

**Writing Style Guide of the  
Geography – Earth Science Department, Shippensburg University**

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**Abstract**

Include your abstract on the cover page. Full details of what is expected in the abstract are presented below. This should be single-spaced and less than 250 words. The abstract should present the purpose, methods, and key results of the paper. Generally, an abstract does not reference other literature. Note that the main body of the paper should stand on its own; that is, do not treat the abstract as an introduction. You should write the main body of the paper as if the reader has not read the abstract.

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## **Introduction: General goals of editing and proofreading**

High quality writing takes a great deal of care, effort, and time. Work to make your paper free of errors, such as spelling, punctuation, and formatting issues. Beyond basic proofreading, careful editing should ensure that the narrative is well organized and concise. Communicate as clearly as possible, which often involves removing unnecessary text and reorganizing material. This can take substantial time and effort, as multiple rounds of review and editing may be necessary to produce a polished, high-quality product. A good practice is to have someone else review your paper and provide editorial suggestions. The [SU Writing Studio](#) provides assistance to help students improve their writing.

Include the following in your paper, as required in your assignment (formatting details provided below):

- Title page
- Table of contents (including lists of tables and figures)
- Abstract (when required)
- Narrative (body of the paper)
- References cited

## **General formatting**

- Be consistent with all aspects of formatting throughout the entire document. Follow the guidelines below unless instructed otherwise.
- Use 1 inch margins on all sides (except MS thesis, 1.5-inch left margin for binding)
- Use 11 or 12 point font
- Use 1.5 line spacing
- Use headings / sub-headings, spaced from preceding text by one blank line (described below)
- Include page numbers on all pages except the title page. Number front material (e.g. Table of Contents) with lower case Roman numerals (i, ii, iii, etc.) and other pages with standard numerals (1, 2, 3, etc.). Number appendices separately (e.g. A-1, A-2, etc.).
- Limit use of quotations—it is often better to paraphrase material to suit the focus of your paper. Quotations of less than 4 lines should be included as standard text, surrounded by quote marks, with proper citation. For example, Lutgens and Tarbuck (2015) state that “every stream drains an area of land called a drainage basin, or watershed.” Longer quotes should be indented and single-spaced, with proper citation, such as this example:

Rivers drain much of the land area, with the exception of extremely arid regions or polar areas that are permanently frozen. To a large extent, the variety of rivers that exist is a reflection of the different environments in which they are found. For example, although the Parana-La Plata river system in South America drains an area roughly the same size as the Nile in Egypt, it carries nearly 10 times more water to the ocean (Lutgens and Tarbuck 2015).

- Mathematical equations should be indented and numbered, with all symbols explained. For example, the discharge of a stream can be calculated based on the size of the channel and the velocity of water (equation 1):

$$Q = AV \tag{1}$$

where:

Q = discharge (m<sup>3</sup>/sec)

A = area, cross section of stream channel (m<sup>2</sup>)

V = velocity, flowing water (m/sec)

### Title page

The first page of your paper should be the title page, including the title of the paper, author name, date, and information on the course for which the paper is submitted (e.g. Geology of National Parks, Dr. Blewett). Work to create an informative title that conveys the purpose and location of the work. For example, “Effect of physical weathering on rock climbing risks, Half Dome, Yosemite National Park, California” is much better than “Rock climbing in Yosemite.” If required, include the abstract on the title page as is the typical format in most professional journals (see example title page above).

### Table of contents

Develop your table of contents early in the writing process to help you organize the flow of information, much as you would with an outline. Format the table of contents with columns for “Section” and “Page.” Include all headings and sub-headings in the table of contents that are used throughout the body of the paper.

Include separate sections in the table of contents for “List of Tables” and “List of Figures,” which should include the table or figure number, caption, and page number. (See example table of contents, page i of this document.)

### Major/minor section headings

Divide the paper into numerous sections to organize the flow of information and help guide the reader. Look for opportunities to subdivide the writing into smaller sections that will improve the organization of information. Develop a hierarchy of text formats for major section headings and minor sub-sections (see professional journals for examples). Specific section titles (e.g. “Chesapeake Bay Watershed Study Area”) are preferable to generic section titles (e.g. “Study Area”). Avoid section headings that appear as the last line on a page; add space to move such a heading to the top of the next page.

## Formatting tables and figures

- Include tables and figures within the body of the paper rather than in a separate section at the end of the document.
- All tables and figures must be numbered (in separate sequences: Table 1, Table 2, Figure 1, Figure 2) and include a short caption that explains the purpose. For tables, place the number and caption centered above the table; for figures, center the number and caption below the figure (see examples, next page). Do not repeat the same information in a title (e.g. on a map or data plot) and in the caption. The proper place for that information is in the caption.
- Refer to all tables and figures in the narrative. For example: “The temperature data (Table 1) indicate...” or “Table 1 provides the temperature data...” For complex tables and figures, explain the key aspects to the reader in the narrative of the paper; that is, provide some guidance to help readers interpret the most important aspects of the table or figure.
- Data plots, charts, map, photos, and other graphics should all be referred to as “figures.”
- Include citation information for any material used from other sources, including copied graphics or data used to develop a graph, map, etc.
- Include the date for time-sensitive information, such as when a photo was taken or the data displayed on a map (which often differs from when the map was prepared).
- Full cartographic design is beyond the scope of this guide, but be sure that all maps include a legend, scale, and a caption that indicates proper citation information and the date(s) of data displayed. Note that data warehouses (e.g. PASDA) are not the data source that should be cited.

Example:

Soils in the study area are dominated by hydrologic soil group B. These soil series vary with regard to horizon thickness, nominal permeability, and clay content, affecting hydraulic conductivity (Table 1). Infiltration rates were tested in the field at 108 residential sites and 18 agricultural sites and the results were classified into categories according to the definition of hydrologic soil groups (Figure 1).

Table 1. Hydrologic soil groups (HSG) and physical characteristics of the tested soil series (Source: Woltemade 2010; data from Zarichansky 1986).

Soil series	HSG	Horizon depth (cm)	Permeability (cm/hr)	Clay content (%)	Depth to bedrock (cm)	Depth to water table (cm)
Murrill	B	0-41	1.5-5.1	10-20	> 152	> 180
channery loam		41-140	1.5-5.1	18-35		
		140-157	0.5-5.1	27-55		
Hagerstown	B	0-25	1.5-15.2	15-35	> 102	> 180
silt loam		25-48	1.5-5.1	23-60		
		48-152	1.5-5.1	23-60		
Duffield	B	0-25	1.5-5.1	15-30	> 122	> 180
silt loam		25-107	1.5-5.1	20-42		
		107-198	1.5-5.1	18-41		

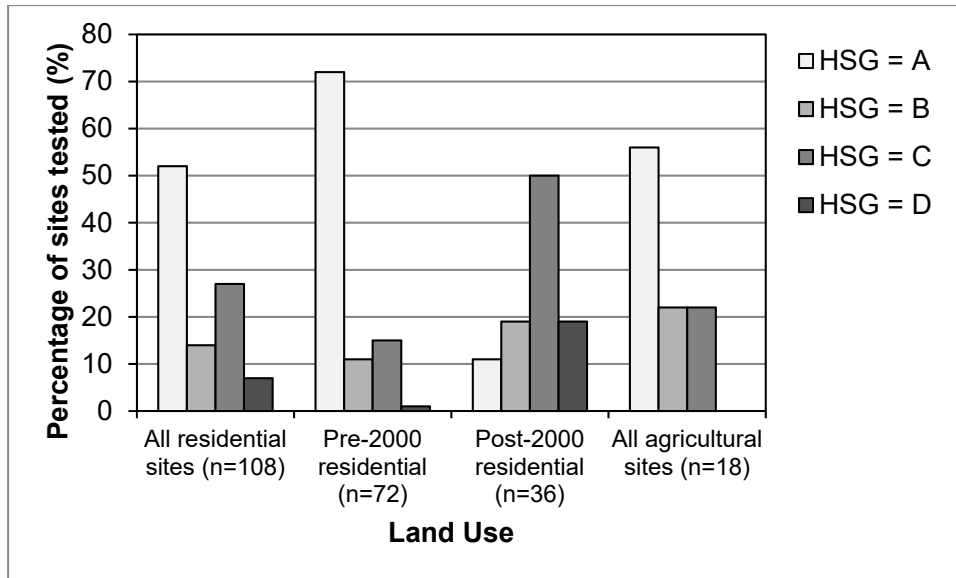


Figure 1. Field-tested infiltration rates classified into hydrologic soil groups. Note that soils in Group A have the highest infiltration rates and soils in Group D have the lowest infiltration rates (Source: Woltemade 2010).

### **Abstract**

An abstract is a short (typically ~250 words) synopsis of the purpose, methods, and key conclusions described in the paper. It should stand on its own, as it may be the only part of a paper that some people will read. Avoid jargon and excessive abbreviations. Generally there are no reference citations in the abstract, although you must provide citations in cases where you draw material from others.

The abstract usually includes four components, typically in a single paragraph without the headings below (see professional journals for examples):

**Introduction:** A few sentences outlining the question addressed by the research. Make the first sentence as interesting and captivating as possible. The final sentence of the introduction describes the purpose of the study, the research question(s), or the hypotheses.

**Methods:** This must be scaled down sufficiently to fit the length of the abstract, but it must be detailed enough to judge the validity of the work. Most abstracts address the research design, study area, sampling of variables, and statistical or analytical methods.

**Results:** Briefly describe the critical outcomes of the paper.

**Conclusion:** State concisely what can be concluded and its implications. The conclusions must be supported by the data presented; never present unsubstantiated personal opinion. If there is room, address the general applicability of the results.

## Literature review

A literature review is an integrated presentation of the available information on the topic of your paper. For papers that rely exclusively on secondary information (i.e. that published by others rather than your own original research), virtually the entire paper is a literature review. For papers that communicate your own primary research (e.g. new data collection and analysis), the literature review provides essential background and context for your original work.

The literature review should be a narrative that integrates the most important ideas from all of the literature. That is, it should not present the material as a sequence of studies, but rather as a synthesis of ideas. The flow should be from general background toward ideas that are more specific and more directly related to your research. You may use section headings to organize the literature into coherent sets of ideas of reasonable length. At the close of your review, you should identify any significant gaps in the literature—especially those that you address in your research.

You might review several different types of literature, including:

- Papers that address your general topic.
- Papers that address methods that you employ in your research, including field sampling, geo-techniques (e.g. GIS methods, image interpretation), statistical analysis, etc.
- Papers that describe the relevant characteristics of your study area.

## References Cited

All literature must be properly cited in the narrative and in the “References Cited.” The Geography-Earth Science Department uses the APA citation style, which is widely used in the sciences and many professional journals. This format is supported by several SU library search engines, Google scholar, Zotero and is explained in numerous online formatting guides. For specific examples of citation formats in APA (as well as MLS and Chicago styles), see the “APA formatting guide” available on the GES website. Use single spacing for the References Cited section, with hanging indentation (example below).

*Failure to properly cite sources is a form of plagiarism, which is not tolerated by the Geography-Earth Science Department. Cases of plagiarism will be reported to the Dean and may be grounds for failing a course and/or dismissal from the University. See Swataney (SU student handbook) for more information.*

Lutgens, FK and EJ Tarbuck. (2015). Essentials of Geology. 12<sup>th</sup> edition. Boston (MA): Pearson Higher Education.

Woltemade, CJ. (2010). Impact of Residential Soil Disturbance on Infiltration Rate and Stormwater Runoff. Journal of the American Water Resources Association. 46(4):700-711.

Zarichansky, J. (1986). Soil Survey of Cumberland and Perry Counties, Pennsylvania. Washington (DC): U.S. Department of Agriculture, Soil Conservation Service.