

MSER 521: Project Proposal

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The goal of this proposal document is to help you think about your project topic, audience, and data sources – so you can get feedback on your idea. Please make a copy of this worksheet, fill it out, and submit it. Please also come to class prepared to talk about your idea and answer questions about it.

1. Topic - What topic are you going to explore? Why does this topic matter (to you, your audience, or society)? What perspective or insight do you want to highlight?

Water quality. This matters to me as I have taken a particular interest in water quality following my two internships involving water quality. I want to highlight the difference in water quality in WNC before and after Helene.

2. Goal - What do you want your audience to think, feel, or do (e.g., to raise awareness, inspire curiosity, influence behavior, correct misconceptions, highlight hidden patterns)?

I want my audience to think about Helen's impact on our waterways, and feel that our streams and rivers water quality is important. Probably my main goal is raising awareness and maybe to highlight patterns.

3. Audience - Who is your audience (noting that you can also have multiple audiences)?

My audience is the general public, anyone curious about water quality or wanting to learn more.

4. Preliminary Data Sources (most important) - What source(s) of data will you be using to communicate your ideas? A few notes here:

- Make sure you have downloaded your dataset, examined it, and determined that you can answer the questions you propose using the dataset provided.
- Note that sometimes more than one dataset is needed to answer the question / illustrate the point you are trying to make.
- You might also need to gather some data for yourself in order to be able to achieve your communication goal.

EQI's VWIN data and SMIE data

(<https://environmentalqualityinstitute.shinyapps.io/eqiDataPortal/>)

Maybe flooding data to find hardest hit streams and compare them to the water quality data?

Possibly MountainTrue's swimguide data?

5. Please describe the specific variables / measurements / dimensions that will be most important to your data narrative.

I'm honestly still not sure where I am going exactly with this data but I'll be using data from the year before Helene compared to the year after Helene and it will include specific sample sites so geographic dimensions. I will include these variables measured for each site, NH3N: ammonia nitrogen, No3N: nitrate-nitrite nitrogen, PO4: orthophosphate, Turb: turbidity, TSS: total suspended solids, Cond: conductivity, and Alk: alkalinity.

I just realized the data posted is only updated until 2022 right now but I am pretty positive Ann Marie has all the up to date data on spreadsheets just not public that I could contact her and use.

My back up plan will be to compare Mountain True's swim guide data from the summer before to the summer after Helene. See if Helene impacted the Ecoli levels and turbidity levels. That data includes ecoli numbers, turbidity numbers, site location, and data. The samples are collected every week on Wednesday from the week after memorial day to the week before labor day.

I may try to find Helene info and see what areas were most badly hit and compare that to the sampling site locations.

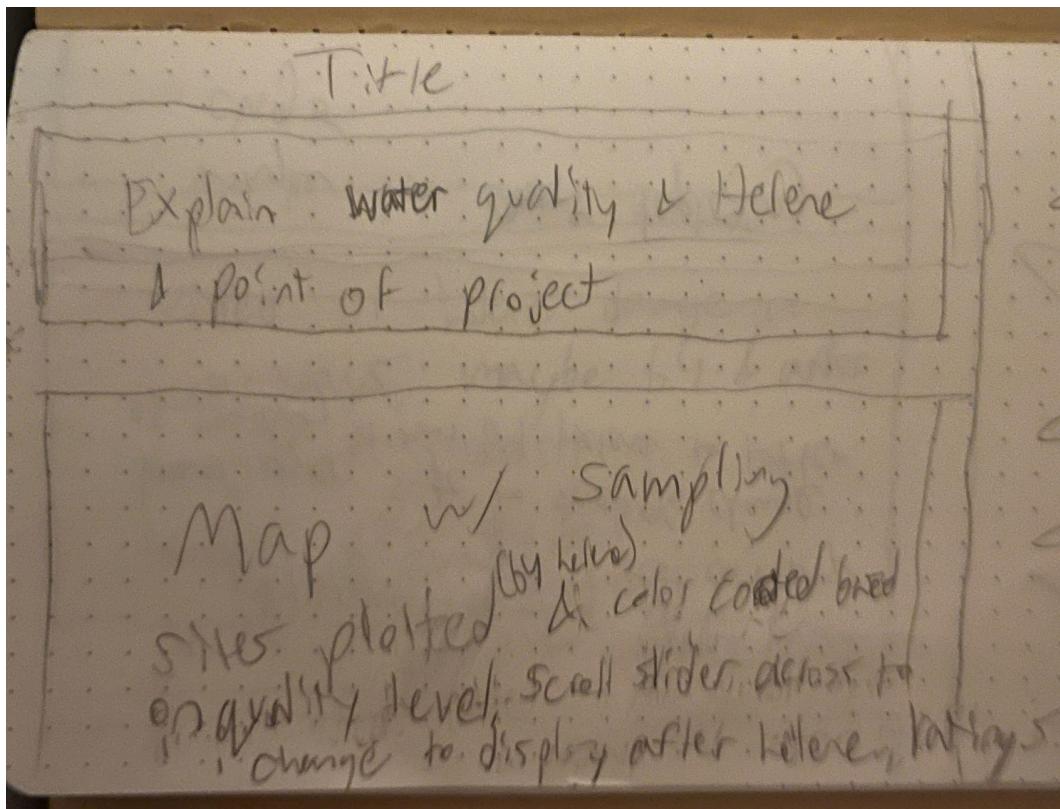
6. Have you thought about bias, accuracy, uncertainty, and representativeness within your dataset? How do you plan to handle this?

There is some uncertainty and i guess inaccuracy in the data from mountaintrue as volunteers collect the samples for the most part and not trained scientists. Since the data from mtn true is only for each summer it does not represent the water quality/ecoli levels for the whole year. I plan to just acknowledge these limitations and use the data knowing it may not be the perfect representation.

For EQI's data it is also collected by volunteers and there were also some sites that

could not be collected after the hurricane due to damage so it is not entirely representative of the whole geographic area.

7. Rough Storyboard or Sketch - Please paste a simple visual outline of your campaign idea (for at least one of your deliverables).



Map w/ where impact areas
mapped & sample sites on top
hover over site to see % change
or switching from b4 Helene to After

maybe a chart depicting
chgs

video of Helene damage on
waterways, maybe b4 & after
images of streams
or interview maybe?
(qualitative data)



What to Submit

When you're done answering these 7 questions, please download this worksheet as a PDF and turn in submit it to the Moodle.