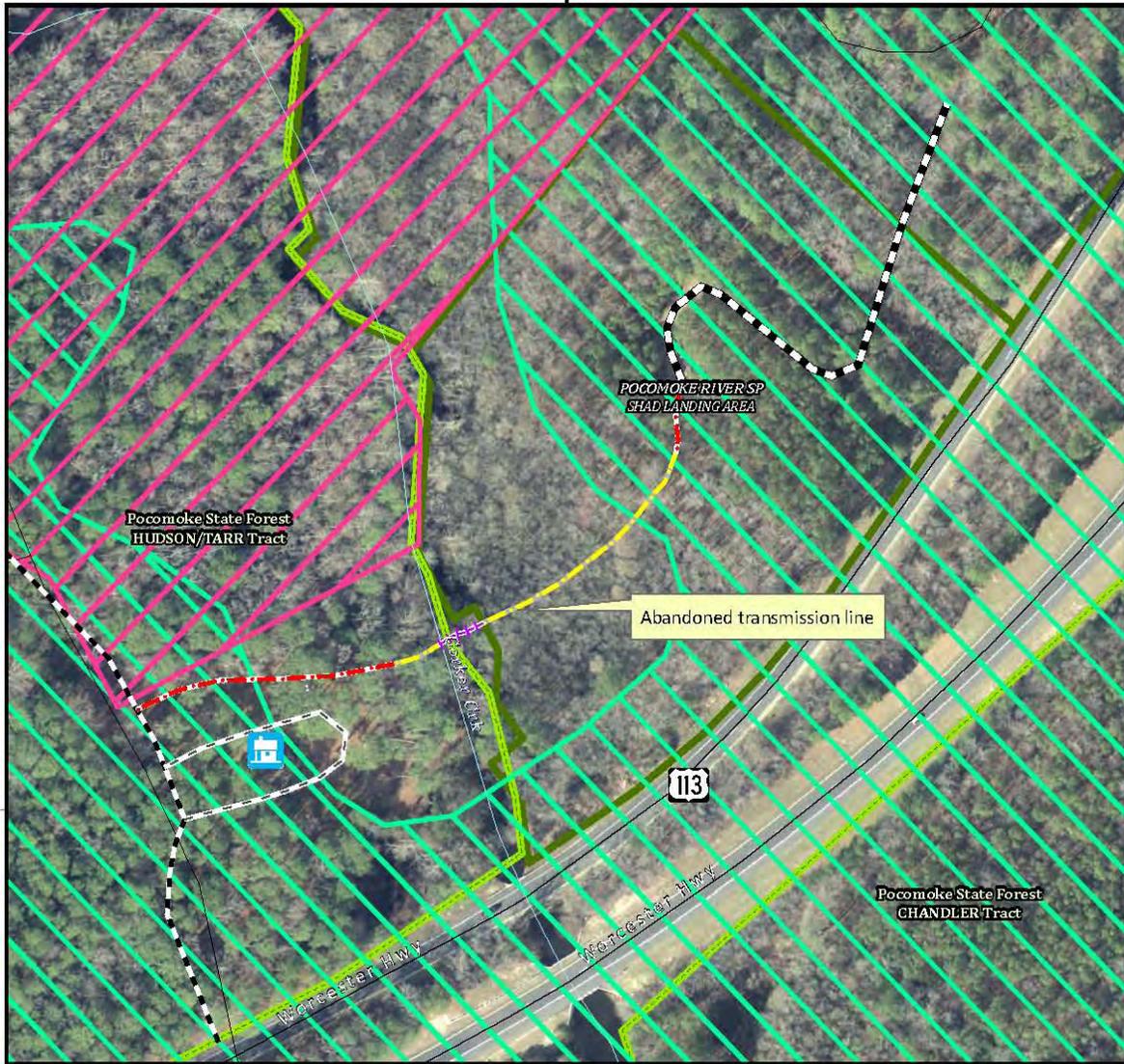
Matching Funds (20%)

Source	Type (cash or in-kind)	Description including Hours and rate	Total
MD FS Staff Labor	In-kind	Project Supervision @ \$41.44/hr X 19.3 hrs	\$800
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Total			8,000

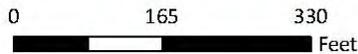
13. Location Map

See attached map and equipment and quote.

75°26'30"W



75°26'30"W



1 inch = 165 feet



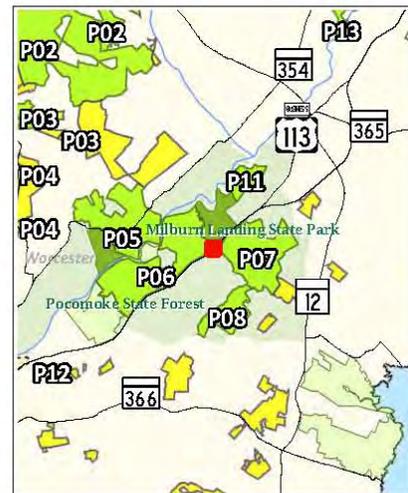
Legend

- Bridge
- Existing Trail (~645 ft)
- New Trail (~415 ft)
- New Boardwalk (~380 ft)
- Wildlands
- Critical Area
- DNR Lands**
- State Park
- Pocomoke State Forest

Pocomoke State Forest Pocomoke River State Park

Corker's Creek Trail and Crossing
Aerial Photo Map

ASC-DNR Forest Service 02/2013



2014 NATIONAL RECREATIONAL TRAILS FUNDING APPLICATION

1. Project Sponsor (Applicant): _____

Please provide contact information for entity and project manager.

Government / non-profit entity: State of Maryland

Name of project manager: Michael Schofield

Title: Forest Manager

Organization: Department of Natural Resources, Forest Service

Address: 6572 Snow Hill Road, Snow Hill, MD 21863

Phone: (410) 632-3732

Fax: (410) 632-3730

E-mail: mschofield@dnr.state.md.us

2. Project name: Milburn Landing Trail Enhancement

3. Project location

The project area includes the Pocomoke State Forest (PSF) Milburn Landing Tract located in Worcester County, Maryland. The site is located adjacent to the Pocomoke River State Park (128,617 visitors annually), 7.5 miles north from Pocomoke City (population 4,184) and 15 miles south from the city of Salisbury, Maryland (population 30,343).

4. Trail Type

May check more than one.

Motorized Trail

Diversified Trail

Non-motorized Trail

Transportation Trail (diversified trail designed for bicyclists and pedestrians to connect destinations. Go to <http://www.mdot.maryland.gov/Planning/Trails/trails.html> for more information)

5. Project Type

Maintenance / Restoration of existing trail

Construction of new trails

Relocation of existing trail

Development and rehabilitation of trailside facilities and trail linkages

- Purchase and lease of trail construction equipment
- Lease or acquisition of easements or property for recreational trails or corridors
- Implementation of interpretive/educational programs to promote intrinsic qualities, alternative transportation, safety, and environmental protection, as those objectives relate to the use of recreational trails

6. Abstract

This project will enhance portions of the existing trails within the Milburn Landing Tract of the Pocomoke State Forest by removing brush, small trees and grass from the existing trail system. Most of the trails are blocked by wind thrown trees from Hurricane Sandy. This project benefits the recreational trail user by maintaining the extensive trail system used by Park patrons.

7. Project Summary

This project will maintain 3.6 miles of existing trail by removing vegetation from the trail surface. Large trees that were blown across the trails will be removed by hand with chainsaws. Smaller brush will also be clipped back using hand tools. Two benches will be installed along the trail at different locations for visitors to rest and observe wildlife. Broken or missing trail side markers will also be replaced along the trail leading from the Park. The parking areas will also be touched up with small stone, which will not hurt horse feet.

8. Project property ownership

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

9. Project Length, Width, Surface

The project length is 3.6 miles of trail, approximately 4 to 8 feet in width.

10. Prior Projects

The Chesapeake Forest has been awarded the following grants since 2007:

RT07-41 Tom Tyler Demonstration Forest & Nature Trail, \$3,500 reimbursed for trail enhancement supplies & materials.

RT08-26 WDF & CF Trail Enhancement Project, \$28,000 reimbursed for labor used to maintain and enhance existing horseback trails

RT09-25 CF 2009 Green Hill Trail Enhancement Project, \$26,052 reimbursed for labor used to maintain and enhance existing multi-use trails.

RT09-25 Green Hill Trail Enhancement, \$26,052 reimbursed for labor used to maintain and enhance multi-use trails.

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RT11-32 UTV Equipment Purchase, \$20,000 reimbursed for equipment purchased for trail maintenance.

RT11-34 Marshyhope Trail Maintenance, Grant is currently 50% complete. Reimbursement request of \$28,000 for labor and materials used to maintain the trail will be submitted by July 2013.

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RT12-31 PSF Mt. Bike Trail, Trail work will begin in March 2013. Reimbursement request of \$28,000 for labor and materials used to maintain the trail will be submitted by October 2013.

12. Work Plan

The following table is provided as a guide to developing a realistic project schedule. Although program does not cover, please include planning and design, if not completed yet. Please consider all required permits discussed within these guidelines.

Milestone/Task	Start Date	Duration	Responsible Party	Justification
NEPA Started	Jan. 1 2014	3 Months	Ken Jolly	Grant List submitted
PCA Assigned	June 1 2014	1 month	Shaneka Allen	Applies to Acct for number
Forest S. contract labor for trail work	June 2014	1 month	Mike Schofield	Go through procurement process
Work Starts	July 2014- May 2015	11 months	Mike Schofield	Work done on Trails by contract labor
Match of Labor	July 2014- May 2015	11 months	Mike Schofield	Match logged and time scheduled
Paperwork Completed	May 2015	1 month	Mike Schofield	Paperwork tabulated checked acct. sent to Regional for review
Paperwork Reviewed Regional	May 2015	1 month	Kip Powers	Paperwork reviewed for accuracy and sent to Forest Service HQ
Paperwork Processed	June 2015	1 month	Ken Jolly	Paper checked-closeout sheet match expenditure sent to SHA
Grant Closed	Summer 2015	1 month		Checks over paperwork

12. Budget

Funds requested for projects cannot exceed \$40,000 for trail construction and \$30,000 for non-construction. Cost Breakdown for Federal Funds Requested (80%)

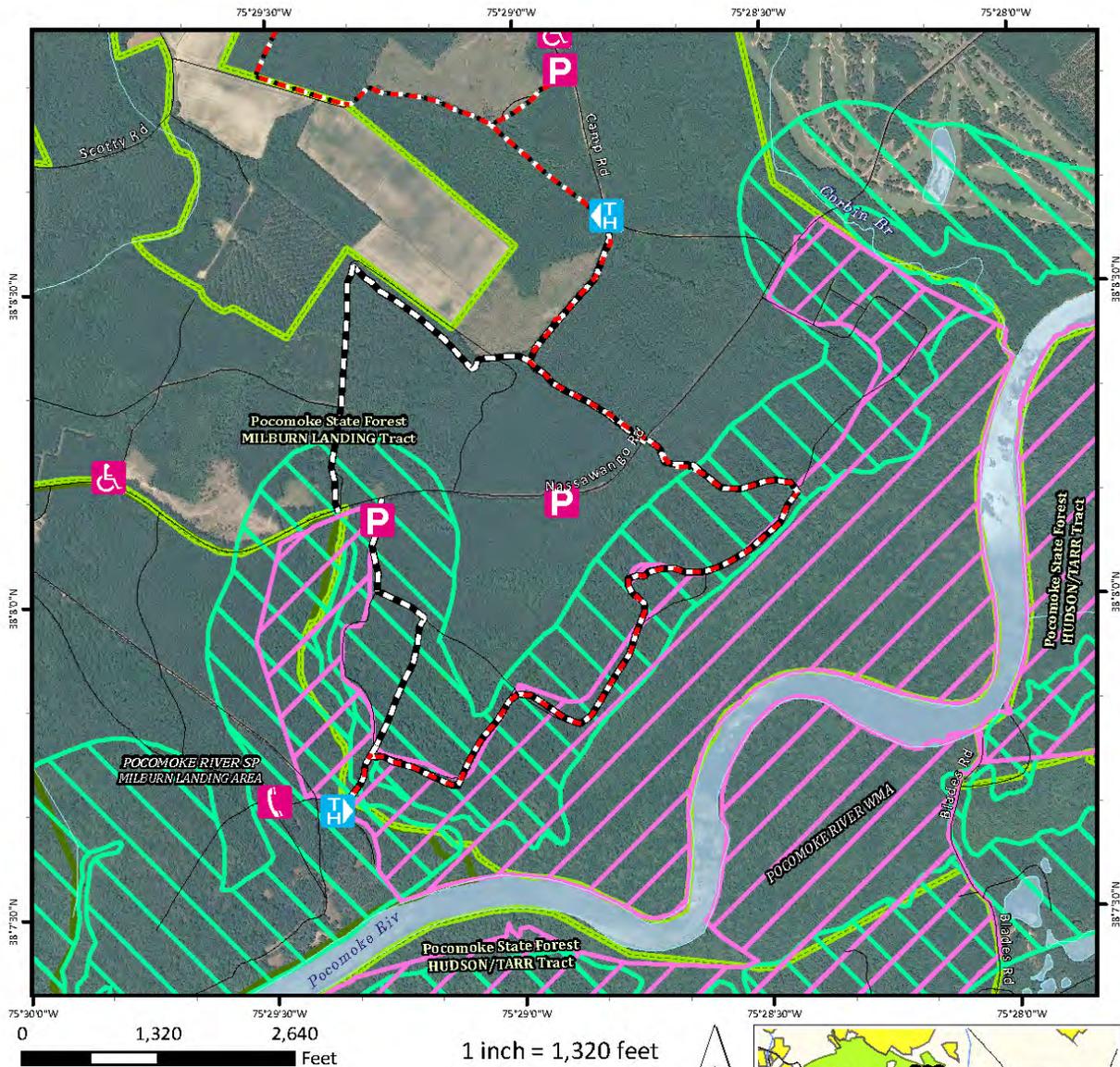
#	Description	Amt. Request Total	Required Match (20%)	Total (100%)
2	Contractual labor @ \$15/hr X 933.33 hrs	\$29,000	\$5,800	\$34,800
2	4' X 6' Park Benches	\$1000	\$200	\$1,200
	Total	\$30,000	\$6,000	\$36,000

Matching Funds (20%)

Source	Type (cash or in-kind)	Description including Hours and rate	Total
MD FS Staff Labor	In-kind	Project Supervision @ \$41.44/hr X 34.5 hrs	\$1,429.68
MD FS Staff Labor	In-kind	Project Implementation @ \$26.57/hr X 173 hrs	\$4,596.61
Total			\$6,026.29

13. Location Map

See attached map.



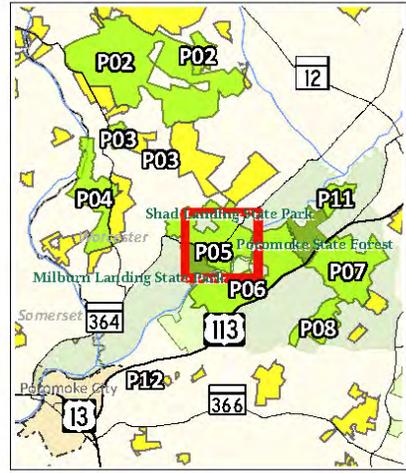
0 1,320 2,640 Feet
 1 inch = 1,320 feet



Pocomoke State Forest

Milburn Landing Trail
 Aerial Photo Map

- Legend**
- Algonquin Cross County Trail
 - Milburn Landing Trail
 - Wildlands
 - Critical Area
 - DNR Lands**
 - State Park
 - Pocomoke State Forest



APPENDIX B - SOIL SERIES ABBREVIATIONS AND SYMBOLS

Soil Series	MG	Caroline	Dorchester	Somerset	Wicomico	Worcester
Acquango sand	4					AcB, AcC
Annessex-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
Endoquepts 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			PhA		
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			GIA		
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	Elkton sandy loam
	Askecksy loamy sand	Elkton silt loam
	Corsica mucky loam	Othello and Kentuck soils
	Corsica mucky loam, Carolina Bay	Othello silt loam
	Crosiadore silt loam	Othello silt loam, loamy substratum
	Elkton loam	Quindocqua silt loam
	Elkton mucky 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	Klej-Galloway complex
	Corsica and Fallsington soils	Klej-Hammonton complex
	Fallsington loam and sandy loam	Lenni loam and sandy loam
	Fallsington-Glassboro complex	Mullica-Berryland complex
	Glassboro loam	Othello-Fallsington complex
	Hurlock loamy sand and sandy loam	Pone mucky loam and mucky sandy loam
	Klej loamy sand	

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

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 herbivores 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

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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).

Silvicultural Activity Summary By Annual Work Plan

Workplan Activity	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		14 Year Total	
	Plan Acres	Acres Comp.	Plan Acres	Acres Comp.																										
Final Harvests	33	33	67	67	138	117	221	171	378	260	209	202	579	449	244	35	294	47	152	239	256	180	94	81	84	96			2,911	1,815
Various Select Harvests &/or other treatments	312	15	89		46	46	54						135		52							139	121	22	31			850	213	
First Thinning	1,421	1,206	1,344	950	733	518	1,193	490	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	17,418	8,722	
Second Thinning	245	181	263	263	673	519	602	445	584	223	1,382	1,058	579	298	257	30	257	151	113	65	86	299	106	88	55	38	350	5,552	3,658	
Site Preparation			375	97	64				130	89	593	32	135	68	167		106											1,570	286	
Tree Planting	482	487	375	96	64		30	30	163	69	593	32	135	68	167				42			11	14					2,051	807	
Regeneration Release	387	387	459	335	106	23			101	69	77	29	191	68	199										25			1,520	911	
Grass Control	482	487	375		64				163										42									1,151	487	
Mid Rotation Release	264	264	498	404	519	396	474	317	350	196			29		24		160	48										2,318	1,625	
Fertilization	895		498		519	96	949	141	350	214							71											3,282	451	
Natural Regeneration				188		64				30		149					87							181				-	761	
Pre Commercial Thinning	214	214	459	241	234	187			50	50	24	24	388	178	573	298	573	197	139		81	94	10	186	125	49	49	2,980	1,632	
Prescribed Fire	19	19	145	145	443		552	178	420		217	217	268	440	47	553	202		76		29	29	31	48	63			2,172	1,723	
Boundary Maintenance		1,029		1,314		1,793	19,160		16,943			2,150	4,552			2,108		12,608	10,945		6,162		3,644					-	82,408	
Restoration Projects							221	221	470	200	362		334		26	362					130	130	143	143	328	41		2,014	1,097	
Watershed Imp. Projects							36	36			15		50		20	50	351	351									472	437		
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	

* High Conservation Value Forests (HCVF) were initially identified and designated in 2007 on the Chesapeake forest. The current designation includes Ecologically Significant Areas (ESA) Zone 1 & 2, Core Forest Interior Dwelling Bird (FIDS) Habitat, Core Delmarva Fox Squirrel (DFS) Habitat, and Riparian Forested Buffers. Management activities within the HCVF have been designed to maintain or enhance the attributes that define such forests. Activities thus far have included the conversion of loblolly pine plantations to natural mixed forest conditions for DFS habitat or the removal of woody plant material from xeric dune and Carolina bay communities (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).

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.														
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

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