

# AKFlow – A web map inventory of Alaska’s stream gages

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## Say Hello to AKFlow (Introduction)

Alaska’s vast size, sparse human population, and access challenges often result in the state’s relatively thin data coverage compared to the other 49 US States for a number of key datasets including the USGS stream gauging network. Forty-one other states have more than the 114 active USGS gages in Alaska’s inventory as listed in a 2020 report to Congress<sup>1</sup>. While we cannot alter Alaska’s geography, we can improve interagency data sharing through modern technologies like web mapping services.

<sup>1</sup> U.S. Geological Survey (USGS) Stream gaging Network: Overview and Issues for Congress <https://sgp.fas.org/crs/misc/R45695.pdf>

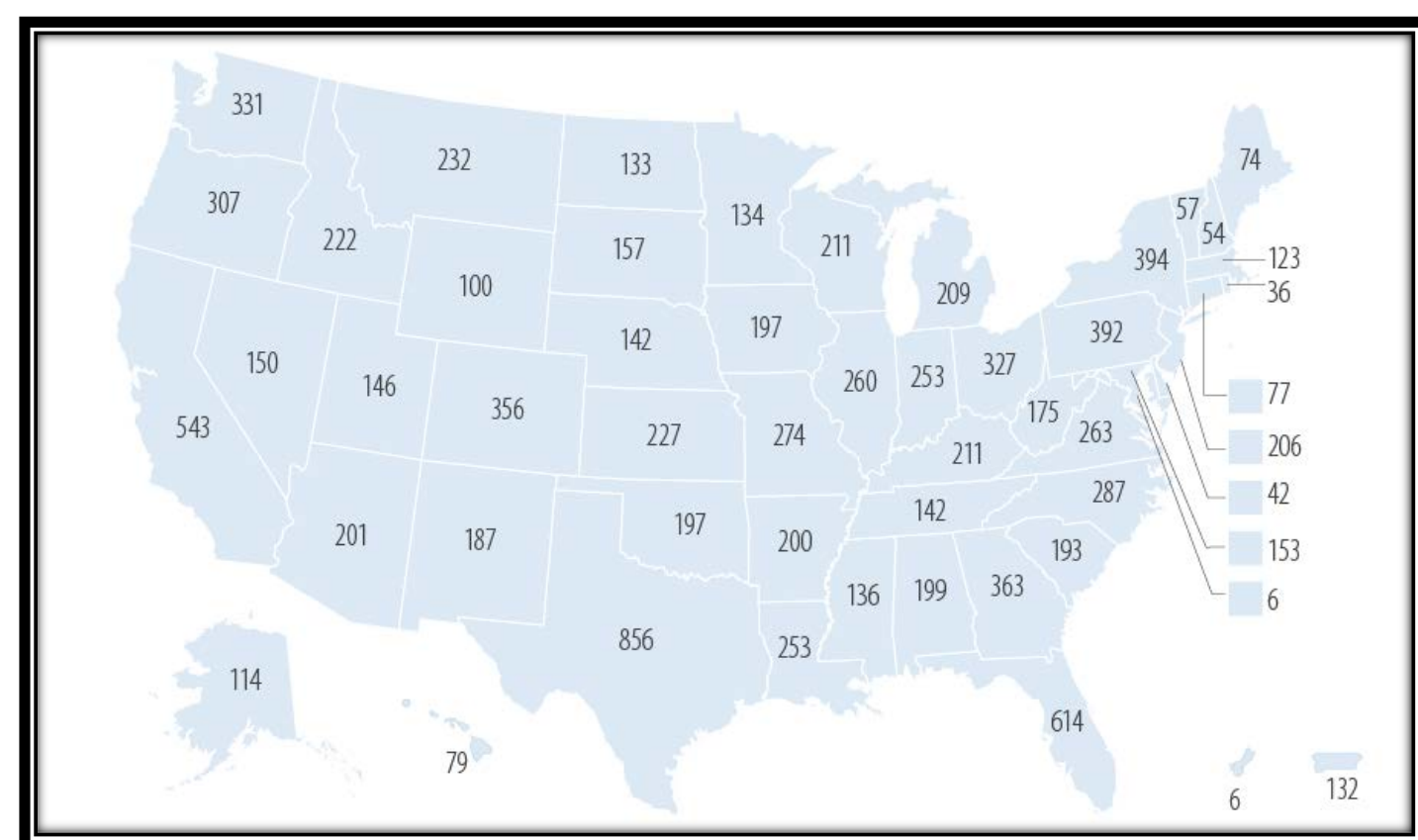
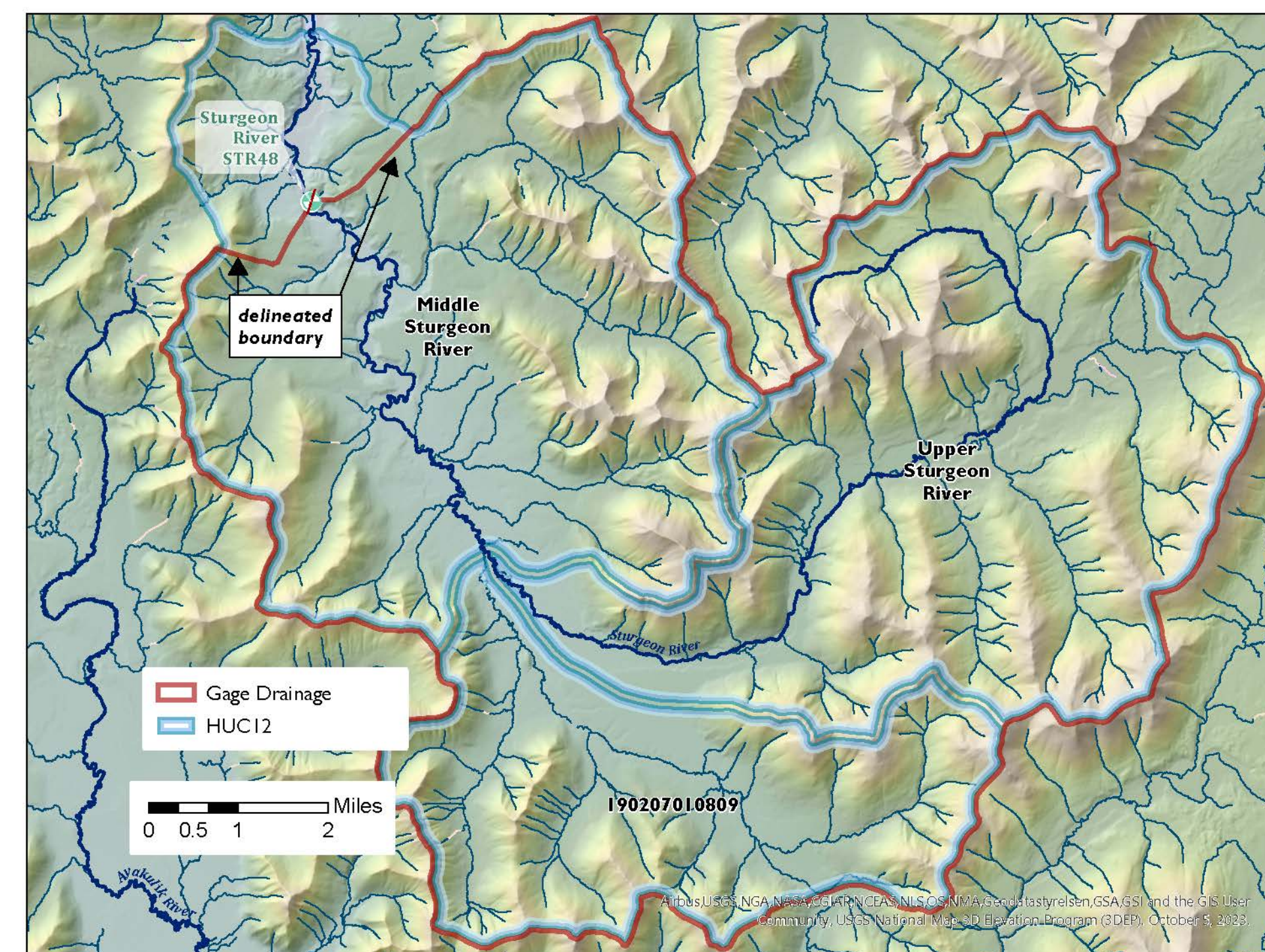
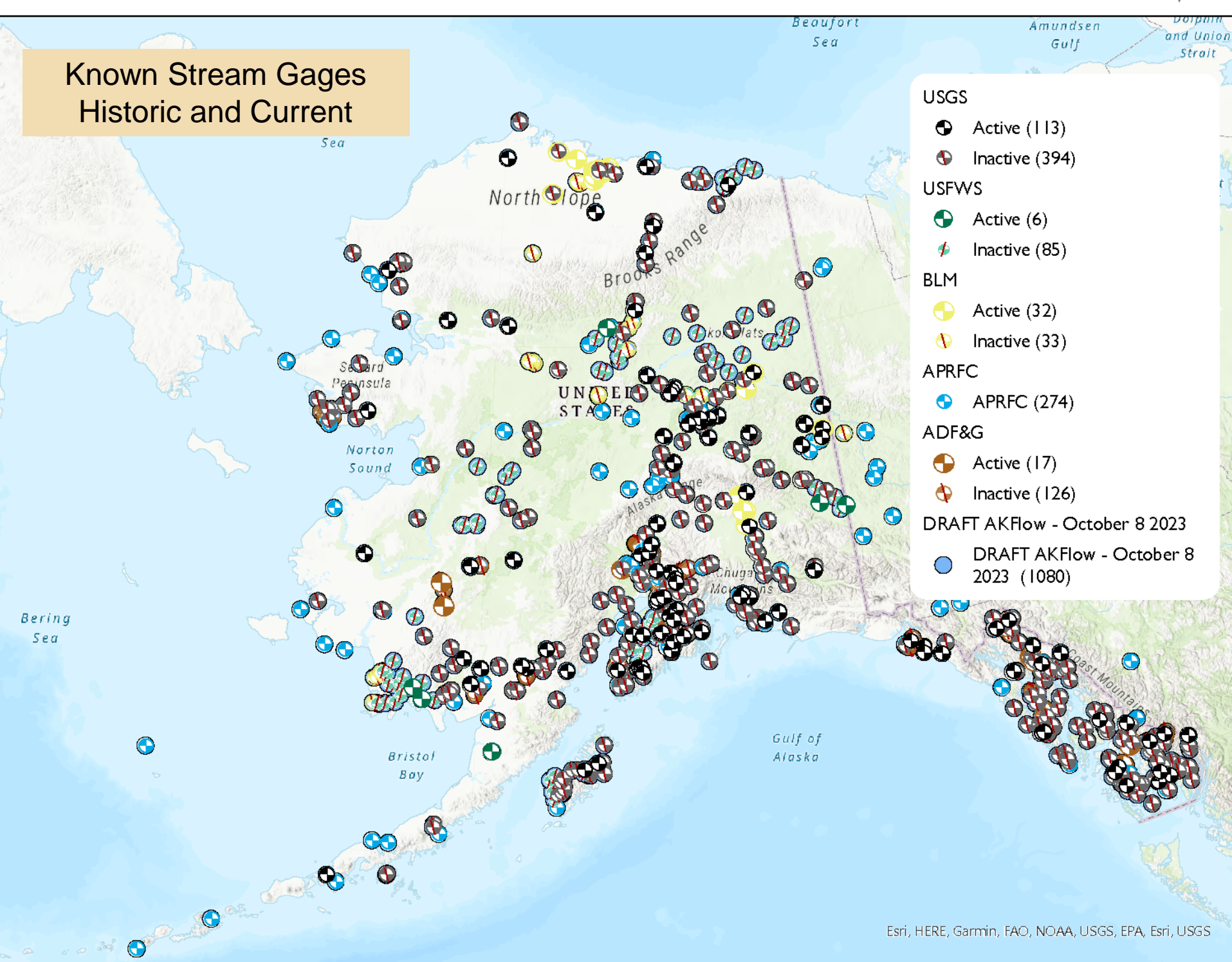


Figure 5. Number of National Streamflow Network Stream gages in U.S. States and Territories in 2020

## Get to Know AKFlow (Methods)

AKFlow is a web mapping site based upon ESRI’s ArcGIS Online platform which combines the current and historic UGSS steam gauging sites as well as stream gauging sites operated by: Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources (ADNR), National Weather Service’s Alaska Pacific River Forecast Center (APRFC), US Bureau of Land Management (BLM), and US Fish and Wildlife Service (USFWS). AKFlow is an interactive web map with sites depicted by data collecting agency and include basic site metadata such as site name, waterbody name, years of operation, site type, hyperlinks to online data (if available), and agency contacts.



Over 1,000 sites are included in this initial inventory. Using the USGS Watershed Boundary Dataset (WBD) at the HUC12 level along with a 5meter IfSAR digital elevation data, and the National Hydrographic Dataset (NHD) stream flowlines; 300 upstream polygon drainages have been generated.

## AKFlow, what does it Show ? (Results)

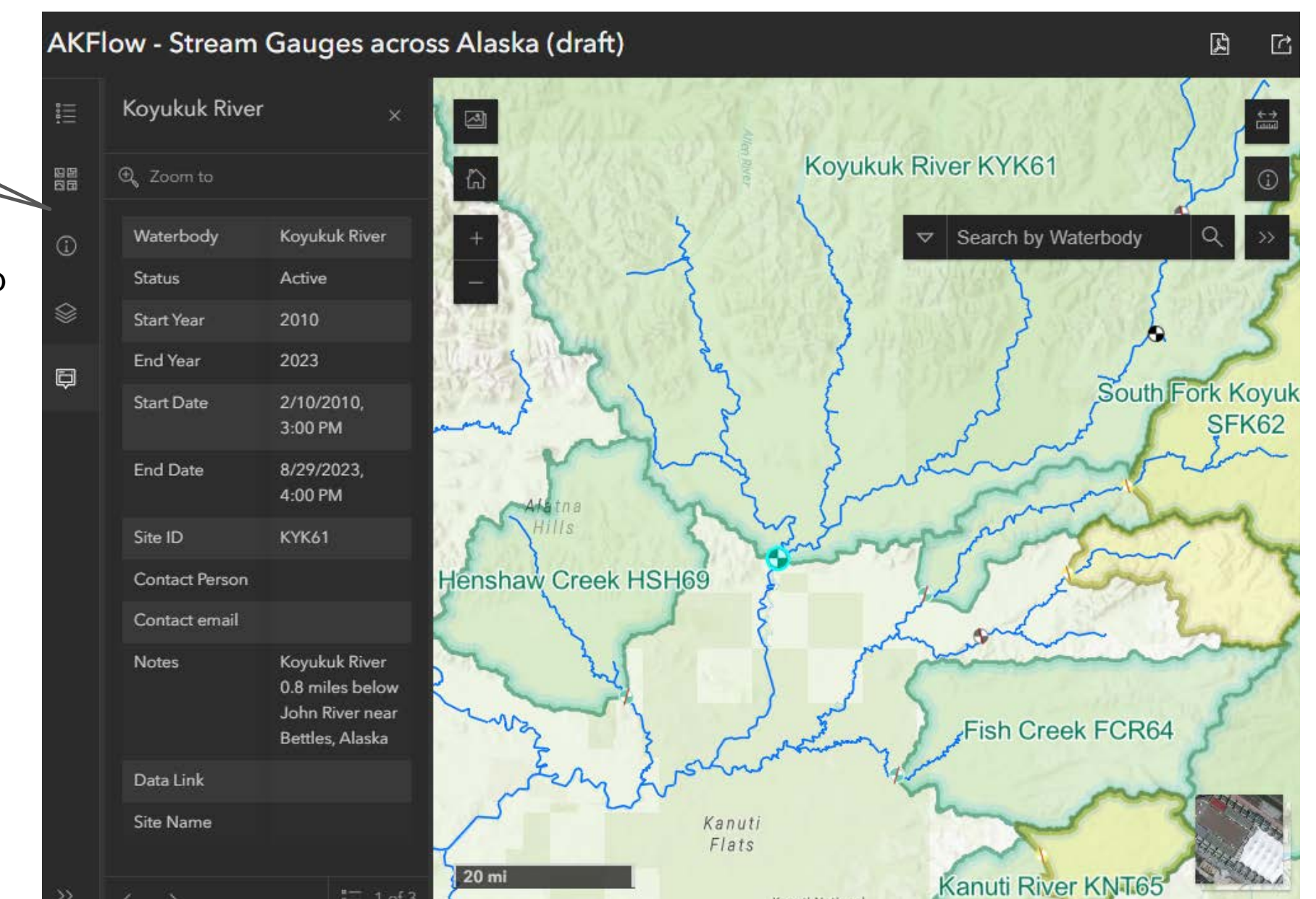
AKFlow allows users to query the gage sites (n=1093) and drainages(n=300) in any web browser via the ArcGIS Online web map or they can use the data (points and polygons) directly in their desktop GIS via a web mapping service.

Tools to query data, modify base maps, search data

Link to Web Map App <https://arcg.is/1Pv1Xy0>



Link to full Web Map



Screenshot from AKFlow web mapping application, user can turn on/off gages by source agency, user can toggle on/off upstream drainages, and user can view site metadata: operating years, site ID, waterbody, and status.

## Help us Grow AKFlow (Conclusion)

Please test the web map, if you encounter omissions or other errors, please report them to the AKFlow team. Generation of additional drainage polygons (as of March 25, n=300) will continue throughout 2024. AKFlow currently links to USGS webpages with an ability to download data for each of its gages. The AKFlow working group is endeavoring to provide links to agency points of point as well as possibly gage data for these other organizations. This project began under the umbrella and guidance of the Interagency Hydrology Committee for Alaska (IHCA) . AKFlow has been developed and is hosted by the Alaska Center for Conservation Science at the University of Alaska Anchorage.

### Project Team:

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