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I had the great pleasure of analyzing the health of Connecticut's Mystic River Watershed using UConn CLEAR's Watershed Assessment tool for the Alliance for the Mystic River Watershed. The goal of the project was to utilize the watershed assessment tool and ArcGIS Pro to observe spatial trends of different land use patterns within the watershed and write a report that summarizes the findings. Some challenges I faced were figuring out how the watershed assessment tool worked, what information to add to the report, and creating maps. At the beginning, I was unsure how to mark the boundaries specifically for the Mystic River watershed but after watching a recorded presentation of how the tool worked, I was able to isolate the tool to just the basins within the watershed. Since I had a lot of freedom on what to put in the report, it was a challenge to figure out what information to put given that I had only the semester to finish the report. There were a lot of ideas that came up but ultimately, I came to the conclusion that I had only enough time to look into the land use patterns within the watershed. Finally, making maps was a challenge because it was the first time I had to independently create maps, unlike in my GIS classes where there were directions on how to do different functions in ArcGIS. This resulted in a lot of trial and error and reviewing my GIS notes to figure out how to best spatially represent the land use patterns within the watershed.

The best part of the project for me was utilizing ArcGIS Pro to create maps of the watershed and talking with Maggie Favretti from the Alliance for the Mystic River Alliance. It was fun having the freedom to be creative with the design of the map. I really enjoyed the trial

and error process and seeing what color schemes worked best for the map design. Additionally, it was rewarding to see the appreciation that Maggie and the members of the alliance had for me conducting the project. Learning about the alliance and the people behind it and being able to help out an organization that has the same passion for environmental conservation made the experience enjoyable. Overall, this experience helped me achieve my personal and professional goals of improving my data analysis and GIS skills. Some of my other goals have shifted throughout the semester such as making the most informative report of the watershed. As I mentioned before, there were so many ideas between me and Maggie to look into such as utilizing the scenario builder in the watershed assessment tool or finding more data on spatial data of farms that can explain why some areas have worse water quality and health than others. Because of the time constraint, I changed my goal to create an informative baseline report that showcases how the watershed is looking right now and suggests that a future Climate Corps member could look into other spatial data and the scenario builder to figure out exactly what needs to be done to improve the quality of the watershed.

The entire project could not have been a success without the organizers of the Climate Corps, Juliana Barrett, Renata Bertotti, and Mary Looney. I would not have figured out how to efficiently use the watershed tool if it wasn't for Mary sending me the link to the watershed tool presentation. Additionally, all three helped me look at my drafts for the report and gave me feedback on what to change, especially the scatterplots that I made where I was comparing a variable with a correlated variable. I really enjoyed our weekly meetings and learning about everyone else's projects. I learned a lot about the importance of watersheds and the application potential of the watershed assessment tool in other watersheds in Connecticut. There is so much that needs to be done to improve watershed health and I am honored to conduct a meaningful

project that is a stepping stone toward the protection of a valuable natural resource that is beneficial to wildlife and many stakeholders.