Geog/Geol 642
Watershed Project Guide & Requirements

Your term project, done as a group, will have the goal of completing some kind of watershed or stream corridor assessment, possibly a post-project assessment. You should (1) describe the problem; (2) goals of the project; (3) methods and protocols applied; (4) identify the agency or group you are cooperating with. Remember to have your project proposal reviewed by the instructor before you collect data (though reconnaissance in advance is recommended.) Projects need to be completed as a group, since you will need field assistance, but final projects can be turned in separately, if desired.

The variables you'll be investigating might include one or more of the following:

- Channel and corridor morphometry
- Bed and bank materials, sediment
- Runoff and streamflow
- Upland watershed conditions of runoff and erosion.
- Water quality: chemical, microbial, turbidity, DO, temperature, pH, specific conductance, etc., or water quality indices from macroinvertebrate sampling
- Efficacy of restoration

Your study may involve one or more modes:

- description or classification
- monitoring characteristics over time – trend over times
- comparison of one place/time with another
  e.g. effects of impacts (like watershed development, or treatment (like restoration)
- investigating relationships among variables
  e.g. velocity and macroinvertebrate population

Some key issues to consider in planning and completing your project:

- Access is critical, and must be secured in advance. Working with existing management agencies is important to securing access.
- Early planning is critical
- You may want to following an existing protocol, modified for your particular needs
- Field notes are a critical part of field work, providing a record of information often not recorded anywhere else – original sketches, observations and other notes. Field notebooks will be used both on field trips and on the group term project.
- If you are returning to a project done as part of this class, the project report and spreadsheets should be online. Additional files on CD may be available from the instructor. Some past projects may have important data spreadsheets embedded in word documents (see note below).

To turn in: Printed report and CD with:

- Digital version of report (pdf). Create by printing to Adobe PDF in 272 or 290.
- Field notes, scanned then converted to pdf. Please consolidate into one document, and clarify as needed. After returning from the field, you should work together to make sure

your notes are correct, cross-checking with multiple notetakers as necessary. Your group may have assigned one person to be responsible for field notes & sketches. Just make sure you provide the best record for future projects studying your site.

- All data spreadsheets, clearly documented. If any are embedded in a Word document, you need to make sure that they are also provided as simple Excel spreadsheets, since your Word document will be converted to PDF form, without spreadsheets.
- All generated maps from ArcGIS, in pdf.
- All GIS data layers, with metadata
- Presentation (powerpoint)