

# 1999 Missouri Envirothon

## Forestry Station

### Forestry

F1. Den trees are:

- A. trees with large crowns that aren't easily removed with a skidder
- B. the shredded bark of redcedars that results from the climbing activity of squirrels
- C. live trees with cavities constructed by primary excavators
- D. standing dead trees at least 6 inches in diameter and 10 feet tall
- E. partially felled trees that have caught on other tree limbs during the cutting process

F2. What is the standard height at which foresters measure tree diameters (DBH)?

4.5 feet above the ground

F3. Which tree species is dominant on this forest site?

- A. American elm
- B. Shagbark hickory
- C. Tulip poplar
- D. White oak

F4. Conduct a forest inventory by completing the following table using the numbered trees:

Tree Number	Tree Species (common name)	Diameter at Breast height	Wildlife or Commercial value	Tree Height
#1	Single oak	7.5 inches	Wildlife	46 feet
#2	Post oak	16.1 inches	Wildlife	52 feet
#3	Shagbark hickory	12.5 inches	Wildlife	53 feet

F5. What species of wildlife would likely benefit if a portion of this site was clear-cut?

- A. wildlife that rely on early successional forest habitat
- B. wild turkey
- C. ruffed grouse
- D. songbirds that use brushy areas
- E. all of the above
- F. none of the above

F6. What is the state tree of Missouri?

- A. white oak
- B. red oak
- C. flowering dogwood
- D. black walnut
- E. none of the above

F7. Give the standard names used by foresters to the size classes of trees listed below:

Youngest trees, up to 3 feet tall: \_\_\_\_\_seedlings\_\_\_\_\_

Trees up to 4 inches in diameter, regardless of height: \_\_\_\_\_saplings\_\_\_\_\_

Larger trees, up to 12 inches in diameter: \_\_\_\_\_pole timber\_\_\_\_\_

Forest trees larger than 12 inches in diameter: \_\_\_\_\_sawtimber\_\_\_\_\_

F8. Based on your observations, describe the past history of this wooded site.

Past history: possibly cropped, then planted to grass, some previous grazing, abandoned with trees invading creating a woodland, some tree harvesting.

F9. What is the best use of this wooded site today?

Wildlife habitat is the best use.

F10. Give 5 reasons to plant trees.

Filter water, clean the air, absorb carbon dioxide, shelter for wildlife, food for wildlife, make money, trap snow, block winter winds, improve aesthetics, provide wood for buildings, cool homes (cities), prevent erosion, recreation, hunting

## Soils

S1. How does the dominant vegetation in a forest act to protect the soil against erosion?

Leaf litter protects the surface, roots hold the soil, tree canopy breaks the force of the rain drops.

S2. Of the prairie and the forest soils, which has the highest organic matter content? Why?

The prairie soil. Because of the high amounts of fine roots from the prairie grasses that die each year and then decay.

S3. Which stop (station) would most likely have an "E" horizon?

The forest stop.

## Aquatics

A1. What trees would grow well along the pond's shoreline? Circle all that would apply.

- A. white oak
- B. red maple
- C. river birch
- D. black willow
- E. bald cypress

A2. If the watershed surrounding this pond was completely in trees, what differences would you observe?

- A. more leaf litter
- B. higher water temperatures
- C. clearer water
- D. all of the above
- E. a and c only

A3. Which type of watershed (forest or grass) allows more surface runoff in a rain storm? Why?

A grass watershed because a grass watershed allows less infiltration of rain.

## Wildlife

W1. Why are there no trees present at this site?

The prairie has formed a tough sod that makes it difficult for trees to germinate and grow. Burning may also be occurring on the site which kills the young woody plants.

W2. If trees were to begin to invade a prairie site, which species would probably be one of the first?

- A. sugar maple
- B. persimmon
- C. tulip poplar
- D. red oak
- E. basswood

W3. What conservation practice might be practical on this site if a landowner was interested in improving protection against the wind and snow?

A windbreak