

ADEC's Community-Based Air Sensor Network

Quarterly Call
March 5, 2024
10:00 AM AKST

Corey James, corey.james@alaska.gov
Lydia Johnson, lydia.johnson@alaska.gov
Kelly Ireland, kelly.ireland@alaska.gov
Isaac Van Flein, isaac.vanflein@alaska.gov

Housekeeping Items

- Mute – Please mute yourself for presentations.
- Please use chat during presentation as you have questions/comments.
 - 20-30 minutes of planned discussion time at end
- Mark your calendar for next call! June 11 2024 at 10 am AK time



Agenda

Welcome!

Sensor network overview and progress

Data findings

Next steps

Questions and discussion





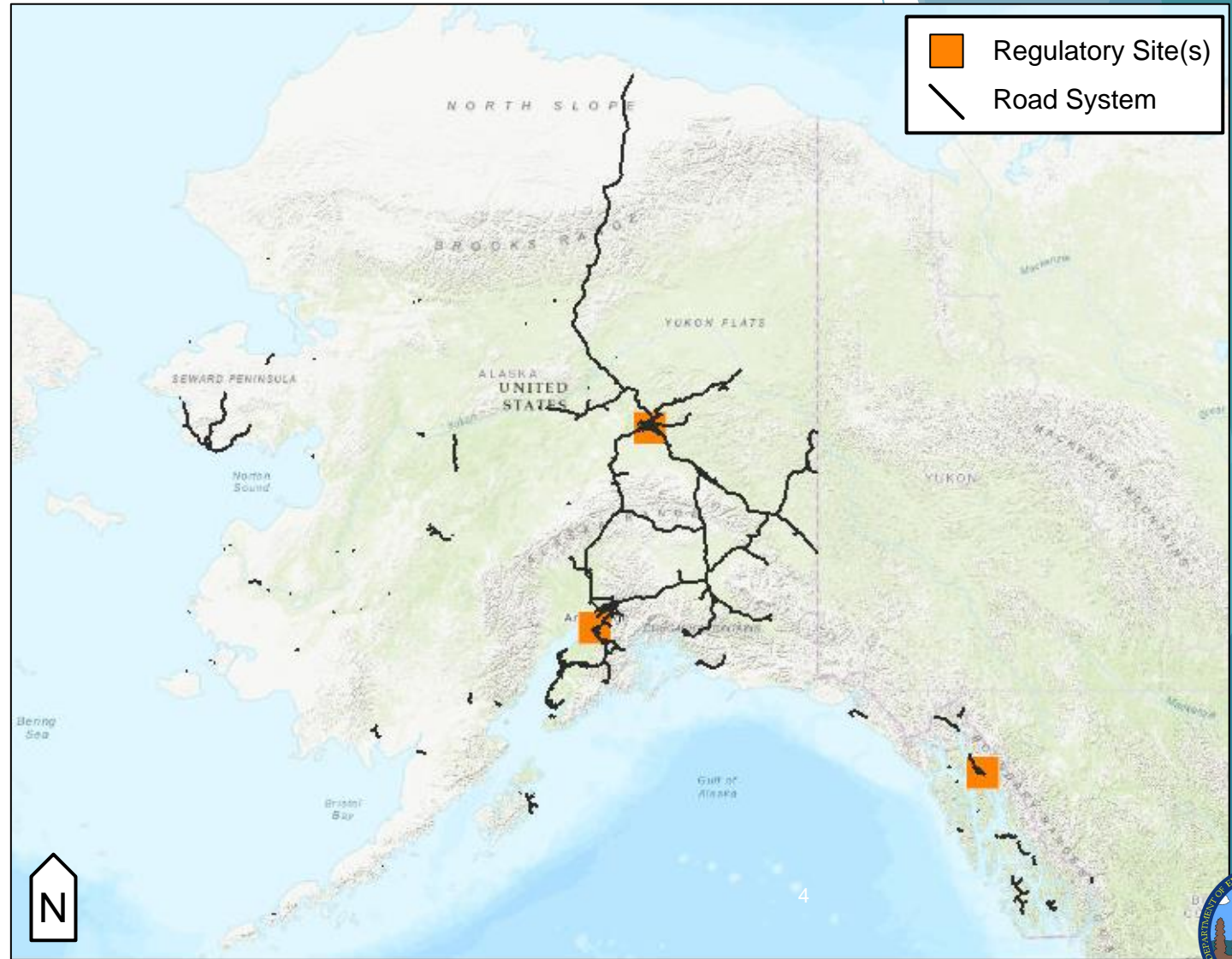
Focus of this call

- ▶ Quarterly calls
 - ▶ Next is June 11th at 10 am
 - ▶ 3-year project
- ▶ Share DEC updates
- ▶ Get input
- ▶ Workgroup style – discussion is encouraged!

Share Alaskan-based expertise

DEC's Regulatory Network

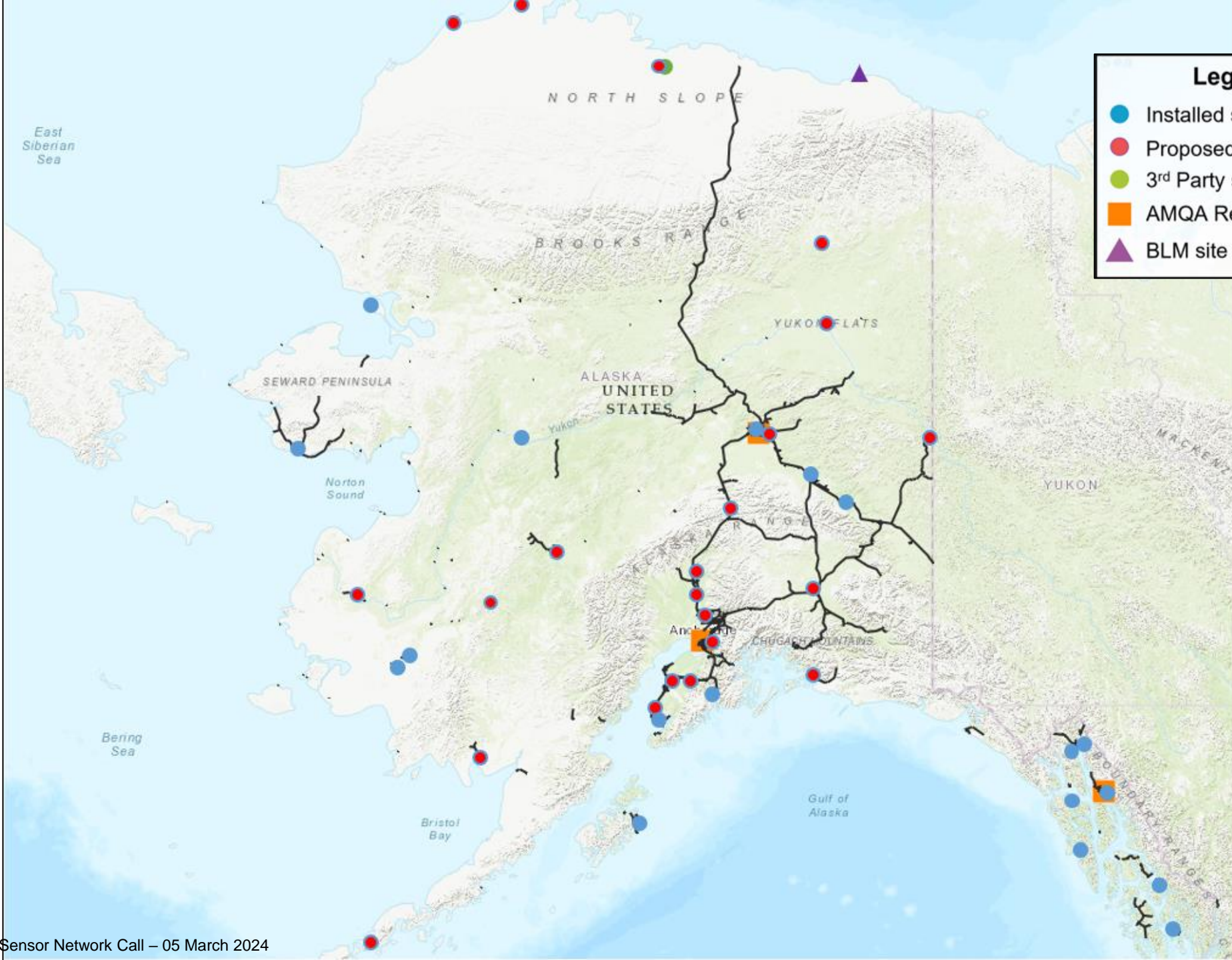
- ▶ Regulatory stations in 3 Metropolitan Statistical Areas (MSAs)
 - ▶ Anchorage / Mat-Su (4 sites)
 - ▶ Fairbanks (3 sites)
 - ▶ Juneau (1 site)
- ▶ Monitor criteria pollutants:
 - ▶ Particulate matter (PM_{2.5} and PM₁₀)
 - ▶ Gases:
 - ▶ Carbon monoxide (CO)
 - ▶ Nitric oxide (NO)
 - ▶ Ozone (O₃)
 - ▶ Sulfur dioxide (SO₂)



We are growing!

- ▶ Map as of February 3, 2024
- ▶ Continued expansion as we...
 - ▶ Deploy more sensors
 - ▶ Collaborate with communities doing their own studies and display their data
 - ▶ Add PurpleAirs from across the state and collaborate with ANTHC
 - ▶ Partnered with the AQEarth project to display Anchorage sensor data



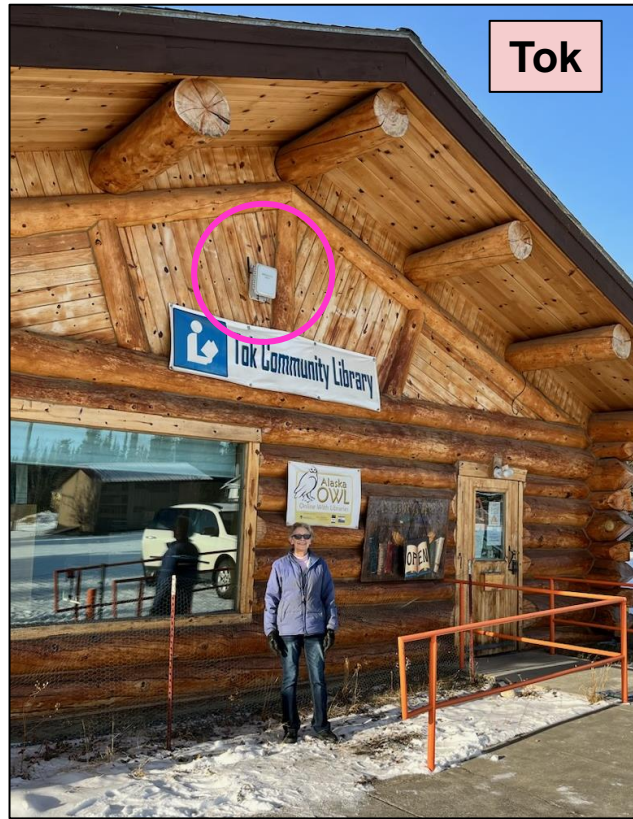


Legend

- Installed sensor site
- Proposed sensor site
- 3rd Party sensor site
- AMQA Regulatory site
- ▲ BLM site







Tok



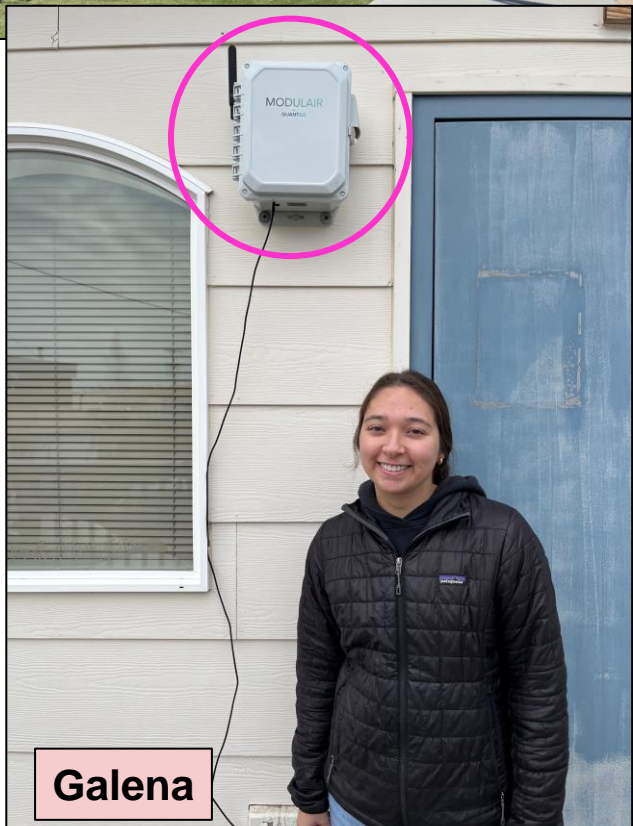
Homer



Delta Junction



Soldotna



Galena



Kodiak



Southeast Alaska Campaign

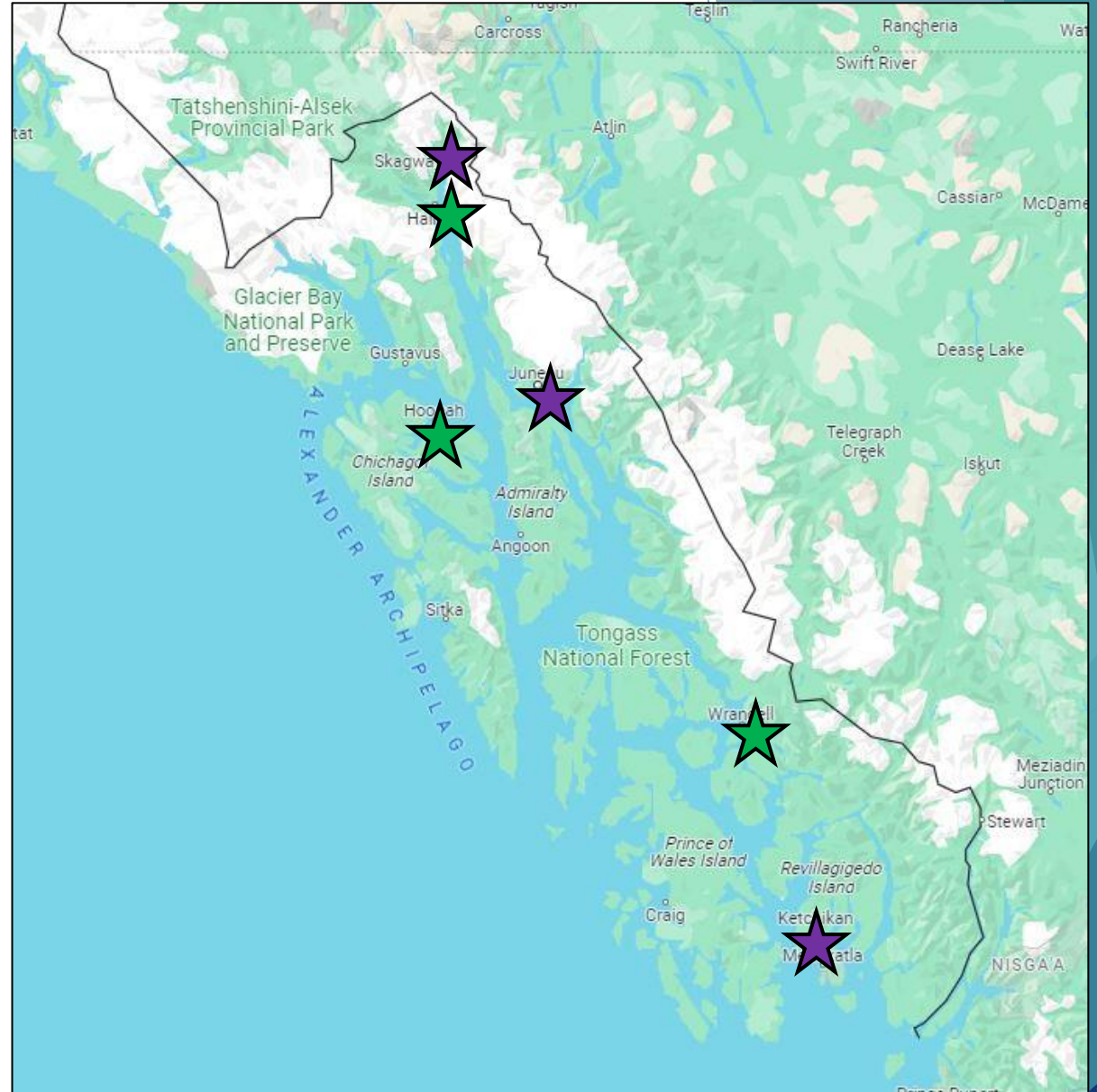
January 2024

Deployed **new** sensors in:

- Haines
- Hoonah
- Wrangell

Replaced sensors in:

- Juneau
- Ketchikan
- Skagway
- Sitka- deploying soon



New deployments!



Wrangell



Juneau, waterline



Ketchikan



Juneau, highlands

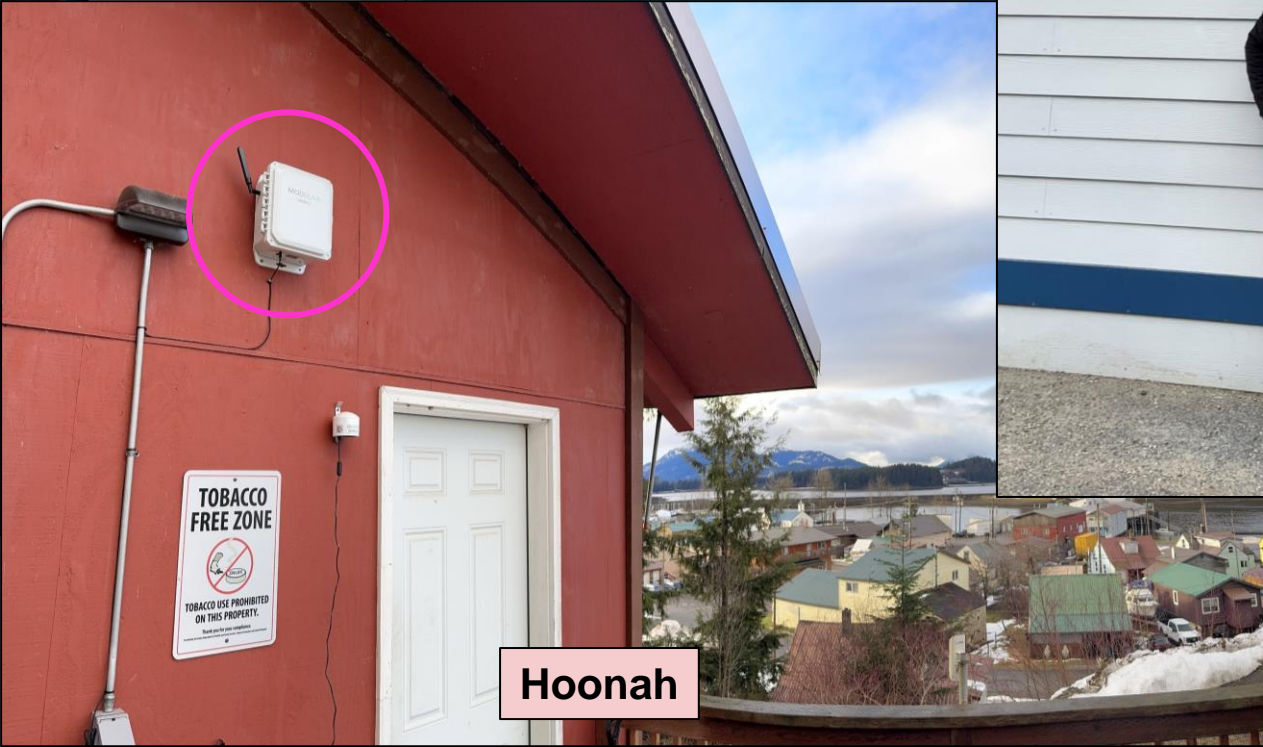


New deployments!

Haines



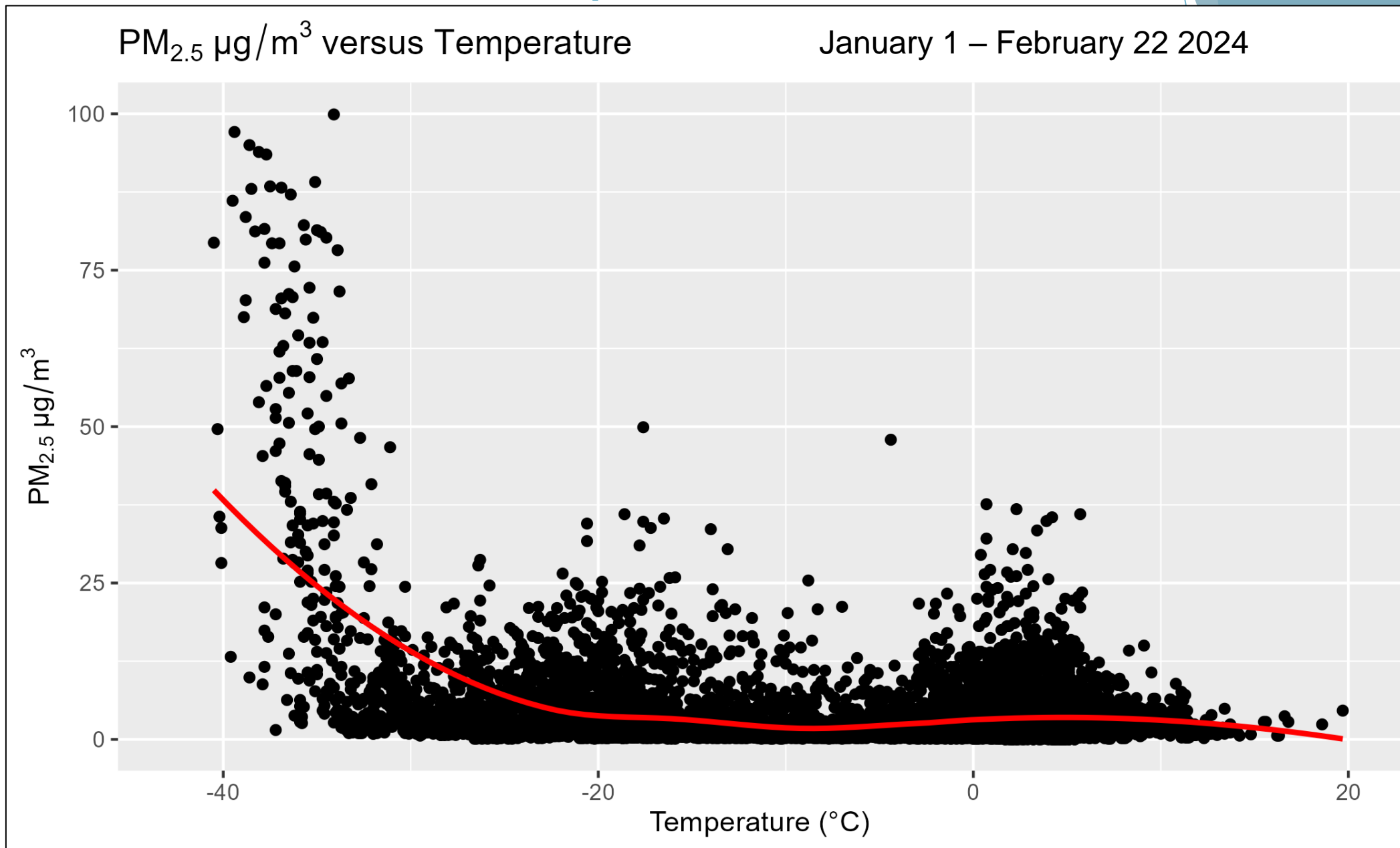
Skagway



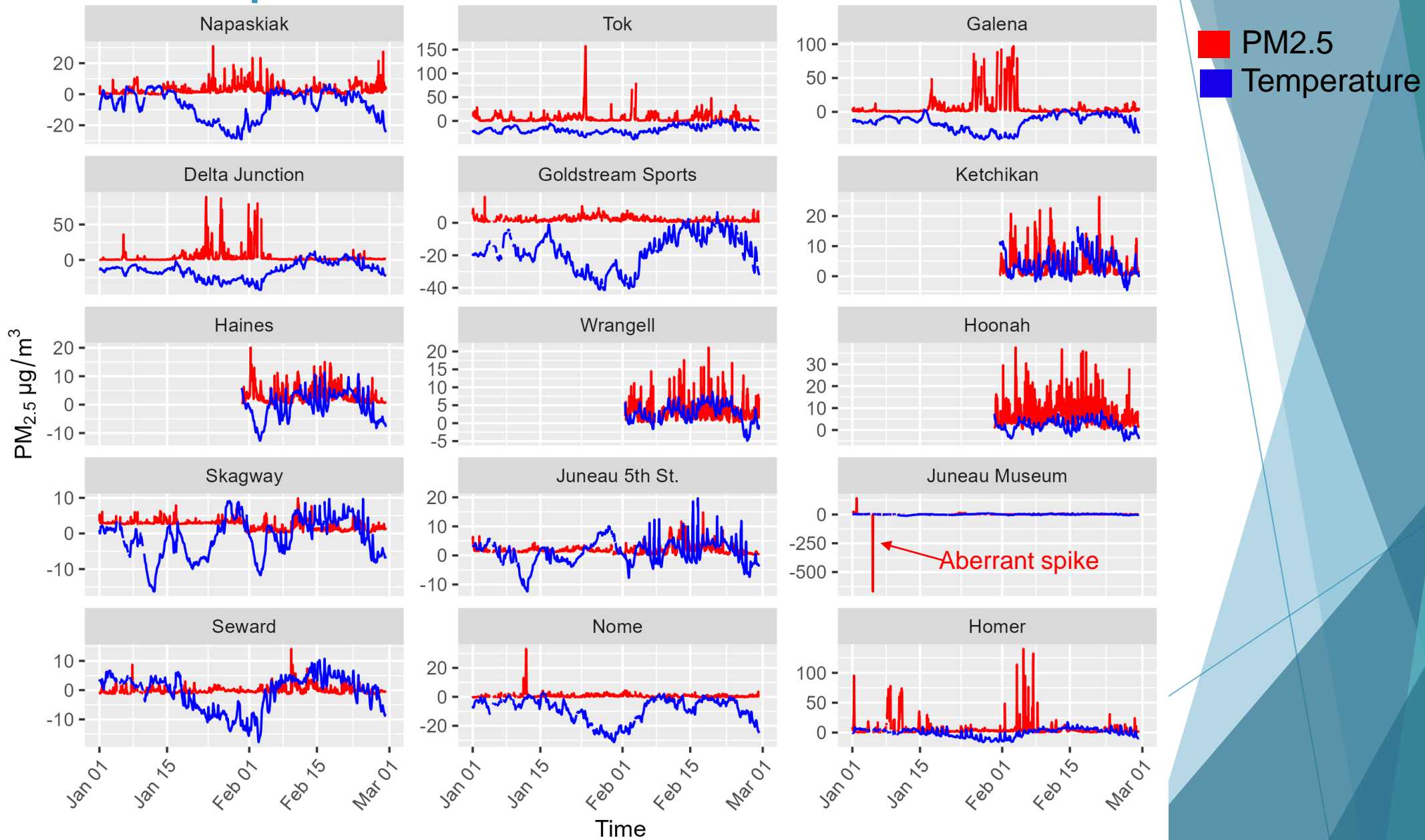
Hoonah



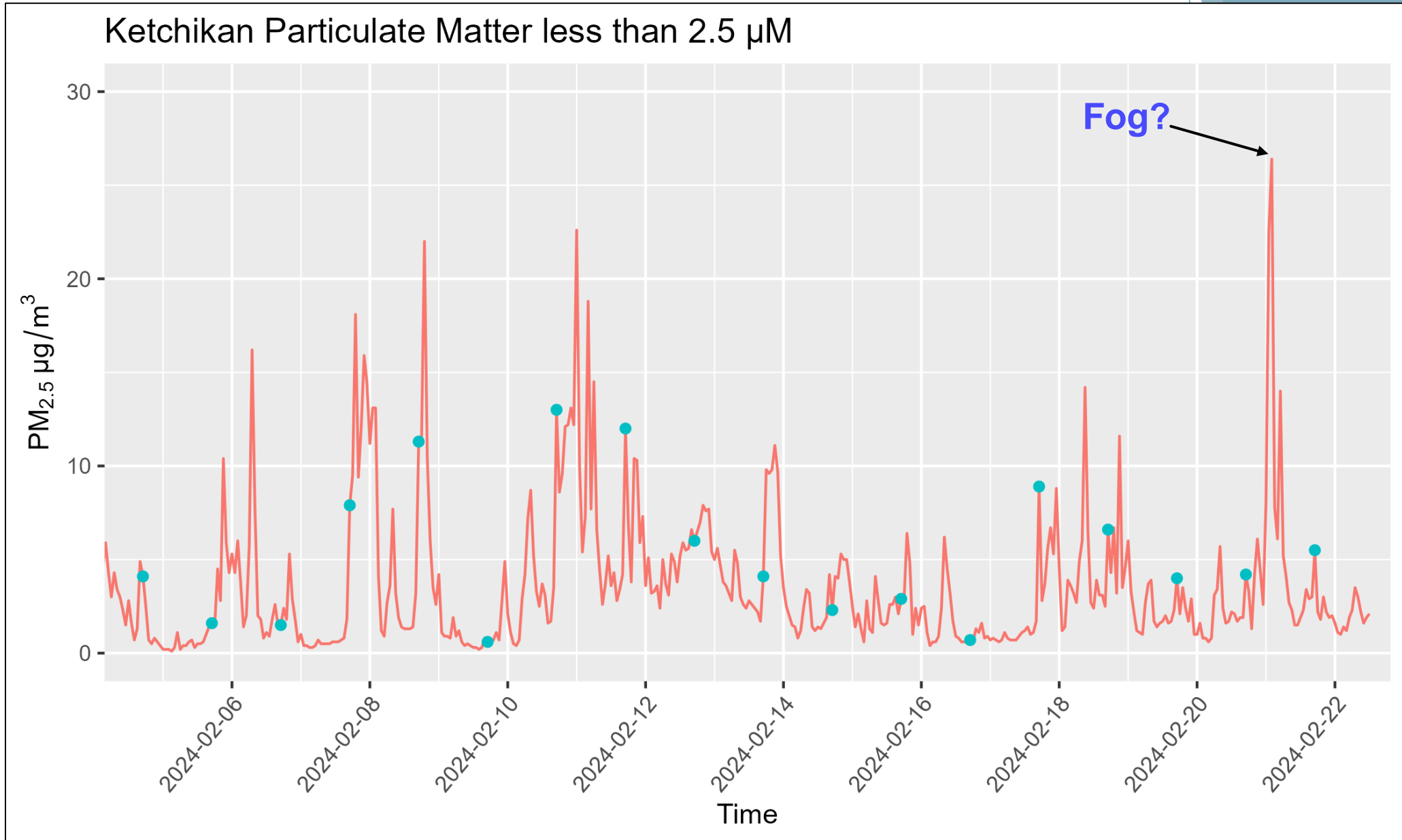
All Sites – PM_{2.5} vs. Temperature



PM2.5 & Temperature

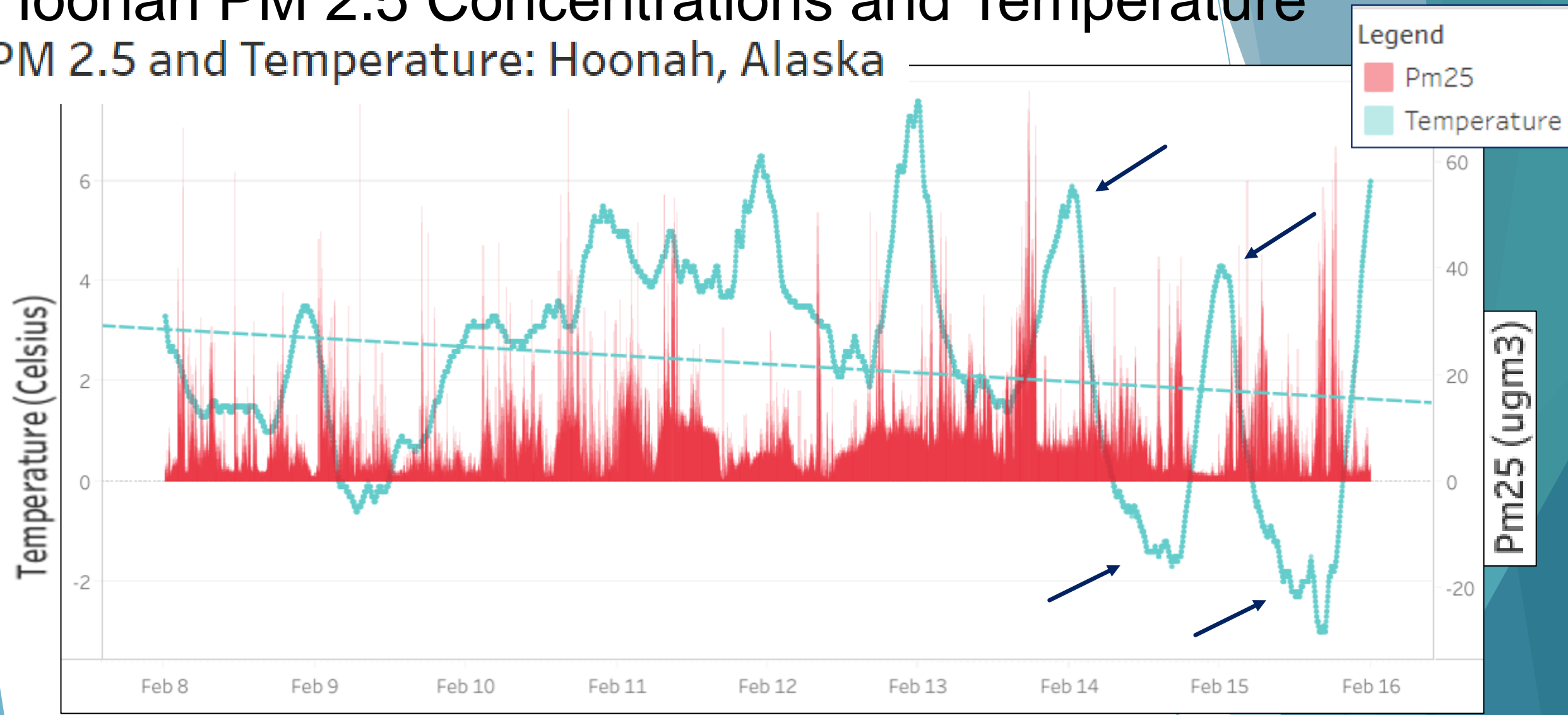


Ketchikan – PM2.5 Pattern



Hoonah PM 2.5 Concentrations and Temperature

PM 2.5 and Temperature: Hoonah, Alaska

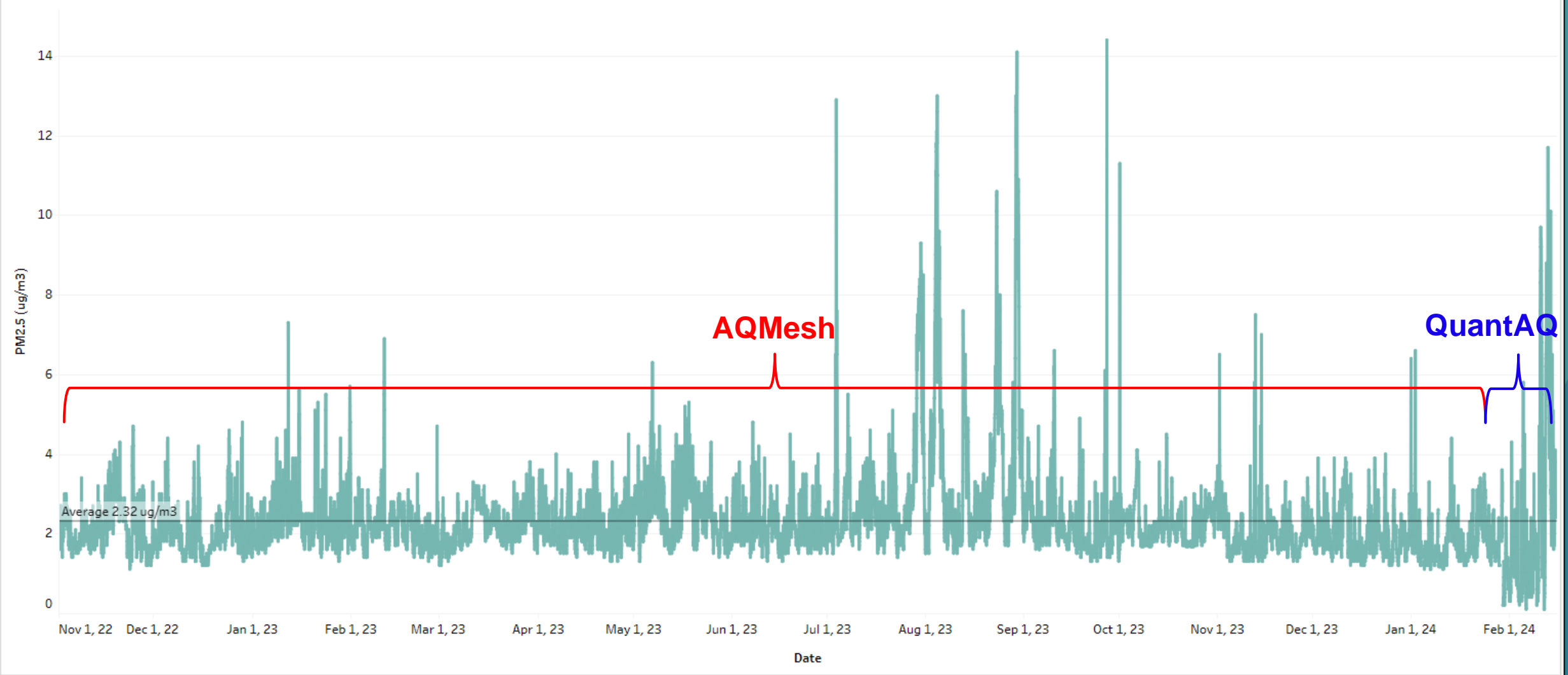


Time and Date (February 8th - 16th) [February 2024]



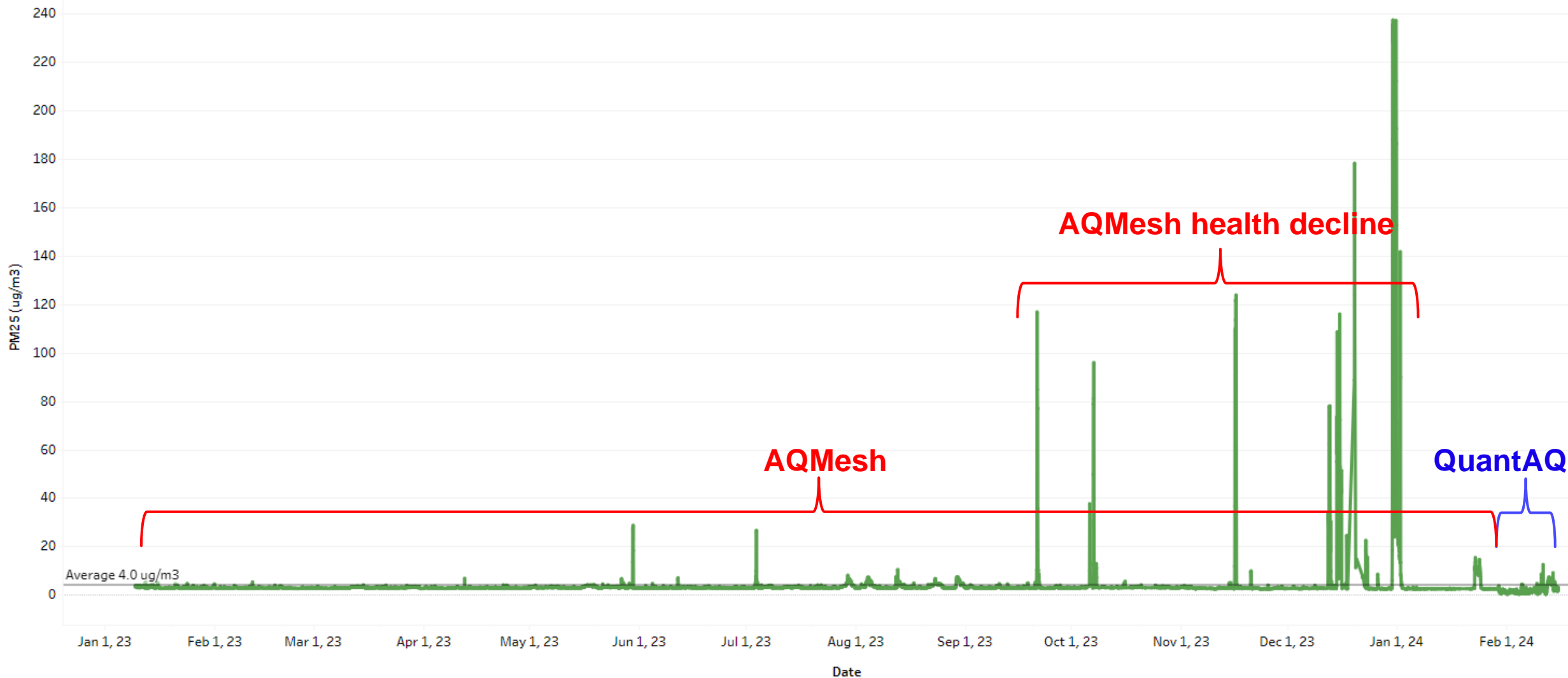
Juneau – 5th Street – PM2.5 Concentration

5th Street Location - PM2.5 - November 2022 to March 2024



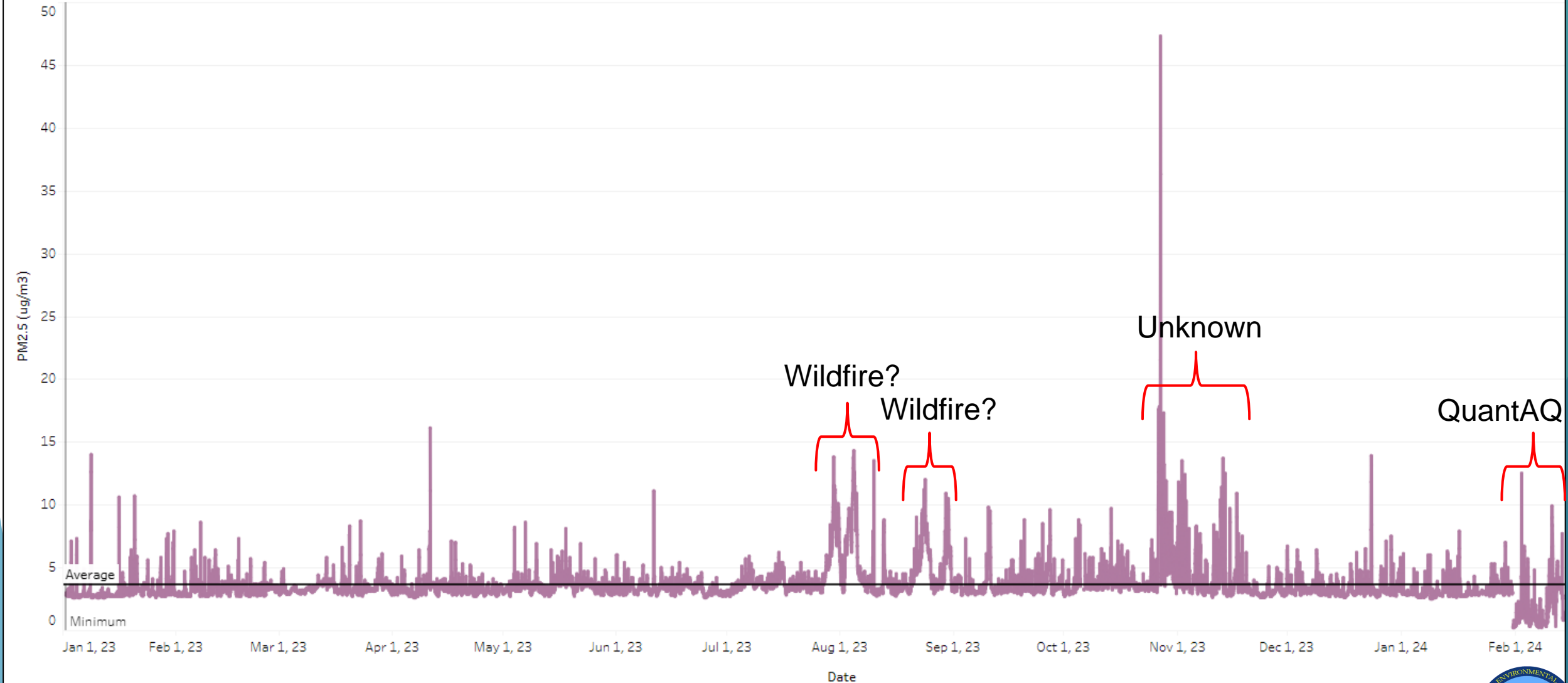
Juneau – Alaska State Museum – PM2.5 Concentration

State Museum Location - PM2.5 - November 2022 to March 2024



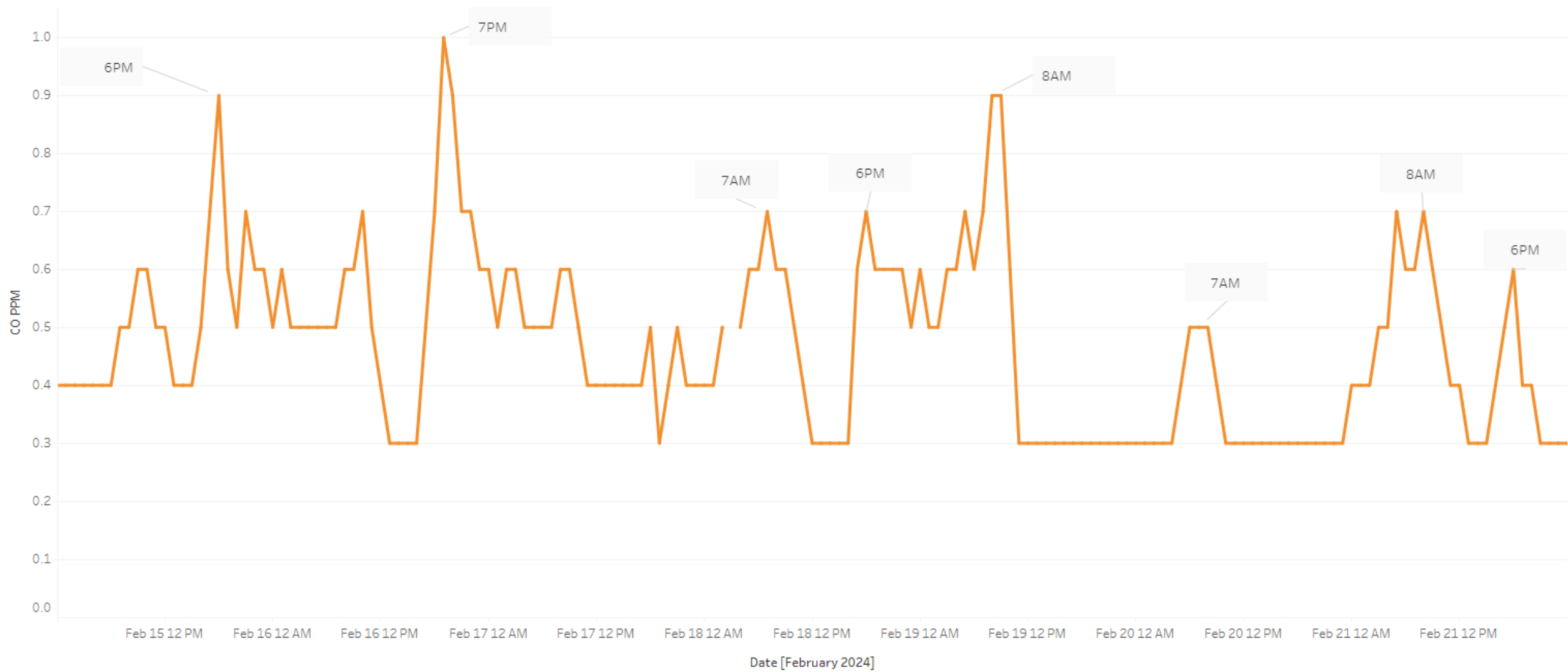
Skagway – Wildfire Influence

Skagway - PM2.5 Average Hourly Concentration



Tok CO Concentrations

Tok Carbon Monoxide (PPM)



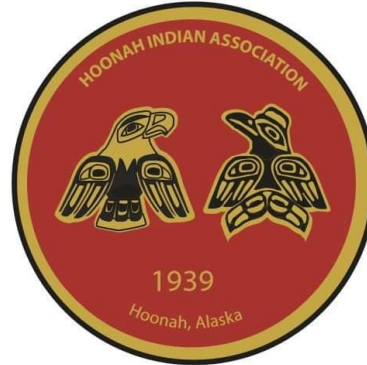


Rowing in the same direction

- ▶ **Looking for Community Champions**
 - ▶ Finding a location and deployment
 - ▶ Receive training on sensor
 - ▶ Join the network! On the map, network calls, semiannual data reports
 - ▶ Data available at request
- ▶ **We want to host your air quality data on our website!**
- ▶ **DEC sensor network collaboration**
 - ▶ Contact us for direct collaboration
 - ▶ Future calls and knowledge share
 - ▶ Hiring staff to help with tribal/rural air quality!
 - ▶ Semiannual data report- what do you want to see?



Thank you to our community partners!

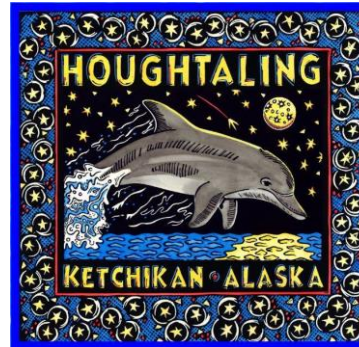


**NORTON SOUND
HEALTH CORPORATION**



Kenai Peninsula College
UNIVERSITY of ALASKA ANCHORAGE

- ▶ Cathedral of the Nativity of the Blessed Virgin Mary
- ▶ Tok Community Library



**ALASKA STATE
LIBRARIES
ARCHIVES
& MUSEUM**



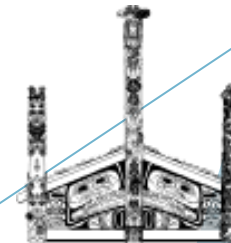
Kodiak Island Borough



CITY & BOROUGH OF WRANGELL
GATEWAY TO THE STIKINE



Chilkoot Indian Association



**Ketchikan
INDIAN COMMUNITY**



Questions

- ▶ Next quarterly call date: June 11th @ 10-11am. Link in chat will take you to registration and will be emailed to our contact list.
- ▶ Visit our Air Quality website: <https://dec.alaska.gov/air/air-monitoring/responsibilities/database-management/alaska-air-quality-real-time-data/> (or Google 'Alaska air quality' and look for DEC AQI link)
- ▶ Contact info is in chat and in QR code

Resources

- ▶ Not sure what sensor to buy?
 - ▶ EPA Air Sensor Toolbox: epa.gov/air-sensor-toolbox
 - ▶ South Coast AQMD's AQ-SPEC program and evaluations: aqmd.gov/aq-spec
 - ▶ Contact us!
- ▶ ANTHC's PurpleAir program – contact Andrew Willman
- ▶ Register for next call: <https://events.gcc.teams.microsoft.com/event/44fb45e0-0be2-47f8-9459-1f4e160d871f@20030bf6-7ad9-42f7-9273-59ea83fcfa38>

Contact us

