

EASTERN REGION
STATE FOREST LANDS
ANNUAL WORK PLAN
FISCAL YEAR 2022

Prepared:

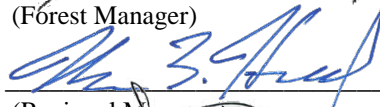


(Forest Manager)

July 29, 2021

Date

Reviewed:

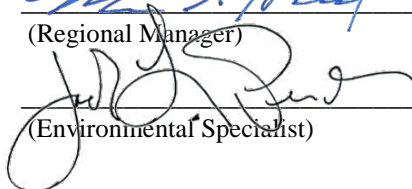


(Regional Manager)

July 29, 2021

Date

Approved:



(Environmental Specialist)

July 29, 2021

Date

Prepared By:

Michael G. Schofield, MFS – Chesapeake Forest Manager

Alexander Clark, MFS – Assistant Forest Manager

Contributors:

Skip Jones, Parker Forestry Services Inc.

DNR Interdisciplinary Team

Citizens Advisory Committee

CONTENTS

A. Forest Overview	4
Chesapeake Forest and Pocomoke State Forest	4
Historic Forest Conditions and the Role of Fire	4
Forest Types and Size Classes.....	5
Unique Community Types	6
Soils	9
B. Annual Work Plan Summary.....	10
Introduction.....	10
Networking with DNR and other agencies	10
C. Maintenance Projects.....	11
D. Recreation Projects	11
E. Special Projects	12
F. Watershed Improvement Projects.....	12
G. Special Wildlife Habitat Projects	12
H. Ecosystem Restoration Projects	12
Xeric Habitat Treatment and Monitoring Plan (Abstract)	13
I. Monitoring Projects	18
J. Review Process	24
Interdisciplinary Team Comments	24
Citizen’s Advisory Committee Comments	24
Public Comments.....	33
K. Silvicultural Projects	55
Silvicultural Activity Overview	55
Definitions of Silvicultural Activities.....	55
Silvicultural Prescriptions & Stand Data	57
Caroline County.....	57
Dorchester County	57
Somerset County.....	58
Wicomico County	59
Worcester County	60
Pocomoke State Forest	62
Silvicultural Site Maps	64
L. Budget.....	92
Appendix A – Soil Series Management Groups, Abbreviations, and Symbols.....	94
Chesapeake Forest/Pocomoke State Forest: Soil Management Groups.....	96
Appendix B – Audit Summaries – 2020	98
Works Cited	98

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 75,530 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 Indian times was primarily a hardwood one, though increasingly mixed with pine to the southward (Rountree & Davidson, 1997). The large patches of pine-dominated woods today are largely second growth, the result of extensive clearing in historic times. In aboriginal times, the woods of the Eastern Shore were likely to be oak-hickory, oak-gum, or oak-pine types, all of which still exist in second-growth form.

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

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

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

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

FOREST TYPES AND SIZE CLASSES

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

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

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

Table 1. Forest Diversity Analysis

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

Forest type	Structure Stage							Total Area
	Open 0 - 5 yrs	Sapling 6 - 15 yrs	Growing 16 - 25 yrs	Maturing 26 - 40 yrs	Mature 41 - 60 yrs	Big Trees 61+ yrs	Uneven Aged	
Loblolly Pine	331	3,186	14,719	29,067	8,871	1,452	259	57,886
(Percent)	0.36%	3.47%	16.01%	31.62%	9.65%	1.58%	0.28%	62.97%
Shortleaf Pine	2	10	0	0	0	265	17	295
(Percent)	0.00%	0.01%	0.00%	0.00%	0.00%	0.29%	0.02%	0.32%
Mixed Pine (Pond, Pitch, Virginia, etc.)	20	0	0	0	0	102	75	197
(Percent)	0.02%	0.00%	0.00%	0.00%	0.00%	0.11%	0.08%	0.21%
Atlantic White Cedar	8	2	1	0	0	0	0	12
(Percent)	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
Mixed Pine/Hardwood	41	1,324	1,958	1,099	1,955	8,179	14	14,570
(Percent)	0.04%	1.44%	2.13%	1.20%	2.13%	8.90%	0.02%	15.85%
Bottomland/Mixed Hardwoods	0	221	370	388	2,046	8,241	6	11,273
(Percent)	0.00%	0.24%	0.40%	0.42%	2.23%	8.97%	0.01%	12.26%
Bottomland Hardwoods/Bald Cypress	0	0	0	0	18	3,691	0	3,708
(Percent)	0.00%	0.00%	0.00%	0.00%	0.02%	4.02%	0.00%	4.03%
Cut/Marsh/Field/Powerline/Road	3,980	0	0	0	0	0	0	3,980
(Percent)	4.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.33%
Total	4,383	4,744	17,048	30,554	12,890	21,930	372	91,921
(Percent)	4.77%	5.16%	18.55%	33.24%	14.02%	23.86%	0.40%	100.00%

UNIQUE COMMUNITY TYPES

INLAND SAND DUNE AND RIDGE WOODLANDS

This natural community occurs on dry, sandy dunes and ridges of the coastal plain. These landforms developed during the late Pleistocene when colder climate processes associated with Wisconsin glaciation influenced much of the region. At the time, prevailing northwest winds transported surficial sands across the Delmarva and deposited them on the east sides of the Nanticoke, Wicomico, and Pocomoke rivers and formed “dune fields” on uplands in the central part of the peninsula. Today, these landforms support woodland vegetation of pine and oak, as well as a variety of rare and threatened plant and animal species. Currently, there are two globally rare natural community types associated with inland sand dunes and ridges. One characterized by shortleaf pine (*Pinus*

echinata) and another dominated by a mixture of hardwoods such as white oak (*Quercus alba*), black oak (*Quercus velutina*), and southern red oak (*Quercus falcata*). Both community types share many common associates such as Pitch pine (*Pinus rigida*), post oak (*Quercus stellata*), sand hickory (*Carya pallida*), and a variety of ericaceous shrubs. In general, the herbaceous layer is sparse and consists primarily of light-demanding species tolerant of dry, sandy conditions. Examples of these species include yellow false indigo (*Baptisia tinctoria*) and the State threatened sundial lupine (*Lupinus perennis*). Frequent low-intensity fire is important in maintaining these natural communities and the distribution of species that depend upon them.

NON-RIVERINE SWAMPS

This natural community includes seasonally flooded “flatwoods” and depressions of the coastal plain. These habitats develop on flat, ancient estuarine terraces and shallow depressions with seasonally perched water tables. This results in standing water throughout the early part of the growing season followed by a period of drawdown. Hydroperiods are variable between swamps and largely dependent on rainfall and drought cycles. The forested canopy structure of flatwoods and depression swamps range from open to closed with composition ranging from hardwood dominated to a mixture 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 of 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 hemitomom*), and Virginia chain fern (*Woodwardia virginica*). Interior portions of Bays may include species such as Eaton's panicgrass (*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 (91,922 acres) managed by the Maryland Forest Service within the Eastern Region during the 2022 fiscal year. These lands include the Chesapeake Forest, Pocomoke State Forest, Wicomico Demonstration Forest, Seth Demonstration Forest, and Fred W. Besley Demonstration Forest. The fiscal year runs from July 1, 2021 to June 30, 2022. 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 donated portion of the forest. Also participates on the ID Team.
- Third party forest certification via annual audits
- The Chesapeake Bay Foundation – Identifies sites for future water quality improvement projects and assists in the implementation by providing volunteers for reforestation.
- National Wild Turkey Federation – Establishes and maintains handicap-hunting opportunities within the forest and provides funding for habitat protection and restoration.
- US Fish & Wildlife Service – Assists in prescribed burns for Delmarva Fox Squirrel (DFS) habitat. Also assists in maintaining open forest road conditions as fire breaks.
- Maryland Forest Association - Master Loggers Program provides training in Advanced Best Management Practices for Forest Product Operators (i.e. Foresters & Loggers) workshops on the forest.
- Network with Universities and Colleges
 - Maryland Environmental Lab, Horn Point – Conducts water quality monitoring on a first order stream not influenced by agriculture. These samples will serve as a local base line for other samples taken on other Delmarva streams.
 - Allegany College – Conduct annual field tour for forestry school student’s showcasing Sustainable Forest Management practices on the forest under dual third party certification.

C. MAINTENANCE PROJECTS

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

Forest boundary lines will be maintained using the DNR yellow band markings. Signs will be placed along the boundary lines designating the type of public access to the property. New acquisitions will be converted from their previous ownership markings to the DNR yellow band markings.

Illegal trash dumps will continue to be removed off the forest as they are discovered. The average amount of trash removed from the forest each year has been 36 tons. In our efforts to control and eradicate this issue, we will continue to coordinate with Natural Resources Police (NRP), local sheriff departments, the State Highway Administration, and County Roads departments.

D. RECREATION PROJECTS

- Host the annual Chesapeake Forest lottery for vacant tracts designated for hunt club access only. Vacant tracts are those that existing clubs opted not to continue to lease or land that has recently become available due to acquisitions or right-of-ways being opened.
- Sign new leases for existing hunt clubs using the revised Board of Public Works delegated authority (<https://bpw.maryland.gov/Pages/adv-2006-2.aspx>).
- Host the Annual Ultra-Marathon “Algonquin 50K” race on Chesapeake Forest and Pocomoke State Forest.

- Host the Fat Tire Bike event with the Eastern Shore IMBA 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
 - Algonquin Cross County Trail Extension
 - Mattaponi Pond Trails and Camping Project
 - Pusey Branch Trail Extension and Enhancement Project
 - Seth Demonstration Forest Trail Enhancement Project
- Perform general maintenance on the existing trail system

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.

H. ECOSYSTEM RESTORATION PROJECTS

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

XERIC HABITAT TREATMENT AND MONITORING PLAN (ABSTRACT)

SITE NAME:

Pocomoke State Forest – Furnace, Foster and Warren Tracts

CONTACT INFORMATION:

Project Contact: Jen Selfridge, Maryland Dept. of Natural Resources, Wildlife and Heritage Service, P.O. Box 68, 909 Wye Mills Road, Wye Mills, MD 21679. Office: 410-827-8612 x102 Email: jennifer.selfridge@maryland.gov

Pocomoke Forest Manager: Mike Schofield, Maryland Dept. of Natural Resources, Forest Service, 3461 Worcester Hwy, Snow Hill, MD 21863. Office: 410-632-3732 Email: mike.schofield@maryland.gov

EXPERIMENTAL DESIGN:

Number of plots or treatment units: Furnace (6), Foster (3), Warren (3)

Size of plots/units: The Furnace Tract comprises roughly 350 acres and the 6 treatment plots range from 43-85 acres each. The Foster Tract comprises 4800 acres and the main unit where the treatment plots will be located is 23.6 acres (the rest of the tract is heavily forested). This 23.6 acre area will be divided into 3 plots of different sizes. The Warren Tract is approximately 120 acres and the main unit we will work in is 30 acres. There will be 3 treatment plots within the 30 acre unit and each will be approximately 3 acres.

Please provide a brief explanation of the treatment plan for each plot/unit including a description of existing vegetation, the proposed work, timing, objectives, and rationale. Use the attached spreadsheet for estimated costs. Please include a site plan or sketch plan.

FURNACE: Most of the plots will be burned on a rotational basis and the cost of this work will be used for match. We are interested in the response of pollinators and vegetation on plots that are burned every 1-2 years versus every 3-4 years. Ideally we will burn 3 of the plots every year and 3 of the plots every 3rd year but this is heavily dependent on available fuel and on weather conditions. Of the 6 plots, 4 were burned in 2017, 1 was burned in 2018, and one has not yet been burned although a burn is scheduled for a future fall date.

In addition to burning we would like to take two of the plots and mechanically clear them in addition to burning. Finally, one plot (the one scheduled to burn in the future) is a site for frosted elfins and cannot be burned in its entirety. This plot will be divided into 3 sub-plots, one of which will be burned in combination with herbicide treatments, while the other two will be managed by mechanical clearing and herbicides.

FOSTER: The 23.6 acre area was burned in 2018. We have not yet determined when or if it will be burned again during the course of this project. Of the burned area, a portion of it is targeted for herbicide treatments of gum and pine; the initial treatment was done in September 2018. A second portion will also be targeted for herbicide treatment as well as mowing where feasible (there are many stumps that need to be avoided). A third portion will serve as a control and will be treated only with prescribed fire.

WARREN: The 30 acre unit was burned in the spring of 2018. We will take 9 of the acres and divide them into three adjacent units. One will be burn only, one will be burn and mow, and the third will be burn and disc.

Maps of all three properties with sketches of the management units are attached.

MONITORING PLAN:

VEGETATION

Outline your vegetation monitoring protocol. If you are using the project protocol or something similar, please explain how you will locate your transects in relation to your treatment plots, number of transects, and the timing of your sampling. If you are using a different method, please briefly explain the differences.

We are using the line-point intercept sampling outlined as the preferred method for this study. We have no recent vegetation data for any of these plots. We did not collect any vegetation data this year but plan to start next year.

BEEES

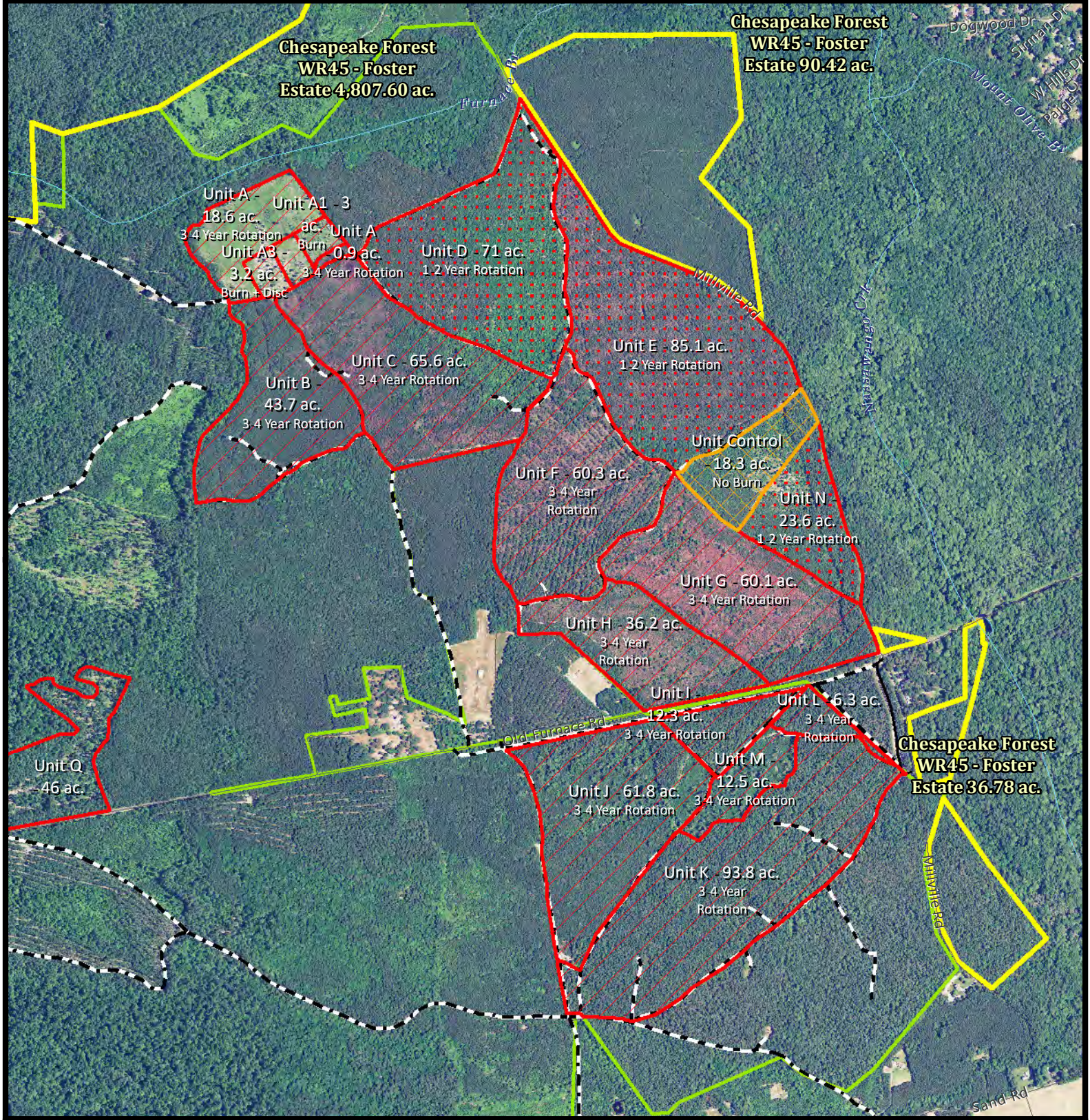
Do you intend to continue or begin bee surveys in future years?

We did conduct bee surveys at both the Foster and Furnace Tracts in 2018. We did not (and cannot) put out bee bowls at the Furnace Tract during the spring survey because of the potential to kill frosted elfin butterflies. However we will still hand collect. We can do bee surveys at the Warren Tract if there is someone able to identify them. Our understanding was that each state could only submit 3 transects per season. This is hard for us because we are also working at Green Ridge State Forest, and have to this point been submitting 2 samples from Pocomoke and 1 from Green Ridge, but that will need to be revisited.



BUTTERFLIES AND MOTHS

Do you have an interest in surveying for butterflies and moths in future years?

It would be relatively easy to add butterfly surveys if they could overlap the time spent netting for bees or be added onto that time. It would be incredibly expensive and time consuming to add moth surveys. It would be great to have the data but it would probably not be feasible to trap, pin and identify moths without hiring someone to do this at a private contractor rate. Additionally, all of our locations are fairly remote with no light sources nearby; we may be attracting moths to lights from fair distances and could not confidently tie their presence to any of our management techniques.

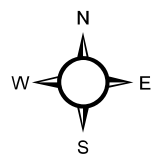


Legend

-  Chesapeake Forest
-  Pocomoke State Forest



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



Furnace, Nazareth Church, Warren tracts
Proposed Burn Units

Scale: 1:15,840
Date: 9/27/2018



Chesapeake Forest
WR45 - Foster
Estate 4,807.60 ac.

Furnace Br

Unit A - 18.6 ac.
3-4 Year Rotation

Unit A1 -
3 ac.
Burn

Unit A2 -
2.9 ac.
Burn + Mow

Unit A3 -
3.2 ac.
Burn + Disc



Unit A - 0.9 ac.
3-4 Year Rotation

Unit D - 71 ac.
1-2 Year
Rotation

Unit C - 65.6 ac.
3-4 Year Rotation

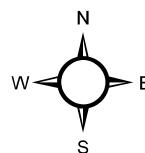
Unit B -
43.7 ac.
3-4 Year Rotation

Legend

-  Chesapeake Forest
-  Pocomoke State Forest



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





Warren tract
Proposed Burn Units

Scale: 1:3,960
Date: 9/27/2018



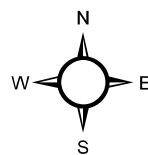


Legend

-  Chesapeake Forest
-  Pocomoke State Forest



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



Foster Estate
Proposed Burn Units

Scale: 1:3,960
Date: 9/27/2018



I. MONITORING PROJECTS

- Maryland Wood Duck Initiative – D03 – Little Blackwater – Cliff Brown
- Lupine and Frosted Elfin – Furnace Tract – WHS – Jennifer Selfridge
- Bat Study – Bats and Prescribed Burning – WHS – Dana Limpert
- 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

Chandini Balram Montgomery (nee Narang)'s thesis

Thesis title: Impact of prescribed burns on bat populations in the coastal plain forests of the eastern United States

Abstract: Bats provide many benefits to humans such as predation on insect vectors and agricultural pests. However, in the Eastern United States, bats are facing a growing array of serious threats, including White-Nose Syndrome (WNS), habitat disturbance, and wind turbines. Since these threats show little sign of abating, and as the human population continues to expand and exert ever more pressures on bats and other wildlife in the region, it is important to investigate habitat management strategies that are beneficial to existing and future populations. Specifically, our study focuses on whether prescribed burns in Loblolly pine forests are correlated with elevated bat activity compared to unburned controls. In our study, we focused on Chesapeake Forests and The Nature Conservancy lands with burned sites that also had comparable unburned counterparts in Eastern Maryland. Two site types were accounted for: forest corridor-edges and interior forests. We set up SM4BAT detectors simultaneously in burned forests and their unburned pairs for 10-day time periods. If SonoBat 4.3.0 North America confirmed high pass numbers by the genus *Myotis* or *Lasionycteris noctivagans*, mist-netting was conducted at least once during the field season to attempt to catch these call ambiguous species. We also collected 44 additional variables that we suspected could influence bat activity. We found no significant difference in overall bat activity between burned and unburned sites. We did find, however, that higher average ambient temperatures and larger areas of emergent herbaceous wetlands in a 5 km radius contributed to predicting higher bat activity while longer distances to the closest water body predicted lower bat activity in corridor-edge sites. We report that the interior forest site model predicts that higher average canopy cover, higher average vegetation density, larger areas of developed open space in a 3 km radius, and larger areas of barren land in a 3 km radius are negatively associated with bat activity whereas larger areas of shrub/scrub in 3 km and 5 km radii were positively associated with bat activity. This research provides valuable information to guide conservation organizations and natural resource agencies in future decision-making over silviculture and management practices.

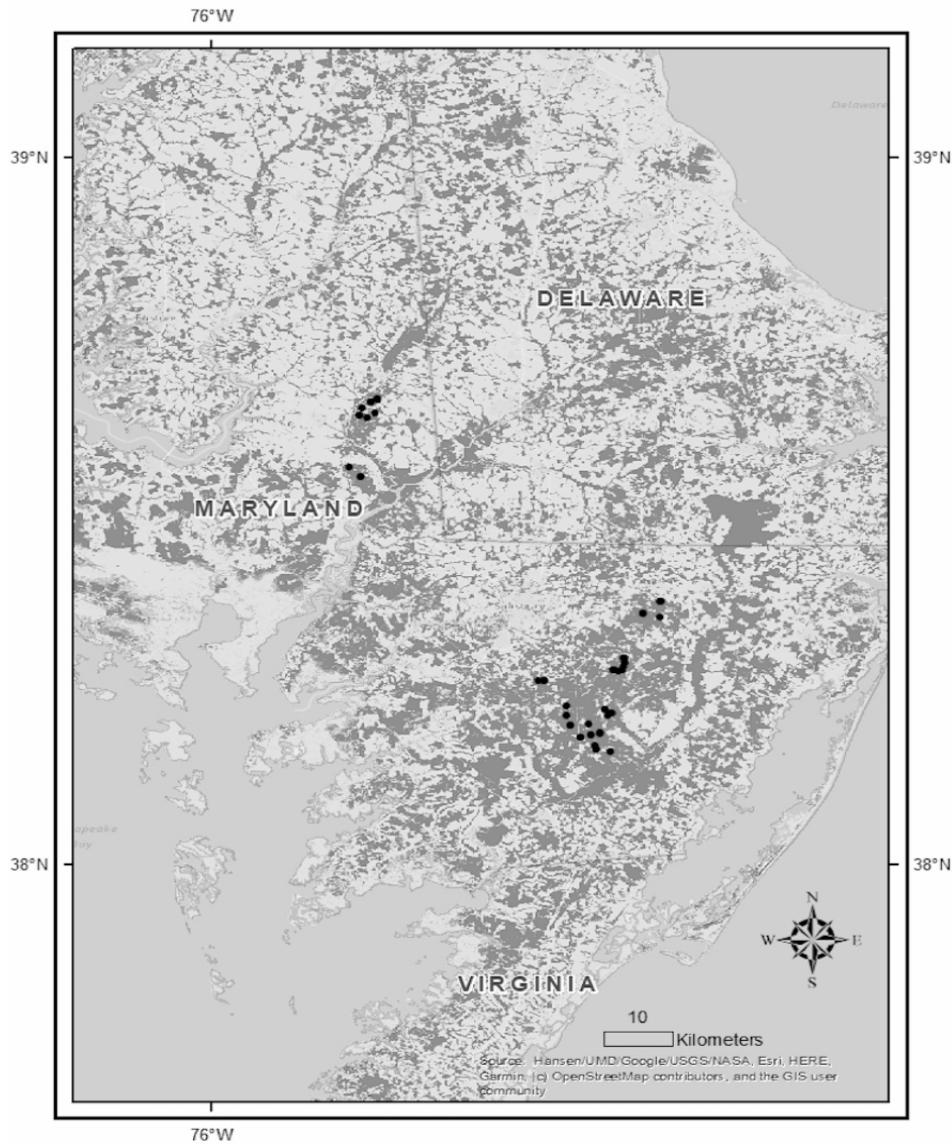


Fig. 1. Map of all 24 site pairs. Sites are represented by black circular markers. Dark gray areas represent forest cover.

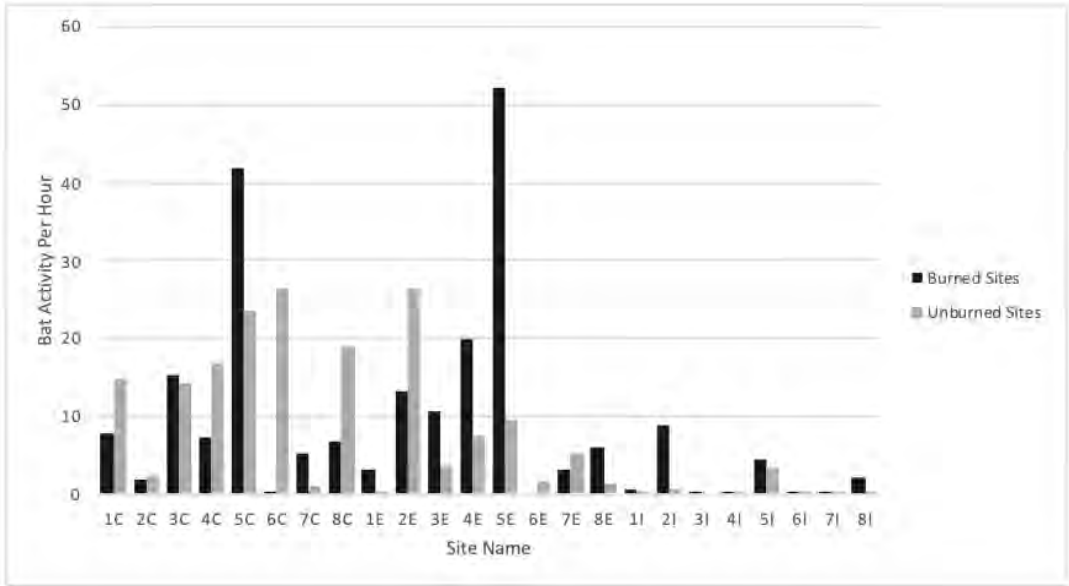


Fig. 2. Bat activity per hour between burned and unburned matched pairs. Site names end in a C if a corridor pair, E if an edge pair, or I if an interior pair.

Appendix A: Site Pairs

Table A1. Data recorded on corridor site pairs, including.... Information acquired through resources (shapefiles, maps, documents, etc.) given by land managers and through personal communication land managers.

<i>Pair¹</i>	<i>Complex</i>	<i>Burn Unit</i>	<i>Tract</i>	<i>Stand</i>	<i>Cover²</i>	<i>Est_Year</i>	<i>Thinned?</i>	<i>Burn Year(s)</i>
<i>1BC</i>	D12	None	4232	39	L	1974	Yes	2016
<i>1UC</i>	D12	None	4209	8 and 1	L	1994 and 1993	Yes	None
<i>2BC</i>	None	22	None	7 and 10	L	1985 and 1993	Yes	2018, 2016, 2013, 2009
<i>2UC</i>	P02	None	32	2	L	1986	Yes	None
<i>3BC</i>	None	10a	None	5	L	1983	Yes	2019
<i>3UC</i>	WR18	None	3738	9	L	1983	Yes	None
<i>4BC</i>	None	21	None	4	L	1977	Yes	2018, 2016, 2014, 2009
<i>4UC</i>	P02	None	6	1	L	1979	Yes	None
<i>5BC</i>	WR24	None	3714	7	L	1966	Yes	2016
<i>5UC</i>	WR24	None	3709	18	L	1969	Yes	None
<i>6BC</i>	D12	None	4227	45 and 64	L	1965 and 1971	Yes	2017
<i>6UC</i>	D14	None	100	27	L	1987	Yes	None
<i>7BC</i>	P02	None	126	8	L	1978	Yes	2017
<i>7UC</i>	P02	None	27	1	L	1990	Yes	None
<i>8BC</i>	None	10a	None	7	L	1985	No	2019
<i>8UC</i>	W46	None	3560	28	L	1993	No	None

¹ B = Burned Sites, U = Unburned Sites, C = Corridor Sites

² L = Loblolly pine

Table A2. Data recorded on edge site pairs, including.... Information acquired through resources (shapefiles, maps, documents, etc.) given by land managers and through personal communication land managers.

<i>Pair</i> ³	<i>Complex</i>	<i>Burn Unit</i>	<i>Tract</i>	<i>Stand</i>	<i>Cover</i> ⁴	<i>Est_Year</i>	<i>Thinned?</i>	<i>Burn Year(s)</i>
1BE	None	8	None	9a	L	1987	Yes	2018
1UE	W46	None	7159	25	L	1988	Yes	None
2BE	None	13	None	7e	L	1985	Yes	2017, 2013, 2011
2UE	P02	None	10	7	L	1990	Yes	None
3BE	P02	None	126	7	L	1999	No	2017
3UE	WR10	None	3714	11	L	1999	No	None
4BE	WR18	None	3738	7	L	1984	Yes	2014
4UE	P02	None	33	1	L	1985	Yes	None
5BE	D12	None	4236	32	L	1999	Yes	2018
5UE	D12	None	4233	1	L	1994	Yes	None
6BE	P02	None	126	9	PH	2005	No	2018
6UE	P02	None	5	22	PH	2008	No	None
7BE	D12	None	4236	1	L	1994	Yes	2016
7UE	D14	None	4217	8	L	1991	Yes	None
8BE	WR24	None	3714	3	L	1966	Yes	2015
8UE	W46	None	7128	42	L	1976	Yes	None

³ B = Burned Sites, U = Unburned Sites, E = Edge Sites

⁴ L = Loblolly pine, PH = Pine/Hardwood (Pine is 50-75% basal area)

Table A3. Data recorded on interior site pairs, including.... Information acquired through resources (shapefiles, maps, documents, etc.) given by land managers and through personal communication land managers.

<i>Pair</i> ⁵	<i>Complex</i>	<i>Burn Unit</i>	<i>Tract</i>	<i>Stand</i>	<i>Cover</i> ⁶	<i>Est_Year</i>	<i>Thinned?</i>	<i>Burn Year(s)</i>
1BI	None	8	None	9a	L	1987	Yes	2018
1UI	W46	None	7159	25	L	1988	Yes	None
2BI	None	13	None	7e	L	1985	Yes	2017, 2013, 2011
2UI	P02	None	10	7	L	1990	Yes	None
3BI	P02	None	126	7	L	1999	No	2017
3UI	WR10	None	3714	11	L	1999	No	None
4BI	WR18	None	3738	7	L	1984	Yes	2014
4UI	P02	None	33	1	L	1985	Yes	None
5BI	D12	None	4236	32	L	1999	Yes	2018
5UI	D12	None	4233	1	L	1994	Yes	None
6BI	P02	None	126	9	PH	2005	No	2018
6UI	P02	None	5	22	PH	2008	No	None
7BI	D12	None	4236	1	L	1994	Yes	2016
7UI	D14	None	4217	8	L	1991	Yes	None
8BI	WR24	None	3714	3	L	1966	Yes	2015
8UI	W46	None	7128	42	L	1976	Yes	None

⁵ B = Burned Sites, U = Unburned Sites, I = Interior Sites

⁶ L = Loblolly pine, PH = Pine/Hardwood (Pine is 50-75% basal area)

J. REVIEW PROCESS

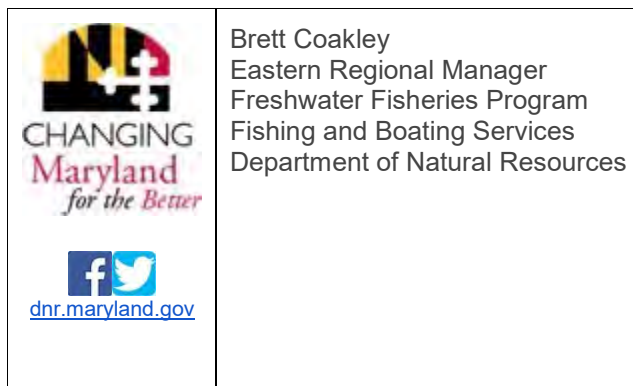
INTERDISCIPLINARY TEAM COMMENTS

Mike/Jack- Freshwater Fisheries has a few general and specific comments regarding the 2022 Pocomoke/Chesapeake workplan. As usual, it seems your staff has done a good job mapping and excluding/buffering needed areas to protect aquatic resources. Generally, thinning or harvest within the 300'-50' stream buffer areas, but not within 50' is appropriate if done with minimal ground disturbance to prevent sediment transport off site. Thinning can play an important part in increasing stand diversity, which is usually a good thing for water quality long term.

Specific comments are included as an attachment.

Thanks for the opportunity to comment. Let me know if you have any questions.

Brett



2022 Chesapeake/Pocomoke Forest Reviews from Freshwater Fisheries Staff

Freshwater Fisheries is providing additional comments on some of the proposed FY2022 Chesapeake Forest work.

CF22-01- No additional comments.

CF22-02- No additional comments.

CF22-03- If Delmarva bays are present, they should be appropriately buffered. Will yield BMP's for management of areas surrounding Delmarva bays to Heritage staff.

CF22-04- No additional comments.

CF22-05- No additional comments.

CF22-06- No additional comments.

CF22-07- There is a drainage ditch located on the eastern edge of the stand. It should be buffered accordingly.

CF22-08- No additional comments.

CF22-09- No additional comments.

CF22-10- The actual location of the stream should be mapped and buffered accordingly.

CF22-11- No additional comments.

CF22-12- The man-made ponds located within the stands should be buffered accordingly.

CF22-13- No additional comments.

CF22-14- No additional comments.

CF22-15 and 16- Within the Corbin Branch watershed. There appears to be several streams (perennial or intermittent) that are not buffered. Freshwater Fisheries would like to visit the area, but we were informed the property is leased for hunting. A visit after hunting season would be best.

CF22-17-19- No additional comments.

Freshwater Fisheries has no additional comments on the Pocomoke State Forest projects.

Thank you for the opportunity to review the Eastern Region State Forest Lands FY2022 Annual Work Plan. Twenty of the proposed stands are within stronghold watersheds or adjacent to tributaries that support rare aquatic fishes and/or freshwater mussels. Two stands are also within Tier II High Quality waters (see details below). To minimize impacts to these important aquatic resources, the proposed harvest efforts should aim to maintain stream buffers – leaving trees that provide direct canopy cover to the stream channel to maintain cooler water temperatures and minimize potential stream bank erosion. Additionally, movement of equipment through the stream or buffer zone should be avoided when possible during these harvest activities. Please contact the Natural Heritage Program for other BMP guidelines and recommendations associated with these rare aquatic species. Please also see the link below and contact Maryland Department of Environment (Angel Valdez) for more information on protection of Maryland's Tier II waters. <https://mde.state.md.us/programs/Water/TMDL/WaterQualityStandards/Pages/Antidegradati on Policy.aspx>

Let me know if you have any questions.
Jay

WR34-3765006: This stand is located within the Lower Pocomoke River watershed – a stronghold watershed that supports populations of the rare Banded Sunfish (S2) and Swamp Darter (S2).

WR22-3788004/ WR22-3788008/WR22-3788003: These stands are within the Dividing Creek watershed – a stronghold watershed that supports populations of the rare Banded Sunfish (S2) and

Swamp Darter (S2). These stands are also adjacent to a Tier II High Quality stream reach designated by Maryland Department of Environment.

W53-3597001/W53-3801016/W53-3786015/ W53-720915/W53-7209016: These stands are within Nassawango Creek watershed – a stronghold watershed that supports populations of the rare Banded Sunfish (S2) and Swamp Darter (S2). These stands are also upstream of two Tier II High Quality stream reaches designated by Maryland Department of Environment.

CO3-6410007/CO3-6401001/CO3-6450010: These stands are located within the Marshyhope Creek watershed – a stronghold watershed that supports rare fishes including the endangered Blackbanded Sunfish (S1) and populations of rare freshwater mussels.

S13-4822001: This stand is located within the Manokin River watershed – a stronghold watershed that supports populations of Banded Sunfish (S2) and Mud Sunfish (S2).

WO2-3534027/WO2-3534030/WO2-3534012: These stands are located within the Nanticoke River watershed – a stronghold watershed that supports populations of rare freshwater mussels.

WR03-3728004/WR03-3728005/WR03-3728006: These stands are located in the Upper Pocomoke River watershed – a stronghold watershed that supports populations of Banded Sunfish (S2), Mud Sunfish (S2) and Swamp Darter (S2).

WO2-7200043: This stand is located near Reconow Creek - a tributary to the Nanticoke River that supports a population of Mud Sunfish (S2).



Fwd: MHT review of Eastern Region State Forest Lands Annual Work Plan

Mike Schofield -DNR- <mike.schofield@maryland.gov>
To: Alex Clark <alexander.clark@maryland.gov>

Please include the MHT comments in the final document.

----- Forwarded message -----

From: Dixie Henry -MDP- <dixie.henry@maryland.gov>
Date: Mon, Jan 11, 2021 at 1:58 PM
Subject: MHT review of Eastern Region State Forest Lands Annual Work Plan
To: Mike Schofield -DNR- <mike.schofield@maryland.gov>

Mike -- MHT staff have reviewed the above-referenced work plan (FY 2022) and concur that the proposed activities would have no adverse effect on historic properties. Please let us know if

- Dixie Henry



Dixie L. Henry, Ph.D.
Preservation Officer, Project Review and Compliance
Maryland Historical Trust
Maryland Department of Planning
100 Community Place
Crownsville, MD 21032
dixie.henry@maryland.gov/ 410-697-9553
mht.maryland.gov
Please take our customer service survey.

***Please note that email is currently the best means of contact, as MHT's Project Review and Compliance staff are largely teleworking at this time. To check on the status of a project submittal, please use our online search: <https://mht.maryland.gov/compliance/ComplianceLogSearch.aspx>.**

EASTERN REGION
STATE FOREST LANDS
ANNUAL WORK PLAN
FISCAL YEAR 2022

MD

The Maryland Historical Trust has determined that this undertaking will have no adverse effect on historic properties.

Dixie Henry Date *1/11/2021*

Prepared: _____ Date _____
(Forest Manager)

Reviewed: _____ Date _____
(Regional Manager)

Approved: _____ Date _____
(Environmental Specialist)



Re: Eastern Region State Forest Lands Work Plan

Mike Schofield -DNR- <mike.schofield@maryland.gov>

Wed, Dec 16, 2020 at 6:49 PM

To: Scott Stranko -DNR- <scott.stranko@maryland.gov>

Cc: Alex Clark <alexander.clark@maryland.gov>, Jay Kilian -DNR- <jay.kilian@maryland.gov>, Kenneth Jolly -DNR- <kenneth.jolly@maryland.gov>, Matthew Hurd <matthew.hurd@maryland.gov>

First, let me say that I am so relieved that Jay and his family escaped the house fire safely. My thoughts and prayers are with him & his family as they recover.

Thank you for taking the time to review the Annual Work Plan and for the comments you provided. I will incorporate your concerns into the updated document as we move it forward to the Citizens Advisory Committee for review.

Please note that we use a standard 300' riparian buffer in all forest harvesting operations. We also strive to avoid any unnecessary stream crossings.

Again, thank you for your review and comments.

On Wed, Dec 16, 2020 at 4:24 PM Scott Stranko -DNR- <scott.stranko@maryland.gov> wrote:

Mike, I am passing along information from Jay Kilian below. Please let me know if you have questions or need any additional information.

-Scott

Thank you for the opportunity to review the Eastern Region State Forest Lands FY2022 Annual Work Plan.

Twenty of the proposed stands are within stronghold watersheds or adjacent to tributaries that support rare aquatic fishes and/or freshwater mussels. Two stands are also within Tier II High Quality waters (see details below). To minimize impacts to these important aquatic resources, the proposed harvest efforts should aim to maintain stream buffers – leaving trees that provide direct canopy cover to the stream channel to maintain cooler water temperatures and minimize potential stream bank erosion. Additionally, movement of equipment through the stream or buffer zone should be avoided when possible during these harvest activities. Please contact the Natural Heritage Program for other BMP guidelines and recommendations associated with these rare aquatic species. Please also see the link below and contact Maryland Department of Environment (Angel Valdez) for more information on protection of Maryland's Tier II waters.

https://mde.state.md.us/programs/Water/TMDL/WaterQualityStandards/Pages/Antidegradation_Policy.aspx

Let me know if you have any questions.

Jay

WR34-3765006: This stand is located within the Lower Pocomoke River watershed – a stronghold watershed that supports populations of the rare Banded Sunfish (S2) and Swamp Darter (S2).

WR22-3788004/ WR22-3788008/WR22-3788003: These stands are within the Dividing Creek watershed – a stronghold watershed that supports populations of the rare Banded Sunfish (S2) and Swamp Darter (S2). These stands are also adjacent to a Tier II High Quality stream reach designated by Maryland Department of Environment.

W53-3597001/W53-3801016/W53-3786015/ W53-720915/W53-7209016: These stands are within Nassawango Creek watershed – a stronghold watershed that supports populations of the rare Banded Sunfish

(S2) and Swamp Darter (S2). These stands are also upstream of two Tier II High Quality stream reaches designated by Maryland Department of Environment.

CO3-6410007/CO3-6401001/CO3-6450010: These stands are located within the Marshyhope Creek watershed – a stronghold watershed that supports rare fishes including the endangered Blackbanded Sunfish (S1) and populations of rare freshwater mussels.

S13-4822001: This stand is located within the Manokin River watershed – a stronghold watershed that supports populations of Banded Sunfish (S2) and Mud Sunfish (S2).

WO2-3534027/WO2-3534030/WO2-3534012: These stands are located within the Nanticoke River watershed – a stronghold watershed that supports populations of rare freshwater mussels.

WR03-3728004/WR03-3728005/WR03-3728006: These stands are located in the Upper Pocomoke River watershed – a stronghold watershed that supports populations of Banded Sunfish (S2), Mud Sunfish (S2) and Swamp Darter (S2).

WO2-7200043: This stand is located near Reconow Creek - a tributary to the Nanticoke River that supports a population of Mud Sunfish (S2).



dnr.maryland.gov

Scott Stranko
MANTA Director, Resource
Assessment Service
Department of Natural Resources
580 Taylor Ave., C-2
Annapolis, Maryland 21401
410-260-8603 (office)
410-533-4839 (cell)
scott.stranko@maryland.gov
[Website](#) | [Facebook](#) | [Twitter](#)

[Click here](#) to complete a three question customer experience survey.

CITIZEN'S ADVISORY COMMITTEE COMMENTS

Date: Mon, Feb 1, 2021 at 9:25 AM

Subject: Annual Work Plan

To: Mike Schofield -DNR- <mike.schofield@maryland.gov>

I have reviewed the plan and have no issues with it as written.

Be safe

Bill Giese



FY 22 Forest Management Plan

Joseph Fehrer <jwfehrer@gmail.com>

Mon, Feb 15, 2021 at 11:51 AM

To: Mike Schofield -DNR- <mike.schofield@maryland.gov>

Cc: Alexander S Clark -DNR- <alexander.clark@maryland.gov>

Hi Mike:

Please accept this email correspondence for inclusion in the CAC comments for the FY 2022 State Forest Management Work Plans.

Most of my comments are general in nature with a few being specific to individual stands.

Overall I found the FY 22 Plans to be satisfactory and complete. I would like to reiterate and add to comments made on pages 30 and 31 (CF 22-03, CF 22-07, CF 22- 10, CF 22-12 and CF 22-15 & 16) by MD Fisheries staff. While the lack of adequate stream/ditch/pond buffering for these particular stands may have been a mapping oversight, it is non-the-less critical to protect aquatic life, to prevent the release of additional nutrients and prevent soils from entering into the adjoining waterways. This information is especially important in the maps provided to the logging crew(s).

I also continue to support and applaud the efforts made by you and your staff to provide high quality recreational opportunities across the Lower Shore; in particular the trail systems and canoe and kayak access points. This is great work!

Again this year I have concerns with the harvest if the following stands in the Pocomoke Forest:

P-22-S-04 Nazareth Church Tract 6 Stand 6

P-22-S-06 Nazareth Church Tract 10 Stand 26

P-22-S-07 Ralph Pusey Tract 34 Stand 3

We've have had this conversation over the years but I feel it's worth repeating. Acknowledging these stands may not be considered "old growth" they are however old growth when considering the overall forested complex of the Lower Shore. As such and since they have seen very little "commercial" activity for nearly a Century they should, in my opinion be excluded from the FY 22 and future harvest plans.

I have not visited these specific stands but suspect the tree DBH is relatively small for the age of the stand, based on similar stands of that age class visited in years past. The acreage numbers provided for these stands is, overall, very small, + OR - 121 acres. Since these stands have been largely void of harvest activities the entire structure of the woodland has evolved and matured. The soil strata has laid undisturbed for 100 years; ground dwelling species [reptiles and amphibians] have been allowed to prosper in as close to a natural area as may be found on the Lower Shore. The soil chemistry and living organisms therein no doubt reflect the absence of disruption and compaction, having achieved some amount of equilibrium only seen in undisturbed soils.

As the Forest Manager and with the responsibilities you have, managing the forest lands for all the citizens of the State; leaving stands such as these un-harvested, to grow and mature should be strongly considered. There are times and places where no "active" management is a management strategy, letting these old stands continue to grow and evolve is one of those times.

Thank you for the opportunity to comment on this plan and serve on the CAC.

My best regards,

Joe

**Maryland Department of Natural Resources
Forest Service
State Forests Annual Work Plan FY 2022**

Public Comments for Chesapeake Forest Lands and Pocomoke State Forest

(Names, addresses, and email addresses have been removed to maintain personal privacy. Superfluous text such as greetings and closures have been redacted. Otherwise, the comments are complete and unedited. Dashes separate individual comments.)

I am writing to express opposition to Maryland DNR's timber harvesting work plan for 2022, specifically items P-22-S-04, P-22-S-06, and P-22-S-07. These items call for cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. While I understand the need for logging some forests, that should not include these older, irreplaceable forests on our public lands. This is also a small amount of the entire timber harvest, and the ecological importance of these stands far outweighs any economic gain derived.

Also, given the urgency of the climate crisis, the carbon sink provided by these old-growth forests is critical; we do not have the time required for these old trees to regrow to absorb the amount of carbon they currently absorb. Prevention of healthy forest loss is always better from an environmental perspective than replacement or reclamation. Once these old-growth trees are gone, recovery could take at least 100 years, if at all.

I urge you to listen to and follow the scientific experts of the Old-Growth Forest Network and the Audubon Maryland-DC and develop bold systemic changes that will sustain and preserve Maryland's State Forests and contribute to abating our current climate challenge rather than cutting down the precious few old-growth forests that we have left.

--

I am writing to convey my thoughts on the FY22 MD State Forest Annual Work Plans. I was raised on the Eastern shore of Maryland, and now help to run the family owned business Paul M. Jones Lumber Co., which is located in Snow Hill, Maryland. Our business relies on the loblolly pine resource we have here on the eastern shore to make quality lumber and pilings for our customers. In my opinion the state should be doing more final harvest on mature timber.

After having reviewed all of the FY22 MD State Forest Annual Work Plans, it is clear to me that they are well thought out, taking a balanced approach of silvicultural practices designed to improve forest health and provide economic benefits to the state, enhancing wildlife habitat through the creation of multiple age classes and habitats on the Forests, as well as improve recreational opportunities. I fully support implementation of all of the management practices contained in the FY22 MD State Forest Annual Work Plans, and recommend they be approved as written. Thank you for the opportunity to provide these comments.

--

I am writing to encourage you to consider the negative environmental impact of the plan to cut 121 acres of mixed pine and hardwood stands in Pocomoke State Forest as part of the 2022 cut.

My understanding is that these stands are almost 100 years old. Their continued life on the site will benefit the local environment for years to come. For the sake of biodiversity, please consider this simple request and stop the plan to cut these stands. It is not a lot to ask.

Thank you for consideration to save the stands and help maintain a healthy environment and biodiversity.

--

The DNR Forest Service's FY 2022 Eastern Region State Forest Lands annual work plan calls for cutting 121 acres of nearly 100-year-old mixed pine and hardwood stands in the Pocomoke State Forest, which are subject to rising sea level and increasing climate impact. The process for timber harvesting on state land should reflect new scientific information about the need to conserve and preserve delicate ecosystems, such as those on the Delmarva Peninsula.

Here in Baltimore City, the Forestry Board in partnership with Recreation and Parks' TreeBaltimore, Blue Water Baltimore, Baltimore Tree Trust, Baltimore Green Space, Flowering Tree Trails, and other environmental organizations, has been working for decades to preserve and increase tree canopy. From 2007 to 2015 with much dedicated work, Baltimore City recorded a tree cover increase from 27 to 28 percent! Recently, in partnership with the Baltimore Office of Sustainability, we succeeded in updating city ordinances to protect more trees from development loss. Currently, we are working with the Old-Growth Forest Network to preserve 100 plus year-old trees in Gwynns Falls Leakin Park-- among the East Coast's largest urban wilderness parks.

This annual Region State Forest Lands Work Plan for the Pocomoke State Forest seems the antithesis to all these forest sustainability efforts in Baltimore. Setbacks to increasing tree canopy are due to new development, storm events, invasive insect pests and diseases. In this case, why is DNR Forest Service continuing to disrupt ecosystems with logging and harvesting practices of old growth trees with short-term financial gain vs. the permanent loss of centuries-old valuable living organisms that support thousands of beneficial species. We request that state forestry officials review new science about the greater long-term value in preserving the Pocomoke State Forest as we stare down Climate Emergency.

--

I am writing this to express opposition to Maryland DNR's timber harvesting work plan for 2022, specifically for items P-22-S-04, P-22-S-06, and P-22-S-07. These items call for cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. While I understand the need for logging some forests, that should not include these older, irreplaceable forests on our public land. This is also a small amount of the entire timber harvest.

Moreover, given the urgency of the climate crisis, the carbon sink provided by these old-growth forests is critical; we do not have time to wait for these old trees to regrow to absorb the amount of carbon they currently absorb. Prevention of loss of forest is always better than trying to bring

forests back and cure razed land. Once these old growth trees are removed, recovery could take more than a century if at all possible.

I urge you to heed to the scientific experts of the Old-Growth Forest Network and the Audubon Maryland-DC and develop bold systematic changes that will sustain Maryland State's forests and contribute to abating our climate challenge rather than cutting down the precious bits of old-growth forests that we have.

--

I am writing in response to Maryland DNR's timber harvesting work plan for 2022, particularly items P-22-S-04, P-22-S-06, and P-22-S-07. Please do not cut these 121 acres in the Pocomoke State Forest. These pine and hardwood trees have stood nearly 100 years. They are of great value because of the carbon they absorb. If these trees were to be cut down, it would take almost 100 years for new trees to replace them and accomplish the work they do now in sequestering carbon from the atmosphere. I urge you to preserve Maryland's old-growth forests, for the sake of the climate we all depend on. Thank you for your thoughtfulness in managing Maryland's natural resources.

--

I would like to begin by commending you and your team on the excellent job you do managing the forest resources of the Chesapeake and Pocomoke Forests.

I have no comments specific to the 2022 annual work plan. I believe all the recommended projects will improve the overall quality of the forest when implemented and I wish you success in getting all proposed projects accomplished.

I do have some general thoughts I would like to express. Sustainable forestry requires a balance of ecological, economic and social values not easily achieved. The Maryland DNR took on a huge undertaking around twenty years ago when it was decided to pursue a path to forest sustainability through forest certification on state forest lands. I do not know how many states were on a similar journey back then but I do know the number must have been small. A partnership between DNR, The Conservation Fund, and the Richard King Mellon Foundation brought forth the Chesapeake State Forest with the idea of it potentially being a model of how Maryland and other states public lands could and yes, probably should be managed.

The original Sustainable Forest Management Plan was written by a highly qualified team with input from a diverse group of natural resource professionals. The resulting document was a great example of a sustainable plan for future forest management. Through the forest certification process, the plan has been revised over the years and is something you and your team should be very proud of. Developing annual work plans through the DNR interdisciplinary team approach along with the inclusion of a citizens advisory committee (CAC) made up a diverse group of citizen stakeholders, in my opinion provides the balance and input to ensure all aspects of natural resource management are represented.

As someone who has some knowledge of the process, I applaud your adoption of forest certification through the FSC and SFI programs. These are the premier certification programs in North America and along with their third party auditing systems, should give the citizens of this state assurance that their state forests are being managed to the highest standards. The commitment to these programs

demonstrate Maryland's commitment to sustainable forestry from the Governor to DNR management along with staff and contract land managers who are working to accomplish the goals in these work plans through the year with little notice or recognition from the public. I would encourage all interested citizens to take the time to read Maryland's Sustainable Forest Management Plan available on the DNR website.

Again, I applaud your efforts and dedication to the forests of our state and support your AWP as written. Good luck in getting all your projects accomplished and "Thank you" to the current people involved in this effort and to all the people who, from the very beginning, worked to make this vision of sustainable forestry a reality.

--

In regards to the Pocomoke and Chesapeake State Forests:

There is insufficient parking space at the Chesapeake gates during the hunting seasons.

The width of these gates were designed during the years when the property was owned by a vertical integrated forest products company and served their purpose well over the years. That is until some portions were open to hunters. The gates are clearly marked with "do not block gate" stickers. In many case that is the only spot to park!

The current and all too common practice of piling logging debris at log landings upon completion of the timber cutting makes it impossible for hunters to park and go hunting. The piles scream "KEEP OUT!"; are unsightly, and provide ideal habitat for predators that prey on our beloved Bob White Quail. These log landings with just a little bit of stone and site work can be transformed in small parking spaces (not full blown lots) with enough room for 3 or 4 vehicles.

I support the silvicultural and habitat work provided the needs of hunters are addressed by creating parking at all landings.

--

The only comment I would like to make deals with the recreation section of the plan. I would like to see a renewed effort to explore the feasibility of building a public rifle\archery range somewhere on either CFL or PSF. The other three regions of the state all support rifle\gun\archery ranges the get a lot of public use. I would think since this is the largest state forest supporting an extensive amount of public hunting & leased hunting that a range probably located on the lower shore would get abundant use. As in other Regions range permits would help with maintenance plus there may be opportunities to partner with a local club or clubs in construction and oversight. I do know the possibility of a range was looked into a few years back but at that time the political climate was not conducive with moving forward. Now might be a good time to revisit this proposal and start to investigate possible sites. One area that comes to mind is the Foster property the large size of the tract has areas away from public roads and houses.

So this is my only comment, the rest of the SF plans I support all the silvicultural activities that are proposed.

--

I am a logger and forest landowner on the Eastern Shore. I am also a member of The Chesapeake Forest Citizens Advisory Committee and I would like to make a few comments on the upcoming Chesapeake Forest management plan. I don't have any problem with any of the prescriptions in the plan although I do think there should be more timber clearcut in the future. Everyone should remember that one of the main justifications for purchasing the Chesapeake Corporation lands was to help the forest industry by continuing to manage for timber, and the final step in management is harvesting. Every year when the upcoming plan is discussed there are always arguments against clearcutting. Those who object to clearcuts do not understand forest management. Trees are a crop, just like corn, soybeans, or a vegetable garden, that is planted with the end goal being to harvest the timber so that it can be used to make forest products. Usually those who object to clearcutting do not have a problem with thinning. But what they don't realize is that thinning is merely a tool used along the way to the final harvest. Thinning removes undesirable trees and leaves room for remaining trees to grow but it does not create much income compared to the final harvest. Thinning a stand of timber without clearcutting the mature timber in the future is no different than weeding a garden to remove weed competition and then not harvesting any of the vegetables when they are ripe. Another goal of the Chesapeake Forest is to be self sufficient. While thinning generates some income per acre, the much greater income from final harvests is needed to help pay for all the costs of management of the forest. One other criticism I have of the Chesapeake Forest management is how the thinnings are implemented. I feel it would benefit more loggers and get more land harvested if the majority of the thinning was not done by one logger. Instead, I feel the more loggers should be brought in to conduct the thinnings when weather permits. Back when Vision Forestry was managing the land, more loggers cut on more acres than what it currently being done.

--

I have reviewed and am writing to support the Fiscal Year 2022 Maryland State Forest Annual Work Plans.

As someone that has been involved in the Forest Products Industry my entire life, I know firsthand the value that this sector provides to its rural economy. It is a fact that cannot be denied. See the link below to the 2018 Beacon/ Salisbury University study that shows that in 2015 forestry contributed nearly \$3.5 billion to the state economy (14.9% of RBI total), supported 15,271 jobs (16.15% of RBI total), and added just over \$132.5 million in combined state and local tax revenue (14.7% of RBI total).

Full Report All Maryland Resource Based Industries Beacon 2018.pdf (marbidco.org)

I have witnessed timber harvesting many times, and I am aware of the non-monetary benefits that working forests provide. Sustainable forest management allows for a continuing cycle of planting, growing, and harvesting. It's a scientific process that maximizes forests' ability to clean our air, clean our water, and provide a mosaic of landscapes for wildlife.

Our rural communities often fall victim to an urban mindset that lacks a real understanding or connection to the land. I see this all the time in agriculture. It is sad to see it happening with

forestry too. After reviewing all of the Fiscal Year 2022 State Forest Annual Work Plans, it is clear that they are well thought out, taking a balanced approach of silvicultural practices designed to improve forest health.

Implementing these practices and promoting more harvesting on state owned land will benefit all Marylanders.

--

I am ***, a member of a faith community with Maryland congregations from Ocean City to Red House in three Evangelical Lutheran Church in America synods. I am assistant for public policy to the Delaware-Maryland synod bishop. Creation Care is a spiritual value our community advocates in public.

It is my understanding that Maryland Department of Natural Resource's timber harvest 2022 work plan items P-22-S-04, P-22-S-06, and P-22-S-07 call for cutting one hundred and twenty-one acres of old growth forest in Pocomoke State Forest.

Our community opposes this. Public resources should be managed for the health of the environment. Carbon sequestration, wildlife habitat, and natural asset preservation are lost in this logging plan.

Old growth forests are essentially irreplaceable because they can only be restored by centuries, not technologies. Threatened and endangered species of wildlife require very specific habitats in the Pocomoke State Forest; the land is an asset of the State's natural context; preserving natural resources and sustaining the nature that produces them should be management goals.

I urge you to heed life science and citizen voices and find another plan that will value thriving nature and benefit the State's public holdings.

--

I am writing this to express opposition to Maryland DNR's timber harvesting work plan for 2022, specifically for items P-22-S-04, P-22-S-06, and P-22-S-07. These items call for cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. While I understand the need for logging some forests, that should not include these older, irreplaceable forests on our public land. This is also a small amount of the entire timber harvest.

Moreover, given the urgency of the climate crisis, the carbon sink provided by these old-growth forests is critical; we do not have time to wait for these old trees to regrow to absorb the amount of carbon they currently absorb. Prevention of loss of forest is always better than trying to bring forests back and cure razed land. Once these old growth trees are removed, recovery could take more than a century if at all possible.

I urge you to heed to the scientific experts of the Old-Growth Forest Network and the Audubon Maryland-DC and develop bold systematic changes that will sustain Maryland State's forests and contribute to abating our climate challenge rather than cutting down the precious bits of old-growth forests that we have.

--

I'm a member of the Old-Growth Forest Network and was alerted to some issues with the annual work plan, specifically the planned removal of some small areas of older trees. Please reconsider and don't harvest P-22-s04, P-22-s-06, and P-22-s-07 in particular and in general, please leave stands of older trees for the many habitat and environmental benefits such as carbon sequestering. At least some of the mentioned stands are part of an Audubon designated Important Bird Area.

There are many reasons not to cut an older forest such as fragmentation, introduction of invasive species, removal of a forest that will not be able to regrow, disruption to forest interior dwellers and other bird life, etc. At a time when so many are planting trees to help mitigate the abundance of carbon, it makes little sense to cut mature forests that are already doing a great job.

--

Please for the sake of biodiversity, we aren't asking a lot--just some restraint on 121 acres of the 2,398 acres slated for clearcutting in 2022.

--

I want to introduce myself- I'm ***, the new owner of the former Croppers Brothers Lumber Company in Willards, Maryland. I have invested a significant amount of time and money into the facility and plan to be producing lumber in less than a month. Operating as Delmarva Lumber, I will return production and employment rates back to the mill's historical levels at a minimum.

I am new to the forest products industry, but I understand that one of the Chesapeake/Pocomoke State Forest general management areas' goals was to provide timber resources to the industry. After reviewing all of the FY22 MD State Forest Annual Work Plans, it is clear that the plan is well thought out. It takes a balanced approach of silvicultural practices designed to meet various goals. Since only 30% of the acreage is available as general management areas, placing further harvesting restrictions based on public comments would cause an unwarranted hardship to me and others in the industry.

I fully support implementing all the management practices in the FY22 MD State Forest Annual Work Plans and recommend they be approved as written. Since larger timbers will be one of my most profitable products, I'd like to see more final harvest sites in future plans.

I appreciate the opportunity to provide these comments, and I look forward to working with the Department of Natural Resources to implement these plans.

--

Thank you for the opportunity to comment on the 2022 Annual Work Plan for the Chesapeake Forest Lands and the Pocomoke State Forest. We are happy to offer the following suggestions.

First, thanks for your continued commitment to supplying timber and pulpwood to the forest products industry here on the Shore. The contribution from State lands is a vital component of the overall supply of timber and it is important that DNR maintains a fair share, one that is commensurate with the amount of land the State now owns. In fact, timber from state lands is becoming increasingly important with the startup of the old Cropper Brothers mill. In addition, there are planned expansions for piling operations and we have recently had inquiries from a company across the Bay and one in North Carolina regarding the availability of high grade

sawlogs from the Shore. These developments promise new and expanded markets for State timber.

As you know, our business has grown and we plan to continue to do so, with a new pellet operation and an expanded firewood plant. This, coupled with our expanding shavings operations, promise markets for not only pine timber and pulpwood but also for such previously “unloved” species as sweet gum and maple. Timber from State lands is increasingly important to our continued success.

There are a few operational details that you might consider for this and future plans. We now better understand the issues with an instantaneous comparison of “acres planned” and “acres accomplished” for the past decade as displayed in the appendices of previous plans. We agree that these comparisons can be misleading and don’t yield much usable data. We do think some indication of accomplishments is important, however. You might consider a simple summary of wood volumes harvested each year or perhaps the annual change in timber revenues as suitable substitutes for the dreaded “acres” column that Mike hates so much. Either measure would provide some indication of progress over time and identify important trends.

It might also be useful to provide a simple list of projects from the previous year and progress made toward completing them, i.e., was the project started, completed or partially completed. Over time, this would allow purchasers to better understand the scope of various sales wherein your planning and review work has been completed and where some wood might be available. Certainly, that would help in our own planning and procurement efforts. Along that line, as the plan notes, there is perhaps an overabundance of timber in the 26-40 age class and this is the obvious target for most of the thinning operations in this and previous plans. It would be interesting to see if your efforts are moving toward a more desirable age class distribution.

As demographics of the Shore’s population changes and as we see increasing tourism, it might be worth a modest effort to explain some of the more obvious forestry practices. For example, the recent clearcut near Furnace Town to benefit Elfin Fringed Butterflies is a wonderful story, but what visitors see is a pretty harsh looking clearcut in the absence of any further explanation. Perhaps some interpretive signs to describe such practices as well as thinnings and young plantations visible from major roadways would be helpful in building support for forest management and perhaps forestalling undue future criticism. I think there will be some opportunities for some cooperative efforts with the Maryland Forests Association that might be worth exploring.

We have been made aware of the recent comments of the Old Growth Forest Network on the draft annual work plan. While the stated goal of the Network regarding protecting at least one older stand of timber in each county is laudable, their current comments indicate this mission seems to be expanding.

Particularly disturbing is their comment, “we believe forest harvesting should be halted, or sharply curtailed on state forests”. This, coupled with the call to create a “Maryland Forest Keepers” group and recent comments noting that forests should not be “chopped down” before the Maryland Legislature by Chesapeake Bay Foundation’s senior scientist Doug Myers portend

a possible new or at least more open anti-logging sentiment that, so far, we have not experienced in Maryland.

There is a clear mission to protect true old growth and uniquely ecologically significant stands on state lands. This mission is manifested in the preservation of forests on state parks, some wildlife management areas and set-asides for critical areas and “wildlands” designations on state forests. Fully one-third of all state forest land in Maryland falls within one of these categories and is simply unavailable for logging. The result is that the amount of timber available from state lands is considerably less than the amount that might be harvested from comparable lands in private ownerships.

The point is, the mission of state lands to protect important ecological forests has been met. The work plan concentrates on the other important mission of state lands and the Chesapeake Forests, particularly, and that is the commitment to manage them to provide timber to support the local industry and rural economies. By urging further withdrawals of areas currently slated for timber harvests is a manifestation of the classic, “What’s mine is mine and what’s yours is negotiable” tactic commonly employed by anti-logging advocates. Frankly, it is disappointing to see this in Maryland and we will work hard with the Maryland Forests Association and others to build support for responsible forest management.

We also urge the DNR to clearly refute such misleading statements by the Network regarding the revenues and costs of timber management and the alleged competition with private timberland owners.

In truth, without timber from state lands, we would see a significant reduction in the size of the industry, a commensurate drop in timber demand and a willingness on the part of private landowners to seek other, more profitable uses of their lands, a result that is clearly contrary to the goal of restoring water quality in the Chesapeake Bay. Finally, although a relatively rare occurrence here on the Shore, a crown fire in a young stand that is overly dense because it couldn’t be properly thinned could be devastating. A call to discontinue timber management on state lands could lead to such consequences.

Lastly, we believe it would be beneficial to develop a better understanding of each purchaser’s operations. For example, our company has made great strides in incorporating technology into our wood procurement and logging operations. We also believe we’ve been able to log some wetter sites in a manner that would meet the State’s SFI and FSC standards. A day in the field with our folks and DNR staff to explore our mutual interests would be well spent, in our view.

Over the past couple of years, I feel we have made a lot of progress toward an effective working partnership with DNR and your local staffs. Such a relationship is vital to both of our continued successes and we appreciate your willingness to work with us and the job that you do.

--

Cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. Please, for the sake of biodiversity, to let these stands remain intact. We aren’t asking a lot--just some restraint on 121 acres of the 2,398 acres slated for clearcutting in 2022.

--

I am commenting on the proposed timber harvest on Maryland state land/parks. At this time it is only a general comment as I have not had the opportunity or physical capability (recent surgery), to inspect the proposed areas.

In view of our rapidly changing climate and the recent science on the amount of carbon sequestered by our largest and usually oldest trees, I would have expected that the DNR/Forest Service was rethinking terms like "over mature stands", recognizing older forests provide more than timber. As I read over the proposal and after seeing some photos of Forest Service harvested stands, that does not seem to be the case. Therefore I am planning to be joining other interested folks in getting involved and learning more about our Maryland Forest Service goals and planning. Looking forward to working with you and our state and local representatives in this effort.

--

I am writing to convey my thoughts on the FY22 MD State Forest Annual Work Plans.

After having (Names, addresses, and email addresses have been removed to maintain personal privacy. Superfluous text such as greetings and closures have been redacted. Otherwise, the comments are complete and unedited. Dashes separate individual comments.) me that they are well thought out, taking a balanced approach of silvicultural practices designed to improve forest health and provide economic benefits to the state, enhancing wildlife habitat through the creation of multiple age classes and habitats on the Forests, as well as improve recreational opportunities. I fully support implementation of all of the management practices contained in the FY22 MD State Forest Annual Work Plans, and recommend they be approved as written.

--

I am a member of Maryland Forests Association and an owner of a small forested area under a management plan.

I was interested in the plans for the four areas listed and just want to say I am in favor of the plans for all four. The plans were I thought well thought out and were very well written, individual considerations for each.

--

I am writing to you in opposition to Maryland DNR's timber harvesting work planned for 2022, specifically for items P-22-S-04, P-22-S-06 and P-22-s-07. These items are calling for cutting 121 acres of nearly 100 year old mixed pine and hardwood stands in the Pocomoke State Forest. This small amount of harvest comes from a nearly irreplaceable older forest on public land.

Given the urgency of the climate crisis, the carbon sink provided by these old growth forests is critical. Additionally, these precious bits of old growth forest protect and sustain the habitats of many of the bird species on Maryland's coastal plain. The remaining old growth timber hosts significant populations of at-risk bird species.

The small amount of profit potential of this proposed harvest is not worth the sacrifice of the biodiversity that this old growth timber protects. Once this forest is harvested it will easily take over 100 years to recover if it is even at all possible.

--

I own an independent trucking company. The majority of the loads I haul is pine lumber. This lumber comes from a pine sawmill on the Eastern Shore. This particular sawmill purchases mature pine timber off the Chesapeake and Pocomoke Forest. The management of both of these State forest greatly affects my business.

--

I am an employee for over 13 years at a pine sawmill located on the Eastern Shore. I understand the value of the Chesapeake Forest and the Pocomoke Forest and how timber coming off these lands influences my employment. Therefore I feel that these lands continually need to be managed.

--

I am writing to strongly urge you NOT to chop down 121 acres of old growth forest in Pocomoke State Forest. Old growth forests are a rarity in Maryland and indeed the entire US. They are a treasure that needs to be preserved. I have had the delight and wonder of walking through old growth forests. To chop them down for the sake of timber is a travesty. You are literally slaughtering a living entity for money, the use of which can never equal the beauty of the trees. In addition, you will be depriving our planet and your children and all children of much needed oxygen. Trees are the best source of carbon sequestration in earth.

--

As a Maryland voter, birder, and someone who cares passionately about the environment, I am writing to implore you to allow the 121 acres of 100-year-old mixed pine and hardwood forests within Pocomoke State Park that are currently slated to be clear-cut to remain intact. They are a small portion of the nearly 2,400 acres scheduled for clear-cutting but they are extremely valuable to maintain biodiversity within this area of the state. These old forests are irreplaceable and valuable to Maryland. I hope you will allow them to remain intact for the foreseeable future.

--

Please be considerate of the small grove of 121 acres of the proposed clear cut planned for Pocomoke to help with the biodiversity necessary to maintain birds and other wildlife in the area. Our grandchildren and yours will appreciate your efforts.

--

Enough is enough!! Take a stand for the future health of our state's wildlife! Maryland's birds and wildlife cannot endure any more loss of mature forests!! The DNR Forest Service's FY 2022 Eastern Region State Forest Lands annual work plan calls for cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. For the sake of biodiversity, let these stands remain intact! What is the matter with the DNR that they allow such destruction??? How can there be 2,398 acres slated for clearcutting in 2022?? Is everyone on the take from the developers?? In our 40 years in this state we have seen the tree cover absolutely obliterated, with no one standing up for forests. Reclaim SOME measure of professional integrity and protect our wild spaces before they are lost for good!!

--

I just got wind that the DNR Forest Service's FY 2022 Eastern Region State Forest Lands annual work plan calls for cutting 121 acres of nearly 100-year old mixed pine and hardwood in the Pocomoke State Forest. Please, please, please let these stands remain intact. We aren't asking a

lot--just some restraint on 121 acres of the 2,398 acres slated for clearcutting. This is a down right shame. I'm really passed off!!! There's no reason in the world this. Whether it's housing construction or make a new highways, whatever the reason being, it's just not a good enough reason to clear cut anything. Gorgeous forest... I am just beside myself. Really outraged. Please stop it. Don't cut down anything!!!

--

I was disappointed to learn that your FY 2022 work plan calls for cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. So many animals depend on this habitat for food, shelter, nesting, etc. Biodiversity is crucial for a healthy and functioning environment, and to remove these trees would drastically impact an enormous number of living creatures. Saving the trees in these 121 acres seems a small ask when there are 2,398 acres slated for clearcutting in 2022.

Protecting these stands is the right thing to do for our environment, and I implore you to strike the removal of these trees from your plans.

--

The DNR Forest Service's FY 2022 Eastern Region State Forest Lands annual work plan calls for cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. For the sake of biodiversity let these stands remain intact. This is not asking a lot--just some restraint on 121 acres of the 2,398 acres slated for clearcutting in 2022. In fact, it probably isn't even enough.

All trees do not contribute equally to a healthy environment. Old forests, old growth, reestablishing old growth forests and mature forests contribute far more than new forests. They provide micro ecosystems that are irreplaceable and have uniquely significant properties needed to support biodiversity and provide habitat for birds and wildlife. It is a bad choice to cut down mature forests and plant new ones to replace them -- this is poor environmental policy that ignores environmental science.

Please support, preserve, and work to increase mature forests in our state.

--

I would like to request that the 121 acres of old growth forest be allowed to stand in the Pocomoke Forest. This will allow for more biodiversity for those plants and animals that require older forests to thrive and grow. Many birds depend on older trees to make their homes. Thank you.

--

The DNR Forest Service's FY 2022 Eastern Region State Forest Lands annual work plan calls for cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. For the sake of biodiversity, to let these stands remain intact. Those of us who love trees and value our environment - which hopefully is all of us - would strongly appreciate some restraint on 121 acres of the 2,398 acres slated for clearcutting in 2022.

--

For the sake of biodiversity, please let 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest remain intact. We aren't asking a lot--just some restraint on 121 acres of the 2,398 acres slated for clearcutting in 2022. Many interior forest-

dwelling bird species need large tracts of contiguous forest to breed and survive. For them, planting replacement trees in the median doesn't cut it.

--

I am writing to express my opposition to cutting down the 121 acres of 100 year old mixed hardwood stands in the Pocomoke State Forest.

We are losing old growth forests at an alarming rate and need to think long term about the loss of biodiversity and specific habitats needed for certain species.

This is a special area for many rare and threatened birds. My 11 year old son is an avid birder and I hate to think he will not be able to experience threatened species because of loss of habitat.

I know you are cutting down over 2000 acres of trees and I am asking for just a small portion of that to be preserved.

You are the stewards of the forest land, please think in terms of nature and not money. When the trees are gone we will not be able to breathe money.

--

How dare you cut down "old growth" forests in my neighborhood!!!

--

I am writing this to express opposition to Maryland DNR's timber harvesting work plan for 2022, specifically for items P-22-S-04, P-22-S-06, and P-22-S-07. These items call for cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. C'mon what the heck!! What could you be thinking about! Leave this mature forrest alone! By the way this is a small amount of the entire timber harvest.

This forrest is an opportunity to leave a benefit behind for our children. Moreover, given the urgency of the climate crisis, the carbon sink provided by these old-growth forests is critical! CRITICAL!!

Prevention of loss of forest is always better than trying to bring forests back. DON'T CUT THEM DOWN!! YIKES!!

I urge you to heed to the scientific experts of the Old-Growth Forest Network and the Audubon Maryland-DC and develop bold systematic changes that will sustain Maryland State's forests and contribute to abating our climate challenge rather than cutting down the precious bits of old-growth forests that we have.

--

I'm writing to voice my opposition to the Chesapeake/Pocomoke Forest plan. As a resident of Maryland, I urge thr Department of Natural Resources to reconsider the plan in light of the forest's ecological importance. I've copied the following fact sheet from the Maryland-DC Audubon Society (see below).

In addition to the ethical case for preservation, Maryland DNR should assess the economic benefits of outdoor tourism on the Eastern Shore. My family and I have visited the Eastern Shore multiple times each year. Our visits consist largely of exploring the region's beautiful and unique

landscapes on public lands (i.e., DNR components), but the restaurant and hospitality industries benefit from presence. Consider the economic benefit to the region in setting aside greater swaths of these state forests for posterity, which will continue to draw birders, hikers, cyclists, and other outdoor recreationists who utilize the state's public lands.

Lastly, as Audubon and the Old Growth Forest Network have argued, Maryland simply does not have enough protected forests to sustain threatened and endangered species. Our state parks and National Wildlife Refuges are not enough contiguous lands to maintain our state's biological diversity if we allow other mature forests to fall to development.

Important facts:

- These ~100-year-old stands are all located within the Pocomoke-Nassawango Important Bird Area--the largest and most intact forested landscape on the Delmarva Peninsula. Of the 24 species of FIDS found on Maryland's coastal plain, 21 breed regularly at this IBA which hosts significant populations of at-risk bird species.
- Deciduous forests are the native forest type on Delmarva. Yet, only 16% of the state's Pocomoke/Chesapeake forest is mixed pine/hardwood. The rest is either riparian bottomlands, pine, or cut over timber.
- The more natural forest structure of the 1960's is very nearly impossible to replicate today. It's nearly impossible to regrow 100-year old upland forests full of oaks and hickories. Even when these trees are left standing, the deer browse results in mostly pine and sweet gum woods.
- 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, predators, and invasive species.

--

I am writing this to express opposition to Maryland DNR's timber harvesting work plan for 2022, specifically for items P-22-S-04, P-22-S-06, and P-22-S-07. These items call for cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. While I understand the need for logging some forests, that should not include these older, irreplaceable forests on our public land. This is also a small amount of the entire timber harvest.

Moreover, given the urgency of the climate crisis, the carbon sink provided by these old-growth forests is critical; we do not have time to wait for these old trees to regrow to absorb the amount of carbon they currently absorb. Prevention of loss of forest is always better than trying to bring forests back and cure razed land. Once these old growth trees are removed, recovery could take more than a century if at all possible.

I urge you to heed to the scientific experts of the Old-Growth Forest Network and the Audubon Maryland-DC and develop bold systematic changes that will sustain Maryland State's forests and contribute to abating our climate challenge rather than cutting down the precious bits of old-growth forests that we have.

--

I am writing to support the proposed plan for timber management in the Pocomoke State Forest. I am a tree farmer in Somerset County and I have life long experience in managing forestland. The plan includes sound forest management practices which will maintain the long

term health of the forest. Some people would prefer to not see any timber cut at all. However, the recent wildfire experience in California shows the danger of not cutting mature timber or of not thinning out overgrown young timber. The health of the forest is best maintained by harvesting mature pine timber when it reaches a certain age.

I urge you to follow thru with the management plan for the Pocomoke State Forest as proposed by MD DNR.

--

I write out of concern for biodiversity and wonderment at what could be the reason for your workplan to cut these trees in Pocomoke.

These ~100-year-old stands are all located within the Pocomoke-Nassawango Important Bird Area--the largest and most intact forested landscape on the Delmarva Peninsula. Of the 24 species of FIDS found on Maryland's coastal plain, 21 breed regularly at this IBA which hosts significant populations of at-risk bird species.

Deciduous forests are the native forest type on Delmarva. Yet, only 16% of the state's Pocomoke/Chesapeake forest is mixed pine/hardwood. The rest is either riparian bottomlands, pine, or cut over timber.

The more natural forest structure of the 1960's is very nearly impossible to replicate today. It's nearly impossible to regrow 100-year old upland forests full of oaks and hickories. Even when these trees are left standing, the deer browse results in mostly pine and sweet gum woods. •

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, predators, and invasive plants.

The Chesapeake/Pocomoke Forest plan calls for cutting 2,398 acres. I ask only for restraint on 121 acres.

--

Thank you for the opportunity to comment on the Eastern Region State Forest Lands annual work plan for FY 2022. I am submitting these comments for Audubon Mid-Atlantic, the new regional office of the National Audubon Society, which has some 19,000 members in Maryland. Audubon's conservation work in Maryland is focused primarily on a network of 43 Important Bird Areas (IBAs) representing the most essential habitat sites for birds in the state (see <http://md.audubon.org/conservation/important-bird-areas-0>).

Our comments on the work plan focus on silviculture operations in the Pocomoke State Forest and specifically relate to the 121 acres of mature pine and hardwood stands that are slated for final harvest (P-22-S-04, P-22-S-06, P-22-S-07). These ~100-year-old stands are all located within the Pocomoke-Nassawango 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 Forest Interior-Dwelling Species of bird (FIDS). Of the 24 species of FIDS found on Maryland's coastal plain, 21 breed regularly at this IBA which hosts significant populations of at-risk bird species.

We are recommending that forest stands P-22-S-04, P-22-S-06, and P-22-S-07 not be harvested but left in a mature or even an "over-mature" state so that they can remain and/or succeed from predominantly loblolly pine to more of a hardwood-pine mix under a dynamic forest canopy.

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 will elaborate on this below.

An important factor that makes these stands special is the relative age of their trees. All three stands are close to 100 years old. Traditional plantation pine monocultures lack bird diversity and also biodiversity in general, in large part because they are harvested at short intervals. Indeed only 16% of the state's Pocomoke/Chesapeake forest is mixed pine/hardwood. The rest is either bottomlands, pine, or cut over timber. Some 65% classifies as pine. When pines and hardwoods are left to mature the trees achieve not only a larger size, but also a more diverse physical structure that offers birds more places to nest, roost and forage. 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.

There is great wildlife conservation benefit to allowing stands to remain a mature hardwood-pine mix. The great majority of FIDS occur primarily in hardwood or mixed forest types. FIDS that would benefit from such a conversion of these three stands include those preferring upland hardwood forests: 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—11 of which are at risk or declining.

The 2015 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 also 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. Add to that the invasion of invasive plants after clearcuts and the science is clear. Leaving mature stands only in riparian areas is not enough.

Our comments are also consistent with the Sustainable Forestry Act of 2009 which calls for cutting at a sustainable rate. It mandates that adequate reference areas be retained, and the three parcels above would fit that criteria.

Moreover, on p. 10 of the 2022 Eastern Region State Forest Lands annual work plan under "Land Management Guidelines and Objectives," keeping these forests intact would fulfill both your "Forest Conservation" and "Wildlife Habitat" categories. The remaining 95% of your plan can easily fulfill the "Forest Economy" section.

We understand that our recommendations mean forgoing the income generated by a harvest of large pine trees, but we urge you to consider the option of enhancing the long-term biodiversity of these parcels, in accordance with the 2015 Maryland State Wildlife Action Plan.

Please note we encourage restraint on only 5% of your Chesapeake/Pocomoke Forest plan or 121 of 2,398 acres. Audubon Maryland-DC takes no issues with the remaining 95%.

--

As Chairperson of the Dorchester County Forestry Board, it is my duty to express the board's opinion on forestry issues in our area. Our board members include landowners, farmers, industry representatives, and concerned citizens. Our membership diversity has led to sound management recommendations that suit industry, recreational, habitat, and conservation needs. It is an honor and a pleasure to take this knowledge and share it on a more regional level by continuing to serve on the citizen's advisory committee for their annual work plan of the Chesapeake and Pocomoke State Forest.

Although the advisory committee could not meet in person this year due to COVID-19 restrictions, I appreciate Mike Schofield — Forest Manager, making himself available to sufficiently answer my questions concerning specific tracts. Below are my comments-

GENERAL COMMENTS FORESTRY- The plan has a variety of harvest types, none of which seemed to be controversial.

The thinning's (both first and second) will address overstocked forests using scientifically proven sustainable forestry practices replacing what fire used to do on the landscape. Today's forests without thinning are weak and quickly overrun by insects and invasive species. It truly is a forest health issue, one that is getting worse. The Department of Natural Resources' latest Forest Action Plan acknowledges the lack of markets for small diameter low-quality wood as a concern- proof that we need more thinning of our forests in Maryland.

The final harvests are good examples of a renewable resource coming full circle. Trees, like all species, have a biological age limit. During the comment periods, DNR often receives negative comments mostly aimed at the harvesting of mature timber. It is static to think that the preservation of older trees is good for the forest. There are areas on unmanaged state lands where dead and dying trees are falling over. I believe that conservation- the wise use of natural resources- trumps preservation any day. A hands-off approach is not the answer. One-third of the Chesapeake/Pocomoke State Forest acreage has been set aside, never to be cut. Further limiting harvest activities on general management areas would have detrimental impacts on both the forest and the industry. These harvests will not only improve timber stands but also help maintain plant diversity and wildlife habitat.

INDUSTRY- The forest products industry has seen a rapid decline on the shore over the past several years, but things are changing. Several startup operations are looking to go online later this year, and existing operations are expanding. The proposed harvest will help supplement the industry's needs on the shore by supplying varying ages of timber to be utilized for pulpwood, poles, and saw logs. I feel very strongly that Maryland must continue to make available a variety of wood to ensure that the industry itself remains healthy and profitable- guaranteeing that it is available to help manage state lands in the future. I am delighted to see the larger timber cited in the final harvest work plans being made available. It will help supply the sawmills, which I consider the backbone of the forest products industry. Without a healthy industry, you can't have a healthy forest.

PUBLIC PERCEPTION- I have commented before about using the term- "final harvest" in these work plans. Although people with knowledge of working forest understand the term, it can be confusing to the general public that doesn't understand the cycle of forestry. The word "final" implies that something is coming to an end when in fact, for the forest, it's just a new beginning. I urge you to find a way to change the terminology in future plan

--

I am writing this to express opposition to Maryland DNR's timber harvesting work plan for 2022, specifically for items P-22-S-04, P-22-S-06, and P-22-S-07. These items call for cutting 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. While I

understand the need for logging some forests, that should not include these older, irreplaceable forests on our public land. This is also a small amount of the entire timber harvest.

Moreover, given the urgency of the climate crisis, the carbon sink provided by these old-growth forests is critical; we do not have time to wait for these old trees to regrow to absorb the amount of carbon they currently absorb. Prevention of loss of forest is always better than trying to bring forests back and cure razed land. Once these old growth trees are removed, recovery could take more than a century if at all possible.

I urge you to heed to the scientific experts of the Old-Growth Forest Network and the Audubon Maryland-DC and develop bold systematic changes that will sustain Maryland State's forests and contribute to abating our climate challenge rather than cutting down the precious bits of old-growth forests that we have.

--

I have reviewed the work plan for the Chesapeake Forest. I appreciate the opportunity to review the plan. As a person who has worked in the forestry field here on the shore I think it's a wonderful opportunity for the State of Maryland to showcase just how the Chesapeake Forest could be properly managed. This would include management for wildlife habitat and timber production. With that said I feel that the lack of some management activities that are not being performed on the Chesapeake forest are creating a gum and maple forest. This gum-maple timber type is not attractive habitat for wildlife and a terrible timber type for timber production. I feel this issue should be addressed on both the Chesapeake Forest and the Pocomoke Forest as well in the up coming work plans. Thank you for your time.

--

I stand with the Old-Growth Forest Network and the Audubon Maryland-DC in their opposition to Maryland DNR's timber harvesting work plan for 2022. The State Forests of Maryland should be treasured for their beauty, wildlife habitat and ability to retain carbon and purify water. As public lands, these forests contribute to the quality of life for all citizens of Maryland.

Timber harvesting of our remaining state forests should be relegated to the history books. Once these old growth trees are cut down, such as those of the Chesapeake/Pocomoke forests, recovery could take more than a century if at all possible. It is heartbreaking to know that some of the tallest American hollies known to exist and century old pine trees will be lost forever.

It is also disturbing to learn that the comment period is not well publicized and despite repeated objections by the scientific experts of Old Growth Forest Network and Audubon Maryland-DC in the past, the MD DNR plans for chopping down our forests continued unabated.

I urge you to heed to the scientific experts of the Old-Growth Forest Network and the Audubon Maryland-DC along with its multitude of supporters and develop bold systematic changes that will sustain Maryland State's forests from destruction and fragmentation.

--

As a life-long resident of this area of the Eastern Shore I am appalled to read of the plan to harvest 121 acres of timber from the Pocomoke State Park. Please reconsider this course of action in the interest of protection of our native flora and fauna and the prevention of further fragmentation of our wooded lands.

--

The State Forests of Maryland are important natural areas that belong to the citizens of the state. As public lands, these forests should contribute to quality of life for all, which includes improvement

of: air quality, water quality, recreational opportunities, and safe habitat for biodiversity. This public resource should benefit the public.

Recent science has shown that forests are the single most effect carbon sinks of any land-based ecosystem. Eighty-five percent of all carbon released from forest land is a result of timber harvesting. Older forests store greater quantities of carbon, and even more as they age. In light of the scientific advances since the State forest lands were acquired, forest harvesting should be halted, or sharply curtailed on State forests.

We are gravely disappointed to see that state forest managers feel otherwise, and some of the oldest, most biodiverse, forests are targeted for harvesting in this work plan.

When the State forests were first acquired, their highest and best value was seen as their contribution to the viability of the timber industry. However, with three-quarters of the forests in Maryland on private lands, the State forests should not be artificially propping up this industry.

An economic analysis shows that the state makes very little, if anything, for selling its trees. For instance, on the Chesapeake/Pocomoke State Forest \$1,100,000 is brought in from selling trees, but it costs \$980,000 to have the loggers cut and bring them to the mill. And that cost doesn't include the salaries for the forest service employees that supervise the projects.

On top of that, the state has an unfair competitive advantage if it is marketing public timber against private land-purchasing and property-tax paying citizens.

New science and greater long-term value in enhanced recreational opportunities for Maryland demand new thinking on the part of public officials; to pivot away from old ways of thinking.

Recognize that if you cut these trees, it will take a century or more to regrow these forests, and some forests never recover.

Comments on planned cutting

Although only 0.5% of the forest is considered "uneven age" and only 0.02% is considered "uneven age, mixed pine/hardwood," cutting is still planned for these small areas.

P-22-s-04: P02

This 100-year-old forest contains some woody species that are disappearing from the Chesapeake/Pocomoke State Forests because of the way they are being mismanaged. Here, on this important upland next to a wetland, are short-leaf pines (*Pinus echinata*), pond pines (*Pinus serotina*), and Horse-sugar (*Symplocos tinctoria*). This stand also contains some of the tallest – perhaps the tallest - American hollies still existing on the forest. Furthermore, there is a wetland stream/ditch on this stand that is not shown on the plans. Evidence of that running stream is the culvert running under Beech Rd that goes from the stand toward Pusey Branch. Further evidence is the video I have of water rushing through the forest toward the ditch and culvert. This forest should not be cut! But at the very least that waterway should be included on the plans and include a 300' buffer.

P-22-s-06: P02, tract 10, stand 26

This public forest planned for 'final harvest' is listed as being 95 years old. Yet these are some of the oldest and most magnificent pines I have seen in the Chesapeake/Pocomoke State Forest. There are diverse species of pine in this stand, including Loblolly pine, Pond pine, and Short-leaf pine. The flat-topped structure of these pines is unusual to see on our mostly young pine forests. In our estimation these pines are likely more than 95 years old. Please remove this forest from the harvest plan and core a half-dozen of the elder trees to determine their true age.

P-22-s-07: P02 Tract 34, stand 3

This cut should absolutely be removed from the work plan, it is the worst sort of cut imaginable. First of all the whole stand is wet, and that is likely why it has escaped cutting for the past 100 years. This stand should be inspected on the FSC audit. The auditors will see the sphagnum moss that is evidence of the seasonal flooding, and the prime habitat for salamanders. The scattered ancient pines (likely the reason our state foresters want to cut it) are growing from raised hummocks. They are surrounded by water oaks (*Quercus nigra*) and huge old American hollies (*Ilex opaca*). If this forest is allowed to be cut the soil structure will be damaged and it is likely the forest will never recover to what it once was. Furthermore, this forest is located in the heart of one of the last unbroken forest areas and punching this forest out will fragment the forest and allow edge species to influence the remaining forest. It is very likely that invasive plant species will appear in the forest after any sort of cut here. We are disappointed that our forest managers would even consider such a harvest.

CF-22-s-16: WR24

On the work plan it shows a gap in the stream buffer on stand 19, planned for final harvest (clear cut), yet when I examined the stand there was an actively flowing stream in the area shown with no buffer. Please modify the work plan to make sure the entire stream is buffered. I have photos to share if you are interested.

Stands we have not examined, but are questionable

CF-22-s-12: WR03

Stand 5 is incorrect info when compared to map. Please examine this inconsistency.

CF-22-s-15: WR24

The description of the age of stand 29 on the work plan does not match the description in the official forest records. Please re-examine this and reconsider this harvest.

CF-22-S-09: W02

Stand 12 & 30

CF-22-S-11: W53

Stands 15,16,20

Public notification is inadequate

The call for public comments on the work plan is not well distributed. I have been commenting on the inadequacy of the advertising for comments year after year. I signed up for the MD DNR news, yet I never hear of the public comment period. (I hear about it second-hand through colleagues.) I was on the Citizen's Advisory committee for the forest for ten years, yet I still never get notified. I have sent in comments in most years, yet I never get notified when new work plans are available. All of this adds up to tell me that the notification system is broken.

Another problem with the comment period is that it occurs in late winter so it is impossible to know if there are rare herbaceous plants in the areas planned for harvest. Please do not depend entirely on the Heritage program data for rare plant occurrences, they would be the first to tell you that there are more occurrences than they have time and resources to determine.

I do my best to share information about the comment period, but I would expect DNR to do more. A notice on the website is not enough unless people are somehow directed to that webpage. I ask the FSC auditors to use the number of public comments per year as an indicator of the adequacy of the public notification.

Public comments make no difference

As a member of the public who has taken the time to comment on work plans, I feel that my comments are ignored. Work proceeds as planned, regardless of our comments. For instance, for the 2020 work plan I wrote,

Please remove P-20-S-01 and P-20-S-02 from the work plans. The majority of the Chesapeake/Pocomoke State Forest is young pine monoculture and thereby lacking in biodiversity; but these two stands are much older, approaching or reaching 100 years, and they are composed of a native mixed forest of various tree species. It is just this sort of forest that we should be allowing to mature further and continue the trajectory it has begun in recovering its original biodiversity. A book I authored: Nature's Temples: The Complex World of Old-Growth Forests, shares the scientific references for my viewpoint. These views are not mine alone, they are shared by over 900 members of the Old-Growth Forest Network who live in Maryland. We understand the need for logging some forests, but older forests on our public lands should be maintained for carbon sequestration, biodiversity, and recreation. I look forward to hearing that these stands have been removed from the work plan.

To my knowledge the stands were never removed from the work plan. The draft work plans are available, but there is no final plan I can find of work that was actually done.

Definitions and work descriptions need improvement

In the definition for pre-commercial thinning, it is pointed out that no heavy equipment is used, yet in the definition for first commercial thinning nothing is said about the fact that heavy equipment is used. This feels like a bias.

What herbicide is used for spraying the forests? I have repeatedly asked this question. In the past I have been given the information personally, but it belongs in the work plan. I ask the auditors to require that the name of the herbicides used be part of the work plan.

I am aware that as a requirement of FSC certification that the forest be managed with representative forest types considered, and particularly areas that will be managed for old-growth conditions and buffers for the old-growth areas, yet none of this information is included on the work plans. When I contacted the forest manager for this information I was told, "we do not have any publically available maps that show the exact locations of old growth on Pocomoke." This is a public forest and this information should be publicly accessible. The FSC auditors should require that this information be included on the work plan, and made available to the public.

Citizen's Advisory Committee appears inactive

Only one person on the Citizen's Advisory Committee commented and that comment was only one sentence? I would expect that the persons chosen to be on the committee would be more responsive. As a former member of the Advisory Committee (ecology representative) I can tell you that the committee was not very active, nor were the positions all filled, when I was a member. From the work plan it seems that the same situation is still occurring a decade later. After a ten-year break I called and offered my services on the committee again, but I was basically told I was not needed. Ideally the committee members should be given a tour of the areas planned for harvest. Without keys to the gates it is very difficult for those on this committee to access the forests. I would also appreciate knowing who the people are on the committee that represents me. I ask the auditors to examine the attendance records for the committee.

Thank you for considering my input. My comments represent one thousand Maryland citizens who support the Old-Growth Forest Network.

--

Please reconsider the forests that you have slated for harvest in the near future. Joan Maloof has written a very well-informed letter to you in regard to the intrinsic value of these forests. Old growth forests have so very much to offer people as well as providing habitat for innumerable species. Please rethink the decision. It takes years to reproduce a forest. While it is growing back, if it does, many creatures will die for lack of their natural habitat. What is more valuable, money in your hand or wildlife that will continue to exist in a forest that provides respite for over-stimulated humans.

--

Please consider the use of designated areas within Pocomoke State Forest for off-road motorcycle trail. Currently, there are no such opportunities on the eastern shore. Local communities are missing out on recreational opportunities and subsequent income generated by such.

These activities are not harmful to local flora and fauna if properly managed and in fact would reduce the illegal use of lands that exist today.

--

I support Maryland-DC Audubon's opposition to your plan to cut 121 acres of nearly 100-year old mixed pine and hardwood stands in the Pocomoke State Forest. These 100-year-old stands are all located within the Pocomoke-Nassawango Important Bird Area (IBA)--the largest and most intact forested landscape on the Delmarva Peninsula. Of the 24 species of forest in-dwelling species found on Maryland's coastal plain, 21 breed regularly at this IBA, which hosts significant populations of at-risk bird species. Timber harvests in forest matrices create fragmentation and edge habitat that can severely curtail breeding of target species due to the subsequent invasion of parasitic cowbirds, predators, and invasive plants.

Deciduous forests are the native forest type on Delmarva. Yet, only 16% of the state's Pocomoke/Chesapeake forest is this type of mixed pine/hardwood. The rest is either riparian bottomlands, pine, or cut over timber. I urge you to remove this tract from the plan and to keep this important forest area intact.

--

It has come to my attention that at least 3 of the MD state forests on the Eastern Shore of MD have been or are planned to undergo massive tree cuttings. I oppose this plan and actually would like to know the reasoning behind this. Please advise, and let me know the best way to proceed to voice my concerns.

--

I browsed the four forest reports that are listed in the latest DNR newsletter.

Fascinating.

I noticed in the Green Ridge report the term non-native invasives seemed to imply that natives are not invasive. of course, that is not true, but maybe the emphasis is non-native invasive plants over native invasive.

In the Savage report on page 13 - I liked the idea of deterring new tracts from being developed - I see that idea was also highlighted in other reports.

Thank you for these reports and the opportunity to read them -

The history of fire and the loblolly pine was fascinating in the Chesapeake report

Keep up the good work, DNR!

—

I am a member and past president of the Maryland Native Plant Society and a field trip leader. Our State Forests are gems that need protection, especially since we have no National Forest in

Maryland. Please sharply curtail forest harvesting in State Forests. In these work plans some of the oldest, most biodiverse forests are slated for harvesting. Forests are the most effective carbon sinks and most carbon is released during timber harvesting. Maryland is trying very hard to reduce our carbon emissions!

When you do your final review and finalize your plan, please avoid older mixed forests and unfragmented forests. Heavy equipment, which will be used in some circumstances, damage the ecosystem and introduce invasive species. Please keep our State Forests intact and healthy! And please no clear cutting.

Bethesda, MD

—
 What are you thinking? When we need them the most for our climate. Yes planting more is great. But.... it takes time for them to grow. Please save the trees that are saving us.

Timonium, Md

—
 Please do not clear cut old growth forests. Their eco system is far more complicated than most people realize and it is environmentally and morally wrong to destroy them.

K. SILVICULTURAL PROJECTS

SILVICULTURAL ACTIVITY OVERVIEW

Tables 2 and 3 summarize the proposed silvicultural activities for the 2022 annual work plan on approximately 2,135.4 acres (2.8%) of the Chesapeake Forest and 264.2 acres (1.4%) of Pocomoke State Forest, for a total of 2,399.6 acres (2.6%) on both forests.

Table 2. 2022 Chesapeake Forest Silvicultural Activity Overview. (CF-22-S-1 – CF-22-S-19)

Activity	Acres
First thinning	1,653.9
Second thinning	330.6
Final Harvest	150.9
Total	2,135.4

Table 3. 2022 Pocomoke State Forest Silvicultural Activity Overview. (P-22-S-1 – P-22-S-8)

Activity	Acres
First Thinning	143.2
Final Harvest	121.0
Total	264.2

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 to 10 years of age. The number of trees retained will depend on growth, tree species present, and site productivity. This activity is conducted with hand held power tools and not heavy equipment, thereby reducing adverse impact to the soil.
- **First Commercial Thinning** – Usually performed on plantations 20-25 years old. The objective is to facilitate forest health and promote development of larger trees over a shorter period of time. This is accomplished in plantations by removing every 5th row of trees and selectively thinning (poor form & unhealthy trees) between rows. In naturally regenerated stands, thinning corridors will be established every 50 feet and the stand will be selectively thinned along both sides of the corridor. Approximately 30-40% of the total stand volume will be removed in this process. Stocking levels are determined using a loblolly pine stocking chart based on the basal area, DBH, and trees per acre of the stand (USDA Forest Service, 1986). Crown ratio and site index are other factors that are used to decide whether to thin or not.
- **Second Commercial Thinning** – Usually performed on stands 35-40 years old. The objective is to lengthen the rotation age of the stand and produce larger, healthier trees. In some cases, this technique is used to improve habitat for the Delmarva Fox Squirrel (DFS) and Forest Interior Dwelling Species (FIDS). Approximately 25-30% of the total stand volume will be removed in this process.
- **Selection Harvest** – This includes the removal of single trees and groups of trees within a given stand. This method will be used to distribute age classes and to adjust species composition within a given stand (i.e. riparian buffers, ESA, DFS & 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. The preferred method of regeneration is by natural seeding from adjacent stands, or from trees cut in the clearing operation. Coarse woody debris (slash/tree tops) is left evenly across the site to decompose. A Variable Retention Harvest (VRH) is prescribed to help regulate the forest

growth over the entire forest, ensuring a healthy and vigorous forest condition. Harvesting of young loblolly pine stands is done to help balance the age class distribution across the forest. Currently, about 20% of the two forests is 19 years of age or younger. VRH are also used to regenerate mixed natural stands within ESA's, DFS & Core FIDS areas. If adequate natural regeneration is not obtained within 3 years of the harvest, hand planting of the site is typically required (not required for certain restoration projects, such as bay restoration).

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

SILVICULTURAL PRESCRIPTIONS & STAND DATA

CAROLINE COUNTY

CF-22-S-01

Proposal Name: C03 – Messenger Branch – Stands 1, 7 & 10

Harvest Area: 204.3 acres

Forest Community Types and Development: Stands 1 and 7 are overstocked loblolly pine plantations established in 1998. Stand 10 is an overstocked loblolly pine plantation established in 2000.

Habitats and Species of Management Concern: ESA Zone 1, FIDS, General Management

Water Resources: Twiford Meadow Ditch, Marshyhope Creek watershed

Soil Resources: CdA, CoA, EwA, EwB, FaA, GaA, GaB, IaA, and RoA

Historic Conditions: No known historic features

Silvicultural Prescription: First thinning, retain significant hard mast species

DORCHESTER COUNTY

[CF-22-S-02]

Proposal Name: D13 – Rhodesdale – Stand 2

Harvest Area: 24.4 acres

Forest Community Types and Development: Stand 2 is an overstocked loblolly pine plantation established in 1999 and pre-commercially thinned in 2009.

Habitats and Species of Management Concern: Stream Buffer and DFS Core

Water Resources: Marshyhope Creek watershed

Soil Resources: FmA, HnA, HvA, PnA, and Za

Historic Conditions: No known historic features

Sivilcultural Prescription: First thinning, retain significant hard mast species

[CF-22-S-03]

Proposal Name: D14 – Indiantown – Stands 3, 12, 15 & 16

Harvest Area: 117.7 acres

Forest Community Types and Development: Stand 3 is an overstocked loblolly pine plantation established in 1989. Stand 12 is an overstocked loblolly pine plantation established in 1999. Stand 15 is an overstocked loblolly pine plantation established in 1988. Stand 16 is an overstocked loblolly pine plantation established in 1996.

Habitats and Species of Management Concern: ESA Zone 1, ESA Zone 2, ESA Zone 3 Pulpwood, ESA Zone 3 Sawtimber, and DFS Core

Water Resources: Marshyhope Creek and Nanticoke River watersheds

Soil Resources: FaA, FmA, HnA, HvA, KgB, PnA, and WdA

Historic Conditions: No known historic features

Sivilcultural Prescription: First thinning, retain significant hard mast species, 200' no-cut buffer around Delmarva bays; Final harvest in ESA Zone 1 area adjacent to Jones Thicket Road

SOMERSET COUNTY

[CF-22-S-04]

Proposal Name: S03 – Covington – Stand 1

Harvest Area: 30.1 acres

Forest Community Types and Development: Mature loblolly pine plantation established in 1968, first thinned in 1989, second thinned in 1995, sprayed in 1996, and fertilized in 1997.

Habitats and Species of Management Concern: General Management

Water Resources: Monie Bay watersheds

Soil Resources: QuA

Historic Conditions: No known historic features

Sivilcultural Prescription: Final harvest

[CF-22-S-05]

Proposal Name: S13 – Hradowsky – Stand 1

Harvest Area: 75.8 acres

Forest Community Types and Development: Overstocked loblolly pine plantation established in 1999 and released in 2001.

Habitats and Species of Management Concern: General Management

Water Resources: Manokin Creek watershed

Soil Resources: CRA, FhA, HvA, IgB, KgB, and MuA

Historic Conditions: No known historic features

Sivilcultural Prescription: First thinning

[CF-22-S-06]

Proposal Name: S32 – Haislip Greenhill – Stands 1 & 3

Harvest Area: 43.9 acres

Forest Community Types and Development: Stand 1 is overstocked loblolly pine naturally regenerated in 1997 and pre-commercially thinned in 2003. Stand 3 is overstocked loblolly pine naturally regenerated in 1994 and pre-commercially thinned in 2001.

Habitats and Species of Management Concern: DFS Core

Water Resources: Big Annemessex River, Manokin River, and Pocomoke Sound watersheds

Soil Resources: FgA and OKA

Historic Conditions: No known historic features

Sivilcultural Prescription: First thinning, retain significant hard mast species

[CF-22-S-07]

Proposal Name: S44 – Phillips – Stands 1, 3, 5 & 9

Harvest Area: 131.8 acres

Forest Community Types and Development: Stand 1 is an overstocked loblolly pine plantation established in 2001. Stand 3 is an overstocked loblolly pine plantation established in 2000, sprayed in 2001, and pre-commercially thinned in 2009. Stand 5 is overstocked loblolly pine naturally regenerated in 1996 and pre-commercially thinned in 2001. Stand 9 is an overstocked loblolly pine plantation established in 2000 and sprayed in 2001.

Habitats and Species of Management Concern: General Management, Stream Buffer

Water Resources: Big Annemessex River and Manokin River watersheds

Soil Resources: FgA, OKA, OtA, and QuA

Historic Conditions: No known historic features

Sivilcultural Prescription: First thinning, 50' no-cut stream buffer on east side of the harvest area

WICOMICO COUNTY

[CF-22-S-08]

Proposal Name: W02 – Aughty Naughty – Stands 25, 26, 28 & 43

Harvest Area: 114.3 acres

Forest Community Types and Development: Stand 25 is overstocked loblolly pine naturally regenerated in 1993. Stands 26 & 28 are overstocked loblolly pine plantations established in 1996. Stand 43 is an overstocked loblolly pine plantation established in 1995.

Habitats and Species of Management Concern: ESA Zone 2, ESA Zone 3 Pulpwood, Stream Buffer, and DFS Future

Water Resources: Nanticoke River watershed

Soil Resources: AsA, HvA, IeA, KgB, Ma, MuA, RsB, RuB, and RwB

Historic Conditions: No known historic features

Sivilcultural Prescription: First thinning, retain significant hard mast species

[CF-22-S-09]

Proposal Name: W02 – Aughty Naughty – Stands 1, 12, 27, 30 & 31

Harvest Area: 136.8 acres

Forest Community Types and Development: Stand 1 is an overstocked loblolly pine plantation established in 1997. Stand 12 is an overstocked loblolly pine plantation established in 1983. Stand 27 is overstocked loblolly pine naturally regenerated in 1996 and pre-commercially thinned in 2003. Stand 30 is overstocked loblolly pine naturally regenerated in 1997 and pre-commercially thinned in 2003. Stand 31 is an overstocked loblolly pine plantation established in 1998.

Habitats and Species of Management Concern: Stream Buffer and DFS Future

Water Resources: Bratten Creek, Nanticoke River watershed

Soil Resources: AsA, BhA, HbA, HnA, HvA, IeB, KgB, MuA, RsB, and RwB

Historic Conditions: No known historic features
Silvicultural Prescription: First thinning, retain significant hard mast species

[CF-22-S-10]

Proposal Name: W39 – Jesse Bratten – Stand 1
Harvest Area: 102.2 acres
Forest Community Types and Development: Overstocked loblolly pine plantation established in 1996.
Habitats and Species of Management Concern: Stream Buffer and General Management
Water Resources: Wicomico River Head watershed
Soil Resources: CoA, EwC, HvA, KgB, LgA, RkA, and RsB
Historic Conditions: No known historic features
Silvicultural Prescription: First thinning

[CF-22-S-11]

Proposal Name: W53 – Twigg-Fooks – Stands 1, 15, 16 & 20
Harvest Area: 320.1 acres
Forest Community Types and Development: Stand 1 is an overstocked loblolly pine plantation established in 1999. Stand 15 is an overstocked loblolly pine plantation established in 1994, stand 16 is an overstocked loblolly pine plantation established in 1990. Stand 20 is an overstocked loblolly pine plantation established in 2002.
Habitats and Species of Management Concern: ESA Zone 1, ESA Zone 3 Sawtimber, Stream Buffer, and DFS Future
Water Resources: Sturges Creek; Dividing Creek and Nassawango Creek watersheds
Soil Resources: AsA, CoA, EkA, FgA, HuA, HvA, KfA, KgB, KsA, KsB, LfA, LgA, LO, Ma, MuA, PrA, RoB, RuB, WdB, and Za
Historic Conditions: No known historic features
Silvicultural Prescription: First thinning, retain significant hard mast species and pitch, shortleaf, or pond pines

WORCESTER COUNTY

[CF-22-S-12]

Proposal Name: WR03 – WM Carter – Stands 4, 5 & 6
Harvest Area: 96.1 acres
Forest Community Types and Development: Stand 4 is an overstocked loblolly pine plantation established in 2000, and sprayed in 2000 and 2001. Stand 5 is an overstocked loblolly pine plantation established in 1998. Stand 6 is an overstocked loblolly pine plantation established in 1994 and sprayed in 2000.
Habitats and Species of Management Concern: ESA Zone 1, ESA Zone 3 Sawtimber, Stream Buffer, Core FIDS, and General Management
Water Resources: Upper Pocomoke River watershed
Soil Resources: AsA, HmA, HuA, KsB, Ma, MuA, RuA, RuB, and W
Historic Conditions: No known historic features
Silvicultural Prescription: First thinning, retain significant hard mast species

[CF-22-S-13]

Proposal Name: WR22 – Whitesburg – Stands 2, 3 & 8
Harvest Area: 147.8 acres
Forest Community Types and Development: Stand 2 is overstocked loblolly pine naturally regenerated in 1996. Stand 3 is an overstocked loblolly pine plantation established in 1998 and pre-commercially thinned in 2009. Stand 8 is overstocked loblolly pine naturally regenerated in 1998 and pre-commercially thinned in 2009.
Habitats and Species of Management Concern: ESA Zone 1 Sand Ridge, ESA Zone 3 Sawtimber, and DFS Future

Water Resources: Dividing Creek watershed

Soil Resources: AsA, BhA, CeB, EvB, FaA, HuA KsA, KsB, MuA, RuA, RuB, and WdA

Historic Conditions: No known historic features

Silvicultural Prescription: First thinning, retain significant hard mast species and pitch, shortleaf, or pond pines

[CF-22-S-14]

Proposal Name: WR22 – Whitesburg – Stand 4

Harvest Area: 22.3 acres

Forest Community Types and Development: Overstocked loblolly pine plantation established in 1979 and first thinned in 1999.

Habitats and Species of Management Concern: DFS Future

Water Resources: Dividing Creek watershed

Soil Resources: AsA, BhA, FaA, MuA, and WdA

Historic Conditions: No known historic features

Silvicultural Prescription: Second thinning, retain significant hard mast species

[CF-22-S-15]

Proposal Name: WR24 – Johnson & Johnson – Stands 23, 25, 27, 28 & 29

Harvest Area: 286.1 acres

Forest Community Types and Development: Stand 23 is an overstocked loblolly pine plantation established in 1985, first thinned in 2002, and burned in 2006. Stand 25 is an overstocked loblolly pine plantation established in 1987 and first thinned in 2009. Stand 27 is an overstocked loblolly pine plantation established in 1983 and first thinned in 2002. Stand 28 is an overstocked loblolly pine plantation established in 1988 and first thinned in 2009. Stand 29 is an overstocked loblolly pine plantation established in 1975, first thinned in 1993, and burned in 2006.

Habitats and Species of Management Concern: ESA Zone 1, ESA Zone 3 Pulpwood, ESA Zone 3 Sawtimber, Stream Buffer, and DFS Future

Water Resources: Lower Pocomoke River watershed

Soil Resources: AsA, BhA, CeA, CeB, EkA, EvB, EvD, FaA, GaC, HmA, HmB, HuA, KeA, LO, MpA, MpB, MuA, OtA, WdA, and WdB

Historic Conditions: No known historic features

Silvicultural Prescription: Second thinning, retain significant hard mast species; refer to the Heritage comments for areas to avoid for logging decks

[CF-22-S-16]

Proposal Name: WR24 – Johnson & Johnson – Stands 19 & 20

Harvest Area: 66.5 acres

Forest Community Types and Development: Stand 19 is a mature loblolly pine plantation established in 1969 and first thinned in 1995. Stand 20 is a mature loblolly pine plantation established in 1969, first thinned in 1995, and second thinned in 2001.

Habitats and Species of Management Concern: ESA Zone 3 Sawtimber, Stream Buffer, and DFS Future

Water Resources: Lower Pocomoke River watershed

Soil Resources: CeA, FaA, HmA, HmB, HuA, KeA, MpA, MpB, OtA, and WdB

Historic Conditions: No known historic features

Silvicultural Prescription: Final harvest, retain any significant hard mast species, no harvest in ground-verified stream buffer areas

[CF-22-S-17]

Proposal Name: WR34 – Selby – Stands 5, 6, 7, 15 & 16

Harvest Area: 142.4 acres

Forest Community Types and Development: Stand 5 is an overstocked loblolly pine plantation established in 1985. Stand 6 is an overstocked loblolly pine plantation established in 2000 and sprayed in 2001. Stand 7 is an overstocked loblolly pine plantation established in 1999 and sprayed in 2001. Stand 15 is an overstocked loblolly pine plantation established in 2000 and sprayed in 2001. Stand 16 is an overstocked loblolly pine plantation established in 1999.

Habitats and Species of Management Concern: ESA Zone 1, ESA Zone 1 Sand Ridge, ESA Zone 3 Pulpwood, Stream Buffer, and DFS Core

Water Resources: Chincoteague Bay and Lower Pocomoke River watersheds

Soil Resources: AsA, BhA, CeA, CeB, EvB, EvD, FaA, FmA, FmB, GaC, HbA, HmA, HmB, HuA, KsA, MuA, OtA, RoB, RuA, RuB, SaB, WdA, WdB, and Za

Historic Conditions: MHT Grid – C506_R266, C508_R265, C509_R265, C509_R266

Silvicultural Prescription: First thinning, retain significant hard mast species

[CF-22-S-18]

Proposal Name: WR34 – Selby – Stands 2 & 3

Harvest Area: 22.2 acres

Forest Community Types and Development: Stand 2 is overstocked loblolly pine naturally regenerated in 1977 and first thinned in 1999. Stand 3 is overstocked loblolly pine naturally regenerated in 1975 and first thinned in 1993.

Habitats and Species of Management Concern: ESA Zone 1, ESA Zone 1 Sand Ridge, ESA Zone 3 Pulpwood, and DFS Core

Water Resources: Chincoteague Bay watershed

Soil Resources: BhA, CeB, EvB, FaA, HbA, HmB, KsA, RoB, RuB, and Za

Historic Conditions: MHT Grid – C508_R265

Silvicultural Prescription: Second thinning, retain significant hard mast species

[CF-22-S-19]

Proposal Name: WR34 – Selby – Stands 7, 15 & 16

Harvest Area: 51.5 acres

Forest Community Types and Development: Stand 7 is an overstocked loblolly pine plantation established in 1999 and sprayed in 2001. Stand 15 is an overstocked loblolly pine plantation established in 2000 and sprayed in 2001. Stand 16 is an overstocked loblolly pine plantation established in 1999.

Habitats and Species of Management Concern: ESA Zone 3 Pulpwood

Water Resources: Chincoteague Bay watershed

Soil Resources: AsA, BhA, FaA, FmA, FmB, HmA, HuA, KsA, MuA, RoB, RuA, RuB, WdA, WdB, and Za

Historic Conditions: MHT Grid – C508_R265, C509_R266

Silvicultural Prescription: Final harvest, retain significant hard mast species

POCOMOKE STATE FOREST

[P-22-S-01]

Proposal Name: P02 – Nazareth Church – Tract 3 – Stand 1

Harvest Area: 26.9 acres

Forest Community Types and Development: Overstocked pine/hardwood naturally regenerated in 1994.

Habitats and Species of Management Concern: ESA Zone 1 and DFS Future Core

Water Resources: Dividing Creek watershed

Soil Resources: AsA, BhA, Ma, MuA, and RuB

Historic Conditions: No known historic features

Silvicultural Prescription: First thinning, retain significant hard mast species; refer to the Heritage comments for areas to avoid for logging decks

[P-22-S-02]

Proposal Name: P02 – Nazareth Church – Tract 3 – Stand 4

Harvest Area: 22.6 acres

Forest Community Types and Development: Overstocked pine/hardwood naturally regenerated in 1998.

Habitats and Species of Management Concern: DFS Future Core

Water Resources: Dividing Creek watershed

Soil Resources: AsA, HuA, KsB, and MuA

Historic Conditions: No known historic features

Silvicultural Prescription: First thinning, retain significant hard mast species

[P-22-S-03]

Proposal Name: P02 – Nazareth Church – Tract 6 – Stand 3

Harvest Area: 17.9 acres

Forest Community Types and Development: Overstocked pine/hardwood plantation established in 1999.

Habitats and Species of Management Concern: DFS Future Core

Water Resources: Dividing Creek watershed

Soil Resources: AsA, BhA, and MuA

Historic Conditions: No known historic features

Silvicultural Prescription: First thinning, retain significant hard mast species

[P-22-S-04]

Proposal Name: P02 – Nazareth Church – Tract 6 – Stand 6

Harvest Area: 63.7 acres

Forest Community Types and Development: Mature loblolly pine naturally regenerated in 1923.

Habitats and Species of Management Concern: DFS Future Core

Water Resources: Dividing Creek watershed

Soil Resources: AsA, BhA, HmA, KsA, MuA, RuA, and RuB

Historic Conditions: No known historic features

Silvicultural Prescription: Final harvest, retain significant hard mast species, pond pine, shortleaf pine

[P-22-S-05]

Proposal Name: P02 – Nazareth Church – Tract 8 – Stand 3

Harvest Area: 23.1 acres

Forest Community Types and Development: Overstocked pine/hardwood naturally regenerated in 1996.

Habitats and Species of Management Concern: DFS Future Core

Water Resources: Dividing Creek watershed

Soil Resources: EvB, KsA, MuA, RuA, and RuB

Historic Conditions: No known historic features

Silvicultural Prescription: First thinning, retain significant hard mast species

[P-22-S-06]

Proposal Name: P02 – Nazareth Church – Tract 10 – Stand 26

Harvest Area: 29.6 acres

Forest Community Types and Development: Mature pine/hardwood naturally regenerated in 1922.

Habitats and Species of Management Concern: ESA Zone 1 and DFS Future Core

Water Resources: Dividing Creek watershed

Soil Resources: AsA, BhA, EvB, EvD, GaB, KsA, KsB, MuA, and RuB

Historic Conditions: No known historic features

Silvicultural Prescription: Final harvest, retain significant hard mast species, pond pine, shortleaf pine; if possible, maintain a minimum residual BA of shortleaf pine of 30-45 ft²/ac

[P-22-S-07]

Proposal Name: P02 – Ralph Pusey – Tract 34 – Stand 3

Harvest Area: 27.7 acres

Forest Community Types and Development: Mature pine/hardwood naturally regenerated in 1926.

Habitats and Species of Management Concern: DFS Future Core

Water Resources: Dividing Creek watershed

Soil Resources: AsA, BhA, HuA, and KsB

Historic Conditions: No known historic features

Silvicultural Prescription: Final harvest, retain significant hard mast species, pond pine, shortleaf pine

[P-22-S-08]

Proposal Name: P07 – Chandler – Tract 21 – Stands 5 & 6

Harvest Area: 52.7 acres

Forest Community Types and Development: Stand 5 is an overstocked loblolly pine plantation established in 1999. Stand 6 is overstocked pine/hardwood naturally regenerated in 2001.

Habitats and Species of Management Concern: ESA Zone 1, Stream Buffer, and DFS Future Core

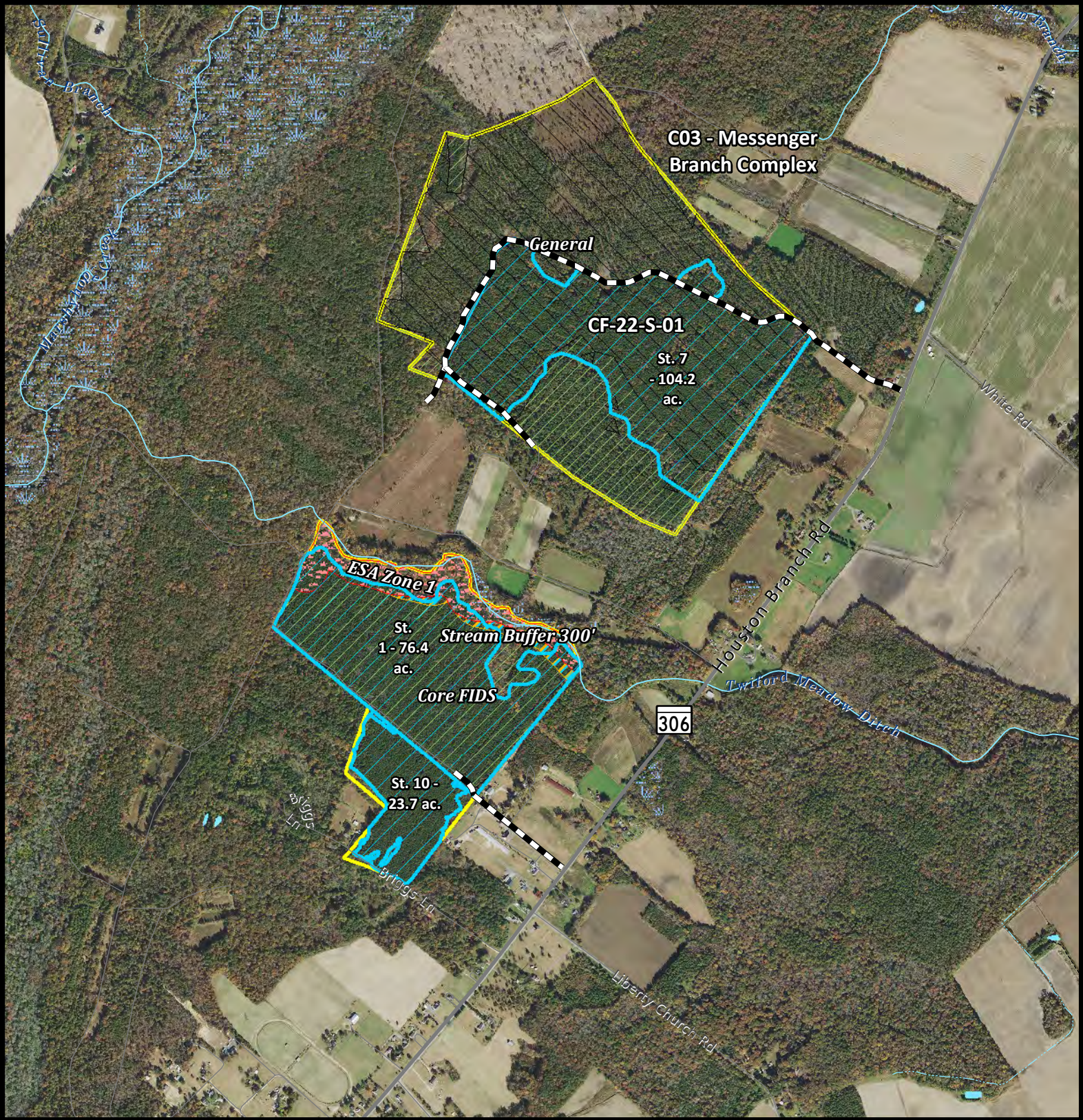
Water Resources: Hardship Branch and Lower Pocomoke River watershed

Soil Resources: CeB, FaA, GaA, GaB, GaC, HmB, HuA, KsA, KsB, WdA, WdB, and Za

Historic Conditions: No known historic features

Silvicultural Prescription: First thinning, retain significant hard mast species

SILVICULTURAL SITE MAPS



C03 - Messenger Branch Complex

General

CF-22-S-01

St. 7
- 104.2
ac.

ESA Zone 1

St. 1 - 76.4
ac.

Stream Buffer 300'

Core FIDS

St. 10 - 23.7
ac.

306

CF-22-S-01

Scale: 1" = 1,320'
Date: 06/2020

Legend

CF AWP Activity

2022 First Thinning

CF Management

Core FIDS

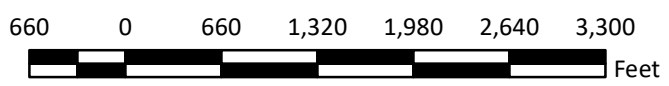
ESA Zone 1



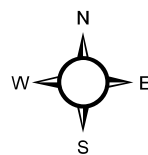
General

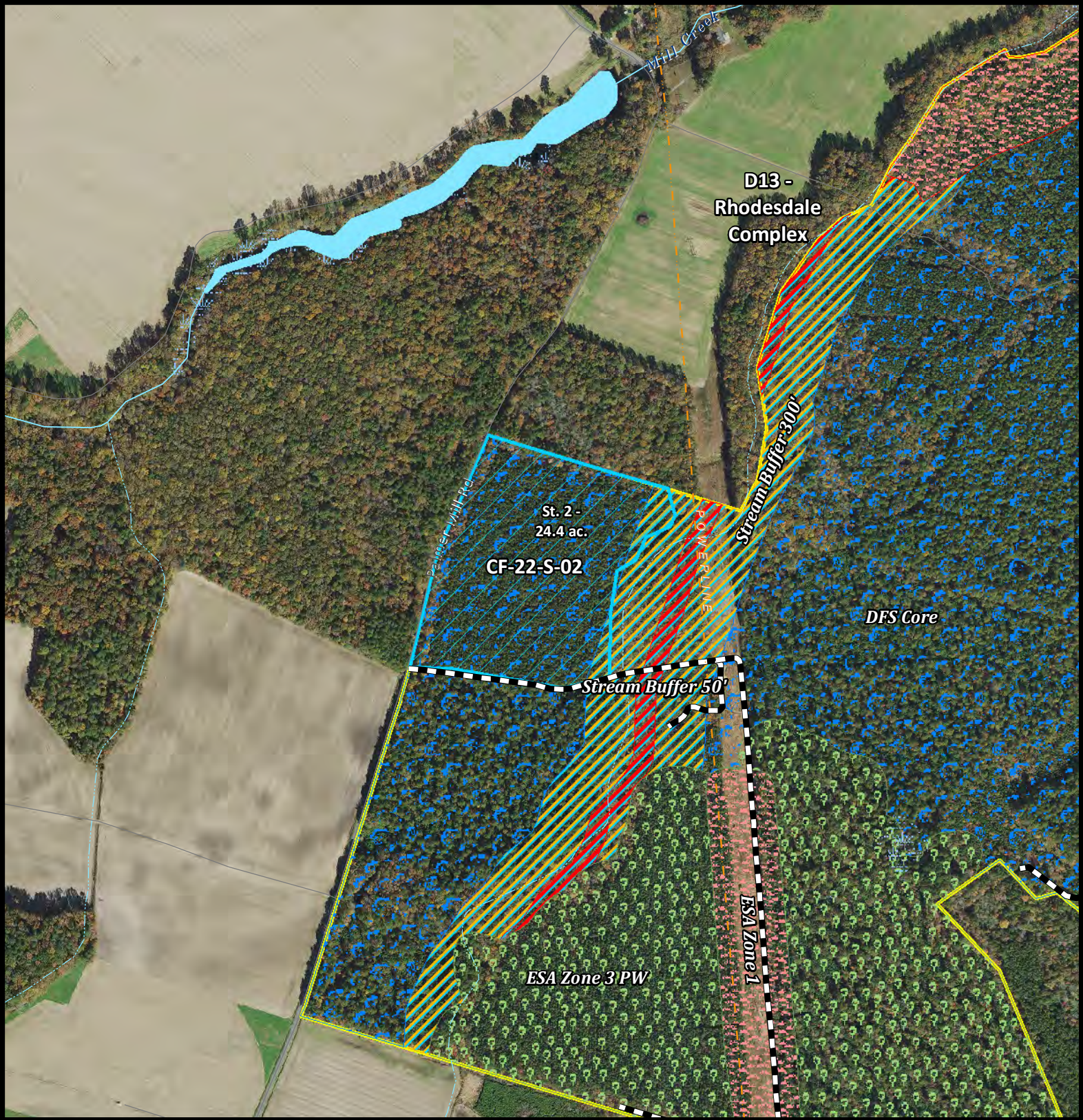


Stream Buffer 300'



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





CF-22-S-02

Scale: 1" = 660'
Date: 06/2020

Legend

CF AWP Activity

2022 First Thinning

CF Management

DFS Core

ESA Zone 1



ESA Zone 3 PW



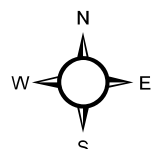
Stream Buffer 50'

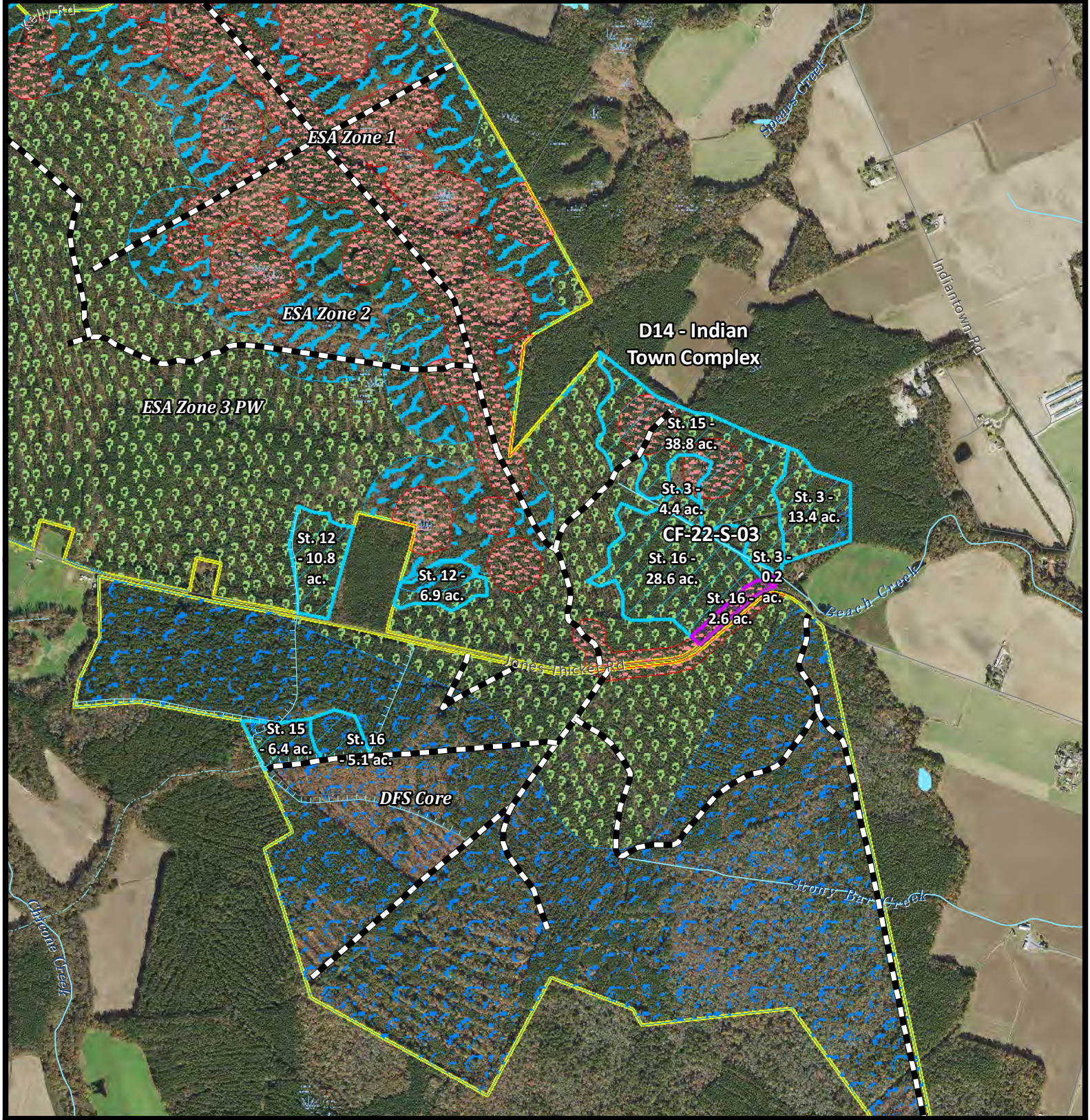


Stream Buffer 300'



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



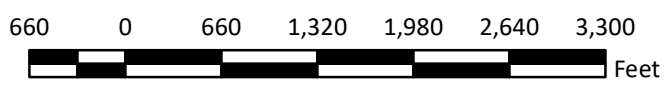


**D14 - Indian
Town Complex**

CF-22-S-03

Legend

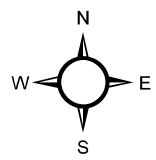
- | | | |
|------------------------|----------------------|---------------|
| CF AWP Activity | CF Management | ESA Zone 2 |
| 2022 First Thinning | DFS Core | ESA Zone 3 PW |
| 2022 Final Harvest | ESA Zone 1 | ESA Zone 3 ST |

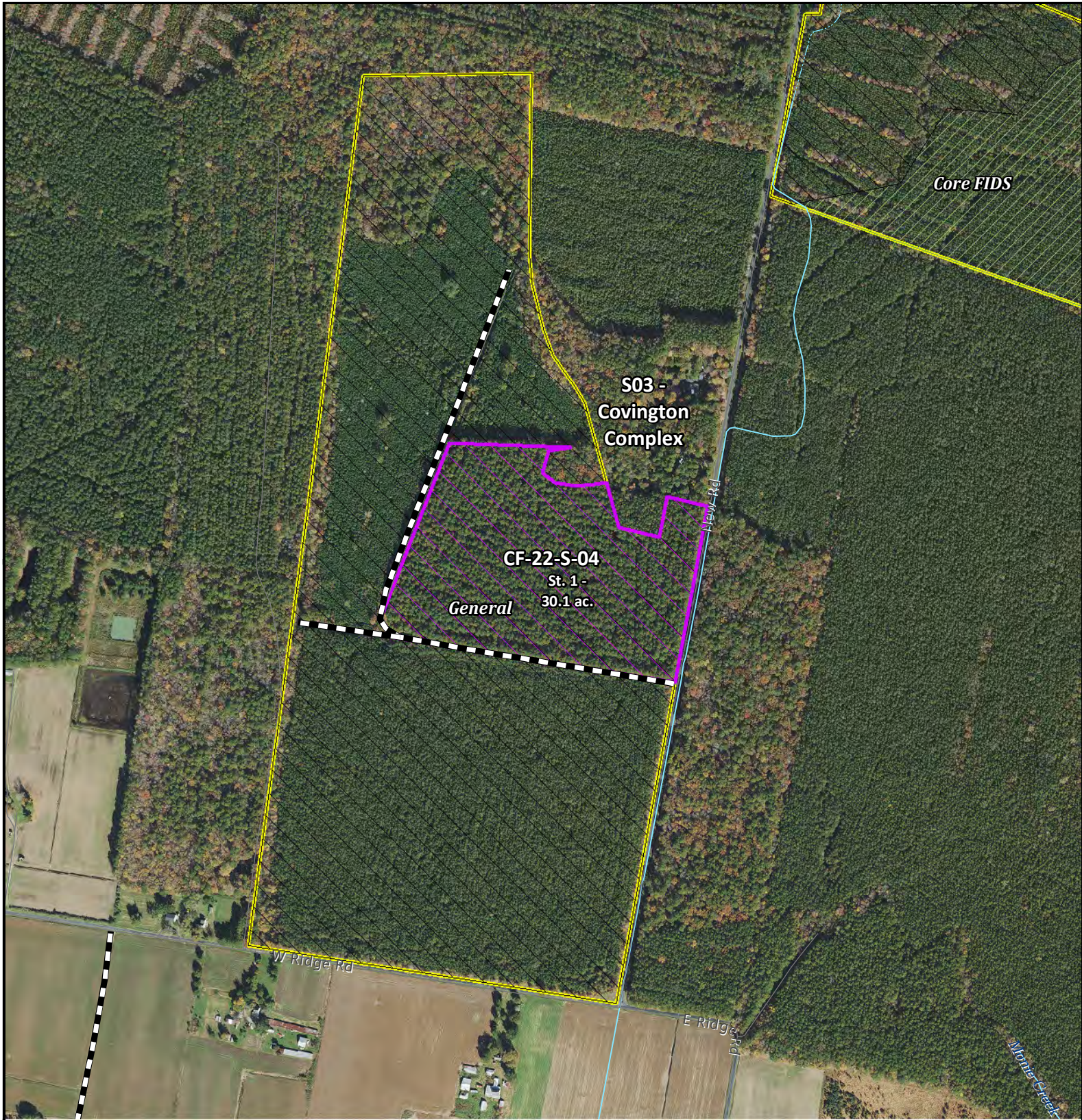


This map is for planning purposes only.
This map is not a boundary survey

CF-22-S-03

Scale: 1" = 1,320'
Date: 12/2020





CF-22-S-04

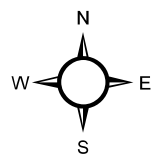
Scale: 1" = 660'
Date: 06/2020

Legend

- | | | |
|------------------------|----------------------|---------|
| CF AWP Activity | CF Management | General |
| 2022 Final Harvest | Core FIDS | |



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





CF-22-S-05

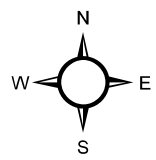
Scale: 1" = 660'
Date: 06/2020

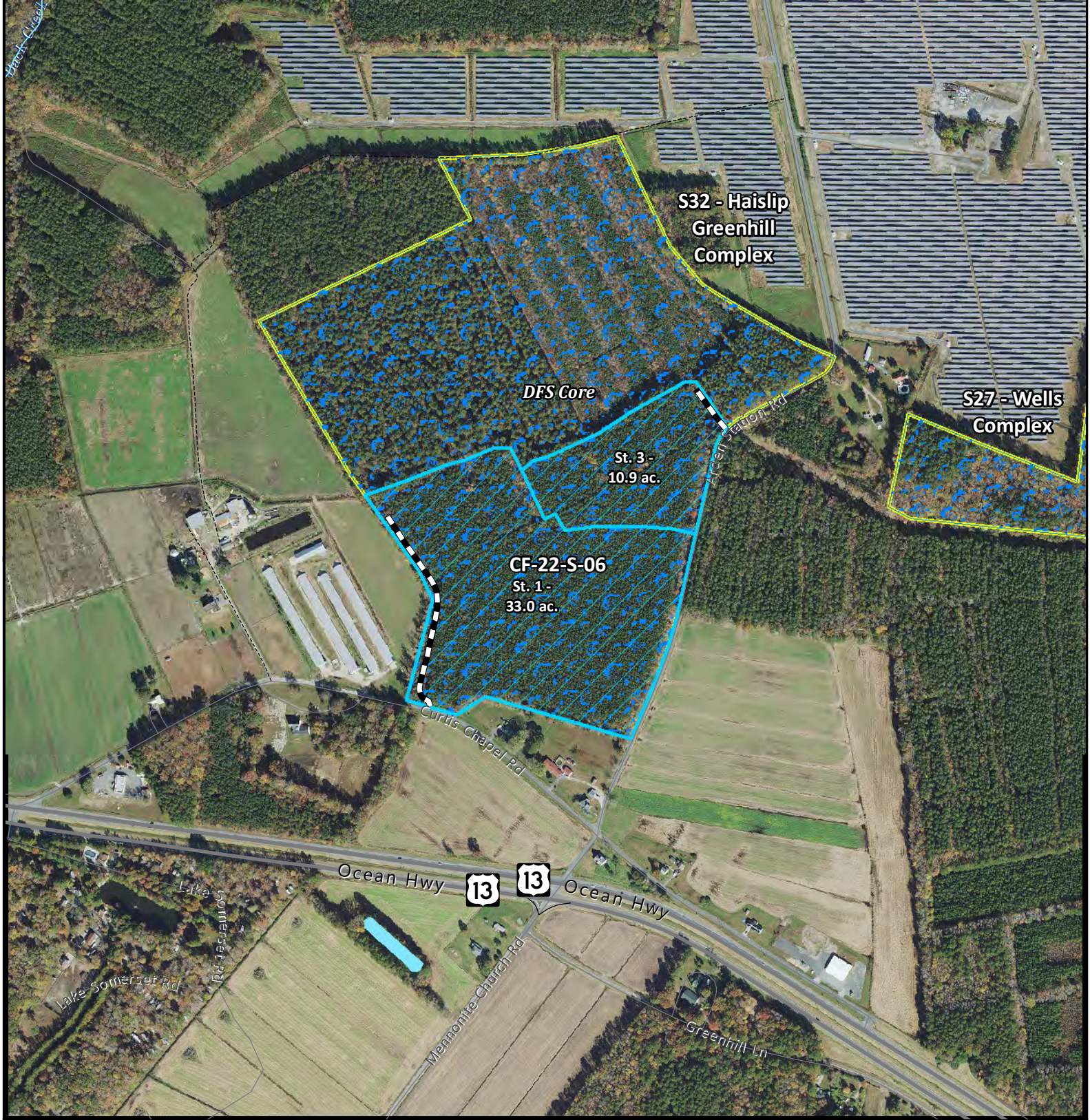
Legend

- CF AWP Activity**
-  2022 First Thinning
- CF Management**
-  General



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






CF-22-S-06

Scale: 1" = 660'
Date: 06/2020

Legend

CF AWP Activity

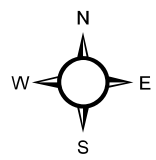
 2022 First Thinning

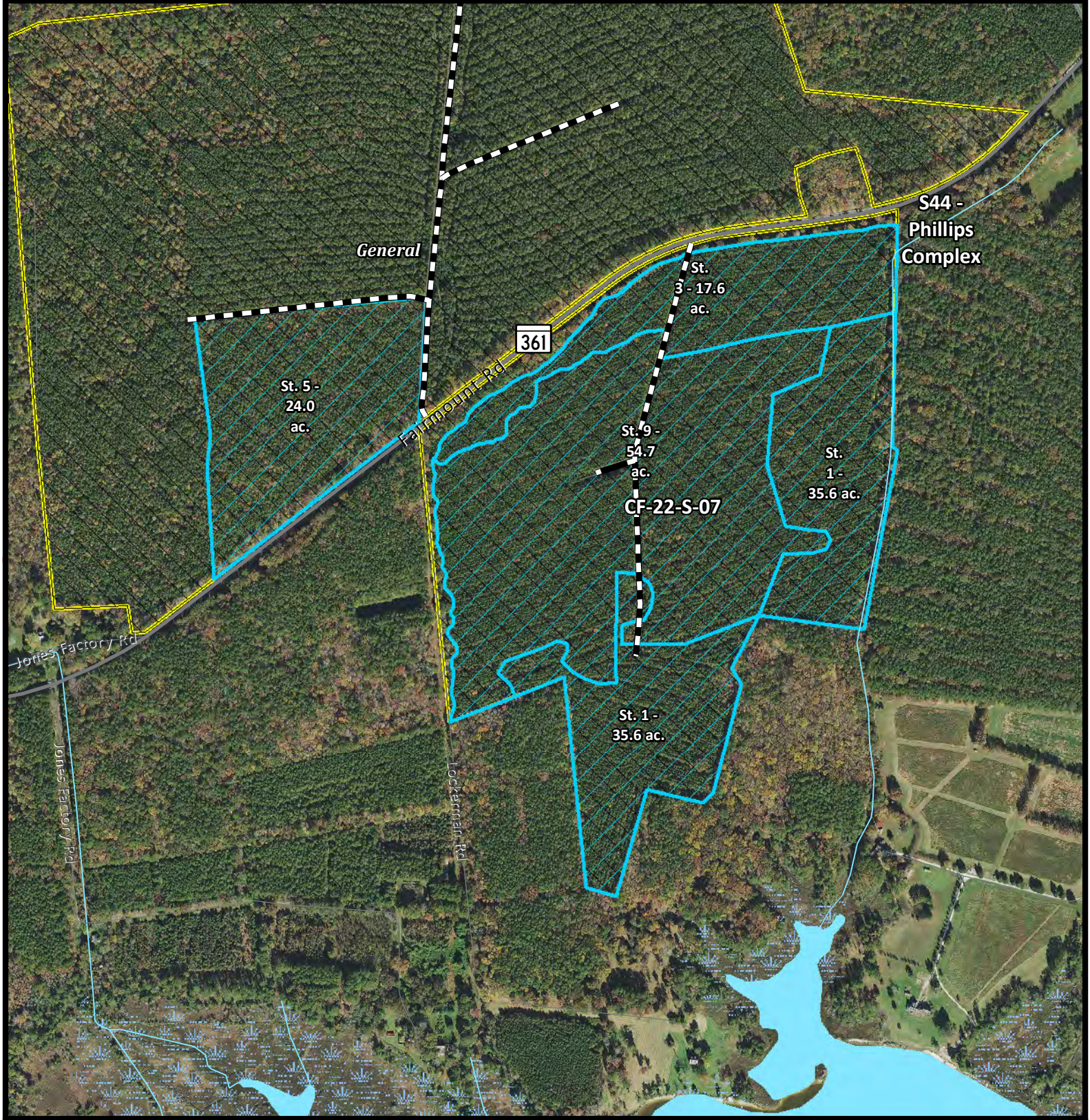
CF Management

 DFS Core



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





CF-22-S-07

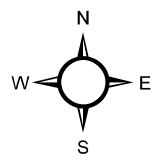
Scale: 1" = 660'
Date: 06/2020

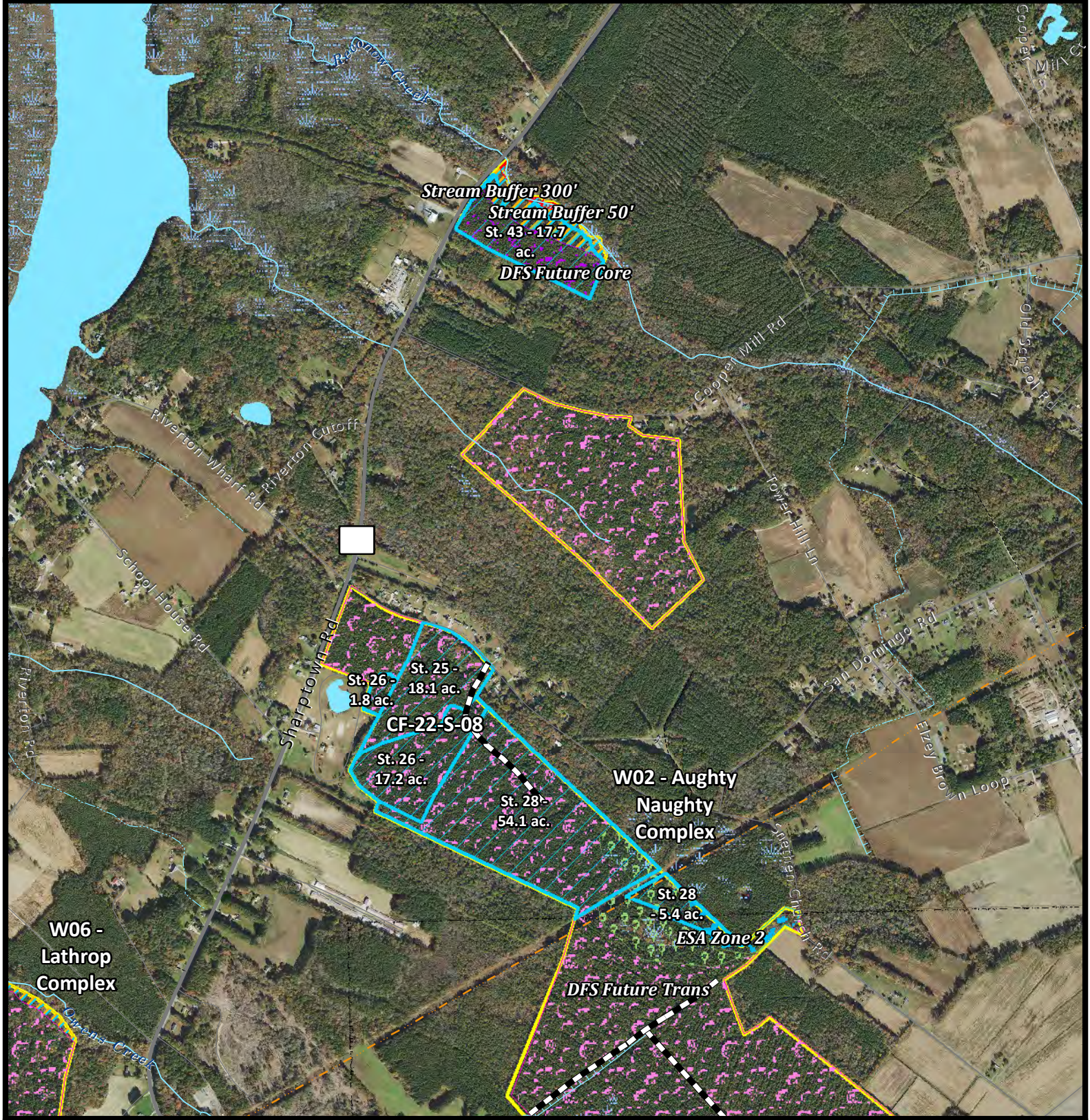
Legend

- CF AWP Activity**
-  2022 First Thinning
- CF Management**
-  General



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





Legend

CF AWP Activity

2022 First Thinning

CF Management

DFS Future Core

DFS Future Translocation

ESA Zone 2

ESA Zone 3 PW

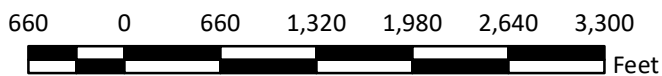
Stream Buffer 50'

Stream Buffer 300'

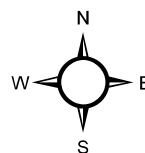
CF-22-S-08

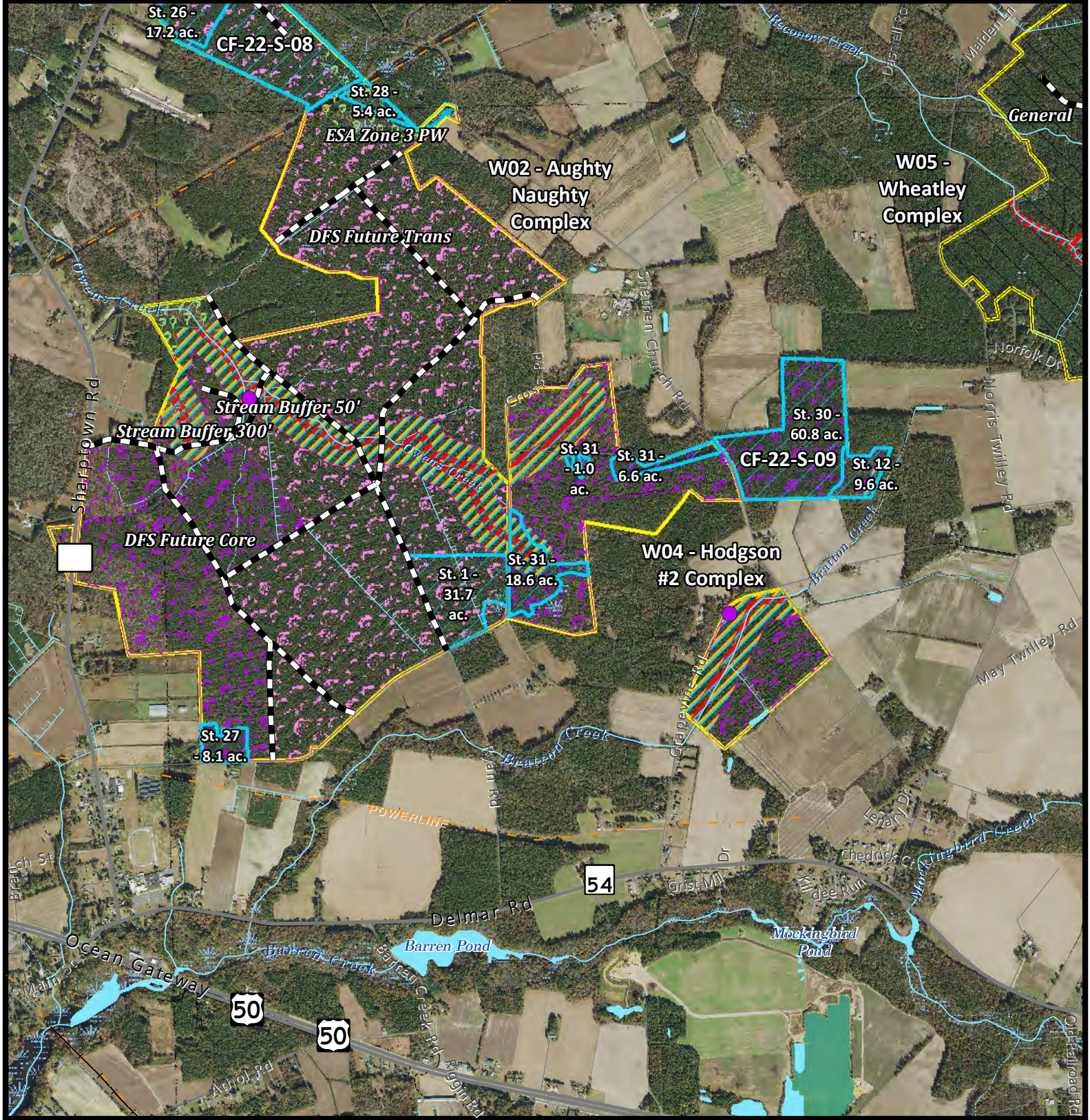
Scale: 1" = 1,320'

Date: 06/2020



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



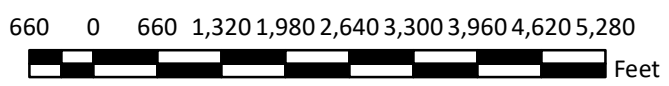


Legend

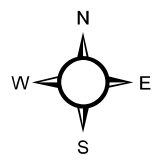
- | | | |
|------------------------|--------------------------|-------------------|
| Home Sites | CF Management | ESA Zone 3 PW |
| CF AWP Activity | DFS Future Core | General |
| 2022 First Thinning | DFS Future Translocation | Stream Buffer 50' |
| ESA Zone 2 | Stream Buffer 300' | |

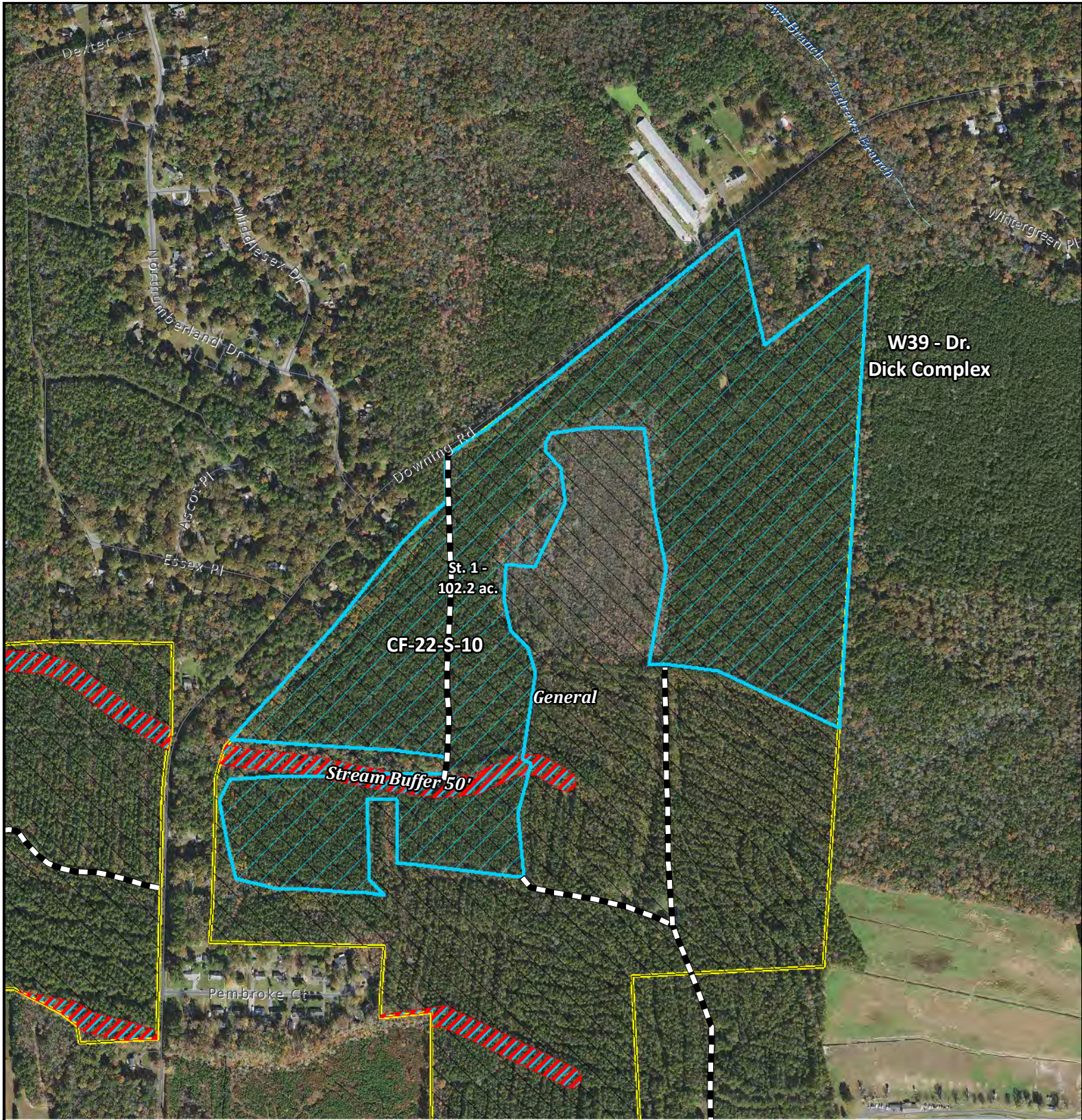
CF-22-S-09

Scale: 1" = 1,980'
Date: 06/2020



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





CF-22-S-10

Scale: 1" = 660'
Date: 06/2020

Legend

CF AWP Activity

2022 First Thinning

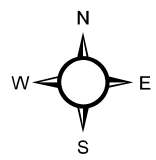
CF Management

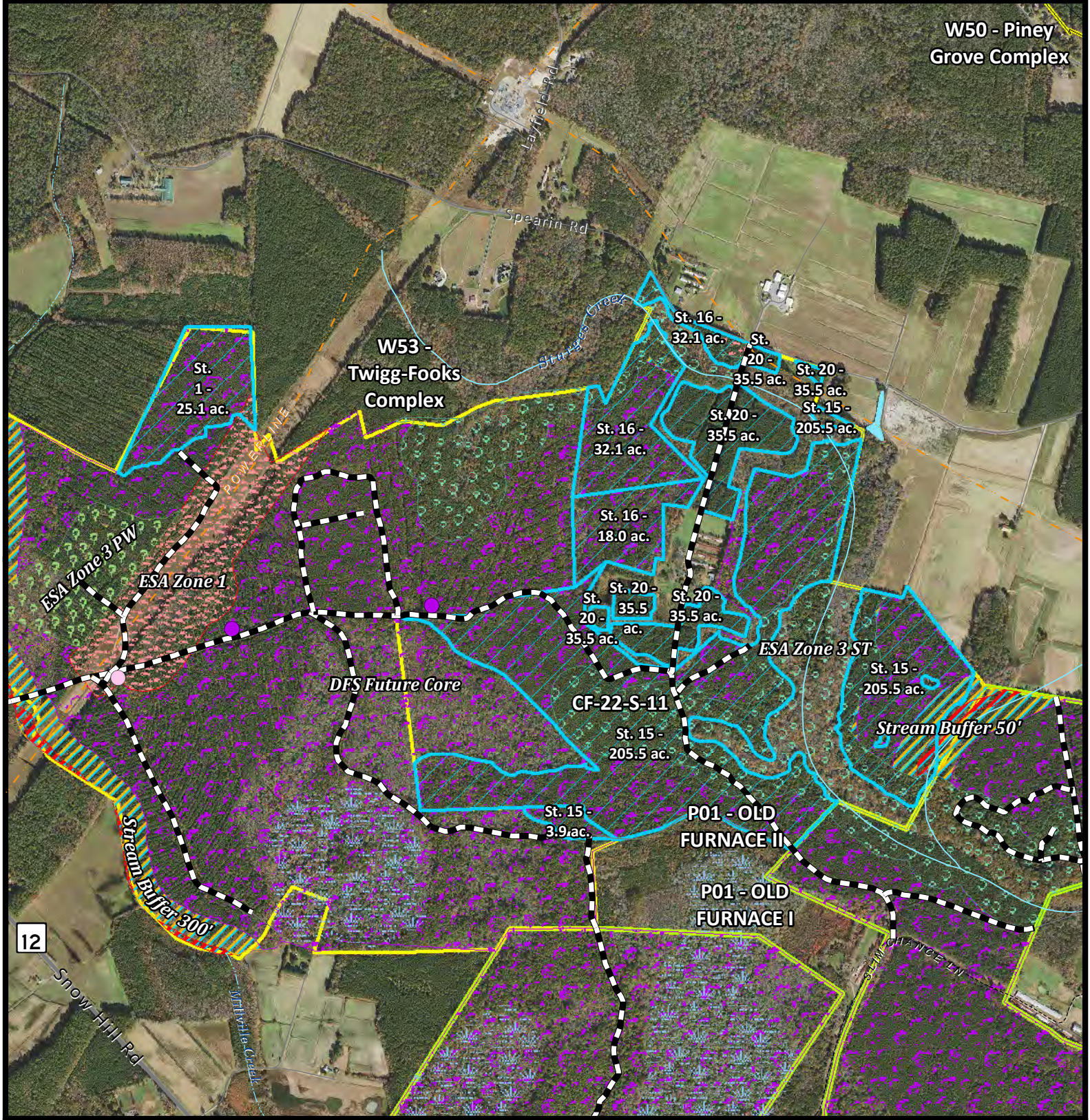
General

Stream Buffer 50'



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



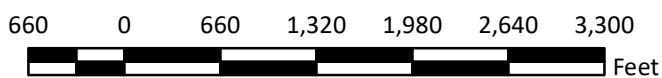


Legend

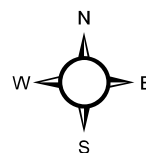
- | | | |
|------------------------|----------------------|-------------------|
| Home Sites | CF Management | ESA Zone 3 ST |
| CF AWP Activity | DFS Future Core | General |
| 2022 First Thinning | ESA Zone 1 | Stream Buffer 50' |
| ESA Zone 3 PW | Stream Buffer 300' | |

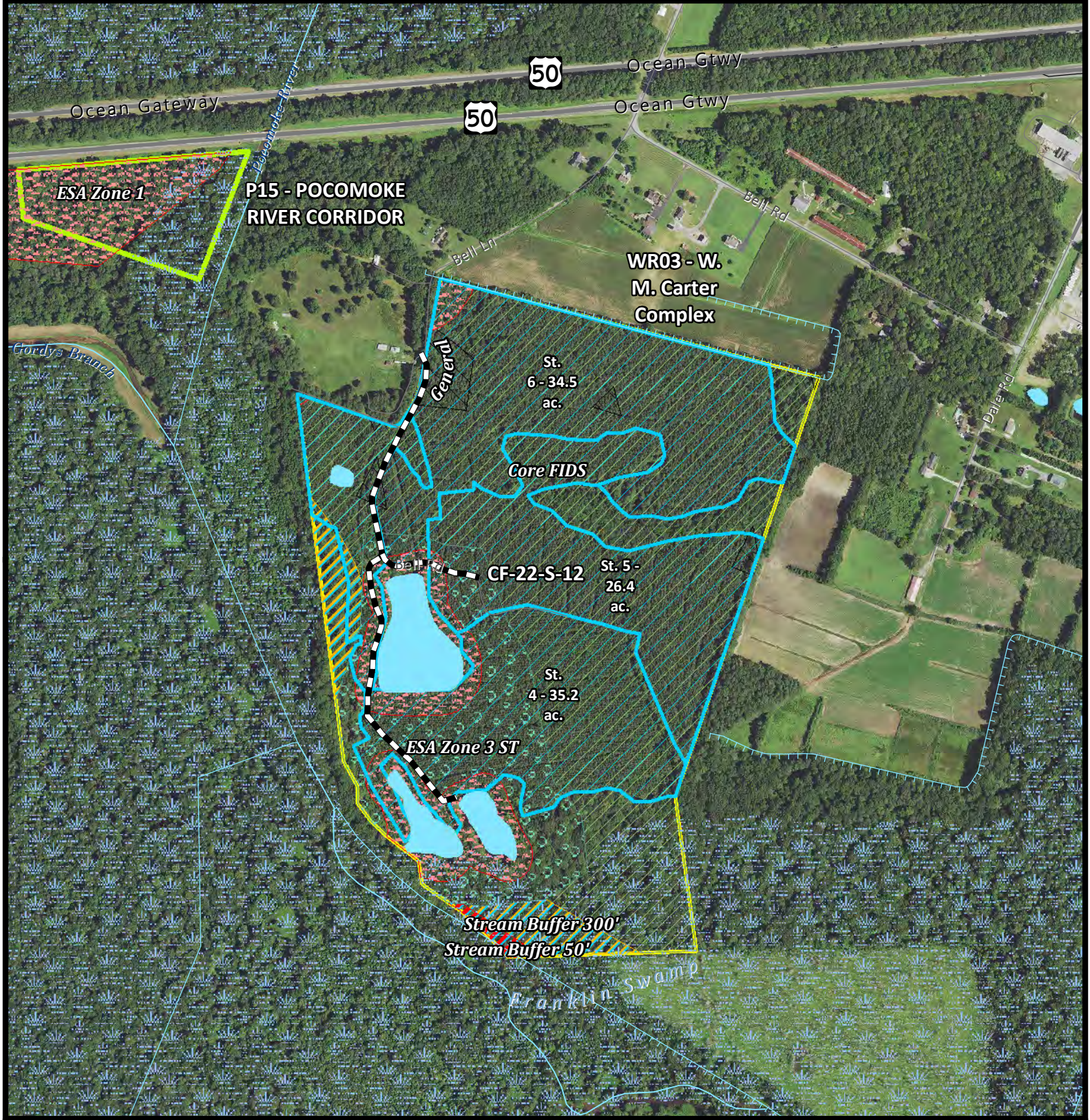
CF-22-S-11

Scale: 1" = 1,320'
Date: 06/2020



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





Legend

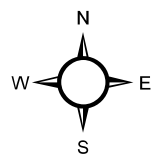
- | | | |
|------------------------|----------------------|--------------------|
| CF AWP Activity | CF Management | General |
| 2022 First Thinning | Core FIDS | Stream Buffer 50' |
| ESA Zone 1 | ESA Zone 3 ST | Stream Buffer 300' |

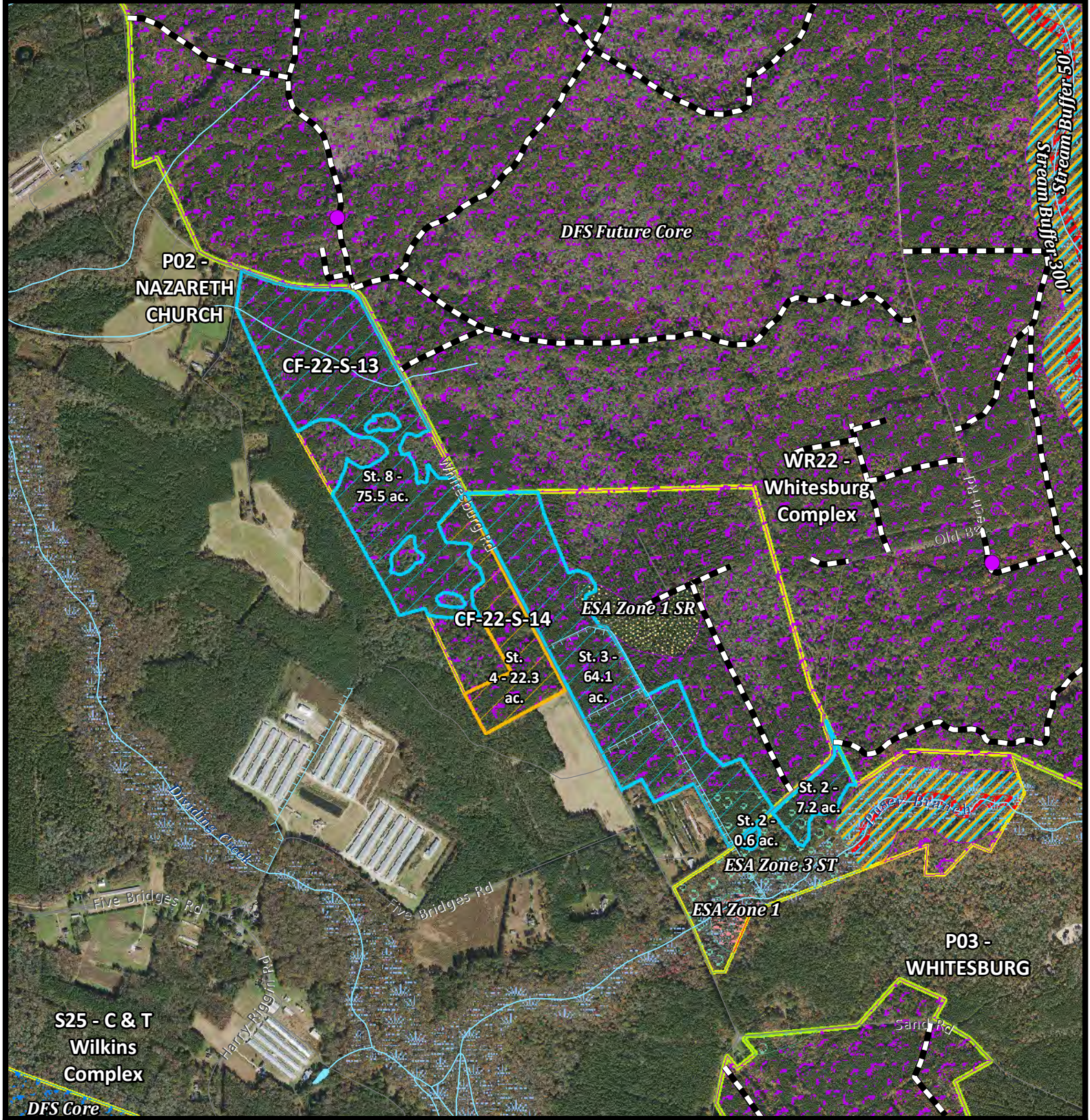
CF-22-S-12

Scale: 1" = 660'
Date: 06/2020



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



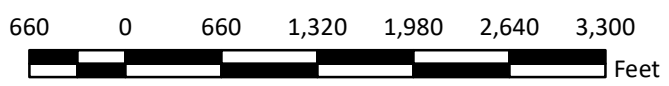


Legend

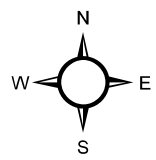
- | | | |
|------------------------|----------------------|--------------------|
| CF AWP Activity | CF Management | ESA Zone 1 SR |
| 2022 First Thinning | DFS Core | ESA Zone 3 ST |
| 2022 Second Thinning | DFS Future Core | Stream Buffer 50' |
| | ESA Zone 1 | Stream Buffer 300' |

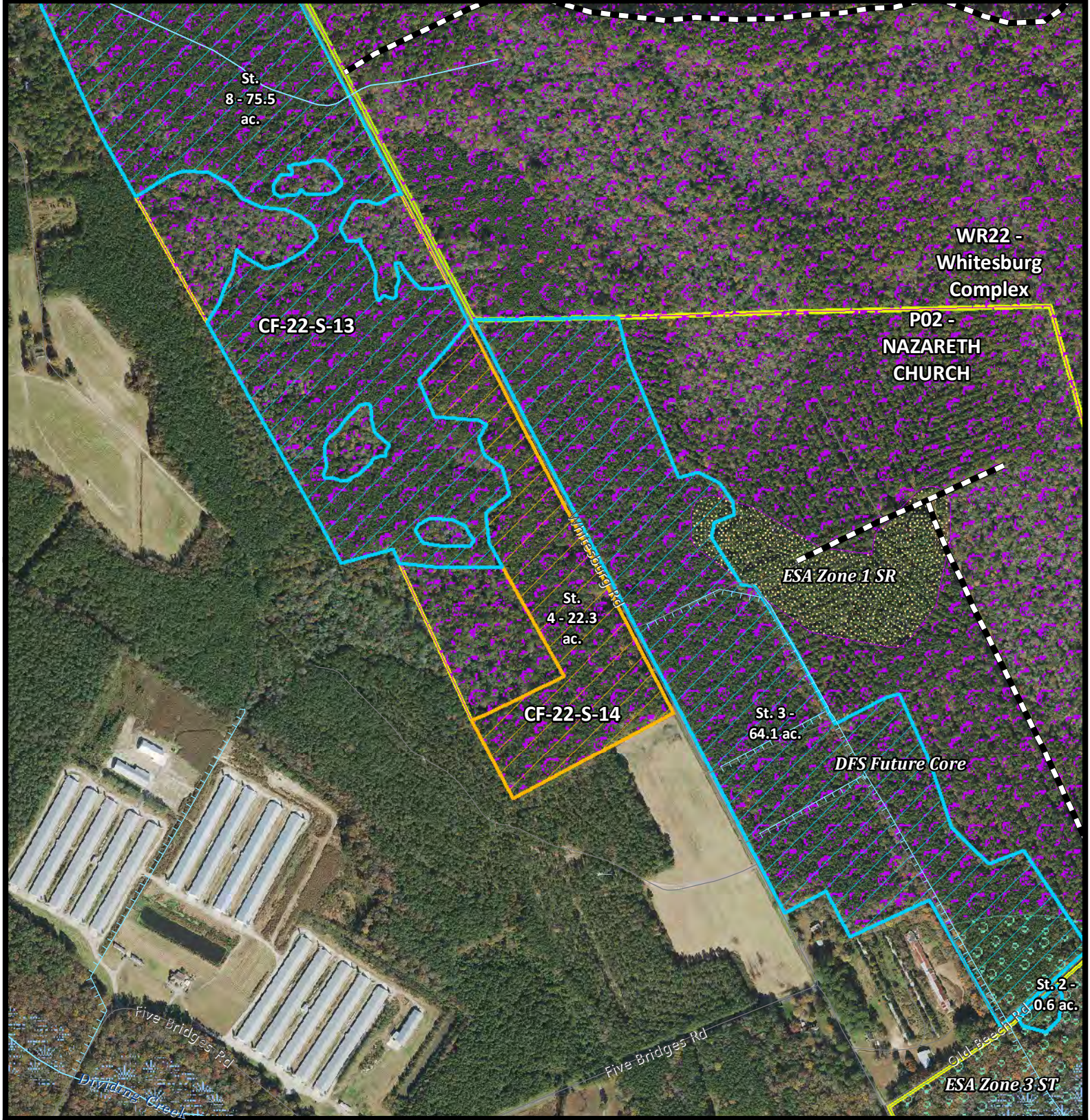
CF-22-S-13

Scale: 1" = 1,320'
Date: 06/2020



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





CF-22-S-14

Scale: 1" = 660'
Date: 06/2020

Legend

CF AWP Activity

- 2022 First Thinning
- 2022 Second Thinning

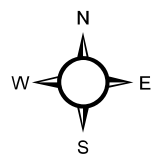
CF Management

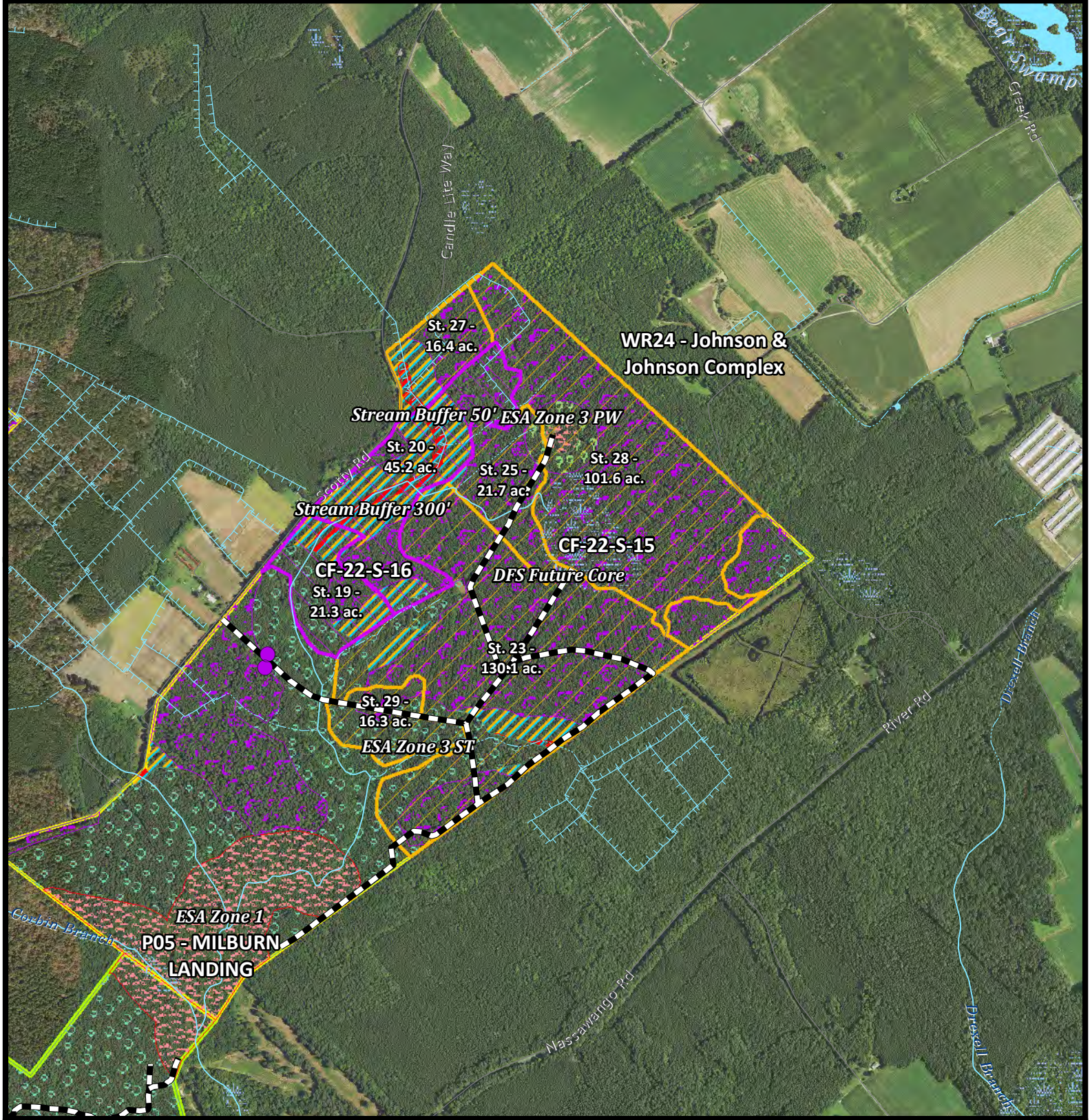
- DFS Future Core
- ESA Zone 1

- ESA Zone 1 SR
- ESA Zone 3 ST



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



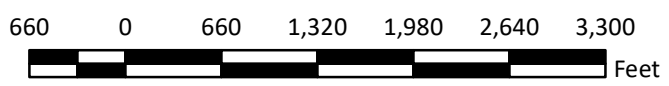


Legend

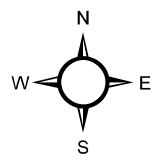
- | | | |
|------------------------|----------------------|--------------------|
| Home Sites | CF Management | ESA Zone 3 ST |
| CF AWP Activity | DFS Future Core | Stream Buffer 50' |
| 2022 Second Thinning | ESA Zone 1 | Stream Buffer 300' |
| 2022 Final Harvest | ESA Zone 3 PW | |

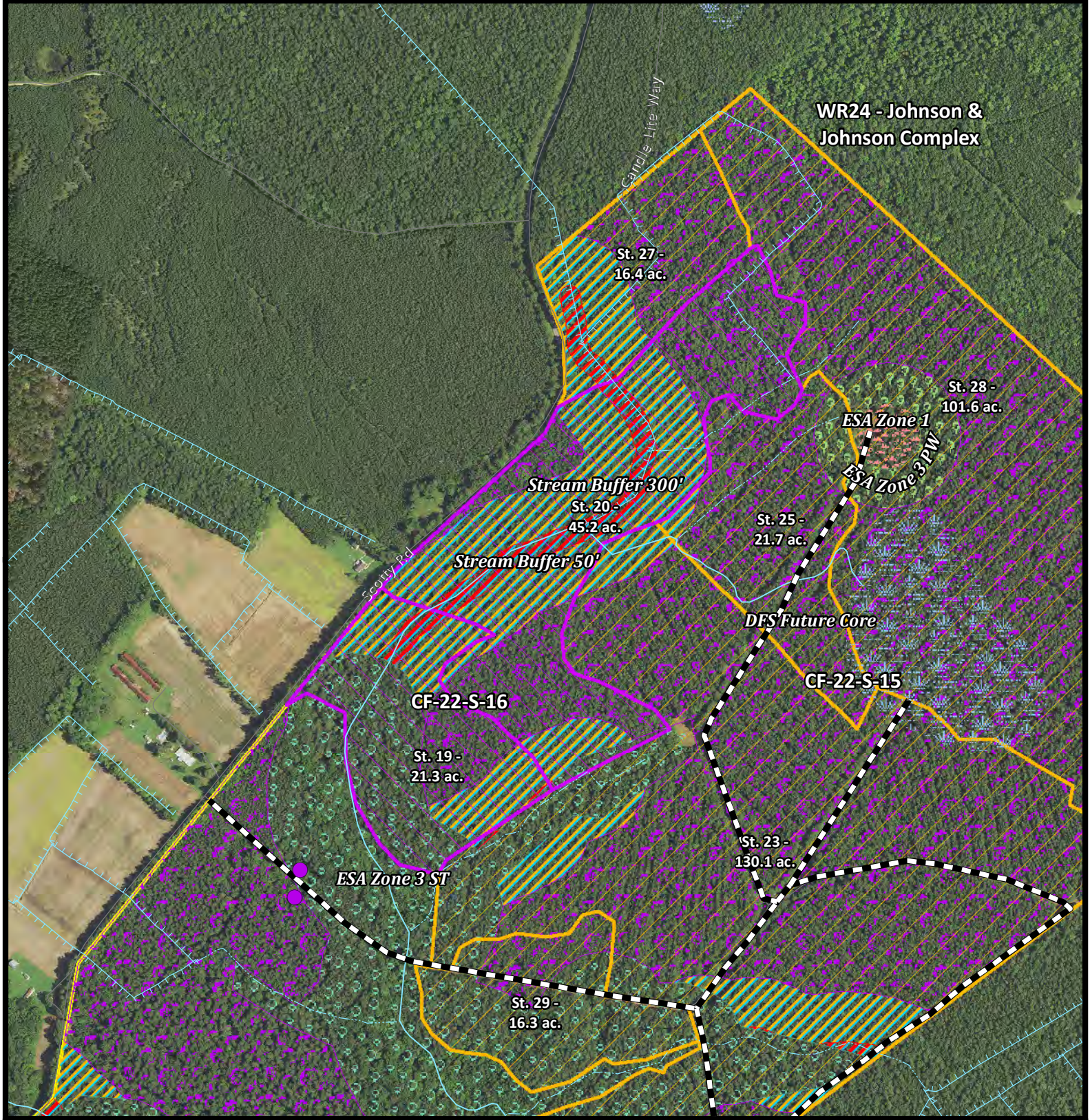
CF-22-S-15

Scale: 1" = 1,320'
Date: 06/2020



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





WR24 - Johnson & Johnson Complex

St. 27 - 16.4 ac.

St. 28 - 101.6 ac.

ESA Zone 1

ESA Zone 3 PW

Stream Buffer 300'

St. 20 - 45.2 ac.

St. 25 - 21.7 ac.

Stream Buffer 50'

DFS Future Core

CF-22-S-16

CF-22-S-15

St. 19 - 21.3 ac.

ESA Zone 3 ST

St. 23 - 130.1 ac.

St. 29 - 16.3 ac.

Legend

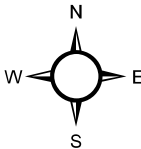
- | | | |
|------------------------|----------------------|--------------------|
| Home Sites | CF Management | ESA Zone 3 ST |
| CF AWP Activity | DFS Future Core | Stream Buffer 50' |
| 2022 Second Thinning | ESA Zone 1 | Stream Buffer 300' |
| 2022 Final Harvest | ESA Zone 3 PW | |

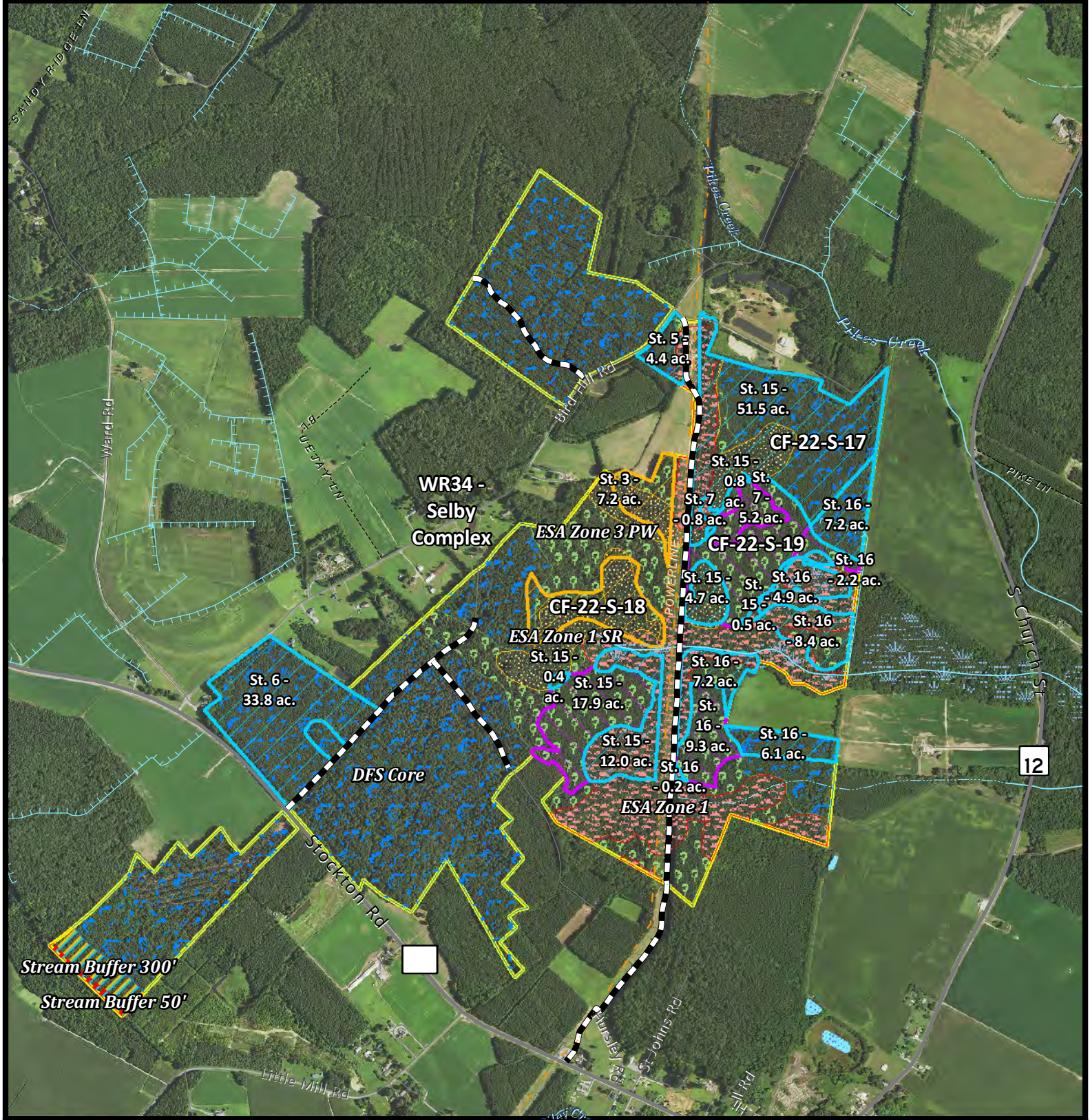
CF-22-S-16

Scale: 1" = 660'
Date: 06/2020



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



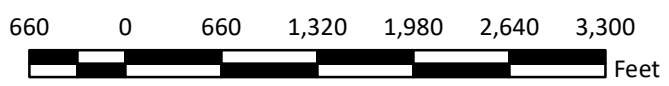


Legend

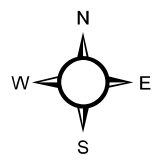
- | | | |
|------------------------|----------------------|--------------------|
| CF AWP Activity | CF Management | ESA Zone 3 PW |
| 2022 First Thinning | DFS Core | Stream Buffer 50' |
| 2022 Second Thinning | ESA Zone 1 | Stream Buffer 300' |
| 2022 Final Harvest | ESA Zone 1 SR | |

CF-22-S-17

Scale: 1" = 1,320'
Date: 06/2020



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





Legend

CF AWP Activity

- 2022 First Thinning
- 2022 Second Thinning
- 2022 Final Harvest

CF Management

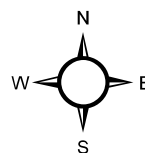
- DFS Core
- ESA Zone 1
- ESA Zone 1 SR
- ESA Zone 3 PW
- Stream Buffer 300'

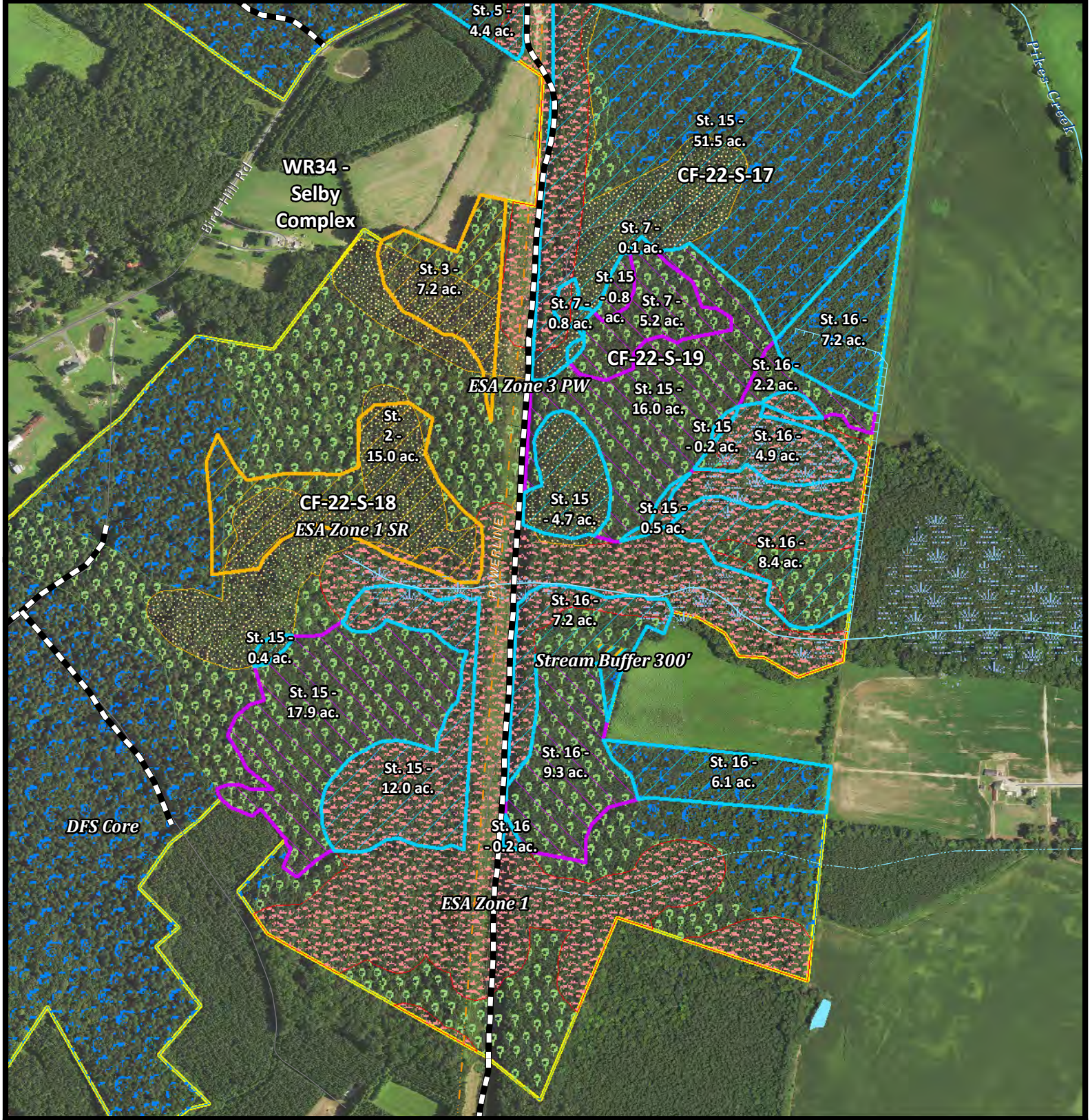
CF-22-S-18

Scale: 1" = 660'
Date: 06/2020



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





Legend

CF AWP Activity

- 2022 First Thinning
- 2022 Second Thinning
- 2022 Final Harvest

CF Management

- DFS Core
- ESA Zone 1
- ESA Zone 3 PW
- Stream Buffer 300'

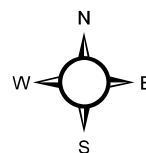
ESA Zone 1 SR

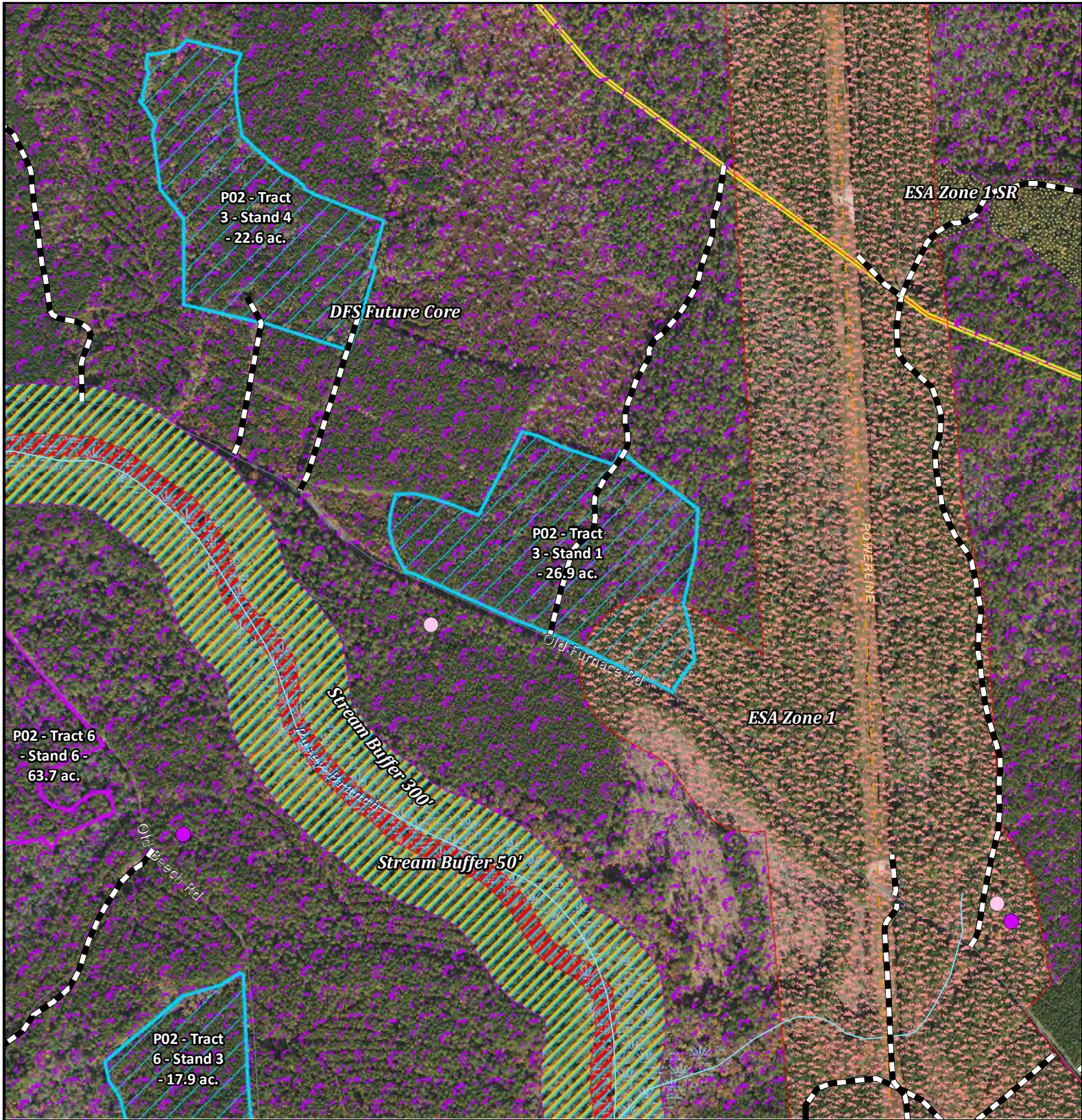
CF-22-S-19

Scale: 1" = 660'
Date: 06/2020



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





Legend

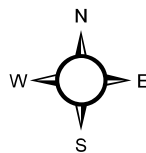
- | | | |
|-------------------------|-----------------------|--------------------|
| Home Sites | PSF Management | Stream Buffer 50' |
| PSF AWP Activity | DFS Future Core | Stream Buffer 300' |
| 2022 First Thinning | ESA Zone 1 | |
| 2022 Final Harvest | | |

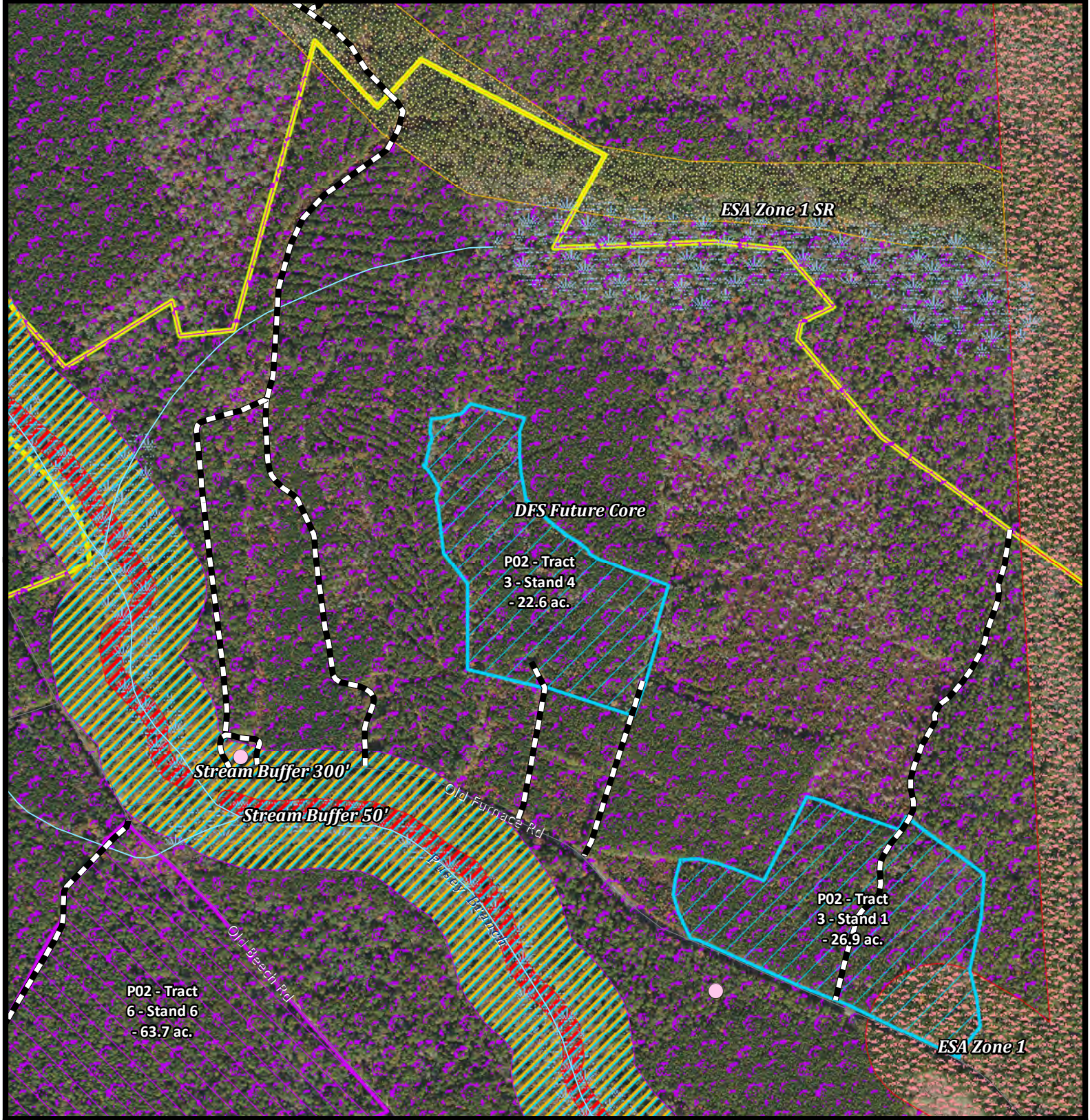
P-22-S-01

Scale: 1" = 660'
Date: 12/2019



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





Legend

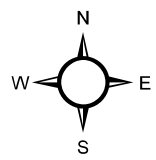
- | | | |
|-------------------------|-----------------------|--------------------|
| PSF AWP Activity | PSF Management | ESA Zone 1 SR |
| 2022 First Thinning | DFS Future Core | Stream Buffer 50' |
| 2022 Final Harvest | ESA Zone 1 | Stream Buffer 300' |

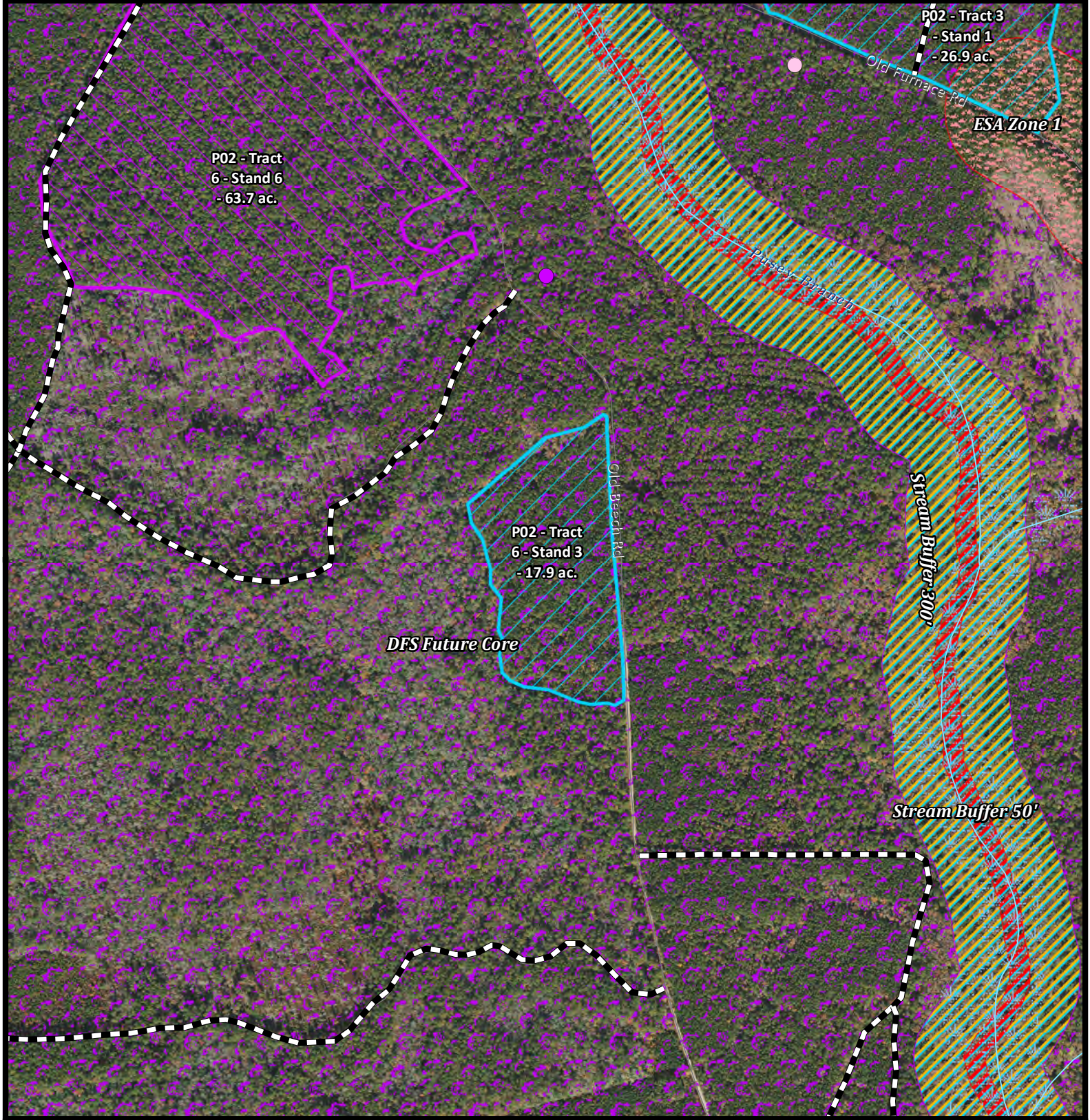
P-22-S-02

Scale: 1" = 660'
Date: 12/2019










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





Legend

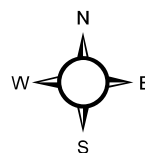
- | | | |
|--|---|--|
|  Home Sites | PSF Management |  Stream Buffer 50' |
| PSF AWP Activity |  DFS Future Core |  Stream Buffer 300' |
|  2022 First Thinning |  ESA Zone 1 | |
|  2022 Final Harvest | | |

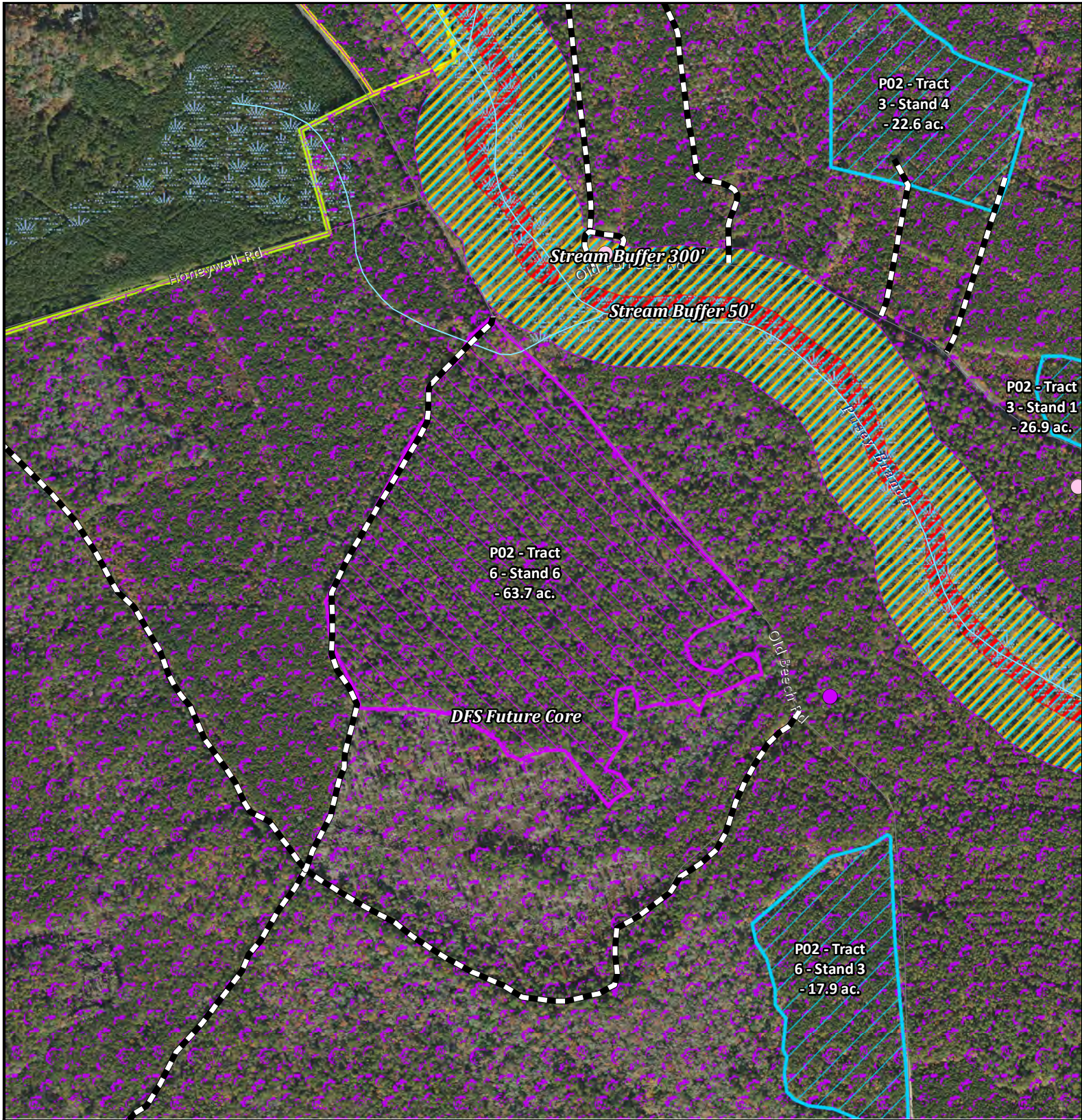
P-22-S-03

Scale: 1" = 660'
Date: 12/2019



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





Legend

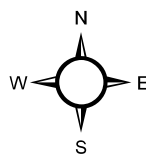
- Home Sites
- PSF Management**
- DFS Future Core
- Stream Buffer 50'
- Stream Buffer 300'
- PSF AWP Activity**
- 2022 First Thinning
- 2022 Final Harvest

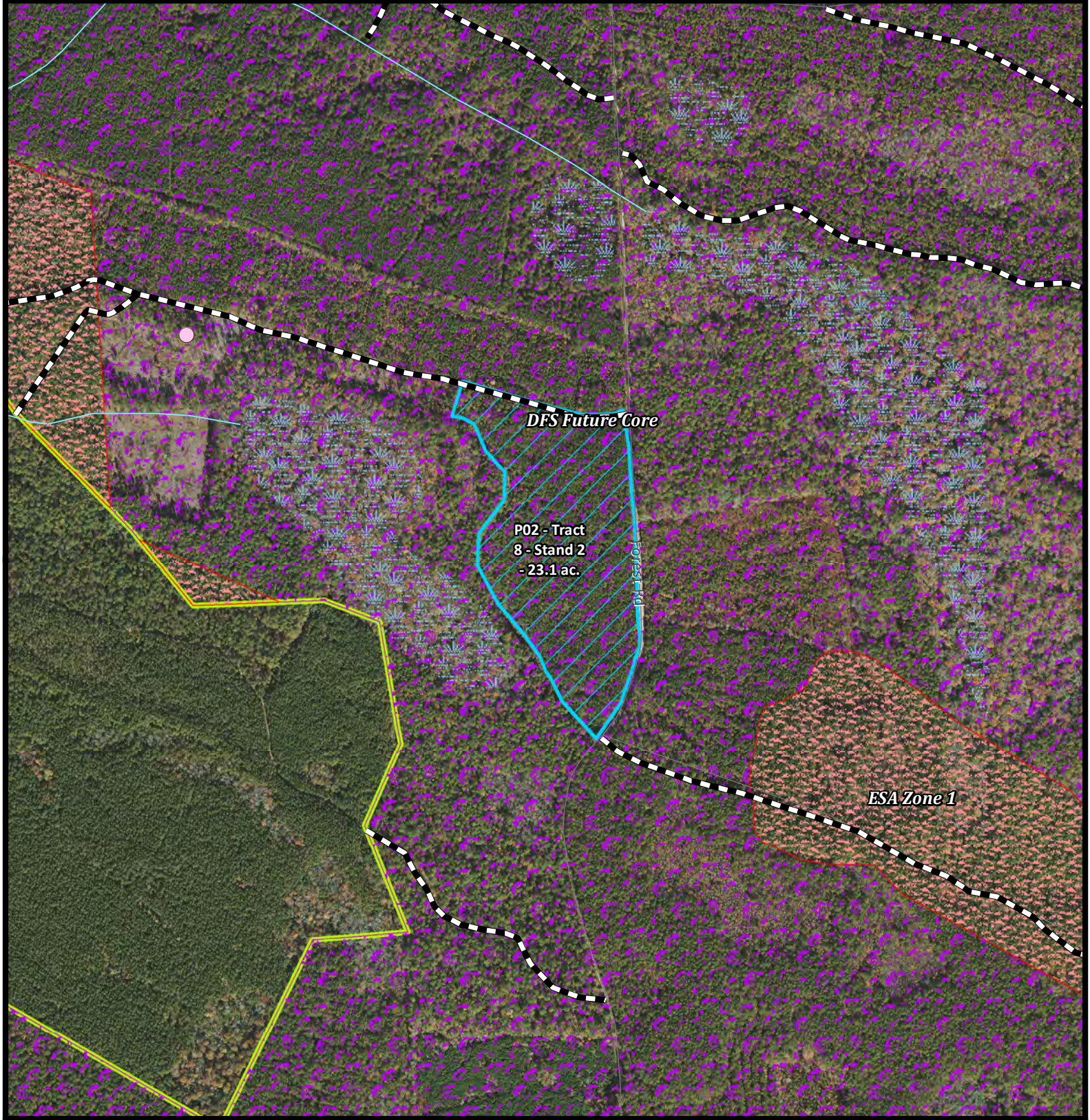
P-22-S-04

Scale: 1" = 660'
Date: 12/2019



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





P-22-S-05


Scale: 1" = 660'
Date: 12/2019


Legend

PSF AWP Activity

 2022 First Thinning

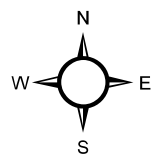
PSF Management

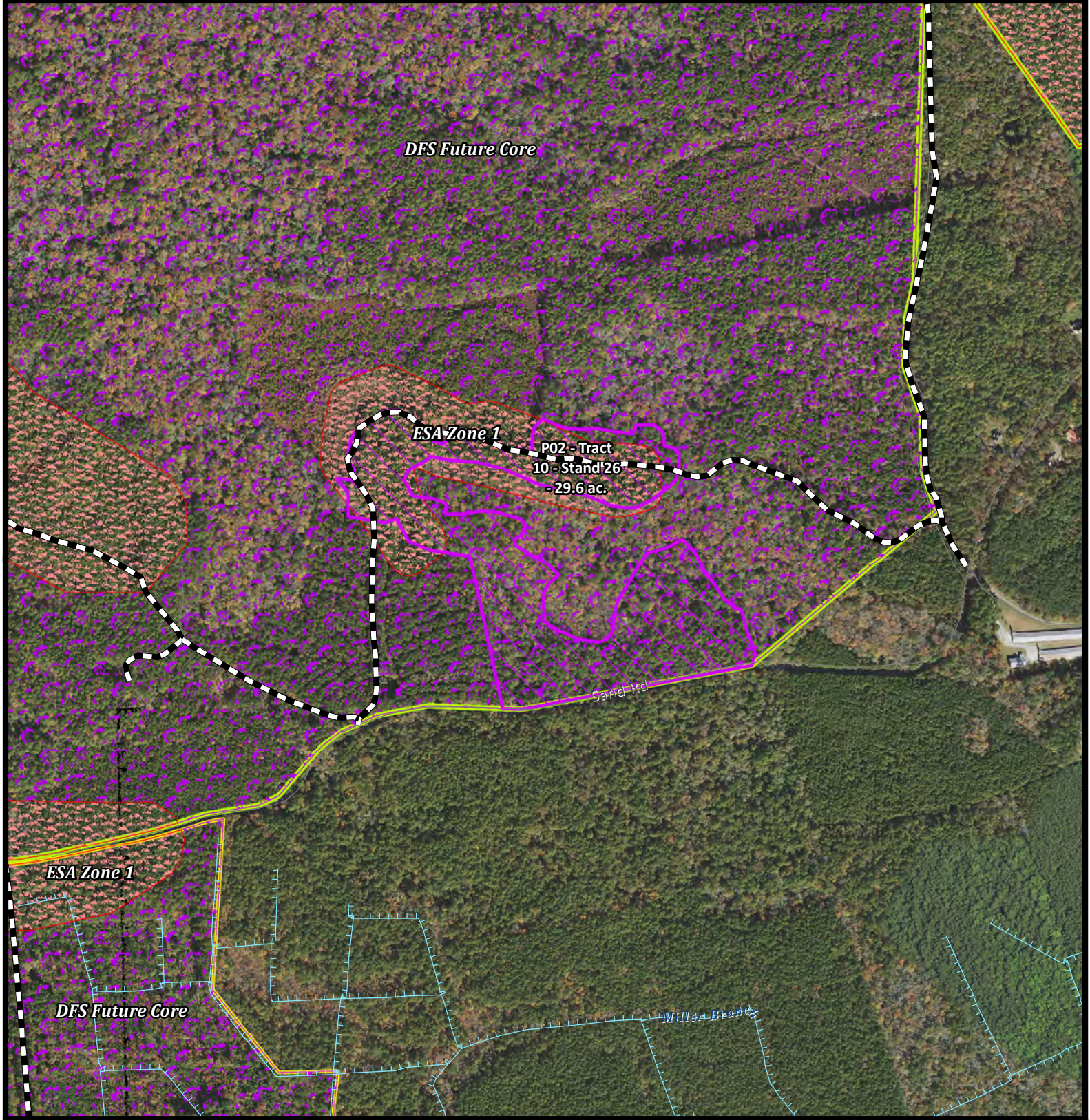
 DFS Future Core

 ESA Zone 1



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





P-22-S-06

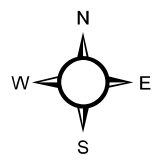
Scale: 1" = 660'
Date: 12/2019

Legend

- | | | |
|---|---|--|
|  PSF AWP Activity |  PSF Management |  ESA Zone 1 |
|  2022 Final Harvest |  DFS Future Core | |



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



ESA Zone 1 SR

Distance Buffer 300'

P02 - Tract
34 - Stand
3 - 27.7 ac.

ESA Zone 1

Old Furnace Rd

DFS Future Core

Legend

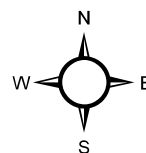
-  Home Sites
-  PSF Management
-  ESA Zone 1
-  DFS Future Core
-  ESA Zone 1 SR
-  2022 Final Harvest

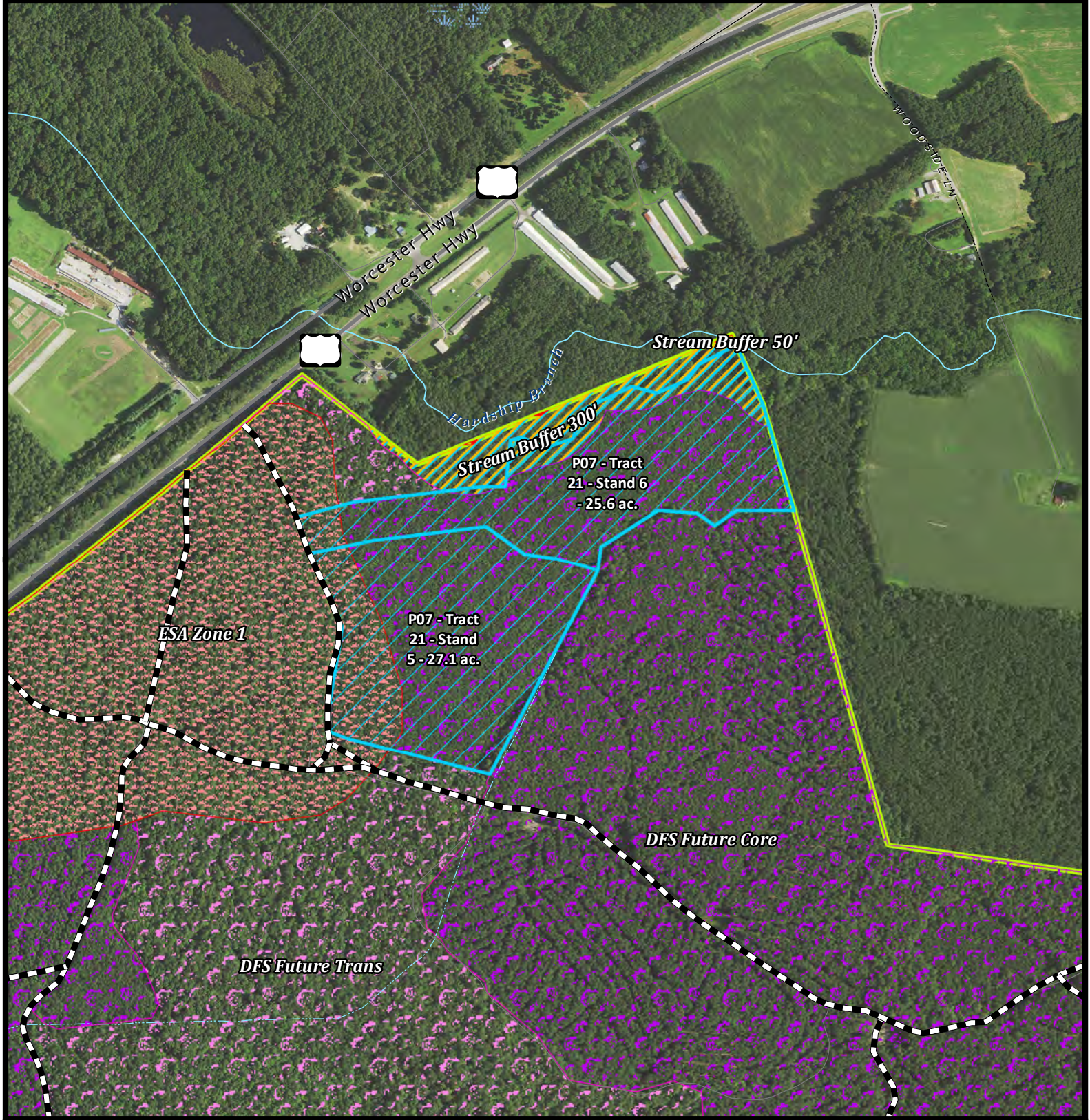
P-22-S-07

Scale: 1" = 660'
Date: 12/2019



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





Legend

PSF AWP Activity

2022 First Thinning

PSF Management

DFS Future Core

DFS Future Translocation

ESA Zone 1

Stream Buffer 50'

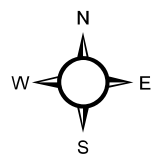
Stream Buffer 300'

P-22-S-08

Scale: 1" = 660'
Date: 12/2019



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



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	\$ 576,778
4. Agricultural Leases	\$ 33,202
5. Recreation Trail Grant(s)	\$ 30,000
Total	\$ 2,179,936

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	\$ 191,527
--------------------	-------------------

APPENDIX A SOIL SERIES MANAGEMENT GROUPS, ABBREVIATIONS, AND SYMBOLS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Soils:	Beaches	Urban Land
	Miscellaneous water	Water

APPENDIX B AUDIT SUMMARIES 2020

The 2020 Certification Audit was not held at its annually scheduled date in April 2020 due to COVID-19. A make up date is tentatively scheduled for July 2020. This section will be updated if and when the annual audit occurs.

Full reports and summaries of the 2019 and all past Forest Certification Audits can be found here:

<http://dnr.maryland.gov/forests/Pages/forestcert.aspx>

WORKS CITED

- Burns, R. M., & Honkala, B. H. (1990). *Silvics of North America, Agriculture Handbook 654* (Vol. 2. Hardwoods). Washington, DC: U.S. Department of Agriculture, Forest Service.
- Frost, C. C. (1998). Presettlement fire frequency regimes of the United States: a first approximation. In T. L. Pruden, & L. A. Bennan (Ed.), *Fire in ecosystem management: shifting the paradigm from suppression to prescription, Tall Timbers Fire Ecology Conference Proceedings. 20*, pp. 70-81. Tallahassee, FL: Tall Timbers Research Station.
- Pyne, S. J. (1982). *Fire in America*. Princeton University Press.
- Rountree, H. C., & Davidson, T. E. (1997). *Eastern Shore Indians of Virginia and Maryland*. University Press of Virginia.
- Schulz, R. P. (1997). The Ecology and Culture of Loblolly Pine. In *Loblolly Pine* (pp. 5-14). Washington, DC: U.S. Gov. Printing Office.
- Smith, D. M. (1986). *The Practice of Silviculture*. New York: Wiley.
- USDA Forest Service. (1986). *Service Forester's Handbook*. Southern Region, State and Private Forestry. Atlanta, GA: U.S. Government Printing Office.