



LRAPA
Lane Regional Air Protection Agency

AGENDA

LRAPA CITIZENS ADVISORY COMMITTEE (CAC)

July 26, 2022

Start promptly at 12:00 noon, adjourn at 1:00 p.m. or earlier.

The CAC meeting will be hosted via ZOOM and in person at LRAPA's office. 1010 Main St. Springfield, OR 97477

Via ZOOM - meeting information:

Join Zoom Meeting

<https://us02web.zoom.us/j/88502781432>

For Audio Only:

Meeting ID: 885 0278 1432

+12532158782, 88502781432# US (Tacoma)

+13462487799, 88502781432# US (Houston)

- I. Call to Order/Agenda Review – (5 minutes – 12:00)
- II. Public Participation (5 minutes – 12:05)
- III. Board Meeting Overview (5 minutes – 12:10)
- IV. Purple Air data in West Eugene (30 minutes - 12:15)
- V. Round table (15 mins - 12:45)
- VI. Adjournment 1:00 p.m.

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**LRAPA CITIZENS ADVISORY COMMITTEE
(CAC) Meeting Minutes
VIA ZOOM/In Person**



July 26, 2022

Attending: Jim Daniels, Chair; Kelly Wood, Vice Chair; Paul Metzler, Chris Cline (via Zoom), Mysti Frost (via Zoom), Evelina Davidova-Kamis (via Zoom).

Absent: Shane Ruddell, Eric Burdette, Jeffrey Carman, Peter Dragovich, Terry Richardson.

Staff: Steve Dietrich, Travis Knudsen, Lance Giles, Debby Wineinger.

Call to Order: 12:00 p.m.

I. Call to Order/Agenda Review

Chair Jim Daniels called the meeting to order at 12:01 p.m.

II. Public Participation-None

III. Board Meeting Overview

Chair Jim Daniels gave an overview on the meeting.

- There were some clarifications regarding the audit report. A couple of minor things that were found to be technical issues.
- Good Company gave a progress report on the Oakridge Air program.
- There were questions on the survey that had been assigned to them. They pointed out the value of trends data. They wanted to keep the questions the same. And want us to focus on just a permittee survey for now. They also wanted to know what the existing questions were. Travis Knudsen said they may want to expand the survey to public comments in the future, but for now just the permittees.

Presentation PurpleAir Monitoring West Eugene – Travis Knudsen

Presentation at the bottom of this doc.

Q&A:

- **Paul Metzler** – Why are they called PurpleAir Sensors? **Travis Knudsen** said that is just the name brand.
- **Kelly Wood** - asked about the eight monitors LRAPA has around Lane County and only monitoring ozone seasonally. **Lance Giles** said it varies from station to station. The main criteria pollutant is PM2.5. Ozone is a seasonal issue we do not monitor for it in the winter when it's not present. It would be summer months with sunshine and heat.

- **Paul Metzler** – asked if it is a cost savings to not run the ozone monitors off seasons, and if it has an effect. **Lance Giles** said yes, and you have to also consider the labor involved for someone to check things at the site.
- **Kelly Wood** – asked if you have to access the units to upload the data. **Travis Knudsen** said they just need to be plugged in and have access to Wi-Fi. About every 10 minutes it sends information to the internet.
- **Kelly Wood** – asked about private residences is their data available to the general public. **Travis Knudsen** said there are options (settings) to not allow the data to be publicly available. But if you go the PurpleAir website there are ways you can see the raw data. **Kelly Wood** asked if it included LRAPA's corrections. **Travis Knudsen** said no, if you are on the PurpleAir website, you can look at just the raw data with no correction and apply a LRAPA's correction. When air quality starts to get really bad our correction factor is not as precise or as good of a correction factor, EPA's is better. When air quality is good where it should be our correction factor actually tends to be a little bit more accurate.
- **Paul Metzler** – said is pretty common with other agencies like DEQ or EPA they have PurpleAir data that is freely available as well. **Travis Knudsen** said any data that is recorded like whether it is LRAPA's data from our monitoring equipment, or DEQ from the extensive monitoring equipment that is made available when it's published, which is on an annual basis.
- **Jim Daniels** – asked about particulate matter, and if there is a way to tell if it is wildfire smoke or industry. **Lance Giles** said they do some speciation; they will set up samplers where they pull particulate matter under a filter and then analyze it afterwards. And they can see if it is elemental, organic carbon, or if it was from wildfires or vehicles.
- **Paul Metzler** – asked if AQI has ever gone into the very unhealthy range when it was not associated with wildfire. **Lance Giles** said in the early days of the 70s with the field burning there were, back before we had real-time monitors.
- **Chris Cline** – asked if this information is available on LRAPA's website. or if you can email it to the committee. **Travis Knudsen** said It is not yet available on the website, but his intent is to put it there. And public members were invited to the meeting today who were not able to come but were interested in seeing the recording. So, recording of this will be made available.
- **Kelly Wood** – asked if there is an expected life duration on the PurpleAir units. **Lance Giles** said yes that's part of the reason they're so inexpensive. We put our first monitors out maybe in 2017, and a lot of those we have had to replace or repair. It averages a couple of years before you start to see some issues.

- **Paul Metzler** – asked if there is any data showing how accurate a proxy measure just pure particulates are? **Lance Giles** said there's lots of data, especially in our area. They tend to work best when the particulate matter is pretty much one thing like wildfire smoke. They don't work as well in other areas where there's a big industrial mix of the aerosols and particulates. So, we've been lucky here in the Northwest. Washington, Oregon, Idaho use these kinds of instruments for years, and have been able to correlate them.

Round Table

Misty Frost – asked since have we lost Joe Berney as a Board member if they will be transferring him off the Board and replaced with somebody else. **Travis** said the county commissioners will seat who needs to be replaced. It has to be an elected official.

IV. **Adjournment** 1:02 p.m.

Next Meeting September 27, 2022



LRAPA

Lane Regional Air Protection Agency

Purple Air Sensors in West Eugene

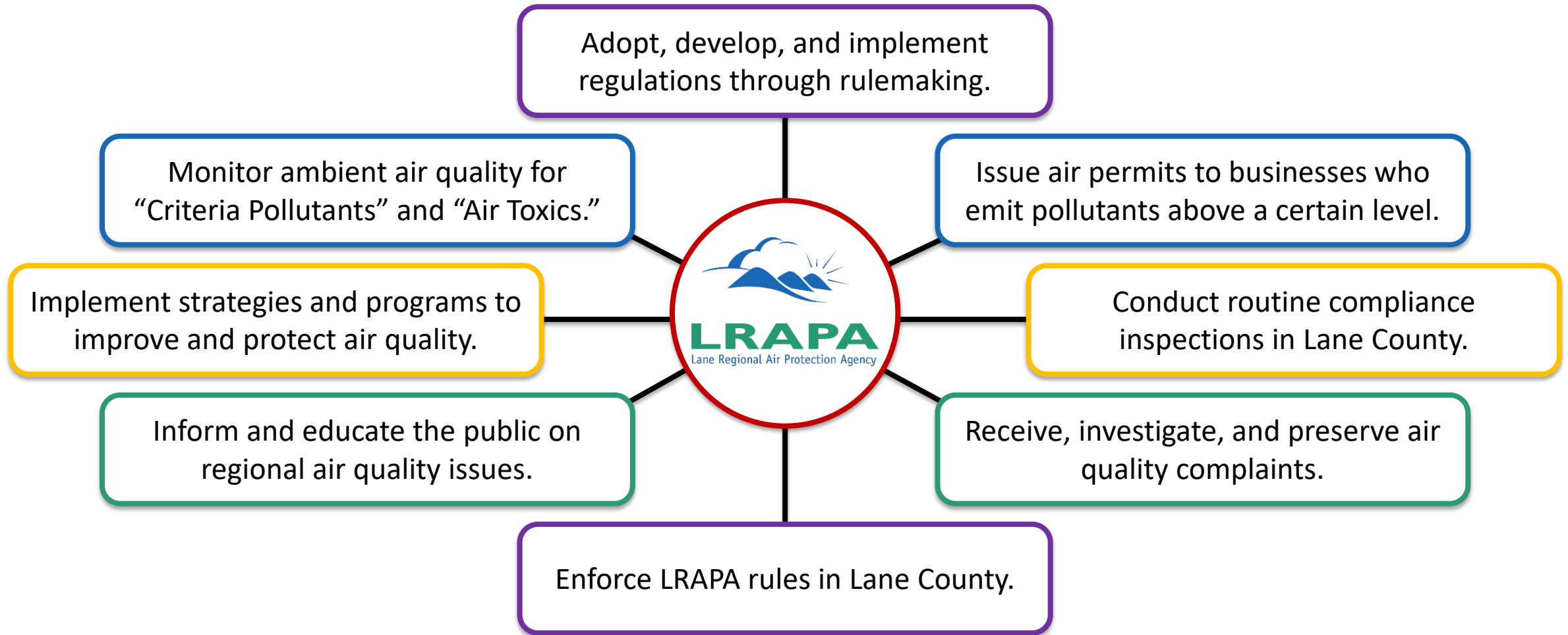
Citizen Advisory Committee

Tuesday, July 28, 2022



LRAPA
Lane Regional Air Protection Agency

LRAPA's work in Lane County



LRAPA Monitoring – Gravimetric Sampler



Cost ~ \$20,000
(LRAPA Discontinued in 2022)



LRAPA Monitoring – Beta-Attenuation Sampler

Cost ~ **\$20,000**



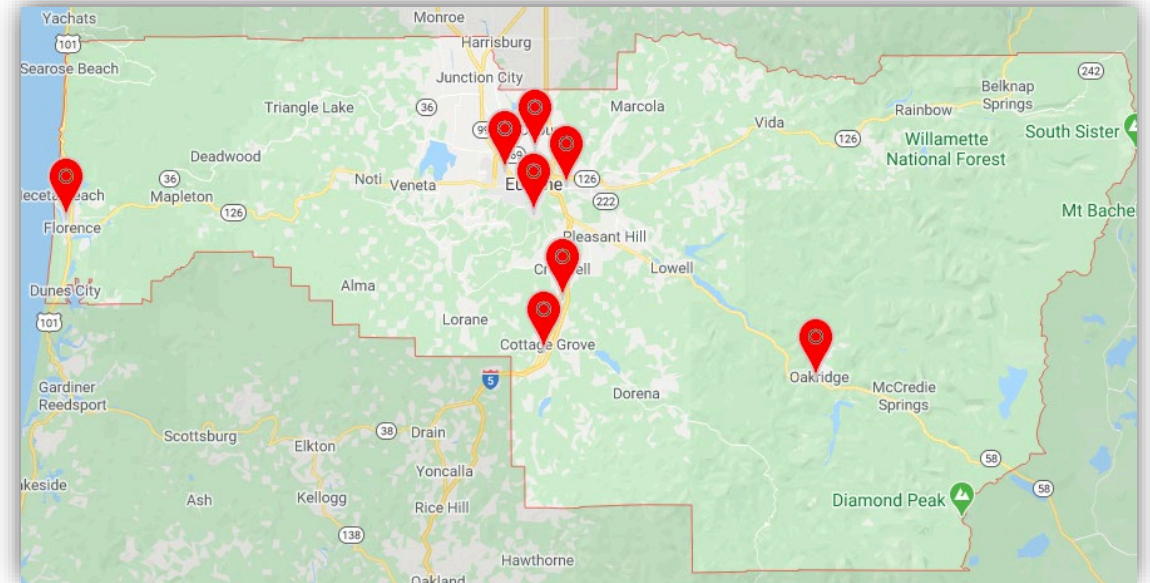
LRAPA Monitoring – Nephelometer

Cost ~ **\$17,000**

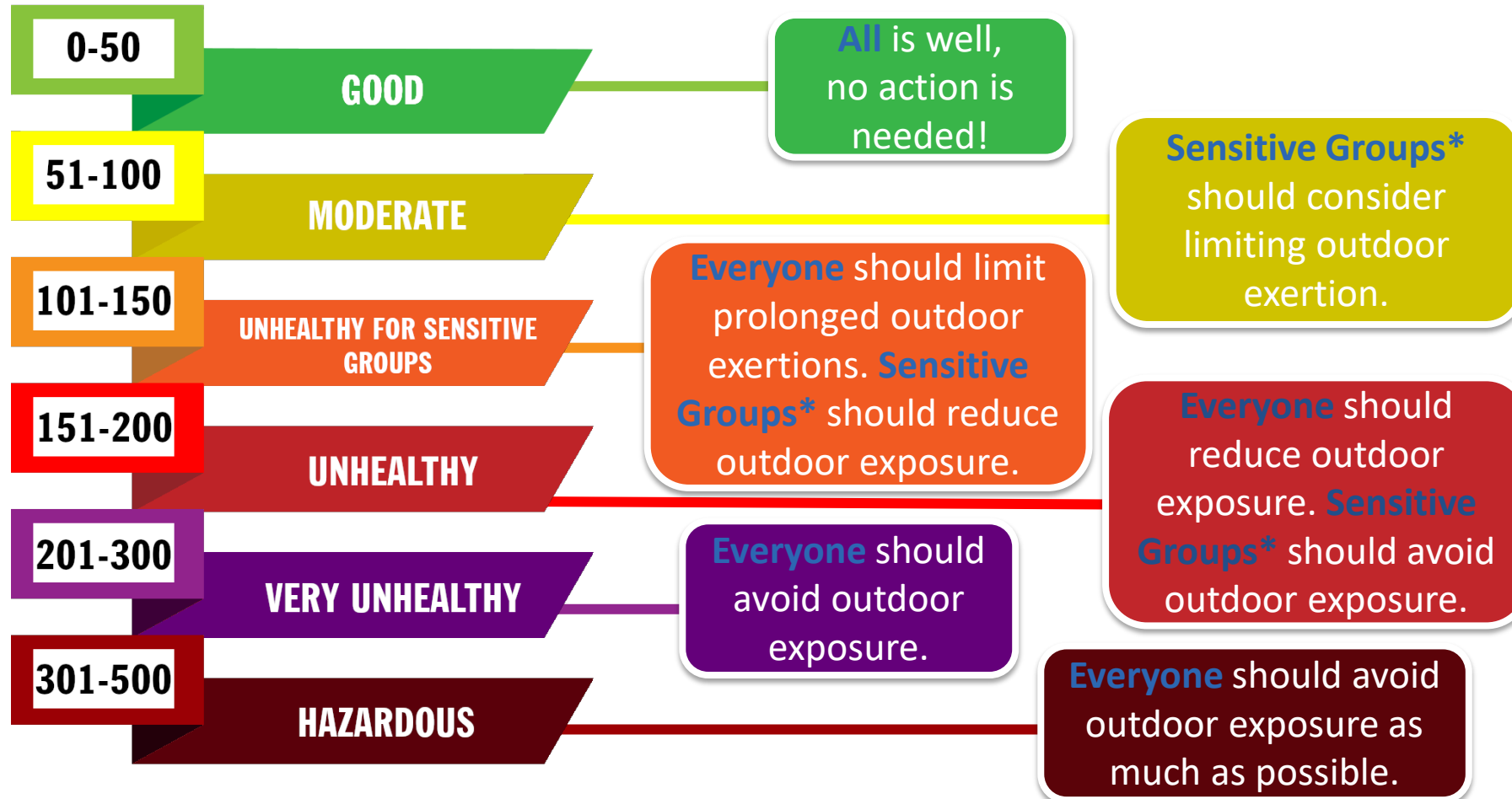


Monitoring in Lane County

- LRAPA has 8 Ambient Air Quality Monitoring stations
 - Each site utilizes accurate but costly monitors to demonstrate Lane County is meeting Federal National Ambient Air Quality Standards (NAAQS) required by the Clean Air Act.
 - Cottage Grove (FEM PM)
 - Eugene, Amazon Park (FEM Ozone and PM)
 - Eugene, Highway 99 (FEM PM)
 - Eugene, Madison Middle School (Neph PM)
 - Florence (Neph PM)
 - Oakridge (FEM PM)
 - Saginaw (FEM Ozone)
 - Springfield, City Hall (Neph PM)



Air Quality Index (AQI) Guidelines

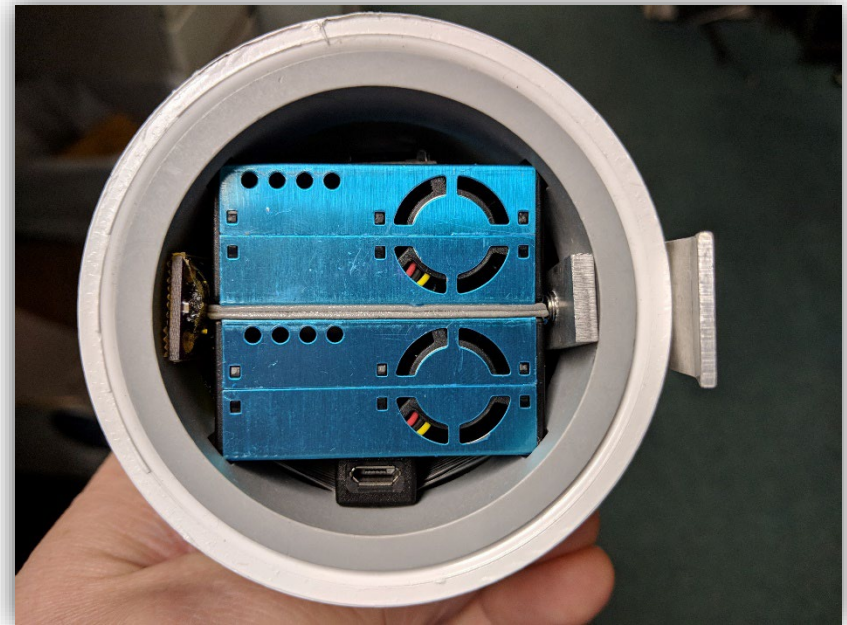


***Sensitive Groups** include people with heart or lung disease, older adults, pregnant women, children and teenagers.



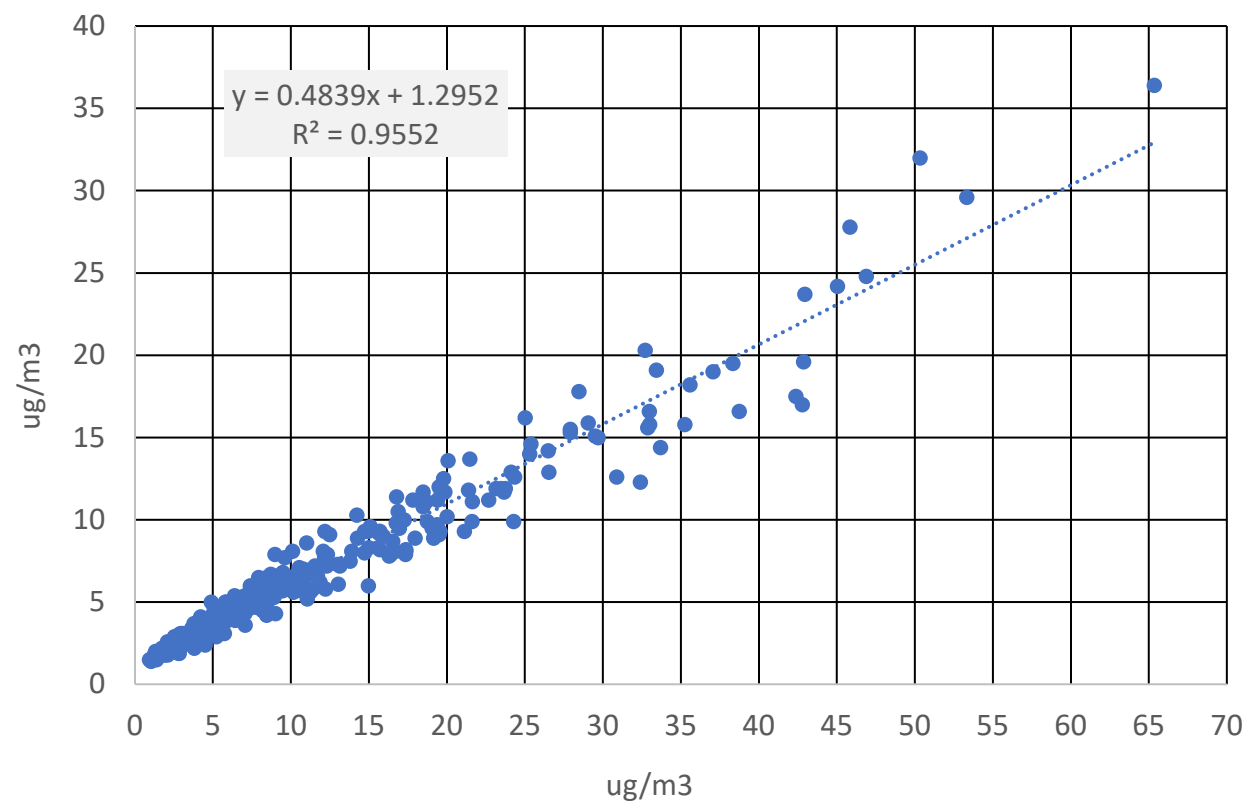
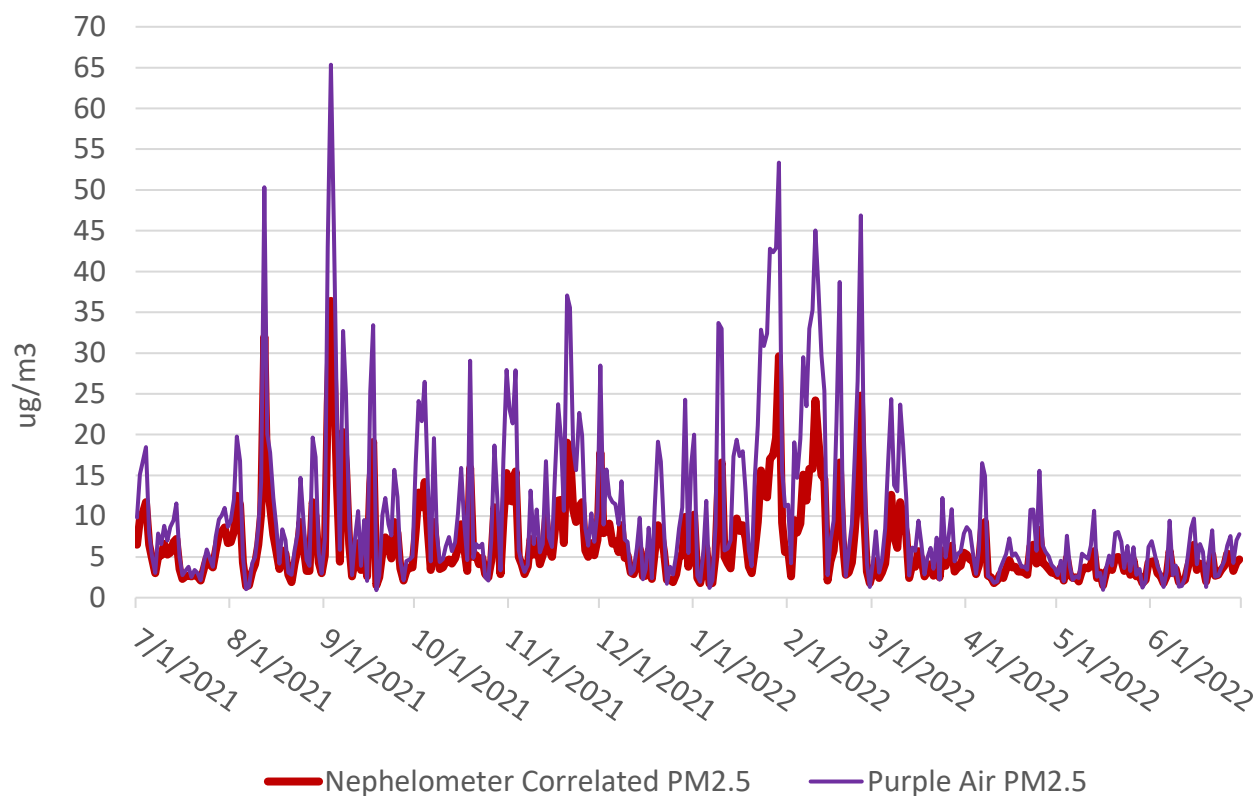
LRAPA Monitoring – Purple Air Sensor

Cost ~ **\$250**



Purple Air Precision

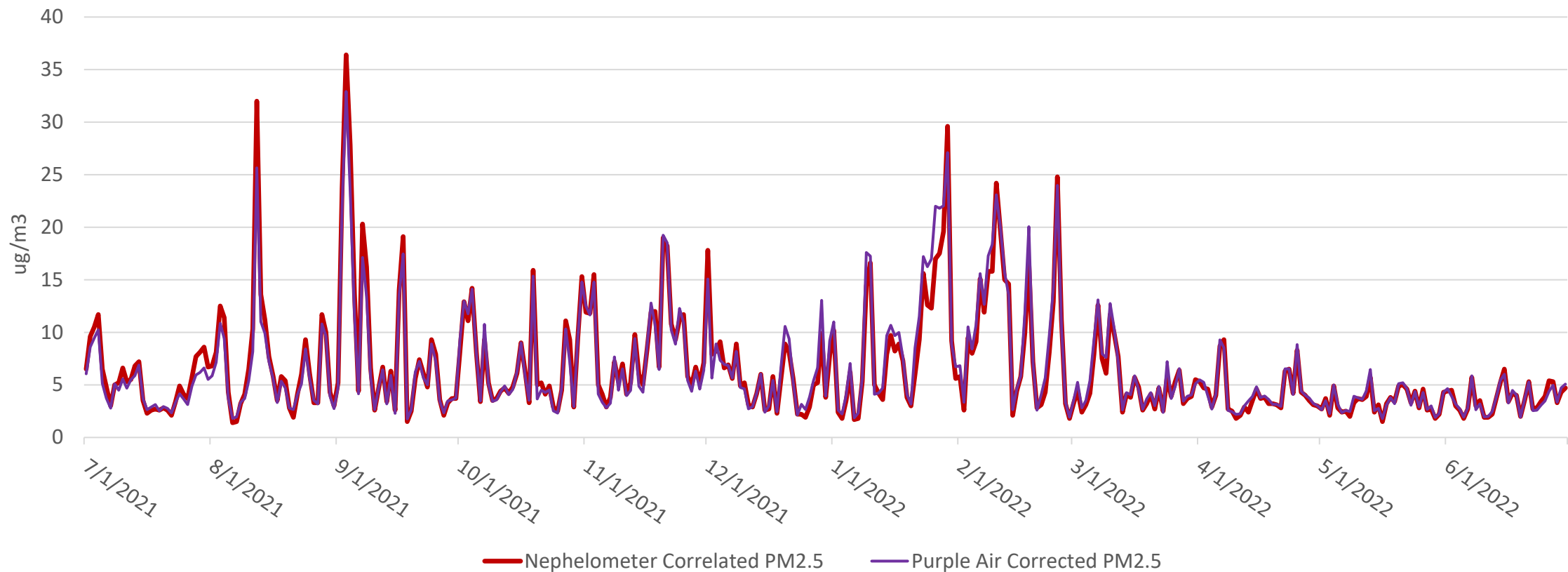
Nephelometer vs Purple Air Sensor Highway 99 / Elmira Rd., Eugene, Ore.



Purple Air Accuracy

Nephelometer vs Corrected Purple Air

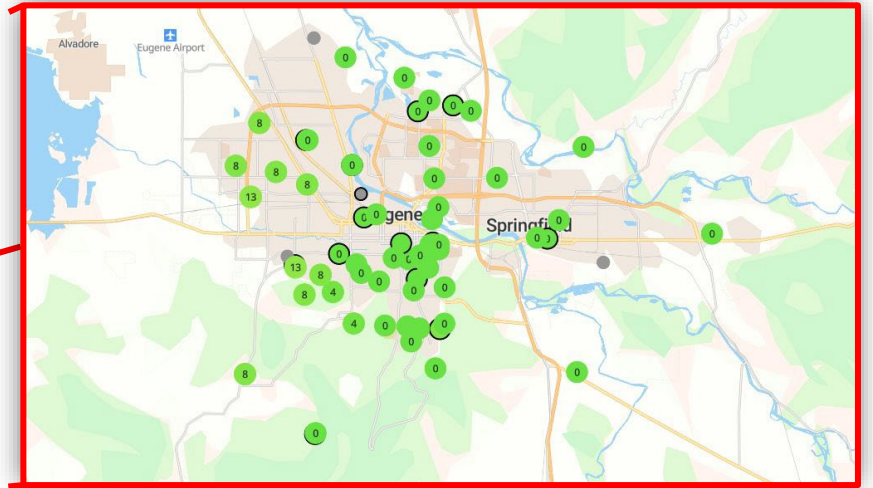
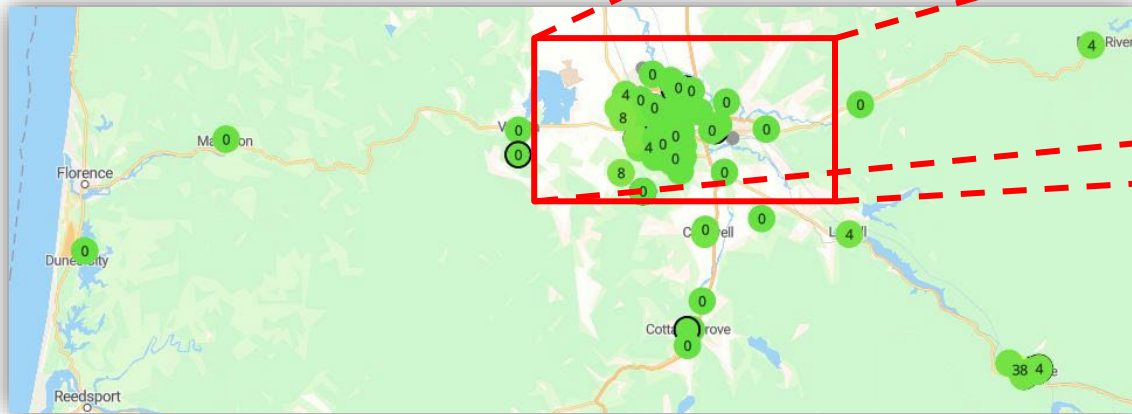
Highway 99 / Elmira Rd., Eugene, Or



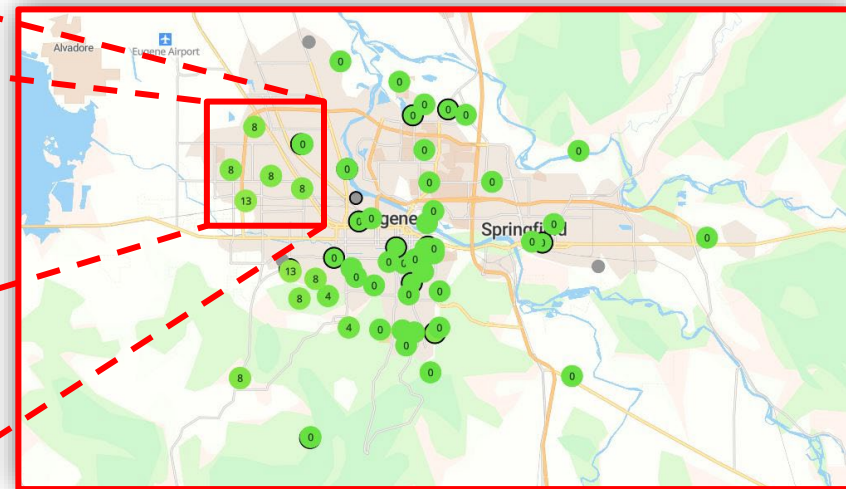
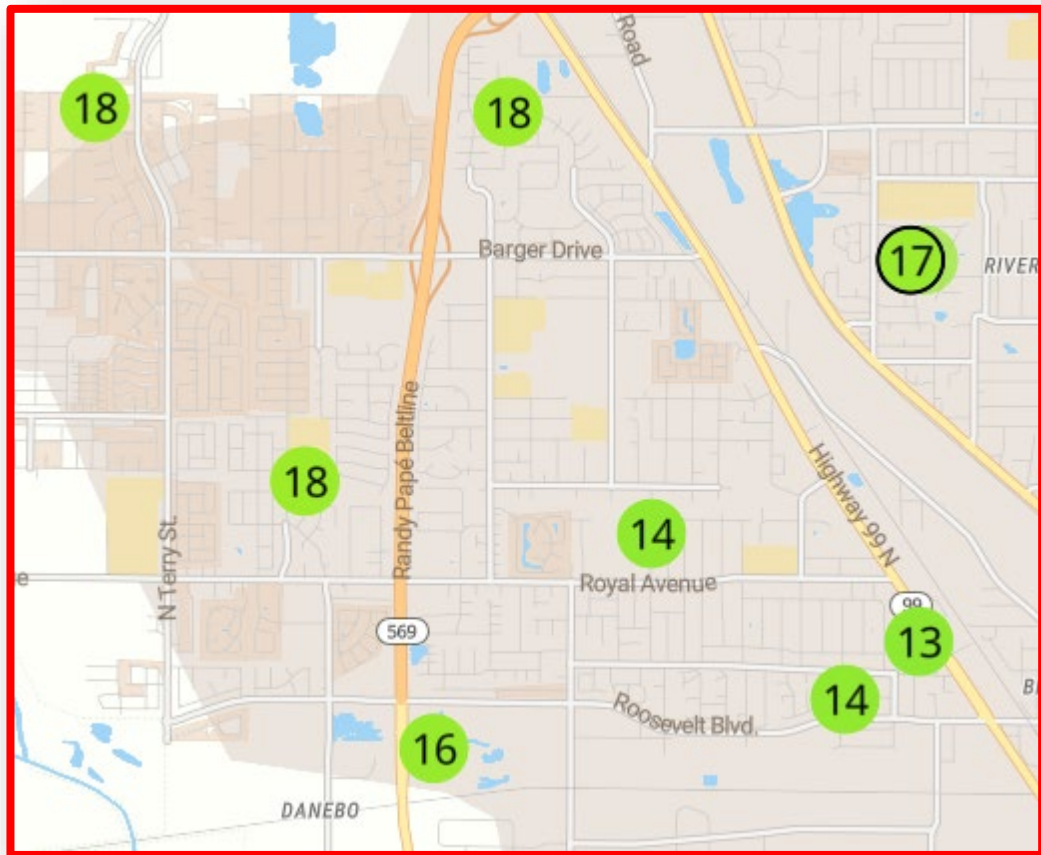
Commercial Grade Monitoring

LRAPA has installed +90 Purple Air Monitors

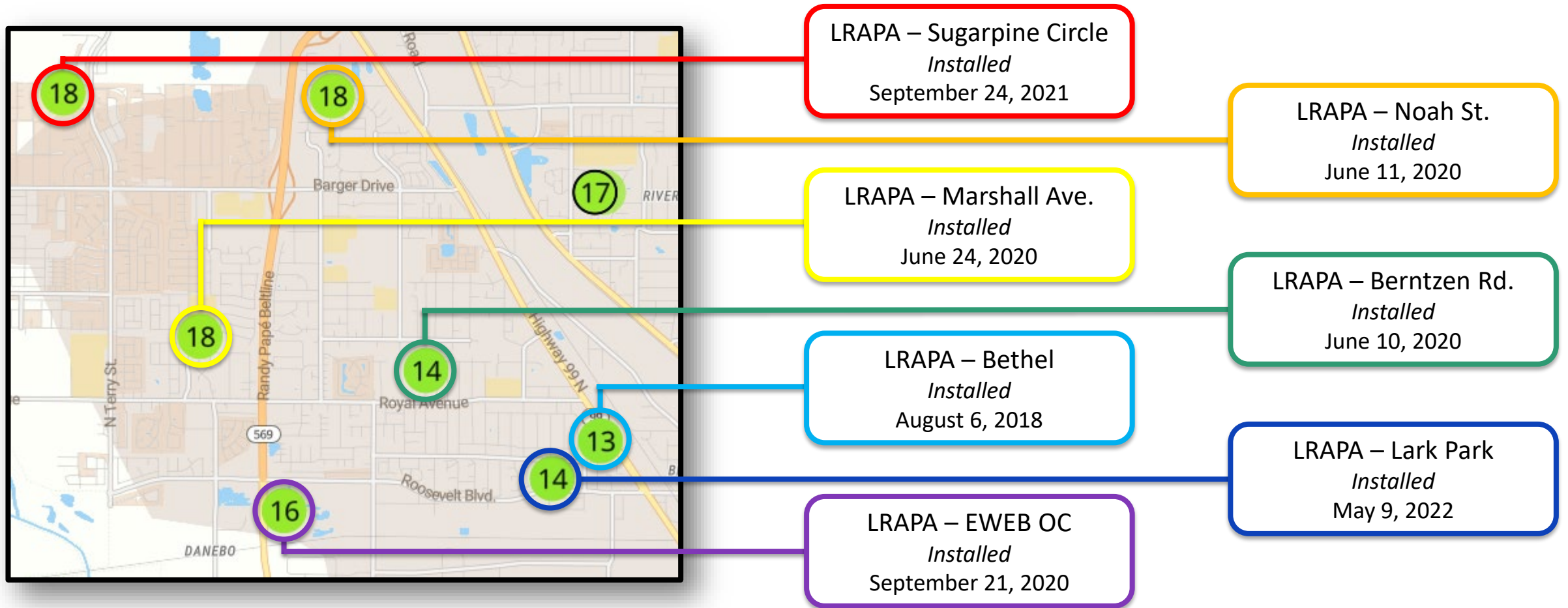
- Commercial Grade Monitors ~\$250 each
- Monitor for Particulate Matter (PM_{2.5} & PM₁₀)
 - Lane County's most common form of pollution



Commercial Grade Monitoring in Bethel



Commercial Grade Monitoring in Bethel



Bethel sensors

LRAPA – Sugarpine Circle

LRAPA – Noah St.

LRAPA – Marshall Ave.

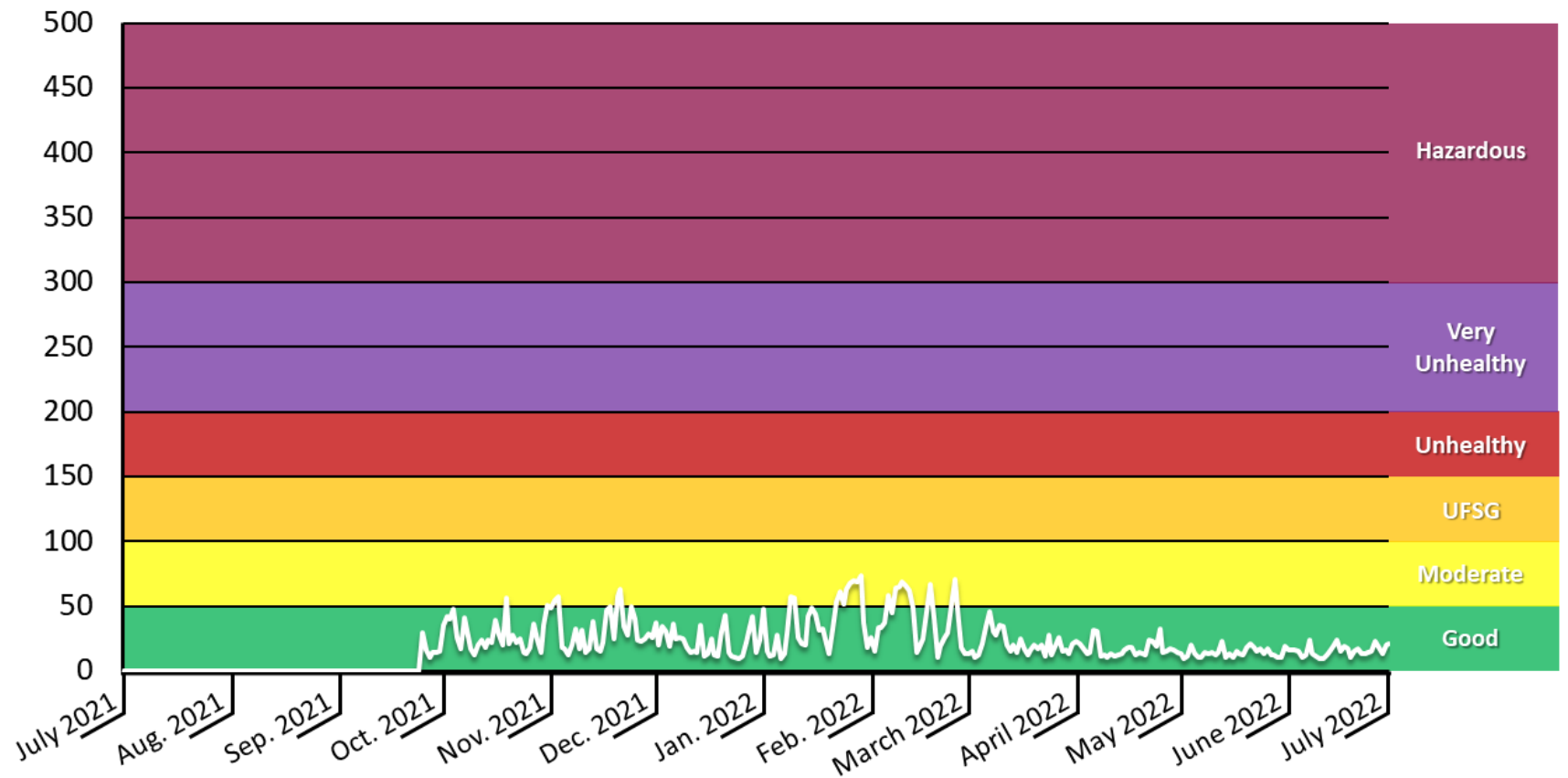
LRAPA – Berntzen Rd.

LRAPA – Bethel

LRAPA – Lark Park

LRAPA – EWEB OC

24-Hour Average, Air Quality Index (AQI)



Bethel sensors

LRAPA – Sugarpine Circle

LRAPA – Noah St.

LRAPA – Marshall Ave.

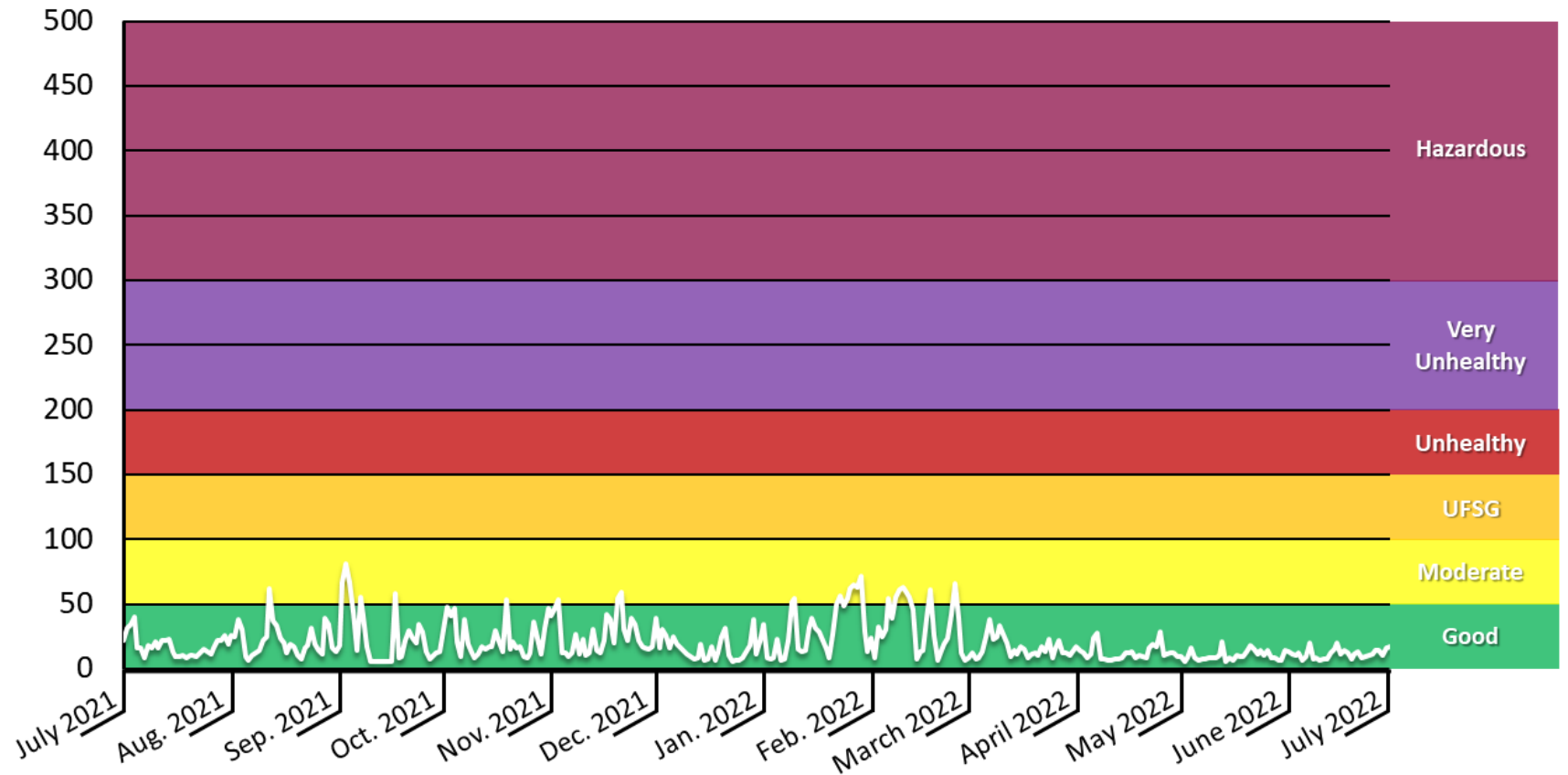
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24-Hour Average, Air Quality Index (AQI)



Bethel sensors

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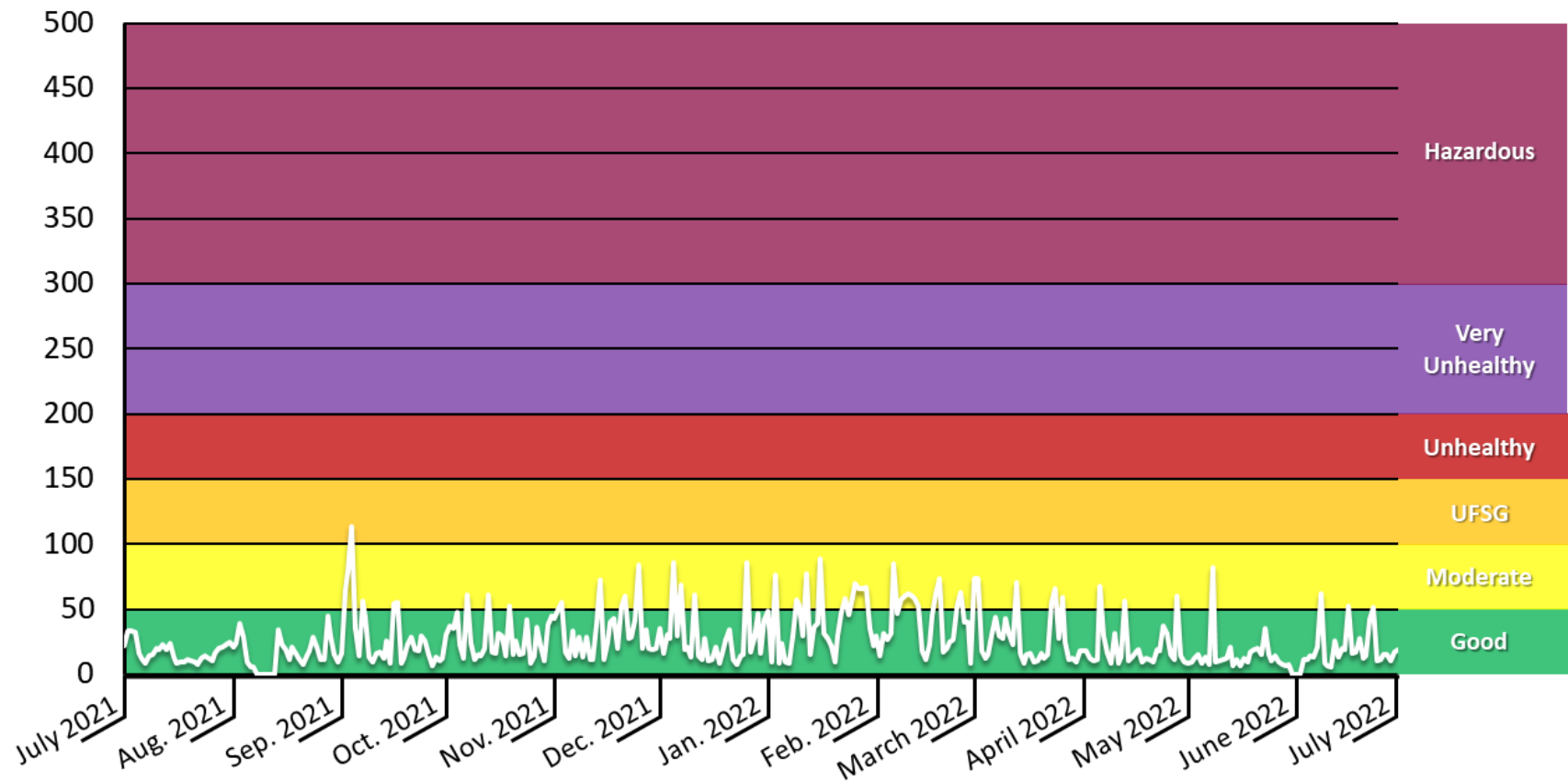
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Bethel sensors

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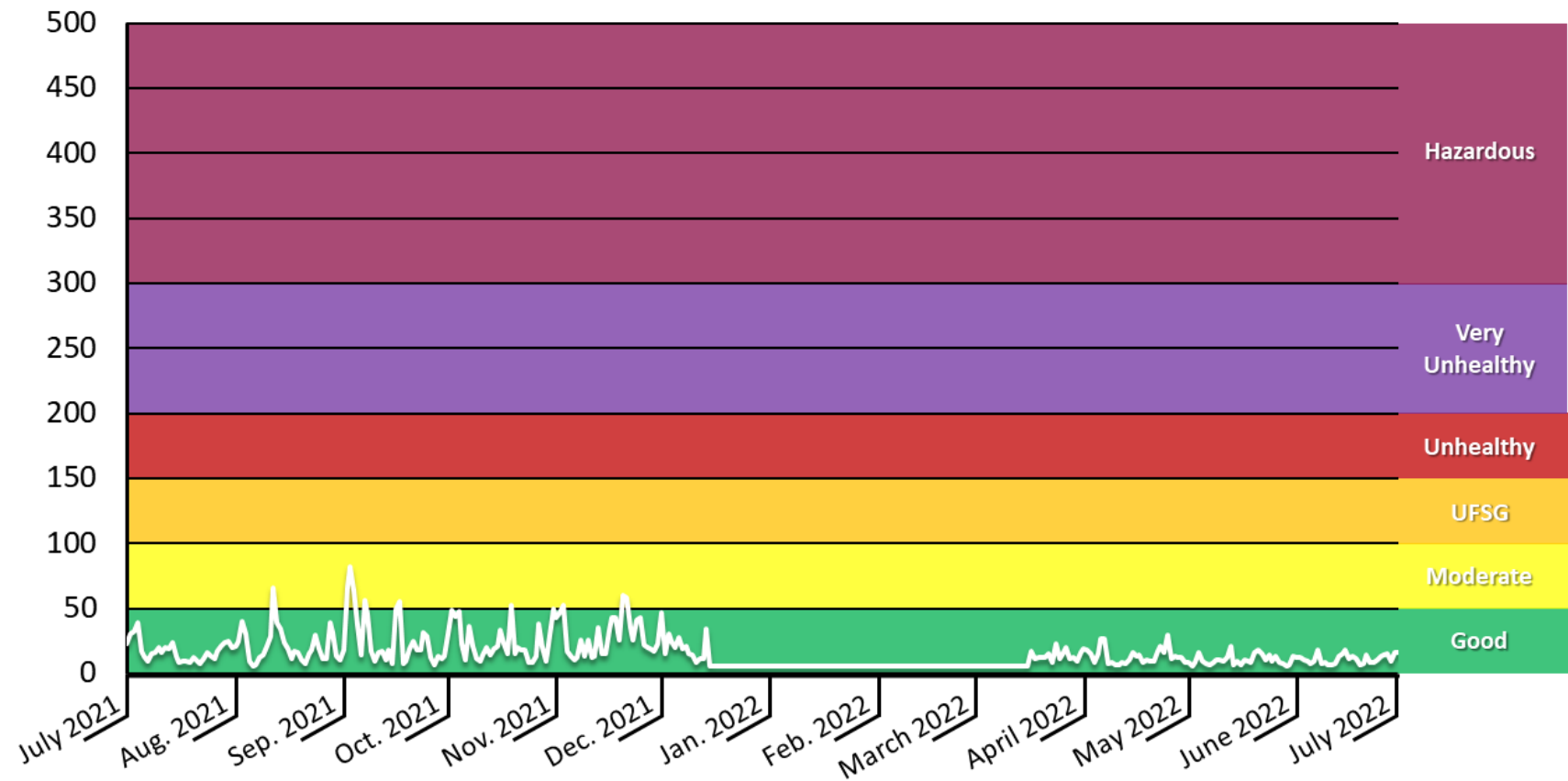
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Bethel sensors

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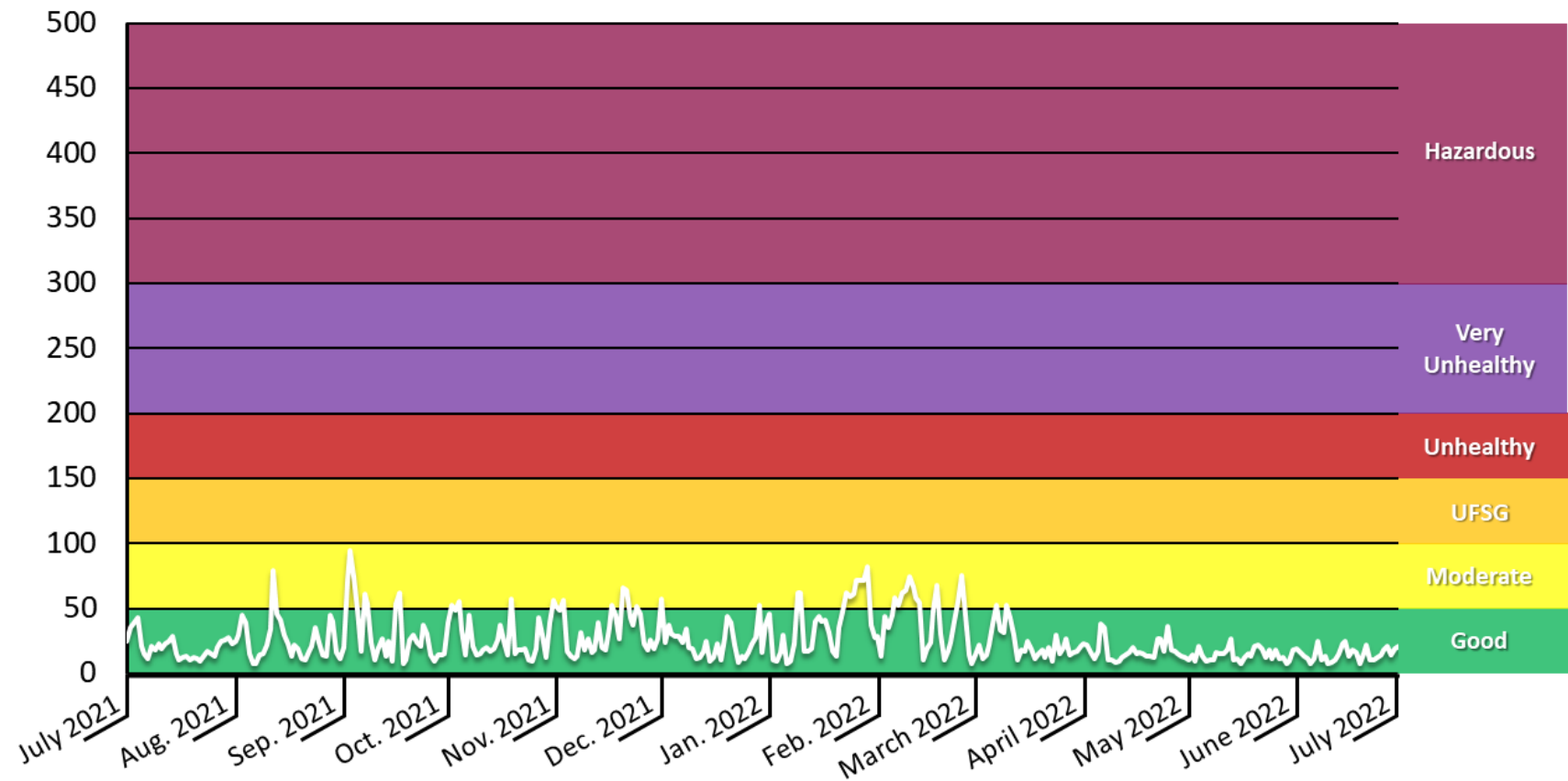
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24-Hour Average, Air Quality Index (AQI)



Bethel sensors

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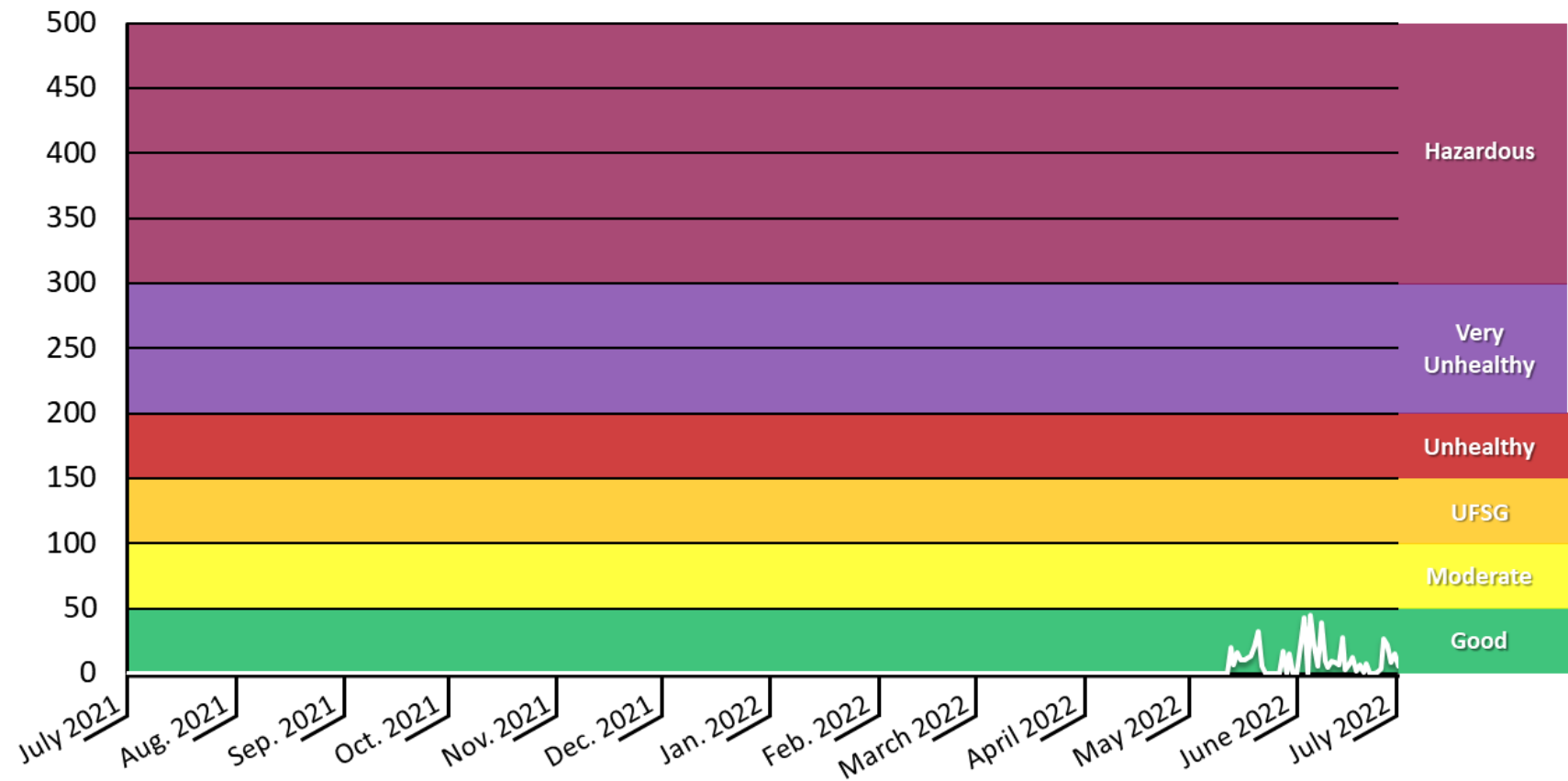
LRAPA – Berntzen Rd.

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24-Hour Average, Air Quality Index (AQI)



Bethel sensors

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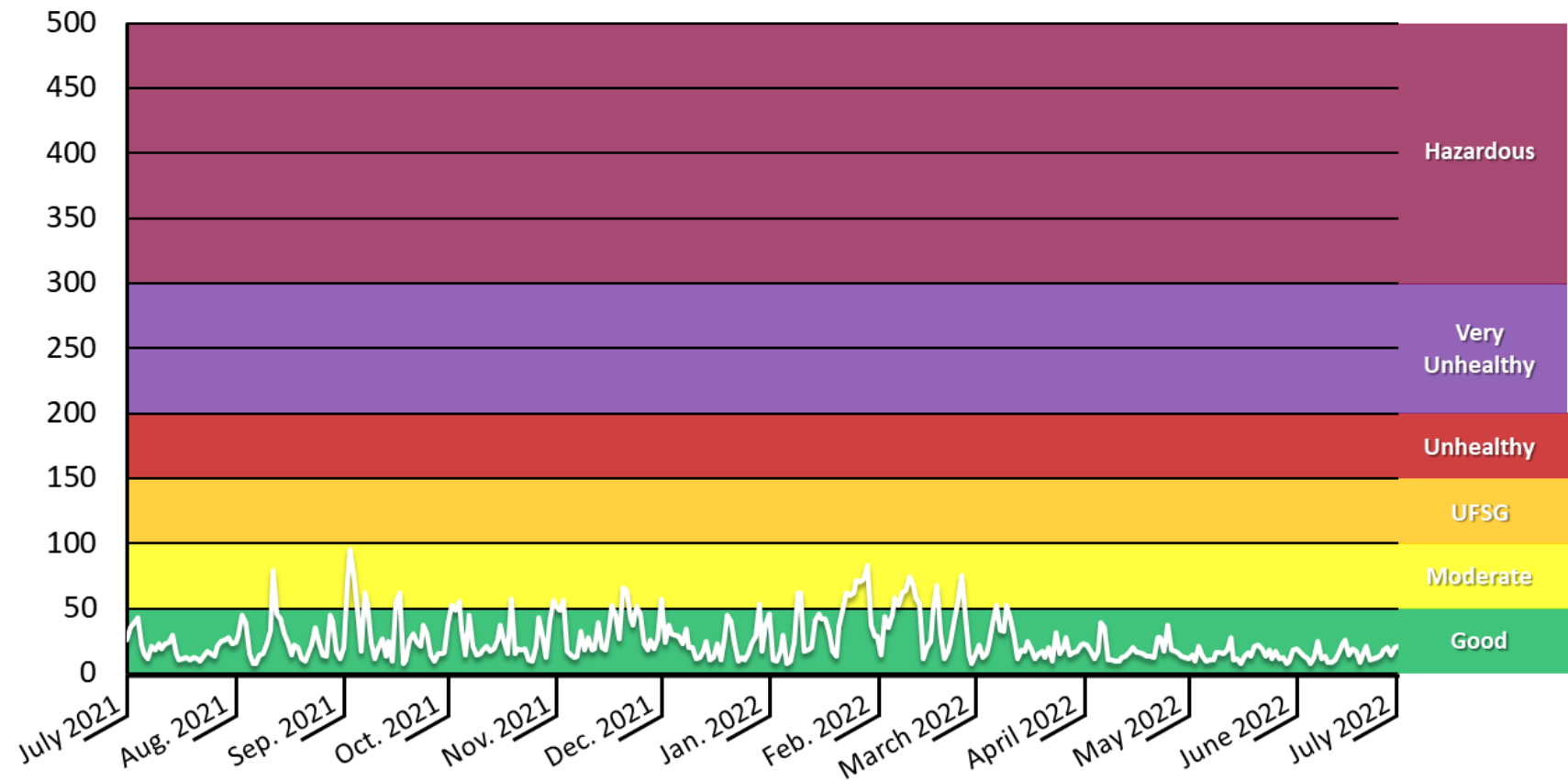
LRAPA – Berntzen Rd.

LRAPA – Bethel

LRAPA – Lark Park

LRAPA – EWEB OC

24-Hour Average, Air Quality Index (AQI)



All Bethel sensors averaged

LRAPA – Sugarpine Circle

LRAPA – Noah St.

LRAPA – Marshall Ave.

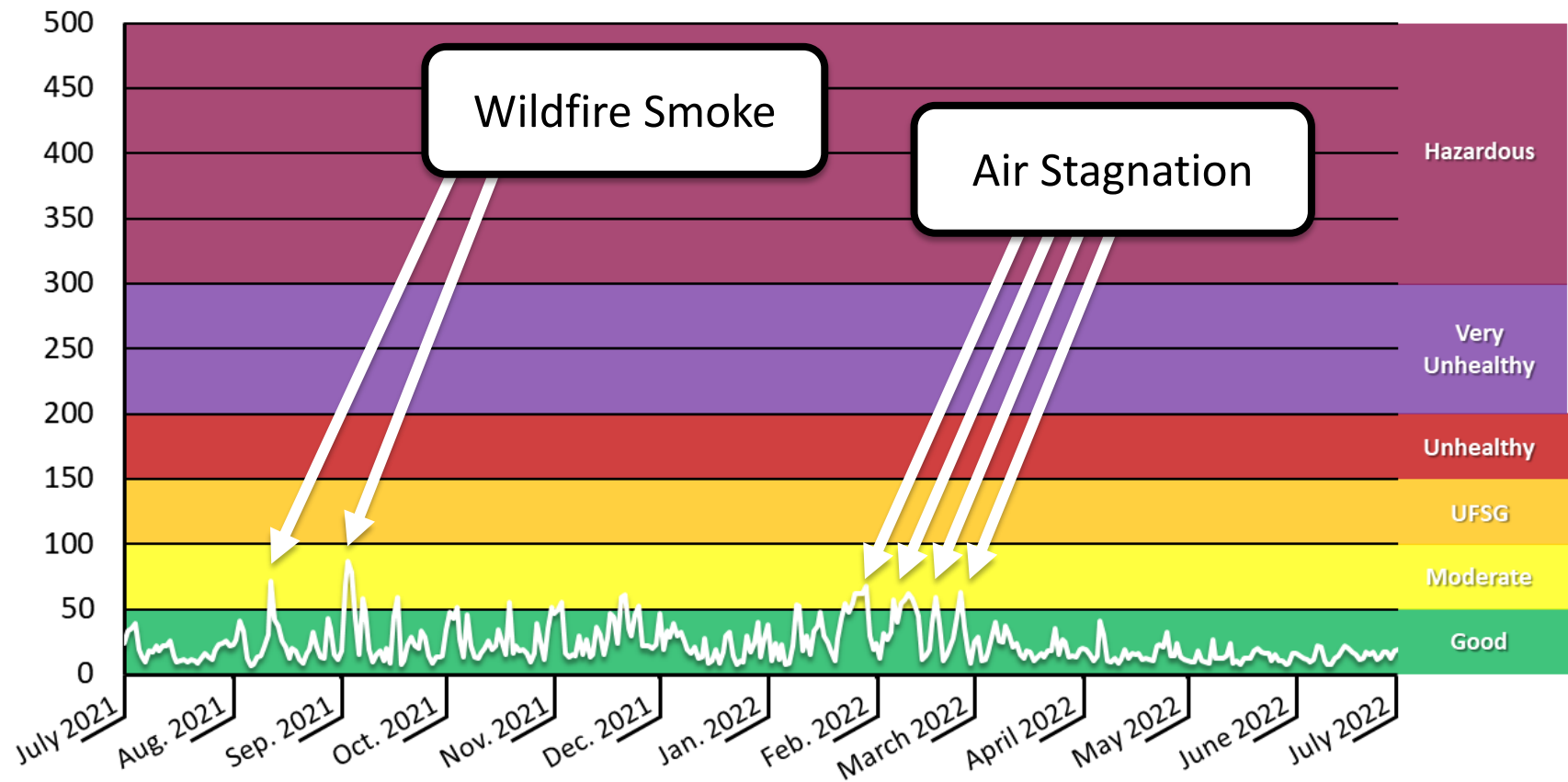
LRAPA – Berntzen Rd.

LRAPA – Bethel

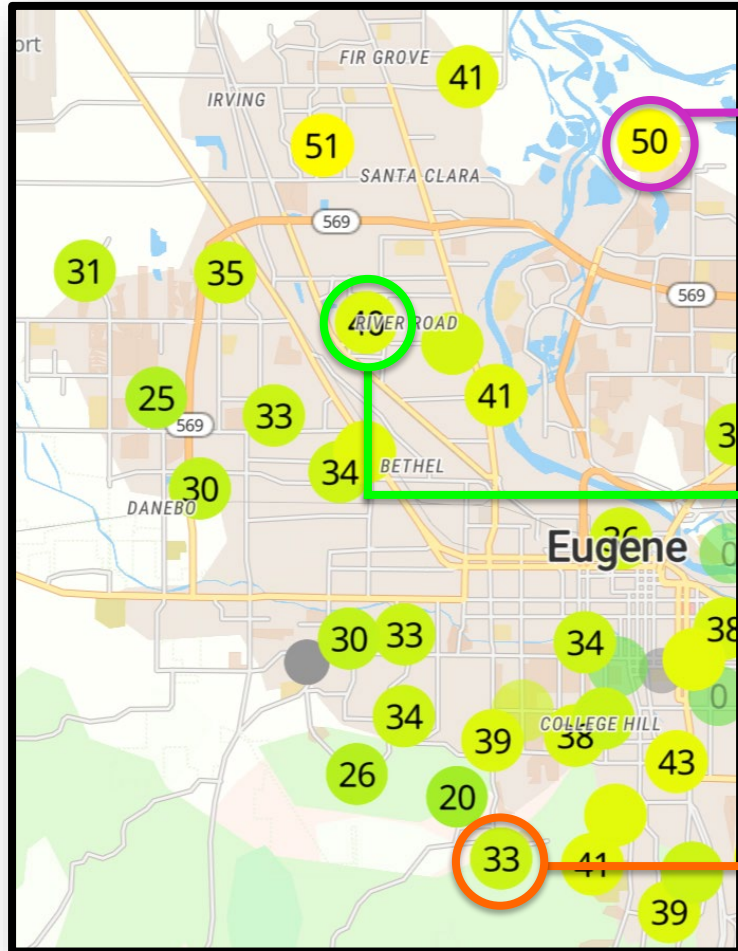
LRAPA – Lark Park

LRAPA – EWEB OC

24-Hour Average, Air Quality Index (AQI)



Comparing other areas to Bethel



The Nines

LRAPA – Emerald Park

Crest 870



All Bethel sensors versus others

LRAPA – Sugarpine Circle

LRAPA – Noah St.

LRAPA – Marshall Ave.

LRAPA – Berntzen Rd.

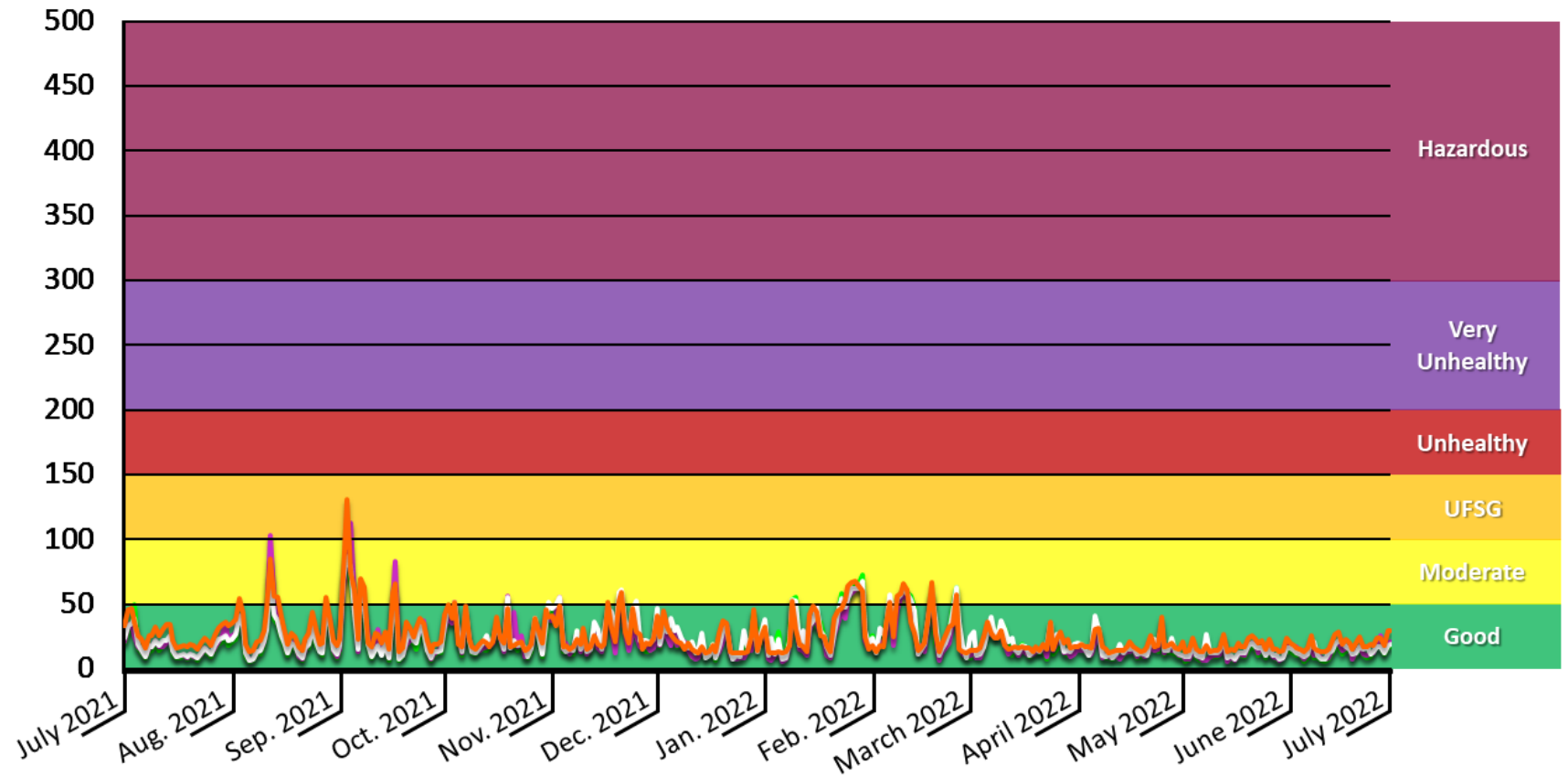
LRAPA – Bethel

LRAPA – Emerald Park

The Nines

Crest 870

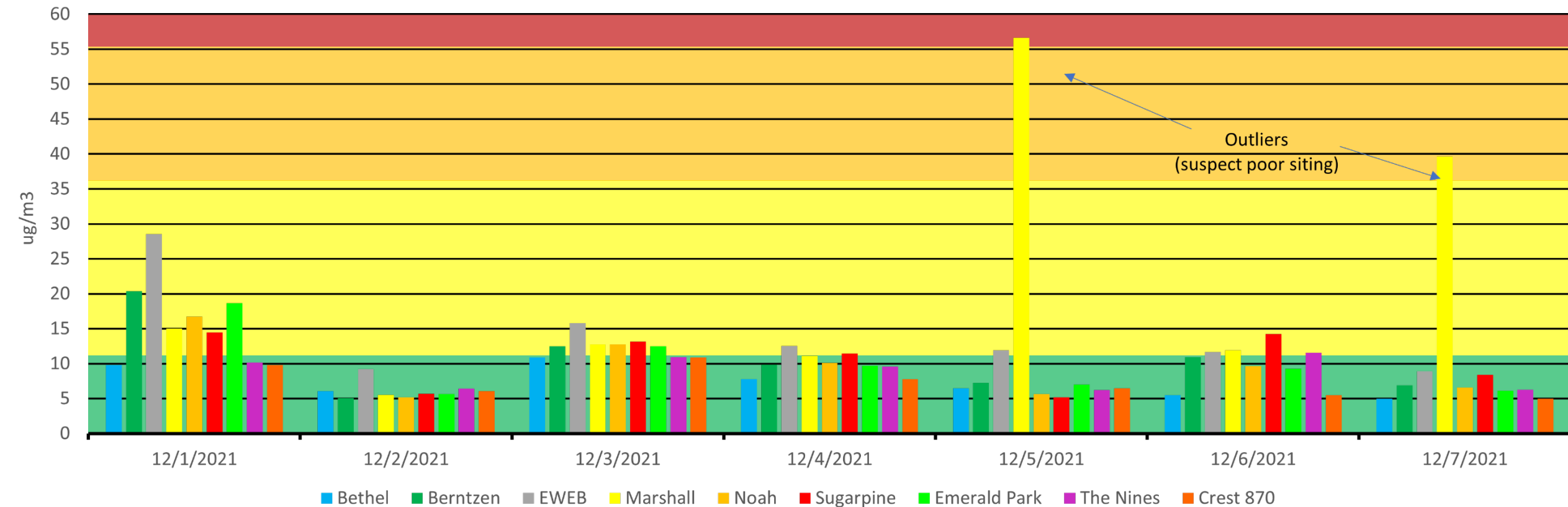
24-Hour Average, Air Quality Index (AQI)



Bethel Sensors and others in Dec. 2021

Purple Air Sensor Comparison

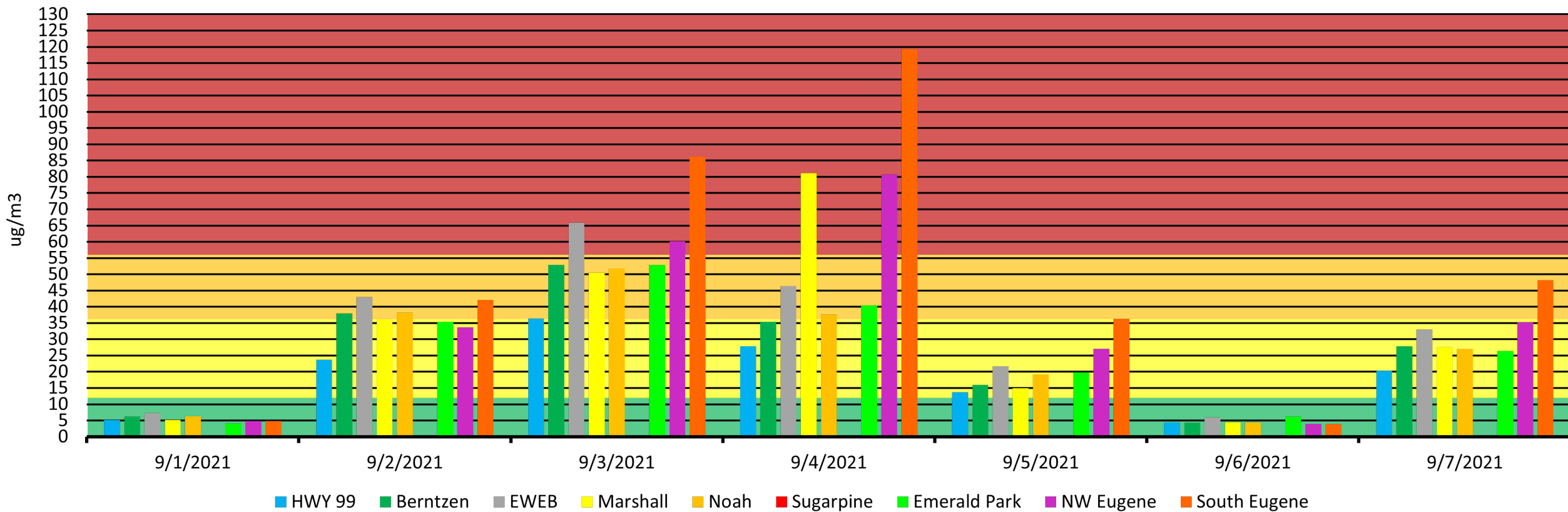
first week of December 2021



Bethel Sensors and others in Sep. 2021

Purple Air Sensor Comparison

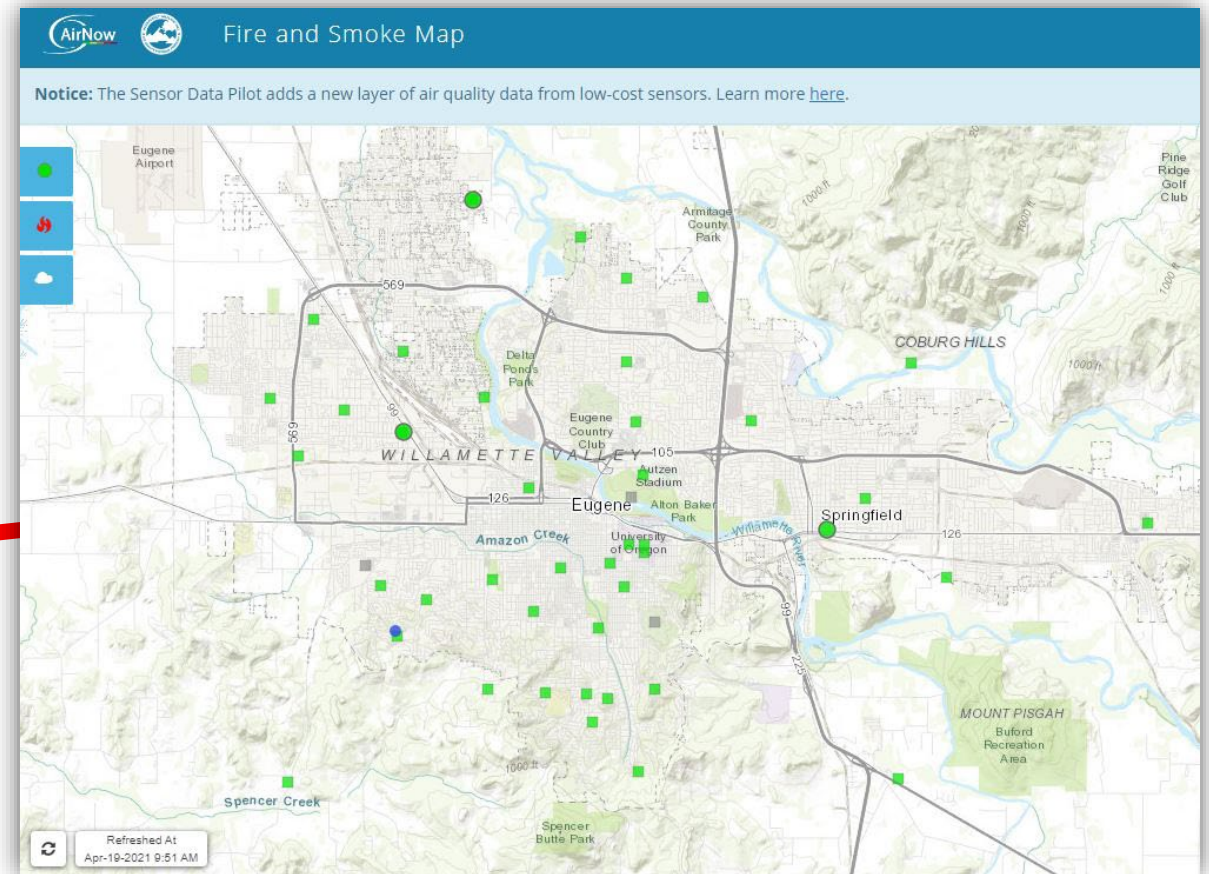
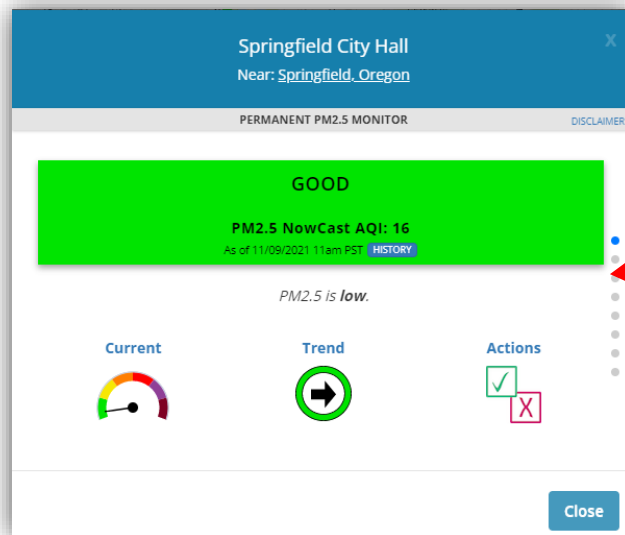
first week of September 2021 - Wildfires



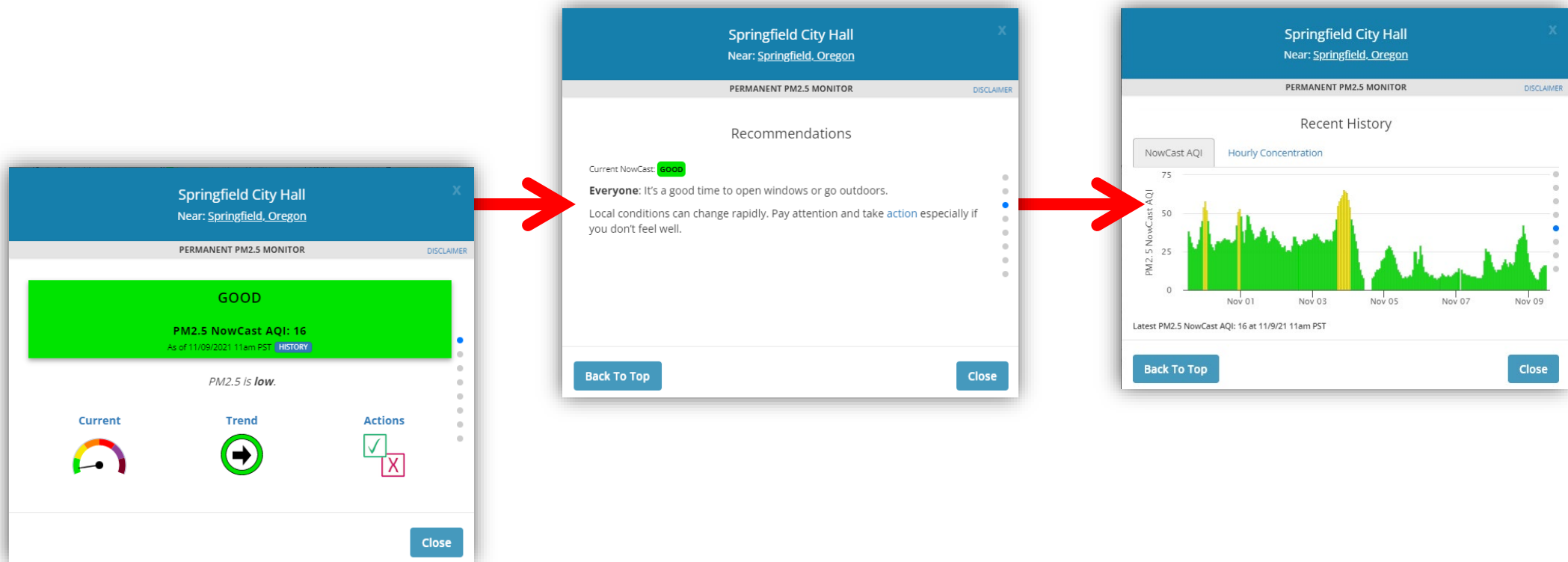
Accessing Air Quality Information

<https://fire.airnow.gov/>

- Shows **BOTH** Purple Air and FRM monitors
- Will show wildfires and associated smoke.



Accessing Air Quality Information



Accessing Air Quality Information



Health Impacts of PM_{2.5} & PM₁₀ Pollution

Particulate Matter (PM) deposits deep throughout airways and induces tissue damage and lung inflammation.

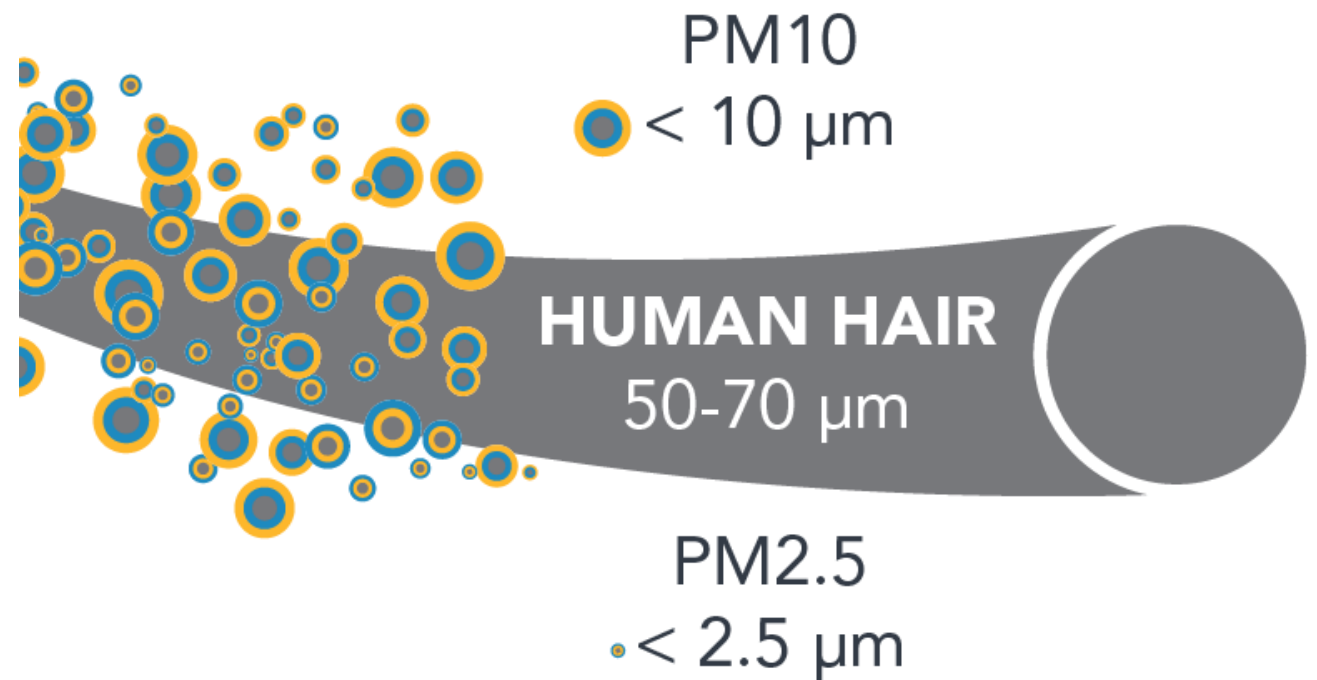
Short-Term

- Premature mortality
- ↑ ER Visits
- ↑ Hospitalizations
- Acute/Chronic Bronchitis

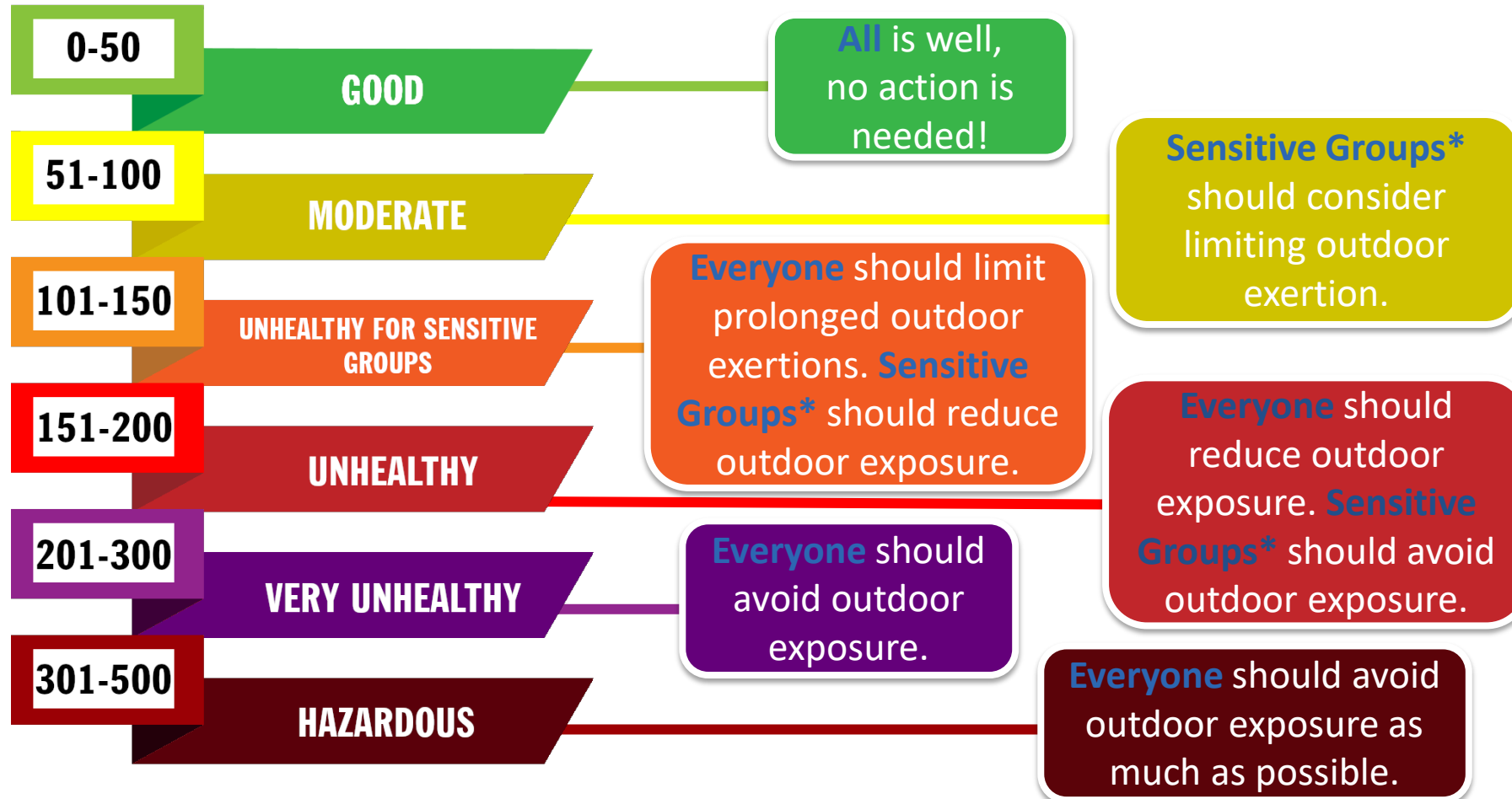
Long-Term

- Premature death
- ↓ Lung Function
- Lung Cancer
- Long lasting health impacts are not yet fully understood

Particulate Size Comparison



Air Quality Index (AQI) Guidelines



***Sensitive Groups** include people with heart or lung disease, older adults, pregnant women, children and teenagers.



Ways To Protect Your Health

Follow AQI guidelines to reduce or avoid exposure to poor air quality.

Use a HEPA air filter and air purifier in your home.

Protect indoor air quality by using electrical appliances, and not lighting candles.

Purchase/replace your home furnace air filter with a MERV 13 (or higher) rated air filter.

Repair/replace drafty windows and unsealed doorways.

Follow LRAPA on social media, and local News outlets, for air quality updates.





Thank you!



LRAPA
Lane Regional Air Protection Agency

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