Impacts of Land Use on Water Quality in Minnesota

https://github.com/lhr12/HDA_Project

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<Arrow brackets are used for annotating the RMarkdown files. Text within these brackets should not appear in the final version of the PDF document>

<**General Guidelines**> <1. Write in scientific style> <2. Global options for R chunks should be set so that only relevant output is displayed> <3. Make sure your final knitted PDF looks professional. Format tables appropriately, size figures appropriately, make sure bulleted and numbered lists appear as such, avoid awkwardly placed page breaks, etc.>

1 Rationale and Research Questions

<Write 1-2 paragraph(s) detailing the rationale for your study. This should include both the context of the topic as well as a rationale for your choice of dataset (reason for location, variables, etc.) A few citations should be included to give context for your topic. You may choose to configure autoreferencing for your citations or add these manually.>

<At the end of your rationale, introduce a numbered list of your questions (or an overarching question and sub-questions). Each question should be accompanied by one or more working hypotheses, inserted beneath each question.>

2 Dataset Information

<Provide information on how the dataset for this analysis were collected, the data contained in the dataset, and any important pieces of information that are relevant to your analyses. This section should contain much of same information as the metadata file for the dataset but formatted in a way that is more narrative.>

<Describe how your team wrangled your dataset in a format similar to a methods section of a journal article.>

<Add a table that summarizes your data structure (variables, units, ranges and/or central tendencies, data source if multiple are used, etc.). This table can be made in markdown text or inserted as a `kable` function in an R chunk. If the latter, do not include the code used to generate your table.>

3 Exploratory Analysis

<Insert exploratory visualizations of your dataset. This may include, but is not limited to, graphs illustrating the distributions of variables of interest and/or maps of the spatial context of your dataset. Format your R chunks so that graphs are displayed but code is not displayed. Accompany these graphs with text sections that describe the visualizations and provide context for further analyses.>

<Each figure should be accompanied by a caption, and each figure should be referenced within the text>

4 Analysis

<Insert visualizations and text describing your main analyses. Format your R chunks so that graphs are displayed but code and other output is not displayed. Instead, describe the results of any statistical tests in the main text (e.g., "Variable x was significantly different among y groups (ANOVA; df = 300, F = 5.55, p < 0.0001)"). Each paragraph, accompanied by one or more visualizations, should describe the major findings and how they relate to the question and hypotheses. Divide this section into subsections, one for each research question.>

<Each figure should be accompanied by a caption, and each figure should be referenced within the text>

4.1 Question 1:

4.2 Question 2:

5 Summary and Conclusions

<Summarize your major findings from your analyses in a few paragraphs. What conclusions do you draw from your findings? Relate your findings back to the original research questions and rationale.>

6 References