

IHCA Stream Gage Inventory

Thursday April 4, 2024

Marcus Geist

Research Geographer

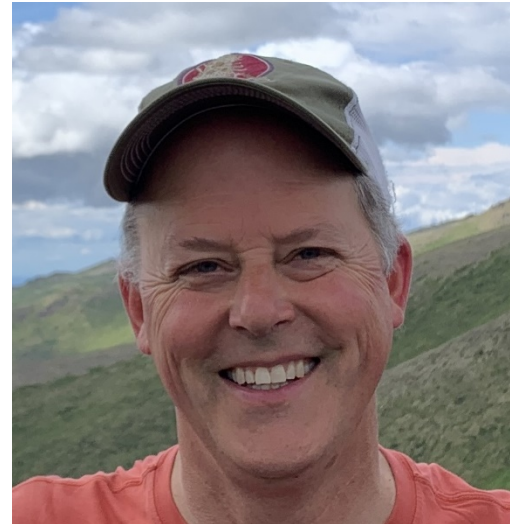
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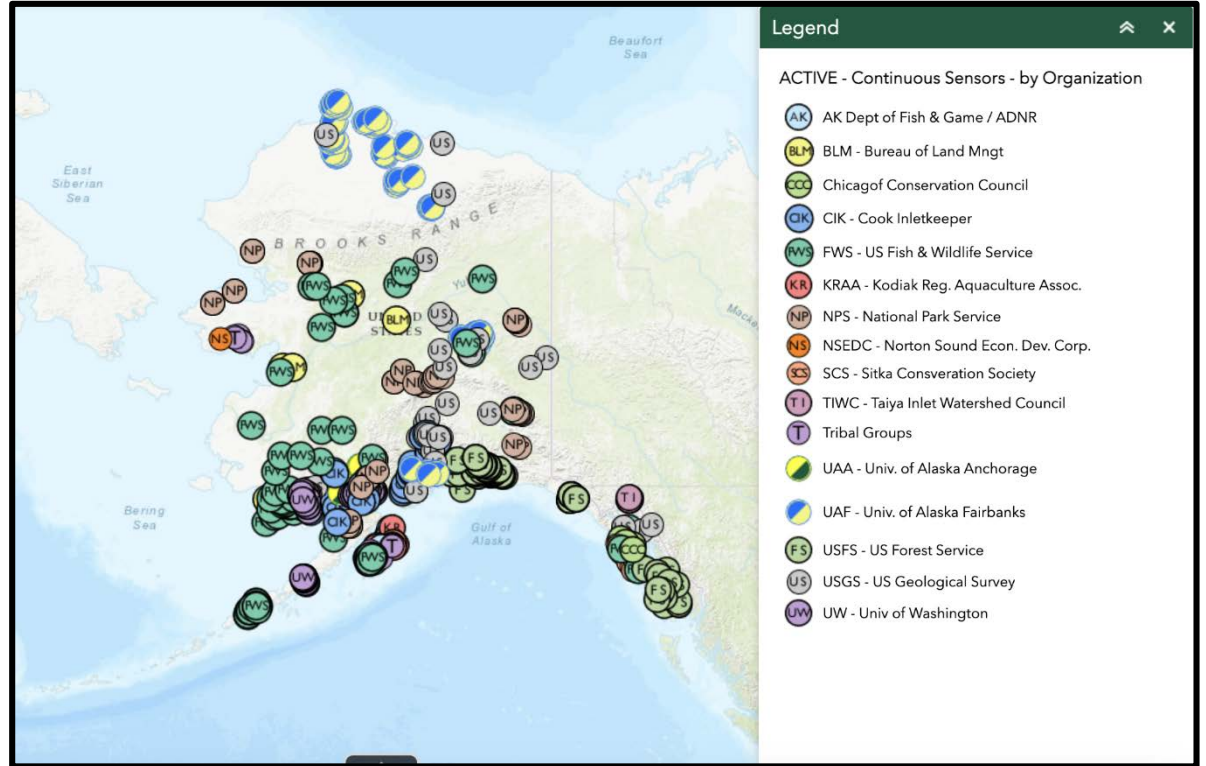


Alaska Center for
Conservation Science
UNIVERSITY of ALASKA ANCHORAGE



IHCA Stream Gage Inventory

- Objective: Alaska stream gage inventory that is discoverable
- Once per year updates (Fall)
- Limited metadata
- Links to data provider and online data repositories
- ArcGIS online map



AKOATS example – multi-agency web map of stream temperature sites

Proposed Metadata

Confirmed Participating Agencies:

1	Site Name
2	Latitude
3	Longitude
4	Rlver/Stream
5	Start Date
6	End Date
7	Agency
8	Contact (email / url)
9	Comments

Bureau of Land Management <i>Ben Stratton btstratton@blm.gov</i>
Alaska Department of Fish and Game <i>Jarrod Sowa jarrod.sowa@alaska.gov</i>
Alaska Department of Natural Resources <i>Kevin Petrone kevin.petrone@alaska.gov</i>
United States Fish and Wildlife Service <i>Jasper Hardison jasper_hardison@fws.gov</i>
National Weather Service <i>Crane Johnson benjamin.johnson@noaa.gov</i>
National Park Service <i>Paul Burger Paul_Burger@nps.gov</i>

USGS - NWIS Query

Initial Inventory

USGS

- Active (113)
- Inactive (402)

USFWS

- Active (6)
- Inactive (85)

BLM

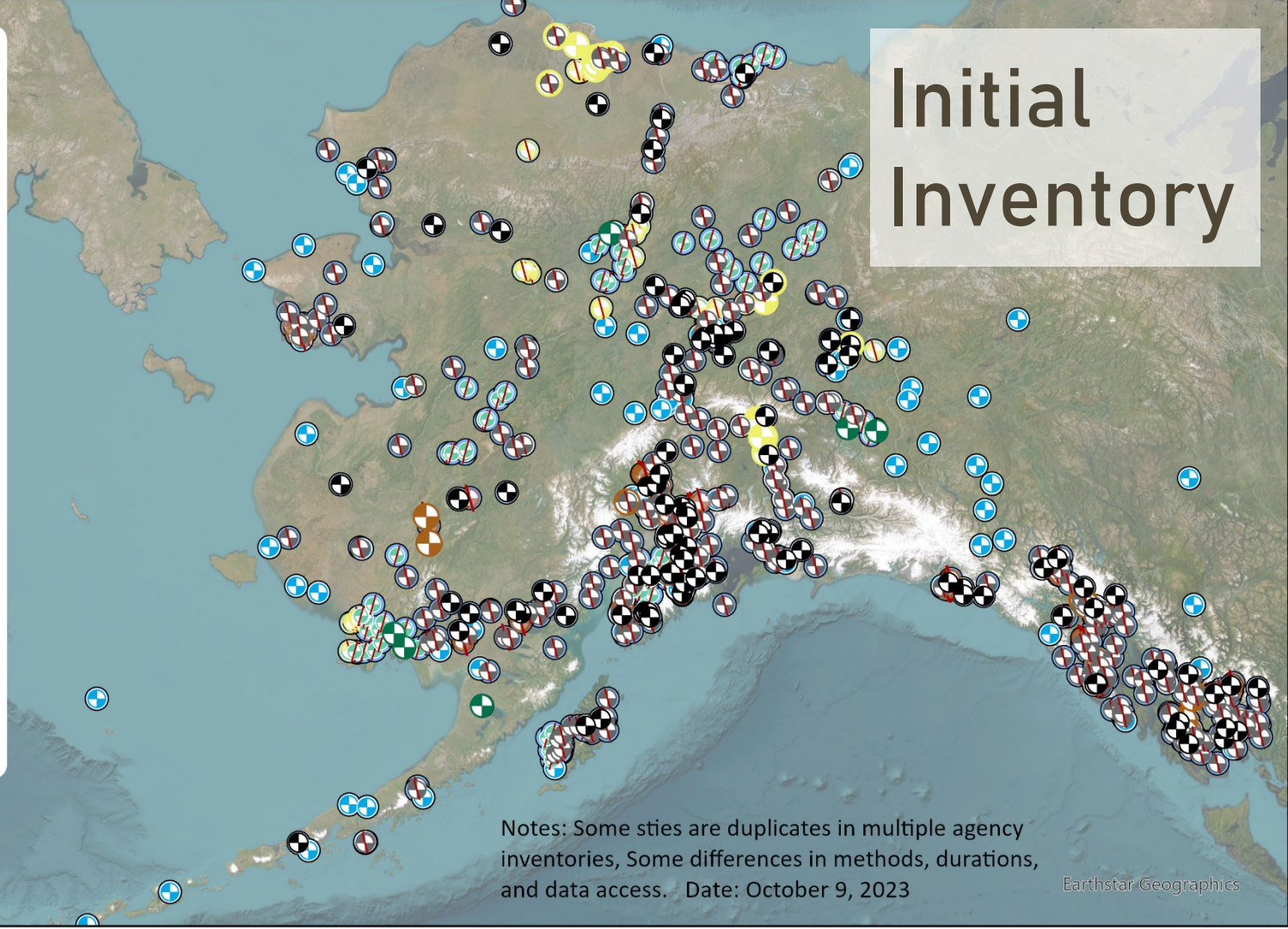
- Active (32)
- Inactive (33)

ADF&G

- Active (17)
- Inactive (126)

APRFC

- APRFC (276)
- Total Sites (1090)

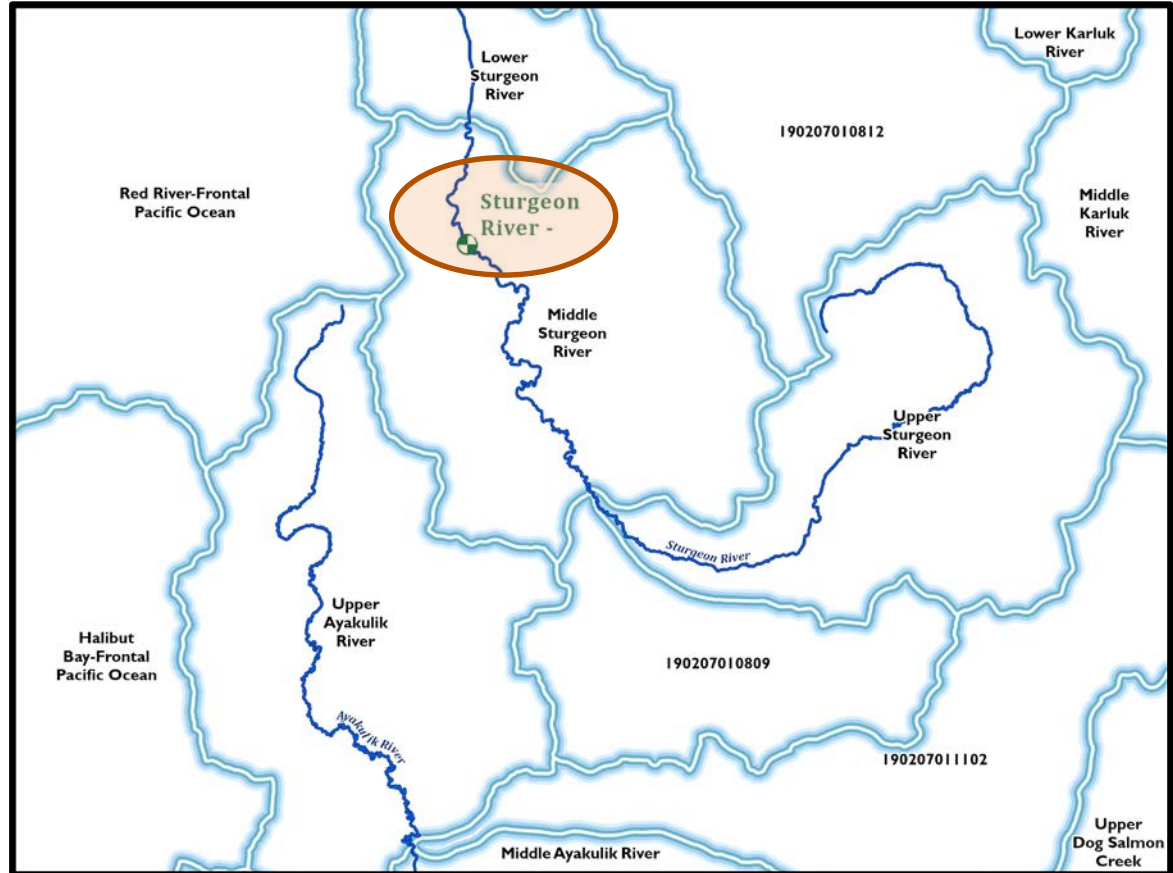


Notes: Some sites are duplicates in multiple agency inventories, Some differences in methods, durations, and data access. Date: October 9, 2023

Delineate Upstream Drainages

Methods

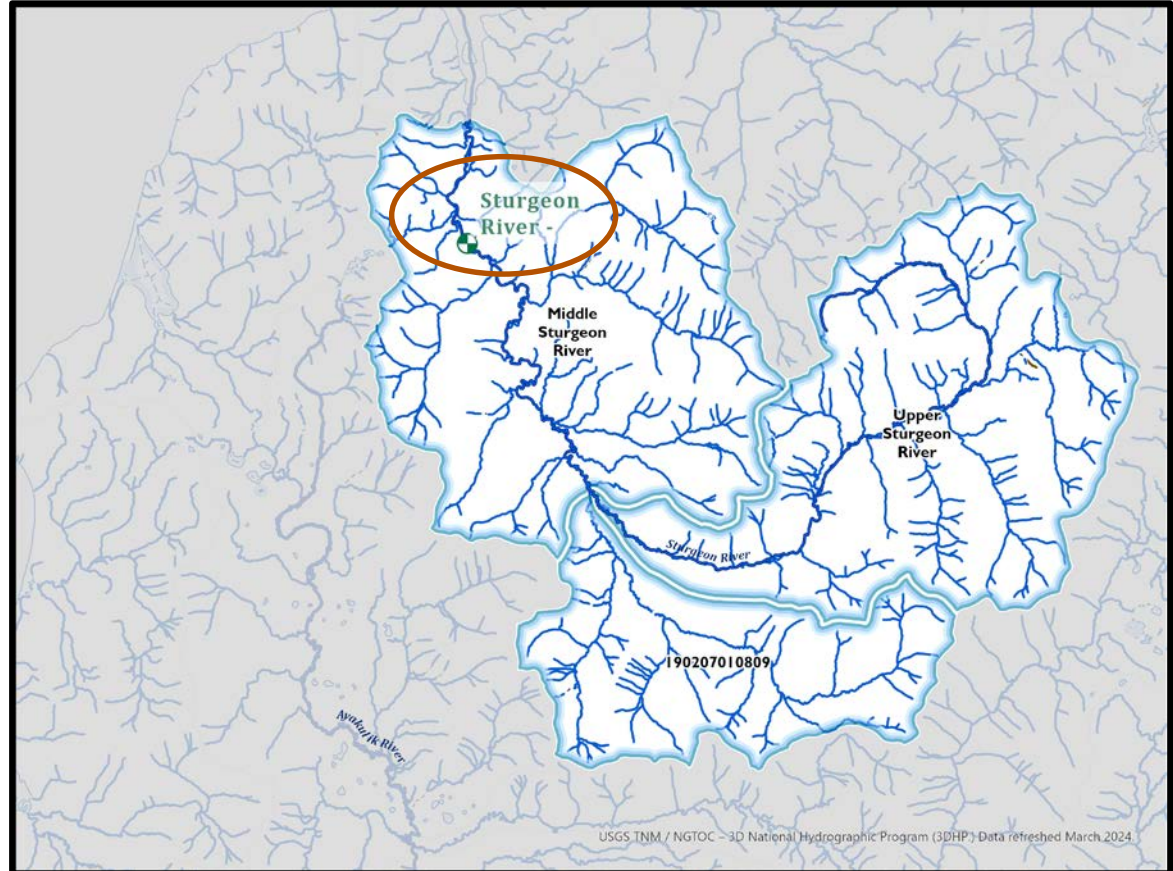
- **HUC12 (WBD)**
- 3DHP Hydro
- 5m IfSAR elev. Data
- Imagery



Delineate Upstream Drainages

Methods

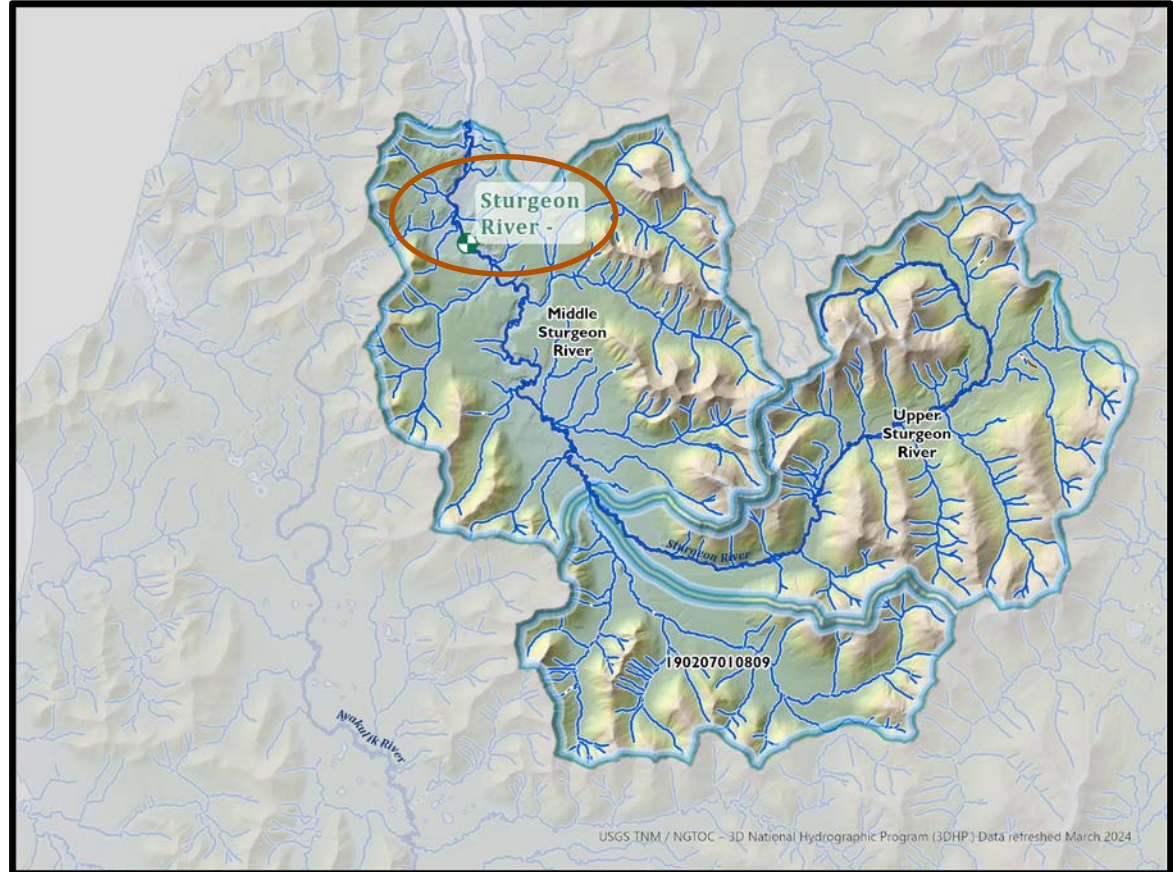
- HUC12 (WBD)
- **3DHP Hydro**
- 5m IfSAR elev. Data
- Imagery



Delineate Upstream Drainages

Methods

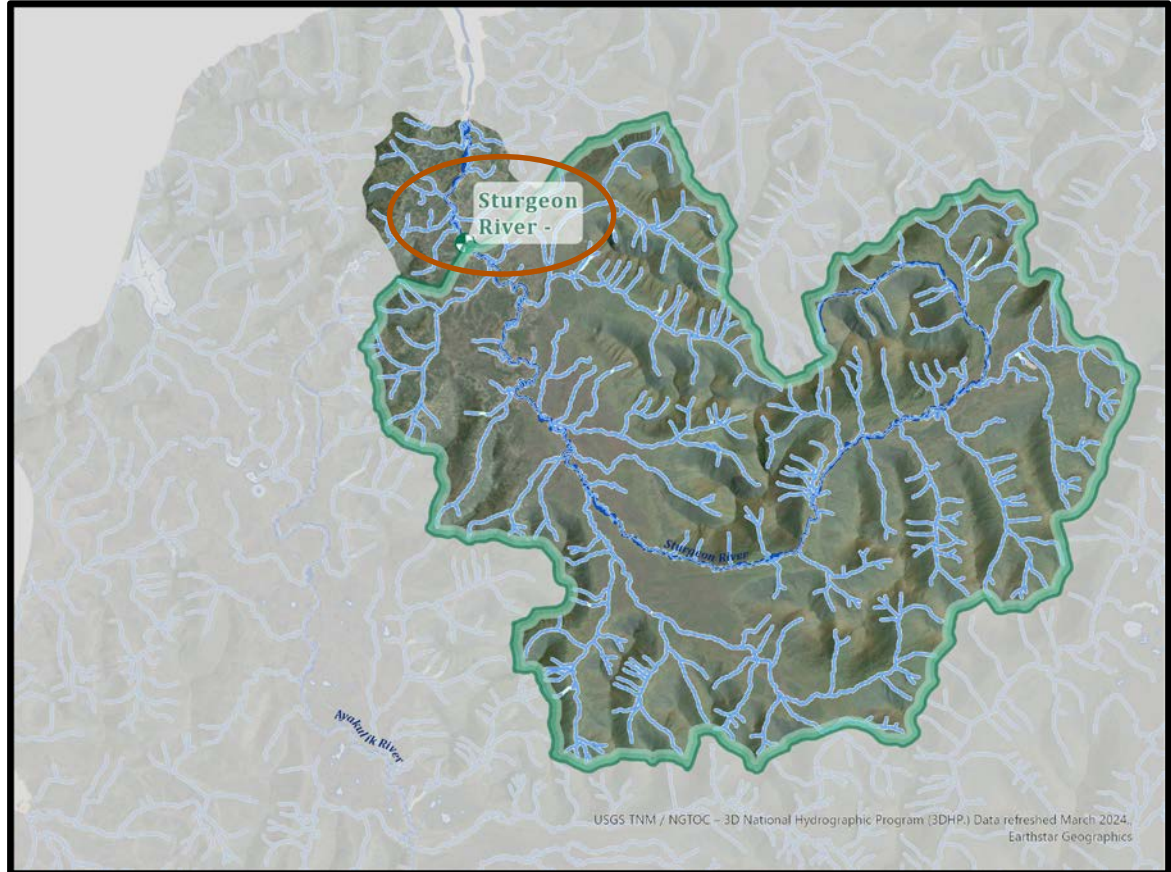
- HUC12 (WBD)
- 3DHP Hydro
- **5m IfSAR elev. Data**
- Imagery



Delineate Upstream Drainages

Methods

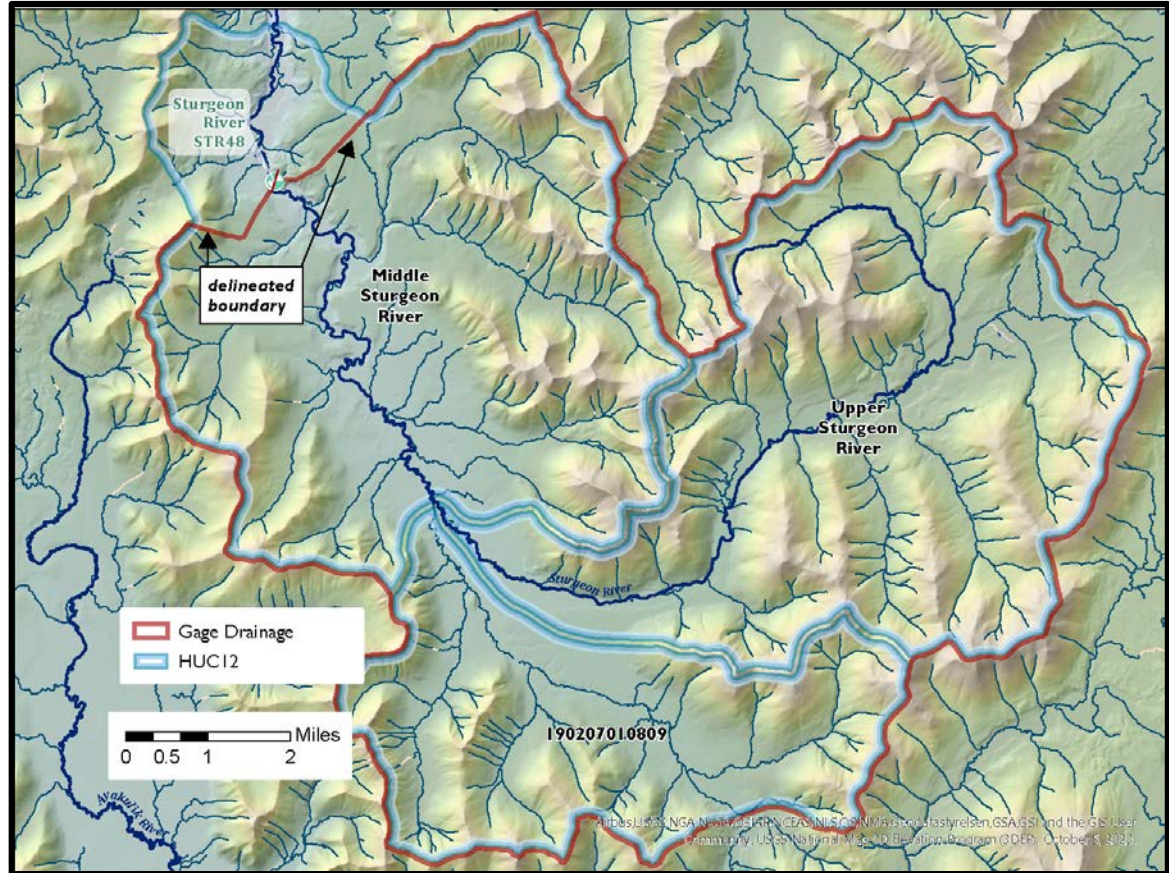
- HUC12 (WBD)
- 3DHP Hydro
- 5m IfSAR elev. Data
- **Imagery**



Delineate Upstream Drainages

Methods

- HUC12 (WBD)
- 3DHP Hydro
- 5m IfSAR elev. Data
- Imagery



Upstream Drainages – Web Map

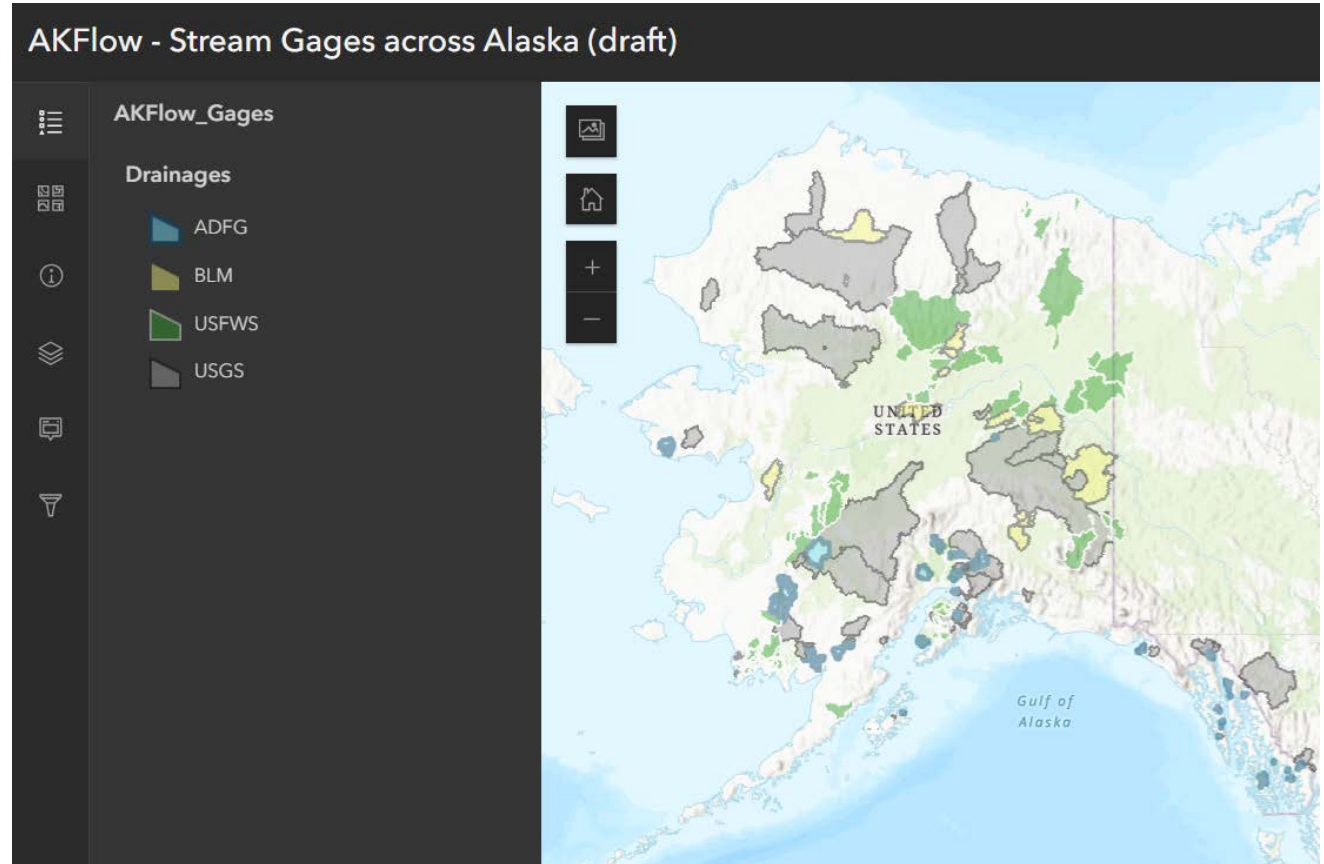
Sheds Mapped

ADF&G - 125

BLM – 27

USFWS – 89

USGS - 59



Web Map – ArcGIS Online

Agencies:

ADF&G

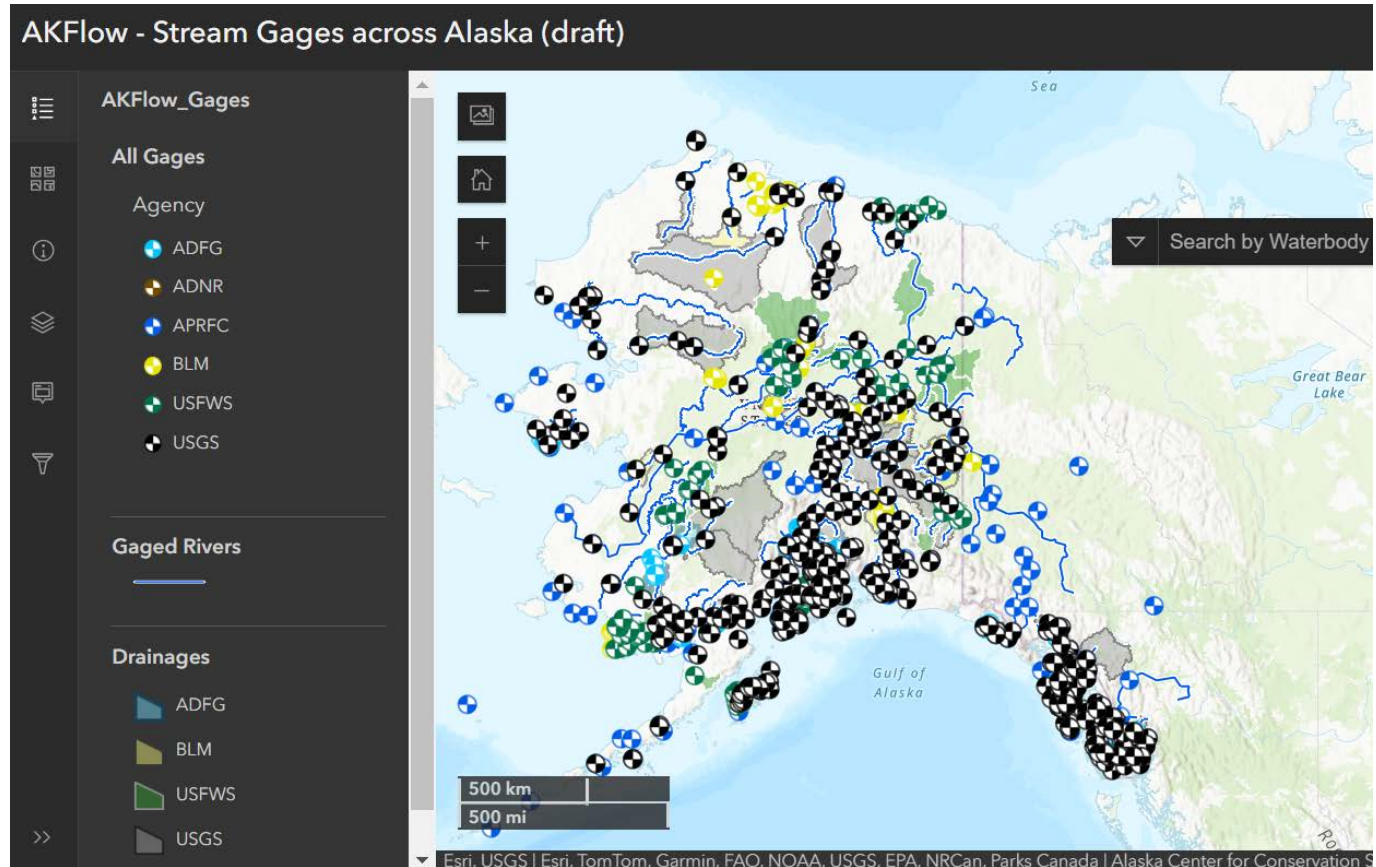
ADNR

APRFC

BLM

USFWS

USGS



Web Map – Interactive

- 3DHP Hydro
- Imagery

<https://arcg.is/0jySuO0>



AKFlow - Stream Gages across Alaska (draft)

Meadow Creek Reach B nr Big Lake

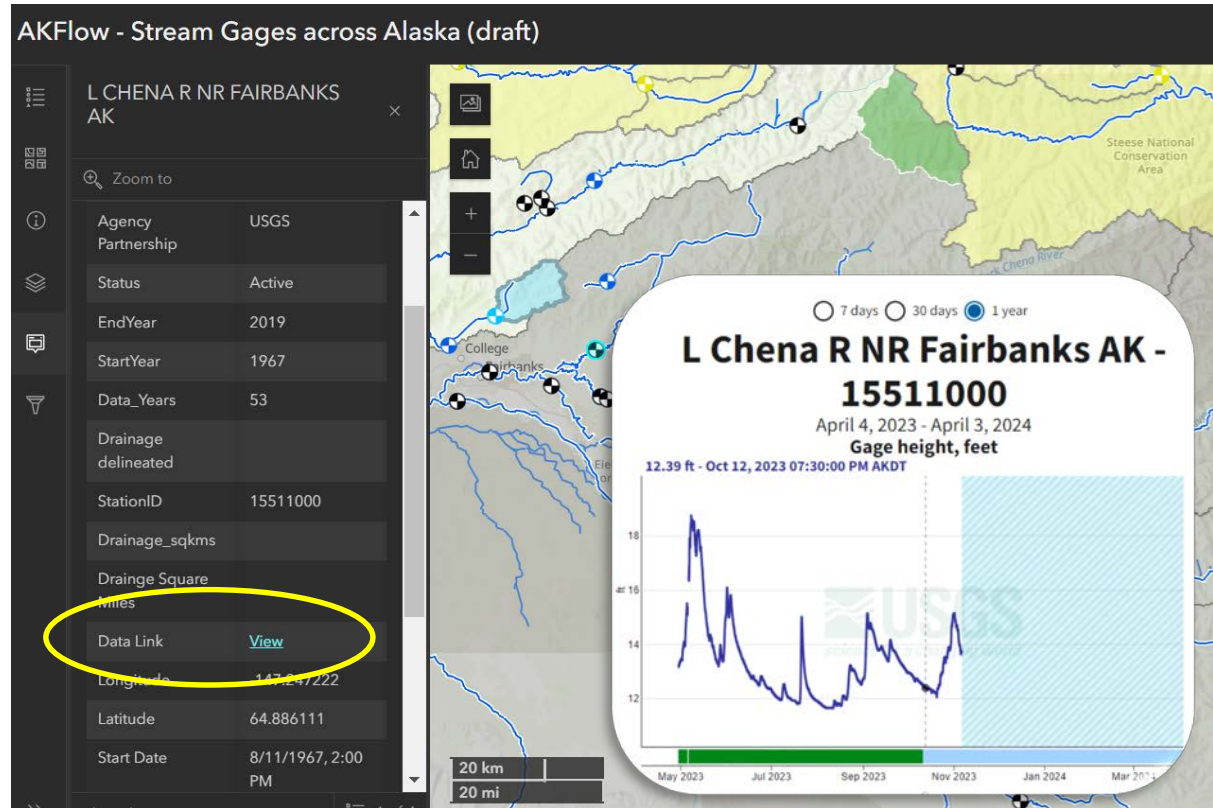
Zoom to

Waterbody	Meadow Creek
Site Name	Meadow Creek Reach B nr Big Lake
Agency	ADFG
Agency Partnership	ADFG
Status	Inactive
EndYear	2013
StartYear	2008
Data_Years	6
Drainage delineated	1
StationID	12102
Drainage_sqkms	86.4
Drainage Square	33.4

An aerial satellite-style map showing a network of streams and lakes. A specific stream is highlighted in blue and labeled 'Meadow Creek'. A red dot on the stream indicates a gage location. The map includes a scale bar for 2 km and various navigation controls like zoom in (+) and zoom out (-) buttons.

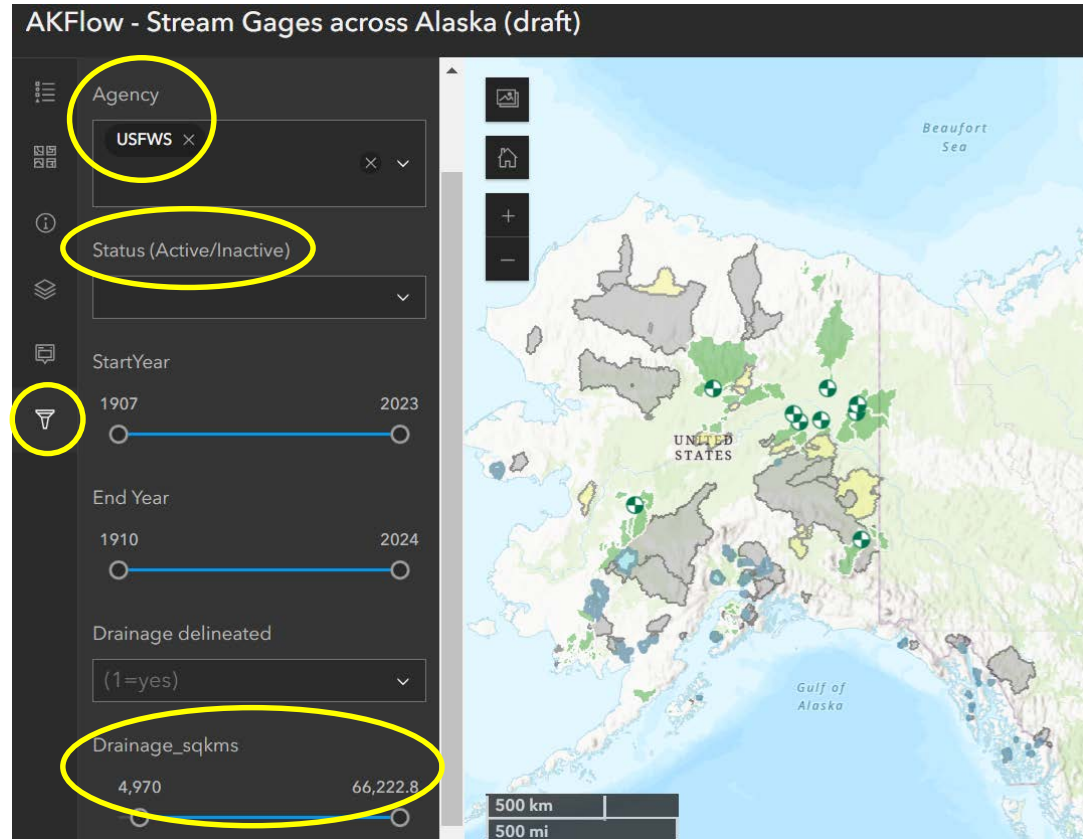
Web Map Function – Data Link

- Link to Agency's website
- USGS - Waterdata
- ADF&G – eventually can download csv files



Web Map Function – Filter

- Agency
- Status
- Years
- Drainage area



Future

Delineate more drainages (300 of 1000)

Link to more agencies' flow data?

ADF&G

Aquarius – BLM

WISKI - USFWS

Bonus: AKTemp Stream & Lake Temp Site

AKTEMP stores temperature measurements

<https://aktemp.uaa.alaska.edu/>

Database Summary



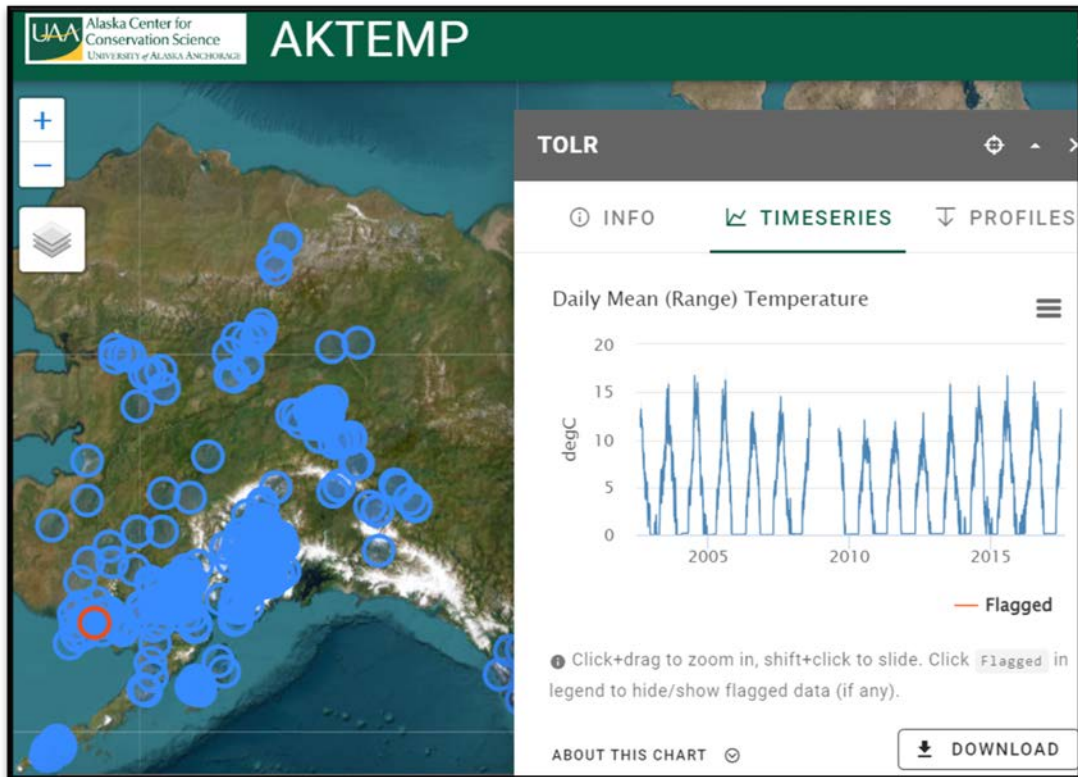
16 Providers



382 Stations



26,397,143 Measurements



Details

- **Compilation/ Revisions ongoing (contact below)**

- **Web Map App (simple)**
<https://arcg.is/0jySuO0>

- **Web Map Link – opens in Browser or ArcGIS Pro**



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