

## STANDARD FSD NOTES

**General Notes** to include on all FSDs with all blanks filled in:

1. This site is zoned (insert zone) and is located in the (Rural/ Developing/ Developed) Tier as defined in the Approved General Plan.
2. The source of the property boundaries on this plan is from (state source as state property layer, deeds, or boundary survey.) (If deeds- list Liber and Folio and provide copies).
3. The topography shown on this plan is from (state source, date, and manner in which the information was obtained).
4. The source of the soils information on this plan is from the USDA NRCS Web Soil Survey (WSS) in a Custom Soil Resource Report for an Area of Interest (AOI) established for the subject site only and generated on (include date report was generated).
5. The county regulated 100-year floodplain information on this plan is from (state source from choices below):
  - a) If the source is a floodplain easement less than 10 years old, then provide a copy of the easement and provide the easement recordation information. Such as "... an easement recorded in the land records at (list Liber and Folio)."
  - b) If the source is a county watershed study, then provide the name of the study and relevant plate number. Such as "... (Insert watershed study name) watershed study, plate number (insert plate number)."
  - c) If the source is a floodplain study prepared by DPW&T, then provide the number and date of approval. Such as "...DPW&T Floodplain Study Number (insert number), approved (insert date)."
  - d) If the source is a floodplain study prepared by an engineer and approved by DPW&T, then provide the number, the name of the engineering firm responsible for preparing the study, and the date of approval. Such as "Floodplain Study Number (insert number), prepared by (insert name of engineering firm), approved by DPW&T (insert date)."
  - e) If the source is a delineation prepared by an engineer that has not yet been approved by DPW&T, then provide the name of the engineer, and the engineering company responsible for the delineation, and a statement regarding their qualifications to do so, such as: "... a delineation prepared by (insert name of engineer and qualifications – for example Tom Jones, P.E., water resources engineer), (insert company name). An approved floodplain study may be required during subsequent development review processes." This statement must be accompanied by the engineer's seal and signature adjacent to this note on the plan.

*OR, if no floodplain is located on-site, use the following note:*  
No county regulated 100-year floodplain is located on-site per (state source from choices below):

  - a) If verified in writing by DPW&T, then provide the date of verification and a copy of the letter. Such as "...DPW&T letter of verification dated (insert date)."
  - b) If no county regulated 100-year floodplain is located on-site because the drainage area to the site is less than 50-acres, then provide the name of the engineer, and the engineering company responsible for determining the drainage area, and a statement regarding their qualifications to do so, such as: "... a drainage area of less than 50-acres as verified by (insert name of engineer and qualifications – for example Tom Jones, P.E., water resources engineer), (insert company name). Written verification from DER may be required during subsequent development review processes." This statement must be accompanied by the engineer's seal and signature adjacent to this note on the plan.
6. The wetland and stream information on this plan is from a study prepared by (state name of professional qualified to prepare the study) in a study dated (state date of preparation of the study).

*OR, if no wetlands or streams are located on-site, use the following note:*  
No wetlands or streams are located on-site as field verified by (state name of professional qualified to make such a determination in the field).

7. This site (is/is not) within a Sensitive Species Protection Review Area based on a review of the SSPRA GIS layer prepared by the Heritage and Wildlife Service, Maryland Department of Natural Resources.  
*OR, if a letter has been obtained from the Maryland Department of Natural Resource Natural Heritage Program, use the following note:*  
In a letter dated (insert date) the Maryland Department of Natural Resource Natural Heritage Program has determined (insert information from the letter).
8. The site (does/does not) include Forest Interior Dwelling Species habitat.
9. The site is not subject to a previously approved TCP.  
*OR, if the subject property is subject to a previously approved TCP/TCP's use the following note:*  
The site is subject to previously approved TCP's. Previously approved TCP's include: (state TCP identification number/s).
10. There are (state the number of trees) specimen, champion and/or historic trees located on the property. These trees were located using (state method of location - field observations or surveyed locations).  
*OR, if there are no specimen, champion or historic trees on the property use the following note:*  
There are no specimen, champion or historic trees located on the property.
11. Marlboro clay and Christiana complex are not found to occur on or within the vicinity of this property.  
*OR, if Marlboro clay or Christiana complex are mapped on or in the vicinity of the subject property use the following note:*  
Marlboro clay (and/or Christiana complex) is/are found to occur on or within the vicinity of this property. As such, the property may be subject to regulation by Section 24-131 of the Subdivision Regulations
12. If any of the base information used to prepare this FSD changes significantly, the FSD will be revised and re-submitted for review to the Environmental Planning Section.

**Additional Notes** required to be included on FSDs when appropriate. Additional notes should be numbered sequentially following the standard notes)

- (1) This site (does/ does not) contain Wetlands of Special State Concern as defined in COMAR 26.23.06.01.
- (2) This site (does/ does not) contain a Tier II waterbody as defined in COMAR 26.08.02.04.
- (3) This site (is/ is not) located within a Stronghold Watershed as established by the MD DNR.
- (4) There are no scenic or historic roads located on or adjacent to this property.  
*OR, if scenic or historic roads are located in the vicinity of the subject site use the following note:*  
The site is (describe location – abutting, adjacent to, etc. – insert name of road), a designated (list designation as scenic, historic, or both) road in the vicinity of the property.
- (5) The subject property is not located within a Registered Historic District.  
*OR, if the subject property is located within a Registered Historic District use the following note:*  
(The subject property/ a portion of the subject property) is located within the (state the name and inventory number of the Registered Historic District).
- (6) There are no known archeological sites located on the subject property; however, the subject property has not been surveyed for archeological resources and a Phase I archeology report may be required during subsequent development review processes.  
*If the subject property has a known archeological site use the following note:*  
Archeological site (insert registration number), registered with the state is located on-site. Further archeological investigations (Phase II or Phase III) may be required during subsequent development review processes.
- (7)
- (8) The site is not located in the vicinity of any master planned roadway designated as arterial or higher.  
*OR, if the site is located in the vicinity of a master planned roadway designated as arterial or higher use the following note.*  
The site is located in the vicinity of (abutting/ adjacent to - name of road), a master planned (state designation - arterial or higher) roadway that is regulated for noise. A noise study may be required during

subsequent development review processes.

- (9) The subject property is not located within the 2008 Air Installation Compatible Use Zone (AICUZ) Study for Andrews Air Force Base.

*OR, if the property is located within the AICUZ use the following note:*

(The subject property/ a portion of the subject property) is located within the (dba level) dba noise contour as found in the 2008 Air Installation Compatible Use Zone (AICUZ) Study for Andrews Air Force Base.

- (10) The site is not located within an Aviation Policy Area (APA).

*OR, if the property is located within an APA area use the following note:*

The site lies within the Aviation Policy Area (APA) of (insert airport name) Airport and is subject to compliance with APA regulations under CB-51-2002.

- (11) The site is not located within the Chesapeake Bay Critical Area (CBCA).

*OR if the property is located within the CBCA use the following note:*

The site lies within the (insert CBCA designation as L-D-O, R-C-O, or I-D-O) overlay zone of Chesapeake Bay Critical Area (CBCA).

Project Name: \_\_\_\_\_  
Prepared By: \_\_\_\_\_  
Date: \_\_\_\_\_

## Simplified FSD Checklist

Use when applying for a Standard or Numbered Letter of Exemption or for applications not eligible for exemption that are not showing any proposed clearing. This option may also be used for Natural Resource Inventories (NRIs) that have no regulated environmental features and limited areas of woodland on-site. Sampling data collection is not required; however, a brief narrative description of the woodlands and a calculation of the amount of woodlands on the site must be provided on the plan. **Additional information may be required by the Planning Director or designee.**

### Submittal Requirements

#### 1. Site Vicinity Map

- \_\_\_ Location of the project site and surrounding area within one square mile
- \_\_\_ Major roads and intersections
- \_\_\_ North arrow
- \_\_\_ Boundaries of property
- \_\_\_ Minimum scale of 1"=2,000'

#### 2. Environmental Features Map

- \_\_\_ Property boundaries (tax maps, plats or surveyed boundaries of all lot(s) and/or parcel(s) included in the application
- \_\_\_ Locations of all existing structures and easements
- \_\_\_ Topographic contours (maximum interval = 2 feet)
- \_\_\_ North arrow
- \_\_\_ Existing regulated woodlands and trees on the property and extending off the property 100 feet
- \_\_\_ Regulated streams and their required buffers
- \_\_\_ Limit of 100-year floodplain and source stated
- \_\_\_ Nontidal or tidal wetlands and their required buffers
- \_\_\_ Location of existing Critical Habitat Areas for rare, threatened, and endangered species
- \_\_\_ Locations of cultural features and historic sites
- \_\_\_ Location of soils mapping units within each soil series shown on the plan to scale, using standard soils boundary symbol per EPS standards
- \_\_\_ Table stating the soils mapping unit name and description, k-factor, hydric rating, hydrologic soil group, and drainage class
- \_\_\_ Location of steep slopes (15% and greater)
- \_\_\_ Standard FSD Notes
- \_\_\_ Title, date, revisions and scale
- \_\_\_ Legend containing all features shown on the plan (Standard symbols used)
- \_\_\_ Qualified professional certification with name, address, phone number, email, stamp (if applicable), signature, and date of plan certification on each sheet
- \_\_\_ A brief narrative description of the woodlands including general class, dominant species, and general health
- \_\_\_ Total woodland on the site to the nearest one-hundredth of an acre

#### 3. Documents

- \_\_\_ 2 copies of completed checklist

Project Name: \_\_\_\_\_  
Associated Plan: \_\_\_\_\_  
Prepared By: \_\_\_\_\_  
Date: \_\_\_\_\_

## Intermediate FSD Checklist

Use when the subject application is for properties where the proposed activity will occur on a small portion of a larger property. Requires a plan of the entire site and text and sampling data for areas proposed for development. Intermediate FSDs shall not be submitted as part of a Natural Resource Inventory. **Additional information may be required by the Planning Director or designee.**

### Submittal Requirements

#### 1. Site Vicinity Map (Place on plan and include copy with Forest Stand Analysis report)

- Location of the project site and surrounding area within one square mile
- Major roads and intersections
- North arrow
- Boundaries of property
- Minimum scale of 1"=2,000'

#### 2. Environmental Features Map (Needed for Entire Site)

- Property boundaries (tax maps, plats or surveyed boundaries of all lot(s) and/or parcel(s) included for the entire property
- Locations of all existing structures and easements
- Topographic contours (maximum interval = 2 feet)
- North arrow
- Existing regulated woodlands and trees on the property and extending off the property 100 feet
- Regulated streams and required buffers
- Limit of 100-year floodplain and source stated
- Nontidal or tidal wetlands and required buffers (If present must also include a wetland report)
- Location of existing Critical Habitat Areas for rare, threatened, and endangered species
- Locations of cultural features and historic sites
- Location of soils mapping units within each soil series shown on the plan to scale, using standard soils boundary symbol per EPS standards
- Table stating the soils mapping unit name and description, k-factor, hydric rating, hydrologic soil group, and drainage class
- Location of steep slopes (15% and greater)
- Standard FSD Notes
- Title, date, revisions and scale
- Legend containing all features shown on the plan (Standard symbols used)
- Qualified professional certification with name, address, phone number, email, stamp (if applicable), signature, and date of plan certification on each sheet
- Locations of Forest Interior Dwelling Species (FIDS) habitat
- Limit of Disturbance (LOD) for the proposed development with area noted
- A brief narrative description of the woodlands located outside of the proposed LOD including general class, dominant species, and general health

In addition to the above, you MUST include the following for the area of proposed Development (within the LOD and 200-feet beyond).

- \_\_\_ Field sample point locations in adequate numbers and locations to delineate separate stands
- \_\_\_ Forest stand boundaries and stand acreages to the nearest one-hundredth of an acre
- \_\_\_ Forest stand summary table including all required information
- \_\_\_ Locations of specimen, champion and historic trees and their critical root zones.
- \_\_\_ Table of specimen, champion and historic trees stating field flag number, common name, scientific name, size (in dbh), condition, and condition comments (with note regarding whether the trees were field located or surveyed)

### 3. Forest Stand Analysis Report

- \_\_\_ Cover sheet (Must include Title, Date and Certification by Qualified Professional)

Narrative to include the following:

- \_\_\_ Brief introduction describing location of the site, total acreage (to the nearest one-hundredth of an acre), zoning, current condition of the property (Partially developed? Undeveloped?)
- \_\_\_ A statement indicating the sampling methodology and equipment used for data collection
- \_\_\_ A statement of the total woodland to the nearest one-hundredth of an acre
- \_\_\_ A statement of the existing condition of each stand including a description of composition, structure, and condition, as well as retention potential and comments on stand history
- \_\_\_ Description of other environmental or cultural features which may impact decisions on forest retention
- \_\_\_ A statement regarding the presence or absence of rare, threatened, or endangered species including the source of this information (SSPRA layer or Letter from Maryland Natural Heritage Program)
- \_\_\_ A statement regarding the presence or absence of specimen, champion and historic trees including condition comments that may affect retention potential
- \_\_\_ A statement regarding the soils (including the mapping unit name and description, k-factor, hydric rating, hydrologic soil group, and drainage class)
- \_\_\_ Field sampling data sheets
- \_\_\_ Forest analysis worksheets
- \_\_\_ Forest stand summary sheets

Supporting information to be provided:

- \_\_\_ Site Vicinity Map
- \_\_\_ A dated custom soil resource report for an area of interest (AOI) established for the subject site and generated from the USDA NRCS WSS
- \_\_\_ Information obtained regarding the presence or absence of rare, threatened, or endangered species including the source of this information (SSPRA layer or Letter from Maryland Natural Heritage Program)
- \_\_\_ *If a wetland study is not required*, color photocopies of the NWI map, the MDDNR Wetland Guidance Map, and the soil survey (otherwise, these materials should be included with the wetland study)
- \_\_\_ Letter from Maryland Natural Heritage Program

### 4. Additional Documents to be included with the application

- \_\_\_ 2 copies of completed checklist

Project Name: \_\_\_\_\_  
Associated Plan: \_\_\_\_\_  
Prepared By: \_\_\_\_\_  
Date: \_\_\_\_\_

## Detailed FSD Checklist

Use when the site or application does not qualify for a Simplified or Intermediate FSD. The Detailed FSD must include a plan, using the standard line types and symbols, sampling data, and supporting text for the entire site. **Additional information may be required by the Planning Director or designee.**

### Submittal Requirements

#### 1. Site Vicinity Map (Place on plan and include copy with Forest Stand Analysis report)

- Location of the project site and surrounding area within one square mile
- Major roads and intersections
- North arrow
- Boundaries of property
- Minimum scale of 1"=2,000'

#### 2. Environmental Features Map

- Property boundaries (tax maps, plats or surveyed boundaries of all lot(s) and/or parcel(s) included for the entire property
- Locations of all existing structures and easements
- Topographic contours (maximum interval = 2 feet)
- North arrow
- Existing regulated woodlands and trees on the property and extending off the property 100 feet
- Regulated streams and required buffers
- Limit of 100-year floodplain and source stated
- Nontidal or tidal wetlands and required buffers (If present must also include a wetland report)
- Location of existing Critical Habitat Areas for rare, threatened, and endangered species
- Locations of cultural features and historic sites
- Location of soils mapping units within each soil series shown on the plan to scale, using standard soils boundary symbol per EPS standards
- Table stating the soils mapping unit name and description, k-factor, hydric rating, hydrologic soil group, and drainage class
- Location of steep slopes (15% and greater)
- Standard FSD Notes
- Title, date, revisions and scale
- Legend containing all features shown on the plan (Standard symbols used)
- Qualified professional certification with name, address, phone number, email, stamp (if applicable), signature, and date of plan certification on each sheet
- Locations of Forest Interior Dwelling Species (FIDS) habitat
- Field sample point locations in adequate numbers and locations to delineate separate stands
- Forest stand boundaries and stand acreages to the nearest one-hundredth of an acre
- Forest stand summary table including all required information
- Locations of specimen, champion and historic trees and their critical root zones.
- Table of specimen, champion and historic trees stating field flag number, common name, scientific name, size (in dbh), condition, and condition comments (with note regarding whether the trees were field located or surveyed)



### 3. Forest Stand Analysis Report

\_\_\_ Cover sheet (Must include Title, Date and Certification by Qualified Professional)

Narrative to include the following:

- \_\_\_ Brief introduction describing location of the site, total acreage (to the nearest one-hundredth of an acre), zoning, current condition of the property (Partially developed? Undeveloped?)
- \_\_\_ A statement indicating the sampling methodology and equipment used for data collection
- \_\_\_ A statement of the total woodland to the nearest one-hundredth of an acre
- \_\_\_ A statement of the existing condition of each stand including a description of composition, structure, and condition, as well as retention potential and comments on stand history
- \_\_\_ Description of other environmental or cultural features which may impact decisions on forest retention
- \_\_\_ A statement regarding the presence or absence of rare, threatened, or endangered species including the source of this information (SSPRA layer or Letter from Maryland Natural Heritage Program)
- \_\_\_ A statement regarding the presence or absence of specimen, champion and historic trees including condition comments that may affect retention potential
- \_\_\_ A statement regarding the soils (including the mapping unit name and description, k-factor, hydric rating, hydrologic soil group, and drainage class)
- \_\_\_ Field sampling data sheets
- \_\_\_ Forest analysis worksheets
- \_\_\_ Forest stand summary sheets

Supporting information to be provided:

- \_\_\_ Site Vicinity Map
- \_\_\_ A dated custom soil resource report for an area of interest (AOI) established for the subject site and generated from the USDA NRCS WSS
- \_\_\_ Information obtained regarding the presence or absence of rare, threatened, or endangered species including the source of this information (SSPRA layer or Letter from Maryland Natural Heritage Program)
- \_\_\_ *If a wetland study is not required*, color photocopies of the NWI map, the MDDNR Wetland Guidance Map, and the soil survey (otherwise, these materials should be included with the wetland study)
- \_\_\_ Letter from Maryland Natural Heritage Program

### 4. Additional Documents to be included with the application

- \_\_\_ 2 copies of completed checklist



## Forest Sample Plot Field Data Sheet

Property: \_\_\_\_\_ Prepared by: \_\_\_\_\_  
 Stand #: \_\_\_\_\_ Plot#: \_\_\_\_\_ Plot Size: \_\_\_\_\_ Date: \_\_\_\_\_

Basal Area in sf/acre: \_\_\_\_\_ Size Class of Trees within sample plot

Tree Species	# of Trees			# of Trees			# of Trees			# of Trees			Total		
	2-5.9" dbh			6-9.9" dbh			10-17.9" dbh			18-29.9" dbh				> 30" dbh	
Crown Position	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH

Total Number of Trees per Size Class						
Number of standing dead trees 6" dbh or greater						

1/100 Ac. Samples:

List of Common Understory Species 3'-20'	% Canopy Coverage	% Invasive Cover
	C N E S W Total	C N E S W Total
List of Herbaceous Species 0'-3'	% Understory Cover 3'-20'	% Herbaceous/ Woody Cover 0'-3'
	C N E S W Total	C N E S W Total
List of Invasive Species	Plot Successional Stage:	

Comments:  
 Total number of tree species > 6": \_\_\_\_\_  
 sheet \_\_\_ of \_\_\_

## Forest Sample Plot Field Data Sheet

Property: Example Property Prepared by: Reel E. Qualified  
 Stand #: A Plot#: 1 Plot Size: 1/10 Ac Date: 8/30/2010

Tree Species	Size Class of Trees within sample plot															Total
	2-5.9" dbh			6-9.9" dbh			10-17.9" dbh			18-29.9" dbh			> 30" dbh			
	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH	
Chestnut oak							2			2						4
Scarlet oak								1			1					2
Black oak								2				1				3
Persimmon			1			2										3
Red Maple		1						1								2
Total Number of Trees per Size Class	2			2			6			4						14
Number of standing dead trees 6" dbh or greater							1			1						2

1/100 Ac. Samples:

List of Common Understory Species 3'-20'	% Canopy Coverage							% Invasive Cover						
	C	N	E	S	W	Total	C	N	E	S	W	Total		
Sassafras, eastern redbud, mountain laurel	45	25	50	40	35	39	10	10	10	10	50	18		
List of Herbaceous Species 0'-3'	% Understory Cover 3'-20'							% Herbaceous/ Woody Cover 0'-3'						
	C	N	E	S	W	Total	C	N	E	S	W	Total		
seal, wild ginger, aster,	50	40	40	50	50	46	75	50	80	75	50	66		
List of Invasive Species	Plot Successional Stage: Late-Succession Upland Oak-Hickory Assoc.													
Multiflora Rose, Honeysuckle														

Comments: Many invasives in western part of stand

Total number of tree species >6": 4

sheet      of

**Forest Sample Plot Field Data Sheet  
Preparation Guidelines**

Property : List the name of the project site where the field sampling is being done

Prepared by: Name of the Qualified Professional completing the field sampling

Stand#: List the stand designation that the individual plot is located in

Plot # List the plot number of the individual sample plot

Plot Size: List the size of sample plot (i.e. 1/10<sup>th</sup> acre)

Date: List the date that the field sampling took place

**LOCATE PLOT CENTER AND FLAG OR STAKE LOCATION**

Basal Area in square feet per acre: Data can be taken with a prism, or angle gauge. To determine the basal area using a prism, total the number of "in" trees and multiply by the prism factor for each plot sampled. The angle gauge is used in a similar method. (refer to text)

Size class of trees within sample plot:

For all five points included for the data sample plot (Center, North, South, East and West) record the following information:

Tree species: List all tree species observed from each directional point.

For each of the tree species listed, show the number in each size class and what crown position they are in.

Crown Position:

Dominant species: Trees which are the largest or tallest. They extend above surrounding individuals and capture sunlight from above and around the crown.

Co-dominant species: Trees that extend their crowns into the canopy and receive direct sunlight from above but limited sunlight from the sides. One or more sides of a co-dominant tree are crowded by the crowns of dominant trees.

Other: All other trees observed which do not meet the definition of dominant or co dominant trees. (Smaller –but qualifying trees)

Total: For each Tree Species listed, total all columns left to right for all sizes and crown position

Total Number of Trees per Size Class: Total all rows for each size class

Number of standing dead trees 6" dbh or greater: List all standing dead trees 6 dbh or larger under the corresponding size class column

List of Common Understory Species 3'-20': List all of the common understory species observed from each directional point

List of Herbaceous Species 0'-3": List the herbaceous species observed from each directional point

List of Invasive Species: List all of the invasive species observed from each directional point and for all layers. (Overstory (O), Understory (U), and Herbaceous (H)).

% Canopy Coverage: Record the percentage of canopy cover for each directional point. Canopy coverage may be obtained using a visual estimate for each plot. (See Crown density scale- Appendix A-1) Average the five directional points and enter the total.

% Understory Cover 3'-20': Record the percentage of understory cover for each directional point. Average the five directional points and enter the total.

% Invasive Cover: Record the percentage of invasive cover for all layers including overstory, understory and herbaceous layers. Enter the average of all layers.

% Herbaceous/Woody Cover 0'-3': Record the percentage of herbaceous and woody cover for each directional point. Average the five directional points and enter the total.

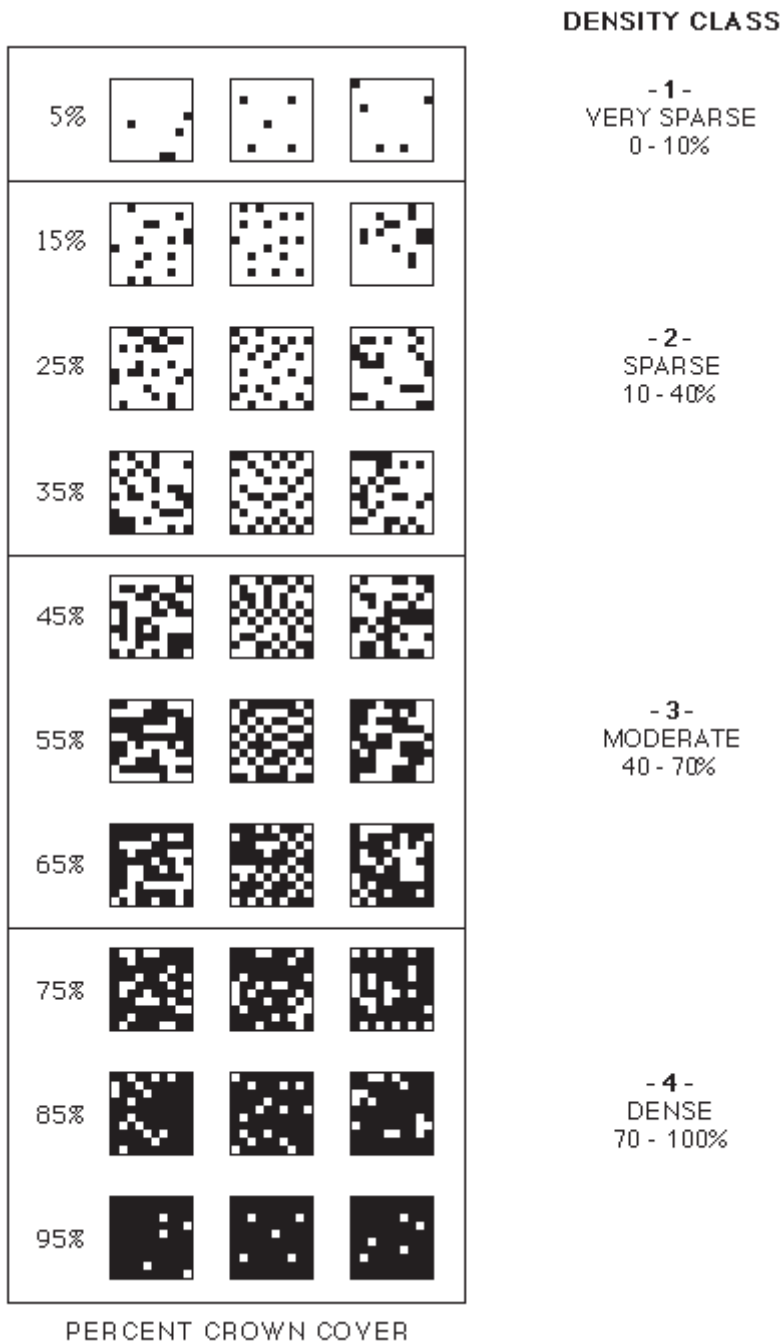
Plot Successional Stage: Forests are characterized as early, mid or late successional, with characteristic growth rates and species composition. Additional information which may be helpful in assessment is available soil moisture, often described as xeric, mesic, or hydric. Species composition descriptions, such as upland, may reflect these soil conditions. Note the forest association.

Comments: This may include other noteworthy information such as evidence of past management practices, cultural or historical features, specimen trees, wildlife notes or rare, threatened and endangered plant species.

Total number of tree species > 6": Record the total number of tree species observed on the plot greater than 6" dbh

# Crown Density Scale

---



Crown density scale used for estimating crown cover. (Rows of squares with black and white patterns represent three different arrangements of vegetated cover for a given percentage.)

*Adapted from [Paine, 1981](#)*

## Forest Stand Summary Sheet

Property: \_\_\_\_\_  
 Location: \_\_\_\_\_ (Town, County ADC Map #, and Grid Coordinates)  
 Prepared By: \_\_\_\_\_ Date: \_\_\_\_\_

Stand Variable	Stand # _____	Stand # _____
1. Dominant species/ Co-dominant species		
2. Forest Association		
3. Successional stage		
4. Basal Area in s.f. per acre		
5. Size class of dominant species		
6. Percent of canopy coverage		
7. Number of tree species per acre		
8. Common understory species		
9. Percent of understory cover 3' to 20' tall		
10. Number of understory species 3' to 20' tall		
11. Common herbaceous species		
12. Percent of herbaceous & woody plant cover 0' to 3' tall		
13. List of major invasive plant species and percent of cover		
14. Number of standing dead trees 6" dbh or greater		
15. Comments		

Sheet \_\_\_ of \_\_\_

August 2010

**Forest Stand Summary Sheet  
Preparation Guidelines**

**The Forest Stand Summary Sheet is prepared using the combined data from the individual sample plots taken in the field. Data is summarized for each stand existing on the subject property.**

Property: Enter the name of the project site where the field sampling was done

Location: List the town, ADC Map number and grid coordinates

Prepared by: Name of the Qualified Professional who completed the field sampling.

Date: Enter the date that the field sampling took place.

Stand #: Enter the stand designation and acreage (if there are more than two forest stands on the property, additional sheets must be used).

1. Dominant species/Co-dominant species: List the dominant and co dominant species for each stand.
2. Forest Association: Based on the dominant and co-dominant species, enter the forest association type.
3. Successional stage: Enter the successional stage of the stand based on the average of all individual plots.
4. Basal area in square feet per acre: To get an average for the stand, add the basal areas for all of the individual sample plots and divide this total by the number of sample plots in the stand.
5. Size class of dominant species: To enter the average size class, add the size class totals for all of the individual sample plots and divide this total by the number of sample plots in the stand.
6. Percent of canopy coverage: This is the average percent of canopy coverage for all sample points in the stand. Add the totals for all individual plot data sheets and divide by the number of sample plots in the stand.
7. Number of tree species per acre: To determine the number of species per acre, count all of the *different* species listed in the first column of the individual data sheets. Next, take the area of the forest stand in acreage and divide by the number of different species.
8. Common understory species: List the 3 or 4 most common species that occur in the 3' to 20' layer.
9. Percent of understory cover 3' to 20' tall: This is the average percent of understory cover for all sample plots in the stand. Add the totals for all individual sample plots and divide this total by the number of sample plots in the stand.
10. Number of understory species 3' to 20' tall: Count the number of *different* species in the understory layer.
11. Common herbaceous species: List the 3 or 4 most common species that occur in the 3' to 20' layer.
12. Percent of herbaceous & woody plant cover 0' to 3' tall: This is the average percent of herbaceous and woody cover for all sample plots in the stand. Add the totals for all individual sample plots and divide this total by the number of sample plots in the stand.
13. List of major invasive plant species and percent of cover: List the major invasive plant species and amount of area coverage. For example:

O-Norway Maple	20 % ( of the overstory layer)
U-Multiflora Rose	60% (of the understory layer)



H-Japanese Honeysuckle 40 % ( of the herbaceous layer)

14. Number of standing dead trees 6" dbh or greater per acre: Divide the average for all plots sampled by plot size. For example, if the average for all plots is 2 and the plot size is 0.1 acre, the number per acre is 20.
15. Comments: This is a summary of comments included on the individual plot data sheets.



## Forest Analysis Worksheet

The following parameters are measured and evaluated at each sample plot as shown on the forest sample plot field data sheet. Each parameter is given a value and upon completion of the sampling, the preparer will total the numbers for each sample plot to give an accurate analysis of each stand. This worksheet must be included in the FSD report for each stand and the Summary Table (below) must be shown on the plan.

Part A: Composition and Structure		Part B: Condition	
1. Percent canopy closure		1. Invasive species coverage (%)	
70-100%	3	Herbaceous	
40-69%	2	<1	3
10-39%	1	1-5	2
0-9%	0	>5	1
		Understory	
2. Number of shrubs under 20" tall		<1	3
15 or more	3	1-5	2
10-14	2	>5	1
5- 9	1	Canopy	
0-4	0	<1	3
		1-5	2
3. #. of tree species 5" DBH and greater		>5	1
6 or more	3	2. Percent of damage from insect & disease or storm damage	
4-5	2	0-10	3
2-3	1	11-20	2
0-1	0	21-30	1
		31+	0
4. Size class of dominant trees			
Greater than 20"	3	3. Percent of downed dead woody material present	
6-19.9"	2	15-50%	3
3-5.9"	1	5-14%	2
Less than 3"	0	51-100%	1
		0-4%	0
5. Percent herbaceous and shrub cover under 3"			
75-100%	3	4. Average number of standing dead trees/tenth acre plot	
25-74%	2	0-1	3
5-24%	1	2	2
0-4%	0	3-5	1
		5 or more	0
6. Stocking level (BA)			
<50	3	5. Other features	
50-120	2	At the discretion of the preparer, additional points may be assigned; provide description in the narrative	
>120	1		1
7. Other features			
At the discretion of the preparer, additional points may be assigned; provide description in the narrative	2		
	1		
<b>Composition and Structure TOTAL</b>		<b>Condition TOTAL</b>	

**Part C: Location**

1. Location of regulated features (Refer to Part \_\_ of the Technical Manual and Corresponding County Code, Subtitle \_\_, Division \_\_)

Priority 1            20  
 Priority 2            15  
 Priority 3            10

Location rating: \_\_\_\_\_

**Part D: Stand Function**

Place an "X" in the corresponding box that describes the existing stand functions or add functions that are specific to the stand.

Stand	water quality protection	visual screening	wildlife habitat	energy conservation	personal woodlot	other function
A						
B						
C						
D						
etc.						

**Summary Table - Forest Analysis and Priorities**  
 (this table is to be provided on the FSD or NRI – refer to the  
 Technical Manual text for how to determine the final priorities)

	Part A	Part B	Part C				
Stand	Structure (Out of 20)	Condition (Out of 20)	Location (Out of 20)	Total (out of 60)		Priority for Preservation (H, M or L)	Priority for Restoration (H, M or L)
A							
B							
C							
D							
etc.							

**Suggested Format for Forest Stand Delineation Report**

**Forest Stand Delineation Report**

*for*

**Name of Project**

Prepared for:

Name of Developer or Owner  
Address  
Phone Number

Prepared by:

Name of Consultant or Preparer  
Address  
Phone Number  
Fax Number  
Email address

**Certification**

Certification statement by qualified professional

Signature \_\_\_\_\_ Date \_\_\_\_\_

**I. SITE LOCATION AND CONDITIONS**

Description of the property including the area (in acreage), location and relationship to the nearest major road, zoning, current use, and adjoining uses.

State the area (in acreage) of qualifying forest that exists on the property.

Description of any structural remains or existing constructed features on-site, and any cultural features of historic significance on or adjacent to the property. A statement regarding the presence of any historic sites, and/or scenic or historic roads should also be included.

**II. EQUIPMENT USED**

Description of the equipment used to determine the findings reported on the data sheets and a description of how the placement of sample points was determined. (Usually a topographic map provides orientation)

**III. METHODOLOGY**

Description of the prescribed methodology cited in the current Maryland Department of Natural Resources, State Forest Conservation Technical Manual for Preliminary and Field Developed Forest Stand Delineations. A description of the sampling methods used and how the number of plots were determined and evaluated. A statement on how the Forest Structure Analysis was calculated from data tallied at each of the sample point locations.

**IV. GEOLOGY/SOILS**

Description of position of site in relationship to slopes. (I.e. Upland position with southerly facing slopes). Description of soil types and source. (Prince George’s County Soils Survey). Include information on the presence /absence of Marlboro clay. Reference the soils table. (Included at the end of report).

## **V. STAND DESCRIPTIONS**

Descriptions for each forest stand delineated on the site. Each description should include the number of sample points that were taken in the field study of the site, and the details for the stand including the species types and sizes, the average diameter of specimen trees and the average diameter of trees for the entire stand. It should also include a statement of the forest structure determination (Excellent, Good, Poor, etc). The presence of steep and/or severe slopes should also be noted.

## **VI. RARE, THREATENED & ENDANGERED SPECIES**

A statement should be included to indicate the presence or absence of rare, threatened or endangered species. Reference should be made to the letter sent to the Maryland Department of Natural Resources requesting the Environmental Review of the property. A copy of the response letter should be included with the report.

## **VII. WETLANDS**

State that all wetlands and streams are shown and labeled on the plan, or that there are no wetlands present. If wetlands are present, a formal wetland delineation in accordance with the current *Corps of Engineers' Wetland Delineation Manual* must be performed and submitted for review with the FSD or NRI. Reference should be made that a Wetland Delineation/Evaluation report has been submitted.

## **VIII. SUMMARY**

Summary of information provided. (As described above, data was collected for the purpose of determining the value of the forest cover (Summary Table) existing on the property. Stand A received a "Good" rating on the Forest Structure Analysis sheet. Describe how priorities were assigned to existing forest stands. (Forest stands are prioritized for retention based on the summary and analysis of stand characteristics and at least one other objective such as timber management, aesthetics or recreation. Include a description of what elements were present that resulted in the priority rating) Refer to Section 4.2.4c for characteristics used to assign stand priorities.



**SAMPLE TABLES**

<b>Table 1. Sample Soils Table</b>					
<b>Map Unit Symbol</b>	<b>Map Unit Name</b>	<b>K-Factor (Whole Soil)</b>	<b>Hydric Rating</b>	<b>Hydrologic Soil Group</b>	<b>Drainage Class</b>
AaB	Adelphia silt loam, 2 to 5 percent slopes	0.37	Unknown Hydric	C	Moderately well drained
AcA	Adelphia-Aquasco complex, 0 to 2 percent slopes	0.37	Not Hydric	C	Moderately well drained
AdA	Adelphia-Holmdel complex, 0 to 2 percent slopes	0.37	Partially Hydric	C	Moderately well drained
AdB	Adelphia-Holmdel complex, 2 to 5 percent slopes	0.37	Partially Hydric	C	Moderately well drained

Taken from: USDA, NRCS, Web Soil Survey (WSS) available online at <http://websoilsurvey.nrcs.usda.gov>

<b>Table 2. Sample Specimen, Champion and Historic Tree Table</b>					
<b>NO.</b>	<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>DBH (INCHES)</b>	<b>CONDITION RATING</b>	<b>CONDITION COMMENTS</b>
1	Red Maple	<i>Acer rubrum</i>	38	Good	
2	Red Maple	<i>Acer rubrum</i>	40	Poor	Storm damage
3	Yellow Poplar	<i>Liriodendron tulipifera</i>	40	Poor	Lightning strike
4	White Oak	<i>Quercus alba</i>	31	Fair	Some breakage
5	Yellow Poplar	<i>Liriodendron tulipifera</i>	31	Good	
6	Yellow Poplar	<i>Liriodendron tulipifera</i>	31	Good	
7	White Oak	<i>Quercus alba</i>	32	Good	
8	Yellow Poplar	<i>Liriodendron tulipifera</i>	31	Fair	Powdery mildew; atypical form
9	White Oak	<i>Quercus alba</i>	31	Good	
10	Chestnut Oak	<i>Quercus prinus</i>	32	Fair	Some breakage

**NOTE: ALL SPECIMEN, CHAMPION AND HISTORIC TREES WERE FIELD LOCATED**

**Additional Information Needed for FSD report**

**Site Map-** provide 8 ½” x 11” vicinity map (taken from Prince George’s County ADC Map, or similar) (Scale: 1”=2,000’) with outline of property shown and labeled.

**Soils Map-** provide 8 ½” x 11” dated custom soil resource report for an area of interest (AOI) established for the subject site and generated from the USDA NRCS WSS

**State Wildlife and Heritage Service letter-** provide copy of environmental review letter received from The Maryland Department of Natural Resources-Wildlife and Heritage Service.

**Forest Sample Point Data Sheets-** include **ALL** sample point data sheets

**Forest Analysis Worksheets-**include for **ALL** sample points

**Forest Stand Summary Sheets-** include for **ALL** forest stands

**IF A SEPARATE WETLAND DELINEATION REPORT IS NOT PROVIDED,** then the following information **MUST BE INCLUDED** with the FSD report:

**National Wetland Inventory Map-** provide 8 ½” x 11” NWI map (Quad) in color (Scale: 1”=2,000’) with outline of property shown and labeled.

**Wetlands of Special State Concern Map-** provide 8 ½” x 11” Maryland Department of Natural Resources Nontidal Wetland Guidance Map in color