

Presentation 3, Jacob Fetterman, April 22nd, 4pm

Citizen science and recreational connection to dams and river obstruction -- Trout Unlimited's digital mapping effort and why it's important

Essential Question:	How can public GIS mapping software contribute to habitat health and environmental stewardship?
Vocabulary:	<i>GIS: Geographic Information Systems</i> – a framework for gathering and presenting data spatially and geographically (digital mapping of data). <i>Citizen Science</i> – efforts to enable the public to contribute to scientific research or projects, often through technology <i>Stream Obstruction</i> – anything that “obstructs” the flow of water down a river or stream, can be natural or human-made

- There are so many types and sizes of dams across our watershed (and many parts of the US) that often it is difficult to monitor them all. Even small dams and obstructions can affect the health of a waterway. Jacob Fetterman of Trout Unlimited, a recreational fishing advocacy group, will describe a project that is attempting to deal with this issue through citizen collaboration and technology.
- Dams might be the most dramatic of “stream obstructions” but there can be many others as well. What does this citizen science effort to record current stream obstructions do for communities?
- Why is Trout Unlimited focusing on recreational users of the watershed to help with this effort?
- There are many digital efforts to map or survey dams. In what ways is digital mapping a useful tool in studying dams, or watershed science in general? What does spatial data and mapping (GIS – geographic information systems) add to this discipline?
- **Reflection:** What other questions or dam related topics did this presentation bring up for you? What kinds of skills are needed to carry out Jacob Fetterman’s work?
- **Extension:** Visit a stream or waterway near to you and use TU’s RIVERS app to conduct a citizen survey of the area. Even if someone has already entered data for your local stream, updating the map with current conditions is important as well!

<p>Citizen Science Initiatives</p>	<p>Trout Unlimited. “RIVERS: River Inventory by Volunteers for Efficient Restoration Strategies.” https://www.tu.org/science/science-engagement/community-science/rivers/</p> <p>U.S. Government. “Federal Crowdsourcing and Citizen Science Catalog.” https://www.citizenscience.gov/catalog/#</p>
<p>Watershed Mapping Examples</p>	<p>Lake Champlain Basin Program. “Lake Champlain Basin Atlas.” https://atlas.lcbp.org/about-the-atlas/</p> <p>The Nature Conservancy. “Vermont Dam Screening Tool.” https://www.arcgis.com/apps/webappviewer/index.html?id=414a9dc9540247ae92acd48f64f1290b</p> <p>U.S. Department of Energy. “The National Hydropower Map: U.S. Operational Plants in 2018.” https://www.energy.gov/sites/default/files/2018/06/f53/national_hydropower_map_2018.pdf</p> <p>American Rivers. “Map of U.S. Dams Removed Since 1912.” https://www.americanrivers.org/threats-solutions/restoring-damaged-rivers/dam-removal-map/?gclid=CjwKCAjw-ITqBRB7EiwAZ1c5U9fpPcUJsSYeIgubaOdmK_gLp_C82fidn-TfbrMFAaRpnYVmJ5ONUhoCZtoQAvD_BwE</p>