

Visualizing USGS Water Use Data

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Environmental Data Analytics (ENVIRON 872.02)
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Our project focused on visualizing patterns in water use, as estimated by the USGS, across space and time. The data used originated from <https://www.usgs.gov/mission-areas/water-resources/science/water-use-united-states> and were cleaned and formatted using code provided by the Nicholas Institute for Environmental Policy Solutions. Spatially, we visualized water use at the scale of counties, states, USACE districts, USACE divisions, and EPA regions. Temporally, we used the resolution provided by the data – 5 year intervals from 1985 through 2015. We used Sankey diagrams to visualize the data, which visually represent sources, sinks, and magnitudes, to show the usage amounts of each surface water and groundwater for a variety of uses, such as industry, agriculture, and public water supply. Building custom functions based on a Sankey Network function included in the NetworkD3 package, we built a reactive dashboard allowing users to explore water use at each of these spatial scales. The app is not remotely hosted – it can only be run locally at the moment. The full code and data are included in the GitHub repository at the following link:

https://github.com/sab159/BrysonMurphyEDA872_EDAFinalProject

(See next page for screenshot showing confirmation from John that this submission format was acceptable!)



Sophia Bryson 3:48 PM

John, we'd talked with you about just submitting our app code/workspace in place of the traditional project template, and I just wanted to confirm that that's still acceptable. I also wanted to ask how you'd like that submitted - it's all in our GitHub repository, but do we need to submit the link to that or upload a zipped folder somewhere or anything like that?



John Fay 4:26 PM

Yes. That's acceptable. Just submit a short document to Sakai that serves as a sort of cover page for your app. Include team names, your GitHub repository address, address of the app (if it lives on-line) and a brief paragraph describing your project.

-John



Sophia Bryson 4:27 PM

Great! Thanks so much! Will do.
