

# Stream temperature logger network

in the Ts'itonhna  
watershed



Pro-tip:  
There is no “Mat-Su” watershed

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What

Develop a water temperature monitoring network

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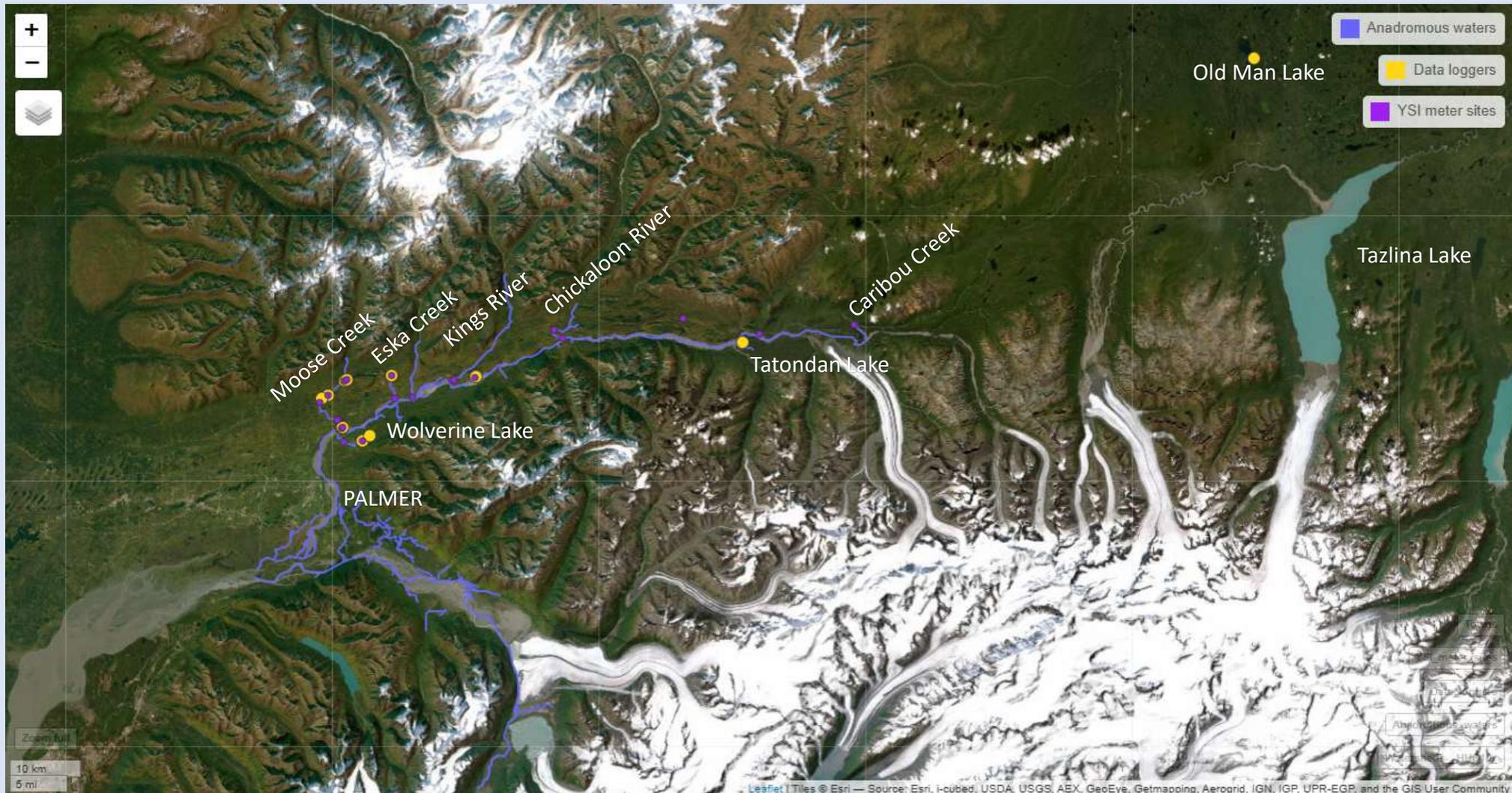
Who



How

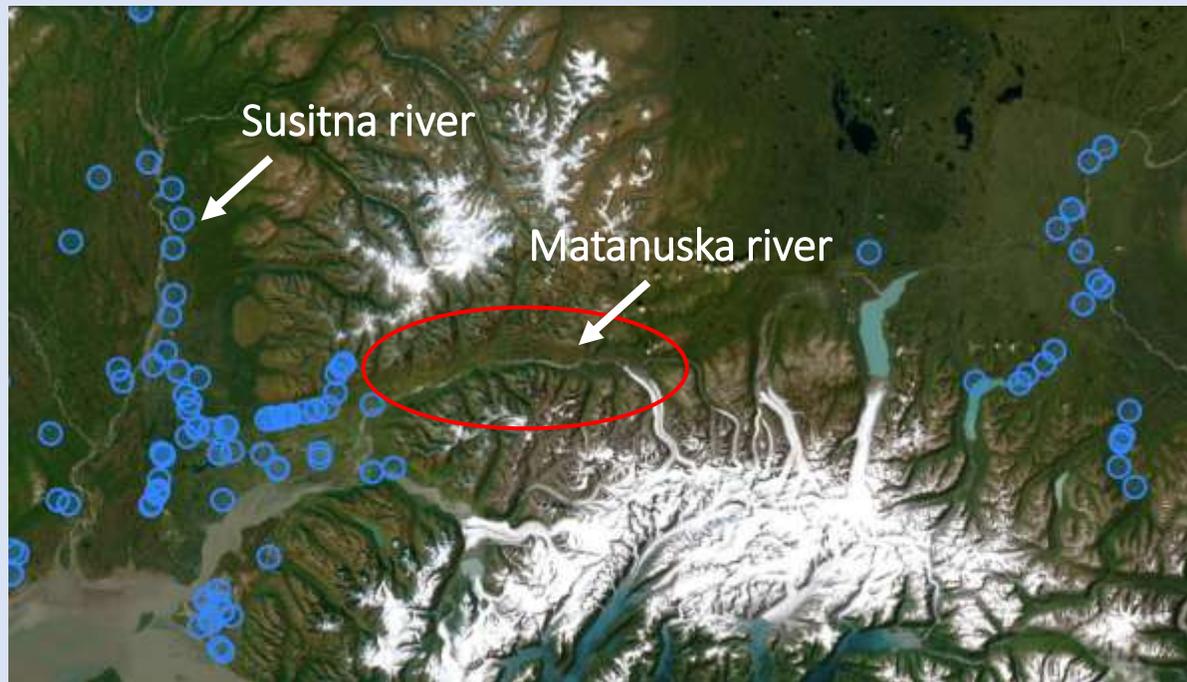


# Where: Ts'itonhna (Matanuska river) watershed



# Why

- No data
- Disconnect from traditional importance of the area
- Informs restoration



(top) Map of data logger sites from AKTemp

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

(bottom) Map of Ahtna traditional place names

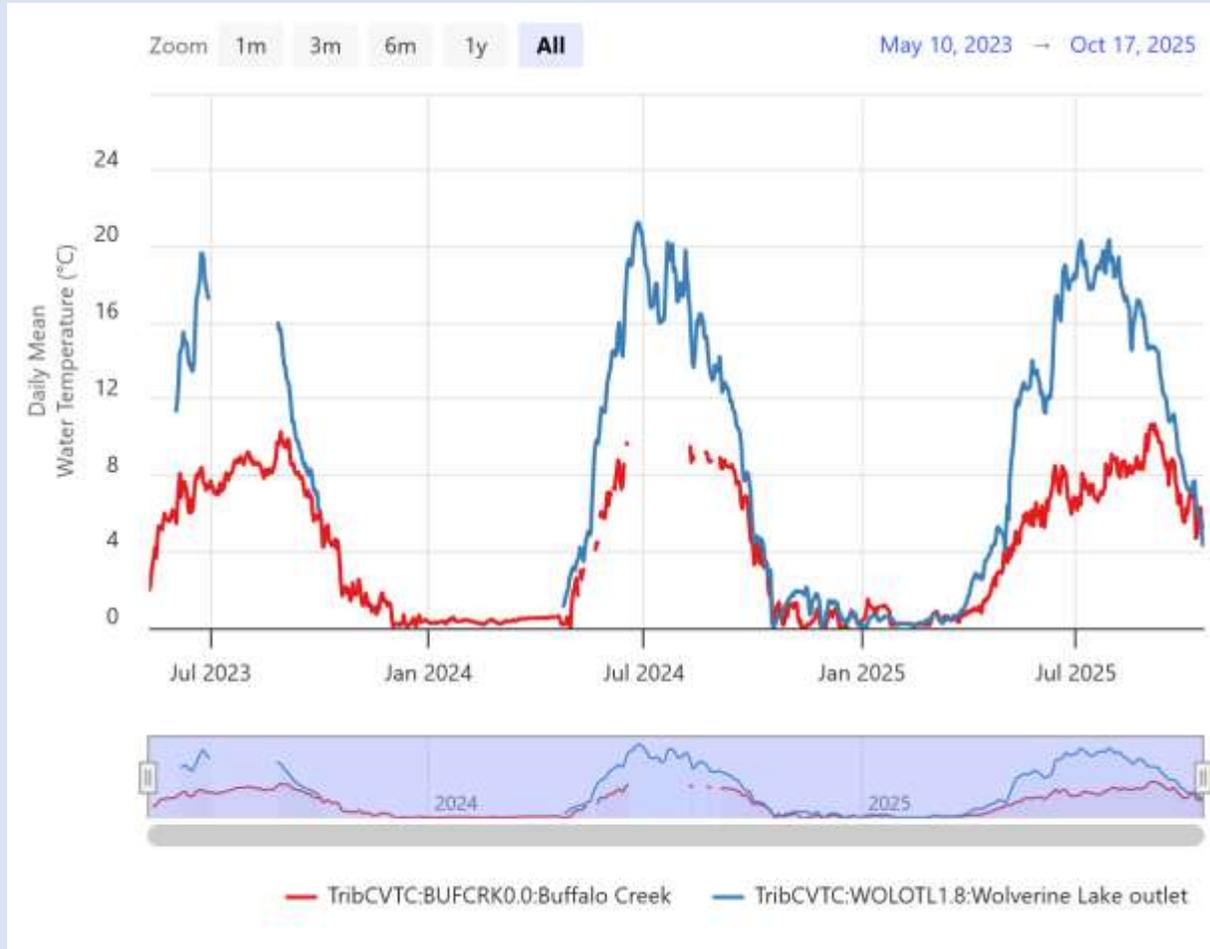
<https://storymaps.arcgis.com/stories/b31fc761a8ea4d7da349985d6932d58c>



Pro-tip:  
There is no “Mat-Su” watershed<sup>4</sup>

# Results

Buffalo Creek (red line) - REMAINS BELOW 10C

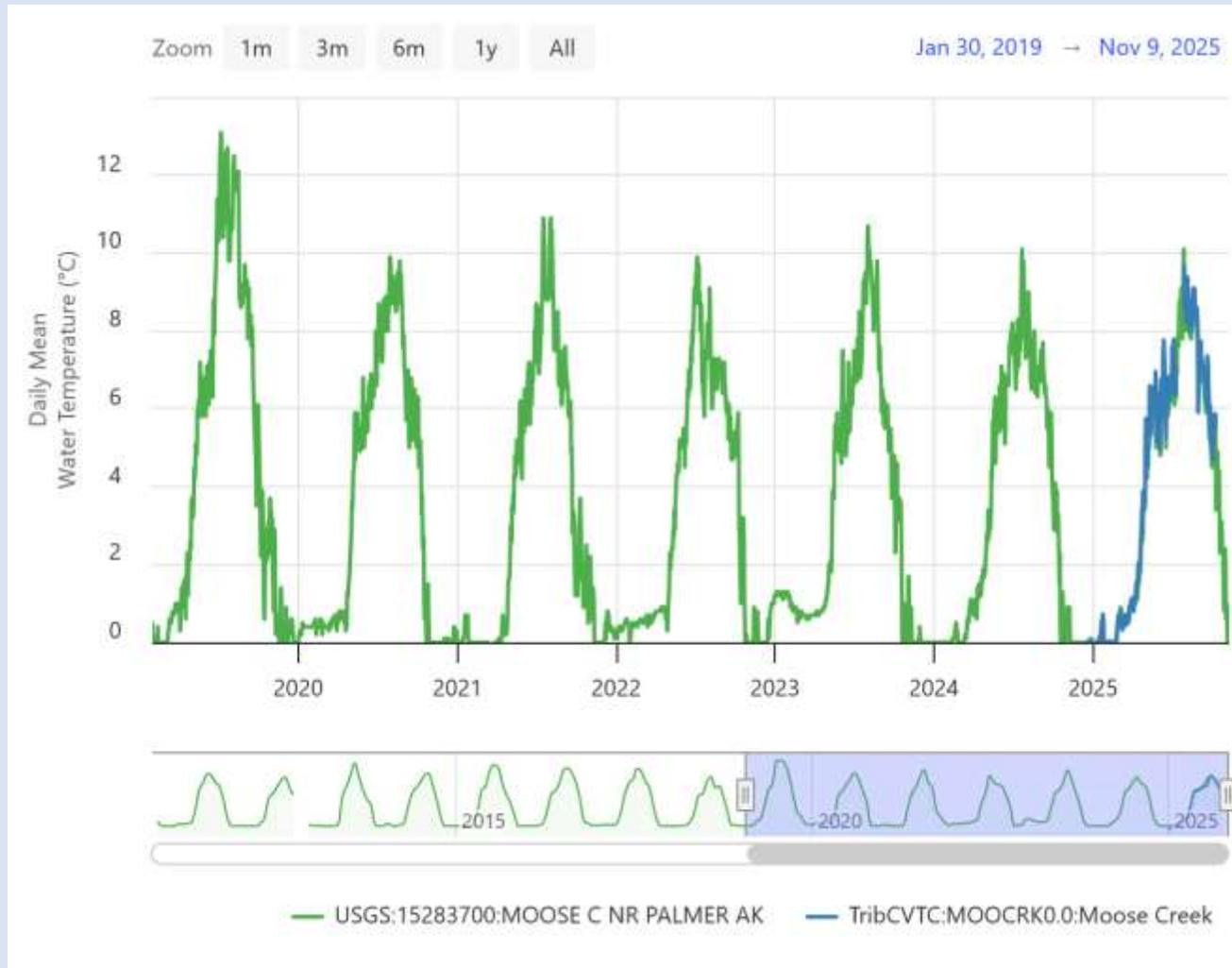


Plot from AKTEMP



Wolverine Lake outlet (blue line)  
- REGULARLY ABOVE 20C

# Comparing results with USGS (Moose Creek)



- USGS green line; CVTC blue line
- Even in the hot summer of 2019, USGS recorded daily mean temperatures below 14C
- CVTC results December 2024- November 2025 match USGS
- **CVTC AND USGS DATA MATCH WELL**

Plot from AKTEMP

# field stories

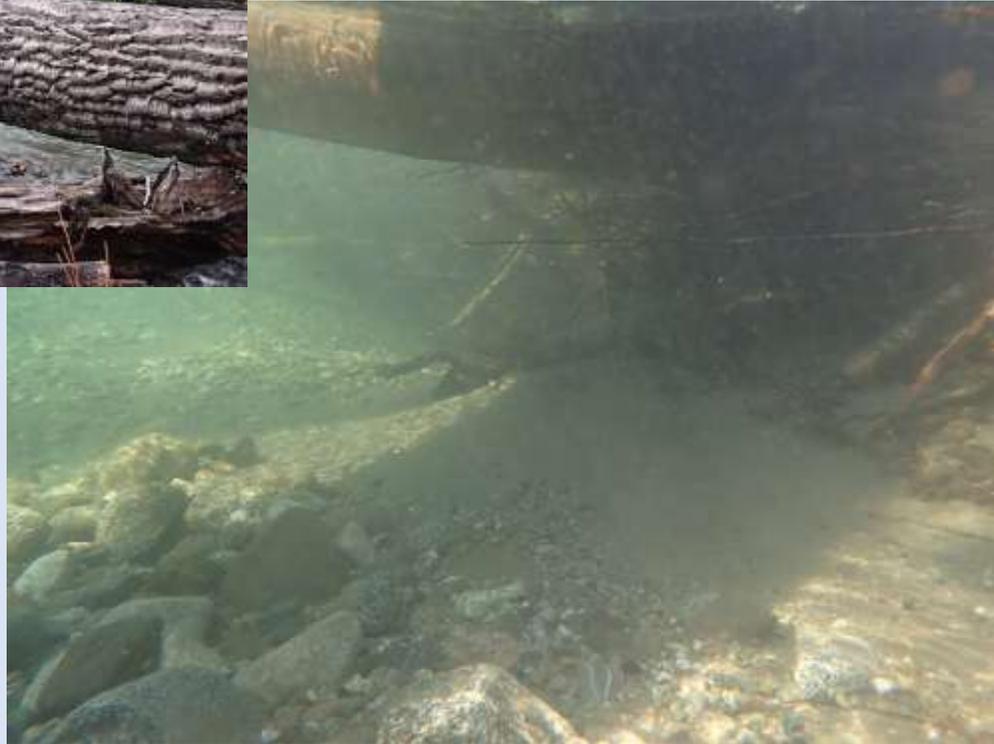
- the challenges of fast water
- the loggers that got buried
- the logger ripped in two by ice
- the loggers floating downstream

# the logger that was buried: Moose Creek





Two weeks after deployment....



Follow the cable?...



Ooh, kings!....

# ice damage: Moose Creek attempt #2

- Sample site



- Damaged housing



- Tidbit and half a conductivity logger



# the loggers found floating downstream

- Always cable the logger back to the bank
- Who knew zip ties had temperature ratings??



# fast water: Eska Creek

- cement block cabled to the bank,
- a small weight on the logger housing,
- and a carabiner slider
  
- results TBD!



Tsin'aen to our friends  
who made this work  
possible



Ed Tompkins, resident at  
Wolverine Lake



Ben Americus and  
Cody Henrickson,  
CVTC fish biology  
program staff



Gina Bodnar, CVTC  
water quality  
program staff

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