

LANE REGIONAL AIR PROTECTION AGENCY

2015 ANNUAL REPORT



LRAPA
Lane Regional Air Protection Agency



LRAPA's Earth Day in the Park Event Booth

OUR GOALS

OUR VISION

Community partners working together to ensure clean 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.

AIR QUALITY

Ensure healthful air quality for all Lane County citizens.

INVOLVEMENT

Inform and involve citizens and businesses in improving air quality.

SERVICE

Serve citizens and other stakeholders fairly, courteously, and in a timely manner.

PARTNERSHIPS

Work with our partners to leverage resources to make a difference in local air quality.



Westfir Covered Bridge

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Ridge separating Westfir's airshed from Oakridge's airshed

CONTACT INFORMATION

BUSINESS OFFICE	541-736-1056
HOME WOOD HEATING ADVISORY LINE	541-746-HEAT
HOME WOOD HEATING BURN BAN TEXT ALERT	TEXT "LRAPAHWH" TO 313131
BACKYARD BURNING ADVISORY LINE	541-726-3976
FLORENCE BACKYARD BURNING ADVISORY LINE	541-997-1757
24-HOUR COMPLAINT LINE	541-726-1930
TOLL-FREE LINE	1-877-285-7272
FAX	541-726-1205
WEBSITE	WWW.LRAPA.ORG
EMAIL	LRAPA@LRAPA.ORG
FACEBOOK	/LaneRegionalAirProtectionAgency
TWITTER	@LaneRegionalAir
LINKEDIN	/LaneRegionalAirProtectionAgency



LRAPA OVERVIEW

ADMINISTRATION & PLANNING

AIR QUALITY PLANNING

Identifies present and potential future air quality problems and develops appropriate control strategies.

FINANCE

Provides agency with full financial management services.

HUMAN RESOURCES

Manages agency personnel matters including hiring.

OPERATIONS

PERMITTING

Establishes conditions under which regulated sources may operate. This section is also responsible for the maintenance of the emission inventory for all point sources. Rule development is also a significant function performed by the permitting section.

COMPLIANCE & ENFORCEMENT

Assures permitted sources comply with permitting requirements. Enforces all agency rules and regulations through education and enforcement actions.

PUBLIC AFFAIRS

PUBLIC INFORMATION & EDUCATION

Works with all sections of the agency to promote public understanding, education, and awareness of the agency and local air quality issues.

TECHNICAL SERVICES

MONITORING

Collects ambient air quality data and provides quality assurance.

DATA METRICS

Determines whether ambient quality standards are being met, and provides technical assistance for program priorities and planning.

AIR METRICS

Makes and markets portable air-sampling devices and services.



Director, Merlyn Hough points out areas impacted by inversions in Oakridge

LETTER FROM THE DIRECTOR

MERLYN HOUGH

AIR QUALITY PROGRESS

Air pollution levels of particulate matter have dramatically improved at all of the monitors in Lane County over the last 30 years. This is good, especially since ongoing world-wide health studies have supported the need for more protective health standards.

MORE PROTECTIVE AIR QUALITY HEALTH STANDARDS

The national particulate health standards were most recently tightened in December 2006 (for the 24-hour standard on worst winter days) and in December 2012 (for the annual average standard). All of the Lane County monitors have met the annual standard for several years, but the 24-hour standard has been a challenge to meet, especially in Oakridge. Even in Eugene, although particulate levels have been in compliance, we were within 10% of violating the current 24-hour standard of 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) during 2013-2015.

SUCCESSSES AND CHALLENGES

In Oakridge, particulate levels have been out of compliance, and the federal Clean Air Act required attainment by December 31, 2015. The bad news is that particulate levels in Oakridge were $37 \mu\text{g}/\text{m}^3$ during 2013-2015, not yet meeting the $35 \mu\text{g}/\text{m}^3$ standard. The good news is that the $37 \mu\text{g}/\text{m}^3$ measured during 2013-2015, and the $28.9 \mu\text{g}/\text{m}^3$ measured in Oakridge during 2015, are the best levels measured since monitoring began

in Oakridge 25 years ago. In addition, it appears that with this improvement in air quality and the extensive one-on-one work with homeowners this winter by the Oakridge Police Department, the area will qualify for a one-year extension of the deadline by the United States Environmental Protection Agency. A joint request for an extension was submitted to EPA on December 14, 2015 by LRAPA, the City of Oakridge, and the Oregon Department of Environmental Quality. We expect EPA approval by May 2016 and, more importantly, continued air quality improvement and full attainment of the health standards in Oakridge by December 31, 2016.

“One major change, the expansion of the green-yellow-red home wood heating advisory season from November-February to October-May”

HOME WOOD HEATING

The major contributors to winter particulate problems are home wood heating emissions from woodstoves and fireplaces. Not surprisingly, home wood heating complaints have steadily increased over the past decade, while most other complaint categories have decreased. The LRAPA Citizens Advisory Committee has recommended a number of improvements to the local home wood heating programs that we will be discussing with



cities and the county in the coming months. One major change, the expansion of the green-yellow-red home wood heating advisory season from November-February to October-May, has already been approved by the LRAPA Board of Directors and began October 1, 2015.

OUTDOOR BURNING

The other complaint category that has increased over the past decade is outdoor burning. The LRAPA Citizens Advisory Committee has recommended a number of improvements to the outdoor burning program, too, with the expansion of yard debris programs in recent years, including curbside pickup in many urban areas. Stay tuned!

CLEANER FUELS, CLEANER VEHICLES, CLEANER POWER PLANTS

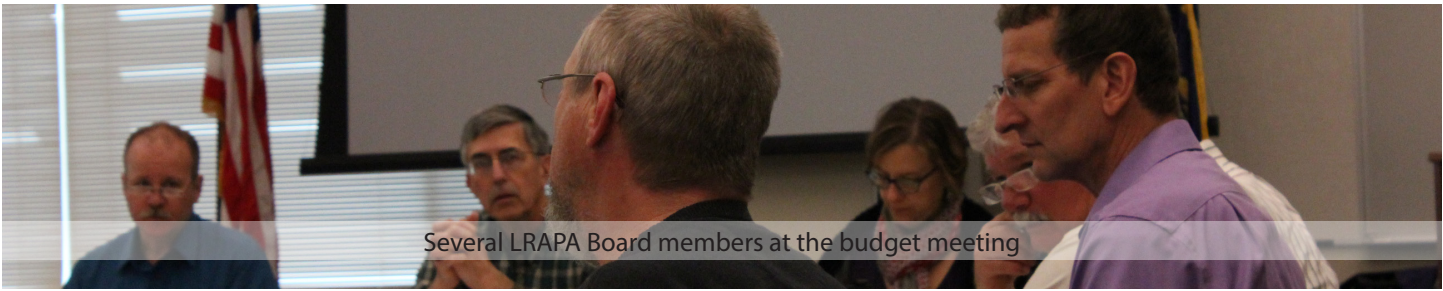
The electric vehicle game-changers are just around the corner. The current front-runners among the affordable EVs with at least 200-mile range are the GM Bolt and the Tesla Model 3, both being revealed in 2016 and produced in 2017. Or will Volkswagen make amends for its past sins and become a new leader in EV technology and production? Meanwhile, power plants are expected to become more efficient, and renewable power sources expanded (despite court challenges), thus reducing the emissions from electrical generation. Workplace charging is becoming more common and quick-charge networks are being expanded, making zero-emission vehicles an option for more and more drivers. These are exciting times!

WEBSITE

Be sure and check out our new LRAPA website features. Take it for a test drive! We welcome your feedback.



Merlyn Hough, P.E., Director



Several LRAPA Board members at the budget meeting

2015 BOARD OF DIRECTORS

The LRAPA Board of Directors appoint the director of the agency, who has overall authority to appoint and direct the LRAPA staff. The director makes policy recommendations to the board and is responsible for implementing board decisions.

Mike Fleck	CHAIR, COTTAGE GROVE
Jeannine Parisi	VICE CHAIR, EUGENE
Bill Brommelsiek	AT-LARGE
Bill Carpenter	SPRINGFIELD
Dave Ralston	SPRINGFIELD
Jay Bozievich	LANE COUNTY
Betty Taylor	EUGENE
Joe Gonzales	EUGENE
Scott Lucas	EUGENE



2015 CITIZENS ADVISORY COMMITTEE

The LRAPA Citizens Advisory Committee is comprised of local citizens representing specific areas of interest, including agriculture, community planning, fire suppression, industry, public health, and community planning. The committee is called upon to advise the board and staff on variety of air quality issues, rules, and policies.

Maurie Denner	CHAIR, 11 YEARS SERVICE GENERAL PUBLIC
Chuck Gottfried	7 YEARS SERVICE, AGRICULTURE
Gery Vander Meer	13 YEARS SERVICE, GENERAL PUBLIC
Hugh Larkin II	9 YEARS SERVICE, GENERAL PUBLIC
Jim Daniels	6 YEARS SERVICE, LARGE INDUSTRY
John Tamulonis	18 YEARS SERVICE, PLANNING
Larry Dunlap	17 YEARS SERVICE, PUBLIC HEALTH
Laura Seyler	5 YEARS SERVICE, LARGE INDUSTRY
Link Smith	7 YEARS SERVICE, FIRE SUPPRESSION
Paul Engelking	18 YEARS SERVICE, GENERAL PUBLIC
Randy Hledik	5 YEARS SERVICE, INDUSTRY
Russ Ayers	16 YEARS SERVICE, GENERAL PUBLIC
Terry Richardson	2 YEARS SERVICE, GENERAL PUBLIC



LANE REGIONAL AIR PROTECTION AGENCY

The Lane Regional Air Protection Agency (LRAPA) is committed as a community partner working toward ensuring clean air for Lane County citizens. Through our mission, we act upon our commitment to our stakeholders and partners.

LRAPA's Board of Directors guarantees local regulatory involvement through Board direction and guidance, and a local decision-making process similar to city and county governance over their jurisdictions. Sixteen local citizens comprise our Citizens Advisory Committee, which provides input and recommendations to the LRAPA Board and agency staff.

AIR QUALITY

Since our inception in 1968, LRAPA has strived to make continued air quality improvements in Lane County. Even with increased traffic and population, air quality levels in Lane County's metro areas have continued to improve. The Eugene/Springfield metro area meets all federal clean air health standards (National Ambient Air Quality Standards) with help from LRAPA to administer state regulation and local mandatory and voluntary programs.

The improvements are evidenced by data collected by LRAPA. LRAPA's air quality monitoring network consists of 7 monitoring sites that include a total of 51 parameters. At an estimated operational cost of over \$400,000 per year, LRAPA's network provides Lane County with comprehensive data on local air quality. The network includes three locations in Eugene and one each in Springfield, Oakridge,

Cottage Grove, and Saginaw.

INVOLVEMENT

LRAPA places strong emphasis on community involvement and public education. To us, involvement means participating in projects to improve our community. In addition, we strive to fulfill our regulatory responsibilities to our partners and inform the public with accurate and timely information.

Our commitment to the local community is demonstrated by our development of community projects, public event booths, outdoor school programs, and outreach events.

Community-building results when an agency such as LRAPA gets involved with its constituents. Local government contributions help secure the funding that is necessary to establish true involvement - an agency with open doors to its public, where staff strive for solutions with citizens, and where the executive director is just a phone call or an office visit away.

In 2015, LRAPA debuted a newly renovated website with easy to navigate features and increased content. To continue to evolve and innovate communication strategies, we have expanded our social media presence on Facebook, Twitter, and LinkedIn. We have activated e-mail and text message notifications for daily home wood heating advisory alerts and increased subscriptions to our quarterly e-news letter. We will continue to reach out to the public with varied methods to increase



the accessibility to and availability of information for all users.

SERVICE

A service organization serves its community, and a government agency should serve its constituents. Whether it be the general public looking for help to solve an odor problem, a permitted facility needing regulatory support, or an “out-of-towner” looking to relocate to our community, LRAPA believes personalized attention is prudent for success. This can be seen in LRAPA’s repeated high marks in its customer service surveys, as reported by LRAPA’s Citizens Advisory Committee. When asked about LRAPA’s service, respondents overwhelmingly gave staff high marks for respectfulness, courteousness, helpfulness, timeliness, and service. Without a strong sense of service, LRAPA could not adequately respond to the numerous complaints it receives yearly.

Over the last few years, LRAPA responded to an average of 800 backyard burning, home wood heating, dust, agricultural burning and industrial

complaints throughout Lane County. LRAPA services the community at-large by giving personal attention whenever possible to city and county staff, local schools, area businesses, the regulated community and the general public. The agency strives to give all members of the community equal time and access.

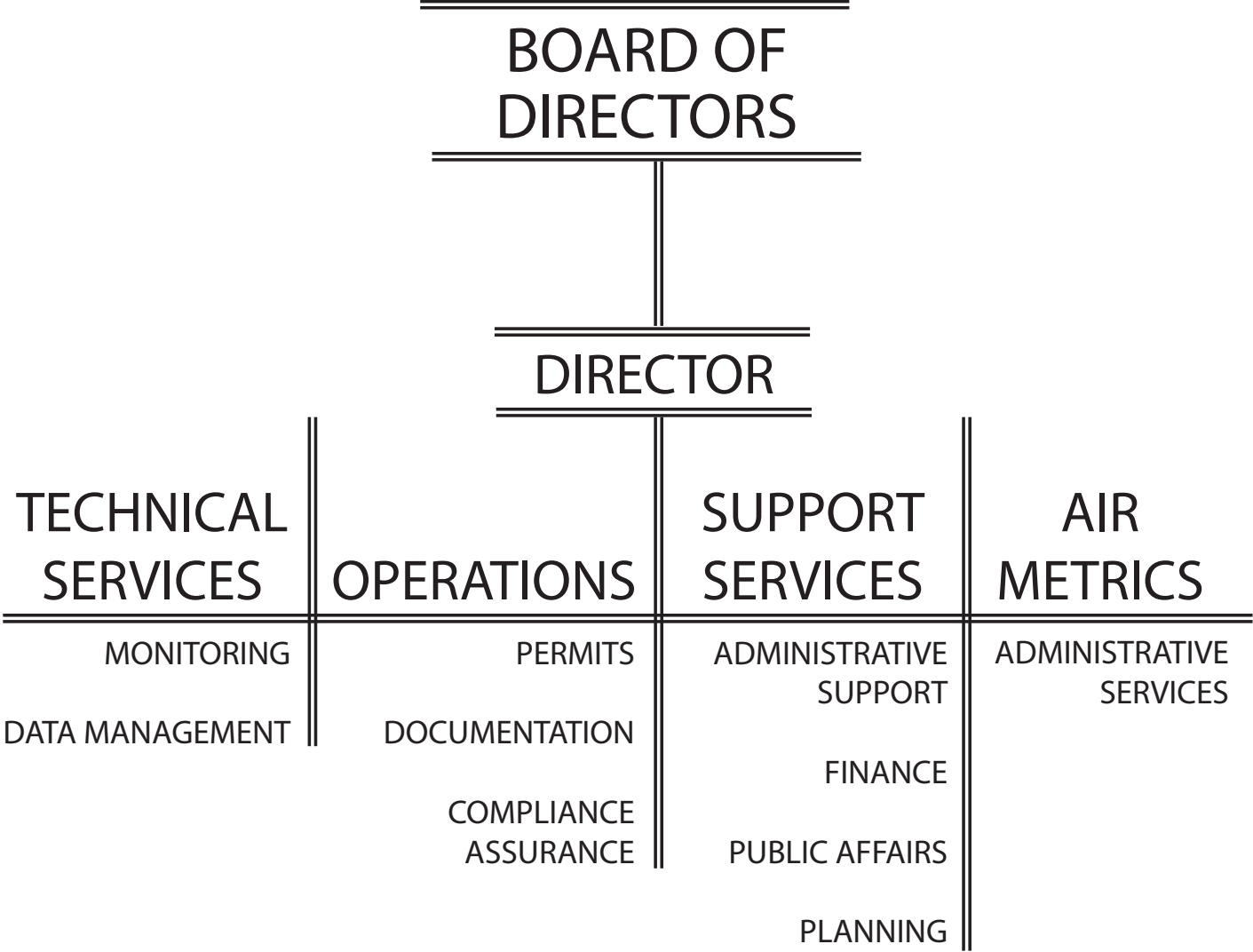
PARTNERSHIPS

Partnerships are a mainstay for LRAPA. Through partnerships, the agency has made enormous strides toward education and emissions reductions. LRAPA’s partnerships are instrumental in educating the community not only about air quality, but about water quality, energy use and overall sustainability as well. Through recent partnerships, LRAPA has helped bring more than \$5 million in funding for cleaner fuels, safer school buses, and woodstove change-outs, to reach beyond our core work in helping the local airshed, community well-being and environment.





ORGANIZATION CHART



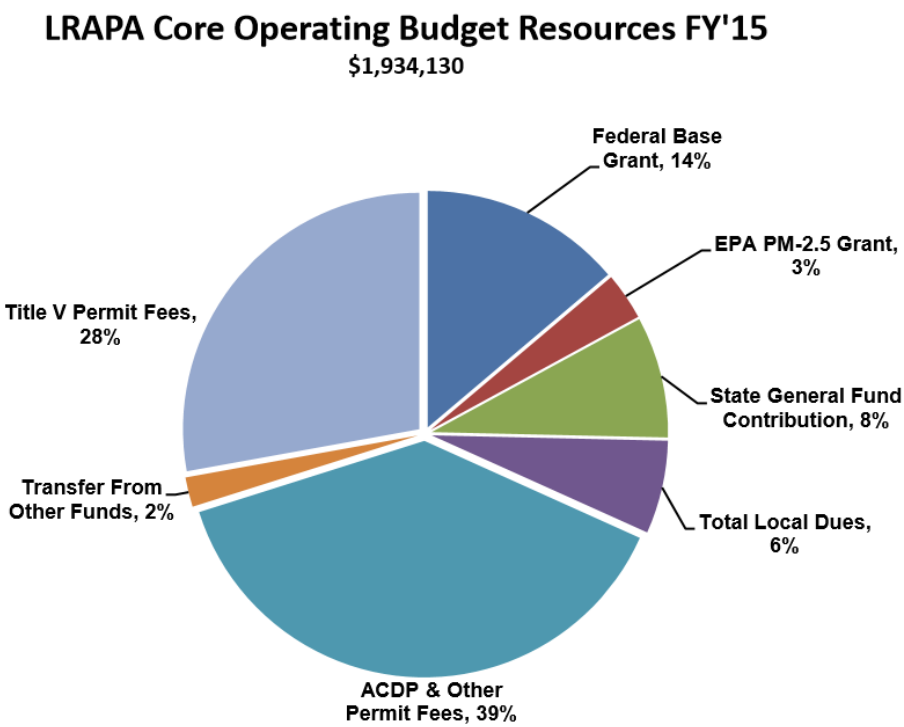


FUNDING & BUDGET

LRAPA's budget process is reviewed and determined by the LRAPA Budget Committee. This process begins in February each year with a new budget prepared by LRAPA's chief financial officer of the agency and budget committee meetings are held during March and April. These meetings are open to the public, and serve as a transparent process for the agency's fiscal policies and responsibilities. Once the committee makes final revisions to the proposed budget, a vote is taken to approve the budget. Once approved, the budget is published and a public hearing is scheduled. Citizens may give testimony at the public hearing. Comments from the public are taken into consideration by the LRAPA Board of Directors before a resolution is enacted to formally adopt the budget.

In the past several years, LRAPA has experienced reduced revenues as the result of decreased funding at the local, state, and federal levels. The agency has responded by reducing staff and cutting certain programs to focus on core responsibilities. This year, with the institution of a reserve policy and the recovery of a portion of the lost local funds, LRAPA has been able to expand operations to include some pre-recession activities such as Air Toxics Monitoring.

Even through funding challenges, LRAPA has been successful in its mission to advocate for the continuous improvement of air quality in Lane County. Our airshed has improved significantly and this trend is expected to continue because of LRAPA's commitment and efforts to deliver on its mission.





Hexion in Springfield is one of LRAPA's many permitted sources

PERMITTING



Arclin and other point sources have permits and review reports available online

LRAPA-issued operating permits are required for a number of industries and businesses in Lane County.

Of the 310 permitted sources in Lane County, 289 have Air Contaminant Discharge Permits (ACDP), 18 hold Title V Federal Operating Permits, and 3 are Registered Sources. Gasoline dispensing facilities (GDFs) account for 35% of the ACDPs (i.e., 103 GDFs out of 289 ACDPs).

ACDPs are issued to all industries required by LRAPA rules to obtain permits, except those “major” sources subject to federal operating permit requirements. Industrial sources are classified as “major” sources if they have the potential to emit 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 on an annual basis.

Source activities in Lane County which require operating permits include: food and agriculture, wood products manufacturing, chemical products manufacturing, mineral products manufacturing, metal products manufacturing, waste treatment, fuel burning, fuel transfer operations, coating operations, and sources of toxic air pollutants.

2015 PERMITTING SUMMARY		
PERMITS ISSUED & RENEWED	PERMITS MODIFIED	INDUSTRIES INSPECTED
14	29	81

NOTE: Some industries have multiple inspections in a year.



ENFORCEMENT



LRAPA initiates enforcement actions in instances of excessive industrial air pollution, illegal open 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.

Typically, the dollar amount of penalties collected annually does not strictly reflect the penalties assessed or settled during the year, due to pending cases and collections received on previous years' penalties. Penalty money collected by LRAPA is transferred to the Lane County general fund.

LRAPA collected \$30,790 in penalties during 2015. All penalties collected are forwarded to the Lane County general fund; however, attorney fees associated with contested cases are deducted first. In 2015, LRAPA issued 38 administrative Notices of Non-Compliance and 37 notices of violations with civil penalties.

SUMMARY ENFORCEMENT ACTIONS 2005-2015											
YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
NOTICES OF NON-COMPLIANCE & WARNINGS	55	51	48	57	37	57	64	41	51	36	38
NOTICES OF VIOLATION WITH CIVIL PENALTIES	39	33	47	36	28	39	42	29	23	28	37

TOTAL CIVIL PENALTIES 2005-2015											
YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
TOTAL CIVIL PENALTIES COLLECTED (\$)	14,700	16,404	46,050	46,526	53,786	27,941	28,187	29,727	21,102	14,511	30,790



LRAPA checks in on asbestos abatement projects

ASBESTOS ABATEMENT

LRAPA's Asbestos Permit and Inspection Program handles hundreds of abatement notices per year. In order to legally remove asbestos, an asbestos survey must be conducted by an accredited inspector prior to commencing a building demolition or remodel. Proper permitting notice needs to be filed and removal or abatement done following criteria outlined in the regulations. The LRAPA asbestos regulations (Title 43) specify work practices regarding asbestos to be followed during demolitions and renovations of all structures, installations, buildings, and residential properties with certain exemptions as outlined in 43-015-8.

The regulations require the owner or the operator of the building to have all materials abated by a licensed abatement contractor prior to any demolition or renovations of buildings that contain more than 1% of asbestos or asbestos-containing material. In addition, particular manufacturing and fabricating operations cannot emit visible emissions into the outside air and must follow air cleaning procedures, as well as follow certain requirements when removing asbestos-containing waste.

2015 ASBESTOS NOTICES	
SCHOOLS	24
RESIDENCE	241
COLLEGE	45
INDUSTRY	14
COMMERCIAL	87
OTHER	15
TOTAL	426
2015 ASBESTOS INSPECTIONS	
TOTAL	88
2015 ASBESTOS FEES RECEIVED	
TOTAL	\$ 155,402.00



Photos (Top and Left): LRAPA inspects asbestos abatement projects for renovation on a University of Oregon building.





COMPLAINT RESPONSE

LRAPA investigates citizen complaints whenever one is registered with the agency. Field officers also include potential complaints they observe and respond to in the field. People are able to submit complaints online on our website, over the phone, or through email. Each year, our office receives hundreds of complaints ranging from agriculture to residential to industry. Aside from the formal complaints, LRAPA also receives community inquiries, informal notifications, and agency requests. In 2015, we received a record number of home wood heating complaints. Overall, industrial complaints have been decreasing in the past eleven years. LRAPA works hard to respond to every complaint received and provide solutions to resolve the sources of these complaints. The success of our complaint program is reflected in the steady decrease of complaints throughout the years.

PERCENT CHANGE FROM 2014 - 2015	
DUST	+ 78.6%
AG/FIELD BURNING	+ 200.0 %
GENERAL AIR QUALITY	- 50.0 %
HOME WOOD HEATING	+ 182.64 %
INDUSTRY	- 59.06 %
MISCELLANEOUS	+ 49.12 %
OPEN BURNING	- 10.04 %
SLASH BURNING	+ 57.12 %
UNKNOWN	+ 31.43 %
TOTAL	+ 24.48 %

LRAPA COMPLAINTS 2006-2015										
YEAR	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
DUST	33	6	21	21	34	33	44	30	14	25
AG/FIELD BURNING	576	341	101	24	9	13	1	17	4	12
GENERAL AIR QUALITY	7	63	14	21	2	6	6	26	30	15
HOME WOOD HEATING	89	82	130	113	62	135	95	219	121	342
INDUSTRY	465	327	231	270	265	169	128	122	127	52
MISCELLANEOUS	95	109	137	61	77	101	79	52	57	85
OPEN BURNING	169	390	293	277	268	341	268	321	279	251
SLASH BURNING	41	33	25	3	5	16	7	5	7	11
UNKNOWN	105	124	59	25	12	25	17	14	35	46
TOTAL	1643	1496	1011	815	734	839	645	806	674	839



PUBLIC EDUCATION & INFORMATION

The Public Affairs department at Lane Regional Air Protection Agency provides a number of services to the agency including media relations, communications, public education, and outreach. The department's priorities are determined by need, urgency, and value.

Public Affairs staff believe its main focus is two-fold: to educate the community about air quality issues affecting the local jurisdiction; and to provide information to the community, be it through press releases and media relations, neighborhood groups, digital outreach, advertising campaigns, or other information avenues.

Over the past years, the program has evolved from one focused on media relations, mandatory program outreach to the community, and direct mailings, to the more dynamic program it is today. Our public education efforts combine traditional marketing with inbound tactics that draw in the community based on their own interests and concerns. It also involves multi-agency partnerships and voluntary educational efforts outside the agency's mandates.

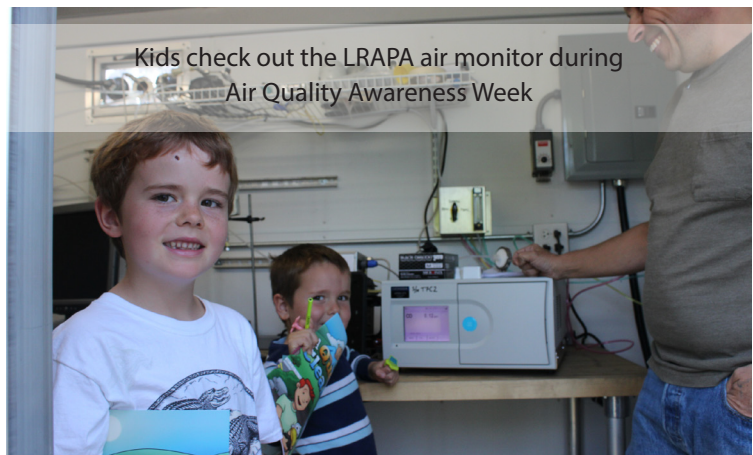
In 2015, LRAPA's public outreach strengthened its year old digital outlets. On both Facebook and Twitter, LRAPA gained followers, likes, and increased engagement. Paid advertising on these channels lead to exposure to thousands of citizens on a single post, which was especially helpful during burn ban notices. Both sites have been gaining a steady audience and allows for the public to communicate with LRAPA on another level. Our Facebook following grew by 132% and Twitter by 81%.

In addition to the quarterly e-newsletters, LRAPA also added e-mail alerts for home wood heating burn bans. These e-mail notifications signed up more than 500 people in the first winter season. Along with the e-mail notifications, we also set up text notifications to mobile phones during burn bans, where hundreds more people signed up.

Twenty years ago, the program largely centered around two LRAPA programs: open burning and home wood heating. It was encompassed of a monthly print newsletter, fire department newsletter, print ad campaigns, and educational materials.



LRAPA teaches at the Oakridge Outdoor School



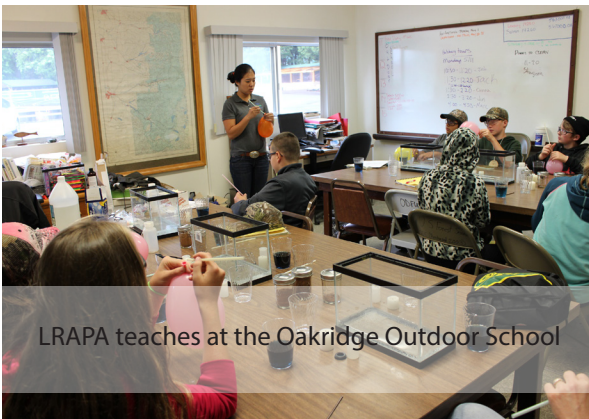


Dry firewood sale partnered with the South Willamette Forest Collaborative

In the last decade, the LRAPA Public Affairs office has evolved to increase scope and depth of its programs to include: digital advertising; website design and management; anti-idling campaigns targeting schools; summertime air quality campaigns; school outreach; diesel education; community events-planning (community hazardous waste collections, Earth Day, and similar events); special project development (such as the supplemental environmental projects); interagency partnerships (such as Warm Homes); print and electronic design; and multi-media.

The Public Affairs department conducted 36 media interviews in 2015. Their audience also expanded to people at outreach and education events including: Lane County Home and Garden Show, Earth Day, National Drive Electric Week, Town Halls, Neighbourhood Association Meetings, and more. LRAPA public education also expands to outdoor school, K-12 science classrooms, and college courses.

As the public’s sources for news become more digital, LRAPA is following the same trends to provide people with the most accurate information as quickly as possible.



LRAPA teaches at the Oakridge Outdoor School



LRAPA at Earth Day in the Park Event



LRAPA at an Electric Vehicle Showcase in Eugene



LRAPA at Oakridge dry firewood sale with information



Filters are used to measure pollution at LRAPA's lab

TECHNICAL SERVICES

LRAPA's air quality monitoring network consists of seven monitoring sites that measure a total of 51 parameters. The agency collects over 300,000 hours of pollutant-related data per year. At an estimated operational cost of \$400,000 per year, LRAPA's network provides Lane County with comprehensive data on local air quality. Without the local program, the Lane County network could have as few as four sites with fewer hours of data collection.

LRAPA's network includes three locations in Eugene, and one each in Springfield, Oakridge, Cottage Grove, and Saginaw.

Monitoring stations have special instruments to measure the amount of specific pollutants in the air. Using information from the monitors, it can be determined whether the air is healthy or unhealthy for people.

LRAPA measures particulate matter at five sites in Lane County: west Eugene, south Eugene, downtown Springfield, Cottage Grove and Oakridge. Particulate matter is measured using two methods. The first method uses a filter that captures particles. The filters are weighed to determine how much pollution is contained in each cubic meter of air that has been drawn into the sampler. The second method measures particles with a nephelometer, which uses a light beam and light detector. Light reflected from the particles determines the concentration of particles in the air.

LRAPA measures ozone concentrations at Amazon park in South Eugene and in Saginaw, near Cottage Grove. To determine ozone levels, a pump brings an air sample into equipment that uses ultra-violet light and a two-step process that calculates the amount of ozone in the sample.



LRAPA giving a tour of the Oakridge air quality monitor to EPA staff



LRAPA air monitor tour during Air Quality Awareness Week



LRAPA's lab technicians measure and weigh filters for data

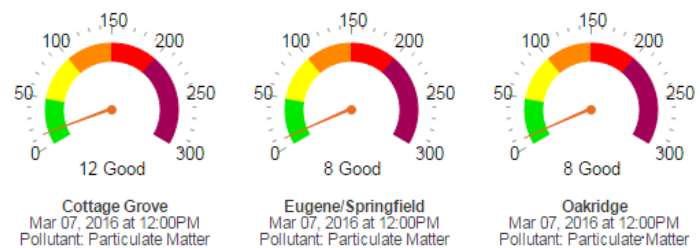
AIR QUALITY INDEX

The United States Environmental Protection Agency (EPA) developed the Air Quality Index (AQI) to provide the public with simple information about local air quality. Using data from local monitoring stations, the AQI provides a daily report about air quality and the possible health impacts on days with bad air quality. Each AQI category is assigned a specific color and a brief explanation to make it easier for the public to understand quickly whether air pollution is reaching unhealthy levels in their community.

The LRAPA website displays the current AQI information for Eugene/Springfield, Oakridge, and Cottage Grove on its home page. The AQI is updated on an hourly basis to provide current information to the public. More detailed technical information from all LRAPA monitoring sites can be accessed on our website including: data summary, AQI for the last 45 days, monitoring site map, and data graphing.

AIR QUALITY INDEX SUMMARY				
OAKRIDGE (NUMBER OF DAYS)				
YEAR	GOOD	MODERATE	USG	UNHEALTHY
2015	288	71	5	1
2014	272	81	11	1
2013	274	77	13	0
2012	308	43	7	0
2011	299	53	12	0
2010	303	49	4	0
2009	282	59	20	4

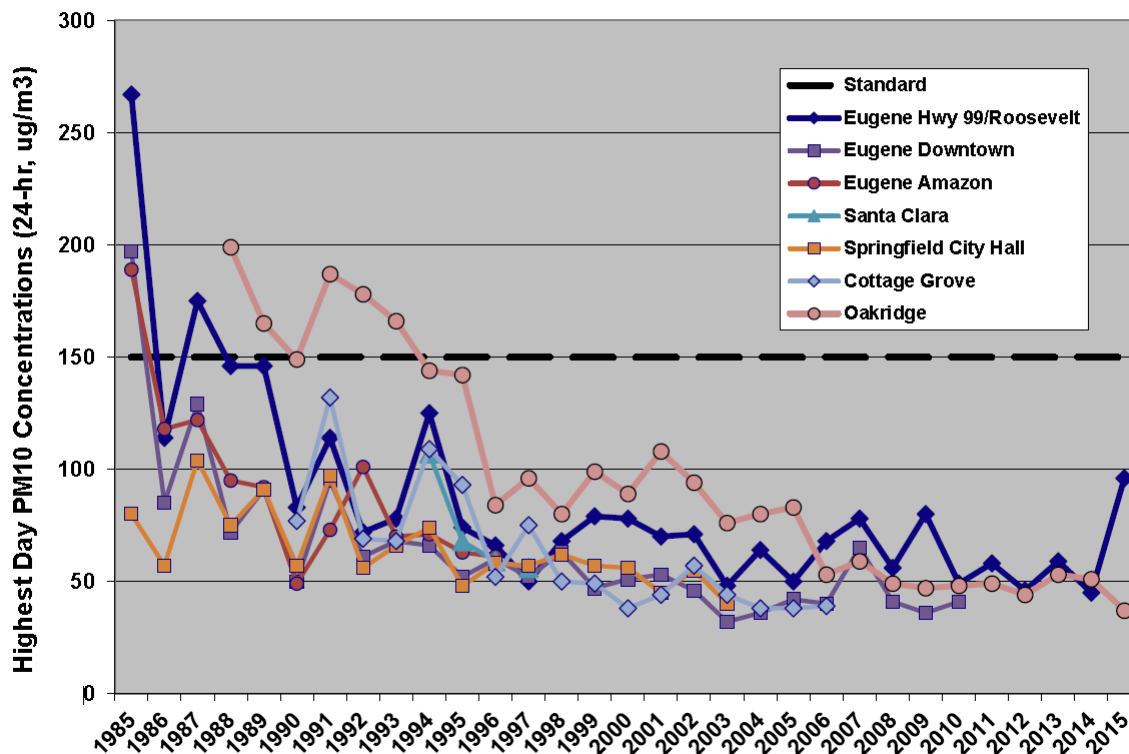
AIR QUALITY INDEX SUMMARY				
EUGENE/SPRINGFIELD (NUMBER OF DAYS)				
YEAR	GOOD	MODERATE	USG	UNHEALTHY
2015	291	67	5	2
2014	310	51	4	0
2013	284	69	11	1
2012	308	58	0	0
2011	329	39	0	0
2010	347	18	0	0
2009	321	35	8	1



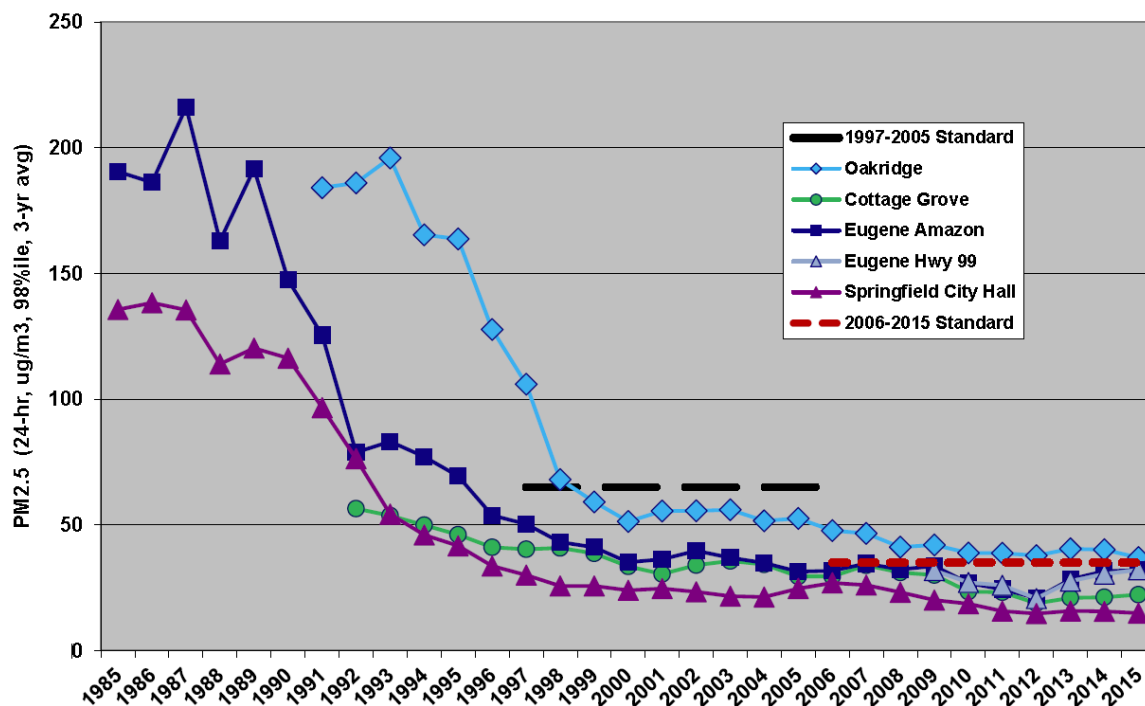
GOOD 0-50	MODERATE 51-100	UNHEALTHY FOR SENSITIVE GROUPS 101-150	UNHEALTHY 151-200	VERY UNHEALTHY 201-300	HAZARDOUS 301-500
Air quality is considered satisfactory, and air pollution poses little or no risk.	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.	Members of sensitive groups may experience health effects. The general public is not likely to be affected.	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.	Health warnings of emergency conditions. The entire population is more likely to be affected.	Health alert: everyone may experience more serious health effects.

LONG TERM TRENDS

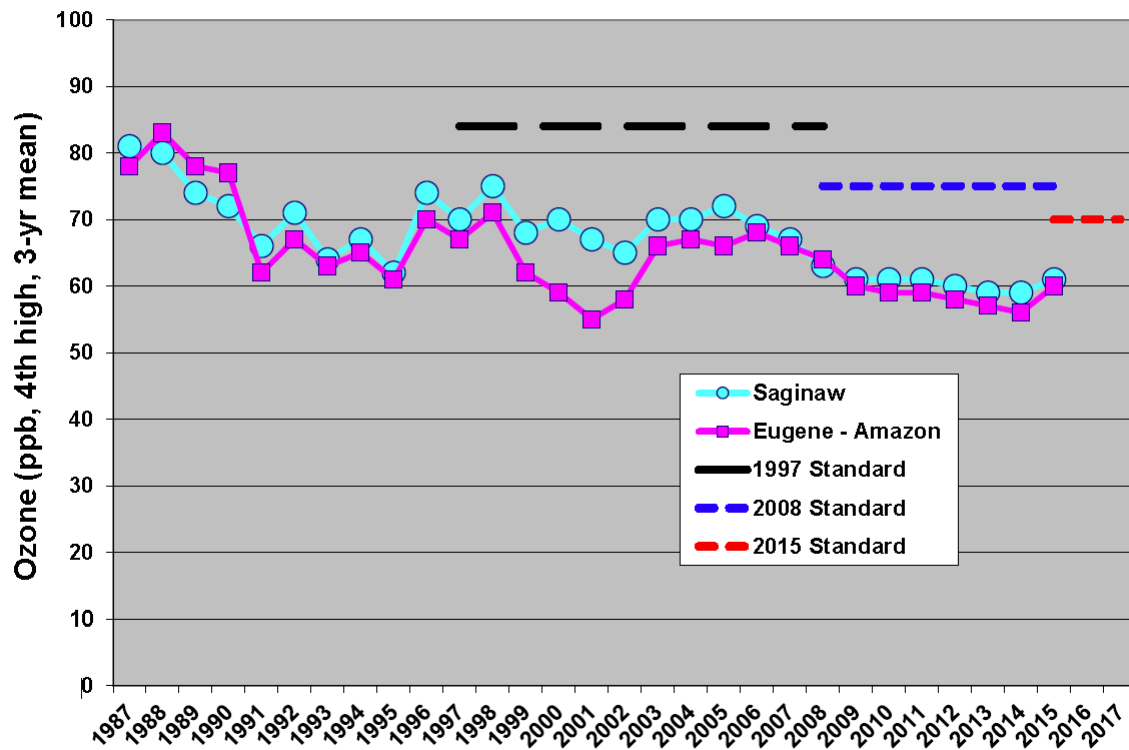
Inhalable Particulate Matter (PM₁₀) in Lane County



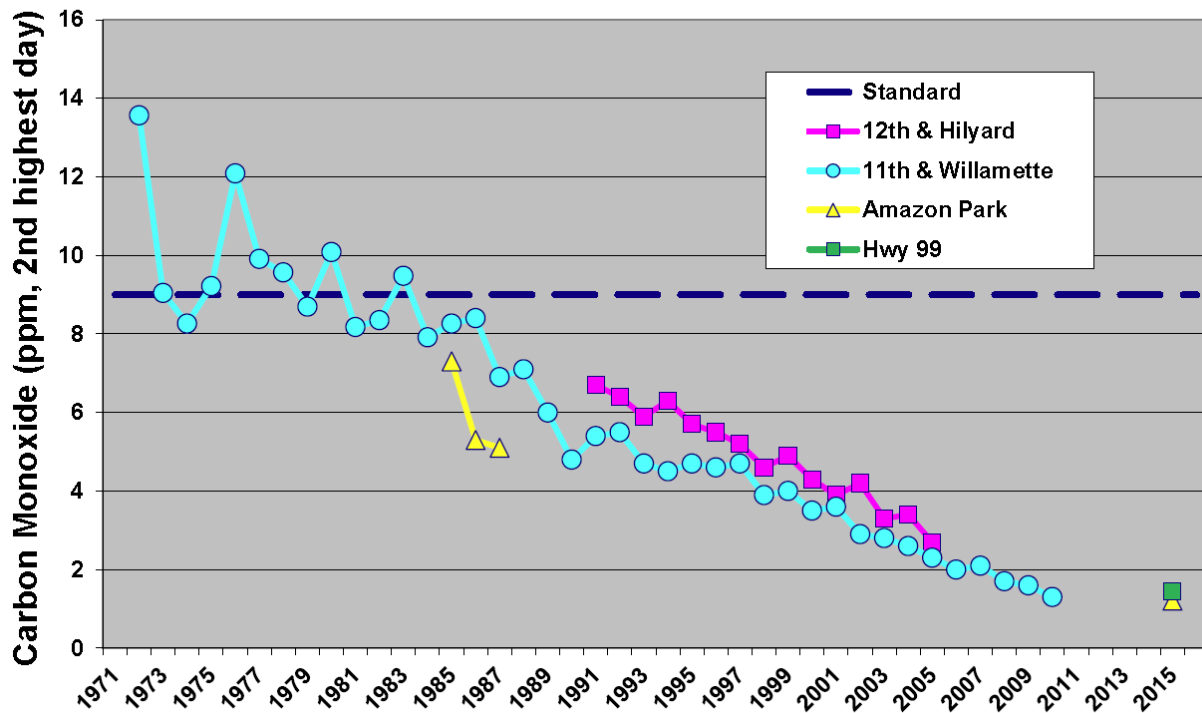
Respirable Particulate Matter (PM_{2.5}) in Lane County



Ozone in Lane County



Carbon Monoxide in Eugene

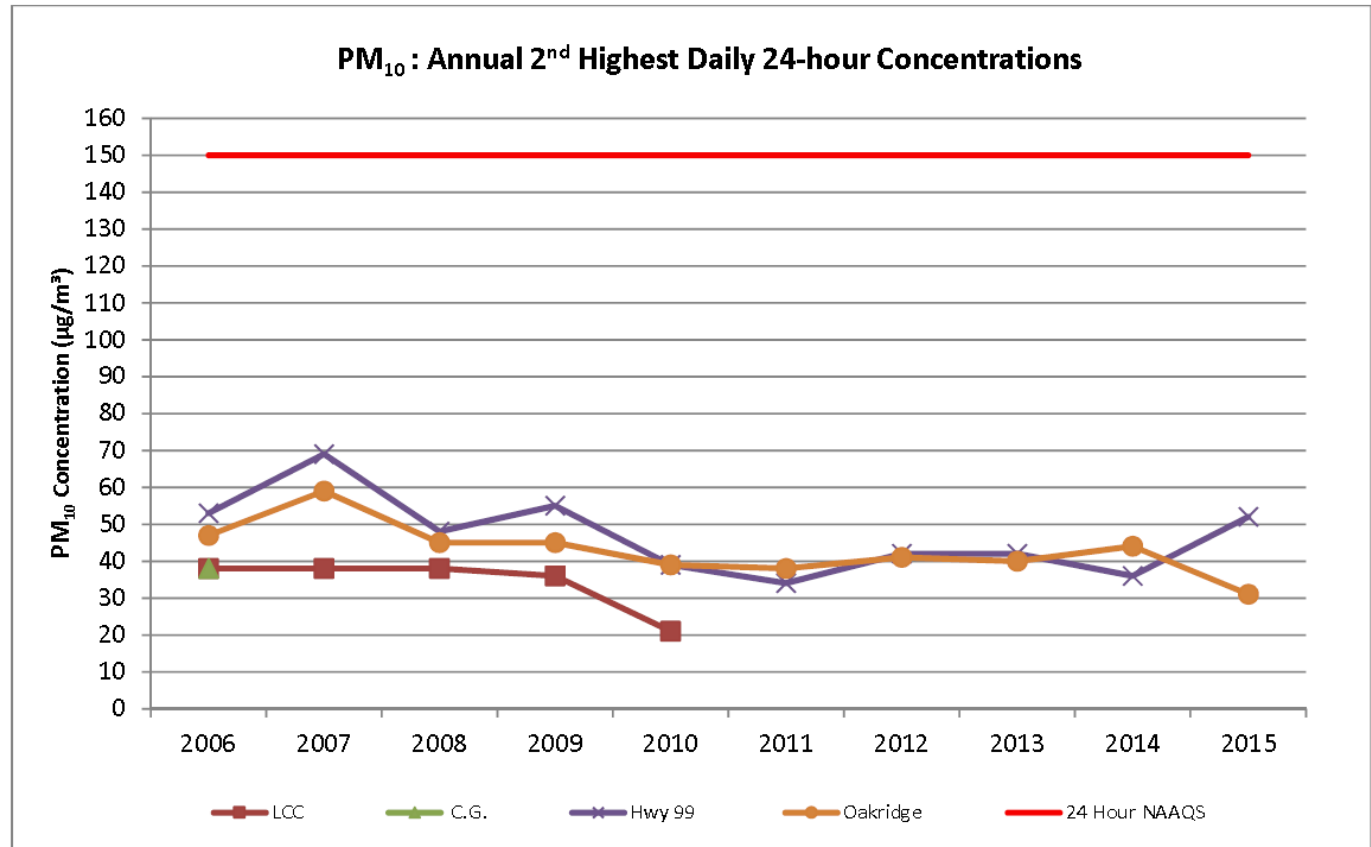


PARTICULATE MATTER DATA- PM10

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

Level	Averaging Time	Description
150 µg/m ³	24-hour	Not to be exceeded more than once per year on average over 3 years.

PM ₁₀ Levels 2006 - 2015 (µg/m ³)											
Site Name		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
LCC - Downtown	Highest 24-hour	40	65	41	36	41	---	---	---	---	---
	2nd Highest 24-hour	38	38	38	36	21	---	---	---	---	---
	Annual Average	13	13	13	12	11	---	---	---	---	---
Cottage Grove	Highest 24-hour	39	---	---	---	---	---	---	---	---	---
	2nd Highest 24-hour	38	---	---	---	---	---	---	---	---	---
	Annual Average	14	---	---	---	---	---	---	---	---	---
Hwy 99	Highest 24-hour	68	78	56	80	49	58	46	59	45	96
	2nd Highest 24-hour	53	69	48	55	39	34	42	45	37	52
	Annual Average	19	16	16	16	13	13	14	15	15	17
Oakridge	Highest 24-hour	53	59	49	47	48	49	44	53	51	37
	2nd Highest 24-hour	47	59	45	45	39	38	41	40	44	31
	Annual Average	16	14	16	14	8	12	12	13	14	13

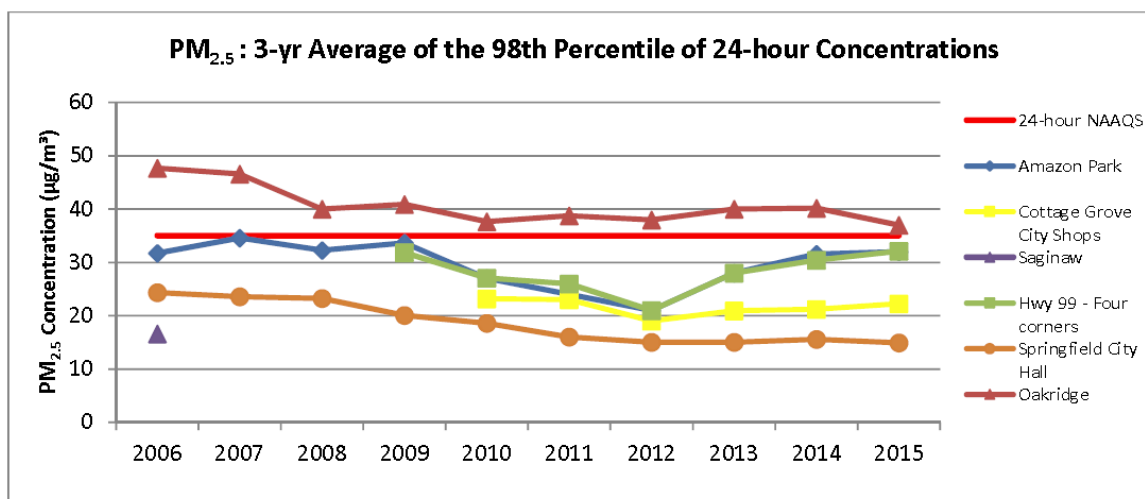


PARTICULATE MATTER DATA- PM2.5

EPA has designated the following National Ambient Air Quality Standards (NAAQS) for PM_{2.5}:

Level	Averaging Time	Description
12.0 µg/m ³	Annual (Arithmetic Average)	To attain this standard, the 3-year average of the annual mean PM _{2.5} concentrations from monitors must not exceed 12.0 µg/m ³ (effective December 14, 2012).
35 µg/m ³	24-hour	To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations must not exceed 35 µg/m ³ (effective December 17, 2006).

24-HOUR AVERAGE PM _{2.5} LEVELS 2006 - 2015 (µg/m ³)											
Site Name		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Amazon Park	Annual mean	8.3	7.4	7.8	8.5	5.8	6.5	6.4	7.8	7.2	7.3
	Highest 24-hour	43.3	43.0	40.0	59.9	21.0	24.6	31.6	51.9	35.5	55.3
	Annual 98 th %-ile	31.8	36.3	28.7	35.9	16.0	21.2	25.4	38.6	30.7	26.7
	3 year 98 th %-ile	32	35	32	34	27	24	21	28	32	32
Cottage Grove City Shops	Annual mean	---	---	8.1	8.5	6.9	7.1	6.7	7.5	7.0	7.3
	Highest 24-hour	---	---	31.8	33.6	21.1	32.1	24.7	38.1	34.0	39.6
	Annual 98 th %-ile	---	---	21.1	30.2	18.3	20.4	17.0	25.4	21.3	20.1
	3 year 98 th %-ile	---	---	---	---	23	23	19	21	21	22
Saginaw	Annual mean	5.5	---	---	---	---	---	---	---	---	---
	Highest 24-hour	16.6	---	---	---	---	---	---	---	---	---
	Annual 98 th %-ile	16.6	---	---	---	---	---	---	---	---	---
	3 year 98 th %-ile	16	---	---	---	---	---	---	---	---	---
Hwy 99 - Four Corners	Annual mean	---	8.4	8.3	8.2	6.3	10.0	6.5	8.3	7.1	8.0
	Highest 24-hour	---	53.5	32.4	47.9	22.9	26.7	30.0	54.6	43.6	56.4
	Annual 98 th %-ile	---	33.9	25.3	36.4	19.5	22.1	20.6	40.2	30.5	25.6
	3 year 98 th %-ile	---	---	---	32	27	26	21	28	30	32
Springfield City Hall	Annual mean	7.4	6.8	6.9	6.8	5.8	5.6	5.5	6.3	6.4	6.3
	Highest 24-hour	30.2	38.6	32.3	21.9	17.9	18.8	18.3	18.8	35.6	54.0
	Annual 98 th %-ile	27.8	18.4	23.5	18.3	14.0	14.8	15.3	17.2	14.2	13.3
	3 year 98 th %-ile	24	24	23	20	19	16	15	16	16	15
Oakridge	Annual mean	11.1	10.5	11.5	11.0	8.9	10.0	7.6	9.8	10.1	8.9
	Highest 24-hour	47.0	52.5	43.5	44.1	43.1	47.9	49.9	54.9	46.1	39.3
	Annual 98 th %-ile	38.6	42.7	38.7	41.3	33.0	42.0	38.4	41.0	41.1	28.9
	3 year 98 th %-ile	48	47	40	41	38	39	38	40	40	37

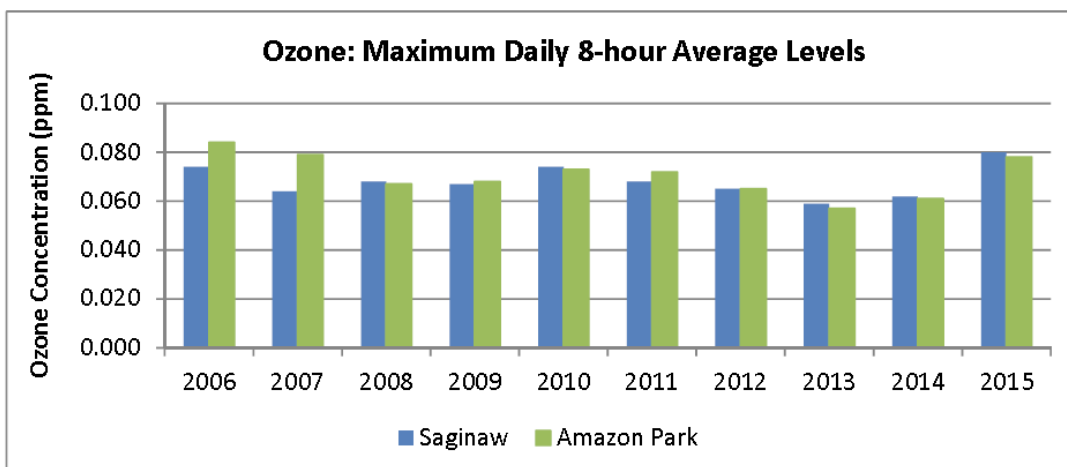
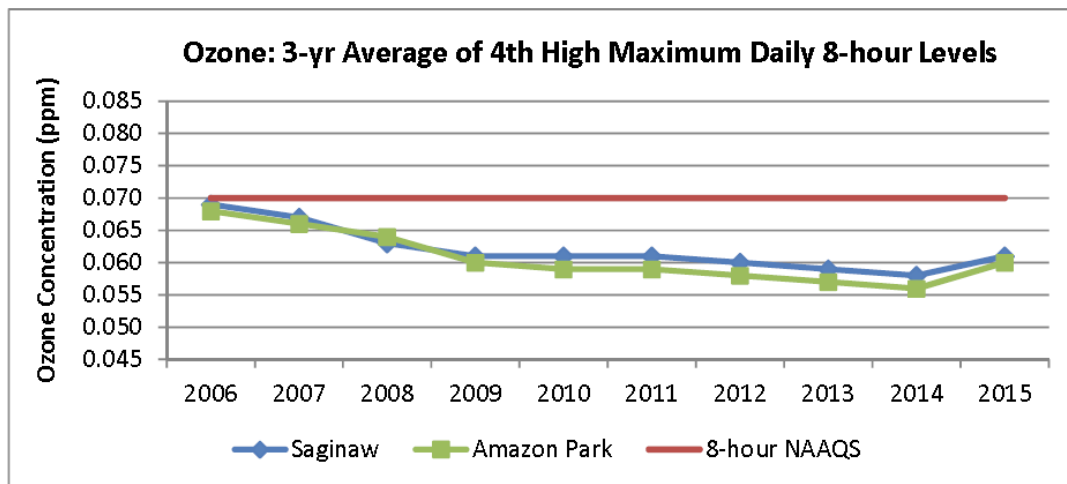


OZONE DATA

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 2006 – 2015 (ppm)											
Site Name		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Saginaw	Maximum	0.074	0.064	0.068	0.067	0.074	0.068	0.065	0.059	0.062	0.080
	4th highest	0.070	0.060	0.059	0.066	0.060	0.059	0.062	0.056	0.058	0.070
	3-year 4 th high	0.069	0.067	0.063	0.061	0.061	0.061	0.060	0.059	0.058	0.061
	# Exceedances	1	0	0	0	1	0	0	0	0	3
Amazon Park	Maximum	0.084	0.079	0.067	0.068	0.073	0.072	0.065	0.057	0.061	0.078
	4th highest	0.076	0.059	0.059	0.063	0.056	0.059	0.059	0.053	0.058	0.069
	3-year 4 th high	0.068	0.066	0.064	0.060	0.059	0.059	0.058	0.057	0.056	0.060
	# Exceedances	5	1	0	0	1	1	0	0	0	3

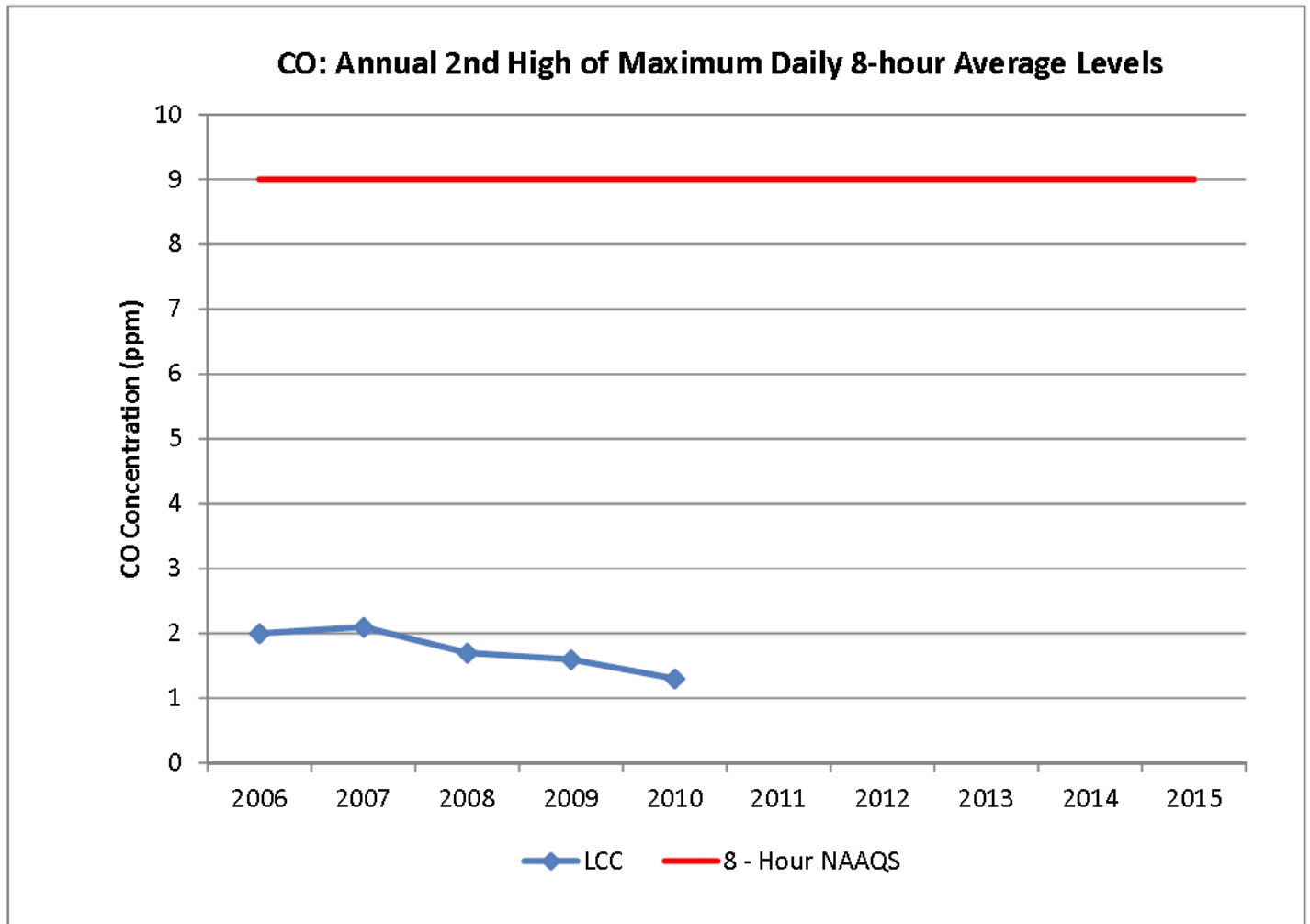


CARBON MONOXIDE DATA

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

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.

CARBON MONOXIDE (CO) LEVELS 2006 - 2015 (ppm)											
Site Name		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
LCC - Downtown Eugene	Highest 8-hour	2.1	2.2	1.7	1.6	1.5	---	---	---	---	---
	2 nd high 8-hour	2	2.1	1.7	1.6	1.3	---	---	---	---	---
	# Exceedances	0	0	0	0	0	---	---	---	---	---



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