

GGY 435 – ENVIRONMENTAL GEOGRAPHY

Research Paper Guidelines – First and Final Drafts

First Draft. The draft of your research paper is due on **Wed., Nov. 12**. It should be a complete draft, with roughly 10 pages of text, and it should include a full list of sources cited. Your draft should include at least one figure or table to illustrate your topic. All figures or tables you plan to use should be attached and referred to in the text. I will read your draft and provide feedback by Mon., Nov. 24, leaving you about 3 weeks to complete revisions and submit a final draft. I will provide a grade on the draft which would reflect your final paper grade if you did not hand in a final revised draft. Your grade on the final draft will be no lower than the draft grade.

My comments will focus on the following points:

- Proper use of grammar and spelling. Please spell-check and edit your draft.
- Fluid style and readability of the text. Use topic sentences, avoid repetition and run-on sentences. Try to be as informative as possible while also being clear and concise. Avoid excess wordiness and unnecessary phrases whenever possible.
- An clear and concise introduction, including a thesis statement that frames the topic and presents the main points to be addressed in the paper.
- Logical organization of topics and structure of content that supports the thesis statement.
- Use of appropriate sources, proper citations, and complete bibliographic citation of all sources used.
- Incorporation of figures or tables in the paper, including discussion in the text and citation of sources.

Final Draft. The final draft of your paper is due by the end of final exams: **5:00 pm on Friday, Dec. 12**. No late papers can be accepted because I will need to begin reading the papers and assigning grades immediately. Hand in a printed copy of your final paper (no email submissions). You may hand in the paper any time up until the deadline by bringing it to me at my office (DL 220), by sliding it under my door if I am not there, or by bringing it to the Geography & Geology department office (DL 102) where the staff will place it in my mailbox with a note of the time and date.

Format Issues. The paper should be double-spaced, with 12-point type and 1-inch margins. The paper should have a title (you are not required to include a title page). The length of the text body of the paper (not including title page, list of sources cited, and figures) should be roughly 8-12 pages.

Figures. Graphs, maps, charts, etc. are encouraged and should be included as separate pages at the end of the paper. Be sure any photocopied material is legible. Be sure they are labeled (Fig. 1, Fig. 2, etc.) and referred to in the text. For each figure or table, include a caption that explains what is shown and cites the source of the information. See the tables and figures in Goudie, *The Human Impact*, for examples of captions and citations.

Citations. Sources should be cited in parenthetical notes according to the author-date system. Follow the example set by Goudie in *The Human Impact*. At the end of the paper should be a list of “References” or “Sources Cited.” This is not quite the same as a bibliography (which lists all relevant publications about a topic whether they have been cited or not). The list of references should include full bibliographic information for each source that was cited in the paper, arranged alphabetically by author. Be sure the citations are complete and the format you use is consistent for each source listed.

Examples of Citation Style and List of Sources Cited

Sediment in river systems is widely recognized as a significant threat to water quality. Elevated sediment loads raise turbidity levels and transport pollutants by acting as a substrate for heavy metals, nutrients, ammonium, and some pathogenic bacteria (Horowitz, 1991; Mallin et al., 1999). An understanding of sediment dynamics is important to the development of management practices to address shoaling and siltation of navigation channels, damage to aquatic and benthic habitats, reduction of light penetration due to elevated turbidity, and pollution control (Phillips, 1991a, 1991b; NCDENR, 2000). Recent research in fluvial geomorphology has addressed these issues by focusing on the processes of erosion, storage, and re-mobilization that deliver sediments to rivers and complicate the management of sediment hazards (Meade et al., 1990). In large river systems, these processes are especially complex because of the many spatial and temporal lags that influence sediment transport over various time scales (Blum and Tornquist, 2000). As Phillips (1991a, p. 440) has noted, the lower reaches of these rivers are particularly important from a management perspective because they “represent the last opportunities to store sediments and associated contaminants before they are deposited in environmentally sensitive coastal waters.” Data from the U.S. Geological Survey’s online *Suspended Sediment Database* (USGS, 2005) confirms that the coastal reaches of large rivers are sometimes associated with very high sediment concentrations that lead to siltation problems (Figure 1).

Sources Cited

- Blum, M.D. and Tornquist, T.E. (2000). Fluvial responses to climate and sea-level change: a review and look forward. *Sedimentology* 47: 2-48.
- Horowitz, A.J. (1991). *A Primer on Sediment Trace Element Chemistry in Aquatic Environments*. Chelsea, MI: Lewis Publishers.
- Mallin, M.A., Posey, M.H., Moser, M.L., Leonard, L.A., Alphin, T.D., Ensign, S.H., McIver, M.R., Shank, G.C., and Merritt, J.F. (1999). *Environmental Assessment of the Lower Cape Fear River System, 1998-1999*. Wilmington, NC: University of North Carolina at Wilmington, Center for Marine Science, Report 99-01.
- Meade, R.H., Yuzyk, T.R., and Day, T.J. (1990). Movement and storage of sediment in rivers of the United States and Canada. In Wolman, M.G. and Riggs, H.C. (eds.), *Surface Water Hydrology, The Geology of North America, Vol. O-1*. Boulder, CO: Geological Society of America, 255-280.
- NCDENR (2000). *Cape Fear River Basinwide Water Quality Plan*. Raleigh, NC: North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Quality.
- Phillips, J.D. (1991a). Upstream pollution sources and coastal water quality protection in North Carolina. *Coastal Management* 19: 439-449.
- Phillips, J.D. (1991b). Fluvial sediment delivery to a Coastal Plain estuary in the Atlantic Drainage of the United States. *Marine Geology* 98: 121-134.
- USGS (2005). *Suspended-Sediment Database: Daily Values of Suspended Sediment and Ancillary Data*. U.S. Geological Survey (USGS), Water Resources Division. Online document accessed Oct. 30, 2005. Last updated Feb. 15, 2005. Internet address: <http://co.water.usgs.gov/sediment/>.