



FE 308 Lab #6 – Mapping lab

Equipment:

Calculator, Engineer's scale, Engineering paper, String, Compass

Exercise:

Field maps are one of the most important tools for fieldwork. This lab is an introduction to reading and making measurements from topographic maps and will involve some familiarity with the Public Lands Survey System (PLSS).

You are to work in teams and hand in one assignment per team. Individual assignments will not be graded. Three people per group is a good number.

Office work

Answer the list of questions that begins on the next page.

Deliverables

Each group should hand in the following (three people per group):

1. One set of typed answers **in the same order as the lab questions**. The course number, assignment title, date submitted, team names, and lab day and time should appear in the upper right-hand corner of the first sheet.
2. For each map question, list the following:
 1. Question number and map name (e.g. 1. Sixes Quad)
 2. List letter for each response (A, B, etc)
 3. Calculations, if necessary
 4. Solution

Do not write or mark on the maps!

Map Questions

1. Sixes Quad

- A. Calculate the coordinates of the top of Saddle Rock in all three coordinate systems that are present on USGS 7.5 minute quadrangle maps. Use a table format and list geographic, state plane, and UTM with the longitude coordinate followed by latitude. Include units.
- B. If you were to build a house on Indian Creek, which county office would you need to contact for permits?

2. Mount St. Helens Quad

- A. Calculate the horizontal and slope distance in feet from the top of Butte Camp dome (use the top of the north peak) to the rim of the crater next to the west fork of Dryer Glacier.
- B. What is the approximate percent slope from the top of the south rim of the crater to the low point of the interior?

3. Mary's Peak Quad

- A. A fire has been reported at the following legal description: NW $\frac{1}{4}$, Section 31, T11S, R7W, W.M. Your crew is at the small community of Blodgett. What are the directions for driving to the fire (including mileages)?

4. Airlie South Quad

- A. List the azimuth and distance (ft) between Lewisburg Saddle and the Vineyard Mtn. radio tower.

5. Windy Peak Quad

- A. You are interested in Section 2, T17S, R8W, W.M. What other maps will you need?
- B. What is the history of the creation of this map?

6. Nestucca Bay Quad

- A. What is the driving distance in miles between Meda and Oretown?
- B. What is represented by the white color on the map?
- C. What is represented by the green color on the map?

7. Oakridge Quad

- A. What is the slope distance in feet and percent slope from Bald Butte to the shore at Hill's Creek Reservoir?
- B. What is the approximate acreage of the lake just south of the Willamette fish hatchery?

8. Five Rivers Quad

- A. What is the canoeing distance in miles on Five Rivers from the Lobster Creek jct. to the Alsea River jct.?
- B. Which counties are included on this map?

9. Cottage Grove Quad

- A. What is the elevation of the NW, NE, SE, and SW (list answers in this order) section corners of Section 8, T20S, R3W, W.M.?
- B. Who owns the railroads running through town?

Do not write or mark on the maps!

Your answers are due by Friday, May 20th at 5 PM. Please put your assignment in the mailbox outside my door (Peavy 275) or in the FERM office (Peavy 204). Please write on the front of the envelope your names, course number (FE 308), and lab day: Monday, Tuesday, or Wednesday lab.