Tennessee 4-H Forestry, Wildlife & Fisheries Project

Advanced

18 USC 707

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UTEXTENSION
INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

FORESTRY

Outcome: Identify tree species using various methods

EXPLORE: Step Out Activity

Use resources listed to learn more about tree identification.

Create an educational piece to showcase your knowledge of topic.

I created the following to share:

Share your educational piece with at least one group (4-H Club, judging team, etc.)

I shared with the following groups:

EXPAND & APPLY

What skills did you learn? How does this relate to every day life? How can you use this knowledge in the future?

FORESTRY

Outcome: Define Forest Fragmentation

EXPLORE: Step Out Activity

Utilize resources listed to define forest fragmentation and seek out other resources to compare and contrast definitions.

Create an educational piece to showcase your knowledge of topic.

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Share your educational piece with at least one group (4-H Club, judging team, etc.).

I shared with the following groups:

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WILDLIFE

Outcome: Develop a simple wildlife management plan for your county

EXPLORE: Step Out Activity

The Written Wildlife Management Plan is when someone assesses their property, considers the species to be managed, and provides written recommendations that address current conditions and objectives regarding wildlife populations and habitat on a specified property. Be sure to identify the focal species, recommend wildlife management practices and their intended impact, as well as state how the management plan will be evaluated.

Utilizing the Written Wildlife Management Plan Outline, create a Wildlife Management Plan for a property you would like to manage. Include a before photo or drawing of the property and decide which species you would like to manage. You may want to visit a Tennessee Wildlife Resources Agency officer to learn more about wildlife practices in your area.

Share your wildlife management plan with at least one group (4-H Club, judging team, etc.).

I shared with the following groups:

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Sample Written Wildlife Management Plan Outline

Part I: Plan Background

What are the species to be managed and what are the management objectives?

The species to be managed include northern bobwhite, eastern cottontail, and brown thrasher.

The management objectives are to manage the area for wildlife species that use early successional stages, particularly those listed above, and provide hunting opportunities.

Part II: Plan Development

Northern bobwhite use scattered patches of shrubby cover, well interspersed with native forbs and grasses. Areas dominated by forbs are commonly used for brooding cover. A variety of seeds, leaves, and insects are eaten.

Eastern cottontails require brushy cover interspersed with herbaceous openings. They eat forbs and grasses, bark of shrubs and young trees, buds, and browse.

Brown thrashers are found in shrub and bramble thickets, brushy hedgerows, young forests, and forest edges. They eat invertebrates and various seeds on the ground among the leaf litter. They usually nest in shrubs up to 10 feet above-ground.

Mourning dove use areas with annual and perennial forbs and grasses with considerable open space at ground level for feeding. They nest in shrubs and trees or on the ground. They commonly use agricultural fields for foraging. They require free-standing water daily.

The area under consideration is 115 acres and includes 2 fields of soybeans that have been planted via no-till agriculture that encompass 60 acres. There are field borders surrounding some portions of the soybean fields. There are 2 small woodlots with an open canopy of scattered trees and a dense brushy understory. The remainder of the area contains dense grass (tall fescue) with scattered forbs, brambles, and tree saplings. Brooding cover for northern bobwhite is limited because of a lack of mobility in the thick grass. Brushy cover used for escape and winter loafing by bobwhite is limiting. Cover for brown thrasher only exists in the 2 small woodlots. Cover for eastern cottontail is largely limited to the small woodlots. The tall fescue does not provide overhead cover. Winter cover will be severely limiting for all species after the soybeans are harvested. There is no free-standing water available.

Part III: Plan Implementation

Control Non-native Invasive Species to reduce coverage of tall fescue and allow the seedbank to germinate, which will provide more food and better cover for all 4 species.

Field Borders should be established around portions of the soybean fields where there are none. This will increase usable space for northern bobwhite and eastern cottontail.

Leave Crop Unharvested will provide soybean seed for northern bobwhite, mourning dove, and eastern cottontail into winter.

Plant Shrubs between sections of soybean fields that will be retained to provide a corridor connecting the two woodlots. Such shrub cover will increase usable space for northern bobwhite, eastern cottontail, and brown thrasher, and increase loafing and nesting cover for mourning dove.

Set-back Succession: Prescribed Fire will rejuvenate the understory in the woodlots and provide more forage for eastern cottontail and northern bobwhite.

Water Development for Wildlife (small pond) should be established to provide free-standing water for mourning doves.

Wildlife Survey should be conducted to monitor populations of all 4 species. Point counts may be used for mourning dove and brown thrasher, covey counts may be used for northern bobwhite, and observation counts and hunter harvest data can be used for eastern cottontail.

Part IV: Plan Evaluation

Wildlife survey data will be evaluated annually and tracked over time to estimate population trends. Hunter success and satisfaction will be accessed through surveys. Vegetation surveys will determine if additional treatment is needed to reduce tall fescue, evaluate success of shrub plantings, and evaluate habitat quality for all species.

Sample taken from Wildlife Habitat Education Program (WHEP) Manual, 2024 edition

Written Wildlife Management Plan Outline

Part I: Plan Background

Identified the wildlife species to be managed and accurately identified the management objectives.

Part II: Plan Development

Demonstrate understanding of the habitat needs of each species. Accurately evaluate the area as habitat for each species (what is present and what is lacking). Identify native plant species or nonnative invasive species.

Part III: Plan Implementation

Include the appropriate management practices. Demonstrate knowledge of the effect of various management practices on habitat and/or the species. Recognize the management compromises necessary to meet the needs of each species and show understanding of the mutual benefits of implementing certain practices.

Part IV: Plan Evaluation

Present realistic methods for monitoring success of the recommendations, including ways to determine if plan was successful, and methods for surveying the species to be managed.

Part V: Drawing

Included a drawing or sketch of the area, reflecting the recommended management practices and where they should be implemented.

WILDLIFE

Outcome: Evaluate the impact of habitat fragmentation and destruction, invasive species, overharvesting, pollution, and climate change on biodiversity (genetic, species, and ecosystem)

EXPLORE: Step Out Activity

Utilize resources listed to learn more about fragmentation and invasive species. Create an evaluation tool or experiment to research this outcome.

List the definitions to the terms above.

Create an evaluation tool or experiment to research this outcome.

I created the following to share:

Share your educational piece with at least one group (4-H Club, judging team, etc.).

I shared with the following groups:

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FISHERIES

Outcome: Conduct a fishery assessment in a Tennessee lake, stream, or river

EXPLORE: Step Out Activity

In this activity, you will study the ecology of a water community while developing skills collecting and interpreting information about the water environment.

Things I Need:

- Old shirt and shorts
- Field shoes
- Field identification books
- Magnifying glass
- White dishpan
- Bucket
- Minnow net or pantyhose
- Small-mesh dip net

I shared my experiences with the following groups:

My Observations:

As you approach the water, observe and record your observations. You will be interested in the creatures living in the water; however, do not overlook the shoreline for signs of their activity.

EXPAND & APPLY

What skills did you learn? How does this relate to every day life? How can you use this knowledge in the future?

FISHERIES

Outcome: Generate a fish marketing plan

EXPLORE: Step Out Activity

In this activity, you will create a marketing plan for fish or other aquaculture products.

List resources you used to research marketing plans.

Resources:

Share your marketing plan with at least one group (4-H Club, judging team, etc.).

I shared with the following groups:

EXPAND & APPLY

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Resources:

PB1756 The All Season Pocket Guide To Identifying Common Tennessee Trees
https://utia.tennessee.edu/publications/wp-content/uploads/sites/269/2023/10/PB1756.pdf

National 4-H Forestry Invitational - Tree Identification resources
https://4hforestryinvitational.org/training/tree-identification-contest/index_html

W428 A Glossary of Common Forestry Terms
https://utia.tennessee.edu/publications/wp-content/uploads/sites/269/2023/10/W428.pdf

National 4-H WHEP Manual
www.whep.org

National Oceanic and Atmospheric Administration
https://oceanservice.noaa.gov/facts/invasive.html

US Department of Agriculture
https://www.invasivespeciesinfo.gov/what-are-invasive-species

US Fish and Wildlife Service
https://www.fws.gov/program/invasive-species

Mississippi State Extension
http://extension.msstate.edu/agriculture/catfish/catfish-marketing

Purdue Extension
https://ag.purdue.edu/department/agecon/_docs/aquaculture/a-guide-to-marketing-for-small-scale-aquaculture-producers.pdf

Purdue Extension
https://ag.purdue.edu/department/agecon/extension/aquaculture/marketing-strategies.html