# EASTERN REGION

# STATE FOREST LANDS

# ANNUAL WORK PLAN

# FISCAL YEAR 2025


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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 75,955 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 18,492-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 19,978 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://dnr.maryland.gov/forests/Pages/mdforests.aspx.

## 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 pre-colonial 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 Native Americans 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 | Sapling | Growing | Maturing | Mature | Big Trees | Uneven Aged | |
| | 0 - 5 yrs | 6 - 15 yrs | 16 - 25 yrs | 26 - 50 yrs | 51 - 90 yrs | 91+ yrs | | |
| Loblolly Pine | 278 | 1,714 | 9,801 | 40,201 | 6,803 | 358 | 291 | **59,446** |
| *(Percent)* | 0.29% | 1.82% | 10.38% | 42.56% | 7.20% | 0.38% | 0.31% | 62.94% |
| Shortleaf Pine | 0 | 12 | 0 | 12 | 227 | 109 | 17 | **378** |
| *(Percent)* | 0.00% | 0.01% | 0.00% | 0.01% | 0.24% | 0.12% | 0.02% | 0.40% |
| Mixed Pine (Pond, Pitch, Virginia, etc.) | 0 | 20 | 0 | 0 | 15 | 87 | 75 | **198** |
| *(Percent)* | 0.00% | 0.02% | 0.00% | 0.00% | 0.02% | 0.09% | 0.08% | 0.21% |
| Atlantic White Cedar | 0 | 8 | 3 | 0 | 0 | 0 | 0 | **12** |
| *(Percent)* | 0.00% | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.01% |
| Mixed Pine/Hardwood | 43 | 966 | 1,342 | 2,829 | 5,988 | 4,108 | 187 | **15,462** |
| *(Percent)* | 0.05% | 1.02% | 1.42% | 3.00% | 6.34% | 4.35% | 0.20% | 16.37% |
| Bottomland/Mixed Hardwoods | 0 | 169 | 364 | 523 | 6,009 | 3,762 | 6 | **10,834** |
| *(Percent)* | 0.00% | 0.18% | 0.39% | 0.55% | 6.36% | 3.98% | 0.01% | 11.47% |
| Bottomland Hardwoods/Bald Cypress | 0 | 0 | 0 | 0 | 18 | 3,842 | 0 | **3,860** |
| *(Percent)* | 0.00% | 0.00% | 0.00% | 0.00% | 0.02% | 4.07% | 0.00% | 4.09% |
| Cut/Marsh/Field/ Powerline/Road | 4,257 | 0 | 0 | 0 | 0 | 0 | 0 | **4,257** |
| (*Percent*) | 4.51% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 4.51% |
| **Total** | **4,578** | **2,891** | **11,510** | **43,566** | **19,059** | **12,267** | **576** | **94,446** |
| ***(Percent)*** | 4.85% | 3.06% | 12.19% | 46.13% | 20.18% | 12.99% | 0.61% | ***100.00%*** |

## DESIRED FUTURE CONDITIONS

The desired future conditions of Chesapeake Forest and Pocomoke State Forest reflect a transition between the former industrial forest management and the future multiple-purpose management under State ownership. Some of the changes between the former forests and the future forests will be subtle, and many will take decades to emerge.

***Some of the changes that will occur over time include:***

- Maintenance or enhancement of water quality
- Protection of natural resources, including biological diversity
- Contribution to the local resource-based economy
- Providing opportunities for appropriate low-impact, resource-based public use
- Widening of Riparian Forest and Wetland Buffers to protect and enhance water quality, as well as provide mature forest habitat for species that need such conditions;
- More mixed hardwoods and hardwood/pine forests associated with the buffers, in which timber harvesting maintains a mature forest stand after it is achieved;
- Longer pine plantation rotations, particularly in areas where wildlife habitat relies on large pine trees. These will be harvested, but at older, larger sizes, which has implications for the future timber industry on the Shore.
- Less intensive methods of forest regeneration, including the use of natural pine regeneration whenever and wherever it can succeed. This has been shown to result in somewhat slower tree growth for the first 2-4 years compared to the more intensive methods of soil preparation and planted seedlings, but those early differences disappear later in the rotation. As a result, when forests are being managed for longer rotations, the less intensive regeneration methods should not result in a loss of productivity. They do, however, reduce up-front costs significantly as well as produce less soil and site disturbance.

***Changes that may take years to emerge and may be almost imperceptible for a long time include:***

- The planned shift to longer rotations for additional saw logs will emerge slowly as today's young stands reach larger sizes. The emphasis on thinning will produce significant amounts of pulpwood and forest-based jobs.
- The development of riparian forest buffers in areas now planted to young pine plantations will take time. These areas must grow into buffers, so for the near future, there may be more pine pulpwood produced from buffer zones than from outside them, as additional pines are removed to create openings for hardwoods.
- Measurable improvements in stream water quality may come slowly. Much of the water flowing across these forests comes from agricultural and developed areas. Efforts will be made to create areas that can trap nutrients, but the measured progress is likely to be slow to emerge.
- Major impacts on the wildlife habitat depending on large trees will not occur until today's young forests have time to grow. Improved Delmarva fox squirrel habitat will emerge rapidly after about 20 years, but not before.
- Changing recreational patterns will require time for the Department to assess all the tracts, assure public safety and landowner relationships. Some of this assessment has already occurred and Public Use of several tracts has been implemented.

## FOREST MANAGEMENT ZONES

Due to the large size and diverse landscape of the lands in this project, the planning team identified specific areas based on physical attributes that need to dominate future management decisions. The following are brief descriptions of the management zones. Additional information of each management zone type can be found in the Sustainable Forest Management Plan.

### GENERAL FOREST MANAGEMENT AREAS

General Forest Management areas are those sites unconstrained by other more demanding management restrictions. It is important to note that production of forest products in no way precludes the contribution from these lands to other forest functions such as recreation, habitat, and water quality. In the general management

areas, the loblolly pine forest will be managed on a 30-40 year rotation for a mixture of saw logs and pulpwood. In the early years of implementing this plan, it may be necessary to harvest some younger stands, as this is the only way to re-distribute stand ages so that the current preponderance of 5-25 year-old stands does not become a recurring problem in future management rotations.

Loblolly pine forest within the general management areas will be managed to produce a rapidly growing, vigorous and healthy forest while supporting local natural resource based industries and at the same time protecting water quality through adherence to Best Management Practices. In this forest type, wildlife habitat will be early and mid-succession habitat that provides structural diversity within the array of mixed forest stands and riparian, wetland, and wildlife buffers.

## ECOLOGICALLY SIGNIFICANT AREAS (ESA)

Sites containing rare plant and or animal communities will be identified and managed for their special qualities. The DNR Wildlife & Heritage Service will be involved in assuring that special sites are properly inventoried, marked, and managed, and that adequate records are created and maintained for each site. Specific prescriptive management recommendations have been developed for each site by the Heritage Division.

Portions of a number of the ESA management areas overlap DFS, FIDS and the Riparian areas, however, management prescriptions will focus on enhancing and protecting the designated ESA. Each ESA area has been broken down into as many as three zones with specific management prescriptions for each zone.

## FORESTED RIPARIAN BUFFERS

Minimum three hundred foot (300 ft.) riparian forest buffers or wetland buffers will be marked, established and maintained according to the guidelines listed in. 50 feet from the stream bank is a no-cut area to avoid destabilizing stream banks. All management activities within these areas will be designed to protect or improve their ecological functions in protecting or enhancing water quality. The long-term goal is to achieve and maintain a mature mixed forest stand. Where the current forest is a pine plantation, the shaping of the riparian forest buffers will generally commence at the time of the first silvicultural activity on the adjoining stands. Management will generally focus on thinning pines to encourage hardwood growth, marking boundaries so that field personnel and contractors can conduct operations properly, and closely monitoring activities to prevent soil disruption or damage and protect stream bank and wetland integrity. In these areas where young pine plantations currently exist, the desired forest conditions may take several decades (and appropriate treatments) to emerge.

## DELMARVA FOX SQUIRREL (DFS) HABITAT

DFS Core Areas are defined as a complex of Chesapeake Forest Lands currently occupied by Delmarva Fox Squirrels. DFS Future Core areas are defined as a complex of Chesapeake Forest and Pocomoke State Forest lands where location, vegetative composition and structure appear suitable for translocation of DFS.

In all designated DFS management areas, the forest will be managed on longer rotations while encouraging an additional hardwood component in the over story. The goal is to grow an older forest with larger mature trees that are held on the landscape for a longer period of time. This will be accomplished through a regiment of pre-commercial and commercial thinning operations to increase growth rates of the residual trees. Thinning operations will favor retaining larger diameter trees including hardwood mast trees. A minimum basal area of 70 to 80 sq. ft. per acre will be retained in order to maintain adequate canopy closure. The plan requires that DFS

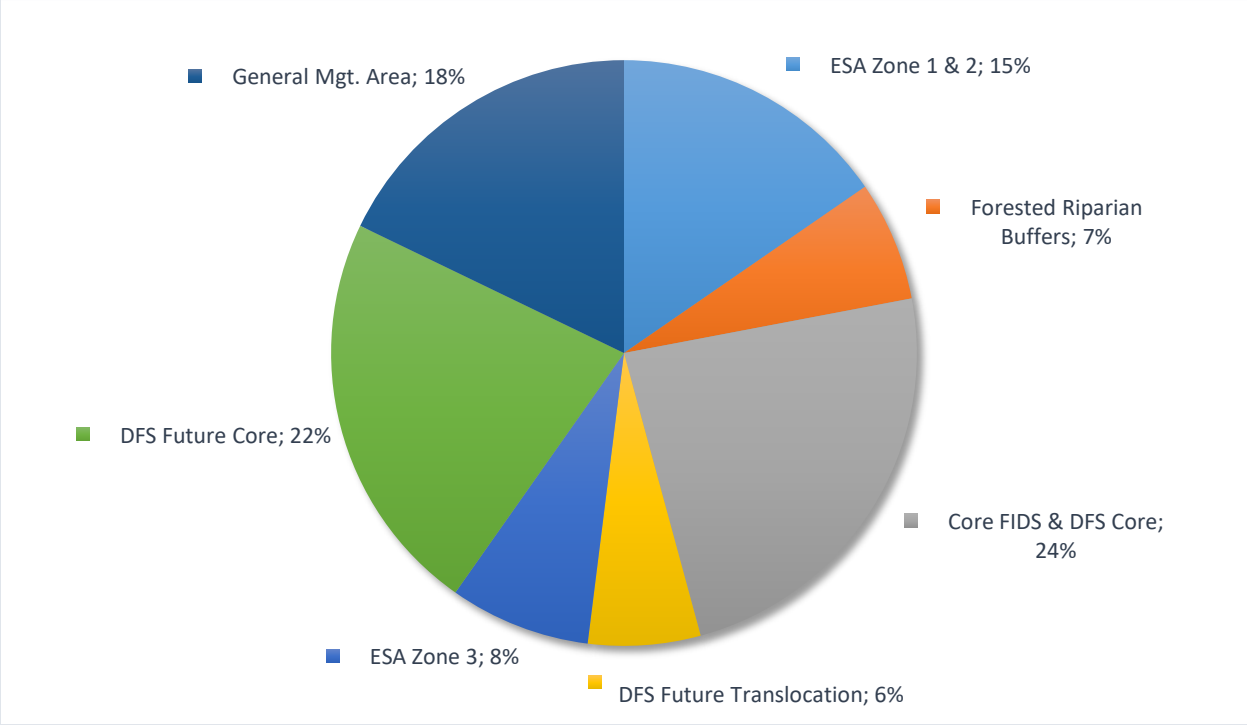
Core management areas at any point in time must retain 50% of the forest in "suitable DFS habitat", which is defined as stands that are 40 years old. The individual stands designated as suitable DFS habitat will be retained on the landscape for 20 years, setting a requirement for a minimum rotation length of 60 years.

### FOREST INTERIOR DWELLING SPECIES (FIDS) HABITAT

In the designated Core FIDS areas, the goal is to improve the stocking of hardwood species so as thinning operations occur, basal areas will not to fall below 70 square feet per acre. Long rotation ages greater than 100 years will be the goal and the preferred harvest method will be singletree selection. Mixed stands of pine and hardwoods will be encouraged, and the use of herbicides will be avoided except to control invasive species and for research.

## CHESAPEAKE FOREST & POCOMOKE STATE FOREST MANAGEMENT ZONES

The following graph depicts the percentage of acres in each forest management zone for both Eastern Region forests.




## 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 (94,145 acres) managed by the Maryland Forest Service within the Eastern Region during the 2025 fiscal year. These lands include the Chesapeake Forest, Pocomoke State Forest, Wicomico Demonstration Forest, Seth Demonstration Forest, and Fred W. Besley Demonstration Forest. Fiscal Year 2025 runs from July 1, 2024 to June 30, 2025. 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 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 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). Engineering and Construction projects such as bridge and culvert replacements will be prioritized based on need and condition.

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 acquisitions or right-of-ways being opened.
- Progress on the Corker's Creek bridge project (elevated boardwalk and bridge to connect Pocomoke River State Park – Shad Landing to Pocomoke State Forest)
- Continue to move forward in the process to establish a trail from the town of Snow Hill to Shad Landing through the Pocomoke State Forest Wildlands. With the successful passage of HB882 in the 2022 Legislative Session, which designated a trail corridor through the Pocomoke Wildlands to establish a new trail, Forest Service staff will be working with the Department of General Services and Engineering and Construction to design the trail specifications during the current AWP cycle. Updates pertaining to bidding and construction of the trail will follow in subsequent AWPs.
- Host the Annual Ultra-Marathon "Algonquin 50K" race on Chesapeake Forest and Pocomoke State Forest.
- 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
  - Summerfield Trails
- Perform general maintenance on the existing trail system
- Begin work on establishing and rehabilitating trails on the newly acquired Bay Club property

## E. SPECIAL PROJECTS

- Maintain dual forest certification. Summaries of the previous year's audit findings can be found in Appendix B.
- 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. Currently the project is in Phase IV, which deals with restoring the natural hydrology of the site through the use of ditch plugs.
- Monitoring of hydrologic, terrain, and vegetation conditions on the Foster Estate pond restoration continues. Response to invasive species, primarily Phragmites, will be taken as needed.

## G. SPECIAL WILDLIFE HABITAT PROJECTS

- Initial site review and selection for possible quail management and habitat restoration.
- Planning and execution of the early successional habitat project on the Foster tract with prescribed burning and targeted herbicide applications continues.
- Continued collaboration with the bobwhite quail habitat improvement public/private partnership project

## H. ECOSYSTEM RESTORATION PROJECTS

Various ecosystem restoration projects continue to proceed, including the Brookview Ponds ESA restoration and the Furnace Tract Xeric Habitat Treatment and Monitoring Plan. In general, site preparation of high priority ESA sites and prescribed burning was performed when and where possible.

**Delmarva Bay Restoration and Management**
**Activities on Chesapeake and Pocomoke State Forest Lands**

Jason Harrison, State Restoration Ecologist
MD DNR - Wildlife and Heritage Service, Natural Heritage Program
PO Box 68, Wye Mills, MD 21679
410-827-8612 ext. 109

**Project Period**: January 2023 through December 2028

**Project Description:** The purpose of this 5-yr workplan is to outline projected Delmarva Bay restoration and management activities at **Brookview Ponds**, **Centennial Ponds**, **Dividing Creek Ponds**, and **Nassawango Creek Central**. All of these areas are recognized as high priority (Tier 1/2) ecologically significant areas (ESAs) on Chesapeake and Pocomoke State Forest lands.

**Background:** Delmarva Bays support a variety of freshwater wetland communities, especially marshes which have exceptionally high biodiversity value. Unfortunately, because of fire exclusion, surface water drainage projects, and excessive removal from the landscape of once dominant oak forests, and other factors, many wetlands and surrounding uplands have an abundance of red maple, sweet gum, and in some cases persimmon. Allelotoxins from red maple and shade from all three trees have converted highly diverse marshes into species depauperate "wet lands". A previous woody plant management project funded by the Maryland Department of the Environment and the Wildlife and Heritage Service (2003 – 2007) resulted in rapid recovery of dominant vegetation in most of over 30 wetlands treated, and expansion of some rare and endangered amphibian populations. In addition, the project relied solely on physical labor and hand-held equipment, resulting in negligible environmental impacts.

**Management Strategy:** The goal of this proposed management is to restore and maintain indigenous freshwater marsh communities in Delmarva Bay wetlands of Brookview Ponds, Centennial Ponds, Dividing Creek Ponds, and Nassawango Creek Central by managing invasive woody plants and non-native herbaceous vegetation using both mechanical and chemical techniques developed during the 2003-2007 management effort. If significant wetland drawdown occurs during the project period, herbicide application to control encroaching woody vegetation (predominately sweet gum, red maple, black gum, loblolly pine, and persimmon) may begin to prevent succession. Woody plant management will be conducted throughout the wetland basins plus 100-200 feet of upland buffer. Additionally, non-native herbaceous vegetation in and around wetlands will be treated with herbicide if mechanical removal is not feasible. Glyphosate (Rodeo), triclopyr (Garlon 3A), and imazapyr (Arsenal) will be applied according to label instructions by foliar spray, hack-and-squirt or injection methods. The application method and herbicide will vary by target species. Treated trees will be left standing for natural decomposition. The largest trees, especially sweet gum, will remain standing for five years or more offering cavity nesting habitat. This multiple year period would also allow for monitoring and retreatment of any resistant plants. All treatments will be supervised by a DNR employee with a Certified Pesticide Applicator License. In addition, a general discharge permit has been issued for this project from MDE (NPDES Permit NO. MDG87 - Registration Number 17PE0018)

Reintroduction of indigenous plants will not be necessary for this project. Whether rare plant species recover will be dependent upon their seed banking strategies. Taxa with short-lived seed banks may have already exhausted their seed reserves, but hopefully will immigrate from nearby extant populations after suitable habitat conditions redevelop.

Where necessary and feasible, prescribed burning will be employed to inhibit re-establishment of pine and other woody plants in the wetlands and enhance recovery of upland oak forest. The frequency of prescribed burning is anticipated to be about once every four years but could vary from 3-7 years. If prescribed fire is determined to be necessary, the Natural Heritage Program staff will coordinate all fire prep work and operations with MFS fire management staff.

## I. MONITORING PROJECTS

- Maryland Wood Duck Initiative – D03 – Little Blackwater – Cliff Brown
- Lupine and Frosted Elfin – Furnace Tract – WHS – Jason Harrison
- Bat Study – Bats and Prescribed Burning – WHS – Dana Limpert
- Delmarva Fox Squirrel – 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
- Water quality monitoring project at Hickory Point – USGS Wetland and Aquatic Research Center – Dr. Beth Middleton

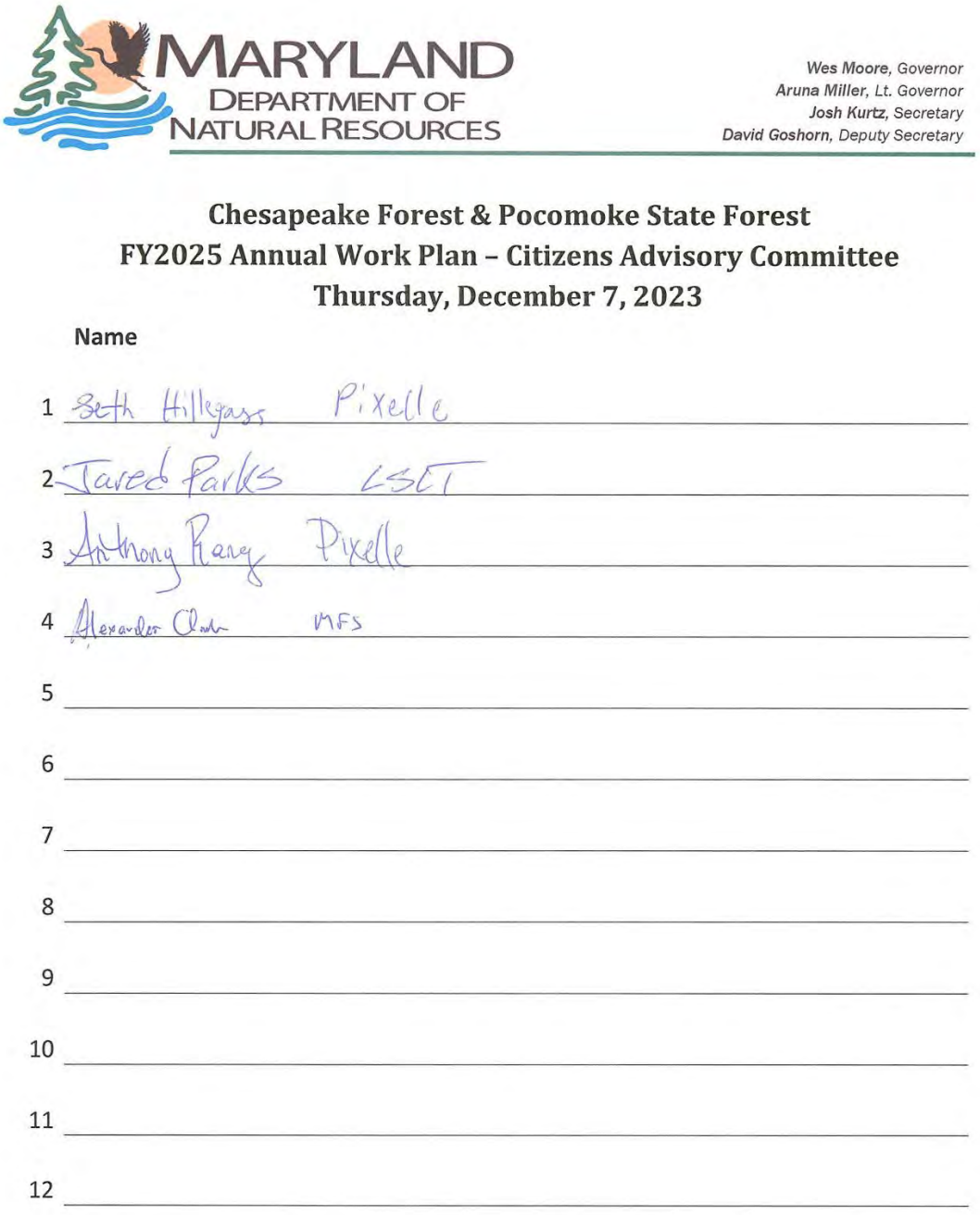
## J. REVIEW PROCESS

### INTERDISCIPLINARY TEAM COMMENTS

Comments from the Interdisciplinary Team are incorporated into the silvicultural prescriptions.

### CITIZEN'S ADVISORY COMMITTEE COMMENTS

No formal comments were received.



MARYLAND DEPARTMENT OF NATURAL RESOURCES

*Wes Moore*, Governor
*Aruna Miller*, Lt. Governor
*Josh Kurtz*, Secretary
*David Goshorn*, Deputy Secretary

**Chesapeake Forest & Pocomoke State Forest**
**FY2025 Annual Work Plan – Citizens Advisory Committee**
**Thursday, December 7, 2023**

| | Name | |
|---|---|---|
| 1 | Seth Hillegass | Pixelle |
| 2 | Jared Parks | CSCT |
| 3 | Anthony Raney | Pixelle |
| 4 | Alexander Clark | MFS |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |

## PUBLIC COMMENTS

**FY25 AWP Public Comments – Chesapeake Forest and Pocomoke State Forest**

**Duplicates of comments were removed, and attachments provided with comments are located at the end of this section. Pictures and photographs were omitted to conserve space.**

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I commend your plans for thinning. However, given the number of acres of timberland and the age of the timber, it seems like you should be cutting a larger acreage of mature timber. I would urge you to cut the timber when it is 60 years old plus to avoid loss due to old age/ disease, etc. There are several small (less than 40 acre) parcels that you own in Somerset County. These parcels are not contiguous. I would urge you to consider selling these small parcels (Land and Timber) to private landowners who might be better able to monitor and manage locally these small parcels.

HALL COONS, MARION STATION, MD

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If the proposed timber harvests are accepted will the timber harvest be put out on bids for individual timber harvest companies to bid on ?

Rich Turner, Snow Hill, Maryland

---

I'd like to see the state of maryland do more controlled burning in the Kate winter early spring. Our forests are over run with greenbriars gum tree thickets. Forestry and wildlife will both benefit from the clearing of these thickets.

Joshua Michael, RHODESDALE, Md

---

I would like to see more control burning in Feb and March before nesting season. Some of the woods are so thick that they are almost impossible to walk through and poor habitat for turkey.

I saw that they have done some burning off of 60 Foot road. Keep up the good work.

Wayne Radcliffe, Glen Arm Maryland

---

Maryland really needs to look into the benefits of burning the understood in its forest! Our forest are overrun with greenbriars and gum thickets. States in the south annually burn their pine forests to provide better habitat for wildlife and the results show in their turkey populations. Burning needs to occur before nesting seasons! I've seen the state burn a small section of marahyhope in May, what good does that do? All it does is burn up turkey nest and countless other nests and young animals. February and March burning needs to happen on all public forest!

Joshua Michael, RHODESDALE

---

Stop burning by April 1st. Turkeys are starting to nest and rabbits have young. We have talked about this before.

Denny Price, Snow hill

---

While I live in Montgomery County, MD, I was raised and frequently return to the Eastern Shore, particularly in Wicomico County. My largest hobby/recreational activity is off-highway driving, particularly for full-size vehicles such as Jeeps. I appreciate MD DNR's efforts out in Wolf's Den State Park and in Savage River State Forest, but I believe that it is time for MD DNR to open/reopen trails on the Eastern Shore, particularly on Chesapeake Forest Lands. SB606 provides funding for maintaining and creating OHV trails, I support these funds being used to fund a sustainability study for OHV recreation, particularly regarding the Eastern Shore.

I consider myself an outdoorsman, I'm an Eagle Scout and love nothing more than spending my weekends outside in nature. That said, I do not hunt, and feel that the Chesapeake Forest Lands offer very little in terms of public access for non-hunters. I disagree with how a significant portion of this land is being managed, access to this land is largely limited to those who are part of a hunting club who lease the land. I support hunting, but I believe that the current process for land access is not equitable for all taxpayers. My dream would be for the Chesapeake Forest Lands to become more similar to Green Ridge State Forest, where public access and dispersed camping is allowed.

Thank you,

Matthew Malone, North Bethesda, MD

---

We need dirtbike trials on the eastern shore of Maryland.  We have no place to ride our dirtbike unless we travel 2-6 hours away from the shore. There are several dealers over here as well that have no place to recommend to ride locally as far as trial riding . Snake creek mx park got closed down and easton is the only track for people to ride . It would be great to see some single track and gncc style of trial systems created on the eastern shore. This would greatly help local economies and help our local dealers generate more work and sales.Thanks again.

Daniel Sanders, Grasonville Maryland

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I would encourage you to not harvest trees over 70 years old and no cutting should be allowed near recreational trails. (Both are happening too frequently).  Older trees are essential to a healthy ecosystem.

Thank you,

Mike Fountain, Bethesda, MD

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Old Growth Forests are irreplaceable and essential to maintaining a habitable planet. Undiscovered and vulnerable species will be lost, along with critical relationships between the flora and fauna, trees and the soil organisms they

rely on. These relationships evolved and were refined over millions of years. Once destroyed they can never be re-established. A young replacement tree chosen by man simply cannot replace the entire ecosystem of organisms that flourished in the previous system, all the relationships, connections, communications, cultures, behaviors, and adaptations of a myriad of supportive species: mammals, birds, insects, fungi, and micro-organisms. Those relationships will be forever destroyed and may never be seen again.

Amanda Wray, Towson, MD

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PLEASE reconsider the plan to harvest P-25-S-05. Allowing such forest habitat to survive and mature seems MUCH more important that any timber it would produce.

Beth Johnson, Silver Spring Maryland

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DNR Forestry plans on cutting down ~100-year-old forests near the Pocomoke River and Dividing Creek. I strenuously recommend NO harvest. The Tarr tract is one of the most beautiful pieces of woods on the Eastern Shore. Please do NOT proceed with this plan.

Amy Thompson, Berlin, MD

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Living on the water I am noticing brackish water invading our trees and forests as climate change raises our waterways. I hope that we can support keeping our forests safe and utilizing living shorelines to be a priority and/ or povide incentives to do so.

Paula Erdie, Whitehaven MD

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2025 Work plan comments

Dave Wilson, Berlin

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Please see the attached letter. I am requesting the removal of P-25-S-05 from the 2025 AWP. I also include other suggestions in the letter.

Joan Maloof, Berlin, MD

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I have known Dave Wilson for more than 20 years and I agree with his assessment of the Plan.

William Killinger, Berlin, Md

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Please do not cut the Blue Bike Trail. It is a beautiful, century old forest surrounding a recreational trail. Cutting just to get some very old, healthy, pines is short-sighted. Thank you for caring and I hope that my comment will help to save the Blue Bike Trail.

Patricia Simpson, Blue Bike Trail Pocomoke Md

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I am writing to express my concern for the proposal to cut our century old forest surrounding the Blue Bike Trail. These trees are irreplaceable and deserve to remain standing. Thank you for your consideration.

Carol White, Newark, MD

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May 28, 2024

Dear Maryland Forest Service,

I am writing to urge you not to harvest the Tarr property (P-25-S-05) or the hardwood section of the Nazareth property (P-25-S-04). These properties are as close as Delmarva comes to old-growth hardwood forests, and are invaluable for their biodiversity and habitat. It would be a tragedy to destroy them for a small financial gain while simultaneously making the Shore, and the State, infinitely poorer in terms of eco-system health and resiliency.

Please make decisions consistent with the State Wildlife Action Plan, which calls for managing for the promotion of biodiversity, and leave these irreplaceable habitats intact. Thank you for considering my opinions on this matter,

David D. Quillin, AIA, Berlin, MD

---

All of the trails are in need of maintenance from cutting the trails to removing fallen trees. There are ditch tiles that need replaced and two wood bridges that need attention. I would be glad to volunteer time and my own equipment for such projects. Thanks

Rob Jones Sr, Parsonsburg Md

---

I trail ride in the Pocomoke state forest an average of once a week. The well cleared trails are much appreciated, especially now in tick season.

This past wet winter was a challenge, but the trails held up well for the most part.

Kathleen Dibben, Salisbury MD

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See the attached document for the comments of the Maryland Ornithological Society regarding the FY 2025 Work Plan for Pokomoke State Forest. Please enter them into the record.

Kurt Schwarz, Columbia, MD

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Please save this forest that I love to run and hike , from logging or Harvest " the Tarr "track

Penny Williams, Easton, MD

---

Please reconsider cutting trees from the forests near the Pocomoke River and Dividing Creek area. I study birds and reptiles in this area and these older growth forests are important remaining habitat on Delmarva for (now) rare forest warblers that declining rapidly over the last 20 years as I have published about (Ground-nesting warblers on the eastern shore of Maryland: declining poplation trends and the effects of forest composition and structure. Acta Ornithologica 54:201-213) as well as the spotted turtles I study, which the USFWS is considering listing under the ESA. In addition, these forests are so old, it would be short-sighted to cut them and wait for forests to regenerate. Please consider cutting only younger forests and leaving what little older forests we have left for wildlife.

Eric Liebgold, Salisbury

---

Hello,

I have seen some of these tracts, both professionally and recreationally, and thoroughly enjoy the plants and animals within them. In particular, one of these tracts that is identified as mostly Pine (loblolly) is in fact mixed hardwood, which support a variety of native species.

The one species that I care most about is the charismatic, but rarely seen, southern flying squirrel. These are an important member of mixed woods, contributing to seed dispersal, and are a prey species for fox, owls, hawks, and snakes (essentially: anything that can catch them).

In particular, the Tarr P-25-S-05 parcel is likely home to these lovely nocturnal animals, but is also a known habitat for many other native eastern shore species. Flying squirrels love mixed, mature woods, with ample nesting sites in snags, or from old woodpecker holes. In younger forests, there are often too little food sources, or too few nesting sites for these squirrels to thrive. They also tend to be found near water sources, like the one found in the Tarr parcel. I have been working with many folks on the eastern shore to try to highlight the flying squirrel as a wonderful, native species since much of the public does not know they live in our eastern shore forests. Losing this parcel would be extremely detrimental to our flying squirrel populations, and other native species as well.

Another parcel, P-25-S-04, though it has more pine wood than Tarr, has a variety of singing birds in spring and summer, and may harbor other small mammals of interest. Because of its position, it may be a haven for many of these species since the areas surrounding the parcel are mainly monoculture pine. I personally enjoy birdwatching as a hobby, as do others in my community, as it is a free hobby. You can listen and watch birds in our local forests all year long without spending a dime. What could be better?!

I am a reasonable person, and I understand the reasons for thinning or removing pine stands that are relatively young monocultures. These are excellent revenue streams for the state. However, please leave these two, ecologically significant tracts for our wonderful, flying squirrels and other native species.

Thank you!

Angela Freeman, Princess Anne, MD

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Please find my attached letter.

Dana Price, Salisbury

---

Hello! Please reconsider plans to cut the Tarr tract surrounding the Blue bike trail in Pocomoke State Forest in the upcoming year. We use these trails through beautiful mature forests and this would be destroying recreational opportunities for Maryland and Eastern Shore residents. Thank you.

Katie Curtin, Salisbury, MD

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Blue Bike Trail/ Tarr Tract.... Save it! We need out forest green spaces!!

Cristie Ammann, MD

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I strongly urge you to reconsider allowing the Tar Tract within Pocomoke State Forest to be felled in FY2025.

To tear down a forest area which is part of a Greenways system for Worcester County, supports our tourism and recreation economy, and provides invaluable service to our environment would be a travesty.

The Blue bike trail runs straight through this tract, offering all of its users an invaluable opportunity to experience the nearest thing we have to old growth here on the shore.

Kathryn Culbertson, Snow Hill, MD

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Thank you for the opportunity to submit the following comments, asking DNR to NOT HARVEST two tracts within the Pocomoke State Forest: P-25-S-04 and P-25-S-05.

I am the retired Assateague COASTKEEPER and former Executive Director of Assateague Coastal Trust in Worcester County, MD. I have resided in Maryland my entire life and lived in Worcester County for over 45 years. As the former Assateague COASTKEEPER I became well acquainted with the natural resource areas of this county both in the Coastal Bays and Chesapeake Watershed. Both for work and for pleasure I have often visited the Pocomoke State Forest to monitor water quality, monitor harmful or polluting events within the State Forest and it's waterways, as well as to enjoy kayak paddling, hiking, birding and relaxing within the forest.

The Pocomoke State Forest is a *public resource* and it is the responsibility of the Department of Natural Resources to protect these natural resources for the citizens of Maryland and to protect the ecosystems within this State Forest. Both tracts P-25-S-04 and P-25-S-05 have a unique status within the Pocomoke State Forest because they are both not mono-cultivated stands of pine but instead are both what is considered '100 year old growth' forest, something we have very little left here on the lower Eastern Shore. These two old growth forests sustain

ecosystems of flora and fauna that can not be found in the dead soil, lifeless mono-cultivated pine stands elsewhere in the Pocomoke Forest (lifeless wooded areas that have been ruined from years of logging and clear cutting due to bad management practices and poorly regulated cutting permits.)

While logging permits are a source of revenue to the State, I wish to remind the Department that you are charged with protecting critical natural public areas within the State. It is not the Department's responsibility to act as a Commerce agency for the State. As the Assateague COASTKEEPER I often had this dilemma with the MD Department of Environment when their permits were more often based on supporting a business entity instead of being based on how to best protect our air and water quality, and protect the communities impacted by various MDE permits.

I wish to note that P-25-S-04 is within the Dividing Creek watershed. The Non-Tidal Dividing Creek Watershed (MD-02130204) was included on Maryland's Section 303(d) List as impaired by fecal bacteria (1996), and impacts to biological communities (2004 and 2006). Industrial agriculture in the same area continues to this day to contribute nitrogen, phosphorus and bacterial pollutants to the Dividing Creek watershed and downstream to the Chesapeake Bay. EPA water quality monitoring in Dividing Creek has shown past stressors to aquatic life and wildlife.

Furthermore, NOAA storm surge maps and FEMA flood zone maps show that the Lower Shore of Maryland is experiencing increased major storm events that cause flooding from the Chesapeake Bay up into its tribs and waterways. Additionally, rising sea levels will soon have Dividing Creek watershed more wet and impacted by salt water intrusion. All the more reason to protect and preserve this important old growth forest in Tract P-25-S-04 from any further clearing or disturbance to the forest floor. A healthy forest ecosystem is our best defense against further impairment in water quality to the Dividing Creek watershed and the Chesapeake Bay.

I bring this to your attention as one reason to protect Tract P-25-S-04 from any clearing or logging operation. I can assure the Department that a 50' 'buffer' from any waterway is not sufficient protection of water quality, given that most logging permits are not well regulated and often these 'buffers' are ignored. Keeping this entire old growth forest in the Dividing Creek watershed provides a means to filter pollutants and better protect water quality within the watershed and the Chesapeake Bay.

Regarding Tract P-25-S-05 I wish to ask you NOT harvest the Tarr Tract because this old growth forest tract not only supports a very healthy ecosystem of wildlife, flora, and naturally protective water quality attributes but this tract is also a well used public area of the Pocomoke State Forest containing a lovely trail for hiking, biking and birding. However, I will defer to public comments submitted by Mr. Dave Wilson and Dr. Joan Maloof (and others) as to the biologic and economic benefits afforded the citizens of Maryland by protecting this tract from timber harvesting.

I would like to remind the Department, as a final note, the Pocomoke State Forest is a *public resource* that deserves to be given more credit than just serving as a forestry industry revenue source. We the citizens of Maryland and the Lower Shore who have watched dramatic loss of healthy hardwood old growth forests on private lands due to over development and witnessed the resulting impacts to wildlife and water quality in the Chesapeake Bay watershed ask the Department to protect both of these State owned public lands from harvest or clearing and allow these small parcels to continue to provide environmental and eco tourism benefits to the people of Maryland.

Thank you,

Kathy Phillips, Ocean City, Maryland

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Please, please, PLEASE do NOT cut

the Tar Tract in Pocomoke State Forest in 2025!!!

We need to add trees, not cut them for the health of our planet & our residents. Walking among trees & nature's green is one of my greatest joys. It's been proven by science to improve physical & mental health. Given the state of our world in terms of climate & mental health, destroying these trees would be a unforgivable.

Additionally, this forested area is part of Worcester's Greenways system, which is a main reason I visit Worcester from Wicomico. This system is a gem on the Eastern Shore & supports the local economy through tourism & recreation.

To me, old trees not only benefit us now, but are also like an investment account for the future. If you cut them, your account goes back to zero & it will take years reap any benefit of a new investment, if there is one.

Please save these trees for all of us, now & in the future!

Cara Rozaieski, Salisbury Maryland

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Recommend no cutting in Tarr Tract

Lillie Olson, Salisbury, MD

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2025 Chesapeake/Pocomoke Forestry Work Plans (Please do not harvest P-25-S-05, P-25-S-04)

Thank you for soliciting comments for the 2025 work plan. For the sake of forest diversity, declining migratory songbirds, and other wildlife, these

two parcels (P-25-S-05, P-25-S-04) and those like them should be left in their mature state.

In the 2025 Forest Work Plan, there are 1,700 acres slated for harvest or thinning. 1,631 acres are loblolly pine monoculture with little or no value to birds, reptiles and amphibians. This is the condition of most of the forestland managed by the Forest Service on the Lower Shore with only small patches of our natural upland mature forest. The two referenced tracts are exemplary examples of such mature native forest with its full complement of obligate biodiversity. Mature stands of such forest are a rarity, and the State should endeavor to preserve prime examples like these. Given their relatively small footprint compared to the predominant pine monoculture, the fiscal impact of preserving these tracts would be negligible.

I've spent almost 18 years surveying and protecting Maryland's natural areas through my career as a biologist with MD DNR and as staff of The Nature Conservancy. Based on that perspective and experience, I consider the referenced tracts to be worthy of preservation. They could serve as both a benchmark of native forest condition and an attraction for those interested to visiting a beautiful example of MD Coastal Plain forest.

Wayne Klockner, Ocean City, MD

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Do not log any of our state forest. Nature does not need your forest plans or interference. Had a majestic kayaking experience inside my Pocomoke state park last May. The ancient white cedars & cypress trees hosted a flurry of vivid bright platanetary warblers, the male & females as far as the eye can see posing for our viewing The tranquil dark waters reflecting the sky & the graceful branches upon us. The quit still watching turtles sunning themselves along the waters edge. To witness floating upon the water the complete harmony of nature left to be, as is. We all have a right to exist & to have a habitat to sustain us. The rapid loss of biodiversity must not be allowed to continue, with any of your justification of means. The untouched forests in our state parks are not your source of commodity for exploit. What is left of this natural world must be conserved & preserved. Change your practices & evolve with the times. It is not 1824. It is 2024. Invest in education of natural resources & the benefits of maintaining these natural state mature forest, not the chain saw & bulldozing roads through pristine ecosystems. Talking scientific research plans & encouraging naturalists, hikers, backpackers, & campers to explore & enjoy our state forest more. Leave all of our trees alone. They are not for sale!

Jennifer Schugam, Maryland

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Plan for Blue Trail. Jane and I are master Naturalist and Birders and we hike the trails off Blades rd quite often. The blue tail is one of our favorites: mountain Laural which is blooming right now, there is an unusual moss covered clearing around the midway point. It is a place where we always stop to look and listen. A few days ago we spotted a female summer tanager. I know you have a plan and I believe you have the forest's best interest in heart.

Donald Cheeseman, Snow Hill, maryland

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The Blue Trail just south of Blades Road is the

Most beautiful of the

Trails in the Mattaponi tract. I live nearby and walk it often. It's a haven for birds,

Particularly worm-eating warblers;

There are foxes denning near the intersection with the yellow trail now. I believe I have walked every trail at Mattaponi-

Most of them are beautiful, but this

One is, in my opinion, is the most beautiful, because of the

Moss and

Lichen there.

It's also got the most ticks, so if you go there to look at it, be prepared…

Sincerely,

Jane Conly, Snow Hill, Md

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Among the various tracts of land scheduled for clearing, there is a beautiful tract I've enjoyed hiking for many years. The Tarr tract is a scenic out of the way gem that should be left intact. Please consider.

Rachelle Daigneault, Snow Hill, Md

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Please do not cut the Blue Bike Trail! It is a gorgeous century old forest that should be left as is!

Mary Fiore, Berlin MD

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The State needs to implement a plan to create old forest growth. And they should start right here!

Henry Immanuel, Elliott MD

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Letter attached below, thank you for the opportunity to comment.

Taylor Swanson, Berlin

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Pocomoke State Forests: Tarr Tract/Blue Bike Trail

It is incomprehensible that we would allow one of the only old growth forests on the Eastern Shore to be harvested. The existence of this forest land is critical to the maintenance and repair of biodiversity in our area, and by extension, the ongoing success of our agricultural heritage. Having moved to the Eastern Shore eight years ago, I have been shocked and saddened by the preponderance of "dead woodlands" – those that have been repeatedly harvested and by now have little feeling of life left in them. I'm fortunate to live adjacent to Tuckahoe State Park and have been delighted to watch the massive reforestation effort going on in our area. But those future forests will take hundreds of years to achieve the biodiversity that exists in an old growth forest. It's not an even exchange, they don't make up for loss of the Tarr Tract. Please do not allow this short-sighted travesty to happen.

Krista Carter-Smith, Ridgely, Maryland

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I am writing to encourage the elimination of the Tarr tract of land from any future logging or harvesting activities. This forest is nearly 100 years old and it has established bike paths through it. It seems counterintuitive to take the time and money to create recreational bike paths and then chop down the forest around it. Obviously, from a nature standpoint there are very old trees and this is an established habitat for many native plants and animals as well. The Maryland Beach to Bay Heritage Area is actively working to create more areas such as this, it would be a shame to really have very little net gain, but a large local loss for our community. Logging has always been a major

industry on the Shore, and part of my family's livelihood historically, but this tract should be excluded from such actions. There are plenty of other forests more suitable for harvesting. Thank you for your consideration.

Katie Bass, Parsonsburg, MD

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Please see our organization's comments in the file we have uploaded. And thank you for the opportunity to share our beliefs.

Thomas Rogers, Frederick, Maryland

Please reconsider plans to cut down the Tarr and Nazareth properties. As an avid birder, I know how important these tracts are to our year-round and migratory songbirds. Eliminating these mature hardwood stands is the wrong decision.

Carol Sottili, Ocean City, MD

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**FY25 AWP Public Comments – General Comments Relevant to All Forests**

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Thank you for this opportunity to comment on the Maryland Forest Service FY 2025 annual work plan.

As I have only learned of this opportunity this afternoon on the day of the deadline, my comments are in general and for all forests in our state.

We must strive to protect our remaining mature forests and fragments of healthy native trees to ensure we continue to preserve what we have while we increase our multi-layer forest canopy across the state. Mature trees are the best tools we have to combat the negative impacts of global warming, species die off, and climate change.

We are in a climate crises. Maryland is losing fragments of forest and trees to development, stream restoration and insect infestation. While other states are losing their trees to circumstances beyond their control due to climate change, we choose to continue to cut Maryland's trees down.

In addition to the preservation of mature trees and healthy native trees, and trees in our stream corridors, we should continue to plant a bio-diverse forest community for the future and also remove invasive species.

Maryland should strengthen the Forest Conservation Act by including stronger penalties for tree poaching and by no longer exempting stream restorations from requirements of the Forest Conservation Act.

Maryland should consider all future generations of people and wildlife and each trees worth and potential to provide food and habitat and to capture and store carbon before it is cutdown to determine if the trade off is worth the loss.

Please watch this short video on the impacts of de-forestation.

https://www.youtube.com/watch?v=0D0zp7Q4YnE

Thanks again for the opportunity to comment and for your consideration of my concerns.

Very Truly Yours,

Protect Our Streams

Sharon Boies, Columbia, MD

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Why aren't cultural resources considered in these plans? For example, Delmarva Bays and the areas surrounding them often feature evidence of native people's occupations dating from very early periods of Maryland's history. Why isn't the Maryland Historical Trust invited to at least comment on these plans?

Aaron Levinthal, Princess Anne, MD

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Tarr has more biological diversity than most. Please preserve this tract. Also, in west OC forest parcels have been cleared along rt 611 and you need to replenish by letting some parcels return to being forested. Create wildlife corridors. Thank you.

Christine Watsky, Snow Hill, MD

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I'm concerned about the apparent potential general conflict of interest between the practice of thinning forest and the dependence of the DNR on revenue from sale of wood products.

Louise Taylor, Annapolis, MD

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Please no harvest!!

Caden O'Connell, Brookeville MD

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Please do not cut down these forests. Be the change by allowing them to remain and prosper in Perpetuity. These forests provide so much shade

and joy

and shelter

and healing

and protection

and adventure

And calm

And serenity

And breath

And oxygen

And wonder

And exploration.

Kristin Hooks, Bishopville MD

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Please do not cut the forest in the Tarr Tract. These forest lands are some of the most biologically diverse on the Eastern Shore, which offers a rare opportunity for locals to experience the delights of such lands. I recommend a no-cutting plan.

Erika Koontz, Cambridge, MD

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Please note that the comments below were submitted in response to one proposed timber sale, in one of the forests subject to this plan review. It could also be written about Savage River State Forest. Increasingly, research shows that allowing mature and old growth forests to remain is the single best approach we have to sequestering carbon, both in the vegetation and the soil. It is beyond time that DNR pay attention to this science!

image.png

Date: November 17, 2022

To: Mr. Robert Feldt, Resource Planning Supervisor, Maryland State Forests

From: Ann Bristow, Spokesperson, Mountain Maryland Movement, 92 Carey Run Rd., Frostburg, MD 21532

Re: FY24 AWP Amendment Maple Glade Harvest, Compartment 43, Stands 3 and 4

These comments are offered in opposition to the plan amendment for FY24 for clear cutting (referred to by DNR as a “regeneration harvest”) approximately 23 acres in two stands of an almost 100 year old native forest dominated by white oak.

Mountain Maryland Movement is a coalition of volunteers working on Appalachian Maryland energy and environmental issues since 2017. Our work focuses on the two westernmost counties — Allegany and Garrett — areas with an extensive legacy of resource extraction, primarily coal and timber. We are particularly concerned about public health and ecological harms from these extractive industries.

The rationale given for the clear cutting is so that white oak seedlings can be planted for future harvest. It should be noted that these stands are near Swallow Falls State Park and have a hiking trail through them — a resource that has benefits far beyond production value of harvestable hardwoods. In addition to the recreational value of

preserving this centennial forest, these mature forest stands are most valuable for wildlife and for carbon sequestration. DNR is continuing to rely on outdated research, failing to acknowledge that mature and old growth forests sequester more carbon than seedlings and young trees.

These centennial white oaks, hemlocks, locusts and maples are viewed by the forestry industry as mature, but they are far from their peak which can be 300 or more years —- as evidenced by their kindred trees in the old growth stand at Swallow Falls. Throughout their life, these trees can continue to grow and absorb CO2, creating carbon sinks in the soil and soil level biomass.

In fact, this "regeneration harvest" would remove a large and effective carbon sequestration system, releasing CO2 from Arbuscular Mycorrhizal Fungi (AMF) and soil carbon, as well as increasing pollution from logging and transportation. Replacing these mature trees with seedlings also delays effective carbon capture by disturbing soil, and it will take an additional century to finally match the effectiveness of the existing, mature trees. We do not have time to wait for these forests to recover – we need to maximize draw-down of CO2 now to reach our climate goals.

Rather than contributing to greenhouse gas emissions and reducing an effective and mature carbon capture system, DNR should be advocating that these forest stands come under enhanced protection. Furthermore, DNR must update recommendations and directives from global and scientifically objective organizations, including the International Panel on Climate Change, rather than relying on industry-supplied talking points. Below is a link to a relevant review article on which two Maryland-based researchers (Maloof and Brosi) are co-authors. To rely on the best available science is in the best interest of all Marylanders: protect the mature trees, let them grow old, and let them provide us and wildlife with the nature-based solutions that we are so in need of.

Thank you for this opportunity for Mountain Maryland Movement to share our comments in opposition to this proposed harvest.

Ann Bristow, Frostburg, Maryland

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Dear Forest Resources Planning Supervisor Feldt and Colleagues:

Thank you for opening the Maryland Forest Service FY25 Annual Work Plan for comment.

I have attached my comment from last year, regarding the roughly twenty-three acres of Potomac-Garrett State Forest, Compartment 41 stands 3 and 4, also known as the "Maple Glade Harvest" (please forgive my calling it Maple Glaze). Since these comments were largely ignored last year and the project has been postponed to October of this year, we would like you to revisit this particular "regeneration harvest" since it by no means is in need of regeneration. Instead, our mature and old-growth forests, including this one, desperately need safeguarding from logging.

In addition to saving the Maple Glade from logging, our group would like to make a general comment pertinent to all State Forest harvesting plans. Our Forests are the most important tool for combatting climate change and for saving biodiversity from complete collapse. As I have mentioned in previous comments and e-mails (i.e. our email exchange from 4/3/24), we are deeply concerned about the lack of protections for the necessary amount of forests on public lands - lands that belong to all Marylanders.

Recognizing the importance of our mature and old-growth forests ("MOG"), the Biden administration announced on December 19th, 2023 that it will amend all 128 National Forest System Plans that host mature and old-growth stands to include consistent direction "to conserve and steward existing and recruit future old-growth forest and to monitor their condition across planning areas of the National Forest System." Since we do not have Federal forest in Maryland, and 78% of our forests are mature, the protection of these forests must fall on the State. Yet, we see no consideration for climate change or the biodiversity crisis in this year's harvest plans despite the 2023 Maryland Stewardship Disalignment Report stating that harvest allowances in Maryland's managed forests preclude most from also providing the ecosystems services we need.

We cannot continue "business" (logging for timber and biomass) as usual in the face of the scientific uncertainty created by climate change. We ask that the MDNR follow the administration's lead with "the intent to foster the long-term resilience of old-growth forest conditions and their contributions to ecological integrity across the [State] Forest System." This will require putting into place robust and clear protection rules which exclude extraction across the State Forest system, in addition to incentives for the preservation and protection of privately owned forests.

The science is clear and we have no time to lose.

Sonia Demiray, Frederick

---

I recommend no harvest. Keep good habitat intact!

James Bell, California, Maryland

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I respectfully suggest that when thinking you've accomplished a lot towards the protections of Maryland forests and Old Growth within them, you haven't. I wish more of my personal and business taxes could be used to support Best Management Practices for Maryland forest management.

Also, I'm anxious that the report about managing Gwynns Falls/Leakin Park will convert into fully Maryland legislative support in 2025 for state funding of the Park; what some refer to as the "lungs of Baltimore". It's been allowed to deteriorate, including the occasional plundering by utility companies.

Dick Williams, Baltimore

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*There were 12 comments submitted asking that no trees ranging in age 50-70-years old be cut because of their contribution to carbon sequestration, and that cutting shouldn't occur next to trails, unless necessary for maintenance and public safety. One also asked that "balance needs to shift toward recreational and ecological values vs loblollies and clearcuts"*

*These comments were submitted by:*

*Andrea Mercado, Rockville, MD; Lisa Krausz, Clarksville; Tom Horton, Salisbury; Clifton Johnson, Washington, DC; Michael Fountain, Bethesda, MD; Cecilia Kane, Washington, DC; Elizabeth Biliske, Preston, MD; Jagroop Dhillon,*

*Rockville, MD; Heather Miller, Kensington, MD; Fay Walton, Sunderland; Louise Teubner-Rhodes, Towson; Kenneth Bawer, Rockville, MD*

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*There were 11 comments referencing HB606 funding for investing in OHV trail development. Support for the Saint John's Rock components 1-3 and support for expanded opportunities for OHV trails in SRSF to attract more users. Seven of these comments expressed support for "expanding the Burkholder ORV trail into a year-round, full loop, multi-use trail as well as expand to multi-use Wallman run trails." Commentors also expressed a desire to ride OHVs closer to home and to spend money in Maryland rather then traveling to neighboring states for a better OHV experience.*

*There were also comments encouraging trails on the Eastern Shore and on the Chesapeake Forest Lands. 8 of the 11 comments asking to "utilize SB 606 funding to fund a sustainability study for OHV recreation."*

*These comments were submitted by the following:*

*Robert Clark, Middletown; Tina Neuenschwander, Ijamsville, MD; Erik Juergensen, Pasadena MD; Matthew Malone, North Bethesda; Carlos Evans, Arnold, MD; Frederick Hoehn, Essex Maryland; Steven Martin, Arnold, MD; Wesley Jones, Annapolis, MD; Matt Brown, Thurmont, MD; Christopher Whyte, Rosedale*; *and James Ratino, New Windsor, MD*

---

Would like more atv - utv trails. A lot of families enjoy trail riding however there is not much offered in md and most have to go to other states like PA or wv ..if there were more available in md it could help bring $ back into parks

Heather Currin, Mechanicsville MD

---

My group and I regularly travel to WV as well as NC to ride. All of Maryland has been off limits to off road vehicles for years at this point. My 17 year old doesn't even know what it is like to ride on our own state land because neighboring states have been more accommodating her entire life. That also means the tens of thousands we spend every year participating in these activities is spent in neighboring states shopping and fueling and lodging. I wish we had more access to places here that aren't being utilized and with the misallocation of funds we see daily in our communities it's hard to believe something can't be done. We are only one group of about 50, but there are hundreds of thousands of people that leave the state every year to ride better places. (Places that allow and welcome us)

Adam Duer, Denton MD

---

Hello:

Please do not cut any older trees as they are vital to the health of the forest and the environment. And do not clear or cut anywhere near recreational trails.

Please continue to make your process as transparent as possible and continue to make science based decisions focused on climate change and the future.

Thank you

Deirdre Smith, Lutherville, MD

---

Expanded ATV trail systems would bring such an economic boom the the state of Maryland. Just look at WVa and the Hatfield and Mcooy trails. It would make Maryland a destination for so many atv and trail bike riders. So do it. There's plenty of land and people want it.

Knightaksu Mason, Annapolis, MD

---

Hello i live in calvert county Maryland

Iam a advid atv rider we need more legal space to ride !! There are places to ride but most are in western Maryland or eastern shore

Derrick Spriggs, Prince Frederick Maryland

---

Old and second-growth forests are essential resources to our environment and the planet. Research has increasingly shown that trees exist within collaborative networks of communication and mutual support. Forest "management" activities should be sensitive to and respectful of these complex systems.

I would request that the removal of major canopy trees occur only as absolutely necessary, when deemed essential to protect trails and shelters, and that no trees determined to be over 50 years of age be cut/removed unless diseased and decaying.

Further, in specific response to the Potomac-Garret State Park plan, I am dismayed to read that only 7.6 acres of the 18,600 acres of the forest are protected for specific sensitive species, including endangered monarch butterflies, and that the current draft plan indicates that "efforts will be made" to promote and preserve milkweed, rather than an actual commitment being made to expand such sub-vital ecosystems.

I will add that I find it shocking that trapping is still allowed in Potomac- Garrett State Forest and elsewhere. This inhumane practice should be suspended and made illegal.

Lauren Goodsmith, Baltimore, Maryland

---

Would like to see more trails for utv's near my area and eastern shore. Please move forward with allowing trail riders to continue to ride in areas that are safe and accessible for tv, dirt bikes, and utv's

Mike Bermudez, Maryland, Ellicott City

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Creating riding areas in central Maryland would be super helpful. It would stop people from having to drive to PA or VA

Paul Congleton, Woodbine, MD

---

Please expand Off Road Vehicle opportunities in Western and Central Md. The existing trails are awesome and very much appreciated. It would be nice to have some closer to home in Anne Arundel, Prince Georges, Charles, Baltimore, and Howard Counties.

JOHN KLUH, ODENTON

---

While I live in Montgomery County, MD, I was raised and frequently return to the Eastern Shore, particularly in Wicomico County. My largest hobby/recreational activity is off-highway driving, particularly for full-size vehicles such as Jeeps. I appreciate MD DNR's efforts out in Wolf's Den State Park and in Savage River State Forest, but I believe that it is time for MD DNR to open/reopen trails on the Eastern Shore, particularly on Chesapeake Forest Lands. SB606 provides funding for maintaining and creating OHV trails, I support these funds being used to fund a sustainability study for OHV recreation, particularly regarding the Eastern Shore.

I consider myself an outdoorsman, I'm an Eagle Scout and love nothing more than spending my weekends outside in nature. That said, I do not hunt, and feel that the Chesapeake Forest Lands offer very little in terms of public access for non-hunters. I disagree with how a significant portion of this land is being managed, access to this land is largely limited to those who are part of a hunting club who lease the land. I support hunting, but I believe that the current process for land access is not equitable for all taxpayers. My dream would be for the Chesapeake Forest Lands to become more similar to Green Ridge State Forest, where public access and dispersed camping is allowed.

Thank you,

Matthew Malone, North Bethesda

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What species of clover are used? Are they native? Please consider using only native species, and replacing turfgrass wherever possible by native alternatives (see https://cornellbotanicgardens.org/explore/on-campus-natural-areas/native-lawn-demonstration-area/). I am glad The Nature Conservancy is involved in one or more areas. Do you get input from the Maryland Native Plant Society?

Drew Brown, Baltimore, MD

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Controlled burns are needed late winter in February on state properties especially on the shore.

Marshall Starkey, Essex,Maryland

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Some good efforts to foster at risk native secies in these plans.

The proposals to provide assistance and facilities for disabled hunters is also noteworthy.

Tom Anderson, Dickerson, MD

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Thank you for the opportunity to provide feedback! Would love to see the climate impacts stated in the Pocomoke State Forest Plan and the Chesapeake Forest Lands Plans reflected throughout the plans and prioritized. Feel free to use the climate change graphics or any of the insights we discovered in the plans to support your climate and sustainability goals.

Kate Vogel, Annapolis

OLD-GROWTH FOREST NETWORK
Connecting people with nature by creating a national network of protected, mature, native forests

PO Box 21
Easton, MD 21601
oldgrowthforest.net
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May 24, 2024

Dear Maryland Forest Service,

We are writing in response to the **Eastern Region State Forest Lan**ds Annual Work Plan (AWP), Fiscal Year 2025. (Chesapeake and Pocomoke State Forests). **Out of over 1,700 acres planned for management (clearing or thinning) we are asking that two parcels, a total of 69 acres, be removed from the work plan.** The parcels we would like left untouched are P-25-S-05 (Blue Bike Trail) and P-25-S-04. Both of these parcels are highly diverse native forests about a hundred years old. Below are some additional specific comments on the work plan:

Once again, the process of notification regarding the AWP is inadequate. Every year we try to make comments but are never notified of the release of the AWP. More of an effort should be made to inform interested parties and the public. We suggest a specific mailing list for interested parties, such as the Dept. of Fisheries utilizes.

**Comments regarding the Silvicultural Plan maps:**

1. Old-growth Buffer Areas and Wildlands should be shown on the plans, as they are for the Potomac-Garrett plans.
2. GIS coordinates and location maps should also be shown, as they are in the Potomac-Garrett plans. For a citizen to find the actual location of the planned silvicultural activities without these is very, very difficult.
3. Recreational trails should be shown on the work plan maps.

**Silvicultural work that should be removed from the Annual Work Plan:**

Out of over 1,700 acres planned for cutting we are asking that these two parcels, for a total of 69 acres be removed from the work plan:

**#1. [P-25-S-05] Proposal Name: P06 – Tarr – Tract 19 – Stand** 8 Harvest Area: 45.1 acres Forest Community Types and Development: Stand 8 is mature loblolly pine established in 1927. Habitats and Species of Management Concern: ESA Zone 1, Stream Buffer, and DFS Future Core Water Resources: Lower Pocomoke River watershed.

This stand is almost a hundred years old. Such old, mixed forests are now becoming rare in the Pocomoke State Forest as more and more are being cut. This stand is also near Shad Landing State Park and the forest is along the recreational trails used by park visitors and others. Ecotourism is very important to the state.

**#2 [P-25-S-04] Proposal Name: P02 – Nazareth Church – Tract 6 – Stand 21** Harvest Area: 23.8 acres Forest Community Types and Development: Mature pine-hardwood naturally regenerated in 1921. Habitats and Species of Management Concern: DFS Future Core.
This forest is over a hundred years old, it contains tree species that are declining in the forest, such as shortleaf pine.

One of the stated goals of the state forest is 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.*" Yet as forests get close to old growth they are being cut. As forest ecologists will tell you, because they have abundant studies as proof, this cutting does nothing to restore old growth structure and function. In fact it destroys it. We see this happening year after year. (See previous years' comments.) We don't understand how these management activities can meet FSC certification guidelines.

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**Comments regarding other sections of the plan:**

Many of the comments in the 2025 AWP plan are incorrect or incomplete. We sent these same comments last year, regarding the 2024 AWP, but this year nothing was corrected, not even the typos. This indicates that not only is the forest manager not listening to our comments, but it also reflects a level of disinterest in accuracy.

Pg 4-5. The section on Historic Forest Clearing and Fire History is out of date. Please do *current research* (newer than twenty-five years old) to learn more. In particular, the AWP states, "Since it is unlikely that lightning was a significant contributor to these fires, Native American populations must have been." There is no evidence to support this claim, and a more recent paper, specifically addressing the coastal plain, notes that this is an outright myth (Noss et al. 2014). You may access this paper here: https://onlinelibrary.wiley.com/doi/10.1111/ddi.12278

"The large patches of pine-dominated woods today are largely second growth, the result of extensive clearing in historic times." This should be changed to "…historic and contemporary times." Our continued clearing has kept the forests in a pine-dominated condition.

Under Desired Future Conditions you write that the desired condition is "a transition between the former industrial forest management and the future multiple-purpose management." To reach this condition we suggest you stop relying on the stocking charts that guide industrial forest management. We would like to see more of the Eastern Region pine forests be allowed to mature naturally without thinning.

The first sentence under Forested Riparian Buffers is incomplete. It reads: "Minimum three hundred foot (300 ft.) riparian forest buffers or wetland buffers will be marked, established and maintained according to the guidelines listed in." we would like to read those guidelines but don't know where to go to find them.

The fiscal year is wrong, it mentions 2022.

We are concerned with what we read in the Special Wildlife Habitats Projects section. There it states:

1. Initial site review and selection for possible quail management and habitat restoration.

2. Planning and execution of the early successional habitat project on the Foster tract with prescribed burning and targeted herbicide applications continues.

3. Continued collaboration with the bobwhite quail habitat improvement public/private partnership project

All of these statements suggest you are planning to cut forests specifically for quail.

If quail are so threatened, and so important that the state is planning to cut forests for them, then why does the state have hunting regulations that allow six per day to be killed on private land? We object to any cutting of public forests for quail. The state land already contains 4.5 percent early successional habitat. This is higher than the estimated natural value of 1-2 percent. Please read this paper to learn more about this topic:

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https://www.frontiersin.org/articles/10.3389/ffgc.2022.1073677/full

Under Definitions, we object to the use of the terms "improving the health of the stand" and "to facilitate forest health" and "ensuring a healthy and vigorous forest condition" when describing management techniques. These phrases are vague. The term 'health' is not defined and there is no scientific proof that these management activities improve forest 'health.' If you have proof, please cite it. Most scientific evidence leans in the opposite direction: management activities are shown to cause a decline in biodiversity, tree age, tree size, and carbon storage. Many people consider these things indicators of health. It is best to leave propaganda-like vocabulary out of the work plans.

The Definition for Second Commercial Thinning states that cutting of 25-30% of the stand is thinned, in part, to "improve habitat for Forest Interior Dwelling Species (FIDS)." This claim is dubious and should have a citation to back it up.

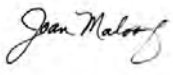
In the Definition section, under Aerial Release Spraying, you mention "An aerial spray of herbicide is used to reduce undesirable hardwood species (i.e. sweet gum & red maple) within the stand." Sweet gum and red maple are both important native species in this region. Sweet gums and red maples feed many, many wildlife species including Luna Moths and Cardinals. Why would you consider them undesirable on our public lands? We object to herbicide spraying of native species in our public forests.

We are pleased to see the increase in Recreation Projects. The new trails are beautiful and will continue to gain in popularity. They add to the quality of life in this area. However, we are disappointed to see a harvest planned that abuts important recreational trails (P-24-S- 05 & P-25-S-04).

In the Budget section (pg. 45), instead of listing "General' under funding sources, it would be clearer to list "Maryland State" as the contributor of $439,000. If Timber revenue is $1,100,000 per year; and we pay $981,034 in payments for "land management" (for harvesting and delivering forest products to processing mills -- and that doesn't include what we pay the state employees to manage these contracts), it seems the state would make much more money, and create a more lovely landscape, by earning carbon credits instead of cutting trees down. Washington State is an excellent example of how this could be done. Here is a description of their project: https://www.dnr.wa.gov/news/dnr-launches-first-nation-carbon-project-protecting-forests-and- creating-over-million-carbon

Pg. 51. The Works Cited section is embarrassingly sparse and outdated. The *most recent* reference you have is twenty-five years old. A great deal has been learned in that time!

For the forests,



Dr. Joan Maloof
Founder of the Old-Growth Forest Network
joan@oldgrowthforest.net

Dave Wilson
Berlin, MD 21811

May 24, 2024

Forest Service
Maryland Department of Natural Resources,
580 Taylor Ave., E-1
Annapolis MD 21401

**2025 Chesapeake/Pocomoke Forestry Work Plans (Do not harvest P-25-S-05, P-25-S-04)**

Dear Maryland Forest Service,

Thank you for the opportunity to comment on the Eastern Region State Forest Lands annual work plan for FY 2025.

As the former executive director of the Maryland Coastal Bays Program, a governor-appointed member of Critical Areas Commission, the Breeding Bird Atlas Coordinator and former Amphibian and Reptile Atlas Coordinator for Worcester County, the former president of the Maryland Bird Conservation Partnership and Coastal Bays Forestry Committee Chair, and a sitting member of the Maryland Sea Grant External Advisory Board I believe my comments should be considered thoughtfully.

On May 17 and 21, I was able to take the opportunity to revisit P-25-S-05 (Tarr), P-25-S-04 (Nazareth), two properties regenerated in 1927 and 1921 respectively that Forestry plans on cutting down in 2025. Both are well-known to the birding community for their high-quality habitat. While the Tarr property is described in the annual workplan as “mature loblolly pine” it is not that. It consists mostly of hardwoods, towering mountain laurel 20-feet high and a diverse understory including substantial coarse woody debris. It is incised by a walkable and marked DNR trail frequented by birders, bikers, and horseback riders. By all accounts it is one of the most beautiful, archetypical pre-settlement patches of woods I’ve ever seen on the Eastern Shore.

The Nazareth property is described as mature pine-hardwood but it’s mostly mature pine save a small section of hardwoods on its norther end. While this property does not rise to the grandeur of the well-known Tarr tract, it would be best to let it be as, like the Tarr tract, it’s surrounded by pine monoculture and is an upland haven for overwintering reptiles and amphibians that have no leaf litter or coarse woody debris in the surrounding woods. It’s also one of the noisiest spots on Whitesburg road from a singing bird perspective. The northern hardwood component of this tract should not be cut under any circumstances.

For the sake of forest diversity, declining migratory songbirds, reptiles and amphibians, these two parcels (P-25-S-05, P-25-S-04) and those like them should be left in their mature state. In the

2025 Forest Work Plan, there are 1,700 acres slated for harvest or thinning, 1,631 acres is loblolly pine monoculture with little or no value to birds, reptiles and amphibians. This is the condition of most of the forestland managed by the Forest Service on the Lower Shore with only tiny patches of our natural upland mature oaks and hickories. Woods that started growing just after WW1 are a rarity and the few places that hold the plant, reptile and amphibian genes that might someday thrive again if the state were to make a more forward-thinking conversion of managing its forests for biodiversity over short-term profit.

Nowadays it's nearly impossible to regrow the original upland forests full of oaks and hickories. Deer browse and invasive plants result in mostly pine and sweetgum woods above a blanket of invasive plants like Japanese stiltgrass and privet. Once they're gone, they're gone forever.

In just the past 30 years, I've volunteered 5,000 hours of my time to the state and driven over 21,000 miles on the Lower Shore for that service. As the Maryland breeding bird atlas coordinator and reptile and amphibian atlas coordinator for Worcester County (and atlaser in Somerset and Wicomico) I have traversed almost every DNR Forestry-managed property on the Lower Shore to document species populations. Unfortunately, there is little living there besides loblolly pine. Most diversity is found on private lands and we have simply begun limiting our effort in Forestry-managed lands because they are so devoid of wildlife. It's honestly hard to believe that in a state as progressive as Maryland we have so much regard for one exploitive industry and so little regard for biodiversity.

Mature deciduous forests are what covered the Lower Shore before Europeans arrived. According to DNR, only 16% of the state's Pocomoke/Chesapeake forest is mixed pine/hardwood. The rest is either bottomlands, pine, or cutover timber. Some 65% classifies as pine which lacks the needed dynamic older growth canopy, understory for cavity nesting, forage sites and coarse woody debris for reptiles and amphibians. Dead trees in mature woodlands, whether standing or on the ground, is where most of the food, shelter, and nesting lie for birds, reptiles and amphibians. There are no such trees in the state's thousands of sterilized rows of pines.

The two rare 100-year-old stands at issue are all located within the Pocomoke-Nassawango Important Bird Area (IBA), which consists of 180,878 acres of predominantly forested land and is the largest and most intact forested landscape on the Delmarva Peninsula. Accordingly, this IBA is the most important area on the Delmarva for both migratory and breeding songbirds. The Pocomoke-Nassawango IBA hosts significant populations of at-risk bird species and is a critical stopover for millions of birds descending on deciduous forests to find rest and food. A few of the Forest Interior Dwelling Species (FIDS) that would benefit from retaining these two stands include: Red-shouldered Hawk, Eastern Whip-poor-will, Hairy Woodpecker, Pileated Woodpecker, Acadian Flycatcher, Wood Thrush, Red-eyed Vireo, Yellow-throated Vireo, Northern Parula, Black-and-White Warbler, American Redstart, Worm-eating Warbler, Ovenbird, Kentucky Warbler, Hooded Warbler, and Scarlet Tanager.

Birds' habitat selection is based very much on the physical structure of vegetation, and most FIDS species benefit from the availability of mature trees over younger pines. While Forestry has consistently argued that a handful of species benefit from early successional habitat, those species were probably never common on the Lower Shore due to the lack of fire in this region. European settlement is what made species like prairie warblers and field sparrows more abundant. Moreover it makes little sense to convert high-quality 100-year old woods to early successional habitat with more than 65% of the Lower Shore forests in 30-50-year pine rotations. These plantations are better suited for successional conversion.

As noted earlier, few reptiles and amphibians can live in most DNR forestland. In the rare places, like the Tarr tract, where mature upland hardwoods haven't been cut and converted to pine, you'll find box turtles, spotted turtles, fence lizards, broad-headed skinks, little brown skinks, smooth earth, rough green, hog-nosed, ring-necked, corn, king and coastal plain milksnakes, and marbled and red-backed salamanders. All of these species are killed on sites where mature timber is harvested. These once-common species have declined on the shore due to the conversion of our native hardwood forests to pine monoculture where you'll find none of them.

While known throughout the state for being a diplomat who understands nuance in most debates during my 30 years in conservation on the Lower Shore, I'd like to convey that this one is not nuanced. For years, I've worked with Audubon Mid-Atlantic and multiple wildlife conservation partners, including DNR Wildlife & Heritage staff, who have tried to no avail to change the antiquated thinking in the Forestry division. Through all the years of providing comments on the forestry plans, never once has the division replied or changed course, and while each year consists of around 1,500-2,000 acres of harvest, we have never asked for more121acres to be spared. Instead, Forestry has in the past told media they have received "no substantive comments" on their plans.* Has public comment ever resulting in Forestry altering its plans?

Lip service and references to the forest certification program have been the standard response to those seeking a more conservation-minded manner of managing our public lands. Yet, such verification is built around the forest industry's needs and not protecting biological diversity. It requires merely "representative samples of existing ecosystems." The Forest Service says they "believe that public lands should be managed in ways that promote health, biodiversity, climate resiliency, and recreation" yet they have shown no evidence of that. They share statistics about the percent of old trees in Maryland to avoid addressing woeful state of public lands on the Lower Shore. On private lands, Forestry continues to advise landowners, regardless of goals, to cut down their mature woods as a standard in their Forest Management Plan recommendations.

In general, we shouldn't be managing our state forestland like federal lands where we let extractive industries, like oil and gas, exploit natural resources belong to all of us. The same is true for one sawmill or one timber company. The benefits from the transfer tax that Maryland residents pay for open space should be conferred on all Marylanders rather than one industry. The state should move away from this outdated paradigm.

DNR's State Wildlife Action Plan specifically calls for less pine monoculture and more managing for biodiversity. Not only does it suggest not cutting diverse mature stands, but it also recommends conversion of loblolly to mixed woods with thick leaf litter and coarse woody debris. It notes that timber harvests in forests matrices create fragmentation and edge habitat that can severely curtail breeding of target species due to the subsequent invasion of parasitic cowbirds and predators that prey on ground nesting species. Leaving mature stands only in areas too-wet-to-cut is not enough. It also mandates that adequate reference areas be retained, and the two parcels above would fit that criteria. The DNR Wildlife & Heritage division would be best suited to manage our state forestland rather than those who have such little regard for or understanding of biodiversity.

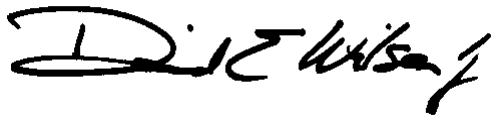
While balance and policy change is badly needed, for now I ask that you consider foregoing the harvest of P-25-S-04 and especially P-25-S-05. We should not be cutting down 100-yr old woods that are islands in a sea of young pine monoculture.

I understand that my recommendation means foregoing a tiny amount of income generated by a harvest of large trees, but I urge you to consider the option of enhancing the long-term biodiversity of our forestland. This is best resolved internally rather than exercising legislative options, Maryland NGO involvement, and media coverage.

Please note I only encourage restraint on 4% of your Chesapeake/Pocomoke Forest plan or 68.9 of 1,700 acres. This would be the first year such restraint was ever shown. The remainder is mostly pine monoculture with little value for wildlife. The rationale for this recommendation is based on the high conservation value of mature, intact forest and of forest with a greater native upland hardwood component.

I would very much appreciate a response to my recommendations and would be happy to discuss them at your convenience. I can be reached by e-mail at marshhawk67@gmail.com.

Sincerely,



Dave Wilson

*Note that this historic frustration predates the new Chesapeake/Pocomoke Forestry Manager Alex Clark who seems willing to listen and learn from more advanced perspectives.

Attached: photos

cc:
Maryland Gov. Wes Moore
Maryland DNR Sec. Josh Kurtz
Delegate Marc Korman, Chair, House Environment and Transportation Committee

Sen. Brian J. Feldman, Chair, Senate Education, Energy, and the Environment
Dr. David Curson, Audubon Mid-Atlantic
Steve Holmer, American Bird Conservancy
Anna Killius, Chesapeake Bay Foundation
Chris Eberly, Interfaith Partners for the Chesapeake
Mark Bryer, The Nature Conservancy
Jacky Grindrod, Lower Shore Sierra Club
Bill Hubick, Maryland Biodiversity Project
Jared Schablein, Lower Shore Progressive Caucus
Wayne Klockner, American Birding Association
Kim Koble, Maryland League of Conservation Voters
Debbie Gousha, Democratic Club of Worcester County
Joe McSharry, Maryland Herpetological Society
Sophia Seufert, Delmarva Restoration and Conservation Network
Mike Walsh, Tri-County Bird Club

DAVID D. QUILLIN ARCHITECTURE
DAVID D. QUILLIN, AIA, LEED BD&C ■ 5705 WATERSIDE DRIVE ■ BERLIN, MD 21811 ■ DAVIDDQUILLINARCHITECTURE.COM ■ DDQARCH@COMCAST.NET

28 May 2024

Forest Service
Maryland Department of Natural Resources
580 Taylor Ave., E-1
Annapolis, MD 21401

Dear Maryland Forest Service,

I am writing to urge you not to harvest the Tarr property (P-25-S-05) or the hardwood section of the Nazareth property (P-25-S-04). These properties are as close as Delmarva comes to old-growth hardwood forests, and are invaluable for their biodiversity and habitat. It would be a tragedy to destroy them for a small financial gain while simultaneously making the Shore, and the State, infinitely poorer in terms of eco-system health and resiliency.

Please make decisions consistent with the State Wildlife Action Plan, which calls for managing for the promotion of biodiversity, and leave these irreplaceable habitats intact. Thank you for considering my opinions on this matter,

David D. Quillin, AIA

May 28, 2024

Forest Service
Maryland Department of Natural Resources
580 Taylor Ave., E-1
Annapolis, MD 21401

**Re: PSF-CFL Annual WorkPlan - FY2025**

Dear Forest Service,

I am writing to request that you **remove P-25-S-05 and PO-25-S-04 from your work plan**.

I am a biologist at Salisbury University, teaching evolution and ecology and founder of the Salisbury University Phenology Project studying the effects of human impacts on ecosystem function. I am also author of the evolution and ecology chapters of the nationally second-ranked biology text book, Freeman, Quillin, Allison, et al. *Biological Science*. In these capacities, my job involves reading primary literature on forest ecology, climate disruption, biodiversity, ecosystem services, etc. In addition, I have spent hundreds of hours in and around Delmarva's forests as a volunteer in the Maryland Amphibian and Reptile Atlas (MARA) and now in the Maryland and DC Breeding Bird Atlas (BBA3) in Worcester, Wicomico, and Somerset Counties. Therefore, I have a first-hand understanding of the poor quality of most of Maryland's forest in terms of biodiversity.

As I tell my students when we look at the maps of Delmarva: *it LOOKS like a lot of forest, but most of it is a pine crop with very low biodiversity and poor ecosystem function.*

Thus, I beseech you to strike your work plans for the Tarr property (P-25-S-05) and the Nazareth property (P-25-S-04). These small properties represent some of the rare gems of biodiversity and ecosystem function in the Maryland forest system. At this time with the many human threats to natural systems such as invasive species and climate change, it will be virtually impossible to regrow forests of this quality and function. Logging these areas is a form of self-sabotage in terms of ecosystem services.

> By analogy, if the goal was to win a race, why would you trade in a Lamborghini for a Honda Civic? It makes much more sense to keep the Lamborghini and take good care of it.

I have many concerns about any amount of interference in these parcels, for example:

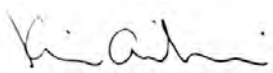
- There is typically a logarithmic relationship between the size of a habitat fragment and its biodiversity. Thus, even reducing the size of these parcels by a small amount has a dramatic effect on biodiversity.
- Small fragments of quality habitat (ignoring adjacent pine forest which is NOT quality habitat) are very vulnerable to edge effects, which erode forest quality well into the interior of the fragment. The smaller and more disrupted the fragment is, the worse the edge effects.
- The higher the biodiversity of a forest fragment, the greater the ecosystem services that it provides: flood management, carbon capture, climate moderation, nutrient cycling, recreation by birders and others, science, etc.
- An acre of larger trees traps carbon FASTER than an acre of smaller trees.

- Once the complex networks of diverse species interactions are disrupted, they are very difficult or impossible to reestablish in a timeframe of decades. This is truer now than ever because many invasive species interrupt traditional successional patterns. We live in a "new normal" where natural systems are not as resistant or resilient as they once were. Therefore, we cannot expect hardwood forests to regrow as they once did given the overbrowse of white-tailed deer and infiltration of invasive plants, for example. (I am regrowing oaks on my own property and have had to cage very oak to save them from deep browse and constantly remove honeysuckle, alternaflora rose, wisteria, stiltgrass, end others.)

I spend my weeks reading articles about the serious and extremely alarming rate of biodiversity loss and commensurate loss of ecosystem function that has wide-ranging consequences to human health and living standards. These are studies written by independent teams of scientists from hundreds of diverse institutions around the world. The message is clear that human culture, such a business-as-usual forestry practices, are not pivoting fast enough to meet the challenge of our time. While it sounds alarmist to say so, the evidence is compelling that we are in an emergency "all hands on deck" situation where we need to be assertive in protecting and restoring ecosystems while we can—the sooner the better.

Biodiverse, hardwood forest communities are like ecological gold—their value intact is immeasurably larger for many generations than any price the trees could fetch at market. Let's make it a priority to protect these valuable parcels in perpetuity for the betterment of Maryland for generations. There is an abundance of other parcels that are already degraded where continued logging makes more sense.

Sincerely,



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May 29, 2024

Forest Service
Maryland Department of Natural Resources
580 Taylor Ave., E-1
Annapolis MD 21401

**2025 Chesapeake/Pocomoke Forestry Work Plans (Do not harvest P-25-S-05, P-25-S-04)**

Dear Maryland Forest Service,

I appreciate the opportunity to comment on the Eastern Region State Forest Lands annual working plan for FY 2025.

I am a Professor of Biological Sciences at Salisbury University who has completed several research projects dealing with dung beetles, ants, and butterflies in the Coastal Bays forests, Nature Conservancy Forests, and those owned by the DNR and Natural Heritage Program.

The proposed work in the Tarr and Nazareth tracts has planned for cutting of "mature loblolly pine." The Tarr tract, however, consists mostly of hardwoods and is home to numerous species of insects, birds, and reptiles documented in these regions. Both areas are well known for their diverse habitats, including microhabitats for insects.

While much of my research deals with documenting and discovering biodiversity, I ask that you do not cut our mature hardwoods, as these small remnants support fauna that are often limited to these habitats yet surrounded by monocultures of pine. DNR's State Wildlife Action Plan states that we should support fewer pine monocultures and manage our lands to increase and support diversity. Therefore, I ask that this work for P-25-S-04 and P-25-S-05 tracts be reconsidered so as not to cut these lands.

Sincerely,

Dana L. Price

Dana L. Price
Associate Chair of Biological Sciences

May 29, 2024

Forest Service
Maryland Department of Natural Resources
580 Taylor Ave, E-1
Annapolis, MD 21401

RE: Eastern State Forest Lands Annual Work Plan – FY 2025

Dear Maryland Forest Service:

The Maryland Ornithological Society (MOS) appreciates the opportunity to comment on the Eastern Region State Forest Lands Annual Work Plan for FY 2025. We have grave concerns regarding the plan for plots P-25-S-04 (Nazareth) and P-25-S-05 (Tarr).

We have learned that the work plan mistakenly describes the Tarr plot as "mature loblolly pine" when it is, in fact, mostly hardwood. Nazareth is described as mature pine-hardwood, while in reality, it is mostly mature pine, with some hardwoods on the northern end. We request that plan be corrected to reflect reality.

These properties are well known to local birders, and the large stands of mountain laurel in Tarr are much admired. Tarr and Nazareth are surrounded by pine monoculture, of little value to wildlife. They serve as a refuge for birds and other creatures.

Nazareth is 103 years old, Tarr is 97 years old. They are mature forests. We feel that mature forest should be retained where ever possible, as they may then begin to resemble old growth. The US Forest Service recently inventoried its lands for old growth and mature forest, with an eye to allowing mature forest to become old growth. We would like to see this prevail in Maryland as well.

Old growth in Maryland is virtually gone, with only Belt Woods as mature hardwood old growth, and few stands of hemlock in Garret and Allegany Counties remaining. Both mature and old growth forests provide needed habitat for Forest Interior Dwelling bird species (FIDS) such at Eastern Whip-poor-will, Acadian Flycatcher, Wood Thrush, Red-eyed and Yellow-throated Vireos, Northern Parula, Black-and-white Warbler, Worm-eating Warbler, Ovenbird, Kentucky and Hooded Warblers, and Scarlet Tanager.

Tarr and Nazareth are located in the Pocomoke-Nassawango Important Bird Area (IBA), which hosts significant populations of at-risk bird species, and is an important stopover area for migrating birds as well.

As noted above, Tarr and Nazareth are important mature forests of great value to birds and other wildlife. We urge that they be spared from harvest. These two tracts constitute only 68.9 acres out a total of 1,700 acres slated for harvest.

MOS is an all-volunteer non-governmental organization, with 15 chapters throughout the state, including Eastern Shore counties. We were founded in 1945, and our goals are the study, conservation, and enjoyment of birds and their habitat, both resident and migrant species.

Sincerely,

Kurt R. Schwarz
Conservation Chair Emeritus
Maryland Ornithological Society
Krschwa1@verizon.net
443-538-2370

Audubon Society of CENTRAL MARYLAND

May 30, 2024

Maryland Department of Natural Resources
Forest Service
580 Taylor Ave., E-1
Annapolis MD 21401

**2025 Chesapeake/Pocomoke Forestry Work Plans (Do not harvest P-25-S-05, P-25-S-04)**

Dear Maryland Forest Service,

Please accept these comments from the Board of Directors of the Audubon Society of Central Maryland (ASCM) relative to the Eastern Region State Forest Lands annual work plan for fiscal year 2025. In the network of birding organizations throughout Maryland, the two properties in question are vital habitat for birds, reptiles, and amphibians. For the sake of these creatures, many species of which are at-risk, we encourage that these properties be left in their current state.

In a state with diminishing mature deciduous forests, these two properties provide valuable habitat for migratory and nesting songbirds as well as food, shelter, and nesting places for reptiles and amphibians. By leaving the property intact, many species of turtles, salamanders, lizards, and birds can sustain their present state and possibly even reverse declines they've experienced for decades.

The ASCM shares the opinion of other environmental/conservation entities – that sustaining and enhancing mature intact forests; and converting present forests to mixed deciduous forests constitution (with thick leaf litter and coarse woody debris) is of high conservation value. Please take a major step in that direction by foregoing the harvesting of these two properties.

We're grateful for your consideration and hope you will make the best decision in this matter to benefit the wildlife of our State.

Sincerely and with appreciation,

Tom Rogers, Board Member
Audubon Society of Central Maryland
trmmv77@gmail.com

Assateague Coastal Trust, Inc.

P.O. Box 731, Berlin, MD 21811 (410) 629-1538
www.ACTforBays.org mail@ACTforBays.org

Taylor Swanson

Berlin, MD 21811

May 30, 2024

Forest Service

Maryland Department of Natural Resources, 580 Taylor Ave., E-1 Annapolis MD 21401

2025 Chesapeake/Pocomoke Forestry Work Plans
(Do not harvest P-25-S-05, P-25-S-04)

Dear Maryland Forest Service,

Thank you for the opportunity to comment on the FY 2025 Eastern Region State Forest Lands annual work plan. I serve as your Assateague Coastkeeper, working as a public defender on water quality issues throughout the Southern Delmarva region. I am thankful for this opportunity to comment, and to express my urgent concern for the issue at hand.

As we look at the mosaic of land uses across the southern reaches of the Delmarva peninsula it is easy to see a decline of our mature forests, especially those containing mature hardwoods. These mature stands are a crucial habitat for not only some of this region's rarest and most iconic flora and fauna but are also irreplaceable habitat for migrating birds.

After careful review of the Tarr (P-25-S-05) and Nazareth (P-25-S-04) properties, slated for harvest in 2025, these forest stands differ from the surrounding Loblolly Pine monoculture and offer unique benefits to wildlife and people alike.

The Tarr property, incorrectly described as “mature loblolly pine,” actually consists of hardwoods, mountain laurel, and a diverse understory. The site is of vital importance towards preservation of regional biodiversity. Additionally, the maturity of this forest helps play an important role in stormwater absorption and aids the health of the Pocomoke River and is frequented by a variety of users.

The Nazareth property, primarily mature pine with some hardwoods, is a vital upland habitat for overwintering reptiles and amphibians. This tract holds an unprecedented quantity of songbird activity in comparison to adjoining regions. The northern reaches of this tract do contain mature hardwoods, and its preservation would be in the best interest of the department to help preserve the rich biodiversity of the region.

For the sake of forest diversity and declining wildlife populations, these parcels should remain in their mature state. Out of the 1,700 acres slated for harvest or thinning in the 2025 plan, 1,631 acres are loblolly pine monoculture, which holds little value for wildlife. Our rare mature forests, dating back to the early 1900’s, are irreplaceable and vital for biodiversity.

It has become nearly impossible to regrow the original upland forests full of oaks and hickories. Deer browse and invasive plants result in mostly pine and sweetgum woods above a blanket of invasive plants like Japanese stiltgrass and privet. Once they're gone, they're gone forever.

We urge this department to consider the importance of wildlife biodiversity, for the health of our region's fragile ecosystems, to preserve important components of the heritage of the Eastern Shore, and as a tourism driver. Maryland should prioritize biodiversity and cultural importance over short-term profit.

The rare 100-year-old stands within the Pocomoke-Nassawango Important Bird Area (IBA) are crucial for at-risk bird species and serve as essential stopovers for migratory birds. Retaining these stands benefits numerous bird species and supports the physical structure required for their habitats. Birding has become a nationwide multi-billion-dollar industry, and harm to the forests along the eastern flyway holds steep-cost implications towards Maryland's coastal tourism industry. Current practices have resulted in pine monocultures, detrimental to native and migratory species.

Despite the Forestry division's arguments for early successional habitat, the Lower Shore has historically lacked such conditions. High-quality mature woods should not be converted when so many of our forests are already in pine rotations.

DNR's State Wildlife Action Plan advocates for less pine monoculture and more biodiversity. It recommends retaining diverse mature stands and converting loblolly pine to mixed woods. These mature stands should not be harvested, especially when only wet areas are spared.

I urge you to consider preserving P-25-S-04 and P-25-S-05, representing just 4% of the Chesapeake/Pocomoke Forest plan. This minimal restraint will significantly enhance long-term biodiversity and will send a positive message to Lower Shore residents that DNR stands for the preservation of the rich heritage of the region.

I welcome a response to my recommendations and am available for further discussion at Coastkeeper@ACTforBays.org.

Sincerely,

Taylor Swanson
Assateague Coastkeeper
Assateague Coastal Trust

## K. SILVICULTURAL PROJECTS

### SILVICULTURAL ACTIVITY OVERVIEW

Tables 2 and 3 summarize the proposed silvicultural activities for the 2025 annual work plan on approximately 1,365.4 acres (1.8%) of the Chesapeake Forest and 332.8 acres (1.8%) of Pocomoke State Forest, for a total of 1,698.2 acres (1.8%) on both forests. All proposed harvests were checked and did not intersect with the MD DNR Northern Long-eared Bat buffer layer.

**Table 2. 2025 Chesapeake Forest Silvicultural Activity Overview. (CF-25-S-01 – CF-25-S-13)**

| Activity | Acres |
|---|---|
| First Thinning | 934.3 |
| Second Thinning | 296.6 |
| Seed Tree Harvest | 112.7 |
| Regeneration Harvest | 21.8 |
| **Total** | **1365.4** |

**Table 3. 2025 Pocomoke State Forest Silvicultural Activity Overview. (P-25-S-01 – P-25-S-06)**

| Activity | Acres |
|---|---|
| First Thinning | 135.8 |
| Second Thinning | 151.9 |
| ~~Seed Tree Harvest~~ | ~~23.8~~ |
| Group Selection Harvest | 45.1 |
| **Total** | **332.8** |

### 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 occasionally followed, in the same fiscal year, with grass control in the form of chemicals (hand-applied by ground crews). Site conditions will dictate application rates, etc., in each case.
- **Site Preparation/Regeneration** – While natural regeneration is the preferred method of reforesting harvested areas, alternative plans should be in place in case natural regeneration is unsuccessful. Alternatives include prescribed burning, herbicide, light mechanical disturbance, or a combination thereof followed by planting of native pines and/or hardwoods as the management zone dictates.
- **Pre-Commercial Thinning** – Pre-commercial thinning is the removal of trees to reduce overcrowded conditions within a stand. This type of thinning concentrates growth on more desirable trees while improving the health of the stand. This treatment is usually done on stands 6 to10 years of age. The number of trees retained will depend on growth, tree species present, and site productivity. This activity is conducted with hand held power tools and not heavy equipment, thereby reducing adverse impact to the soil.

- **First Commercial Thinning** – Usually performed on plantations 20-25 years old. The objective is to facilitate forest health and promote development of larger trees over a shorter period of time. This is accomplished in plantations by removing every 5th row of trees and selectively thinning (poor form & unhealthy trees) between rows. In naturally regenerated stands, thinning corridors will be established every 50 feet and the stand will be selectively thinned along both sides of the corridor. Approximately 30-40% of the total stand volume will be removed in this process. Stocking levels are determined using a loblolly pine stocking chart based on the basal area, DBH, and trees per acre of the stand (USDA Forest Service, 1986). Crown ratio and site index are other factors that are used to decide whether to thin or not.
- **Second Commercial Thinning** – Usually performed on stands 35-45 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.
- **Single and Group Selection Harvests** – This includes the removal of single trees and/or 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 & FIDS areas).
- **Shelterwood Harvest** – The shelterwood method involves the gradual removal of the entire stand in a series of partial cuttings that extend over a fraction of the rotation (Smith, 1986). The number of trees retained during the first stage of the harvest depends on the average tree size (diameter at breast height) on the site. As with seed tree regeneration, the shelterwood method works best when overstory trees are more than 30 years old and in their prime period of seed production potential (Schulz, 1997).
- **Seed Tree Harvest** – This type of harvest is designed to regenerate pine on the site by leaving 12 to 14 healthy dominant trees per acre as a seed source. The seed trees are typically left on the site for another rotation, but can be removed once sufficient pine regeneration is achieved. The seed tree method regenerates loblolly pine effectively and inexpensively in the Coastal Plain, where seed crops are consistently heavy (Schulz, 1997).
- **Variable Retention Harvest** – This harvest type focuses on the removal of approximately 80 percent of a given stand in one cutting, while retaining approximately 20 percent as wildlife corridors/islands, visual buffers, and/or legacy trees. 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 ESAs, DFS & Core FIDS areas. The preferred method of regeneration is by natural seeding from adjacent stands, or from trees cut in the clearing operation. 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).
- **Regeneration Harvest** – This type of harvest removes up to 95% of a stand in one cutting, while retaining at least 5% in green tree retention areas. Factors such as riparian areas, soil types, ecologically significant areas, snags, and legacy trees will determine the placement of green tree retention areas. Coarse woody debris (slash/tree tops) is left evenly across the site to decompose. A regeneration harvest is prescribed to help regulate the forest growth over the entire forest, ensuring a healthy and vigorous forest condition. Regeneration harvests are most typically implemented in General Management and ESA Zone 3 areas, but they can also be used to regenerate mixed natural stands within ESAs, DFS and Core FIDS areas. The preferred method of regeneration is by natural seeding from adjacent stands, or from trees cut in the clearing operation. If adequate natural regeneration is not obtained within 3 years of the harvest, hand

planting of the site is typically required (not required for certain restoration projects, such as bay restoration).

- **Aerial Release Spraying** – An aerial spray of herbicide is used to reduce undesirable hardwood species (i.e. sweet gum & red maple) within the stand. In many cases, a reduced rate (well below the manufactures recommendation) is used. A reduced rate has been used on the CF successfully to kill the undesirable species while maintaining the desirable ones (yellow poplar & oaks). All forms of aerial spraying are based on precision GPS mapping and accompanied by on-board flight GPS controls. GPS-generated maps shows each pass of the aircraft and are provided by the contractor to demonstrate precision application. Aerial applications are not allowed in specially designated wetland areas or within 150 feet of riparian areas on the forest.
- **Prescribed Fire** – Prescribed fires are set deliberately by MFS personnel, under proper weather conditions, to achieve a specific management objective. Prescribed fires are used for enhancing wildlife habitat, encouraging fire-dependent plant species, reducing fuel loads that feed wildfires, and prepare sites for planting.
- **Riparian Buffer Zone Establishment** – Riparian buffer zones are vegetated areas adjacent to or influenced by a perennial or intermittent bodies of water. These buffers are established and managed to protect aquatic, wetland, shoreline, and/or terrestrial environments and ultimately the Chesapeake Bay. Boundaries of riparian buffer zones will be marked, surveyed (GPS) and mapped (GIS). Selective harvesting and/or thinning may occur in these areas to encourage a mixed hardwood-pine composition.

## SILVICULTURAL PRESCRIPTIONS & STAND DATA

### DORCHESTER COUNTY

#### [CF-25-S-01]

**Proposal Name**: D01 – Arthur's Seat – Stands 6 and 8
**Harvest Area**: 173.5 acres
**Forest Community Types and Development**: Stand 6 is overstocked loblolly pine naturally regenerated in 2000. Stand 8 is an overstocked loblolly pine plantation established in 1998.
**Habitats and Species of Management Concern**: ESA Zone 1 and DFS Core
**Water Resources**: Little Choptank and Lower Choptank watersheds
**Soil Resources**: EmA, OkA, and OtA
**Historic Conditions**: Homesite as indicated on map
**Sivilcultural Prescription**: First thinning, retain significant hard mast species

#### [CF-25-S-02]

**Proposal Name**: D12 – Marshyhope – Stand 32
**Harvest Area**: 21.9 acres
**Forest Community Types and Development**: Stand 32 is an overstocked loblolly pine plantation established in 1999 and pre-commercially thinned in 2008.
**Habitats and Species of Management Concern**: ESA Zone 3 Sawtimber, DFS Core, and Stream Buffer
**Water Resources**: Puckum Branch and Marshyhope Creek watershed
**Soil Resources**: EmB, GaB, RsB, and Za
**Historic Conditions**: No known historic features

**Sivilcultural Prescription**: First thinning, retain significant hard mast species, maintain 300' riparian stream buffer. Due to its location near Puckum Branch and its floodplain, all steps available should be taken to minimize ground disturbance and soil transport off site due to the proximity of the access road to the floodplain. Thinning should only occur within the pine stand, and the floodplain area and areas which sharply slope down to it should not be disturbed.

## SOMERSET COUNTY

### [CF-25-S-03]

**Proposal Name**: S21 – E. Mace Smith – Stand 31
**Harvest Area**: 37.8 acres
**Forest Community Types and Development**: Stand 31 is a mature loblolly pine plantation established in 1969, first thinned in 1995, and second thinned in 2008.
**Habitats and Species of Management Concern**: DFS Core
**Water Resources**: Manokin River and Monie Bay watersheds
**Soil Resources**: AoB, OKA, and QuA
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: Seed tree harvest, retain significant hard mast species

### [CF-25-S-04]

**Proposal Name**: S54 – Jesse Johnson – Stands 2 and 4
**Harvest Area**: 23.1 acres
**Forest Community Types and Development**: Stand 2 is overstocked loblolly pine naturally regenerated in 1978 and first thinned in 1998. Stand 4 is overstocked loblolly pine naturally regenerated in 1978 and first thinned in 2006.
**Habitats and Species of Management Concern**: General Management
**Water Resources**: Pocomoke Sound watershed
**Soil Resources**: FgA, MdA, and QuA
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: Second thinning

### [CF-25-S-05]

**Proposal Name**: S54 – Jesse Johnson – Stand 1
**Harvest Area**: 41.1 acres
**Forest Community Types and Development**: Stand 1 is mature loblolly pine naturally regenerated in 1972, first thinned in 1998, sprayed in 2000, and second thinned in 2006.
**Habitats and Species of Management Concern**: General Management
**Water Resources**: Pocomoke Sound and Lower Pocomoke River watersheds
**Soil Resources**: AoB, FgA, FhA, OKA, and QuA
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: Seed tree harvest

## WORCESTER COUNTY

### [CF-25-S-06]

**Proposal Name**: WR14 – Hopkins-Timmons – Stands 6, 7, and 8
**Harvest Area**: 365.2 acres

**Forest Community Types and Development**: Stand 6 is an overstocked loblolly pine plantation established in 2002. Stand 7 is an overstocked loblolly pine plantation established in 1988. Stand 8 is an overstocked loblolly pine plantation established in 1990.
**Habitats and Species of Management Concern**: Stream Buffer and General Management
**Water Resources**: Multiple unnamed ditches, Lower Pocomoke River and Chincoteague Bay watersheds
**Soil Resources**: EkA, EmA, FaA, KeA, MpA, MtA, MtB, and OtA
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: First thinning, harvesting equipment should not disturb the banks, vegetation on the banks, or the ditches themselves to prevent sediment transport off site. Consultation with a hydrologist should be considered to determine if this site is a candidate for plugging or other techniques to restore more natural hydrology to the area.

[CF-25-S-07]

**Proposal Name**: WR18 – Buck Harbor – Stands 21, 22, 25, and 26
**Harvest Area**: 275.7 acres
**Forest Community Types and Development**: Stand 21 is an overstocked loblolly pine plantation established in 2004. Stand 22 is an overstocked loblolly pine plantation established in 2005. Stand 25 is an overstocked loblolly pine plantation established in 1987. Stand 26 is an overstocked loblolly pine plantation established in 2007.
**Habitats and Species of Management Concern**: Stream Buffer and Core FIDS
**Water Resources**: Denney Branch and Dividing Creek watershed
**Soil Resources**: AsA, BhA, Ch, EvD, FaA, HuA, KsA, LO, MuA, RuB, and UzB
**Historic Conditions**: MHT Grids C487_R239 and C487_R240
**Sivilcultural Prescription**: First thinning, retain hardwood species and snags where possible. The upper northeast corner of stand 25 contains a wetland area that should be excluded from the harvest area.. All steps should be taken to minimize ground disturbance and soil transport off site.

[CF-25-S-08]

**Proposal Name**: WR18 – Buck Harbor – Stand 23
**Harvest Area**: 43.3 acres
**Forest Community Types and Development**: Stand 23 is an overstocked loblolly pine plantation established in 1987 and first thinned in 2007.
**Habitats and Species of Management Concern**: Stream Buffer and Core FIDS
**Water Resources**: Denney Branch and Dividing Creek watershed
**Soil Resources**: AsA, BhA, KsA, MuA, and RuB
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: Second thinning, retain hardwood species and snags where possible. All steps should be taken to minimize ground disturbance and soil transport off site.

[CF-25-S-09]

**Proposal Name**: WR19 – Priscilla Pusey – Stands 13 and 14
**Harvest Area**: 98.0 acres
**Forest Community Types and Development**: Stand 13 is an overstocked loblolly pine plantation established in 2000 and sprayed in 2005. Stand 14 is an overstocked loblolly pine plantation established in 2004.
**Habitats and Species of Management Concern**: Stream Buffer and General Management
**Water Resources**: Dividing Creek, Denney Branch, and Dividing Creek watershed
**Soil Resources**: AsA, BhA, EvD, HuA, KsA, LO, Ma, RuA, RuB, and UzB
**Historic Conditions**: MHT Grids C487_R239 and C487_R240
**Sivilcultural Prescription**: First thinning, time of year restriction (May 15-August 15) is encouraged. Minimize disturbance within the 50-300' buffer. All steps should be taken to minimize ground disturbance and soil

transport off site. Areas within the 50' no cut buffer and areas associated with the Dividing Creek floodplain should be excluded from harvest, and disturbance should be minimized in the 50'-300' buffer area.

[CF-25-S-10]

**Proposal Name**: WR27 – W.T. Onley – Stands 4 and 5
**Harvest Area**: 97.0 acres
**Forest Community Types and Development**: Stand 4 is an overstocked loblolly pine plantation established in 1982 and first thinned in 2002. Stand 5 is an overstocked loblolly pine plantation established in 1983 and first thinned in 2002.
**Habitats and Species of Management Concern**: ESA Zone 3 Pulpwood, Stream Buffer, and DFS Future Core
**Water Resources**: Hardship Branch and Lower Pocomoke River watershed
**Soil Resources**: EkA, KeA, KsA, KsB, MpA, MpB, NnA, and OtA
**Historic Conditions**: MHT Grid C509_R254
**Sivilcultural Prescription**: Second thinning, retain hardwood species and snags where possible. All steps available should be taken to minimize ground disturbance and soil transport off site.

[CF-25-S-11]

**Proposal Name**: WR35 – Hancock – Stands 2 and 6
**Harvest Area**: 33.7 acres
**Forest Community Types and Development**: Stand 2 is a mature loblolly pine plantation established in 1971, sprayed in 1997, and fertilized in 1998. Stand 6 is a mature loblolly pine plantation established in 1971, first thinned in 1993, sprayed in 1997, fertilized in 1998, and second thinned in 2004.
**Habitats and Species of Management Concern**: DFS Core
**Water Resources**: Little Mill Creek and Chincoteague Bay watershed
**Soil Resources**: HbB, HuA, KeA, OtA, and WdB
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: Seed tree harvest, retain hardwood species and snags where possible

[CF-25-S-12]

**Proposal Name**: WR40 – Dunn Swamp – Stands 1 and 2
**Harvest Area**: 133.2 acres
**Forest Community Types and Development**: Stand 1 is an overstocked loblolly pine plantation established in 1990, sprayed in 1992, and first thinned in 2009. Stand 2 is an overstocked loblolly pine plantation established in 1987, sprayed in 1988, and first thinned in 2008.
**Habitats and Species of Management Concern**: General Management
**Water Resources**: Lower Pocomoke River watershed
**Soil Resources**: MuA and OtA
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: Second thinning, large area of Japanese knotweed near Dunn Swamp Road will need to be controlled prior to harvest.

[CF-25-S-13]

**Proposal Name**: WR40 – Dunn Swamp – Stand 9
**Harvest Area**: 21.8 acres
**Forest Community Types and Development**: Stand 9 is a matiure loblolly pine plantation established in 1970, first thinned in 1998, sprayed in 2000, and second thinned in 2006.
**Habitats and Species of Management Concern**: General Management
**Water Resources**: Lower Pocomoke River watershed
**Soil Resources**: OtA
**Historic Conditions**: No known historic features

**Sivilcultural Prescription**: Regeneration harvest

## POCOMOKE STATE FOREST

### [P-25-S-01]

**Proposal Name**: P02 – Nazareth Church – Tract 3, Stand 7
**Harvest Area**: 25.8 acres
**Forest Community Types and Development**: Stand 7 is an overstocked loblolly pine plantation established in 2005.
**Habitats and Species of Management Concern**: Stream Buffer and DFS Future Core
**Water Resources**: Dividing Creek watershed
**Soil Resources**: AsA, BhA, CeB, EvB, EvD, HuA, KsA, MuA, and RuB
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: First thinning, retain hardwood species and snags where possible, bat survey will be conducted next year to determine presence of Myotis spp.

### [P-25-S-02]

**Proposal Name**: P02 – Nazareth Church – Tract 4, Stands 11, 12, 13, and 20
**Harvest Area**: 79.8 acres
**Forest Community Types and Development**: Stand 11 is overstocked loblolly pine naturally regenerated in 2001 and pre-commercially thinned in 2011. Stand 12 is an overstocked loblolly pine plantation established in 1998. Stand 13 is overstocked loblolly pine naturally regenerated in 1994. Stand 20 is an overstocked loblolly pine plantation established in 2006.
**Habitats and Species of Management Concern**: DFS Future Core
**Water Resources**: Dividing Creek watershed
**Soil Resources**: AsA, BhA, FaA, HmA, KsA, MuA, RuA, and WdA
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: First thinning, retain hardwood species and snags where possible, and pitch, shortleaf, and pond pines. An intermittent stream and wetland in the NE corner of the stand should be delineated and buffered accordingly.

### [P-25-S-03]

**Proposal Name**: P02 – Nazareth Church – Tract 4, Stand 6
**Harvest Area**: 30.2 acres
**Forest Community Types and Development**: Stand 6 is overstocked loblolly pine naturally regenerated in 1994.
**Habitats and Species of Management Concern**: DFS Future Core
**Water Resources**: Dividing Creek watershed
**Soil Resources**: AsA, EvB, KsA, KsB, MuA, RuA, and RuB
**Historic Conditions**: Homesite as indicated on map
**Sivilcultural Prescription**: First thinning, retain hardwood species and snags where possible, and pitch, shortleaf, and pond pines.

### ~~[P-25-S-04]~~

~~**Proposal Name**: P02 – Nazareth Church – Tract 6 – Stand 21~~
~~**Harvest Area**: 23.8 acres~~
~~**Forest Community Types and Development**: Mature pine-hardwood naturally regenerated in 1921.~~
~~**Habitats and Species of Management Concern**: DFS Future Core~~
~~**Water Resources**: Dividing Creek watershed~~

~~**Soil Resources**: AsA, BhA, EvB, MuA, and RuB~~
~~**Historic Conditions**: No known historic features~~
~~**Sivilcultural Prescription**: Regeneration harvest – if possible, retain significant shortleaf, pond, or pitch pine and hard mast species. Avoid disturbance in the wetland areas, remove loblolly in the upland perimeter on the south side of the wetland. If feasible, prescribed burning of the upland area should be performed to help promote the regeneration of oaks and fire-tolerant species. No harvesting will occur on the south side of the forest road adjacent to the intermittent stream.~~
**The wetland areas and other restrictions for this site reduce the total harvestable acreage to an extent where it is not feasible for a harvest. Therefore, P-25-S-04 is removed from the FY2025 Annual Work Plan.**

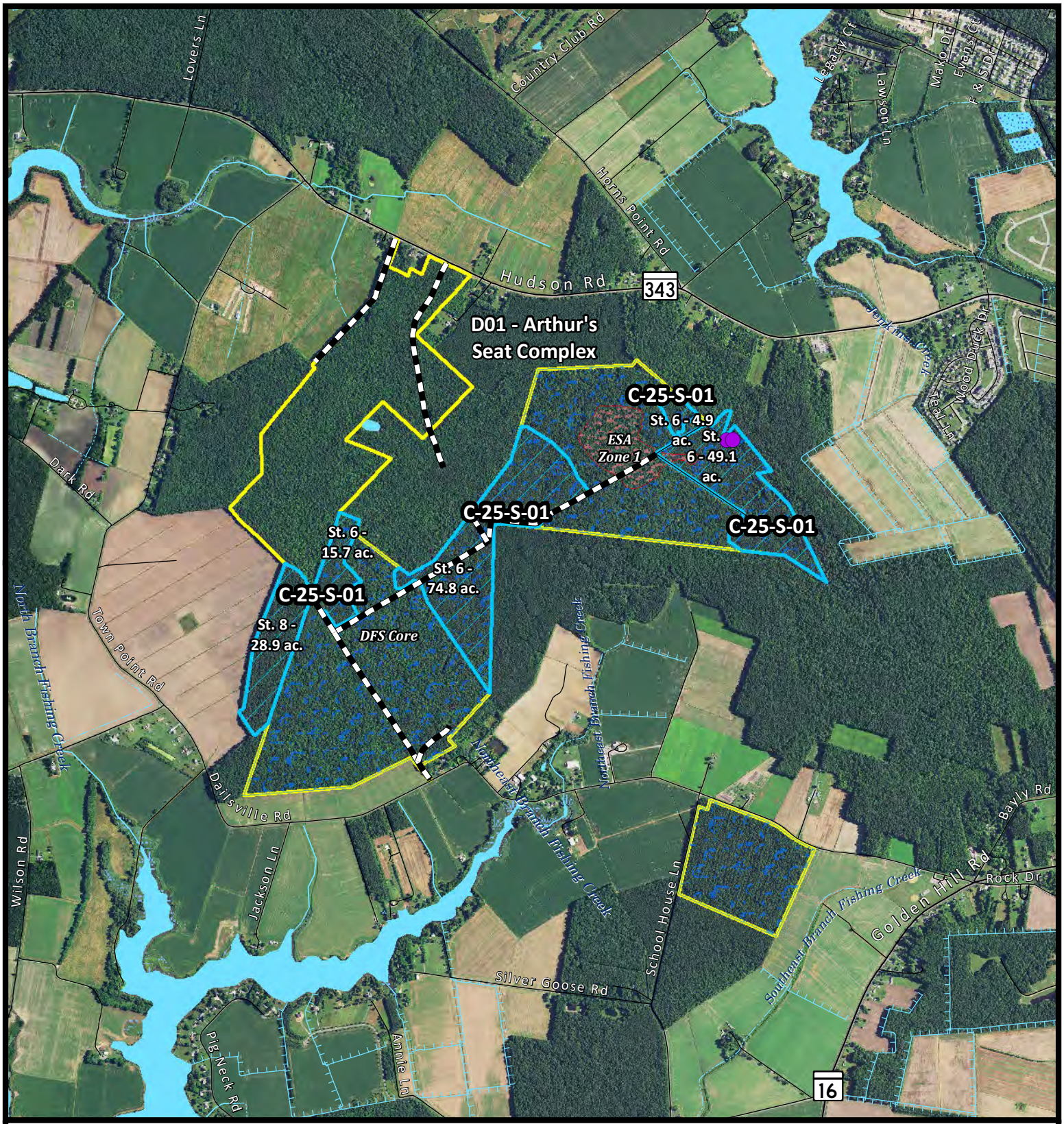
[P-25-S-05]

**Proposal Name**: P06 – Tarr – Tract 19 – Stand 8
**Harvest Area**: 45.1 acres
**Forest Community Types and Development**: Stand 8 is mature pine-hardwood established in 1927.
**Habitats and Species of Management Concern**: ESA Zone 1, Stream Buffer, and DFS Future Core
**Water Resources**: Lower Pocomoke River watershed
**Soil Resources**: AsA, EvB, FaA, KeA, MuA, Pk, and RuA
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: Group selection harvest – retain significant hard mast species and shortleaf, pond, or pitch pines. No harvesting will occur within the 50' stream buffer area. Single-tree harvesting within the expanded 300' riparian buffer will be restricted to areas where the harvest will encourage the creation of a mature mixed pine-hardwood forest. Follow prescription for dunes on the dune sites on the north and west sides. No harvesting in the non-riverine hardwood swamps. Plugging of the ditches in the non-riverine swamp is encouraged.

[P-25-S-06]

**Proposal Name**: P07 – Chandler – Tract 21 – Stands 1, 2, and 8; Tract 22 – Stands 2, 3, 8, 9 and 10
**Harvest Area**: 45.1 acres
**Forest Community Types and Development**: Tract 21: Stand 1 is an overstocked loblolly pine plantation established in 1983, sprayed in 1984, and first thinned in 2006. Stand 2 is overstocked loblolly pine naturally regenerated in 1980, sprayed in 1982, and first thinned in 2006. Stand 8 is an overstocked loblolly pine plantation established in 1973, sprayed in 1975, pre-commercially thinned in 1979, and first thinned in 2006. Tract 22: Stand 2 is an overstocked loblolly pine plantation established and sprayed in 1980 and first thinned in 2006. Stand 3 is an overstocked loblolly pine plantation established in 1981 and first thinned in 2006. Stand 8 is an overstocked loblolly pine plantation established in 1979, pre-commercially thinned in 1987, and first thinned in 2006. Stand 9 is overstocked loblolly pine naturally regenerated in 1972 and first thinned in 2006. Stand 10 is overstocked loblolly pine naturally regenerated in 1974, pre-commercially thinned in 1982, and first thinned in 2006.
**Habitats and Species of Management Concern**: Stream Buffer and DFS Future Core
**Water Resources**: Corkers Creek and Lower Pocomoke River watershed
**Soil Resources**: AsA, CeA, CeB, EvB, FaA, GaA, HmA, HmB, HuA, KsA, KsB, MuA, and Za
**Historic Conditions**: No known historic features
**Sivilcultural Prescription**: Second thinning, retain hardwood species and snags where possible. Avoid timber harvest activities from May 15 to August 15. Corker's Creek, its associated floodplain, and intermittent streams, should be buffered accordingly. Minimize disturbance within the 300' buffer.

## SILVICULTURAL SITE MAPS




## C-25-S-01

Scale: 1" = 1,980'
Date: 11/2023

**Legend**

| CF AWP Activity | CF Management | |
|---|---|---|
| First Thinning | DFS Core | ESA Zone 1 |
| | | Home Site |

1,320 0 1,320 2,640 3,960 5,280 Feet

This map is for planning purposes only.
This map is not a boundary survey



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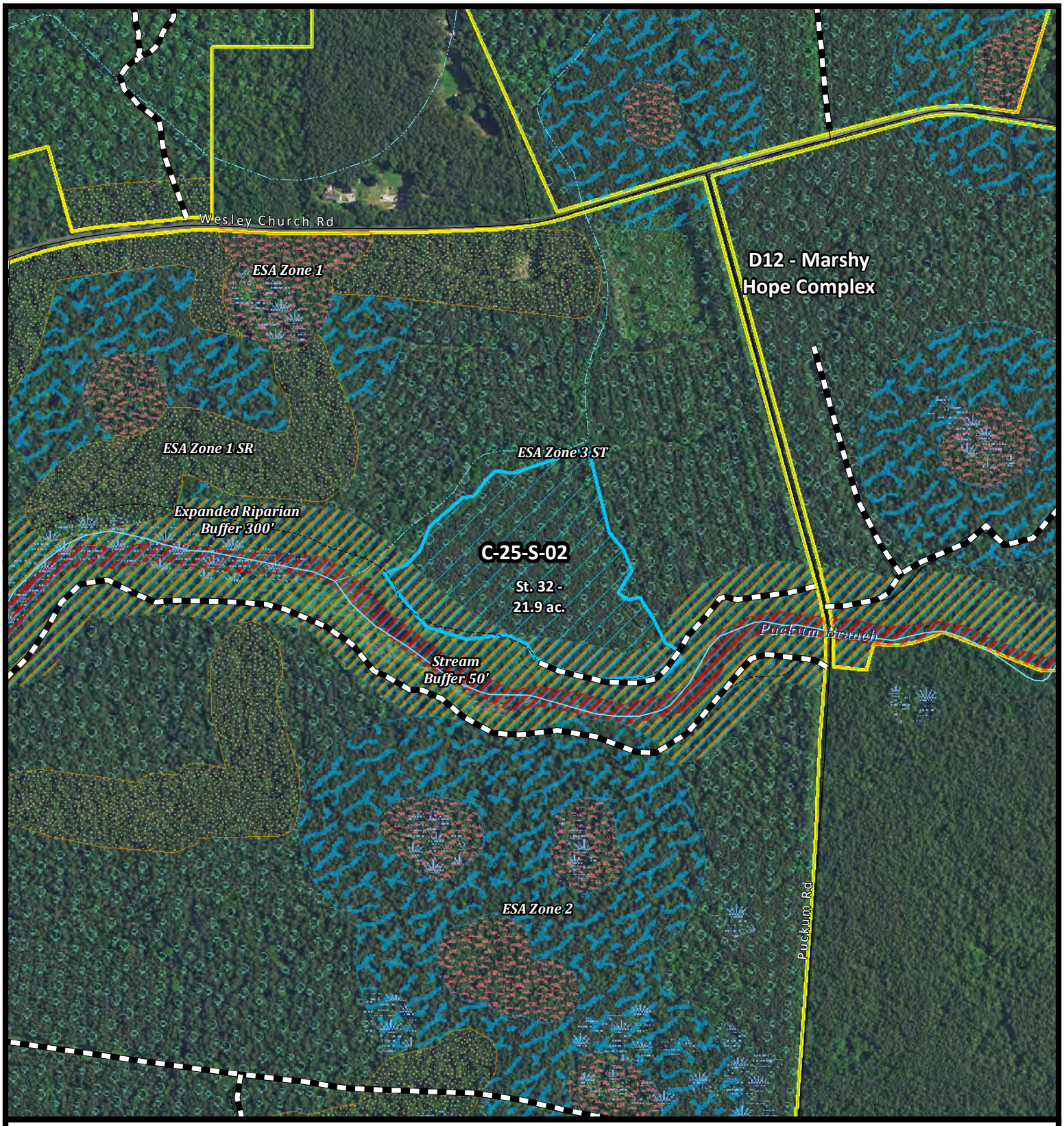
MARYLAND DEPARTMENT OF NATURAL RESOURCES




**Legend**

**CF AWP Activity**

- First Thinning

**CF Management**

- ESA Zone 1
- ESA Zone 1 SR
- ESA Zone 2
- ESA Zone 3 ST
- Stream Buffer (50')
- Expanded Riparian Buffer (300')

**C-25-S-02**

Scale: 1" = 660'
Date: 11/2023

1,320 0 Feet

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This map is not a boundary survey



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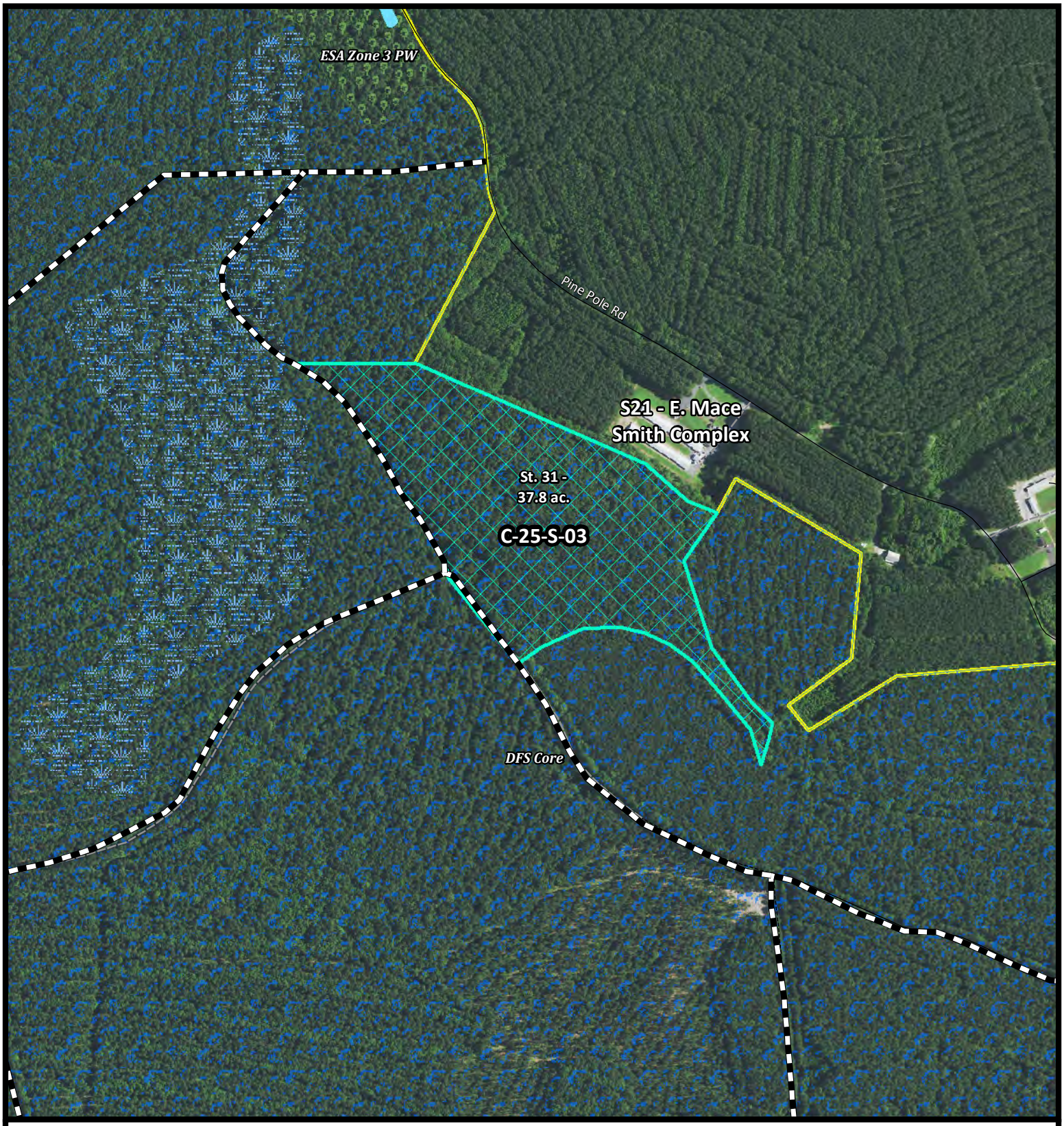


**C-25-S-03**

Scale: 1" = 660'
Date: 11/2023

**Legend**

**CF AWP Activity**
Seed Tree Harvest

**CF Management**
DFS Core
ESA Zone 3 PW

1,320 0 Feet

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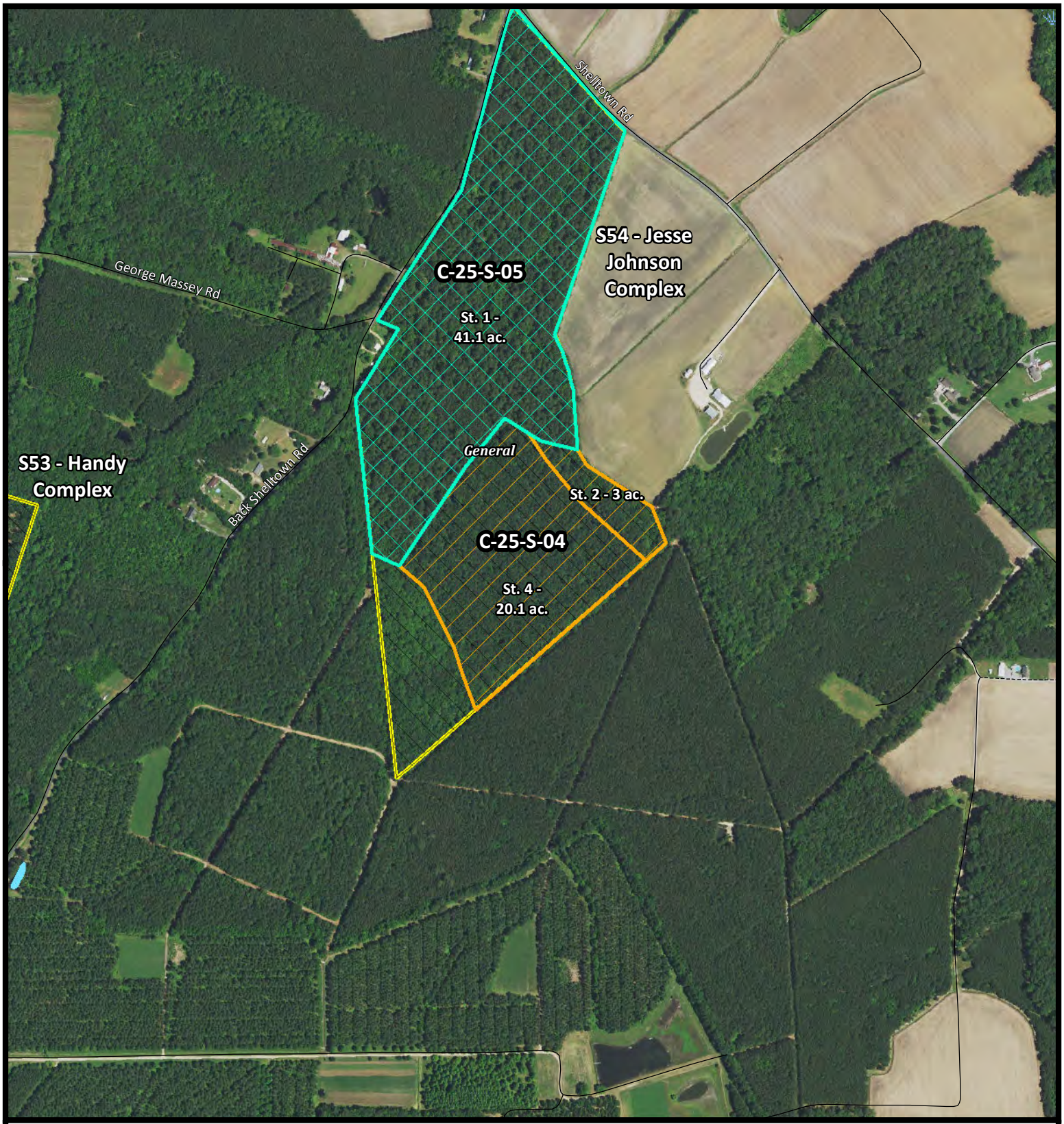


**C-25-S-04**

Scale: 1" = 660'
Date: 11/2023

**Legend**

**CF AWP Activity**

- Seed Tree Harvest
- Second Thinning

**CF Management**

- General

1,320 0 Feet

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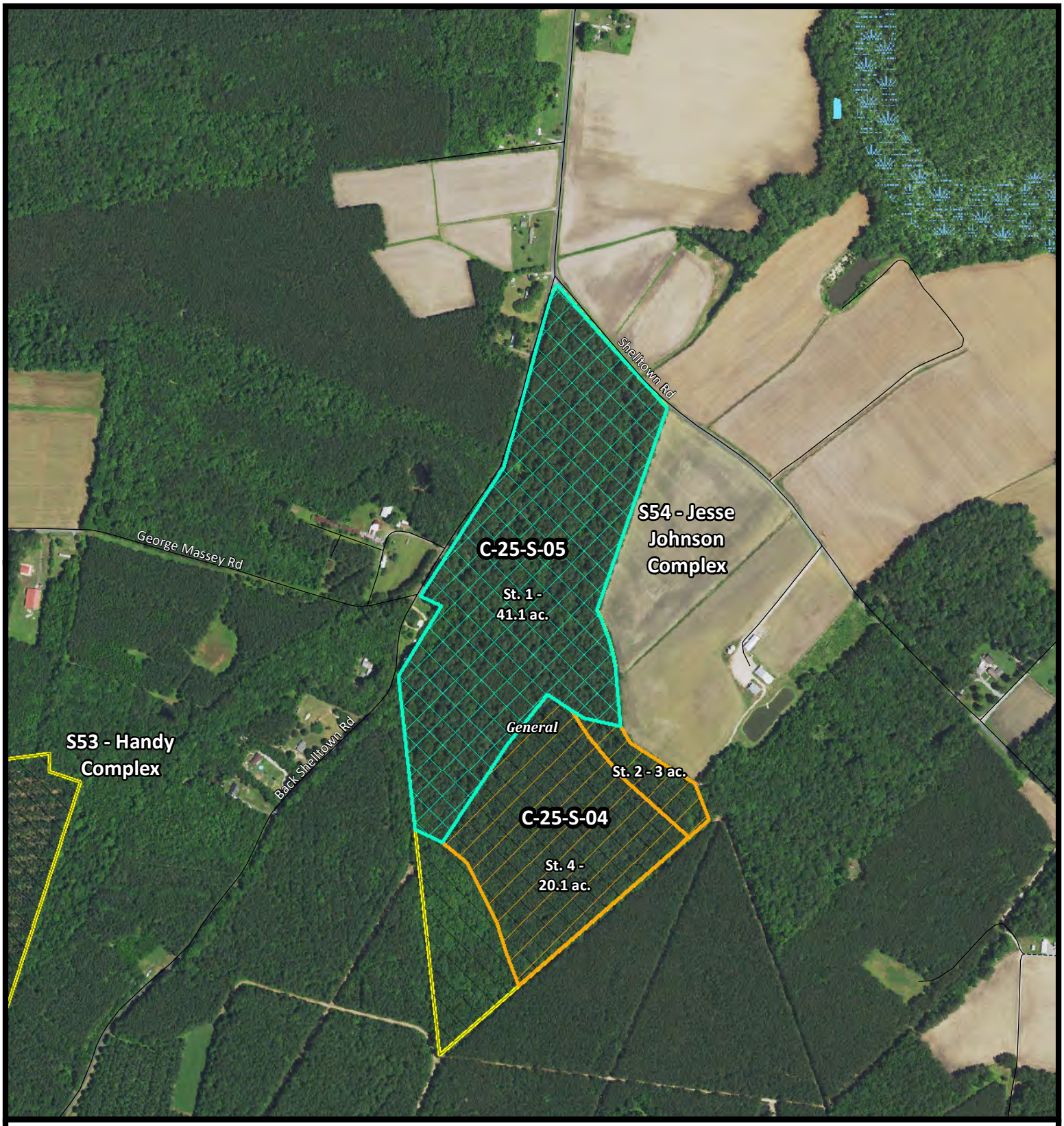


**C-25-S-05**

Scale: 1" = 660'
Date: 11/2023

**Legend**

**CF AWP Activity**

- Seed Tree Harvest
- Second Thinning

**CF Management**

- General

1,320 0 Feet

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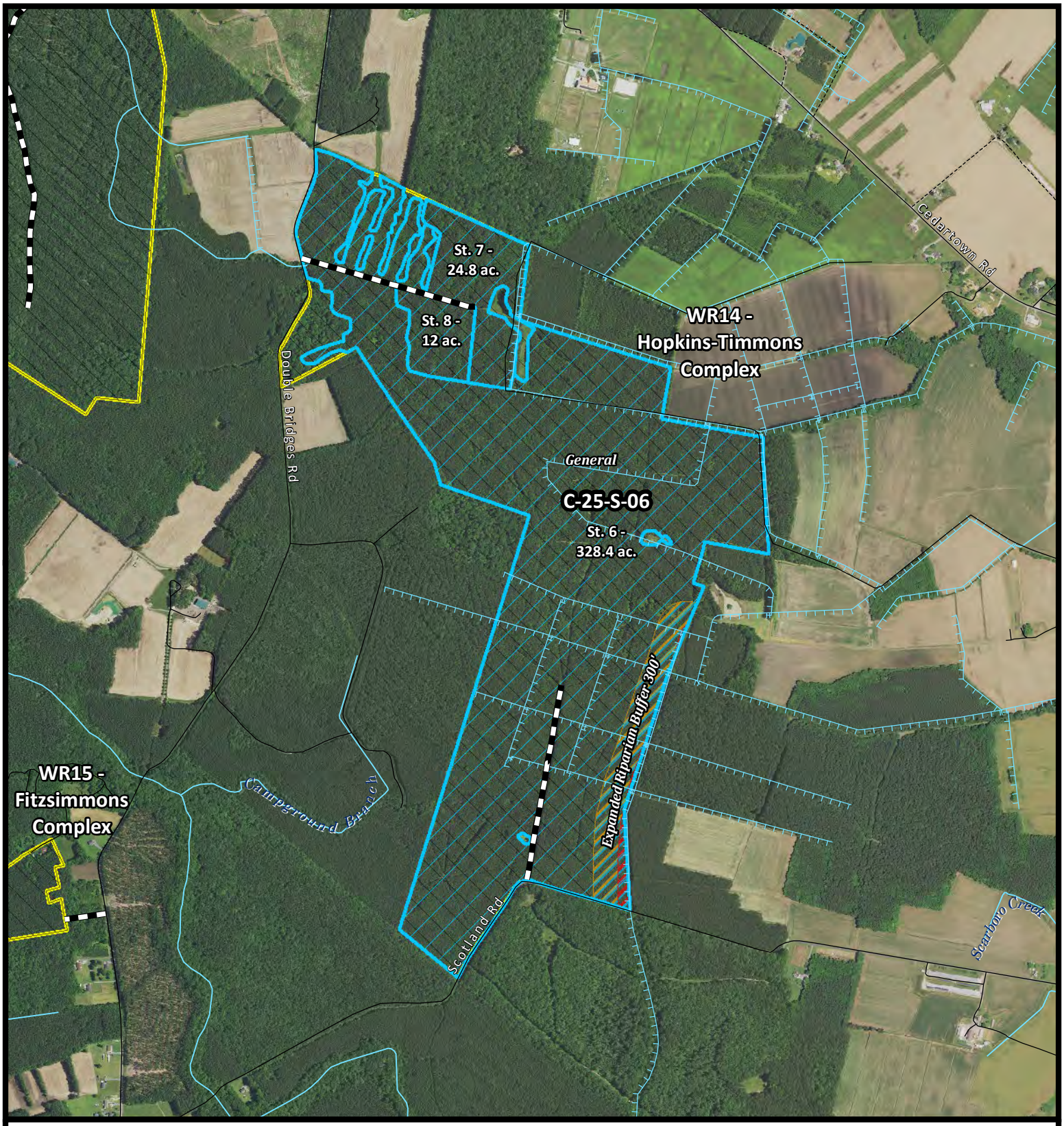


## C-25-S-06

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Date: 11/2023

**Legend**

| CF AWP Activity | CF Management | |
|---|---|---|
| First Thinning | General | Stream Buffer (50') |
| | | Expanded Riparian Buffer (300') |

1,320 0 1,320 2,640 Feet

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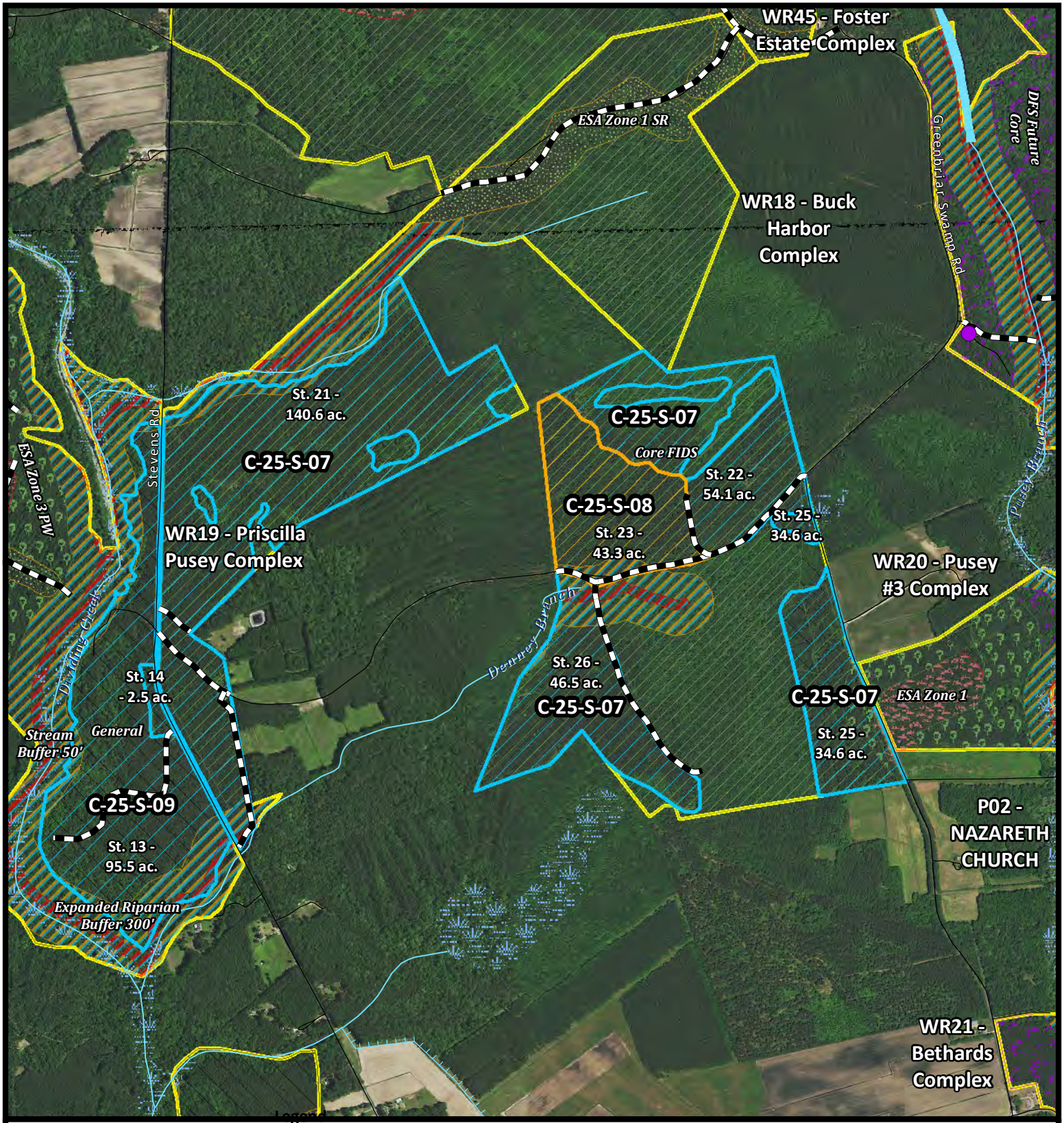


**CF AWP Activity**

- First Thinning
- Second Thinning

**CF Management**

- Core FIDS
- DFS Future Core
- ESA Zone 1
- ESA Zone 1 SR
- ESA Zone 3 PW
- General
- Stream Buffer (50')
- Expanded Riparian Buffer (300')
- Home Site

## C-25-S-07

Scale: 1" = 1,320'
Date: 11/2023

1,320 0 1,320 2,640 Feet

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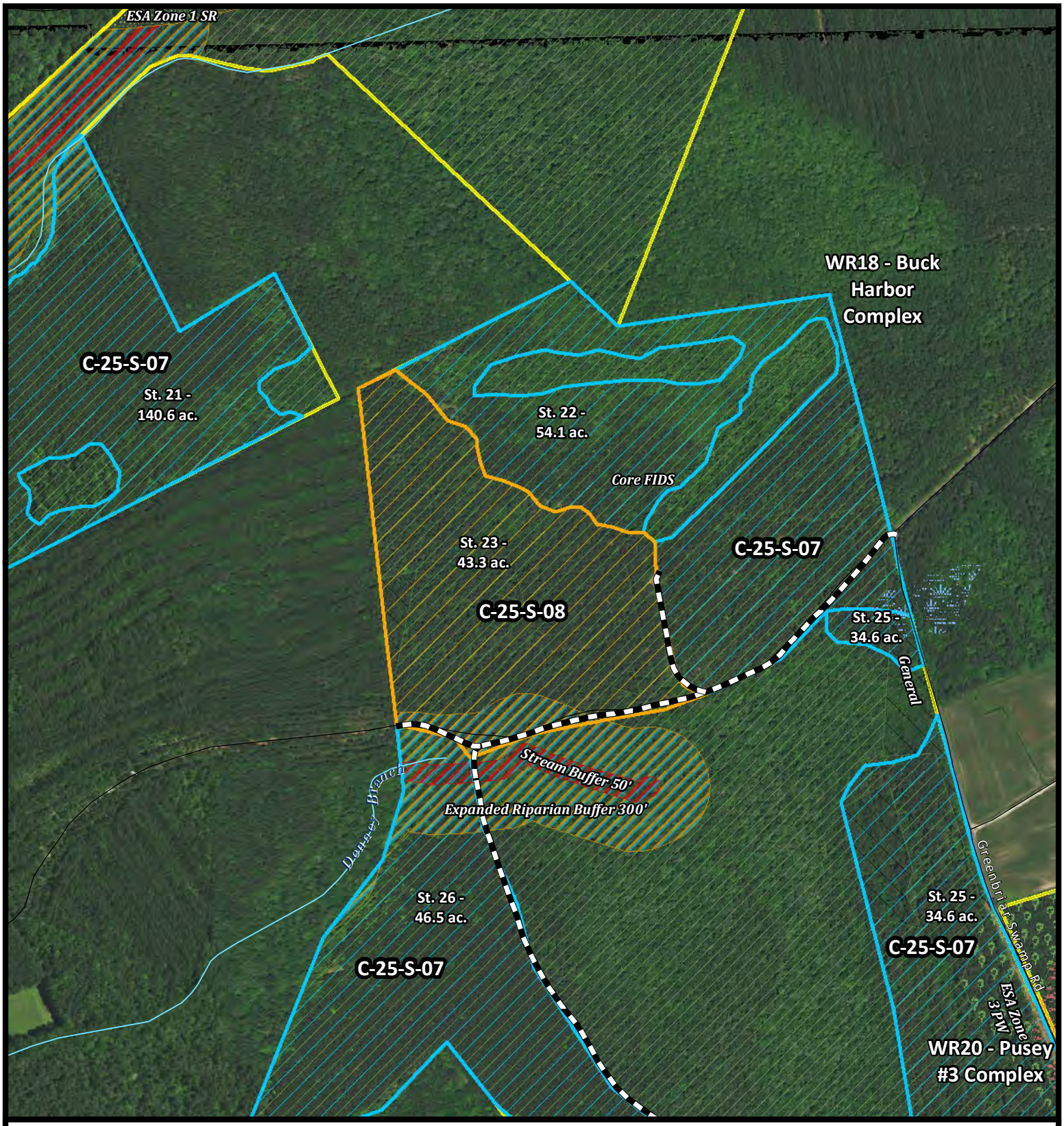


**Legend**

**CF AWP Activity**
- First Thinning
- Second Thinning

**CF Management**
- Core FIDS
- ESA Zone 1
- ESA Zone 1 SR
- ESA Zone 3 PW
- General
- Stream Buffer (50')
- Expanded Riparian Buffer (300')

**C-25-S-08**

Scale: 1" = 660'
Date: 11/2023

1,320 0 Feet

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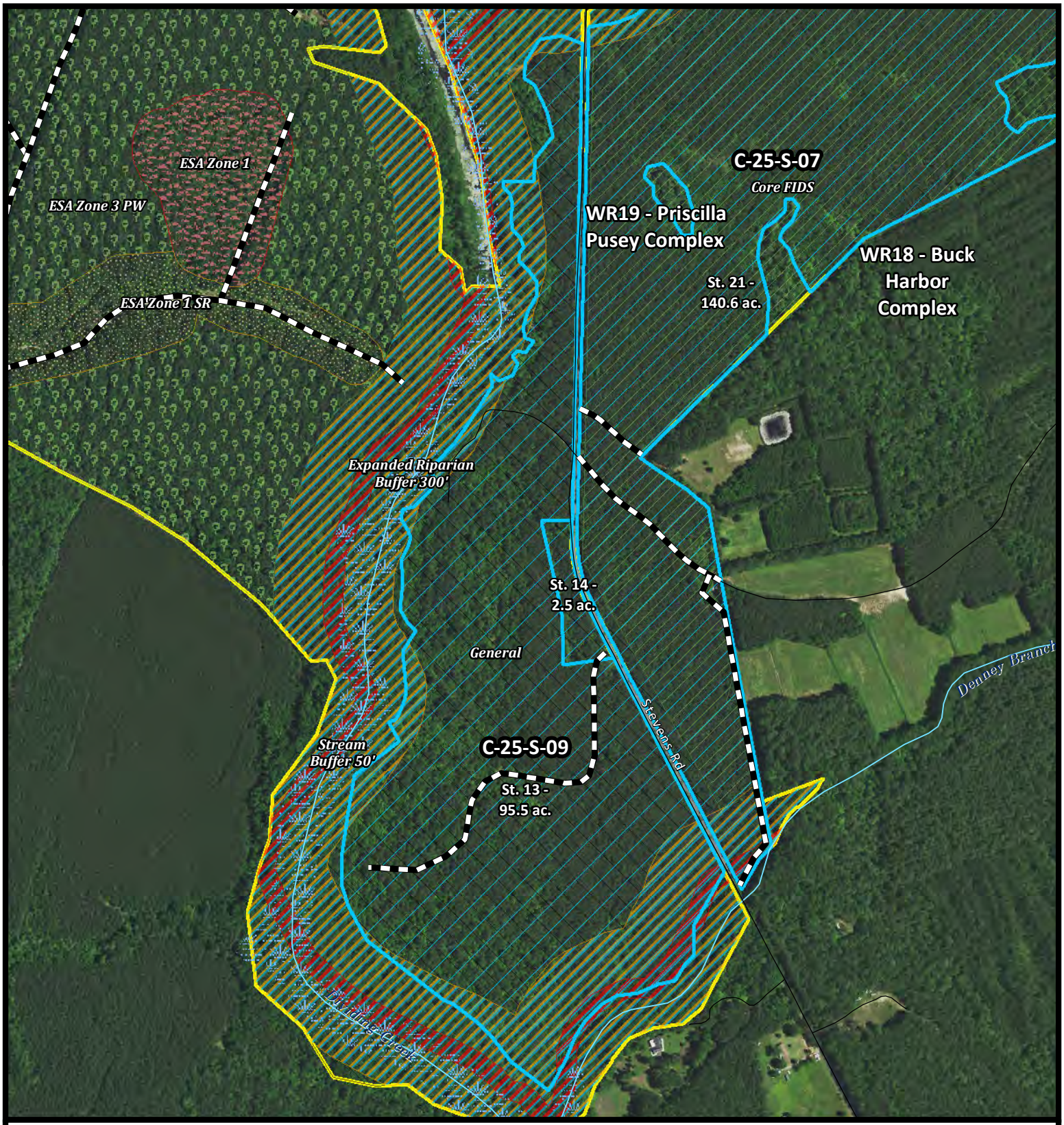


**Legend**

**CF AWP Activity**

- First Thinning

**CF Management**

- Core FIDS
- ESA Zone 1
- ESA Zone 1 SR
- ESA Zone 3 PW
- General
- Stream Buffer (50')
- Expanded Riparian Buffer (300')

**C-25-S-09**

Scale: 1" = 660'
Date: 11/2023

1,320 0 Feet

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This map is not a boundary survey

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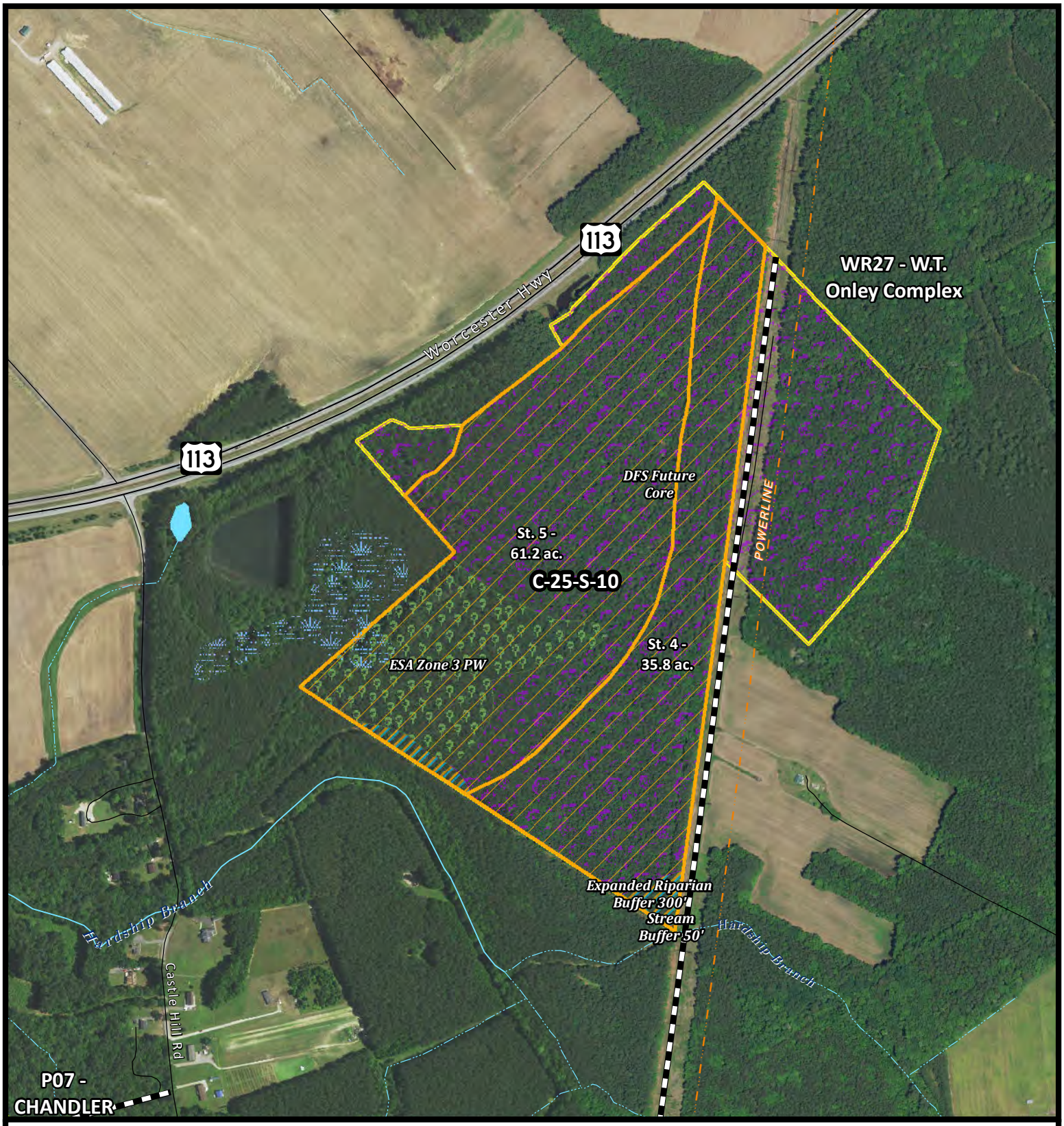
MARYLAND DEPARTMENT OF NATURAL RESOURCES




**C-25-S-10**

Scale: 1" = 660'
Date: 11/2023

**Legend**

**CF AWP Activity**
- Second Thinning

**CF Management**
- DFS Future Core
- ESA Zone 3 PW
- Stream Buffer (50')
- Expanded Riparian Buffer (300')

1,320 0 Feet

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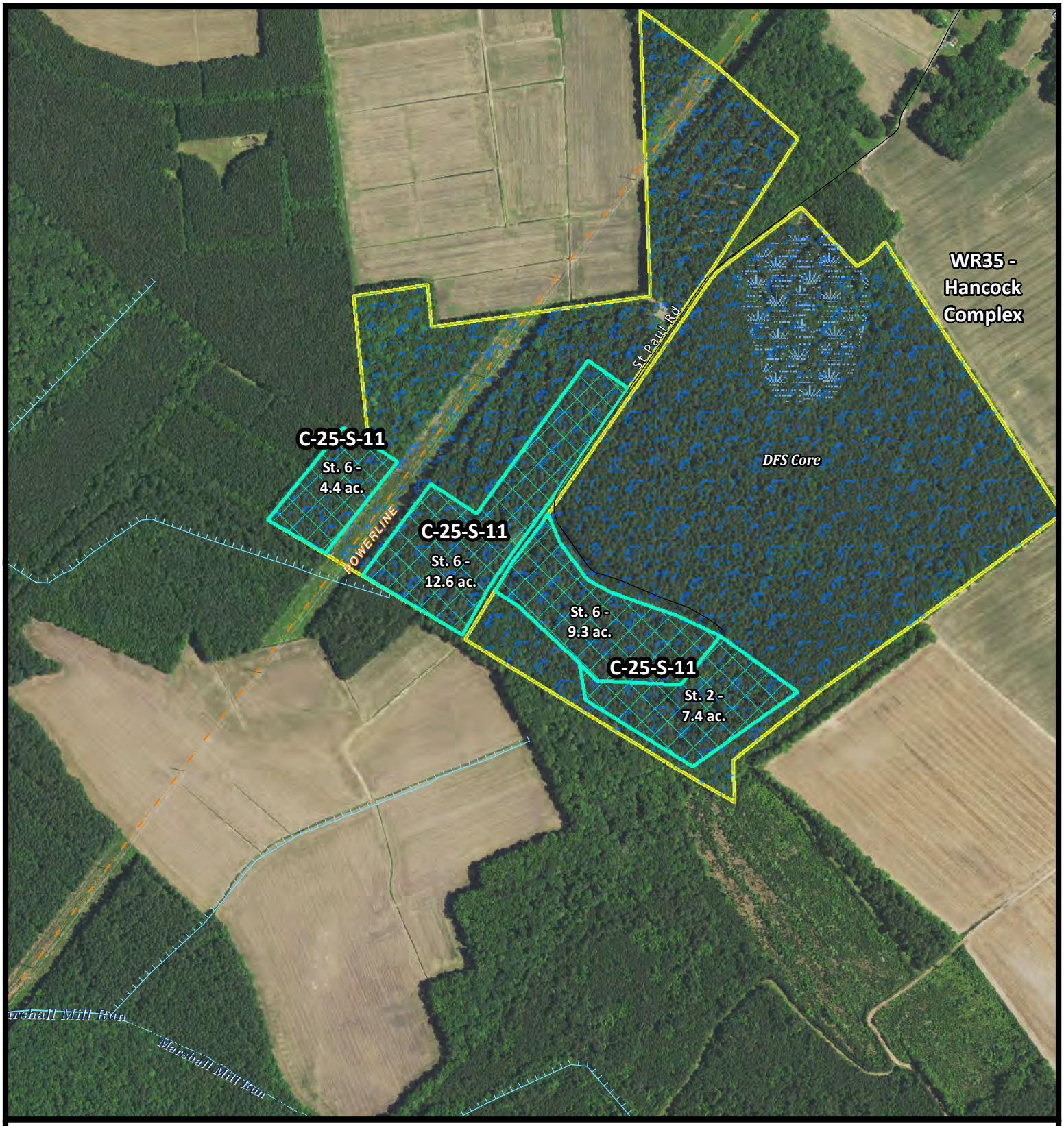
MARYLAND DEPARTMENT OF NATURAL RESOURCES




## C-25-S-11

Scale: 1" = 660'
Date: 11/2023

**Legend**

**CF AWP Activity**

Seed Tree Harvest

**CF Management**

DFS Core

1,320 0

Feet

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This map is not a boundary survey

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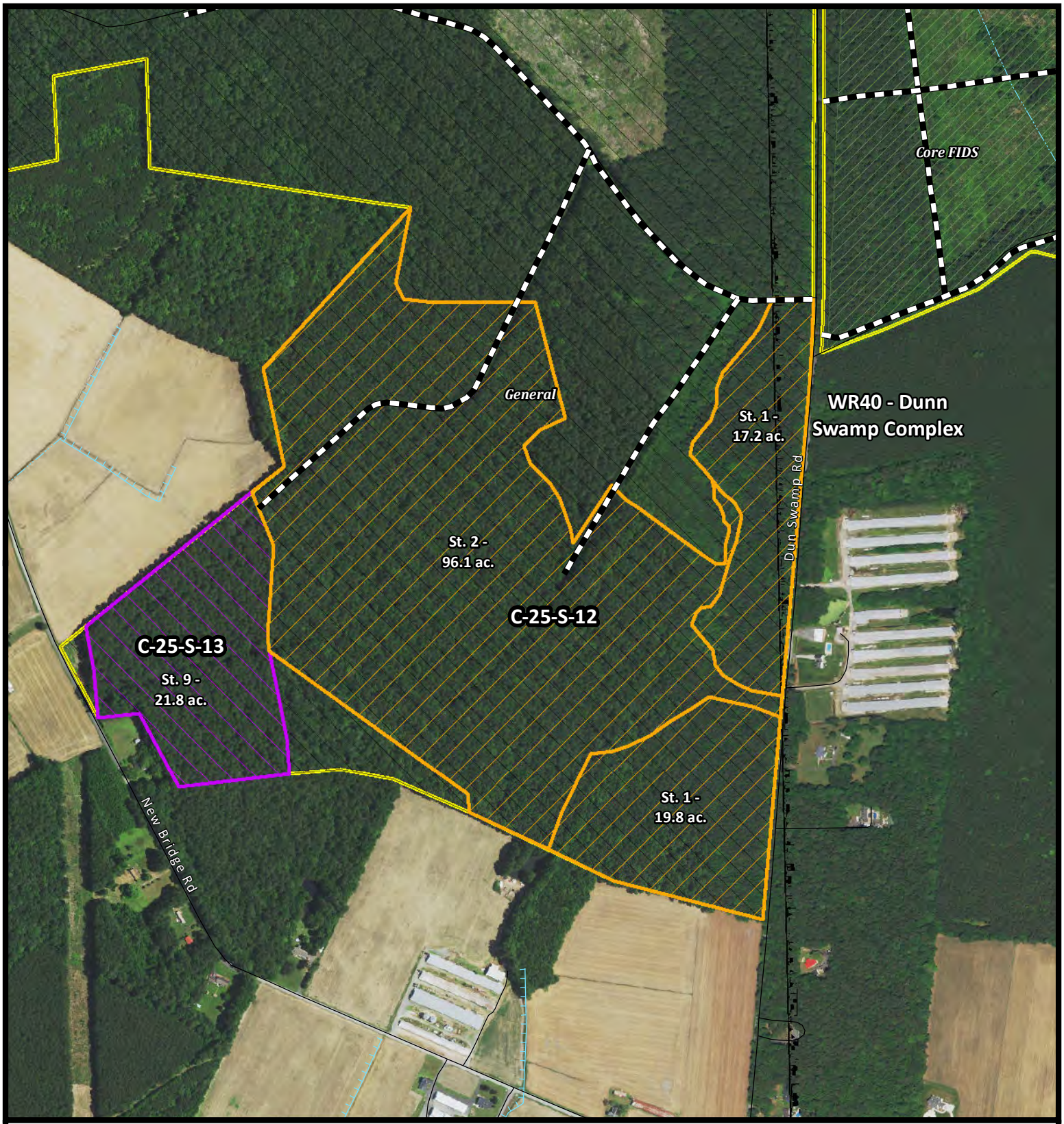
MARYLAND DEPARTMENT OF NATURAL RESOURCES




**C-25-S-12**

Scale: 1" = 660'
Date: 11/2023

**Legend**

**CF AWP Activity**
- Regeneration Harvest
- Second Thinning

**CF Management**
- General
- Core FIDS

1,320 0 Feet

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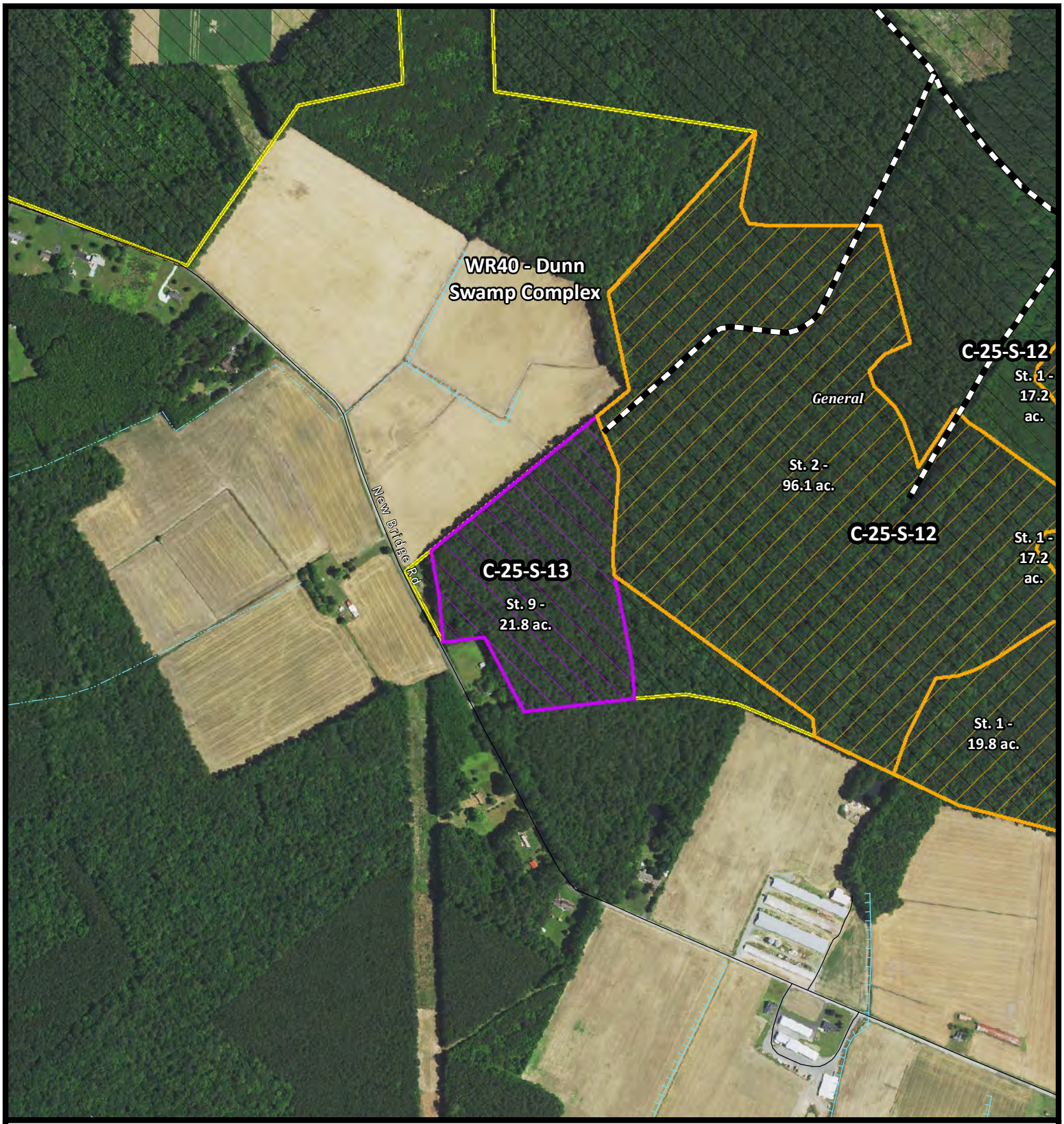
N W E S

MARYLAND DEPARTMENT OF NATURAL RESOURCES




## C-25-S-13

**Legend**

**CF AWP Activity**

Regeneration Harvest

Second Thinning

**CF Management**

General

Scale: 1" = 660'

Date: 11/2023

1,320 0

Feet

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This map is not a boundary survey

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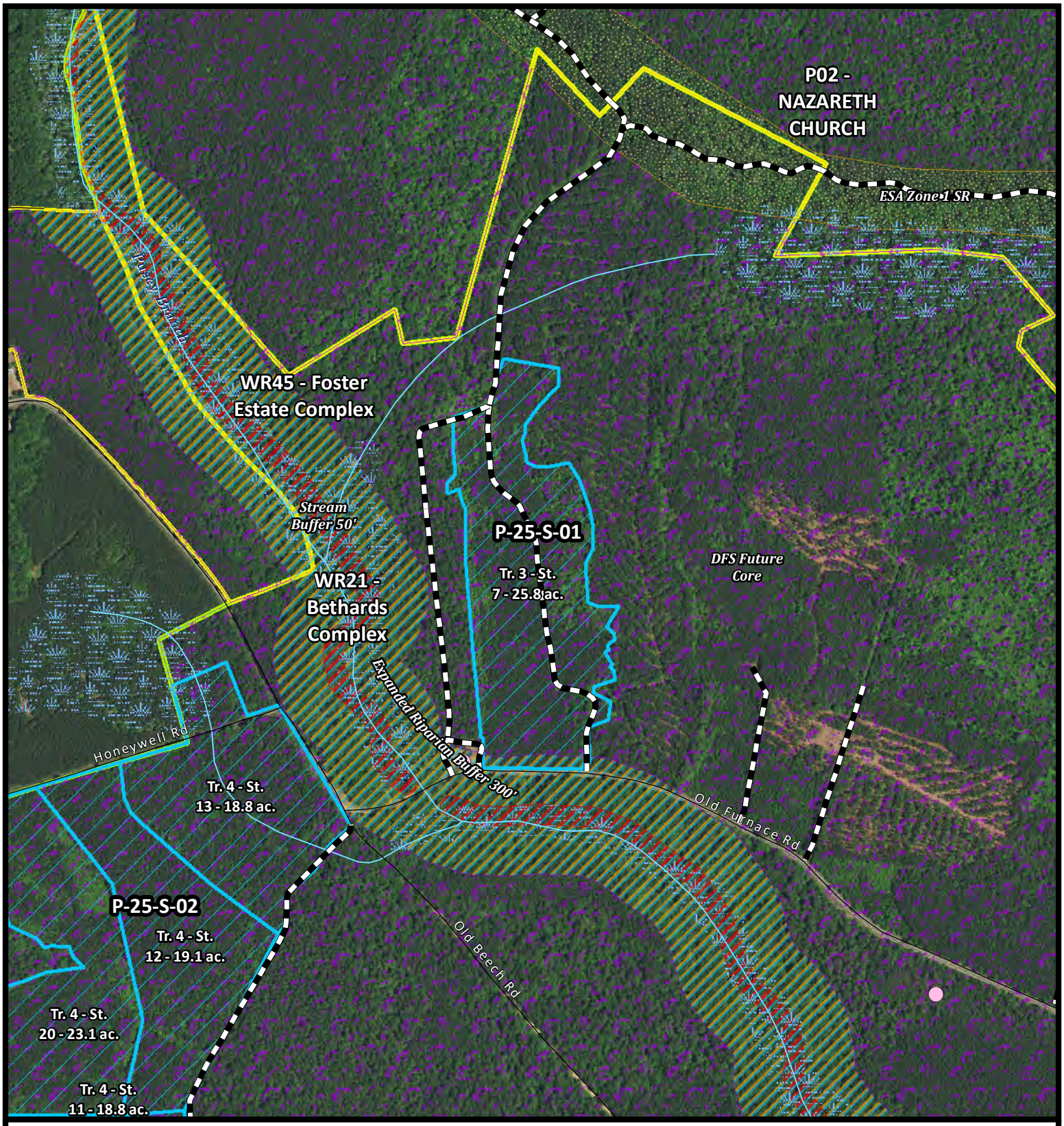
MARYLAND DEPARTMENT OF NATURAL RESOURCES




**P-25-S-01**

Scale: 1" = 660'
Date: 11/2023

**Legend**

**PSF AWP Activity**
- First Thinning

**PSF Management**
- DFS Future Core
- ESA Zone 1 SR

- Stream Buffer (50')
- Expanded Riparian Buffer (300')
- Cemetery

1,320 0 Feet

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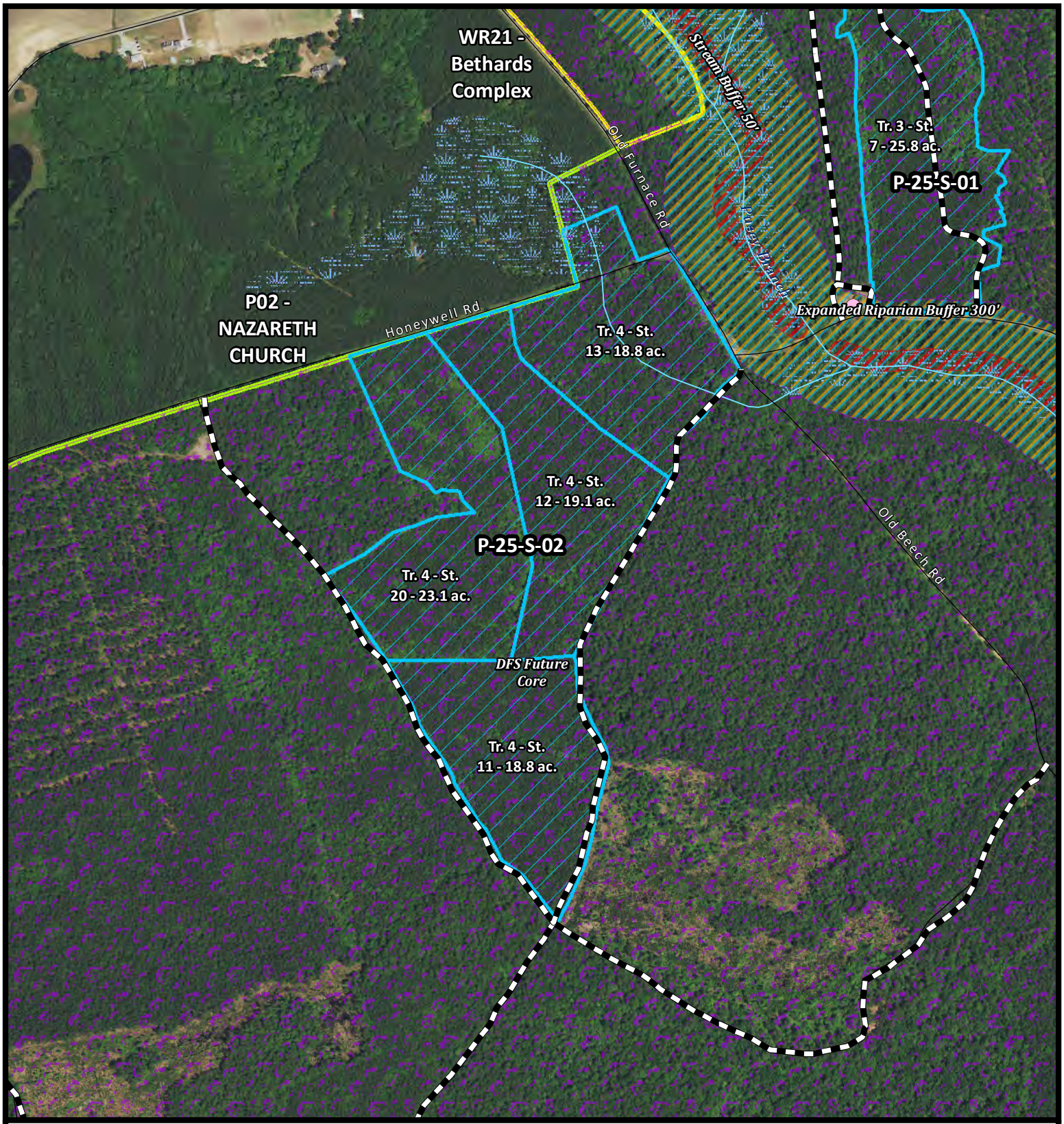
This map is not a boundary survey

N W E S

MARYLAND DEPARTMENT OF NATURAL RESOURCES




**P-25-S-02**

Scale: 1" = 660'
Date: 11/2023

**Legend**

**PSF AWP Activity**
First Thinning

**PSF Management**
DFS Future Core

Stream Buffer (50')
Expanded Riparian Buffer (300')

Cemetery

1,320 0 Feet

This map is for planning purposes only.
This map is not a boundary survey



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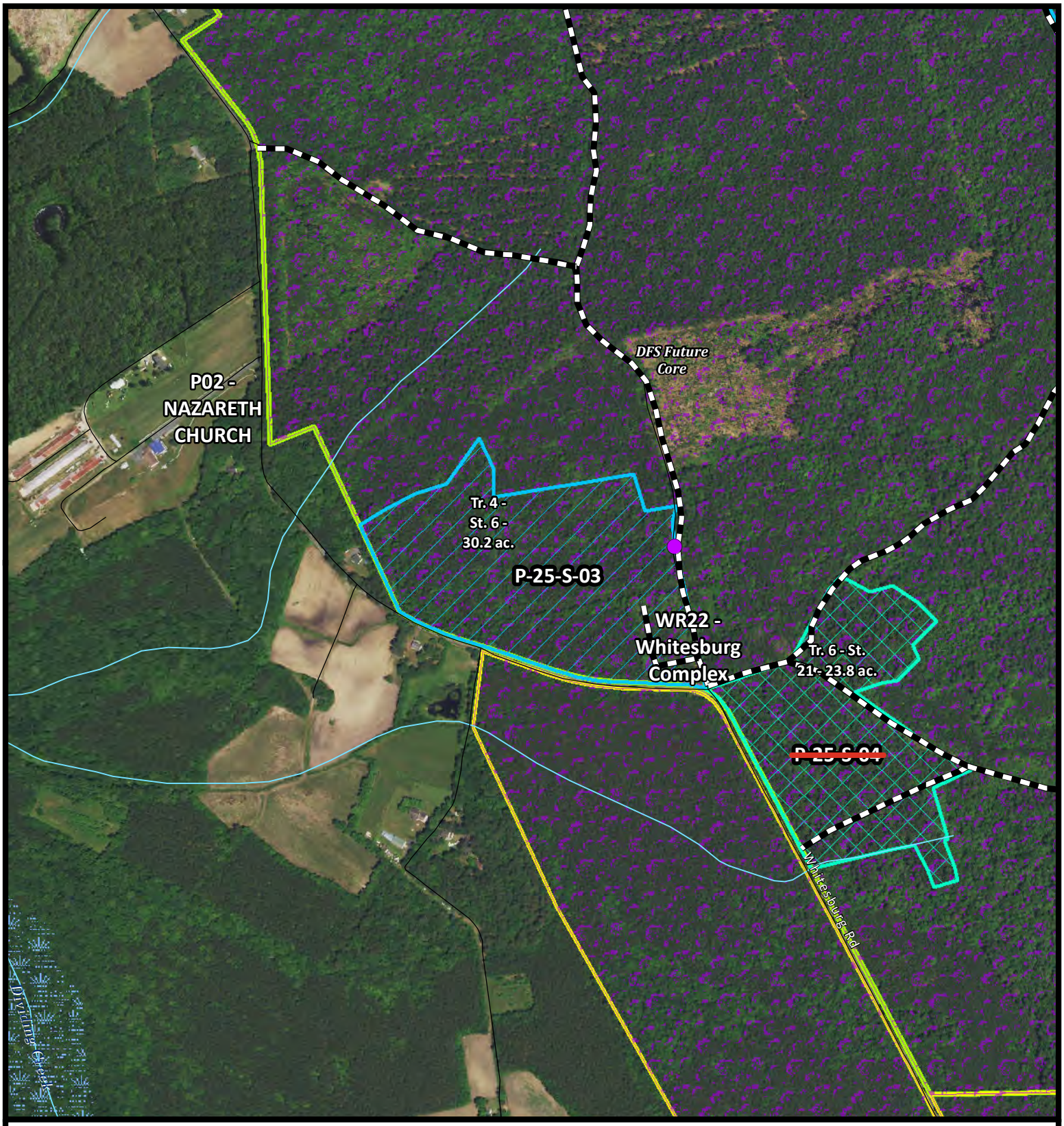
MARYLAND DEPARTMENT OF NATURAL RESOURCES




**P-25-S-03**

Scale: 1" = 660'
Date: 11/2023

**Legend**

**PSF AWP Activity**

~~Seed Tree Harvest~~

First Thinning

**PSF Management**

DFS Future Core

Home Site

1,320 0

Feet

This map is for planning purposes only.
This map is not a boundary survey

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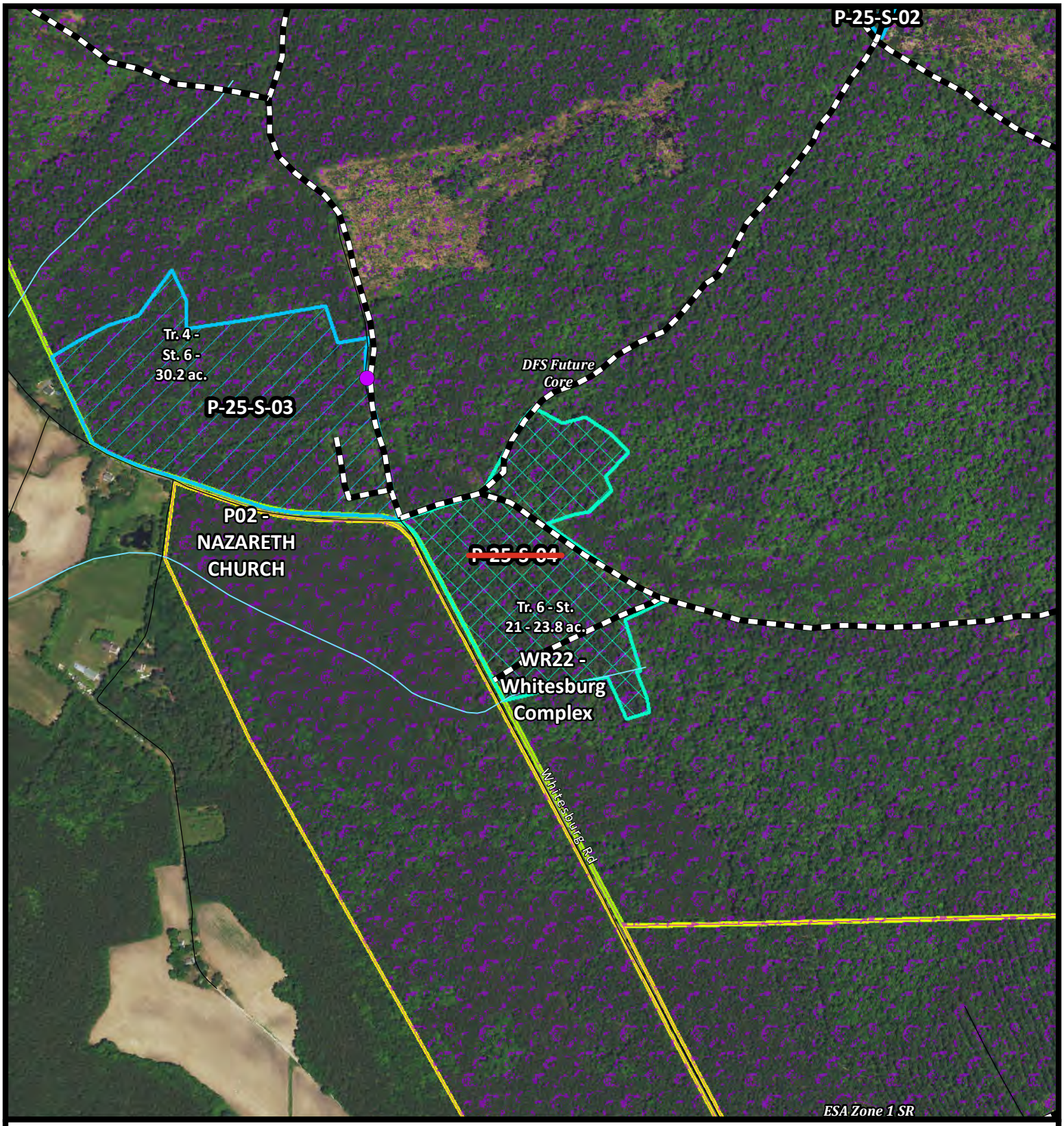
MARYLAND DEPARTMENT OF NATURAL RESOURCES




**Legend**

**PSF AWP Activity**

~~Seed Tree Harvest~~

First Thinning

**PSF Management**

DFS Future Core

Home Site

~~P-25-S-04~~

Scale: 1" = 660'
Date: 11/2023

1,320 0 Feet

This map is for planning purposes only.
This map is not a boundary survey

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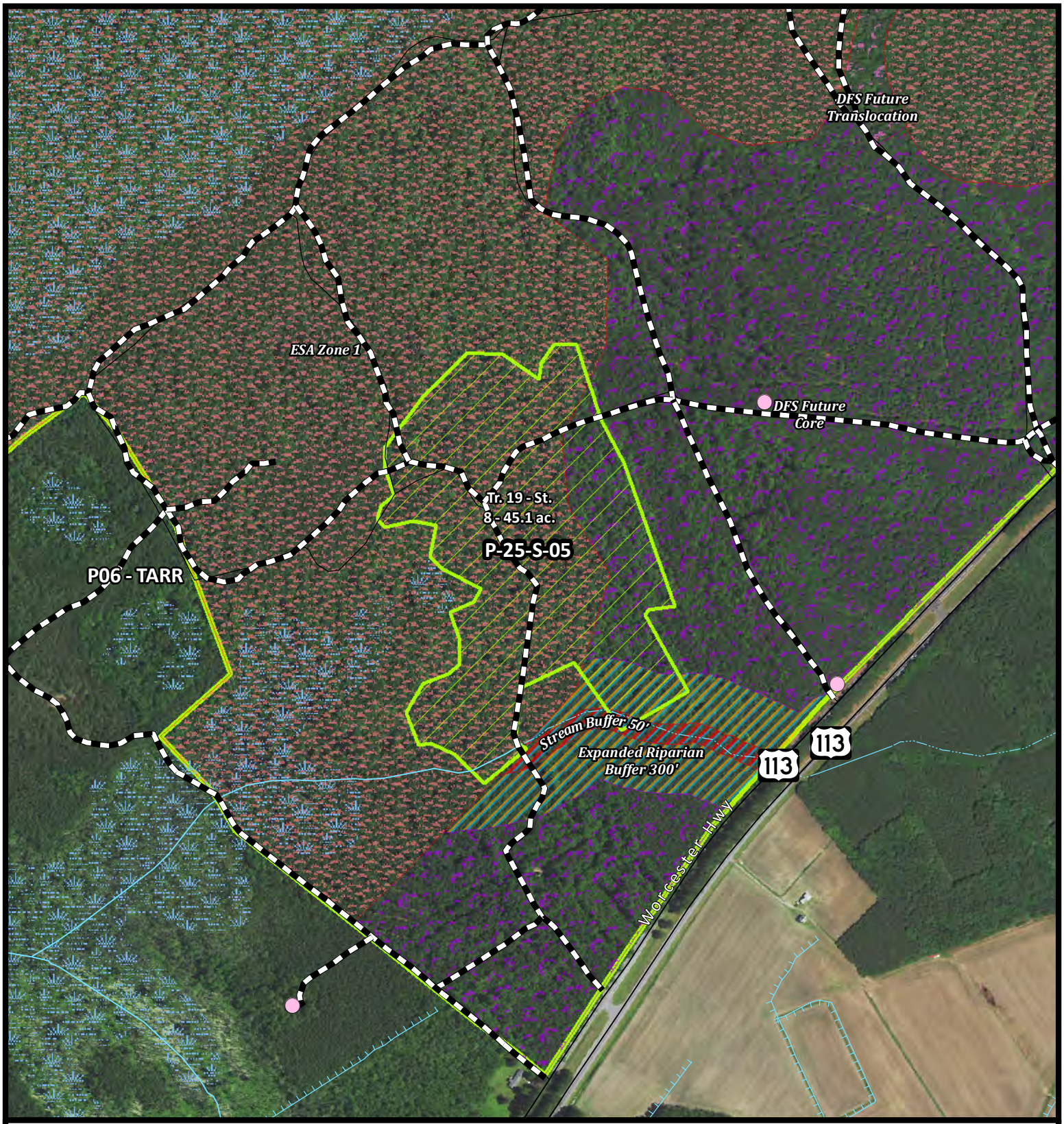
MARYLAND DEPARTMENT OF NATURAL RESOURCES




**P-25-S-05**

**Legend**

**PSF AWP Activity**
- Group Selection Harvest

**PSF Management**
- DFS Future Core
- DFS Future Translocation
- ESA Zone 1
- Stream Buffer (50')
- Expanded Riparian Buffer (300')
- Cemetery

Scale: 1" = 660'
Date: 11/2023

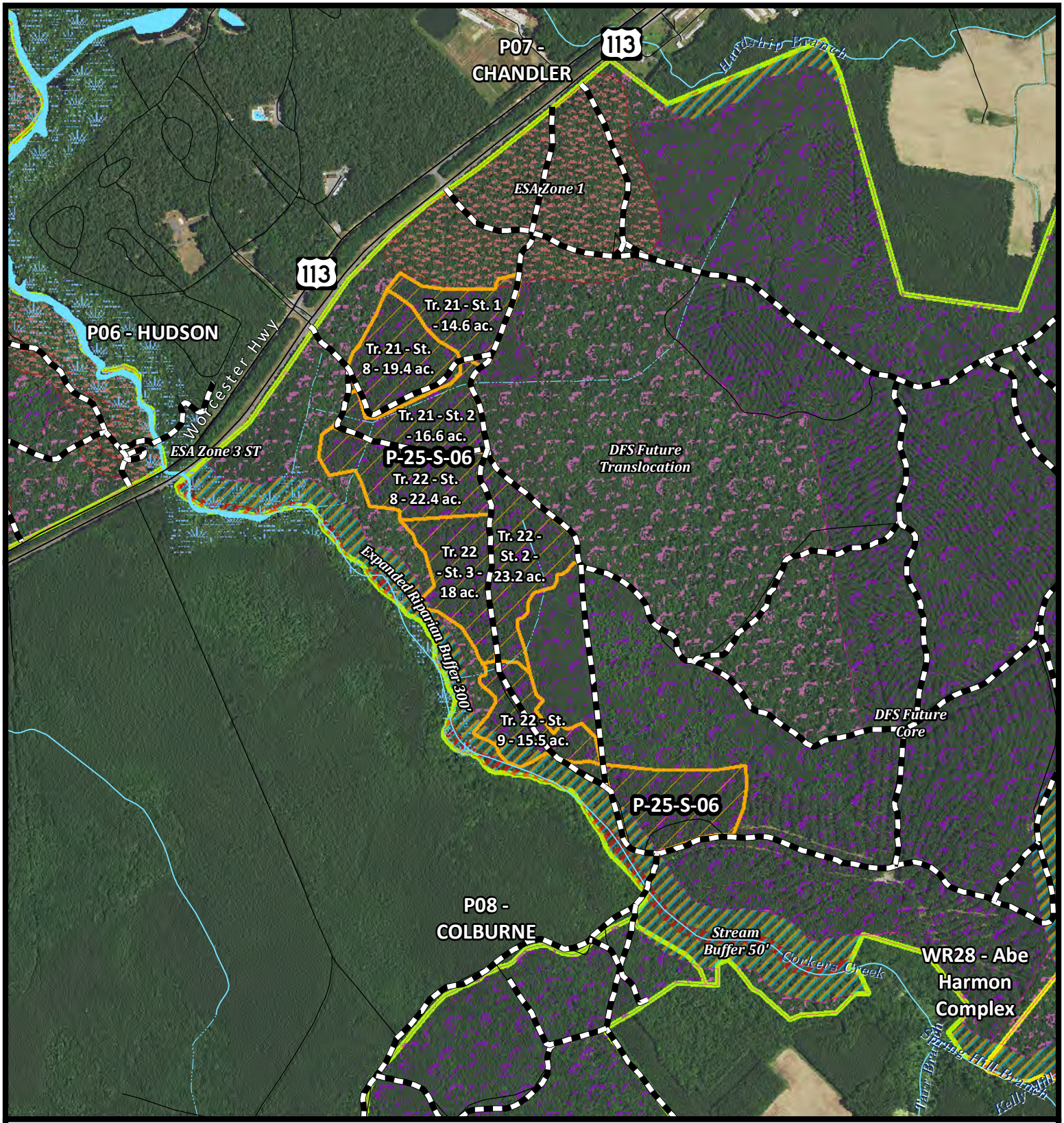
1,320 0 Feet

This map is for planning purposes only.
This map is not a boundary survey



N W E S

MARYLAND DEPARTMENT OF NATURAL RESOURCES




**Legend**

**PSF AWP Activity**

- Second Thinning

**PSF Management**

- DFS Future Core
- DFS Future Translocation
- ESA Zone 1
- ESA Zone 3 ST
- Stream Buffer (50')
- Expanded Riparian Buffer (300')

**P-25-S-06**

Scale: 1" = 1,320'
Date: 11/2023

1,320 0 1,320 2,640 Feet

This map is for planning purposes only.
This map is not a boundary survey



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MARYLAND DEPARTMENT OF NATURAL RESOURCES

## L. BUDGET

### Introduction

This section of the plan is designed to cover the annual funding sources and costs associated with the operational management of the Chesapeake Forest and the Pocomoke State Forest (CF/PSF).

The numbers expressed in this section are approximates typically found from one year to the next. Variations do occur based on management prescriptions, economic conditions, weather, certification audit year, and public use of the forest.

### Funding Sources

1. General Fund – Monies generated from Maryland State taxes. These funds are appropriated by the General Assembly through the annual state budgeting process.
2. Timber Revenue – Monies generated from the sale of forest products such as sawtimber, poles, pilings and pulpwood.
3. Hunting Leases – Monies generated by the Chesapeake Forest Hunting Lease Program.
4. Agricultural Leases – Monies generated from leasing agricultural fields on the forest to local farmers.
5. Grants – Monies generated from outside agencies/groups through a competitive grant request process.

### Operational Costs

1. State Employee Salaries – There are four classified (full time) state employees assigned to the CF/PSF: Forest Manager, GIS Forester, Forest Technician, and an Administrative Assistant.
2. Contractual Employee Salaries – There are typically four contractual employees working 10 to 12 months per year on the forest.
3. Land Management – This includes the cost of contract management services and payments to loggers for harvesting and delivering forest products to processing mills.
4. Land Operations – This includes costs for road maintenance, non-commercial harvesting, tree planting, herbicide application, monitoring, equipment purchase & maintenance, etc.
5. County Payments – All counties except for Worcester are paid at a rate of 15% of the total revenue in lieu of property taxes. In Worcester County, 25% of the revenue generated off the forest is paid to the county since the total acreage of Park and Forestry properties exceeds 10% of the total County land base.
6. Public Drainage Association (PDA) Fees – This is a fee collected for large public drainage ditches that are present on the forest. Monies are used by the PDA to maintain the ditches.
7. Forest Certification – Monies used to maintain state forest lands certification through annual third party audits. Every fifth year is a full recertification audit, which costs $40,000. Subsequent surveillance audits cost $20,000.

# Chesapeake Forest/Pocomoke State Forest Budget

| **Funding Sources** | | |
|---|---|---|
| 1. General | $ | 439,956 |
| 2. Timber Revenue | $ | 1,100,000 |
| 3. Hunting Leases & Camping Permits | $ | 586,946 |
| 4. Agricultural Leases | $ | 33,202 |
| 5. Recreation Trail Grant(s) | $ | 24,000 |
| **Total** | **$** | **2,184,104** |

| **Operational Costs** | | |
|---|---|---|
| 1. State Employee Salaries | $ | 285,049 |
| 2. Contractual Employee Salaries | $ | 83,062 |
| 3. Land Management | $ | 981,034 |
| 4. Land Operations | $ | 438,242 |
| 5. County Payments | $ | 171,770 |
| 6. Public Drainage Association Fees | $ | 9,647 |
| 7. Forest Certification | $ | 19,605 |
| **Total** | **$** | **1,988,409** |

| **Net Revenue** | **$** | **195,695** |
|---|---|---|

## APPENDIX A – SOIL SERIES MANAGEMENT GROUPS, ABBREVIATIONS, AND SYMBOLS

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

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

## CHESAPEAKE FOREST/POCOMOKE STATE FOREST: SOIL MANAGEMENT GROUPS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

| | | |
|---|---|---|
| Soils: | Beaches | Urban Land |
| | Miscellaneous water | Water |

## APPENDIX B – AUDIT SUMMARY – 2022

The 2022 Certification Audit for the Eastern Region Forests was held and completed in the Spring of 2022. Full reports and summaries of the 2022 and all past Forest Certification Audits are located here: http://dnr.maryland.gov/forests/Pages/forestcert.aspx

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