FORESTRY

Teacher Training Day for Envirothon
Grand Island, January 11, 2017
**Topics To Study**

- What is forestry in Nebraska?
- Forests and their trees
  - Pine Ridge
  - Riparian forests
  - Windbreaks
- Managing forests, understand & measure!
- Tree Identification: Using the key to identify:
  - Habitat, form, bark, bud, twig, leaves, flower, and fruit
- Tools to measure
What is forestry in Nebraska?
Forests and their Trees

Where are Nebraska’s significant forests?

- Ponderosa pine forests
- Hardwood forests
- Riparian forests
FORESTS AND THEIR TREES

- Trees in Nebraska’s forests
  - Pine
  - Oak and walnut
  - Cottonwood
  - Eastern redcedar
Managing Forests

- Sustainable use and the importance of it
- Silvicultural practices
- Forest thinning
- Fire suppression - fuel loading and fuel reduction
- Prescribed fire
- Forest inventory measurements
- Plant species identification
- Insect and disease identification
Tree Identification

- Each tree species has unique characteristics, which often determines the practical use of the species. Some are conifers (or softwoods), others are deciduous (or hardwoods).
- It is important to be able to accurately identify the common tree species in Nebraska.
- Become familiar with identification terminology using a dichotomous key to identify tree species.
5 Features of Tree Identification

- Habitat
- Form
- Bark
- Bud, Twig
- Leaves, Flowers, and Fruit
Habitat
Form
Bark
BUDS AND TWIGS
Leaves,
Flowers, and Fruit
Tools: Tree & Forest Measurement

- To estimate the volume of wood to buy and sell raw trees and turn into wood products, it is necessary to estimate not only the number of trees, but also the amount and size of wood for products such as homes, furniture, paper, construction and fuel. The quantity of wood in trees and logs must be measured and quantified for the wood market.

- Common forest and tree measurement terms.
  - Diameter
  - Log
  - Basal area
  - Stocking
  - Stand
  - Density
  - Merchantable
  - Board feet
  - Cubic feet
  - Cord
Tools: Tree & Forest Measurement

- A method of forest and tree measurement is necessary to guide the sustainable management of the forest.
- Specific forestry tools are used to measure the spacing of trees in the forest: the diameter, age, height, and the volume of individual trees and logs
  - Compass
  - Increment borer
  - Diameter tape
  - Prism
  - Clinometer
  - Hypsometer or Biltmore stick
**Fun Facts!**

- Home of Arbor Day!
  - In 1872 J Sterling Morton proposed a tree planting holiday called Arbor Day

- The State Tree!
  - eastern cottonwood
RESOURCES

- Tree ID – Trees of Nebraska, UNL EC publication, https://nfs.unl.edu/documents/TreesofNebraska.pdf

- Internet sites –
  - about.com -- forestry
  - Project Learning Tree Activity Guides, http://plt.org
  - Nebraska Forest Service, www.nfs.unl.edu
  - Nebraska Statewide Arboretum, Inc., www.arboretum.org

- And, don’t forget to ask your local district forester for help (forestry books, practical help with using the forestry tools and answering questions), http://nfs.unl.edu/foresters
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