RIMORPHIS

River Morphology Information System

1st Annual Stakeholder Workshop

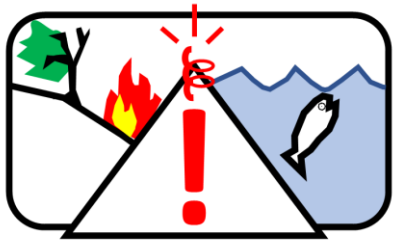
May 12 & 19, 2021

U.S. Geological Survey Water Mission Area
Water Hazards Program

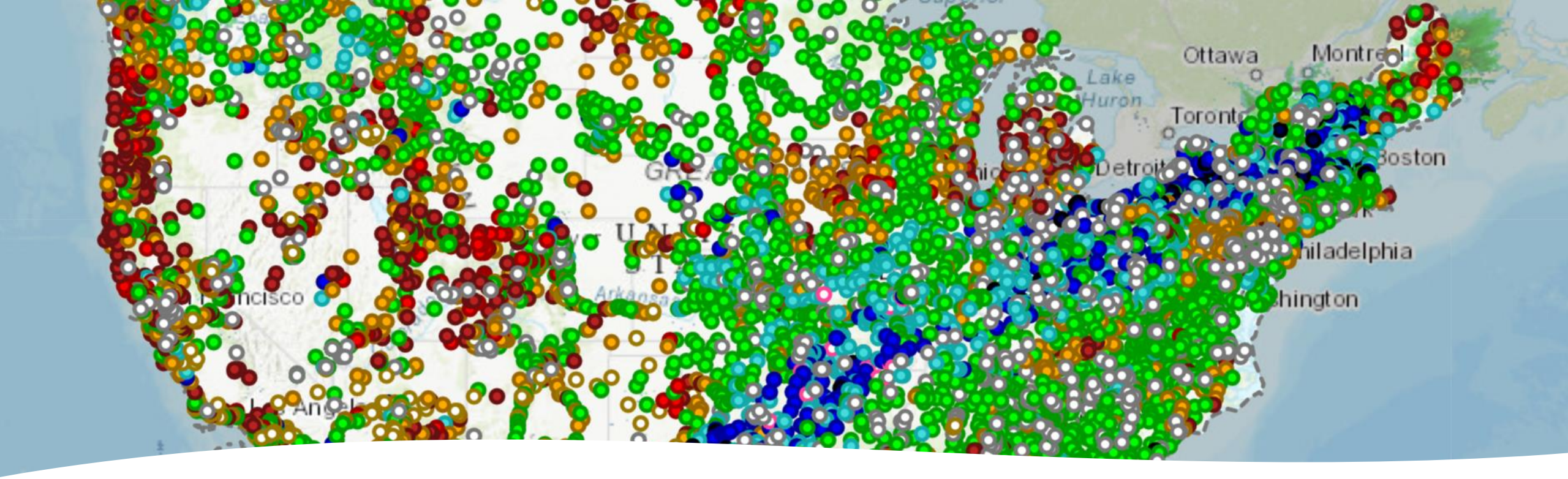
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USGS
science for a changing world

USGS Water Hazards Program



- One of 14 programs in the Water Mission Area
- Coordinate and assist in planning, response, and follow-up for water related emergencies -- hydrologic context, rapid deployment of sensors and additional measurements, network augmentation and supplemental observations.
- Program has existing framework in flood and coastal storm response
- Developing framework for post-fire runoff, spills, HABs, fluvial erosion hazards, drought



River Morphology Data and Tools

- USGS Water Science Centers and Water Mission Area collect river morphology data associated with over 80,000 streamflow measurements a year. Morphology data also collected as part of cooperative projects and research related to habitat, water quality, and fluvial change.
- All data are public but cross section data are not automatically distributed, are hard to find and many need georectification. Study-related data goes to Sciencebase.
- New National Water Dashboard for streamgage data – does not contain morphology data at this point https://dashboard.waterdata.usgs.gov/
- Pilot program to include surveying top of bank, bridge decks, roads during routine gage surveys and make these thresholds publicly available. These data can help verify estimates of flows above the bank lines or identify needed road closures.

Wish List for River Morphology Data & Tools

- Cross sections and valley bottoms cut from 10-m DEMs at gages, as one of multiple data sets that could be used for multiple purposes (low resolution large spatial coverage).
- Field based data for verification, including bankfull altitudes (georeferenced), depths, and widths; especially at gages with hydrologic prediction utility.
- NHD reach-based potential unit stream power for bankfull and 1% AEP (low resolution, large spatial coverage).

