

UPLAND CONTIGUOUS FOREST FIELD DATA SHEET

PROJECT		LOCATION	
STATION #		INVESTIGATORS	
LATITUDE		LONGITUDE	
FORM COMPLETED BY		PICTURE #	
DATE _____ TIME _____ AM PM		WEATHER	
ECOREGION/ FOREST ASSOCIATION	Loblolly Pine, Willow Oak -- Loblolly Pine, Bald Cypress, Basket Oak -- Loblolly Pine , Chestnut - Post - Black Jack Oak., Other - describe		
# OF TREES IN PRISM & DBH	Number DBH		
DOMINANT TREE SPECIES			
SPECIMEN OR RARE SPECIES	Rank (1-5) 5 being highest Describe		
DENSIOMETER READING (# of squares >3/4 filled/total # squares)	North ____/24 = ____%	South ____/24 = ____%	East ____/24 = ____% West ____/24 = ____%
	Average of above readings = ____%		
WETLAND?	Soils Y N	Hydrology Y N	Plants Y N
UNDERSTORY CHARACTERIZATION	Dense, Medium, Sparse Dominant species:		
HABITAT COMPLEXITY	Canopy, Mid Canopy, Understory 3 present 2 present 1 present		
FORBES (herbaceous cover)	Dense, Medium, Sparse		
EVIDENCE OF DISRUPTION AND EXTENT (%)	Natural (ie. storm, disease, deer browsing) Extent (% site coverage)	Anthropogenic (ie. clearing, dirt road, timber harvesting , trash) Extent (% site coverage)	
INVASIVES	Species Dense, Medium, Sparse Extent (% site coverage)		
SIZE OF TRACT	Acres		
WATERSHED FEATURES	Predominant Surrounding Landuse <input type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other _____	Local Watershed NPS Pollution <input type="checkbox"/> No evidence <input type="checkbox"/> Some potential sources <input type="checkbox"/> Obvious sources	

Explanation of Contiguous Forest Field Data Sheet

Representative or random sites should be chosen for the Contiguous Forest Assessment. Enough points should be chosen to provide a good representative characterization of the land under consideration for protection. General guidance is to sample at least 2 points for less than 100 acres of forest, and at least 4 points for up to 1000 acres of forest.

PROJECT: Project name. Typically refers to the watershed being studied

LOCATION: Station location description (i.e. 100 meters NE of the corner of Rt. 5 and Boon Drive).

STATION #: A unique station identifier. Usually refers the subwatershed being studied (e.g., Scotts Level subwatershed Site #1 might be called SL-1).

INVESTIGATORS: Initials of investigators assessing the site (useful if clarification of the data sheet is needed).

LATITUDE/ LONGITUDE: Use a GPS unit to determine the latitude and longitude of the specific location. If you do not have a GPS unit, an estimate of the location should be made using aerial/orthophoto maps.

PICTURE NUMBERS: Roll and photo numbers for any pictures taken at the site.

FORM COMPLETED BY: Initials of investigator completing the form (necessary for deciphering hand writing).

WEATHER: Describe the current weather (e.g, sunny, rainy, snowing).

DATE: Day, month and year the survey was completed.

TIME _____ **AM PM:** Time the survey was completed.

ECOREGION/ Forest Classification: By pre-identifying the eco-region and forest association, the investigator will have an idea of what to expect and what issues may be facing that region. Ecoregion information is available at www.natureserve.org

OF TREES IN PRISM and DBH: Number of trees in Prism refers to a 10 Basal Area Factor (BAF) Prism which is used to select out the larger trees at a given site. The size of the trees is quantified by DBH, or Diameter at Breast Height (see Figure 1).

DOMINANT TREE SPECIES PRESENT: Common and/or scientific name of dominant tree species present. Be as specific as possible (i.e. chinquapin oak, loblolly pine).

SPECIMEN OR RARE SPECIES: Give each site a rank from 1 to 5 (5 being the highest) based on the presence, age, height, location, and health of rare or specimen species present. For example, the presence of old growth trees, rare plant species, or habitat for an endangered species would constitute a high score of 5. Large mature trees and good quality forest would constitute a score of 3 or 4. A site with only 1 specimen tree might receive a rank of 2, while a site with young trees and no rare species would score a 1. The ranking system may vary and should be pre-determined.

Pointers on using the Wedge Prism



Hold it correctly

Hold prism at any convenient distance from the eye, directly over the sampling point. Hold in a vertical position and at a right angle to the line of sight.

Correct it for slope

Make corrections in point sampling when slope is 15% or greater, that is, a 15-ft. rise or drop in elevation per 100 horizontal feet. (For slope correction using a secant scale clinometer, multiply the BAF of the prism/angle gauge times the secant value of the slope in the direction of each tally tree. This reading will be the BA of the tally tree. Trees sampled in this method should be added together to obtain the total BA for the plot.) When the wedge prism is used, an appropriate on-the-ground compensation for slope can be made by tilting the top edge of the prism through the estimated slope angles.

Clear or amber glass

Clear glass prisms perform satisfactorily in most cruising conditions. Amber glass prisms prove superior when cruising is done in low light, hazy or misty conditions.

Handling borderline trees

Tree stems not completely offset when viewed through the prism are counted; others are not tallied. Measure and check borderline trees with the appropriate plot radius factor.

Figure 1. Using Wedge Prism (www.forestry_suppliers.com)

DENSIOMETER READING: A spherical densiometer is used to measure the density of the forest canopy. In other words, you are quantifying how much of the sky above you is blocked by trees. To use a densiometer correctly it must be held level about 12-18" in front of you. When looking into the densiometer you can see the trees above you and grid marks on the densiometer mirror. Count and record the number of grid squares that are more than $\frac{3}{4}$ filled with tree images as well as the total number of squares to calculate the percent coverage. A densiometer reading should be taken at each of the four compass directions. Take the average of the four readings to get a canopy density % for the site. If the canopy density is greater than 50%, the canopy is closed. If the density is less than 50%, the canopy is open. Densiometers are available through forestry supply companies. As there may be some variation between types, follow manufacturers instructions.

WETLAND: Are there wetlands present? This can be difficult to determine since the time of year and amount of recent rainfall can greatly influence your findings. Knowledgeable personnel and wetland identification guides may be necessary to help determine if wetlands are present.

Soils: Are the soils hydric? Y/N

Hydrology: Is there standing water? Y/N

Plants: Are there wetland plants? Y/N

UNDERSTORY CHARACTERIZATION: Understory refers to the trees located entirely below the general level of the canopy that receive little or no sunlight from above or the sides. Indicate if understory is dense, medium, or sparse and identify the dominant species.

HABITAT COMPLEXITY: Circle the number of different habitats (canopy, mid-canopy, and understory/shrubs) present: 3 present 2 present 1 present.

FORBES: Forbes are herbaceous groundcover, including vegetation such as ferns. Indicate if forbes are dense, medium, or sparse.

EVIDENCE OF DISRUPTION AND EXTENT: Describe any evidence of disruption, indicate whether the disruption is natural or anthropogenic and identify the extent (%) of the site affected.

INVASIVE SPECIES: (non-native plants) Invasive species can overrun native species due to lack of natural predators, and often create a monoculture. Identify and describe the type, density (dense, medium, sparse) and extent (% site coverage) of any invasive species present.

SIZE OF TRACT: (acres) Estimate the size of the tract based on topographical maps or GIS data layers.

WATERSHED FEATURES: Identify the predominant surrounding land use and indicate if evidence of local watershed nonpoint source pollution exists. Nonpoint source pollution (NPS) is pollution that cannot be connected to one specific source such as an industrial sewage treatment plant. Examples of NPS pollution may include runoff from golf courses, commercial development, or residential lawns containing fertilizers, pesticides, sediment, metals and other pollutants.

Glossary

Basal Area – The cross-sectional area of a tree at breast height (4.5 feet above ground). The basal area of all trees in a given area represents forest stand density and is measured in square feet per acre.

Biltmore Stick – A measurement tool resembling a yard stick that is used to estimate the diameter and height of a tree.

Caliper – Tree diameter measured at 2 inches above the root collar.

Canopy – The level of the tallest trees overhanging branches that result in the limitation of sunlight reaching lower levels.

Champion Tree – The largest tree of its species within the United States, the state, county or municipality as determined by the state or local Natural Resources Department or similar agency.

Contiguous Forest – Forested land without significant breaks due to roads, power lines or other clearings.

Critical Habitat Area – A critical habitat for all endangered species and its surrounding protection area.

Densiometer – A monitoring tool used to determine the amount of canopy coverage.

Dominant Trees – Trees with crowns extending above the general level of the crown cover and receiving full sunlight from above and partly from the side; typically larger than the average trees in the stand.

Forest Stand Delineation – A methodology for evaluating the existing natural features and vegetation on a site proposed for development, taking into account the environmental elements that shape or influence the structure or makeup of a plant community.

Forest Structure – A measure of vertical and horizontal structural diversity within a stand, which is related to stand age and habitat.

Natural Regeneration – The natural establishment of trees and other vegetation.

Prism – A piece of precisely angled glass used in large forested areas for estimating basal areas, volumes or number of trees per unit area.

Specimen Tree – Trees having a diameter measured at breast height (4.5 feet above the ground) of 30 inches or more, or trees having 75% or more of the diameter of the current state champion tree of that species.

Understory Trees – Trees with crowns entirely below the general level of the canopy receiving little or no sunlight from above or the sides.