

Using Sensors and Portable Monitors to Guild a Tribal Air Quality Program

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Confederated Tribes of the Colville Reservation

Air Sensors International Conference, September 2018

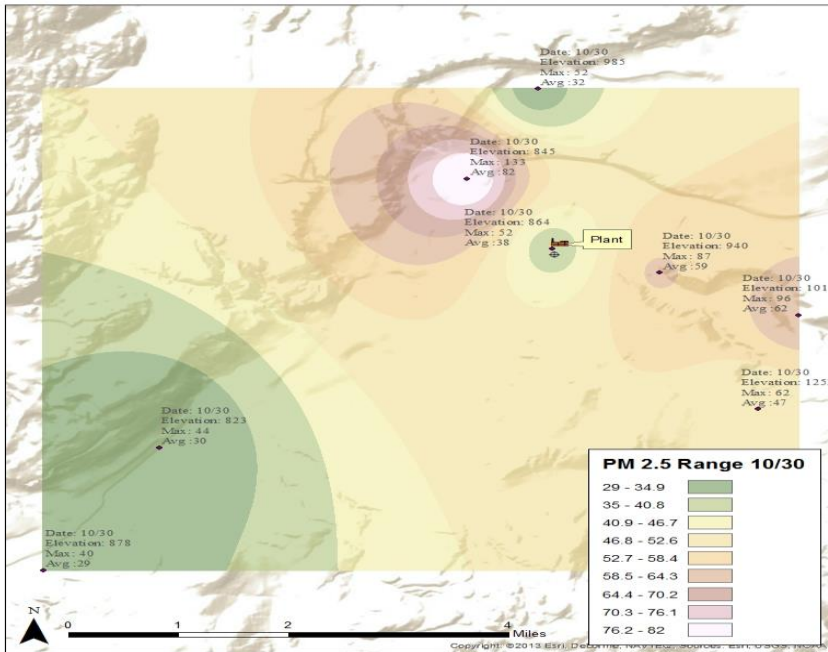
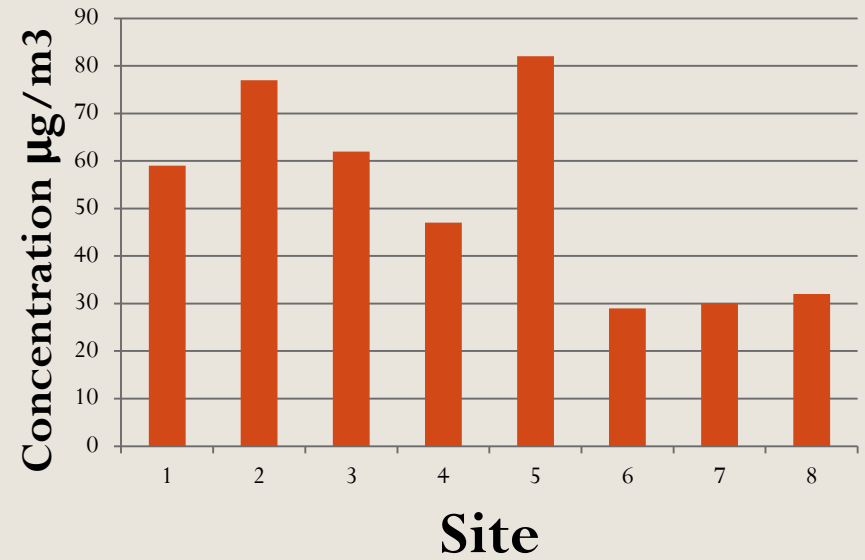


2013 Series of Unfortunate Events

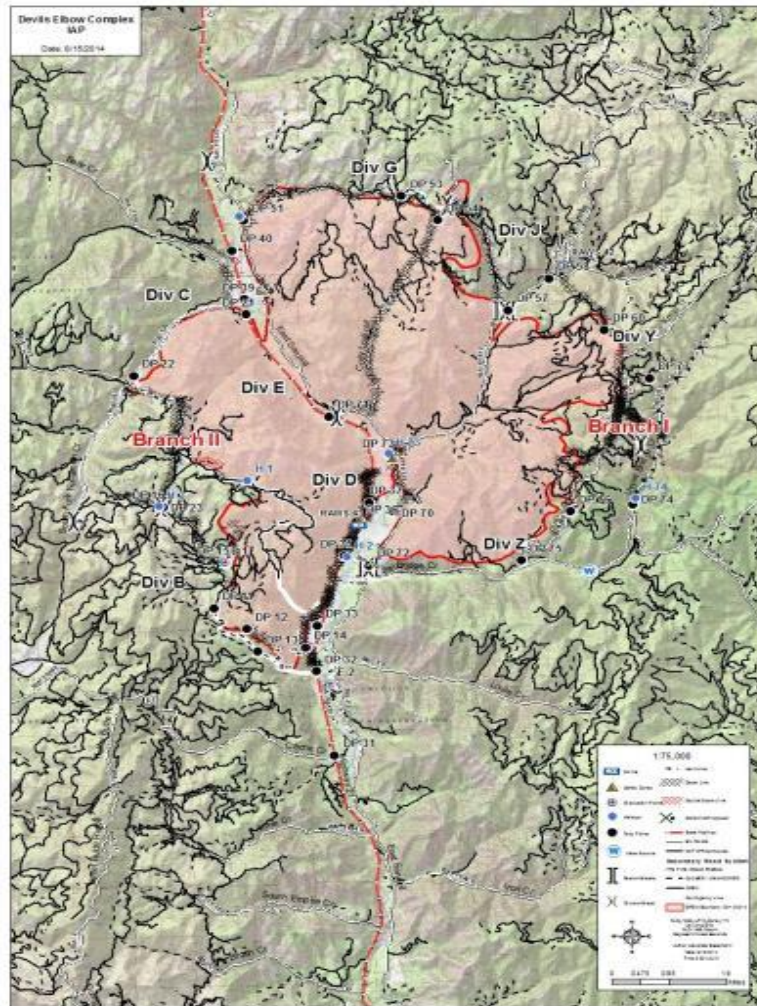




EVM Concentrations 10/30/2013



Devil's Elbow Fire 2014



San Poil River Airshed

26,500 acres

725 personnel

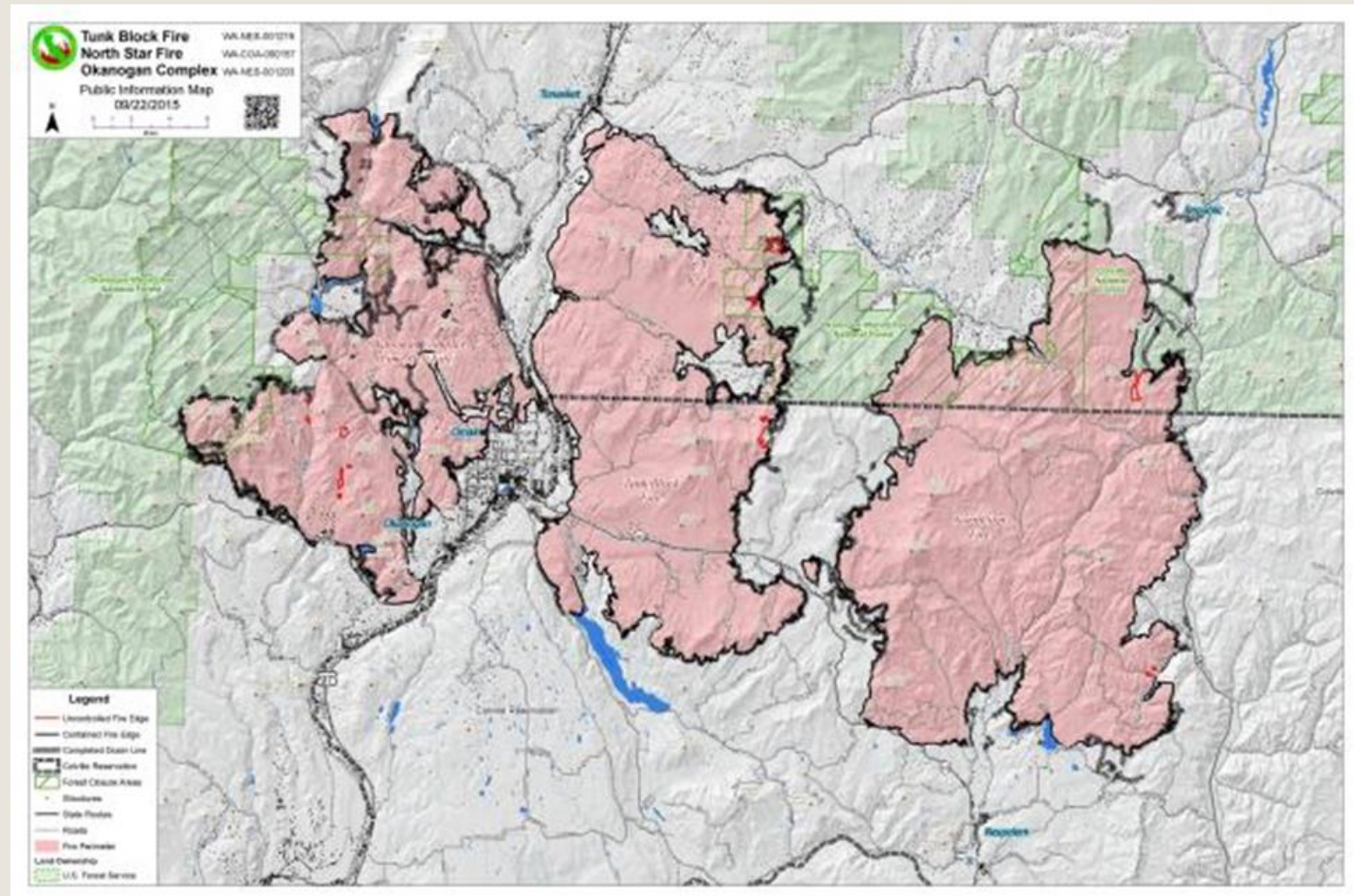
Start August 3rd burned into
September

Carlton Complex 256,000
acres

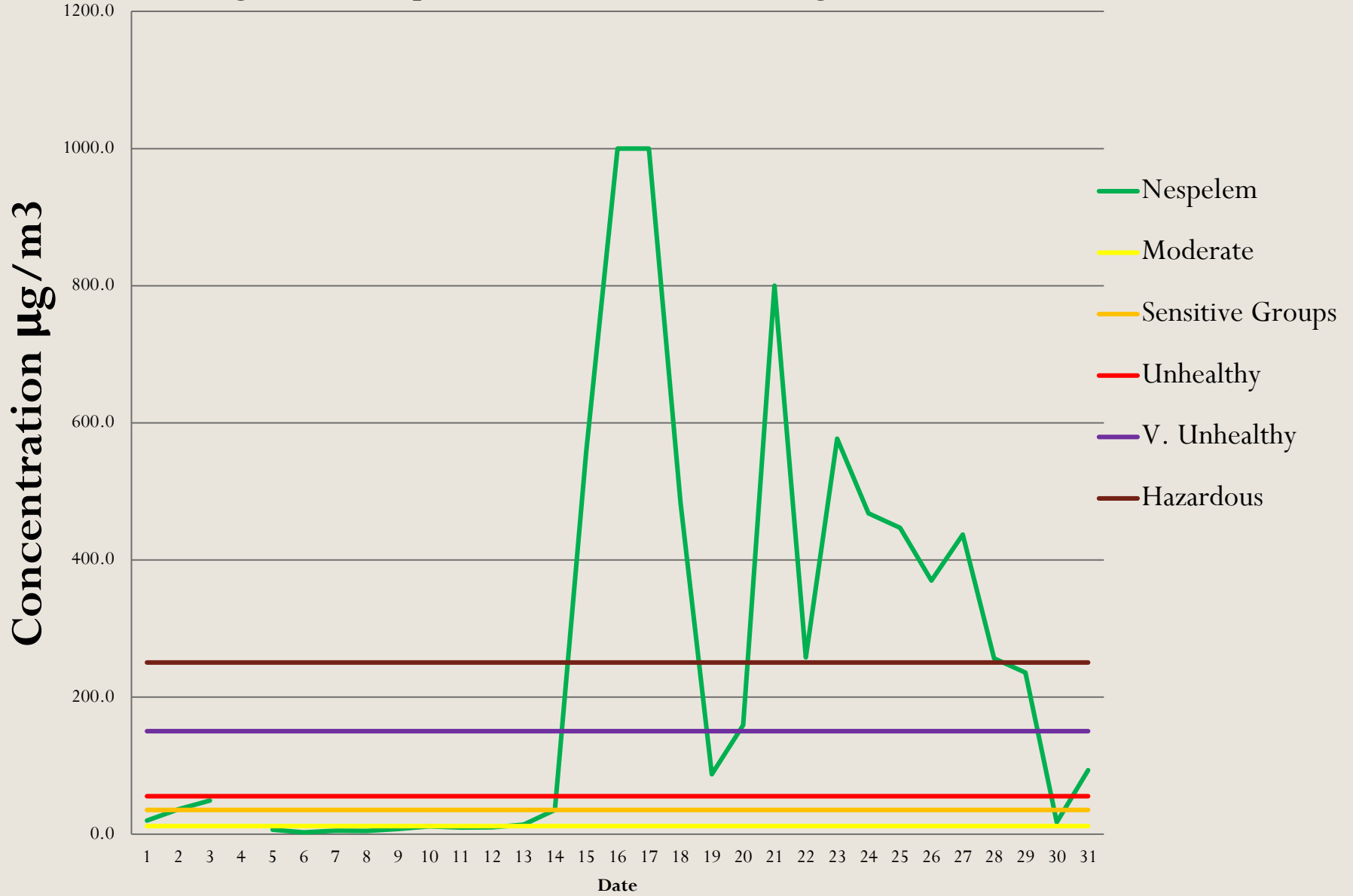
E- Sampler, Met One



2015 Extreme Fire Year



August 2015 Nespelem Monitor 24 hour Average Concentration



Met One Aerocet 831



August 25, 2015 ($\mu\text{g}/\text{m}^3$)

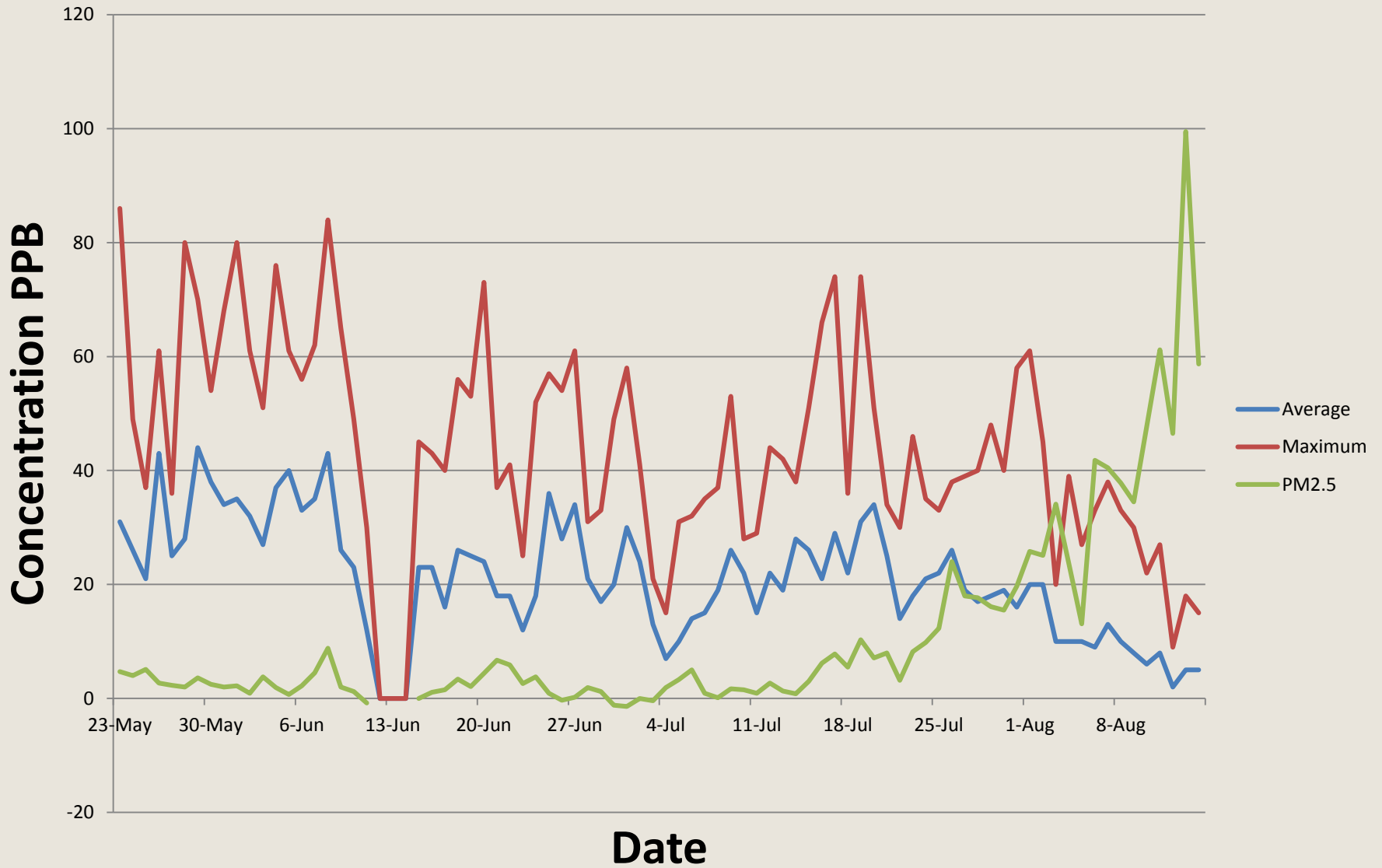
My Office	405
Reservation Attorney	394
Head Start	633
Admin Building	798
Archeology Office	630
Prosecutors Office	278
IHS Clinic Lobby	166
Outside Concentration	980

Used the AeroQual 500 Ozone Sensor

- Screening tool
- Concentrations of Ozone
- Need Permanent Monitor
- Relationship of Ozone and Wildfire Smoke

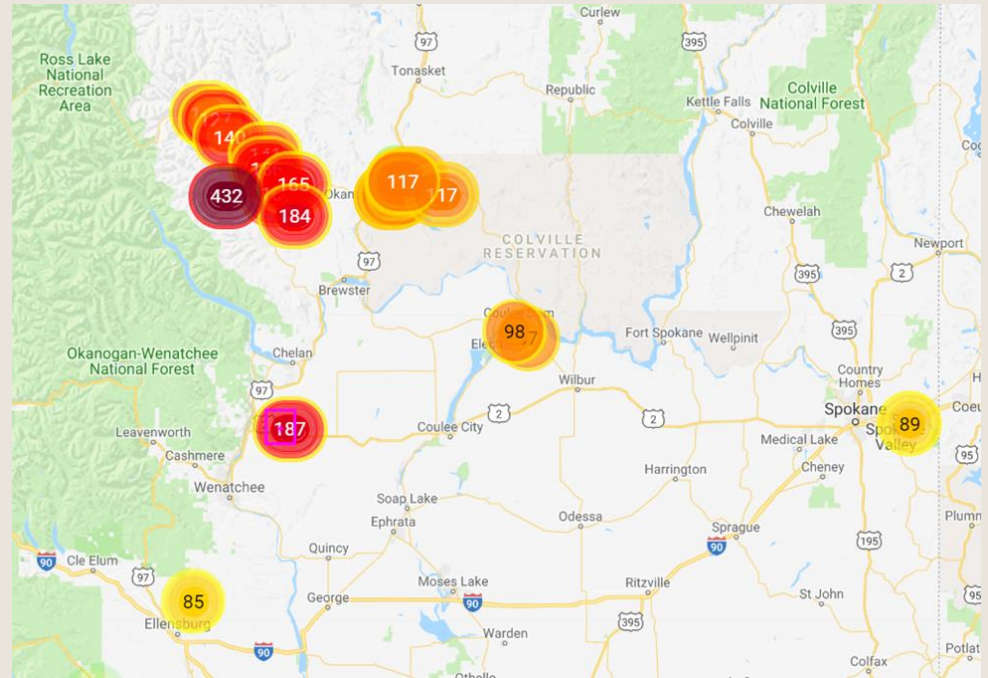


24 Hour Average and Maximum Ozone Concentrations, Omak Site Summer 2018



PurpleAir Network

- Purchase 10 in the spring of 2018
- Installed in the greater Okanogan/Omak area
- Deployed to understand neighborhood differences
- Great outreach tool



Smoke Ready Communities

- Community based
- All sources of smoke
- Yearly smoke exposure
- Prevention of health problems
- Education and outreach
- Mitigation actions
- Coordination with partners



https://www.dropbox.com/sh/wdb9pz373cxb15i/AADsESkgv_fOkim8TQrxbeQBa/050117_SmokeReady?dl=0&subfolder_nav_tracking=1

https://www.dropbox.com/sh/qudyzokbsvsney0/AAApoW140SbHJaJS-TWxFoPva/WildlandSmoke_Resources?dl=0&subfolder_nav_tracking=1

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Sensors Are Not Only Fun They Are
Useful Also