

Greetings from
**AKTEMP: A Stream and
Lake Temperature
Database for Alaska**

AKTEMP

November 2023

Marcus Geist, UAA

Dustin Merrigan, UAA

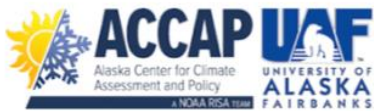
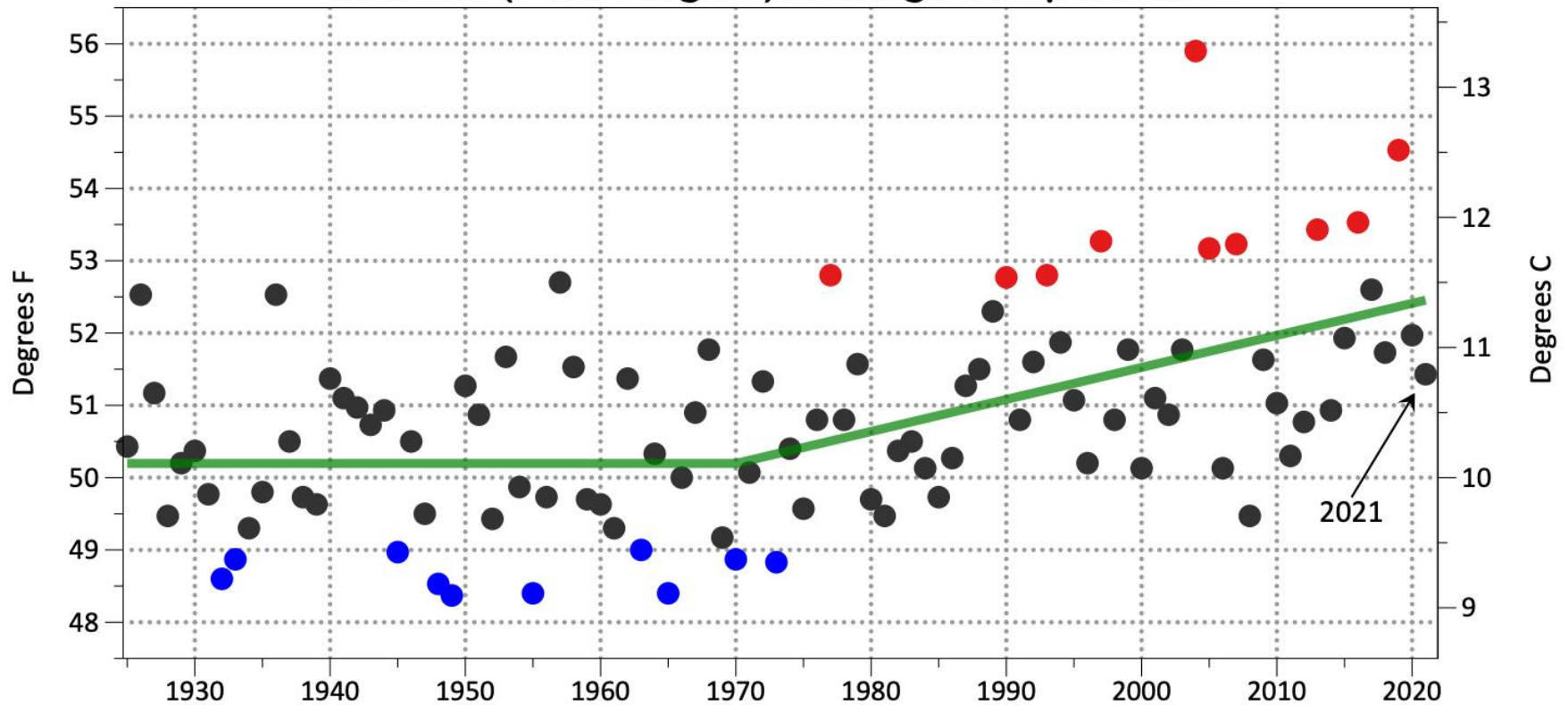
Jeff Walker, WER



**Walker Environmental
Research**

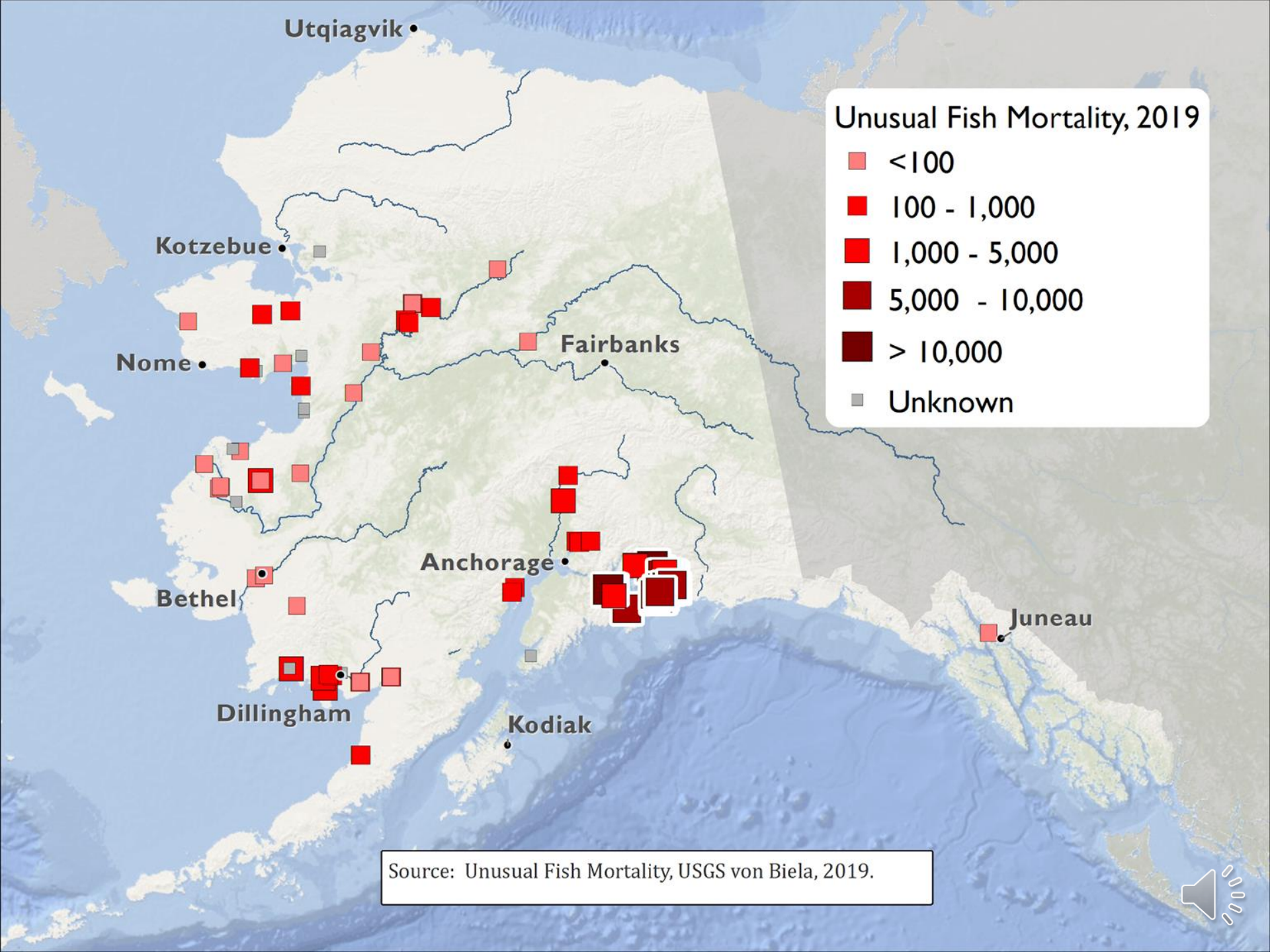
Why AKTEMP?

Alaska Statewide, 1925-2021 Summer (June-August) Average Temperatures



- Ten Warmest
- Ten Coldest
- Estimated Average (Regression)

Data source: NOAA/NCEI



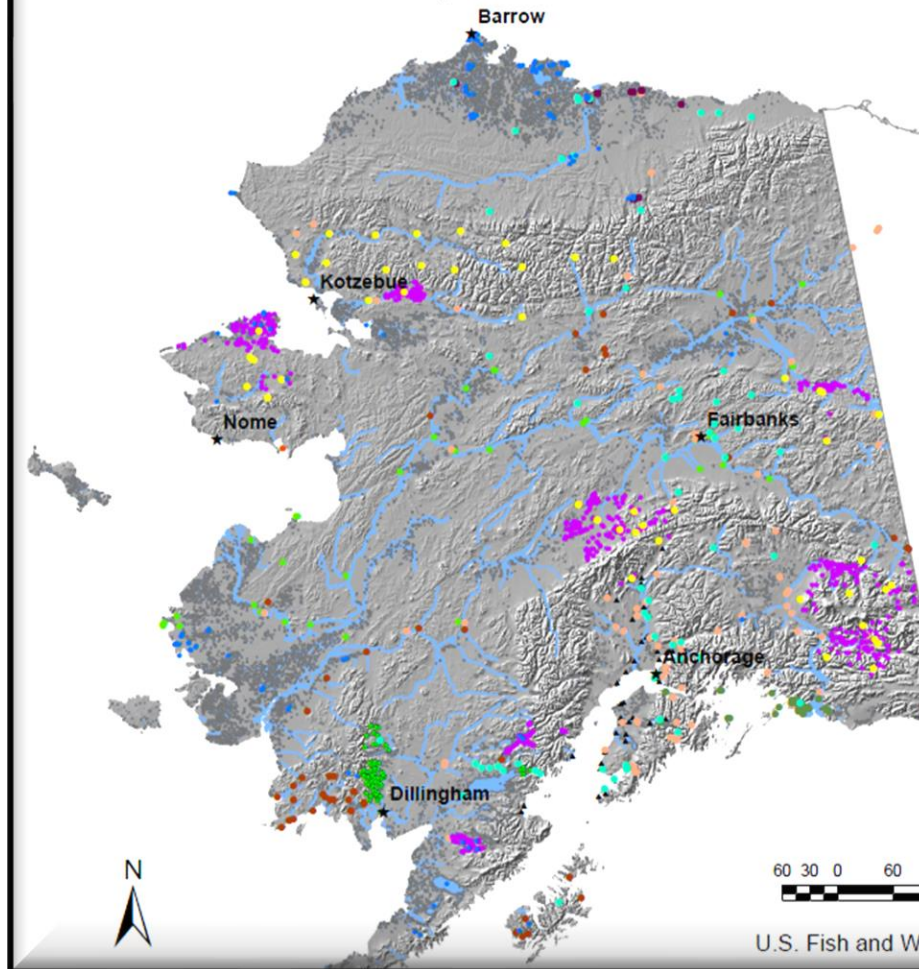


Grim?



When AKTEMP?

Stream and Lake Monitoring Sites Draft Nov. 6, 2012



Alaska Stream and Lake Temperature Monitoring Workshop

Anchorage, Alaska
November 5 & 6, 2012



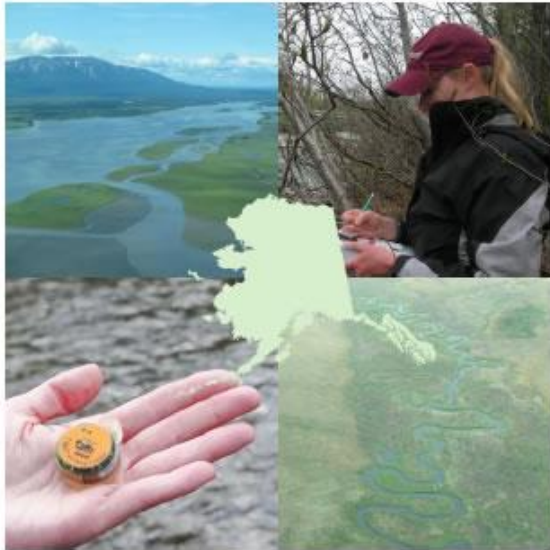
Kijik River, Lake Clark National Park

SPONSORED BY:
Western Alaska Landscape Conservation Cooperative
Northwest Boreal (formerly Northwestern Interior Forest) Landscape Conservation
Cooperative
Alaska Climate Science Center

How AKTEMP?

Stream Temperature Data Collection Standards and Protocol for Alaska:

Minimum Standards to Generate Data Useful for
Regional-scale Analyses



Alaska Natural Heritage Program
UNIVERSITY of ALASKA ANCHORAGE

- Basic Standards
- Instructions for:
 - Logger Deployment
 - Data Collection
 - QA/QC procedures
- Accessible to wide range of data providers



Yesterday- AKOATS – Metadata

~1200
Sensors

- WHO
- WHAT
- WHERE
- WHEN
- HOW

AKOATS - 2021 Alaska Online Aquatic Temperature Site [AKOATS Homepage](#)

Find address or place

Legend

ALL Sensors, Historic and Current data, Continuous

- AEA - Alaska Energy Authority
- AK - AK Dept of Fish & Game / ADNR
- BLM - Bureau of Land Mngt
- CCC - Chicagof Conservation Council
- CIK - Cook Inletkeeper
- FWS - US Fish & Wildlife Service
- KRAA - Kodiak Reg. Aquaculture Assoc.
- NPS - National Park Service
- NSEDC - Norton Sound Econ. Dev. Corp.
- SCS - Sitka Conservation Society
- TIWC - Taiya Inlet Watershed Council
- Tribal Groups
- UAA - Univ. of Alaska Anchorage
- UAF - Univ. of Alaska Fairbanks
- BLM/UAF
- USFS - US Forest Service
- USGS - US Geological Survey
- UW - Univ of Washington

<https://accs.uaa.alaska.edu/aquatic-ecology/akoats/>

400mi

Intermission



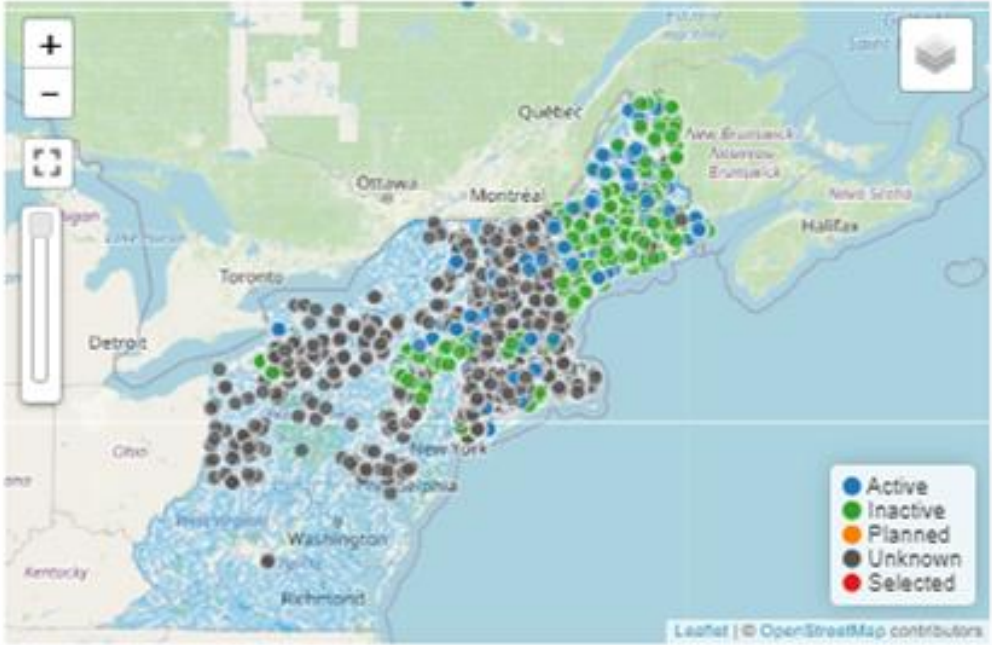
Adapt SHEDS to Alaska

Stream Temperature Database

Public Data Viewer

Instructions

Station Map



Level: None HUC4 HUC8 HUC8

Filter by Timespan

Start Date: mm/dd/yyyy

End Date: mm/dd/yyyy

Filter Clear

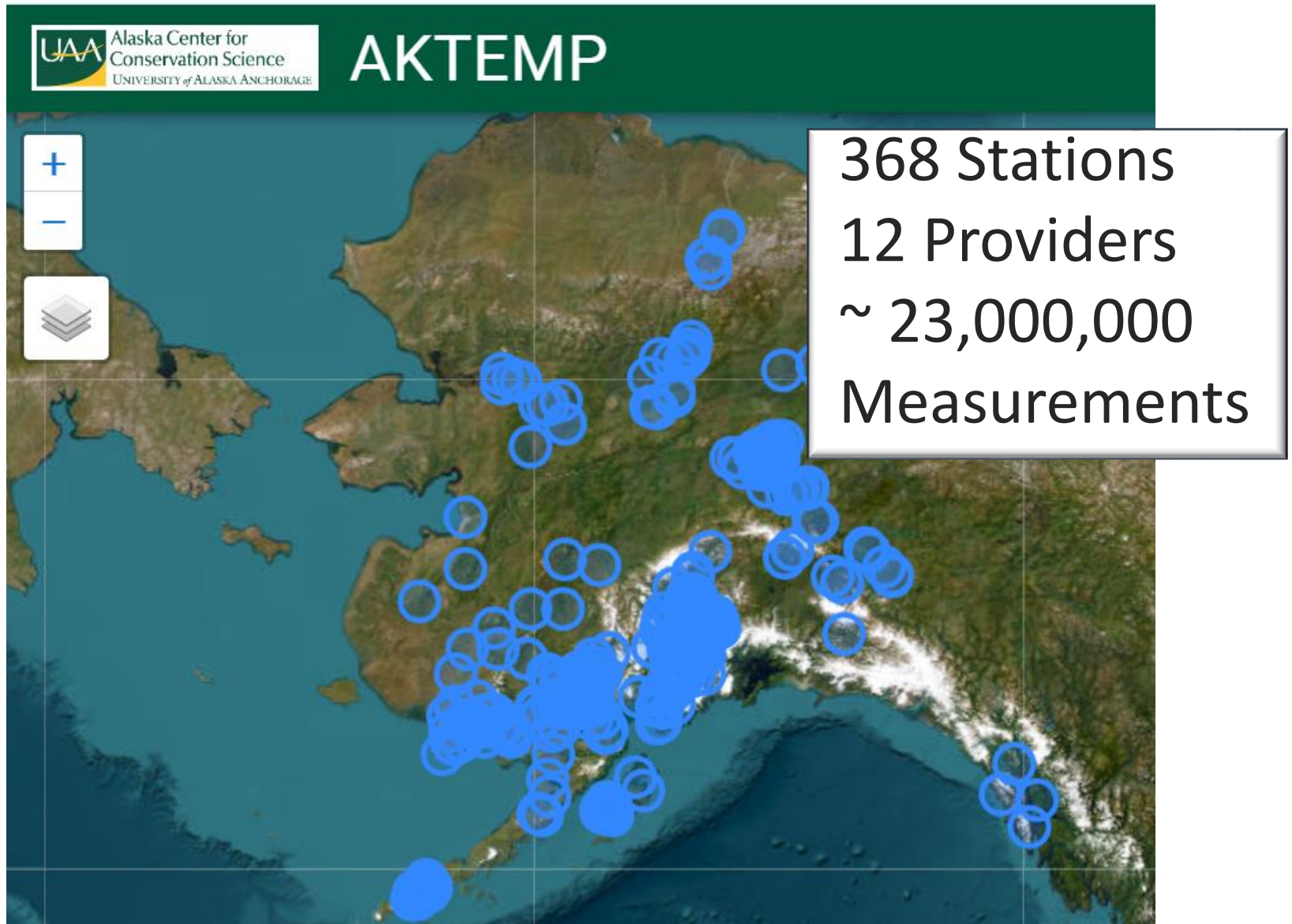
Station List Station Detail

<http://db.ecosheds.org/viewer>

(0 Stations) Che

~8400 Sensors
93 Providers

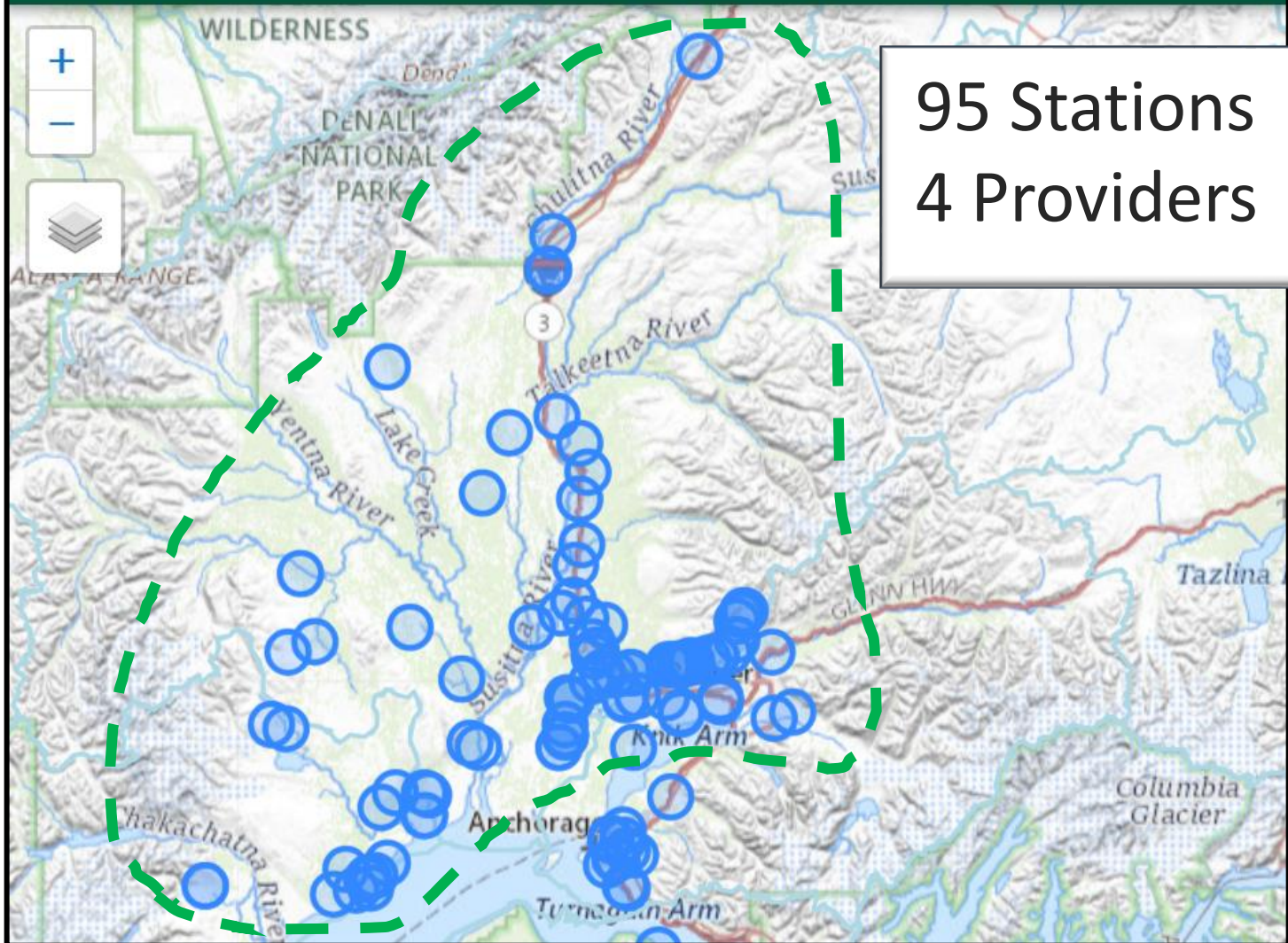
Today - AKTEMP – Mega Data



Today - AKTEMP – Mat-Su



AKTEMP

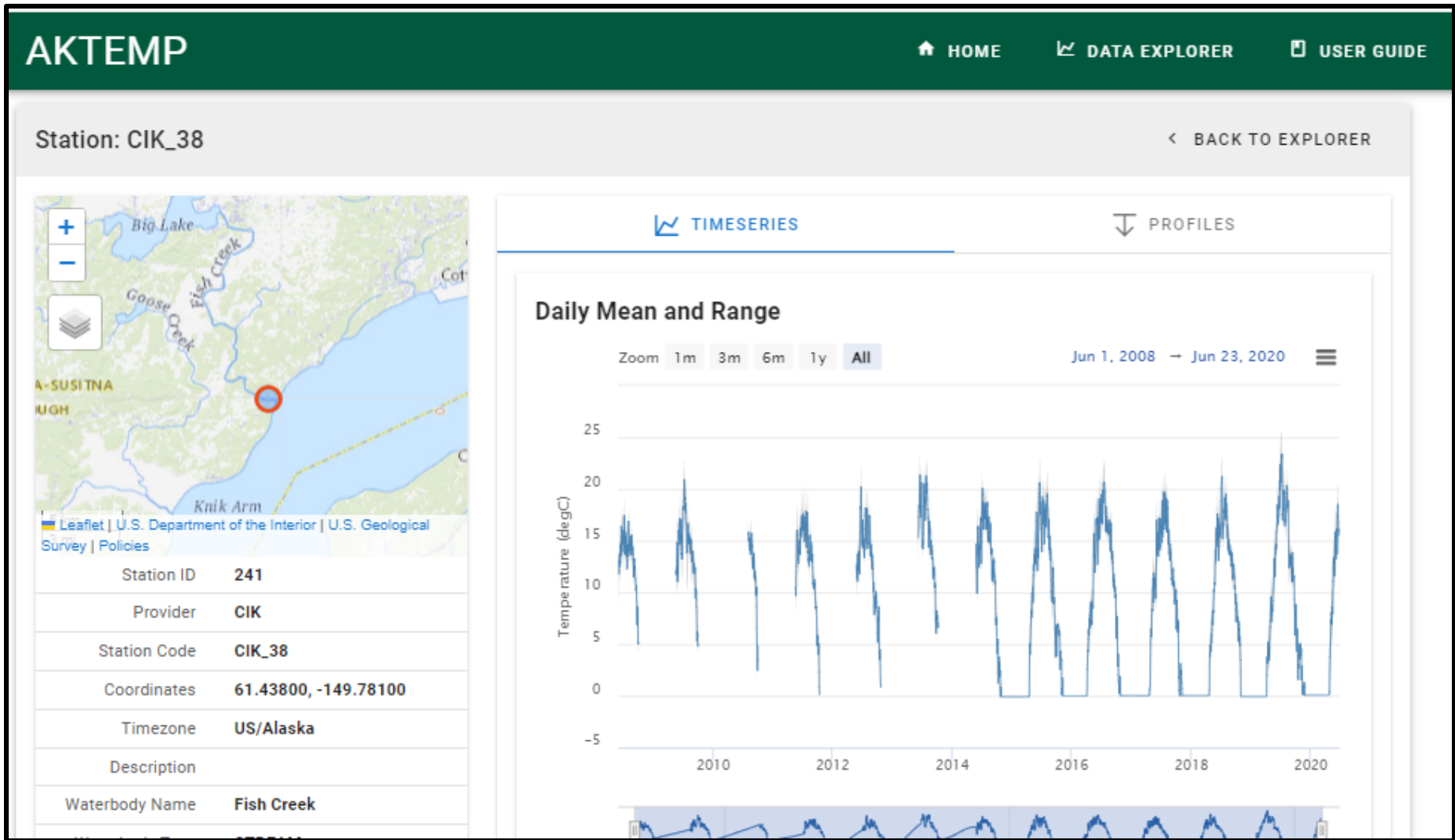


95 Stations
4 Providers

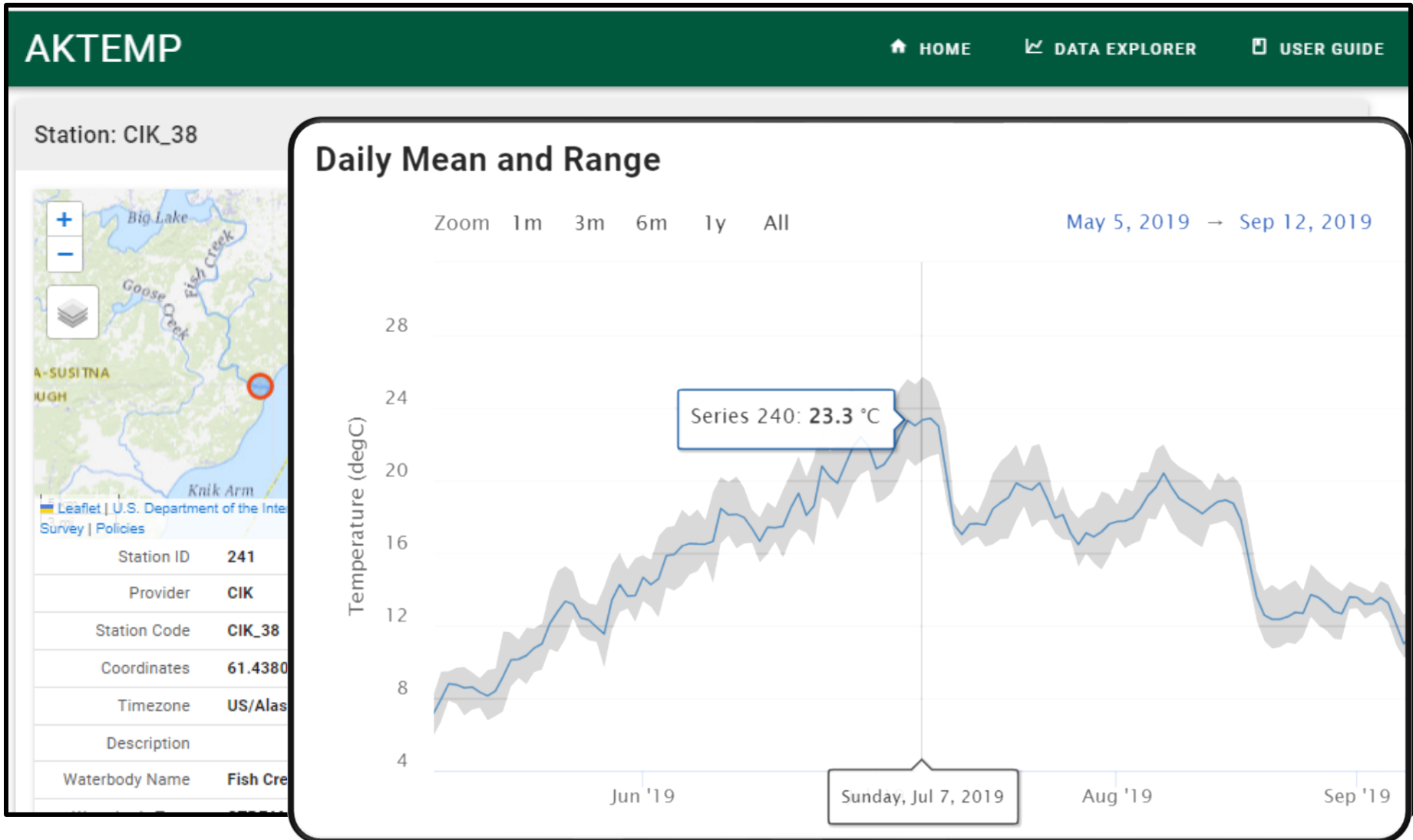
Demonstration!



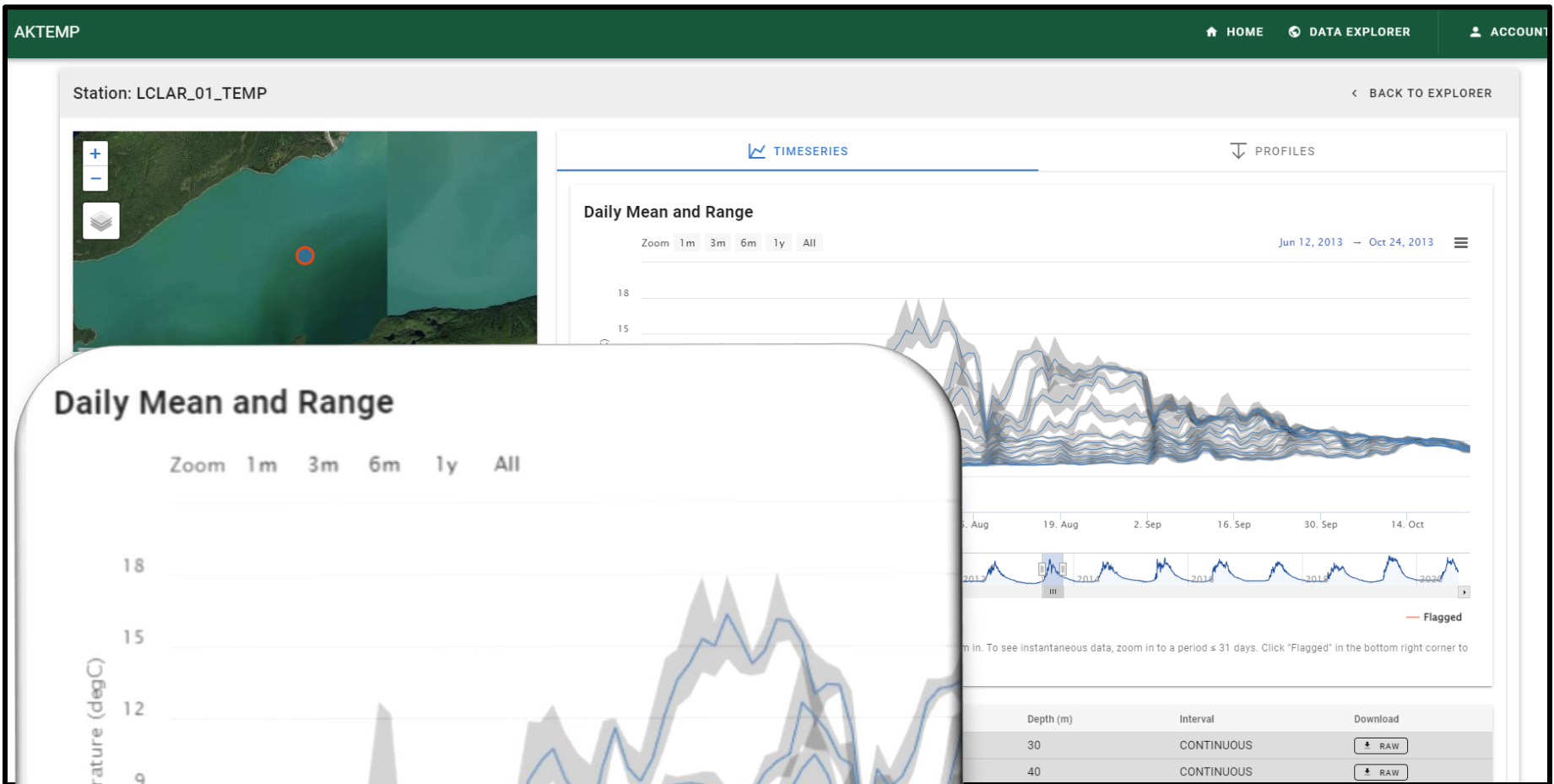
Today - AKTEMP – Station



Today - AKTEMP – Data Viewer



AKTEMP –depths – Lakes - Gravel



AKTEMP – Download by HUC

The screenshot displays the AKTEMP web application interface. At the top left is the logo for the Alaska Center for Conservation Science, University of Alaska Anchorage. The main title 'AKTEMP' is centered at the top. Below the title is a map of Alaska with several HUC basins outlined in orange and blue circles representing monitoring stations. A 'Stations Table' overlay is visible, showing a list of stations filtered by the 'Lower Susitna River (19020505)' HUC. The table has columns for Station, Waterbody, and Station ID. Below the table are navigation buttons: 'SPATIAL FILTERS', 'MORE FILTERS', 'FIT MAP', 'ADD TO CART', and 'VIEW CART (EMPTY)'. The 'VIEW CART (EMPTY)' button shows 'Selected: 59'. At the bottom, there is a pagination control showing 'Rows per page: All' and '1-59 of 59'.

Stations Table

Station	Waterbody	Sta
<input type="text" value="Search"/>	<input type="text" value="Search"/>	<input type="text" value="A."/>
msgre01	Greys Creek	Ju 13 20
msdec05	Deception Creek	Ju 13 20
msans01	Answer Creek	Ju 17 20

Selected: **Lower Susitna River (19020505)**

Rows per page: All 1-59 of 59

Intermission



AKTEMP Tools – formatted Templates

Data and Resources



AKTEMP - Data Explorer Web Map

AKTEMP Water Temperature Database

Go to resource



AKTEMP Station Template

Template to aid data providers in uploading monitoring stations to AKTEMP...

Download



AKTEMP Files Template

Template to aid data providers in uploading their temperature data to AKTEMP...

Download



Report: Stream temperature data collection standards and protocols for Alaska: Minimum standards to generate data useful for regional-scale analyses



<https://accscatalog.uaa.alaska.edu/dataset/aktemp-water-temperature-database>

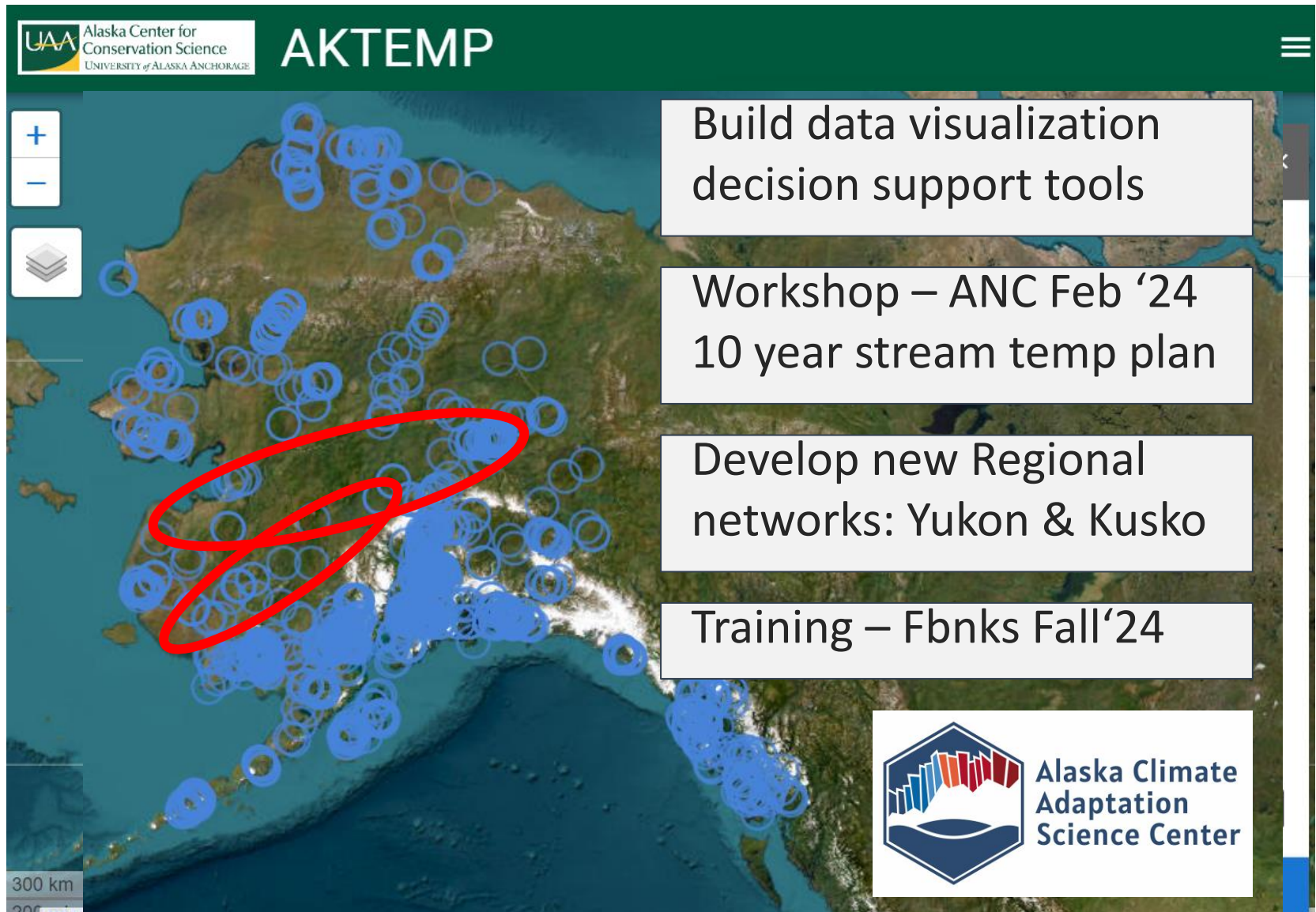
AKTEMP Tools – Tutorial Videos

The image shows a YouTube playlist page for 'AKTEMP Tutorials'. The page features a search bar at the top, a video player on the left, and a list of five tutorial videos on the right. The video player shows the first video, 'AKTEMP Video Tutorial #1: Adding A Single Station and Timeseries Dataset', with a duration of 4:10. The playlist list includes the following videos:

- 1. AKTEMP - Adding A Single Station And Timeseries Dataset (dwm • 11 views • 1 month ago)
- 2. AKTEMP - Adding Multiple Stations and Timeseries Data (dwm • 3 views • 1 month ago)
- 3. AKTEMP - Data QAQC And Editing Station Metadata (dwm • 3 views • 3 weeks ago)
- 4. AKTEMP - Uploading A Depth Array Timeseries (dwm • 1 view • 1 month ago)
- 5. AKTEMP - Uploading Depth Profiles

A message at the top of the video list states '1 unavailable video is hidden'.

Tomorrow AKTEMP Mega-Mega Data



Partnerships / Data Sharing / Knowledge



ARTICLE



Summer temperature regimes in southcentral Alaska streams: watershed drivers of variation and potential implications for Pacific salmon

Sue Mauger, Rebecca Shaftel, Jason C. Leppi, and Daniel J. Rinella

PRIMARY RESEARCH ARTICLE

Global Change Biology WILEY

Watershed-scale climate influences productivity of Chinook salmon populations across southcentral Alaska

Leslie A. Jones¹  | Erik R. Schoen² | Rebecca Shaftel¹ | Curry J. Cunningham³  | Sue Mauger⁴ | Daniel J. Rinella⁵ | Adam St. Saviour⁶

Stream Temperature Action Plan

Steps to protect Alaska's wild salmon habitat from the impacts of thermal change

Prepared by
Cook Inletkeeper



Greetings from

Funding: USEPA Environmental Information Exchange Network



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

