

WINTER AIR QUALITY STUDY

AIR SENSORS

NORTH KITSAP

March 28, 2019

PSCAA Board meeting

Graeme Carvlin

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Air Monitoring Team

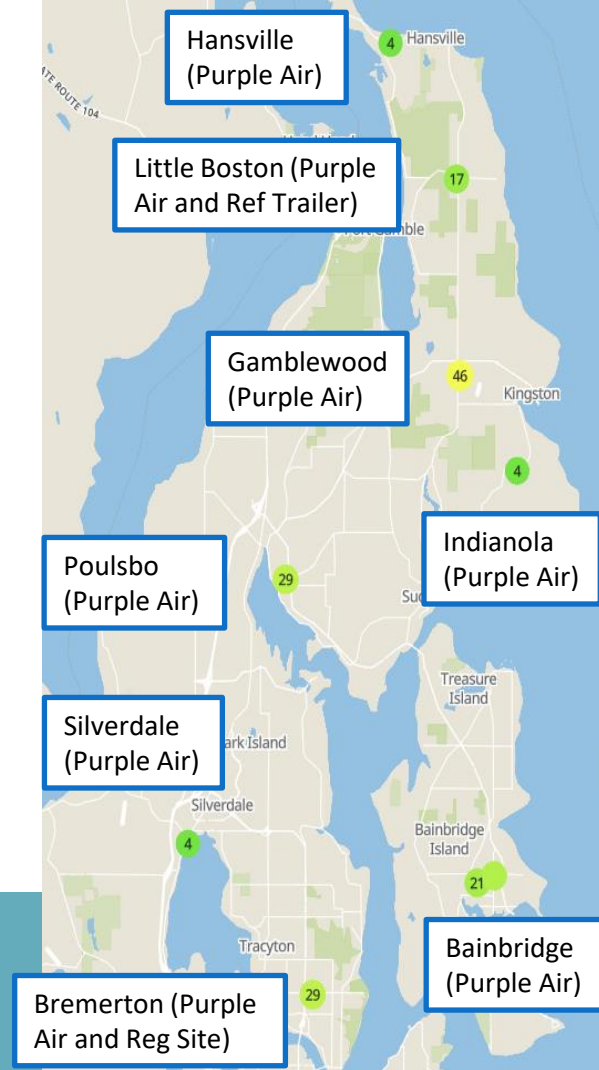
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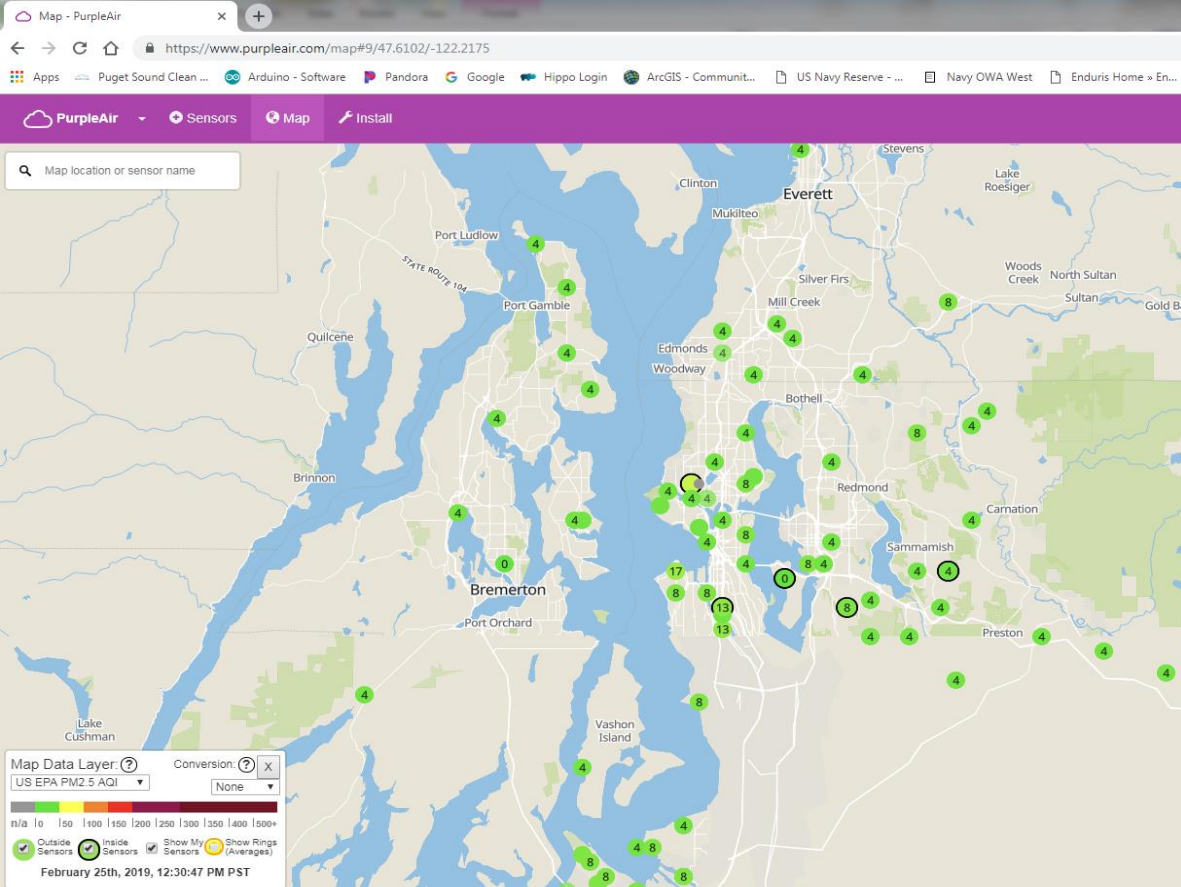
2014-2020 Strategic Plan Objective 1.5

- Monitor in more places beyond our long-term trend network
- “Characterize fine particle levels in at least 2 communities per county” by 2020
- This year’s study covers 8 communities in Kitsap County

ABOUT

- Concern about communities with high levels of wood smoke
- Pilot Purple Air Sensors at several locations
 - Data is available on web in real time
 - Provide useful hyper-local data
- Spread designed to cover large geography
- Partnered with North Kitsap Fire & Rescue and Kitsap Regional Library
 - Outreach to KRL customers is underway





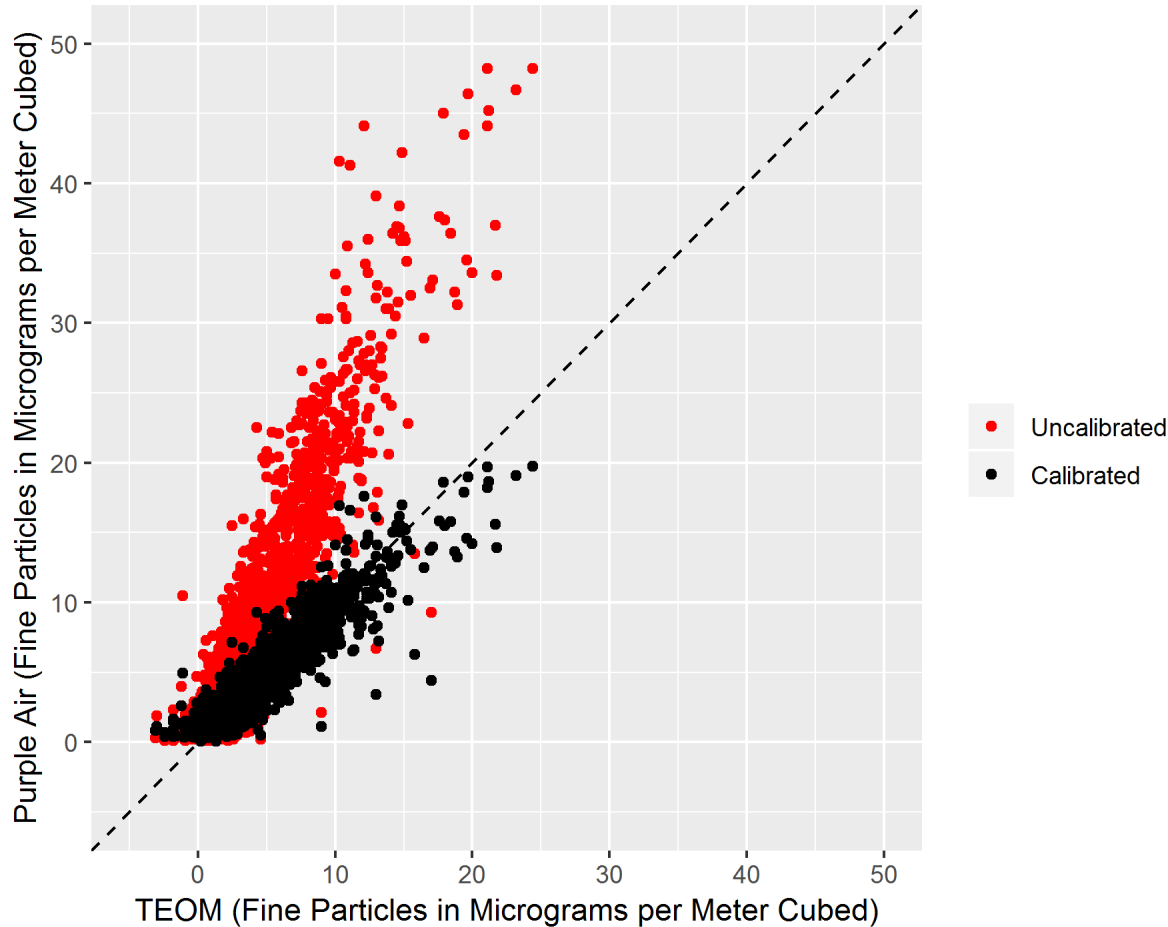
Purple Air Sensor

- Low-cost, \$250
- Power, Wi-Fi
- Require calibration



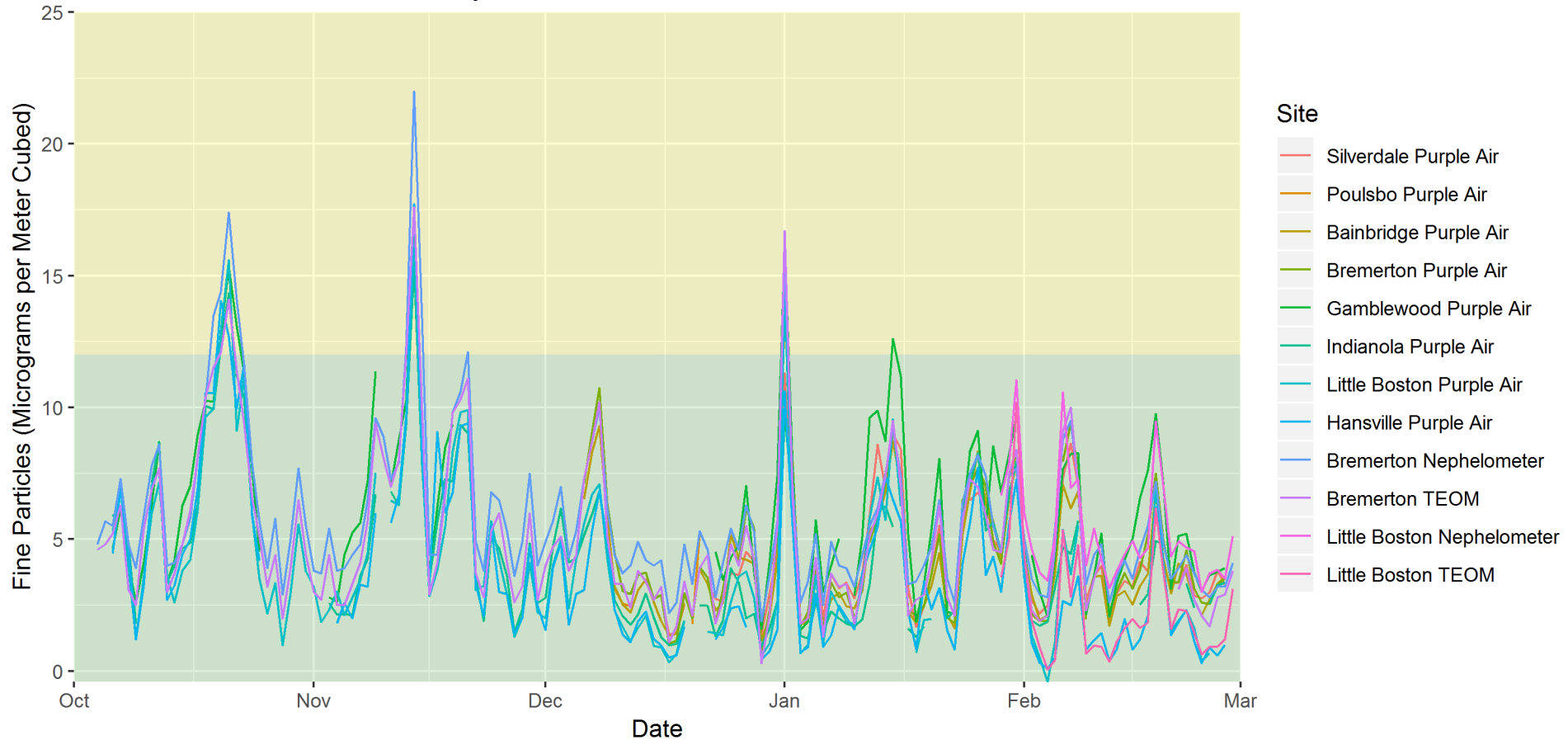
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Calibration of Purple Air to Bremerton TEOM

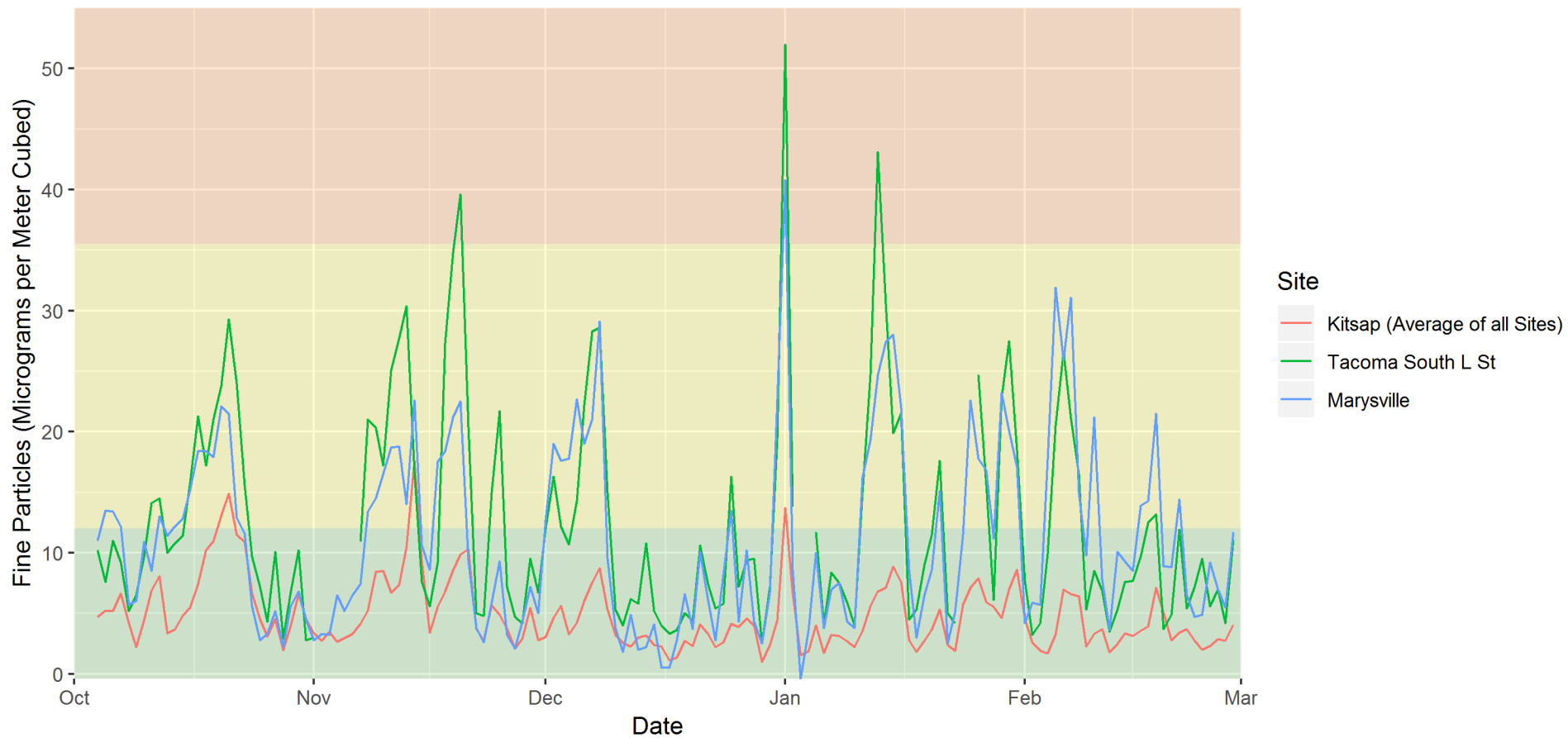


- Before calibration, Purple Air reads 2.5x higher than reference
- Calibration bring the Purple Air readings much closer to reference

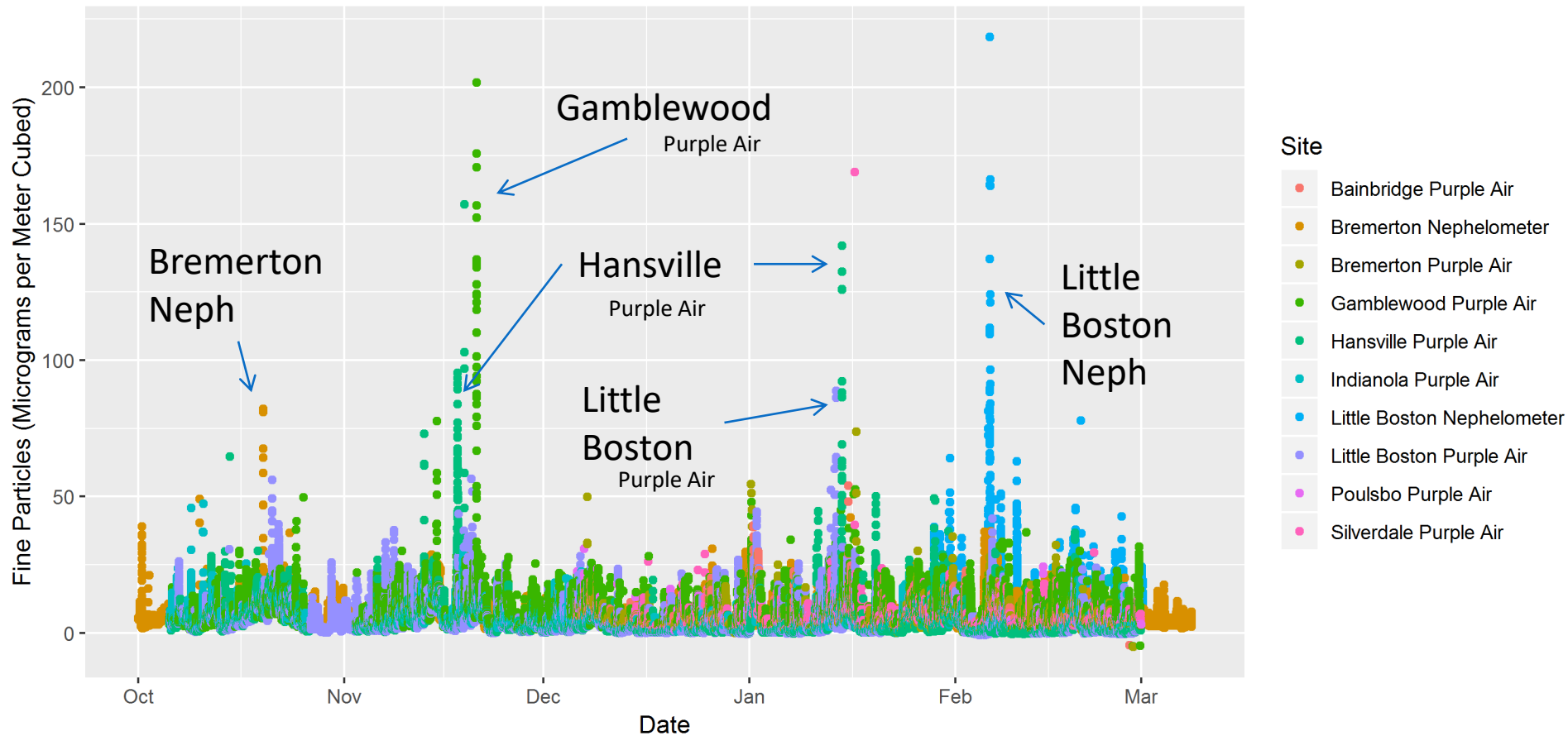
Daily Fine Particle Levels Over Time



Daily Fine Particle Levels Over Time



Minute Fine Particle Levels Over Time

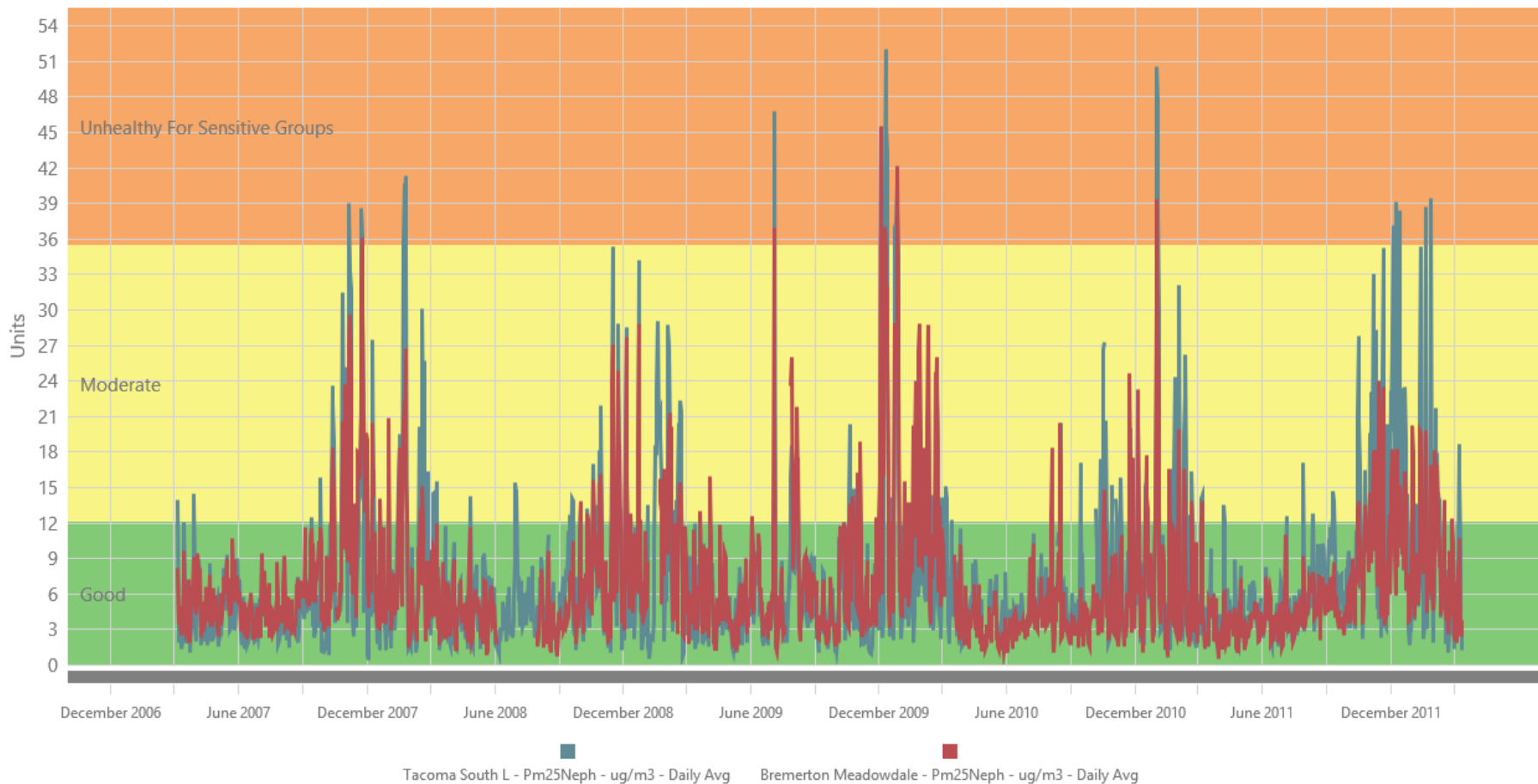


Preliminary Observations

- This winter, Kitsap County met our air quality health goal
- Short term spikes in fine particles occurred at some sites
- People living next to wood burning households may experience poorer air quality (micro scale impacts)

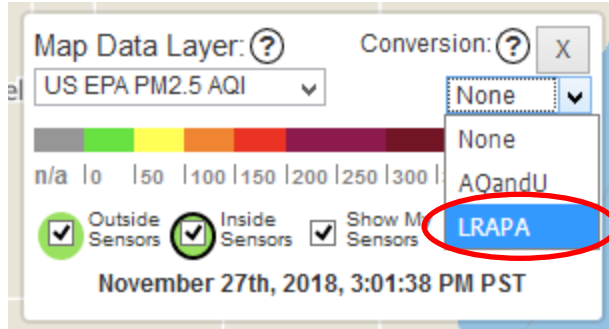
EXTRA SLIDES

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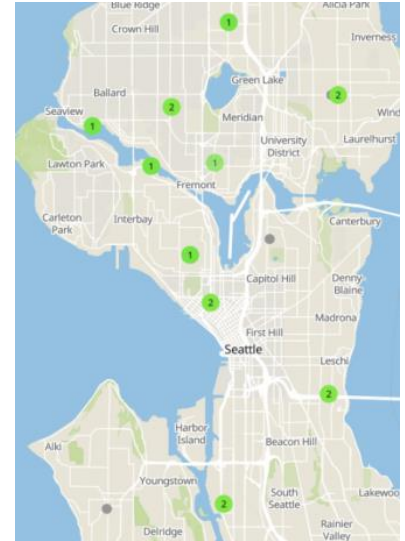


HOW TO USE THE PURPLE AIR WEBSITE

- <https://www.purpleair.com/map#11.1/>
- Click on “Conversion” from the drop down menu:

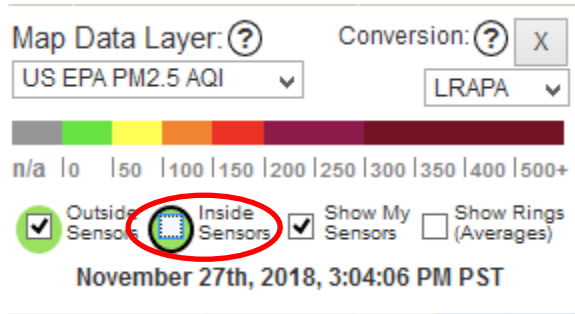


- Select “LRAPA” to get the correct relationship for our region
- Otherwise, the values are twice as high as the reality
- <http://www.pscleanair.org/539/Air-Quality-Sensors>



HOW TO USE THE PURPLE AIR WEBSITE

- Uncheck the “Inside Sensors” box to see only outdoor air monitors:



HOW TO USE THE **PURPLE AIR** WEBSITE

- Click on the site you want to look at
- Since the AQI is only good for a full day of measurements, you should look at the “1 Day” average (the second from the right)

