

Introduction to Ecology Week 5 Lesson Plan

Friday, September 23, 2016, 1:45-3:15 PM

Mapping Exercise

Objectives:

- To know how to use a compass
- To create a legend, compass rose, and landmarks on our study site maps
- Determine length and area; acres/hectares

Activities

- On your Field Study site map, label the Arboretum barn, S. Fork Palouse River, bike trail, bridge, quarry, wetlands & large willows on western end of field study site.
- About our study site: The Clyde Park Site as it is known, owned by the City of Moscow. The riparian restoration at the Arboretum site on the South Fork Palouse River aimed to decrease nonpoint source pollution and restore riparian and floodplain areas along the riverbank. BMPs included developing a functional floodplain, re-sloping and stabilizing eroding streambanks with various bioengineering techniques, constructing five riparian wetlands to treat surface runoff waters before it enters the South Fork Palouse River, and planting native woody and herbaceous vegetation to create a variable-width riparian forest buffer.

Assignment

- Our field study site is 1,176 paces (1 pace = 68 cm).
 - Determine how many meters this is.
 - Next, measure the field study site on your map in cm and then convert it to meters. For example if on your map the study site is 25 cm, this would equal 0.25 meters (1 meter = 100 cm)
 - Make a ratio with these two numbers (divide the length of the study site by the length of it on the map) and then simplify. This is our map scale. Record the number in the bottom. Example: 850 meters actual distance/ 21.25 meters on the map = 40:1 map scale
 - Determine how many acres our study site is if its average width is 30 meters. An acre = 4,047 square meters or meters². To do this you multiply your answer from

the first question by 30. For example 30 meters X 850 meters = 25,500 meters².
Then divide by our definition of an acre (4047 sq. meters) = 6.3 acres.

- Determine how many hectares our site is: 10,000 sq. meters = 1 hectare

Read this article about famous Palouse ecologist Rex Daubenmire:

<https://magazine.wsu.edu/2015/08/16/traveling-ecologist-rexford-f-daubenmire/>