

2025 State Problem

Roots and Resiliency: Fostering Forest Stewardship in a Canopy of Change

Research

- Identify a forest in your area (county, region) and describe its current composition and what it is managed for (Urban tree canopy, lumber, wildlife habitat, food products, ecological diversity/refuge, recreation, etc). Identify an area with a minimum of 20 woodland acres (or potential to re-establish 20 acres), and preferably includes a water feature (ditch, stream, river, lake, etc.). Larger land tracts are encouraged.
- Describe the vulnerability this forest (with its current make-up) will face in the next 25 and 55 years, in terms of climate change and other public and private pressures.
- Understand Climate Change projections for Indiana for 2050 and 2080, based on the Indiana Climate Change Assessment (2018).

Plan

- As a manager, develop a strategic plan, including a general timeline, for how to effectively manage the forest to be a viable and lasting component of the landscape (i.e., will its species composition, uses, etc., change). Include impacts and changes to wildlife, water resources, and soils. What resources, institutions, and groups will you consult and partner with to execute this plan? What key commitment of the 2015 Paris Agreement that, if lost, would affect the sustainability of this forest?
- Describe the current economic impact of this forest on the community.
- As a manager of this resource, describe the future impacts that climate change could have on the forest, soil health, land use, the local economy, and other resources.
- You may want to consider prescribed burning - how would these burns benefit or affect the forest? If the fire was to get out of control, how might an uncontrolled wildfire affect the forest (trees, wildlife, soil and water)?
- Do you have a plan to monitor for and manage invasive species? What methods might you use to control Invasives?
- Climate change puts forests under stress which makes the trees more susceptible to disease and insects. What methods might you use to minimize stress and help prevent forest damage from insects and disease?

- Impacts of climate change could involve drought or heavy rain. What impacts might weather patterns of moisture, temperature, or wind have on your forest area and how might you mitigate some of these impacts?
- Consider the resource materials provided for this year's Current Issue Resource Study Guide. Relate your plan to some of these resources.
- Look at the Tribal Climate Adaptation Menu in the Current Issue Resource Study Guide. You must incorporate at least one strategy from this publication into your management solution.

- IF you live in an area of the state where there are no tracts of forest that range from 20 to 200 acres THEN you may consider an Urban Tree Canopy landscape as your forest case study. IF your region is more suited to an Urban Tree Canopy study as an alternative choice THEN please use any suitable points from above and consider the following points to include in your presentation including the Tribal Climate Adaptation Menu:
 - What are the concerns and projected land use/landcover/urban heat trends for this area?
 - How will you manage urban trees for a changing climate? What factors must you consider?
 - What effects will your plan have on the urban environment/landscape, urban forest, and urban community? Consider the economic impact. What is the projected timeline?
 - Project the potential of urban development adjacent to this forest and what impact and urban tree canopy may have (positive or negative) on this forest. Explore whether “the benefits of urban tree canopy (treeequityscore.org) are reaching communities who need them most” and suggest areas for planting more trees.

Present

- Describe how this forest might change in the next 25 and 55 years, based on climate projections and models. Be sure to document the models or references you use.

Your Strategic Plan may include:

1. History of the property

2. Vision of the forest for the future
3. Prioritization of plan/timeline
4. Goals and Objectives of the plan
5. Monitoring of plan

Activities of the plan – Consider practicality, costs, impacts

Resources to consider –

- Your local Natural Resource Professionals
USDA/NRCS/SWCD
County Extension Office
Department of Natural Resources (DNR)
State/National Forests
Indiana State Department of Agriculture
Parks Department
City/County Planner/Commission
Local College Agriculture Professor
A Landowner that you know
City or County GIS/Planning and Zoning/Engineering Departments

- Web Soil Survey link
[-https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm](https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)

IF you are assessing an Urban Tree Canopy THEN you may consider referencing the US Forest Service/USDA Urban Tree Canopy Assessment Report (USAFS FS-1121 April 2019) [Urban tree canopy assessment: a community's path to understanding and managing the urban forest](#) (PDF to be attached).