EASTERN REGION

STATE FOREST LANDS

ANNUAL WORK PLAN

FISCAL YEAR 2019

STATE OF MARYLAND
LICENSED FORESTER
MICHAEL G. SCHOFIELD
NO. 424
BOARD OF FORESTERS

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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 71,441 acres divided into 186 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 18,206-acre Pocomoke State Forest is almost entirely contained within Worcester County, except for 388 acres in Somerset County and 154 acres in Wicomico County. The Chesapeake Forest has 18,038 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	9,188	12	**10,471**
(Percent)	*0.52%*	*0.35%*	*0.28%*	*0.12%*	*0.24%*	*10.85%*	*0.01%*	***12.36%***
Bottomland Hardwoods/ Bald Cypress	0	0	0	0	20	3,855	0	**3,875**
(Percent)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.02%*	*4.55%*	*0.00%*	***4.57%***
Marsh/Field/ Power lines	3,946	0	0	0	0	0	0	**3,946**
(Percent)	*4.66%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***4.66%***
Total	**6,295**	**10,741**	**22,186**	**13,462**	**9,095**	**22,483**	**441**	**85,533**
(Percent)	***7.43%***	***12.68%***	***26.19%***	***15.89%***	***10.74%***	***26.54%***	***0.52%***	***100.00%***

UNIQUE COMMUNITY TYPES

INLAND SAND DUNE AND RIDGE WOODLANDS

This natural community occurs on dry, sandy dunes and ridges of the coastal plain. These landforms developed during the late Pleistocene when colder climate processes associated with Wisconsin glaciation influenced much of the region. At the time, prevailing northwest winds transported surficial sands across the Delmarva and deposited them on the east sides of the Nanticoke, Wicomico, and Pocomoke rivers and formed “dune fields” on uplands in the central part of the peninsula. Today, these landforms support woodland vegetation of pine and oak, as well as a variety of rare and threatened plant and animal species. Currently, there are two globally rare natural community types associated with inland sand dunes and ridges. One characterized by shortleaf pine (*Pinus echinata*) and another dominated by a mixture of hardwoods such as white oak *(Quercus alba),* black oak *(Quercus velutina),* and southern red oak *(Quercus falcata)*. Both community types share many common associates such as Pitch pine *(Pinus rigida),* post oak *(Quercus stellata),* sand hickory *(Carya pallida),* and a variety of ericaceous shrubs. In general, the herbaceous layer is sparse and consists primarily of light-demanding species tolerant of dry,

sandy conditions. Examples of these species include yellow false indigo *(Baptisia tinctoria)* and the State threatened sundial lupine *(Lupinus perennis)*. Frequent low-intensity fire is important in maintaining these natural communities and the distribution of species that depend upon them.

NON-RIVERINE SWAMPS

This natural community includes seasonally flooded "flatwoods" and depressions of the coastal plain. These habitats develop on flat, ancient estuarine terraces and shallow depressions with seasonally perched water tables. This results in standing water throughout the early part of the growing season followed by a period of drawdown. Hydroperiods are variable between swamps and largely dependent on rainfall and drought cycles. The forested canopy structure of flatwoods and depression swamps range from open to closed with composition ranging from hardwood dominated to a mixtures of hardwoods and pines. Swamps dominated by oak species such as willow oak *(Quercus phellos)*, pin oak *(Quercus palustris)*, swamp chestnut oak *(Quercus michauxii)*, and cherrybark oak *(Quercus pagoda)* are considered highly rare because most have been logged and subsequently invaded by successional hardwoods such as red maple *(Acer rubrum)*, sweetgum *(Liquidambar styraciflua)*, and black gum *(Nyssa sylvatica)*. Pond pine (*Pinus serotina*) and loblolly pine *(Pinus taeda)* are prominent components of many flatwoods on the lower Coastal Plain. Nonriverine Swamps have been greatly reduced in Maryland through ditching, draining, logging, and conversion to agriculture.

ATLANTIC WHITE CEDAR SWAMPS

Atlantic white cedar *(Chamaecyparis thyoides)* swamps occur discontinuously along the Nanticoke, Wicomico, and Pocomoke Rivers. They are best developed above regular tidal influence between tidal swamp forests and sandy uplands where groundwater discharge and the accumulation peat over time provide favorable growing conditions. A few examples have also been documented from seasonally saturated to flooded basin wetlands associated with ancient estuarine terraces in the Pocomoke River watershed. Atlantic white cedar *(Chamaecyparis thyoides)*, swamp tupelo *(Nyssa biflora)*, pond pine *(Pinus serotina)*, and sweetbay magnolia *(Magnolia virginiana)* often comprise the tree canopy. In the understory, shrubs and vines are common but variable, often including an abundance of common greenbrier *(Smilax rotundifolia)*. The herbaceous layer is often sparse and may include species of sedges, manna-grasses, and rushes. Slightly elevated hummocks of sphagnum mosses *(Sphagnum* spp.) frequently form large patches. The extent of Atlantic white cedar has been greatly reduced over the past 200 years by logging. Today, remaining stands exist as patches representing only a fraction of historical estimates. All natural community types classified as Atlantic white cedar swamps are considered globally and state rare.

DELMARVA BAYS

Delmarva Bays are seasonally flooded wetland depressions on Maryland's coastal plain. They developed from ancient interdunal depressions approximately 16,000 years ago when the climate of the Coastal Plain was very cold and windy and supported an extensive sand dune ecosystem. The majority of Delmarva Bays have been shaped by these wind and erosional processes into circular depressions up to one meter in depth with prominent sand rims. A perched water table and seasonal fluctuations in groundwater recharge and precipitation cause these wetlands to be irregularly flooded or seasonally inundated. During very dry seasons, surface water may be absent or limited to the deepest point within the bay. Likewise, during very wet years when rainfall is abundant, bays may retain water throughout the entire growing season. Depth and duration of seasonal inundation are apparently the most important factors influencing plant communities and the degree to which woody species become established. Dry-season fires in adjacent uplands may spread into Bays and may be another factor limiting the invasion of

woody species, although fire frequencies throughout the region have been much reduced in recent decades. The vegetation of Delmarva Bays is closely linked to its hydrologic regime. As water levels draw down or recede during the growing season, plant communities typically develop concentric rings from the outer edge towards the center or deepest point in the bay. Outer rings of a bay may include shrubs of buttonbush *(Cephalanthus occidentalis)*, fetterbush *(Leucothoe racemosa)*, swamp loosestrife *(Lysimachia terrestris)*, and sweet pepper-bush *(Clethra alnifolia)* or nearly monospecific stands of Walter's sedge *(Carex striata)*, maidencane *(Panicum hemitomon)*, and Virginia chain fern *(Woodwardia virginica)*. Interior portions of Bays may include species such as Eaton's panic-grass *(Dichanthelium spretum)*, warty panicgrass *(Panicum verrucosum)*, and Virginia meadow-beauty *(Rhexia virginica)*. Many of these species grade into the "draw down pocket" or lowest portion of a bay, which is the last to desiccate during the growing season. Common to this zone are slender fimbry *(Fimbristylis autumnalis)* and flood tolerant shrubs like buttonbush *(Cephalanthus occidentalis)*. Many plants and animals considered rare in Maryland are known to occur in Delmarva Bays. Delmarva bays and their associated life zones have their own ESA designations identified and mapped.

BALD CYPRESS SWAMPS

Bald cypress swamps are forested wetlands that contain bald cypress (*Taxodium distichum*) as a dominant species in the canopy. In addition to bald cypress, swamp tupelo (*Nyssa biflora*) and pumpkin ash *(Fraxinus profunda)* are also characteristic in the canopy. Bald cypress swamps occur in the tidal and upper non-tidal reaches of the Pocomoke River in Maryland. These habitats are mostly freshwater and are periodically flooded by lunar tides. Stands are found in low floodplains, forming a corridor between open tidal marsh and non-tidal habitats. Due to flooding, these stands typically contain hummocks and hollows where the hollows are frequently flooded and hummocks are occasionally flooded. Due to the "drier" nature of the hummocks, they often support a diversity of woody and herbaceous species.

VERNAL POOLS

Vernal pools are small (~0.1-2 ha), non-tidal palustrine forested wetlands. They exhibit a well-defined, discrete basin and lack a permanent, above-ground outlet. The basin overlies a clay hardpan or some other impermeable soil or rock layer that impedes drainage. As the water table rises in fall and winter, the basin fills forming a shallow pool. By spring, the pool typically reaches maximum depth (~0.5-2.5 m) following snowmelt and the onset of spring rains. By mid- to late summer, the pool usually dries up completely, although some surface water may persist in relatively deep basins, especially in years with above average precipitation. This periodic seasonal drying prevents fish populations from becoming established, an important biotic feature of vernal pools. Many species have evolved to use these temporary, fish-free wetlands. Some are obligate vernal pool species, so-called because they require a vernal pool to complete all or part of their life cycle. vernal pools occur throughout the state as scattered, isolated habitats. They are most numerous on the lower coastal plain, especially on the mid to upper eastern shore, and uncommon west of the fall line. They are typically situated in low areas or depressions in a forest, but they can also occur in floodplain forests as isolated floodwaters, among backwaters of old beaver impoundments, old sinkholes, or as perched spring- or seep-fed basins along mountain slope benches, or at the base of slopes. vernal pools may persist in cleared areas such as cropland, pastures, and clearcuts, but usually in a highly degraded ecological state. Because vernal pools occur throughout the state in a variety of forest types and settings, the vegetation in and around these habitats varies considerably. However, many vernal pools exhibit similar vegetative structure. For example, pools tend to have a semi-open to closed forest canopy around them and the degree of canopy closure generally decreases with increasing pool size. The basin substrate consists of dense mats of submerged leaf litter and scattered, coarse woody debris. Herbaceous vegetation is usually absent

to sparse in and around the basin, although small mossy patches frequently occur along the basin edge. A dense shrub layer may occur along the shoreline or in small patches within the basin, especially on the coastal plain, but many pools also lack a well-developed shrub layer.

SOILS

The region features flat topography, near-sea level elevations, and poorly drained soils. Soils are naturally low in fertility, but soil erosion and sediment runoff for forestry activities is seldom a problem, given reasonable management care. Seasonally wet conditions affect the timing and type of forest management activities. For management activities on the Forest, the soils in the region were classified into 5 Soil Management Groups (SMG), based on soil characteristics. See Appendix A for a listing of soil types by soil management group and a listing by county of symbols used by soil survey reports.

The Five (5) Groups (SMG's) were defined as follows:

- SMG 1 - wet soils with firm sub-soils that can physically support machines when wet.
- SMG 2 - wet soils with non-firm sub-soils that cannot support machines when wet.
- SMG 3 - soils that are less wet than either 1 or 2; highly productive forest sites.
- SMG 4 - very sandy, often dry soils that are generally not highly productive forest sites.
- SMG 5 - very wet, low-lying soils that are too wet for forestry operations.

To facilitate plan development and future management, digital soils data was utilized from the USDA Natural Resources Conservation Service for, Caroline, Dorchester, Somerset, Talbot, Wicomico, and Worcester Counties.

B. ANNUAL WORK PLAN SUMMARY

INTRODUCTION

This section summarizes the proposed activities that will occur on all public forest lands (86,563 acres) managed by the Maryland Forest Service within the Eastern Region during the 2019 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, 2018 to June 30, 2019. 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.

All projects and proposals within this Plan have been developed to meet one or more of the Land Management Guidelines and Objectives as seen in the Chesapeake Forest and Pocomoke State Forest Sustainable Forest Management Plans including:

- **Forest Economy** - management activities with a purpose to maintain an economically sustainable forest and contribute to the local economy through providing forest-related employment and products.
- **Forest Conservation** - management activities with a purpose to protect significant or unique natural communities and elements of biological diversity, including Ecologically Significant Areas, High Conservation Value Forests and old growth Forests. Old growth forest management serves to restore and/or enhance old growth forest structure and function.
- **Water Quality** - management activities designed to protect or improve ecological functions in protecting or enhancing water quality.
- **Wildlife Habitat** - management activities with a purpose to maintain and enhance the ecological needs of the diversity of wildlife species and habitat types.
- **Recreation and Cultural Heritage** - management activities with a purpose to maintain and enhance areas that serve as visual, public camping, designated trails, and other high public use areas.

NETWORKING WITH DNR AND OTHER AGENCIES

MARYLAND DNR AGENCIES:

- Wildlife & Heritage – Identify and develop restoration projects, report and map potential Ecological Significant Areas (ESA) as found during fieldwork, release programs for game and non-game species. Mapping will be done with Global Positioning Systems (GPS). Participates on the Inter-Disciplinary Team (ID Team) and assists in the development of a forest monitoring program.
- Natural Resource Police – Enforcement of natural resource laws on the forest.
- Land Acquisition & Planning – Provides assistance in the development of plans, facilitates meetings with various management groups, develops Geographic Information System (GIS) maps for public review, and conducts deed research and boundary recovery. Also participates on the ID Team.
- Maryland Conservation Corps (MCC) – Assists in painting boundary lines, installing gates and trash removal.
- State Forest & Park Service – Participates on the ID Team.
- Chesapeake & Coastal Watershed Service – Develops watershed improvement projects, assists in the development of a forest monitoring programs and participates on the ID Team.

OTHER AGENCIES:

- DNR Contract Manager – Assists the Forest Manager in the designs and implementation of management activities on the donated portion of the forest. Also participates on the ID Team.
- Third party forest certification via annual audits
- 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. Recreational trails will be mowed and cleared to meet the requirements of the specific user group(s).

Forest boundary lines will be maintained using the DNR yellow band markings. 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. In our efforts to control and eradicate this issue, we will continue to coordinate with Natural Resources Police (NRP), local sheriff departments, the State Highway Administration, and County Roads departments.

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
    - Chesapeake Forest – W23 – Greenhill trail marking

    - Pocomoke State Forest – Furnace Town Loops
    - Algonquin Cross County Trail Extension
    - Mattaponi Pond Trails and Camping Project
    - Pusey Branch Trail Extension and Enhancement Project
    - Seth Demonstration Forest Trail Enhancement Project
- Perform general maintenance on the existing trail system

Submit and execute Recreational Trails Grants. Appendix B contains copies of the following grant applications for Calendar Year 2017-18:

- Algonquin Cross County Trail Extension
- Algonquin Trail Maintenance

E. SPECIAL PROJECTS

- Maintain dual forest certification. Summaries of the previous year's audit findings can be found in Appendix C and Appendix D.
- Conduct information and educational opportunities on the forest.
- Update and maintain forest information in a GIS database, which will result in a new updated forest wide field map.
- Continue the effort to inventory and protect historic sites (i.e. cemeteries, old home sites, Native American Indian sites) using GPS and GIS technology.
- Collect native genotype pond pine (*Pinus serotina*) and short-leaf pine (*Pinus echinata*) on the forest in an effort to aid future management objectives on the Pocomoke and Chesapeake Forests.
- Provide assistance to the State Tree Nursery with maintenance of Seed Orchards on the Pocomoke State Forest.

F. WATERSHED IMPROVEMENT PROJECTS

Work continues on the Indiantown/Brookview Ponds watershed improvement project from the FY2013 AWP.

G. SPECIAL WILDLIFE HABITAT PROJECTS

Planning and execution of the early successional habitat project on the Foster tract continues.

H. ECOSYSTEM RESTORATION PROJECTS

Various ecosystem restoration projects continue to proceed, including the Brookview Ponds ESA restoration, management of the Furnace Tract lupine site, and the Foster Estate pond restoration. In general, site preparation of high priority ESA sites and prescribed burning was performed when and where possible.

I. MONITORING PROJECTS

- Maryland Wood Duck Initiative – D03 – Little Blackwater – Cliff Brown
- Lupine and Frosted Elfin – Furnace Tract – WHS – Jennifer Selfridge
- Bat Study – Bats and Prescribed Burning – WHS – Dana Limpert
- DFS – Hunt Club Monitoring Project – USF&WS – Cherry Keller
- Trail Monitoring – Recreation Trail Grant trail counters
- Maryland Biological Stream Survey – Stream Sampling on Pocomoke State Forest – DNR Resource Assessment Service – Matt Ashton

J. REVIEW PROCESS

INTERDISCIPLINARY TEAM COMMENTS

CITIZEN'S ADVISORY COMMITTEE COMMENTS

PUBLIC COMMENTS

K. SILVICULTURAL PROJECTS

SILVICULTURAL ACTIVITY OVERVIEW

Tables 2 and 3 summarize the proposed silvicultural activities for the 2019 annual work plan on approximately 1,749 acres (2.4%) of the Chesapeake Forest and 302 acres (1.6%) of Pocomoke State Forest, for a total of 2,024 acres (2.3%) on both forests.

Table 2. 2019 Chesapeake Forest Silvicultural Activity Overview. (CF-19-S-1 – CF-19-S-28)

Activity	Acres
Final Harvest	165.4
First Thinning	1383.5
Second Thinning	199.8
Total	**1748.7**

Table 3. 2019 Pocomoke State Forest Silvicultural Activity Overview. (P-19-S-1 – P-19-S-2)

Activity	Acres
First Thinning	138.5
Second Thinning	163.9
Total	**302.4**

A 10-year silvicultural activity summary for both forests is located in Appendix F.

DEFINITIONS OF SILVICULTURAL ACTIVITIES