



LANE REGIONAL AIR PROTECTION AGENCY

**ANNUAL
REPORT
2020**

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WWW.LRAPA.ORG

CONTENTS



- 03 - 04**
LETTER TO THE DIRECTOR
- 05**
LRAPA, WHO ARE WE?
- 06**
OUR GOALS
- 07**
BOARD OF DIRECTORS
- 08**
CITIZEN ADVISORY COMMITTEE
- 09**
AGENCY DEPARTMENTS
- 10**
BUDGET & FINANCES
- 11**
PERMITTING
- 12**
CLEANER AIR OREGON

- 13**
ASBESTOS ABATMENT
- 14**
COMPLAINTS
- 15**
ENFORCEMENT
- 16**
PUBLIC AFFAIRS
- 17**
OAKRIDGE AIR
- 18**
AIRMETRICS
- 19**
2020 WILDFIRES
- 20**
COVID-19
- 21 - 27**
MONITORING

LETTER TO THE DIRECTOR

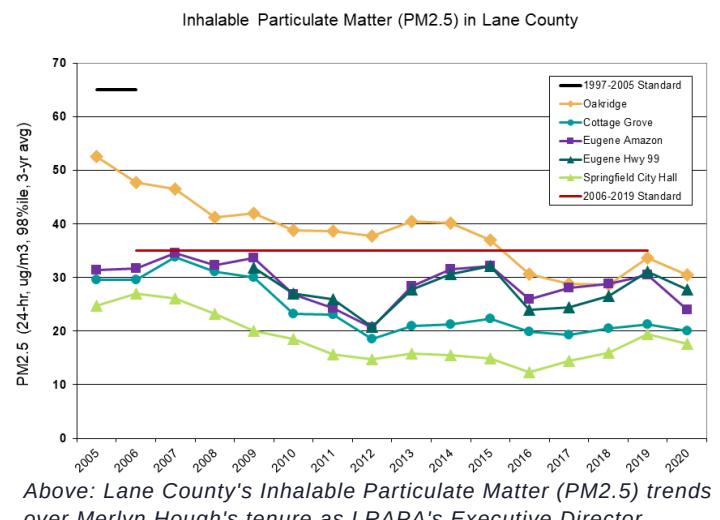
The Lane Regional Air Protection Agency's Executive Director Merlyn Hough has entered retirement after more than 40 years of public service in Oregon, 15 of them as LRAPA's Executive Director.

Hough is a professional environmental and civil engineer with a B.S. and M.S. degrees from Oregon State University and the University of Portland. He served for over 31 years at the Oregon Department of Environmental Quality (DEQ), working to improve air quality throughout the state. He began as a Senior Environmental Engineer before becoming the Western Region Manager – a position he held for over 11 years. In 2005 Hough joined LRAPA as the Operations Manager and accepted the role of Executive Director in 2006. From there he tirelessly worked to improve Air Quality across Lane County until retiring from full-time work at LRAPA with the conclusion of 2020.

Under Hough's guidance Lane County residents have benefitted from great improvements in air quality. LRAPA programs to replace old uncertified woodstoves with cleaner, more efficient, certified woodstoves, as well as providing access to dry and seasoned wood, has resulted in better air quality for all. The most common form of air pollution in the county is particulate matter (PM2.5). In Oakridge, where Particulate Matter pollution is at its highest, PM2.5 (24-hr, ug/m³, 98%ile, 3-year average) has fallen over 30 percent.



Pictured Above: Merlyn Hough and his wife Martha at McKenzie Pass scenic Byway. Mount Jefferson seen in the background.



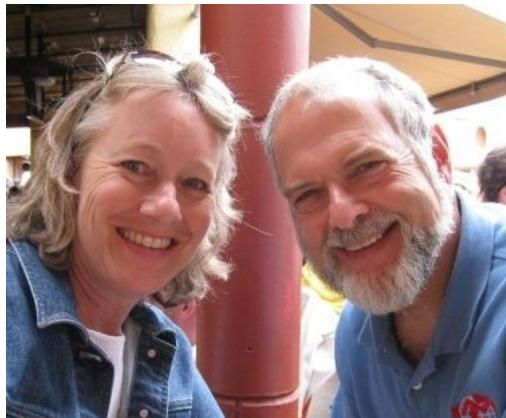
Above: Lane County's Inhalable Particulate Matter (PM2.5) trends over Merlyn Hough's tenure as LRAPA's Executive Director.

Hough's interest and passion in the development and utilization of new technology to improve air quality is reflected by LRAPA's promotion of Electric Vehicle use in Lane County. He initiated a workplace charging program at LRAPA, providing free charging for employee's plug-in electric vehicles and for those who visit our office. Under this program LRAPA installed three level-2 charging stations, one for the agency's fleet and two for workplace charging and public use.

LETTER TO THE DIRECTOR

During his time at the agency, Hough held the role of Co-President of the National Association of Cleaner Air Agencies (NACAA) from 2014 to 2015. In 2012 he was the President of the Air & Waste Management Association (A&WMA). In these prestigious and important roles, he guided the national dialogue on air quality concerns and helped shape and coordinate feasible solutions. In 2008 Hough was awarded the EPA Region 10 “Clean Air Excellence” award for work in reducing benzene in the PNW gasoline supply. Hough received recognition in 2017 with the Stanley E. Kappe Award from the American Academy of Environmental Engineers and Scientists recognizing his extraordinary contributions for the betterment of the environment and the advancement of public awareness.

Hough has dedicated his career to improving air quality in Lane County to protect public health, community well-being, and the environment. Merlyn and his wife Martha have five children and nine grandchildren. The family enjoys running, walking, and cycling on the paths in Eugene, and flyfishing the streams and lakes of Oregon, in addition to road trips taken in their electric vehicles.



Pictured Above: Merlyn Hough and his wife Martha visiting Santa Fe in June of 2009.



Pictured Above: 2017 LRAPA Board Chair, Jeannine Parisi presenting Merlyn Hough with his 2017 Stanley E. Kappe Award.

Merlyn Hough’s work at LRAPA will be forever reflected in the improvements to our air quality. His knowledge and guidance were an irreplaceable resource to the Agency. LRAPA wishes him a happy and well-deserved retirement.

LANE REGIONAL AIR PROTECTION AGENCY

WHO ARE WE?

OUR VISION

Community Partners working together to ensure cleaner air for everyone.

OUR MISSION

To protect public health, quality of life and the environment as a leader and advocate for the continuous improvement of air quality in Lane County.

Created in 1968, the Lane Regional Air Protection Agency (LRAPA) is the local air quality authority for Lane County, Oregon. LRAPA's staff of 19 work to achieve and maintain clean air across the county. Supported by our member entities of Lane County, Eugene, Springfield, Cottage Grove, and Oakridge, we play an active role in community development and planning.

LRAPA is the only local clean air agency in Oregon. The rest of the state's air is monitored and regulated by the Oregon Department of Environmental Quality. LRAPA is local, presenting more opportunity for voices in our communities to be recognized, heard, and hold influence over decisions made regarding Lane County's air.

We work collectively with our local governments and community groups to help achieve federal Clean Air Act goals and objectives. Despite an increase in population and traffic, the air quality for Lane County's metro area has continued to improve since our inception. The Eugene/Springfield metro area meets all federal clean air standards (National Ambient Air Quality Standards) in part, due to LRAPA's efforts to administer state regulations and local mandatory and voluntary programs.

OUR GOALS

AIR QUALITY

To ensure healthy air quality for all who live and work in Lane County.

INVOLVEMENT

Inform and involve all who live and do business in Lane County on our work to improve air quality.

SERVICE

Serve the communities and stakeholders across Lane County fairly, courteously, and in a timely manner.

PARTNERSHIP

Work with our partners to leverage resources to make a difference in local Air Quality.

BOARD OF DIRECTORS

Joe Pishioneri - Chair
Springfield

Kathy Nichols - Vice-Chair
Oakridge

Joe Berney
Lane County

Betty Taylor
Eugene

Jeannine Parisi
Eugene

Mysti Frost
Eugene

Howard Saxon
Eugene

Gabrielle Guidero
Springfield

Mike Fleck
Cottage Grove

CITIZENS ADVISORY COMMITTEE

Jim Daniels - Chair
Representing Large Industry

Kathleen Lamberg - Vice-Chair
Representing General Public

Kelly Wood
Representing Industry

Evelina Davidova-Kamis
Representing Industry

Jack Carter
Representing Industry

Steve Pelky
Representing Industry

Terry S. Richardson
Representing General Public

Gery Vander Meer
Representing General Public

Link Smith
Representing Fire Suppression

Jeffrey Carman
Representing Public Health

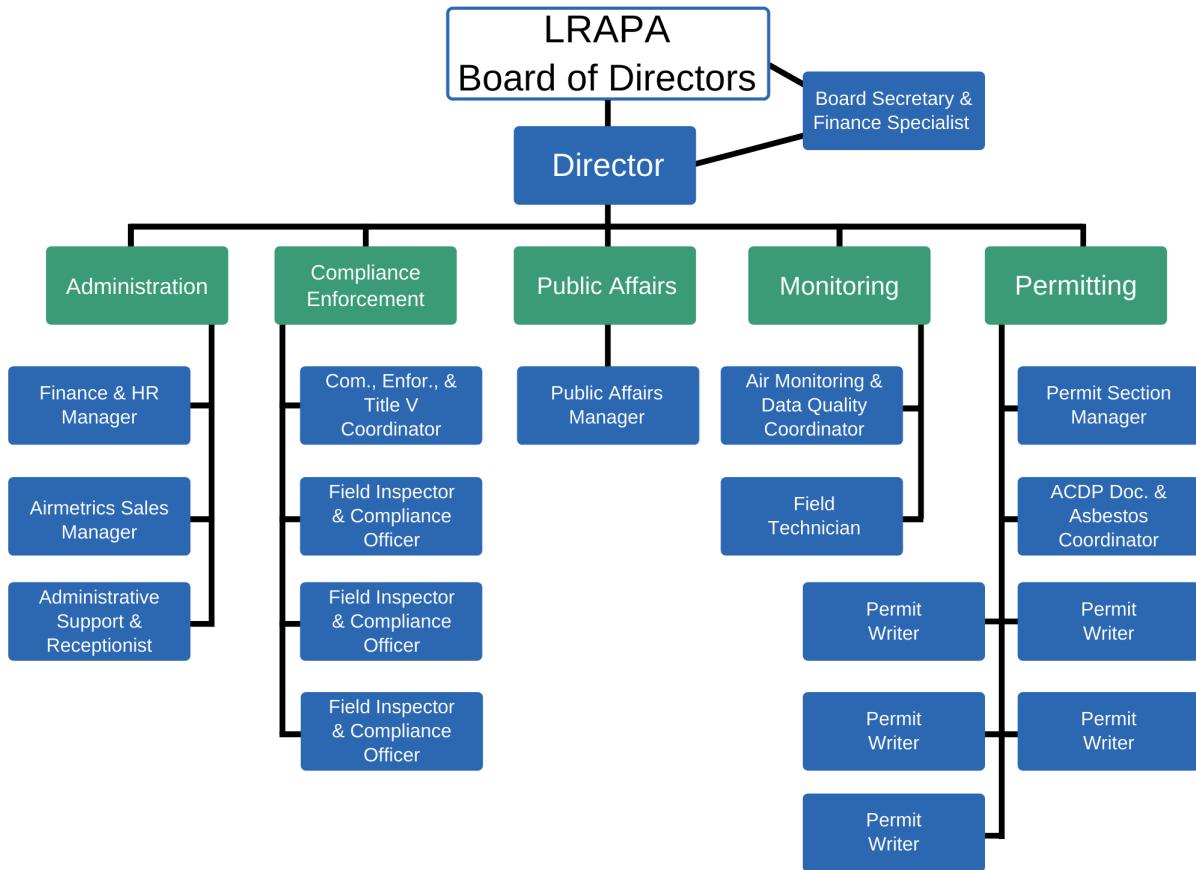
Shane Ruddell
Representing Agriculture



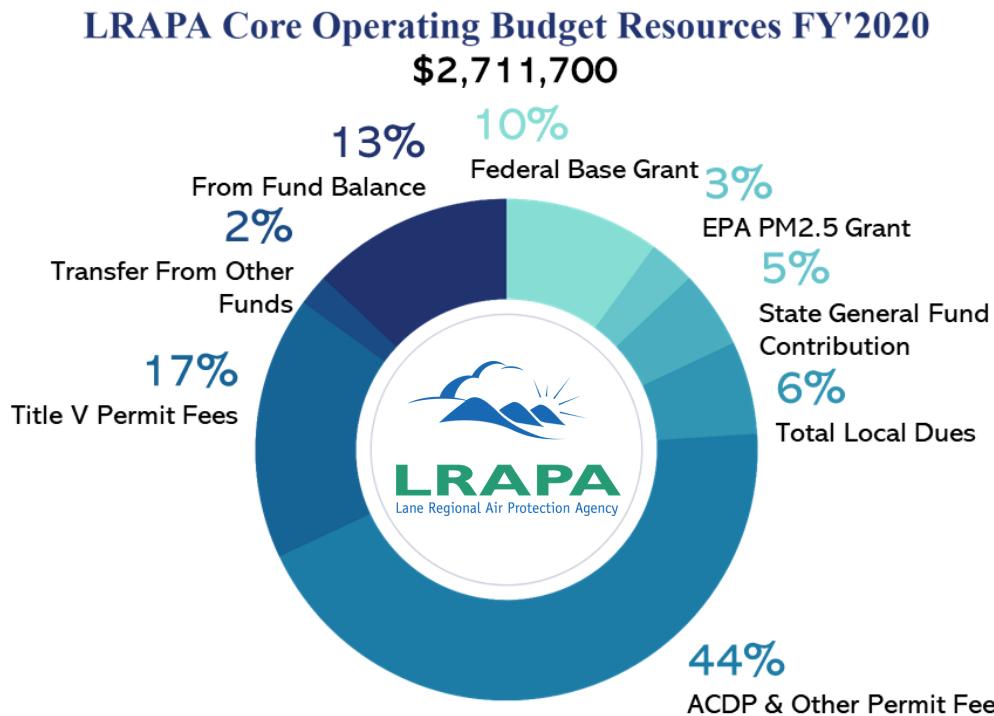
DEPARTMENTS & STAFFING

LRAPA's staffing numbers have fluctuated throughout the years as economic factors contracted or expanded our budget. At our highest LRAPA staffed 23 full-time employees (2008), at our lowest LRAPA staffed 13 full-time employees (2014).

In 2020, LRAPA was staffed by 19 full-time employees.



BUDGET & FINANCES



The LRAPA Budget Committee reviews and determines the Agency's budget. In March and April, the budget committee meetings are held and open to the public with the minutes published on our website. This transparent process assures the agency meets its fiscal policies and responsibilities.

Public involvement is desired and encouraged in the budget process. After the committee's final revisions to the proposed budget a vote is held. Once approved, the budget is published, and a public hearing is scheduled to take and record public testimony for consideration by LRAPA's Board of Directors. The board votes on a resolution to adopt the budget.

LRAPA remains a good steward of taxpayer dollars despite a 40% cut in state General Funds after the 2008 economic recession which has not been restored. LRAPA has managed the reduced funding by curtailing certain programs, primarily from public education and outreach, to focus on core responsibilities to stakeholders. LRAPA works to remain viable through potential economic impacts created by the 2020 COVID-19 pandemic.

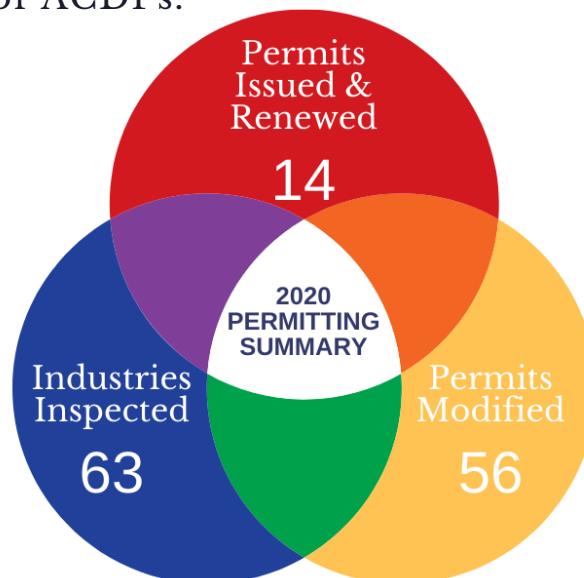
Despite funding challenges, LRAPA has succeeded in its mission to advocate for the continuous improvement of air quality in Lane County. The airsheds in our jurisdiction have seen significant improvement over the last decade due to LRAPA's commitment and efforts to deliver on its mission and responsibilities to all of Lane County's diverse communities.



PERMITTING

Operating permits are required for many industries and businesses in Lane County. LRAPA has 303 permitted sources, of those 284 hold Air Contaminant Discharge Permits (ACDP), 14 hold Title V Federal Operating Permits and 3 are Registered Sources. Gasoline dispensing activities account for 37% of ACDPs.

Sources with Title V permits are considered “Major” industrial sources and have a potential to emit, on an annual basis, more than 100 tons of any criteria pollutant, or 10 tons or more of any single hazardous air pollutant (HAP), or 25 tons or more of any combination of HAPs.



LRAPA permits multiple activities across the county, such as: wood products manufacturing, chemical products manufacturing, mineral products manufacturing, metal products manufacturing, water treatment, fuel burning, fuel transfer operations, coating operations, and sources of toxic air pollutants.

LRAPA’s regulations cannot be less stringent than Federal and State regulations.

CLEANER AIR OREGON

The Oregon Department of Environmental Quality (DEQ) and the Oregon Health Authority (OHA) launched Cleaner Air Oregon (CAO) in 2016 to improve air quality regulations in Oregon by using health-based standards. LRAPA's Board of Directors voted to integrate Cleaner Air Oregon rules with existing LRAPA rules.

In addition to closing gaps in existing air quality rules, Cleaner Air Oregon rules will provide the public greater access to air toxics emissions data and create more certainty for regulated facilities in addressing community health concerns.

LRAPA has worked with facilities called into CAO in 2019. This process is thorough and detailed, which takes time to progress through the program. In 2020 LRAPA expanded our website to make information on these sources and emissions generated from their activities readily available to the public.

Industrial sources in Lane County under Cleaner Air Oregon review in 2020:

J.H. Baxter & Co. in Eugene

Seneca Sustainable Energy, LLC in Eugene

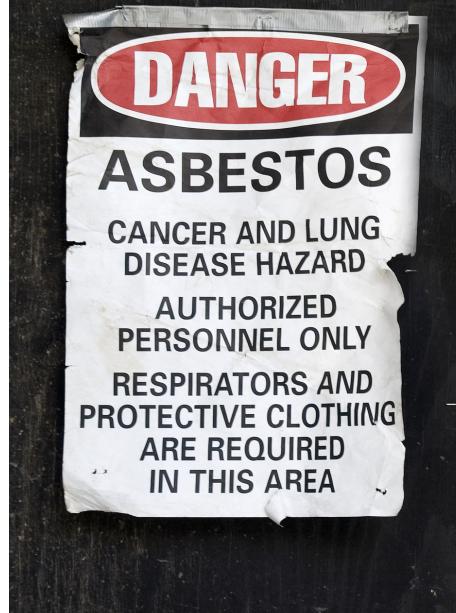
The Willamette Valley Company, LLC in Eugene



Title 43 Regulations

To legally remove asbestos, an asbestos survey must be conducted by an accredited inspector prior to commencing a building demolition or renovation. Proper asbestos notification must also be filed with LRAPA prior to demolition or renovation.

The owner or operator of the building is also required to have asbestos-containing material abated by a licensed abatement contractor. Certain exemptions are outlined in 43-015-8.



ASBESTOS ABATEMENT

2020 Asbestos Notices

School: 25

Residence: 248

College: 11

Industry: 9

Commercial: 133

Other: 13

Total: 439

Asbestos inspections:

93

Fees Received:

\$184,765.50

Wildfire Variance

On October 9, 2020, the LRAPA Board of Directors approved a temporary variance from certain asbestos requirements to aid cleanup efforts for those impacted by wildfires in Lane County. The action waived some requirements for handling asbestos containing waste (ACW) for properties impacted by wildfires.



COMPLAINTS

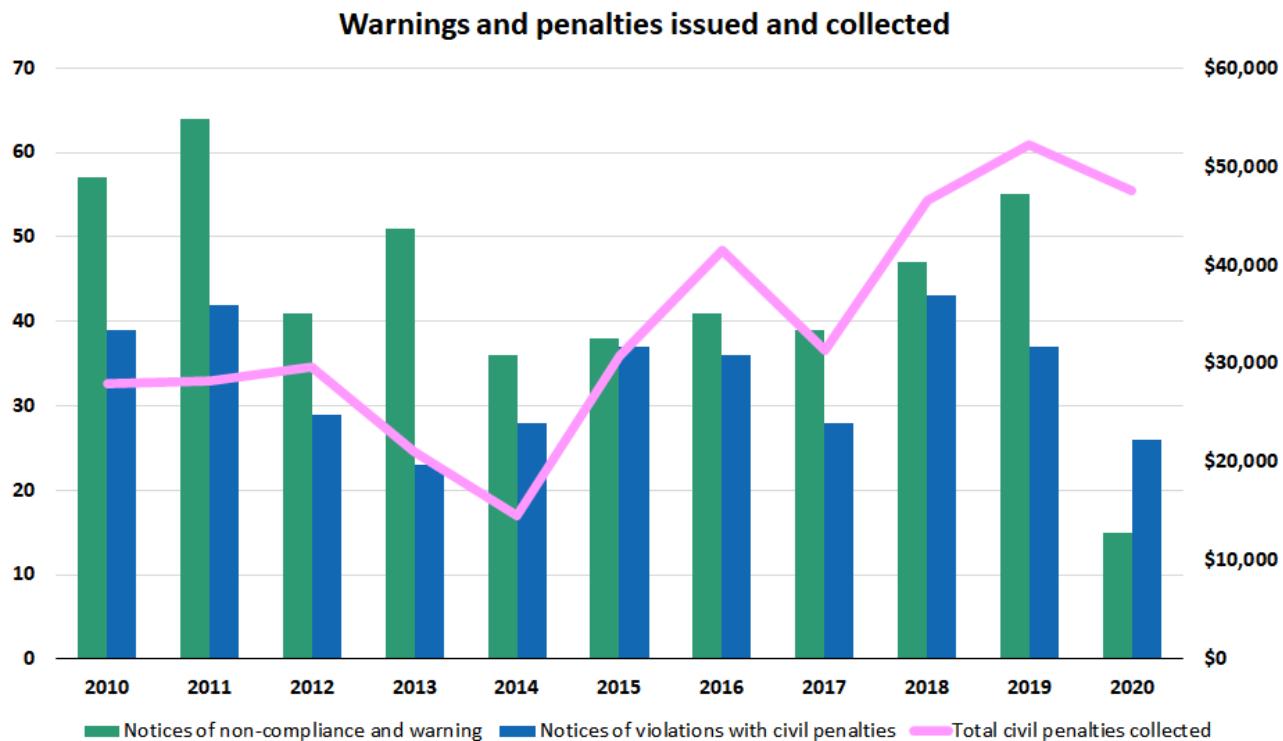
LRAPA endeavors to investigate 100% of resident complaints submitted to the agency. Inspectors may also respond based on field observations. People can submit complaints on our website, over the phone, in person at our office, or by email. LRAPA receives hundreds of complaints annually, ranging from agricultural to residential, to industrial. In addition to formal complaints, LRAPA receives community inquiries, informal notification, and requests to the Agency for information.

LRAPA holds great pride in complaint response and all our staff work hard to try and respond to every complaint received and aim to provide solutions and resolve issues. Our agency appreciates and relies on complaints received from the public. Complaints guide decisions made at LRAPA, such as helping us consider which industrial facilities would benefit from additional review and scrutinization.

2010 - 2020

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
DUST	34	33	44	30	14	25	32	25	26	15	17
AG/FIELD BURNING	9	13	1	17	4	12	9	1	0	6	2
GENERAL AIR QUALITY	2	6	6	26	30	15	20	14	6	12	4
HOME WOOD HEATING	62	135	95	219	121	342	130	197	126	128	74
INDUSTRY	266	169	128	122	127	52	58	74	50	170	100
MISCELLANEOUS	77	101	79	52	57	85	164	138	66	67	59
OUTDOOR BURNING	268	341	268	321	279	251	266	281	351	402	423
SLASH BURNING	6	16	7	5	7	11	26	13	24	16	12
UNKNOWN	12	25	17	14	35	46	56	63	29	39	74
TOTAL	734	839	645	806	674	839	761	806	678	855	765

ENFORCEMENT



LRAPA may take enforcement action on an assortment of violations. Examples of such violations may include excessive industrial air pollution, illegal outdoor burning activities, improper handling or transport of asbestos-containing materials, failure to obtain necessary air pollution permits prior to construction or operation, and exceeding opacity limits from woodstoves and chimneys.

Dollar amounts of penalties collected annually does not necessarily reflect the penalties assessed or settled during the year, due to pending cases and collections received on previous years' penalties.

LRAPA assessed \$47,545 in penalties throughout 2020. Money – minus attorney fees associated with contested cases – from all penalties are passed along to the Lane County general fund. Over 2020, LRAPA issued 15 Notices of Non-Compliance and 26 Notices of Violation with civil penalties.

PUBLIC AFFAIRS

+ 402



Twitter Followers in 2020!

Facebook Page
likes in 2020!



+ 1067

+ 1173



Facebook Followers
in 2020!

**The public affairs department conducted
39 media interviews in 2020.**

LRAPA's public affairs department disseminates air quality information and agency activities by focusing on many forms of media, and diverse programing. The public affairs department uses digital advertising, effective website design and management, summertime air quality campaigns, school outreach programs, community events planning, interagency partnerships, print and electronic design, as well as utilizing multi-media production to inform and educate Lane County's diverse communities.

Public affairs has meaningful interaction with the public through avenues such as: Lane County Home and Garden Show, Earth Day, National Drive Electric Week, Town Halls, Neighborhood Association Meetings, public education with Outdoor School, K-12 science classrooms, and presentations at college courses.

However, due to restrictions in Oregon to combat spread of COVID-19, most of these events were cancelled. LRAPA's outreach efforts moved to online formats where applicable, and LRAPA worked to provide educational materials for parents to utilize in an at-home schooling environment.



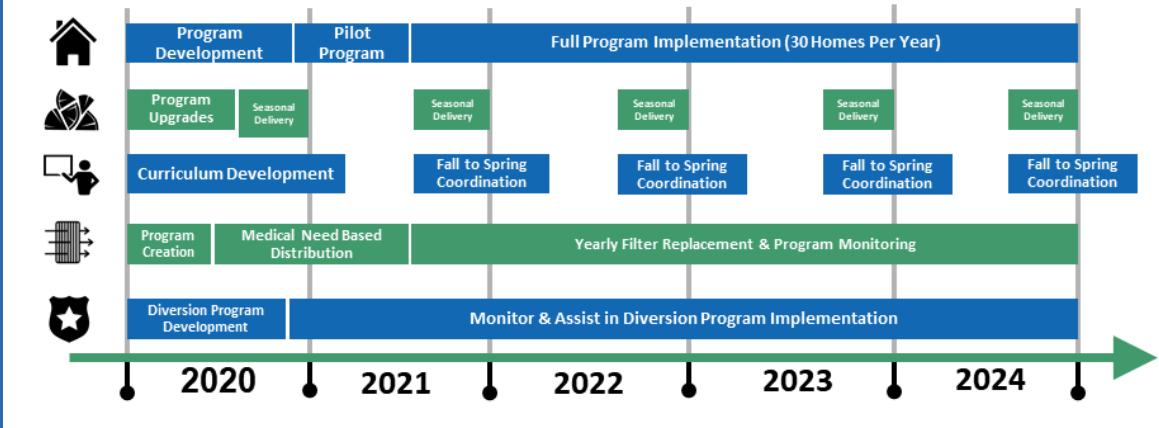


TARGETED AIRSHED GRANT

In the fall of 2019, LRAPA was awarded a \$4,938,190 Targeted Airshed Grant (TAG), by the Environmental Protection Agency (EPA), to reduce particulate pollution in Oakridge. The program funded by this grant is called Oakridge Air. This grant is helping to resolve air particulate pollution in the Oakridge/Westfir airshed.

The 5-year program funds a multitude of air pollution reduction strategies in the Oakridge/Westfir airshed including:

- Affordable dry firewood
- Woodstove upgrades and changeouts
- Weatherization upgrades for homes
- Increased education in the community and schools
- Upgraded indoor air filters in schools and residences
- Increased air quality monitoring and expansion of particulate air sensor use
- Strengthened compliance and enforcement program





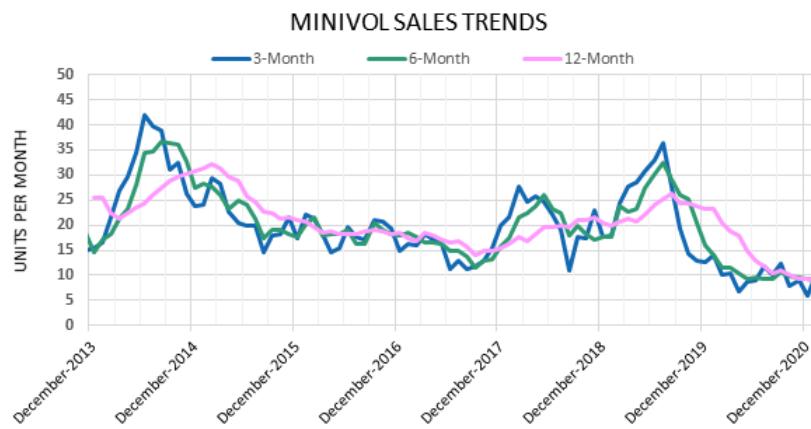
AIR METRICS

Airmetrics, in conjunction with the US EPA, developed the patented low-flow technology found in the MiniVol Portable Air Sampler to address the need for portable, ambient air sampling. Proceeds from the enterprise fund are used to supplement LRAPA's budget by covering some fixed costs and providing opportunities for capital improvements.

Current users of the MiniVol™ include domestic and international air quality authorities, government agencies, consultants and mining companies. Domestic users include the US EPA, USDA, South Coast AQMD, Utah DEQ, and the Tribal Air Monitoring Support Center. Consultants and mining companies using the sampler include Desert Research Institute, SLR Consulting, Golder Associates, Freeport-McMoran and Capstone Mining Corporation.

Airmetrics' product line can be found world-wide, with customers ranging from the Cairo Air Improvement Study in Egypt to universities in South Korea, India, Japan, and Mexico. Both rugged and reliable, the MiniVol™ has proven its effectiveness in ambient air sampling at remediation sites, prescribed burns, fugitive dust studies, manufacturing locations, mining operations, and power plants.

Sales of the MinVol™ declined with arrival of the pandemic. However, new customer quotes and distributor feedback indicate an increase in future sales. Over the fiscal year, Airmetrics sold 154 MiniVol™ units.

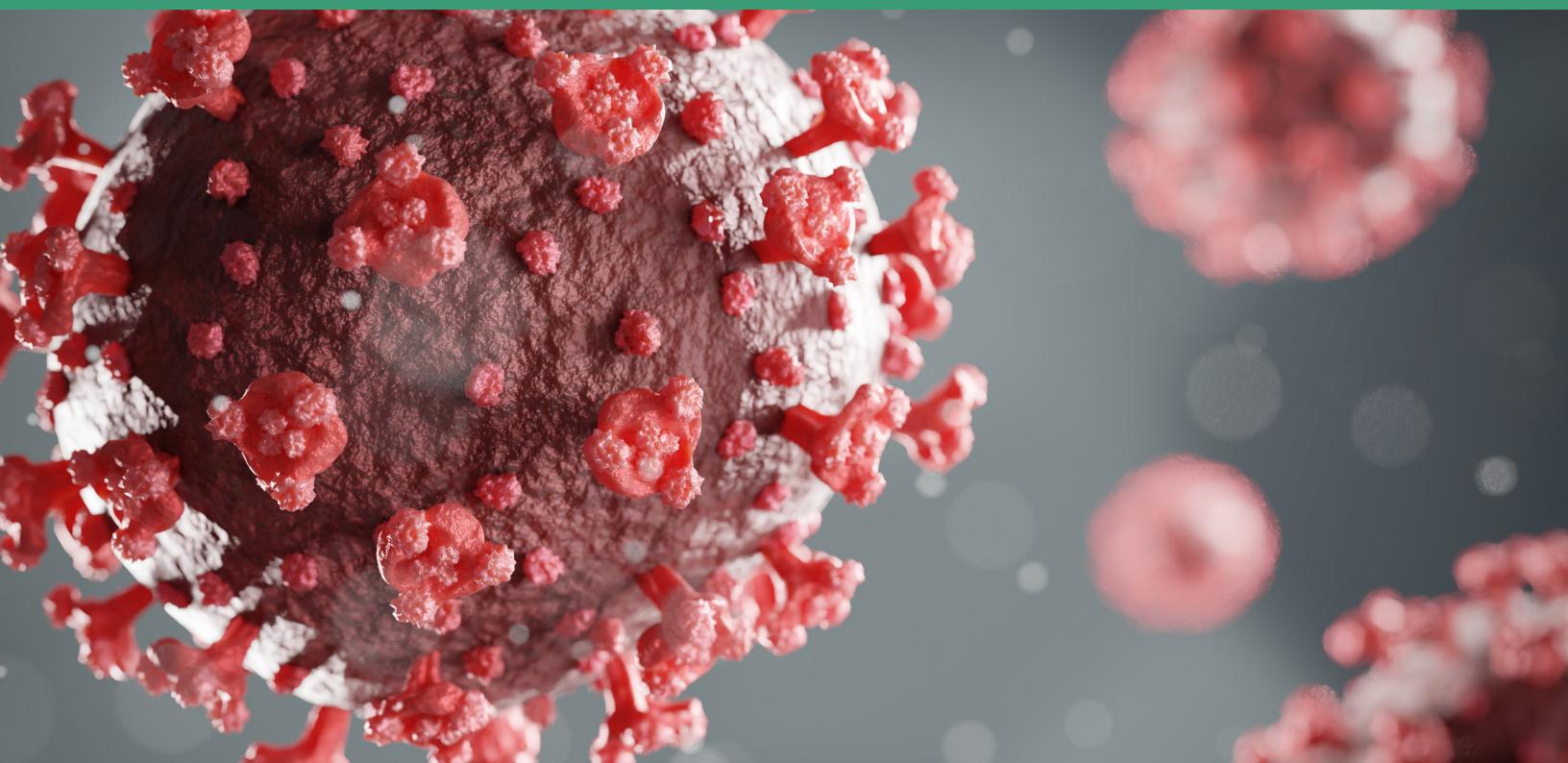


2020 & COVID-19

In early 2020 the SARS-CoV-2 (COVID-19) virus thrust the world, Lane County, and LRAPA into a new mode of operation. The agency modified its operations and worked to overcome new difficulties created by the COVID-19 pandemic, allowing the agency to continue its important work and serve Lane County residents.

Beginning March 18, 2020, LRAPA staff began to work from home and telecommute to the fullest extent possible. Our office became closed to the public, and available by appointment only. Public events and outreach opportunities, such as the Lane County Home and Garden Show, were cancelled and outreach efforts were moved to online formats. Our public meetings, such as Board of Director Meetings, and Citizen Advisory Committee meetings were moved to a Zoom format.

LRAPA will continue to utilize remote working and online public meetings following the most current information and recommendation from Lane County Public Health, the Oregon Health Authority, the Center for Disease Control and Prevention, as well as other local, state, and national authorities.



2020 & WILDFIRES

Lane County, and Oregon, endured its worst period of air quality in known history in September of 2020 due to multiple fires across the state. In Lane County, the Holiday Farm fire burned 173,393 acres devastating communities along the McKenzie River and forever changing the valley's landscape.



AIR QUALITY INDEX RECORDS

PREVIOUS AQI RECORD:

291

Set in 2017 for Eugene.

NEW AQI RECORD:

457

Set Sunday Sep. 13, 2020 for Eugene.

Cottage Grove exceeded the AQI of 500 on Sep. 10!



Over a two-week period in September all of LRAPA's eight monitors across Lane County reported "hazardous" air quality on the Air Quality Index (AQI), a category which has never once been reached in Lane County. Eugene reported eight days of hazardous air.

Relief finally arrived in Lane County with a push of clean Pacific air on September 19th, concluding the worst period of air quality across the county in known history.



MONITORING

LRAPA's air quality monitoring network consists of eight stationary sites measuring a variety of air pollutant and meteorological parameters. The agency currently collects over 750,000 hours of pollutant-related data each year.

At an estimated operations cost of over \$400,000 a year, LRAPA's network provides Lane County with comprehensive data on local air quality. The network includes three locations in Eugene, and one in Springfield, Oakridge, Cottage Grove, Saginaw, and Florence. Monitoring stations have special instruments to measure specific pollutants in the air. With this information it can be determined whether the air you breathe is healthy.

LRAPA measures particulate matter at seven sites in Lane County: west Eugene, north Eugene, south Eugene, downtown Springfield, Cottage Grove, Oakridge, and Florence. Particulate matter is measured using three methods. The first uses filters which capture particles and are weighed. The second uses beta rays, similar to a Geiger counter, to measure the mass of particles. The third measures particles with a nephelometer that uses the reflection of light to determine the concentration of particles in the air.

LRAPA measures ozone concentrations at Amazon park in south Eugene and in Saginaw. A pump pulls a continuous air sample into equipment that analyzes ozone levels using ultra-violet light in a two-step process.

LRAPA also samples for a variety of toxic air pollutants. Sampling for toxic air pollutants allows LRAPA to track trends and look for elevated levels of these pollutants in our area.



LRAPA has installed over 80 commercial grade Purple Air sensors across Lane County. While these sensors do not meet federal requirements for sampling and analyzing ambient air for Particulate Matter, they are accurate enough to correctly inform the public of outdoor air quality. Find the closest Purple Air sensor in your neighborhood by visiting <https://fire.airnow.gov>

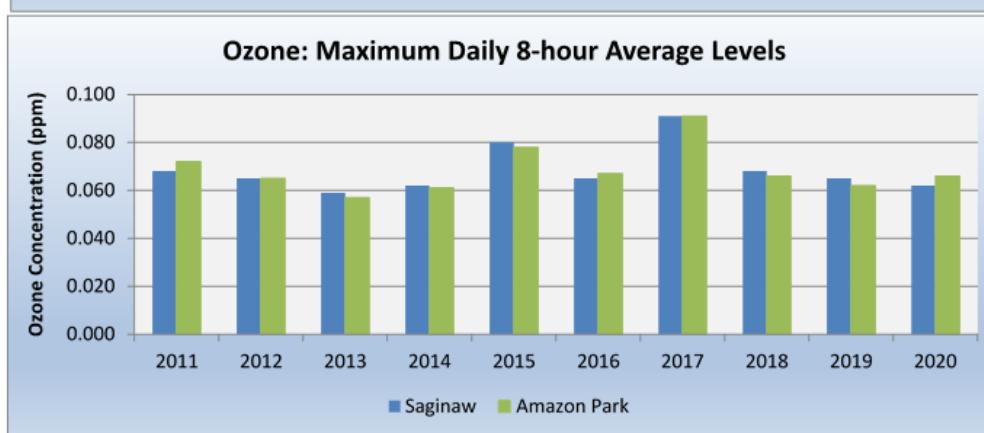
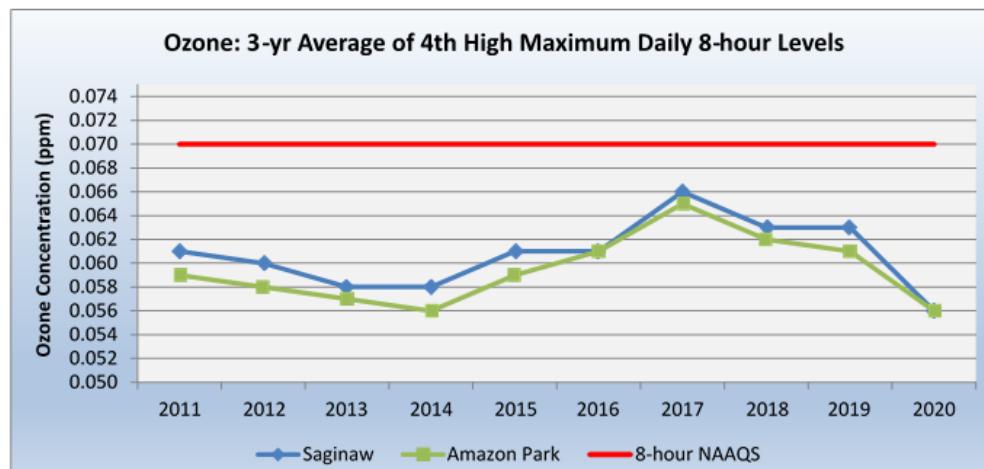


OZONE DATA

EPA has designated the following National Ambient Air Quality Standards (NAAQS) for Ozone:

Level	Averaging Time	Description
0.070 ppm	8-hour	To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.070 ppm. (effective October 1, 2015)

8-HOUR AVERAGE OZONE LEVELS 2011 – 2020 (ppm)											
Site Name		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Saginaw	Maximum	0.068	0.065	0.059	0.062	0.080	0.065	0.091	0.068	0.065	0.062
	4th highest	0.059	0.062	0.058	0.058	0.071	0.056	0.073	0.061	0.055	0.052
	3-year 4 th high	0.061	0.060	0.058	0.058	0.061	0.061	0.066	0.063	0.063	0.056
	# Exceedances	0	0	0	0	4	0	4	0	0	0
Amazon Park	Maximum	0.072	0.065	0.057	0.061	0.078	0.067	0.091	0.066	0.062	0.066
	4th highest	0.059	0.059	0.053	0.058	0.068	0.058	0.070	0.060	0.055	0.055
	3-year 4 th high	0.059	0.058	0.057	0.056	0.059	0.061	0.065	0.062	0.061	0.056
	# Exceedances	1	0	0	0	3	0	3	0	0	0



*Includes all wildfire data not approved for Exceptional Event status by the EPA.

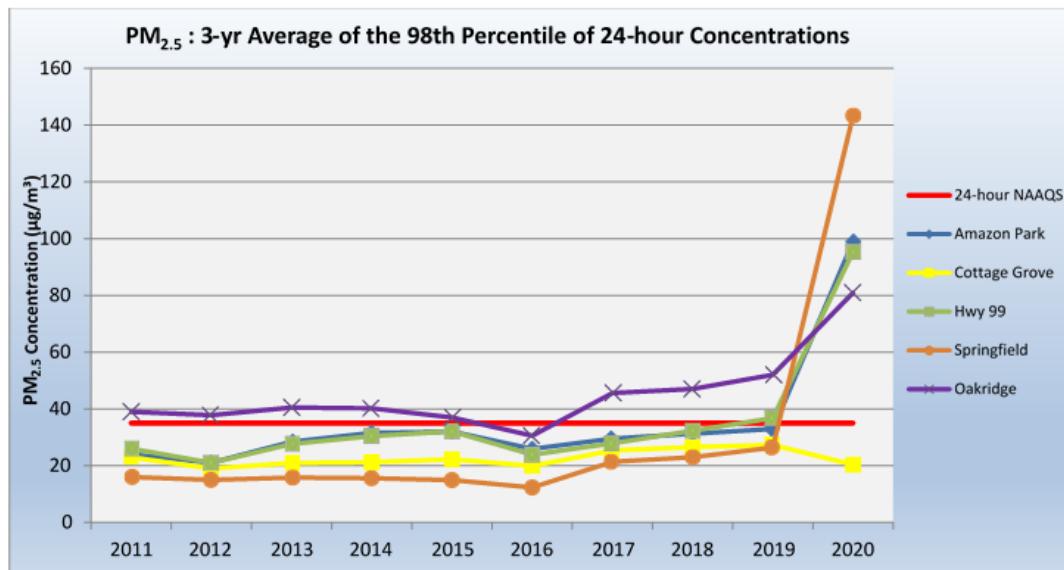
PARTICULATE MATTER DATA - PM2.5

Includes Wildfire Data*

EPA has designated the following National Ambient Air Quality Standards (NAAQS) for PM2.5:

Level	Averaging Time	Description
12.0 $\mu\text{g}/\text{m}^3$	Annual (Arithmetic Average)	To attain this standard, the 3-year average of the annual mean PM2.5 concentrations from monitors must not exceed 12.0 $\mu\text{g}/\text{m}^3$ (effective December 14, 2012).
35 $\mu\text{g}/\text{m}^3$	24-hour	To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations must not exceed 35 $\mu\text{g}/\text{m}^3$ (effective December 17, 2006).

24-HOUR AVERAGE PM _{2.5} LEVELS 2011 - 2020 ($\mu\text{g}/\text{m}^3$)											
Site Name		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Amazon Park	Annual mean	6.5	6.4	7.8	7.2	7.4	5.4	9.0	7.5	7.3	14.9
	Highest 24-hour	24.6	31.6	51.9	35.5	55.3	38.2	145.3	40.4	30.1	528.3
	Annual 98 th %ile	21.2	25.4	38.6	30.7	26.7	20.3	41.6	32.0	25.3	239.5
	3 year 98 th %ile	24	21	28	32	32	26	30	31	33	99
Cottage Grove City Shops	Annual mean	7.1	6.7	7.5	6.9	7.3	5.8	8.8	7.8	7.3	13.3
	Highest 24-hour	32.1	24.7	38.1	34.0	39.6	26.2	116.0	43.5	29.1	499.2
	Annual 98 th %ile	20.5	17.0	25.4	21.3	20.1	18.3	37.7	23.7	20.5	16.8
	3 year 98 th %ile	23	19	21	21	22	20	25	27	28	20
Hwy 99 - Four Corners	Annual mean	6.8	6.5	8.3	7.2	8.0	5.7	10.9	8.7	8.0	14.9
	Highest 24-hour	26.7	30.0	54.6	43.6	56.4	18.0	330	45.6	30.9	454.2
	Annual 98 th %ile	22.2	20.6	40.2	30.5	25.6	15.5	42.5	38.9	28.9	218.2
	3 year 98 th %ile	26	21	28	30	32	24	28	33	37	95
Springfield City Hall	Annual mean	5.6	5.5	6.3	6.4	6.3	4.7	12.1	6.1	6.6	21.9
	Highest 24-hour	18.8	18.3	18.8	35.6	54.0	10.4	286.8	18.2	21.0	589.3
	Annual 98 th %ile	14.9	15.3	17.2	14.2	13.3	9.4	41.4	18.1	19.7	392.2
	3 year 98 th %ile	16	15	16	15	15	12	21	23	26	143
Oakridge	Annual mean	10.0	7.6	9.8	10.0	8.9	6.7	13.0	9.0	9.2	14.4
	Highest 24-hour	47.9	49.9	54.9	46.1	39.3	30.7	200.0	62.0	42.0	576.6
	Annual 98 th %ile	42.0	38.4	41.0	41.1	28.9	21.7	35.7	33.2	36.7	173.0
	3 year 98 th %ile	39	38	41	40	37	31	46	47	52	81



*Includes all wildfire data not approved for Exceptional Event status by the EPA.

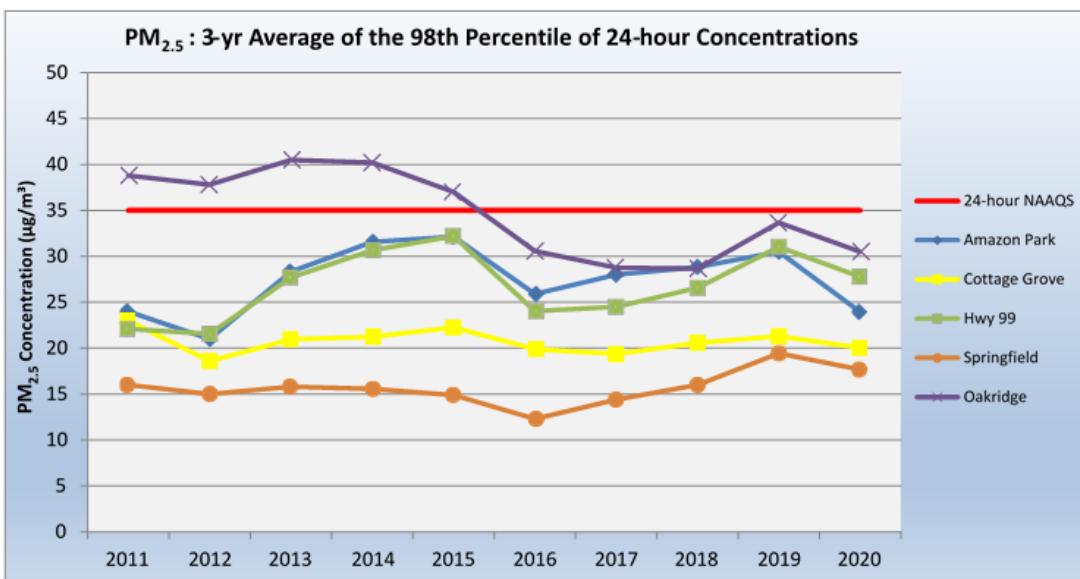
PARTICULATE MATTER DATA - PM2.5

Excludes Wildfire Data*

EPA has designated the following National Ambient Air Quality Standards (NAAQS) for PM2.5:

Level	Averaging Time	Description
12.0 $\mu\text{g}/\text{m}^3$	Annual (Arithmetic Average)	To attain this standard, the 3-year average of the annual mean PM2.5 concentrations from monitors must not exceed 12.0 $\mu\text{g}/\text{m}^3$ (effective December 14, 2012).
35 $\mu\text{g}/\text{m}^3$	24-hour	To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations must not exceed 35 $\mu\text{g}/\text{m}^3$ (effective December 17, 2006).

24-HOUR AVERAGE PM _{2.5} LEVELS 2011 - 2020 ($\mu\text{g}/\text{m}^3$)											
Site Name	Annual mean	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		6.5	6.4	7.8	7.2	7.4	5.4	7.0	7.5	7.3	5.8
Amazon Park	Highest 24-hour	24.6	31.6	51.9	35.5	55.3	38.2	41.6	40.4	30.1	26.2
	Annual 98 th %-ile	21.0	25.0	39.0	30.7	26.7	20.3	37.0	29.2	25.3	17.3
Cottage Grove City Shops	3 year 98 th %-ile	24	21	28	32	32	26	28	31	33	24
	Annual mean	7.1	6.7	7.5	6.9	7.3	5.8	6.8	7.8	7.3	6.1
Hwy 99 - Four Corners	Highest 24-hour	32.1	24.7	38.1	34.0	39.6	26.2	27.7	43.5	29.1	16.8
	Annual 98 th %-ile	20.5	17.0	25.4	21.3	20.1	18.3	19.7	23.7	20.5	15.9
Hwy 99 - Four Corners	3 year 98 th %-ile	23	19	21	21	22	20	19	27	28	20
	Annual mean	6.8	6.5	8.3	7.2	8.0	5.7	7.2	8.7	8.0	6.9
Springfield City Hall	Highest 24-hour	26.7	30.0	54.6	43.6	56.4	18.0	46.8	45.6	30.9	31.2
	Annual 98 th %-ile	22.1	21.0	40.0	31.0	25.6	15.5	32.4	31.8	28.9	22.6
Springfield City Hall	3 year 98 th %-ile	26	21	28	30	32	24	25	30	37	28
	Annual mean	5.6	5.5	6.3	6.4	6.3	4.7	6.2	6.1	6.6	5.7
Oakridge	Highest 24-hour	18.8	18.3	18.8	35.6	54.0	10.4	27.9	18.2	21	24.2
	Annual 98 th %-ile	14.9	15.3	17.2	14.2	13.3	9.4	20.5	18.1	19.7	15.2
Oakridge	3 year 98 th %-ile	16	15	16	15	15	12	14	16	26	18
	Annual mean	10.0	7.6	9.8	10.0	8.9	6.7	8.8	8.5	9.2	7.5
Oakridge	Highest 24-hour	47.9	49.9	54.9	46.1	39.3	30.7	41.6	35.3	42.0	38.5
	Annual 98 th %-ile	42.0	38.4	41.0	41.1	28.9	21.7	35.7	28.6	36.7	26.2
Oakridge	3 year 98 th %-ile	39	38	41	40	37	31	29	29	34	31



*Excludes wildfire influenced data >20 $\mu\text{g}/\text{m}^3$

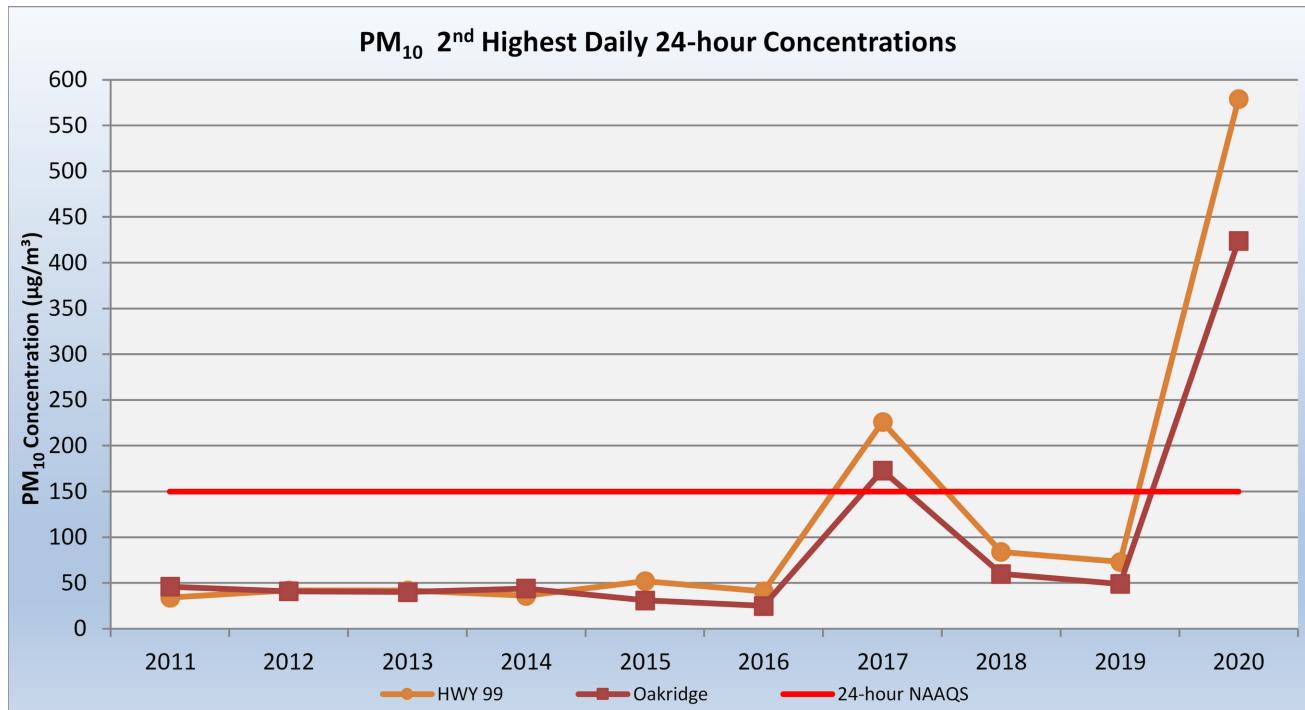
PARTICULATE MATTER DATA - PM10

Includes Wildfire Data*

EPA has designated the following National Ambient Air Quality Standards (NAAQS) for PM10:

Level	Averaging Time	Description
150 $\mu\text{g}/\text{m}^3$	24-hour	Not to be exceeded more than once per year on average over 3 years.

PM ₁₀ Levels 2011 - 2020 ($\mu\text{g}/\text{m}^3$)											
Site Name		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Hwy 99	Highest 24-hour	57	46	59	42	96	56	239	134	77	588
	2 nd Highest 24-hour	34	42	42	36	52	41	226	84	73	579
	Exceedances	0	0	0	0	0	0	3	0	0	10.1
	3yr Avg. of Exceedances	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	3.4
Oakridge	Highest 24-hour	49	44	53	51	37	30	210	76	53	592
	2 nd Highest 24-hour	46	41	40	44	31	25	173	60	49	424
	Exceedances	0	0	0	0	0	0	4.3	0	0	8.1
	3yr Avg. of Exceedances	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	2.7



*Includes all wildfire data not approved for Exceptional Event status by the EPA.

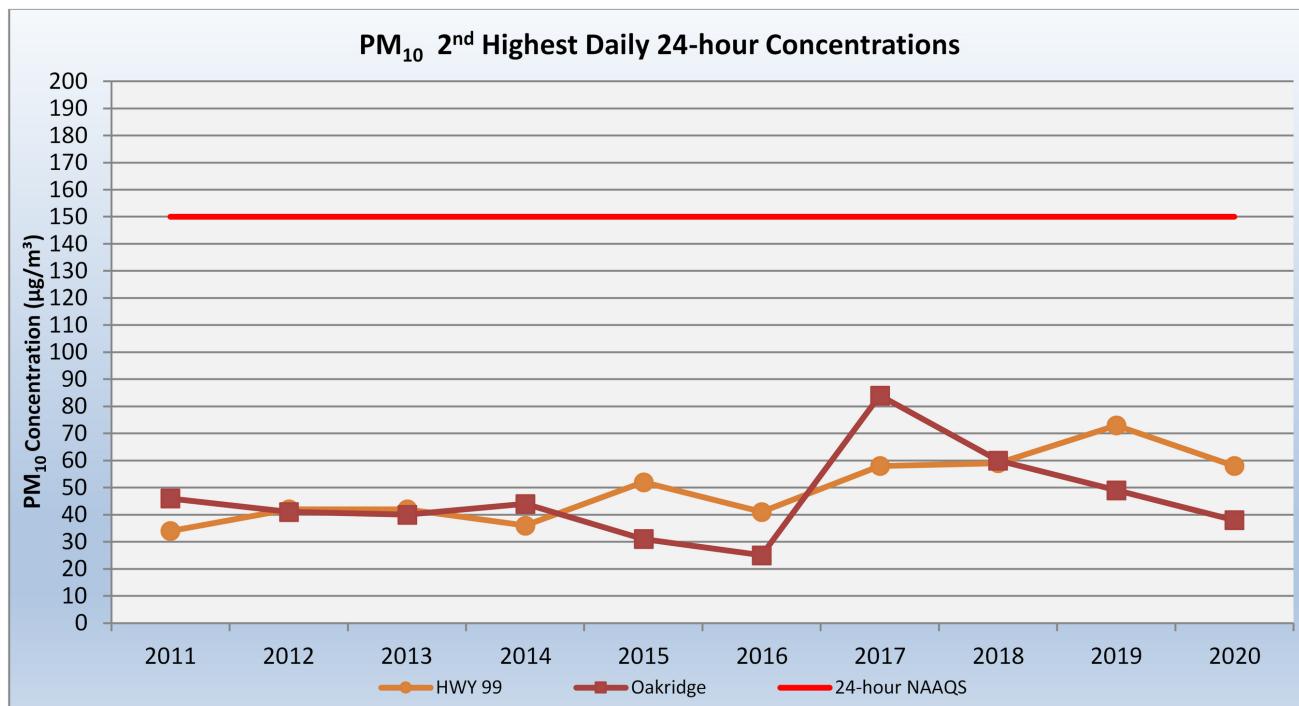
PARTICULATE MATTER DATA - PM10

Excludes Wildfire Data*

EPA has designated the following National Ambient Air Quality Standards (NAAQS) for PM10:

Level	Averaging Time	Description
150 $\mu\text{g}/\text{m}^3$	24-hour	Not to be exceeded more than once per year on average over 3 years.

PM ₁₀ Levels 2011 - 2020 ($\mu\text{g}/\text{m}^3$)											
Site Name		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Hwy 99	Highest 24-hour	57	46	59	42	96	56	69	59	77	59
	2 nd Highest 24-hour	34	42	42	36	52	41	58	59	73	58
	Exceedances	0	0	0	0	0	0	0	0	0	0
	3yr Avg. of Exceedances	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oakridge	Highest 24-hour	49	44	53	51	37	30	96	76	53	40
	2 nd Highest 24-hour	46	41	40	44	31	25	84	60	49	38
	Exceedances	0	0	0	0	0	0	0	0	0	0
	3yr Avg. of Exceedances	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



* Excludes wildfire influenced data >145 $\mu\text{g}/\text{m}^3$

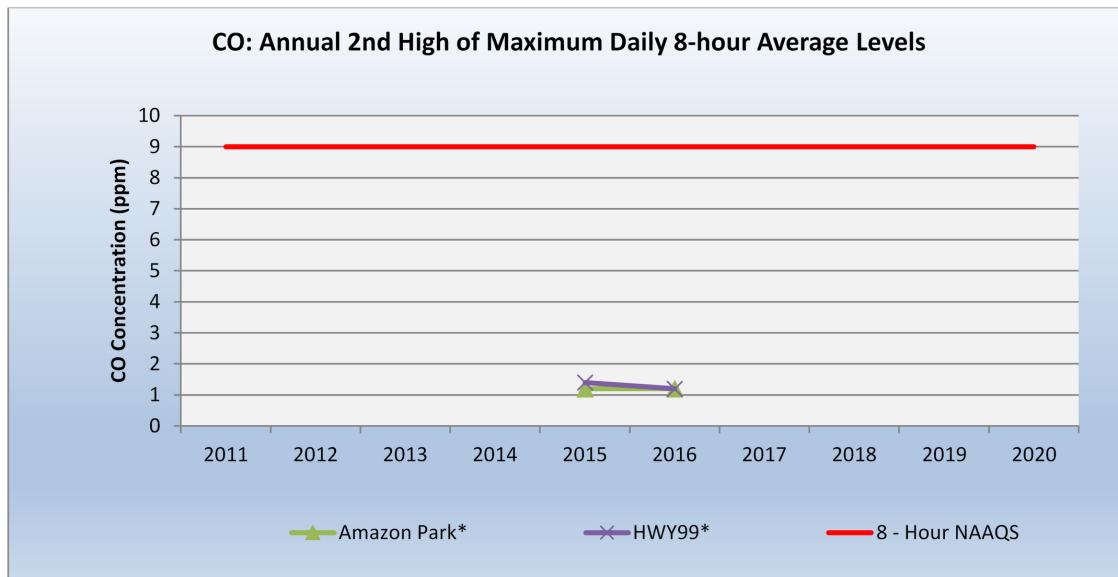
CARBON MONOXIDE DATA

EPA has designated the following National Ambient Air Quality Standards (NAAQS) for Carbon Monoxide:

Level	Averaging Time	Description
9 ppm	8-Hour	Not to be exceeded more than once per year.
35 ppm	1-Hour	Not to be exceeded more than once per year.

(The carbon monoxide levels, relating to the 1-hour standard in Lane County, are less than 10% of the standard)

CARBON MONOXIDE (CO) LEVELS 2011 - 2020 (ppm)											
Site Name		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
LCC - Downtown Eugene	Highest 8-hour	---	---	---	---	---	---	---	---	---	---
	2 nd high 8-hour	---	---	---	---	---	---	---	---	---	---
	# Exceedances	---	---	---	---	---	---	---	---	---	---
Amazon Park*	Highest 8-hour	---	---	---	---	1.3	1.3	---	---	---	---
	2 nd high 8-hour	---	---	---	---	1.2	1.2	---	---	---	---
	# Exceedances	---	---	---	---	0	0	---	---	---	---
HWY99*	Highest 8-hour	---	---	---	---	1.6	1.4	---	---	---	---
	2 nd high 8-hour	---	---	---	---	1.4	1.2	---	---	---	---
	# Exceedances	---	---	---	---	0	0	---	---	---	---



*These are special purpose monitoring sites and do not conform to NAAQS siting criteria. The data from these sites is not used to determine NAAQS compliance.