1992 ANNUAL REPORT

Lane Regional Air Pollution Authority

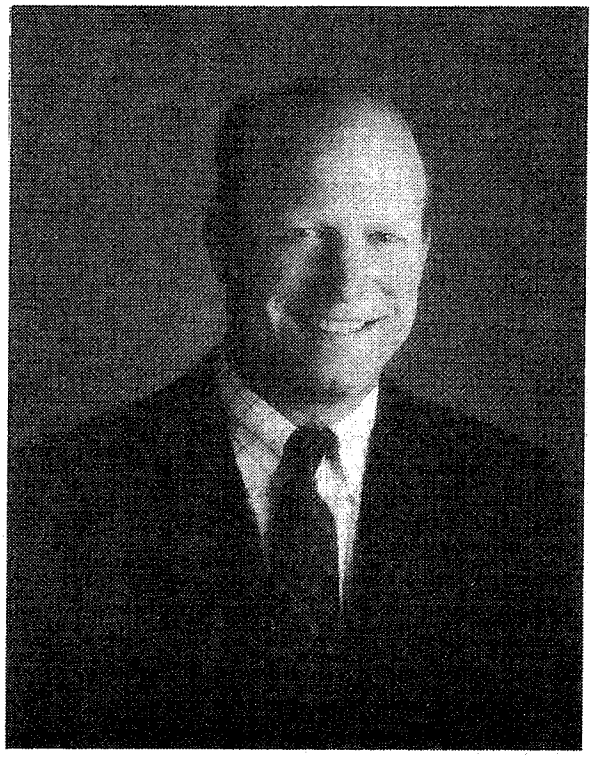
1992
ANNUAL REPORT

Lane Regional Air Pollution Authority

Lane Regional Air Pollution Authority
225 North 5th Street, Suite 501
Springfield, OR 97477
Phone (503) 726-2514
FAX (503) 726-1205

[redacted]

[redacted]



Donald R. Arkell
Director

The Lane Regional Air Pollution Authority (LRAPA) is a local intergovernmental quasi-municipal agency formed under state law. LRAPA's purpose is to protect and maintain in a progressive manner the air resources in Lane County, consistent with the public health, economic and quality-of-life values of the citizens of the county. It is the only such local agency in the state of Oregon.

LRAPA was formed in 1968, by agreement among Lane County and the cities of Eugene and Springfield. Since then, the cities of Oakridge and Cottage Grove have joined LRAPA as full participants. Each member entity provides financial support to the agency.

A seven-member board of directors governs the agency. The number of board members from each participating entity is determined by population. The board sets policy and adopts rules and regulations necessary to maintain a local air quality program that meets the needs of the area and fulfills the requirements of federal and state air quality regulations.

LRAPA Board of Directors

George Wojcik — Chairperson
Springfield City Council
Terry Callahan
Oakridge City Council
Steve Dodrill
Eugene City Council Appointment
Marie Frazier
Lane County Board of Commissioners
Randy MacDonald
Eugene City Council
Bill Morrisette
Springfield Mayor
Toney O'Neal, Jr.
Eugene City Council Appointment

LRAPA Budget Committee

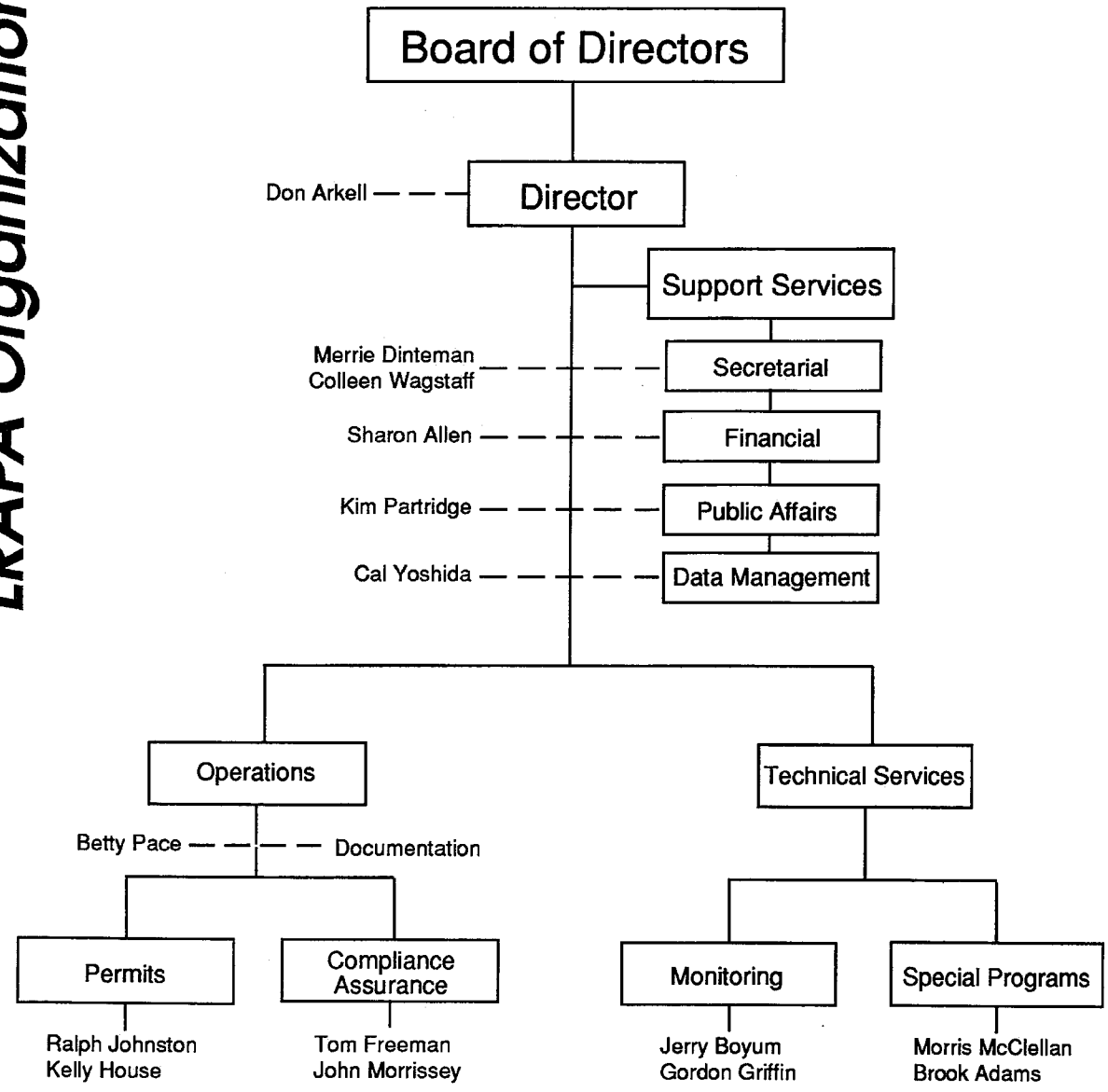
Don Churnside
Appointed by Toney O'Neal, Jr.
Dave Gibson
Appointed by George Wojcik
Craig Miller
Appointed by Bill Morrisette
Vern Stokesberry
Appointed by Terry Callahan
Judy Tichenor
Appointed by Marie Frazier
Charlie Ward
Appointed by Steve Dodrill
Hilda Young
Appointed by Randy MacDonald

LRAPA Citizens Advisory Committee

W. Stewart Tittle — Chairperson	
Representation: General Public	*3 yrs. service*
Michael Copely	
Representation: Community Planning	*2 yrs. service*
Steve Counard	
Representation: Industry	*7 yrs. service*
Everett Falk	
Representation: Agriculture	*3 yrs. service*
John Fischer	
Representation: General Public	*3 yrs. service*
JuneAnn Locklear	
Representation: General Public	*6 yrs. service*
William Nagel	
Representation: Public Health	*3 yrs. service*
Don Miller	
Representation: Fire Suppression	*1 yr. service*
Candice Rohr	
Representation: Public Health	*4 yrs. service*
Darrel Spiesschaert	
Representation: Fire Suppression	*16 yrs. service*
Gary Stiltner	
Representation: Industry	*7 yrs. service*
Andy Vobora	
Representation: General Public	*3 yrs. service*
Fred Walter	
Representation: General Public	*1 yr. service*
Lorena Young	
Representation: General Public	*1 yr. service*
Marlys Simons	
Representation: General Public	*1 yr. service*

Table of Contents

LRAPA Organization



Board of Directors

The LRAPA Board of Directors is a seven-member board which meets monthly to establish policy and adopt agency regulations. Board members are appointed from their respective city councils and the Lane County Board of Commissioners. Membership comprises three representatives from the city of Eugene, one each from Lane County and the city of Springfield, one from either the city of Cottage Grove or Oakridge, and one at-large representative. Cities with more than one member may appoint the second and third member from the public within their jurisdictions.

LRAPA Director

The Board of Directors appoints the director of the agency, who has overall authority to direct the LRAPA staff. The director makes policy recommendations to the board and is responsible for implementing board decisions. The director interacts closely with the the Oregon Department of Environmental Quality and the Environmental Protection Agency to implement state and federal requirements.

Citizens Advisory Committee

The LRAPA Citizens Advisory Committee comprises local interested citizens representing specific areas of interest, including agriculture, community planning, fire suppression, industry, public health and the general public. The committee is called upon to provide input before policies are established. Up to 15 members may comprise the committee at any one time.

The LRAPA advisory committee has been active in developing policies for LRAPA's mandatory home wood heating advisory program, open burning rules and long-term planning policies.

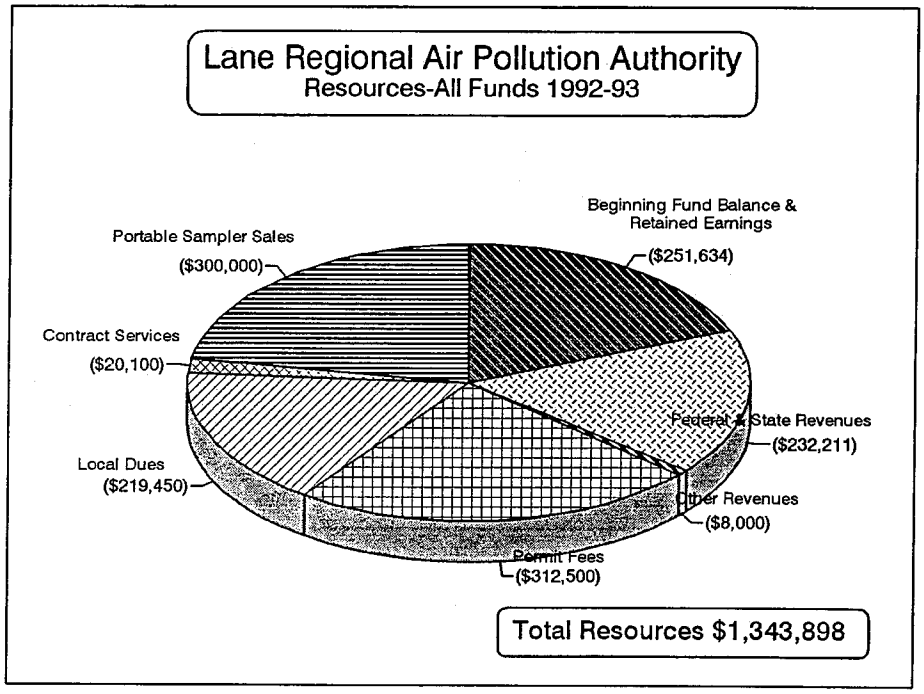
Budget Committee

The LRAPA Budget Committee comprises seven members, appointed by the Board of Directors. The committee meets yearly to review LRAPA's budget request. Committee recommendations are presented to the Board prior to budget adoption.

Hearings Officer

LRAPA's hearings officer is an independent attorney with whom LRAPA contracts to act as the presiding official for hearings of contested cases.

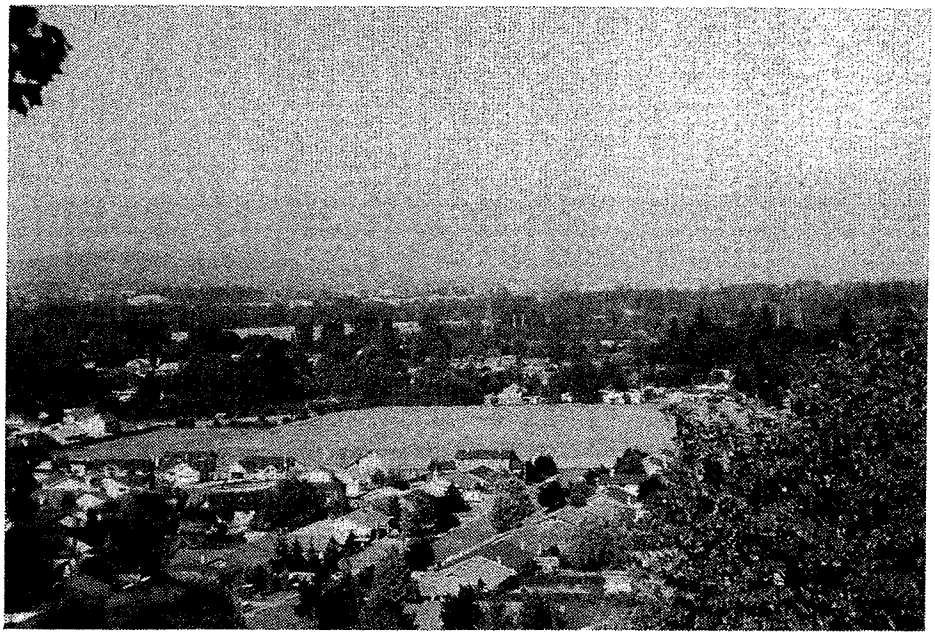
Funding



Funding expenditures reflect LRAPA's ongoing program plus federal permit program development, enhanced compliance assurance and special projects.

LRAPA's funding comes from many sources, including local contributions (Lane County and the cities of Eugene, Springfield, Oakridge and Cottage Grove), state and federal grants, industrial permit fees and miscellaneous contracts. Although LRAPA's workload budget continues to increase as more regulatory requirements are placed on the agency, the agency has been successful in keeping local entity contributions constant over the past four fiscal years.

The agency increased its staff level by one FTE in 1992, in order to implement requirements of the Clean Air Act Amendments of 1990. This was the first year the agency received industrial emission fees, as required by the Act.



Lane County is located at the southern end of the Willamette Valley and stretches from the Cascade Mountains to the Pacific Ocean. The county's population is 283,500 or about 10 percent of the state's total population. The incorporated cities of Eugene and Springfield comprise the second largest urban area in Oregon with an estimated 164,100 residents.

The Eugene/Springfield metropolitan area is the most populated portion of Lane County, both in terms of people and industry. This area has the greatest potential for future problems as the population continues to grow. Several other areas of Lane County experience seasonal air quality problems due to residential wood burning, forest slash burning and agricultural field burning. The city of Oakridge, for example, located about 40 miles southeast of Eugene/Springfield receives high concentrations of particulates in the wintertime months from residential home wood heating. The Cottage Grove, Marcola, Veneta, Elmira, and Junction City areas experience seasonal air quality problems resulting from slash and agricultural field burning.

Topography and meteorology influence air quality

The metropolitan area of Lane County is surrounded on three sides by mountains. During days with cold, stagnant weather conditions, cold air often becomes trapped near the valley floor with warm air aloft creating temperature inversion conditions. The combination of cold, stagnant air and restricted ventilation causes air pollutants to become trapped near the valley floor. Although temperature inversions can occur anytime, they are most frequent and pose most harm to air quality in the winter months when residents are using wood to heat their homes. During these episodes, smoke and gas concentrations climb, deteriorating the local air quality.

The cities of Oakridge and Cottage Grove, which have similar topography, experience the same phenomena during the winter months.

Program Activities

LRAPA operates a complete program which includes most of the regulatory, monitoring, public information and program development elements needed to meet local needs as well as state and federal requirements.

Specifically, LRAPA's program provides the following elements:

Air Quality Planning

Air quality planning identifies present and future air quality problems and determines appropriate recommendation control strategies. Those strategies are designed to achieve and maintain acceptable air quality as population growth occurs, thus forestalling or preventing the occurrence of future problems. LRAPA works together with other local planning and community development agencies to ensure adequate attention is given to air quality concerns and that transportation-related federal air quality requirements are met.

Monitoring and Data Analysis

Monitoring and data analysis provides measured air quality data through a network of sampling and continuous monitoring equipment. Besides providing to the public information on current air quality conditions, *Monitoring and Data Analysis* is used to identify air pollution trends and assist in determining what programs are needed to attain or maintain healthful air quality.

Permitting

Permitting establishes conditions under which regulated industrial sources may operate to minimize their contribution to air pollution in the area.

Compliance Assurance

Compliance Assurance works with local regulated industry to ensure permit conditions are met; conducts inspections of industry, open burning and asbestos abatement; enforces emission limit regulations; and responds to and resolves public complaints about air quality.

Public Education and Information

Public education and information promotes public understanding of air pollution and methods of prevention through public presentations, media relations, intergovernmental relations, and audio/visual and written materials; produces a bimonthly newsletter and yearly report; issues daily air pollution advisories to the media and public; and responds to public complaints and inquiries about air quality.

Special Projects

Special projects provides data about air quality in addition to the routine information provided by the monitoring program; identifies "hot spots" or pockets of air quality problems, and local industrial source emission problems. Some special projects are conducted in support of community planning or development efforts by other local, state and federal agencies.

The Environmental Protection Agency (EPA) has established health standards for six outdoor air pollutants (criteria pollutants): particulate matter (PM_{10}), ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2) and lead (Pb). The standards are required to be met everywhere in the US. The concentration levels of criteria pollutants must be continuously measured to ensure the standards are met. Areas that fail to meet the standards are designated as federal "non-attainment" areas by EPA and are required, by law, to have developed strategic plans designed to bring the area back into compliance with the standards.

Lane County Pollutants

In Lane County, three criteria pollutants are measured continuously: particulate matter (PM_{10}), carbon monoxide and ozone. The Eugene/Springfield area is monitored for all three pollutants while the city of Oakridge is monitored for PM_{10}. Both the Eugene/Springfield area and Oakridge have been designated as PM_{10} non-attainment areas. The Eugene/Springfield area was designated a "non-attainment" area in 1987, Oakridge in September 1992.

PM_{10} standards were last exceeded in 1987 in the Eugene/Springfield area. Oakridge exceeded the federal standard four of the last five years monitored.

Air Pollution Index Summary
Eugene-Springfield

1988
Number of days

	Good	Moderate	Unhealthful	Total
CO	104	13	0	117
O_3	91	43	2	136
PM_{10}	64	49	0	113
Totals	259	105	2	366

1989
Number of days

	Good	Moderate	Unhealthful	Total
CO	85	32	0	117
O_3	104	19	0	123
PM_{10}	85	39	0	124
Totals	274	90	0	364

1990
Number of days

	Good	Moderate	Unhealthful	Total
CO	152	5	0	157
O_3	122	18	0	140
PM_{10}	47	15	0	62
Totals	321	38	0	359

1991
Number of days

	Good	Moderate	Unhealthful	Total
CO	135	14	0	149
O_3	107	28	0	135
PM_{10}	37	44	0	81
Totals	279	86	0	365

1992
Number of days

	Good	Moderate	Unhealthful	Total
CO	138	29	0	167
O_3	104	37	0	141
PM_{10}	38	20	0	58
Totals	280	86	0	366

Criteria Pollutants

Pollutant	Particulates PM_{10}	Carbon Monoxide CO	Ozone O_3	Nitrogen Dioxide NO_2	Sulfur Dioxide SO_2	Lead Pb
Description	Respirable particles less than 10 microns in size	An odorless, tasteless, colorless gas which is emitted primarily from any form of combustion	A toxic gas associated with photochemical smog; formed when nitrogen oxides and volatile organic compounds photochemically react with one another in the presence of sunlight and warm temperatures	A poisonous gas produced when nitrogen oxide is a by-product of suffficiently high burning temperatures	A pungent, colorless gas that combines with water vapor to become sulfurous acid (H_2SO_3), a mildly corrosive compound; when sulfurous acid combines with oxygen, it produces sulfuric acid (H_2SO_4), a very corrosive and irritating chemical	A widely used metal, which may accumulate in the body
Sources	Residential wood burning Industry Fugitive dust Construction activities Street sand application Other combustion sources Open burning	Gasoline and diesel powered mobile sources, such as autos, trucks, buses and locomotives Wood burning Open burning Industrial combustion sources	Volatile organic compounds and nitrogren oxides from gasoline powered mobile sources, etc. Industry Power plants Gasoline storage and transfer Paint	Combustion processes: fossil fuel power motor vehicles industry Explosives manufacturing Fertilizer manufacturing	Fossil fuel power plants Non-ferrous smelters Kraft pulp production	Leaded gasoline Smelting Battery manufacturing Battery recycling
Health Effects	Aggravates ailments such as bronchitis and emphysema, especially bad for those with chronic heart and lung disease, as well as the very young and old, and pregnant women	Deprives the body of oxygen by reducing the blood's capacity to carry oxygen; causes headaches, dizziness, nausea, listlessness, and in high doses, may cause death	Irritates eyes, nose, throat and respiratory system; especially bad for those with chronic heart and lung disease, as well as the very young and old, and pregnant women	Harmful to lungs, irritates bronchial and respiratory systems; increases adverse symptoms in asthmatic patients. Precurser to ozone, contributes to acid fog and rain	Increases the risk of adverse symptoms in asthmatic patients; harmful to plant life, irritates respiratory system Dissolves stone and corrodes iron and steel	Disturbs motor function and reflexes; impairs learning; causes intestinal distress, anemia and damage to the central nervous system, kidneys and brain Children more adversely affected than adults

LRAPA's air quality surveillance network measures pollution concentrations of criteria pollutants in Lane County. Of the criteria pollutants, LRAPA regularly measures concentrations of three: PM_{10}, carbon monoxide and ozone. Sulfur dioxide, nitrogen dioxide and lead are not regularly measured in Lane County because it has been determined the levels are well below the federal standards.

The instruments LRAPA uses to measure the pollutants meet EPA performance standards for precision and accuracy.

In addition to the health standards, EPA has established specific operating schedules and reporting requirements for monitoring each criteria pollutant.

Fine Particulate (PM_{10})

- Sixty to 365 24-hour concentrations must be taken per year on a set schedule. The number of samples required per year depends on the severity of the problem.

- The number of 24-hour concentrations greater than 150 micrograms/cubic meter in any calendar year indicate the number of exceedances of the *daily* standard. The standard allows one 24-hour exceedance per calendar year.

- An arithmetic mean of all 24-hour concentrations measured in a calendar year greater than 50 micrograms/cubic meter indicates an exceedance of the *annual* standard.

Carbon Monoxide (CO)

- Hourly concentrations must be measured continuously year-round.

- The number of one-hour concentrations greater than 40 milligrams/cubic meter in any calendar year indicates the number of exceedances of the *one-hour* standard. The standard allows for one one-hour exceedance per calendar year.

- The number of eight-hour concentrations greater than 10 milligrams/cubic meter indicates the number of exceedances of the *eight-hour* standard per calendar year. The standard allows for one eight-hour exceedance per calendar year.

Ozone (O_3)

- Hourly concentrations are measured continuously on a federally determined schedule. Oregon is required to measure ozone levels from May through September.

- The number of one-hour concentrations greater than 235 micrograms/cubic meter in any calendar year indicates the number of exceedances of the *one-hour* standard. The standard allows one one-hour exceedance per calendar year.

Nitrogen dioxide (NO_2)

- Hourly concentrations must be measured continuously year round.

- The arithmetic mean of all the hourly concentrations measured in a calendar greater than 100 micrograms/cubic meter indicates an exceedance of the *annual* standard.

Sulfur Dioxide (SO_2)

- Hourly concentrations must be measured continuously year-round.
- The number of 24-hour concentrations greater than 365 micrograms/cubic meter indicates the number of exceedances of the *24-hour* standard per calendar year. The standard allows for one exceedance per calendar year.
- The arithmetic mean of all the hourly concentrations measured in a calendar year greater than 80 micrograms/cubic meter indicates an exceedance of the *annual* standard.

Lead (Pb)

- Samples for lead analysis are collected once every six days throughout the year.
- A composite analysis of samples taken during any calendar-year quarter greater than 1.5 micrograms/cubic meter indicates an exceedance of the *quarterly* standard.

Monitoring Methods

PM_{10}

Hi-Volume Sampler: Samples are collected with "high-volume" samplers which operate somewhat like a vacuum cleaner. The method uses pre-weighed 8" x 10" quartz fiber filters. Air is drawn through the filter at about 40 cubic feet per minute. After 24 hours of sampling (midnight to midnight), the sample filter is removed and reweighed. The sample weight is expressed as micrograms of particulate per cubic meter of air sampled. Hi-volume samples are routinely taken every sixth day at each sampling site. Additional samples are collected at selected sites because of special studies or poor air quality.

Medium-Volume Sampler: Samples are collected with "medium-volume" samplers which draw air through pre-weighed quartz fiber filters at about 1.13 cubic feet per minute. The samplers can collect particles on two separate filters simultaneously allowing for chemical analysis of particulate matter at a later date. After 24 hours of sampling (midnight to midnight), the sampler automatically sequences to the next filter set and begins taking another 24-hour sample. The difference between the starting weight and ending weight of the filter is the sample weight and is expressed as micrograms of fine particulate per cubic meter of air sampled. Samples are collected every day on a seasonal basis at some sites.

Carbon Monoxide

Non-dispersive Infrared (NDIR): Infrared energy from a source is passed through a cell containing the gas sample to be analyzed and simultaneously through a reference cell containing the same gas from which the CO has been removed. Carbon monoxide in the sample absorbs some of the energy, creating an out-of-balance condition in the detector. The imbalance is proportional to the amount of carbon monoxide in the sample air and is electronically amplified and recorded.

Ozone

Ultraviolet Photometry: The air sample enters a chamber with an ultraviolet source at one end and detector at the other. The ozone in the sample stream absorbs the ultraviolet light at a specific wavelength. The amount absorbed is proportional to the amount of ozone in the air stream. The detector then sends an amplified signal to the recorder.

Chemiluminescrense: The air sample enters a chamber where it is mixed with ethylene gas. The ethylene reacts with ozone to produce a light whose intensity is proportional to the concentration of ozone in the air sample.

Sulfur Dioxide / Nitrogen Dioxide

Routine monitoring is not conducted for sulfur dioxide and nitrogen dioxide in Lane County. Periodic monitoring has been conducted in past years in areas where maximum concentrations would be expected and no concentrations near the standards for either pollutant have been detected.

Yearly PM_{10} Levels — 1985-1992

Site #	Site Name	Notes	1985	1986	1987	1988	1989	1990	1991	1992
2018039	Westmoreland Elementary School	a	—	—	—	39	28	20	—	—
		b	—	—	—	76	120	30	—	—
		c	—	—	—	74	91	26	—	—
		d	—	—	—	0	0	0	—	—
2018056	Lane Community College (downtown)	a	32	31	37	29	27	23	27	25
		b	197	85	129	72	91	50	95	61
		c	156	72	124	69	79	48	73	54
		d	3	0	0	0	0	0	0	0
2018058	Key Bank — Hwy 99N	a	—	39	43	37	34	31	38	31
		b	267	151	175	129	146	118	126	123
		c	234	111	174	118	125	102	121	98
		d	14	1	3	0	0	0	0	0
2018060	Amazon Park	a	34	27	32	26	39	24	34	25
		b	189	118	122	95	92	49	73	101
		c	152	67	117	91	86	46	62	55
		d	2	0	0	0	0	0	0	0
2030003	Willamette Acti. Center — Oakridge	a	—	—	—	34	—	33	37	32
		b	—	—	—	199	165	149	187	178
		c	—	—	—	177	122	142	184	161
		d	—	—	—	4	1	0	9	2
2033060	Springfield City Hall	a	—	—	35	34	28	25	30	27
		b	80	57	104	75	91	57	97	56
		c	62	52	96	67	71	56	89	55
		d	0	0	0	0	0	0	0	0
2033061	Springfield High School	a	—	—	—	—	—	—	29	31
		b	—	—	—	—	—	—	99	53
		c	—	—	—	—	—	—	85	53
		d	—	—	—	—	—	—	0	0
2009002	Harrison Elem. School — Cottage Grove	a	—	—	—	—	—	24	29	27
		b	—	—	—	—	—	77	132	69
		c	—	—	—	—	—	59	71	60
		d	—	—	—	—	—	0	0	0

Standards:
24-hour average — 150 micrograms/cubic meter
Annual arithmatic mean — 50 micrograms/cubic meter

Notes:
a Annual arithmetic mean
b Highest 24-hour concentration
c 2nd highest 24-hour concentration
d Number of days over 24-hour standard
— Insufficient data
--- No data collected at site during year

Yearly Ozone Levels — 1985-1992

Site #	Site Name	Notes	1985	1986	1987	1988	1989	1990	1991	1992
2000036	Delight Valley School — Saginaw	a	202	210	224	232	174	180	184	202
		b	202	191	220	216	147	178	180	186
		c	0	0	0	0	0	0	0	0
2018060	Amazon Park	a	182	188	235	286	165	---	174	194
		b	175	184	218	241	149	---	172	186
		c	0	0	0	2	0	---	0	0

Standard:
1-hour average 235 micrograms/cubic meter

Notes:
- **a** Highest 1-hour concentration
- **b** 2nd highest 1-hour concentration
- **c** Number of exceedances
- --- No data collected at site during year

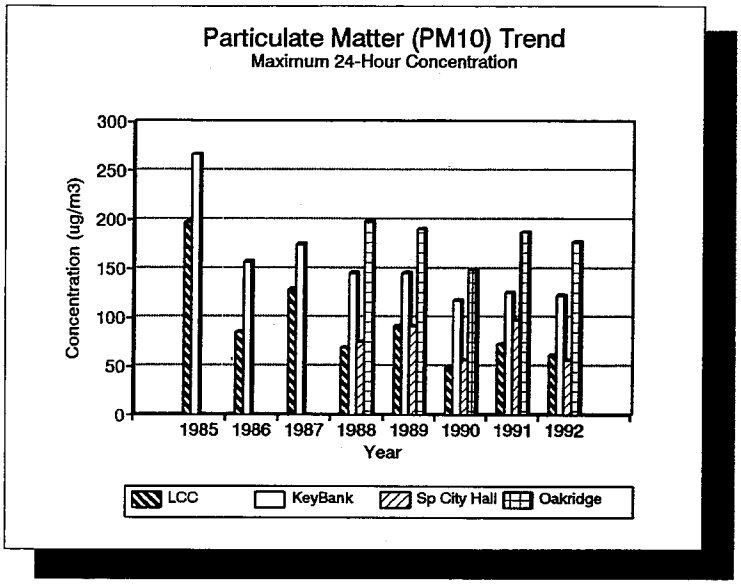
Yearly Carbon Monoxide Levels — 1985-1992

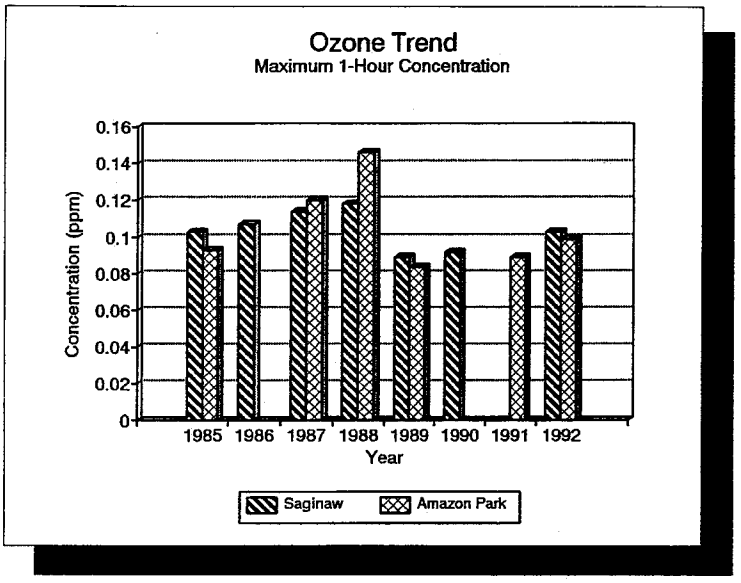
Site #	Site Name	Notes	1985	1986	1987	1988	1989	1990	1991	1992
2018056	Lane Community College (downtown)	a	12.7	10.3	8.2	8.3	7.0	5.8	6.3	6.5
		b	9.5	9.6	7.6	8.2	6.0	5.5	6.2	5.5
		c	1	1	0	0	0	0	0	0
2018060	Amazon Park *	a	10.3	7.3	6.0	5.1	---	---	---	---
		b	8.5	6.1	5.9	4.5	---	---	---	---
		c	1.0	0	0	0	---	---	---	---
2018058	Sacred Heart ** General Hospital	a	---	---	---	---	9.6	6.9	9.1	6.6
		b	---	---	---	---	9.5	6.3	7.7	6.4
		c	---	---	---	---	0	0	0	0

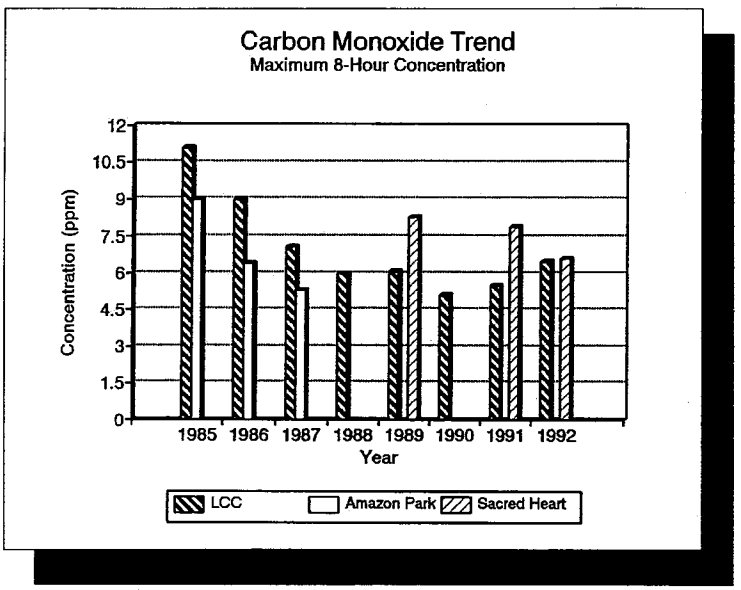
Standard:
8-hour average — 10 milligrams/cubic meter
1-hour average — 35 milligrams/cubic meter

Notes:
- **a** Highest 8-hour concentration
- **b** 2nd highest 8-hour concentration
- **c** Number of exceedances
- --- No data collected at site during year
- * Site operated January - February 1988
- ** Site began operation in August 1989

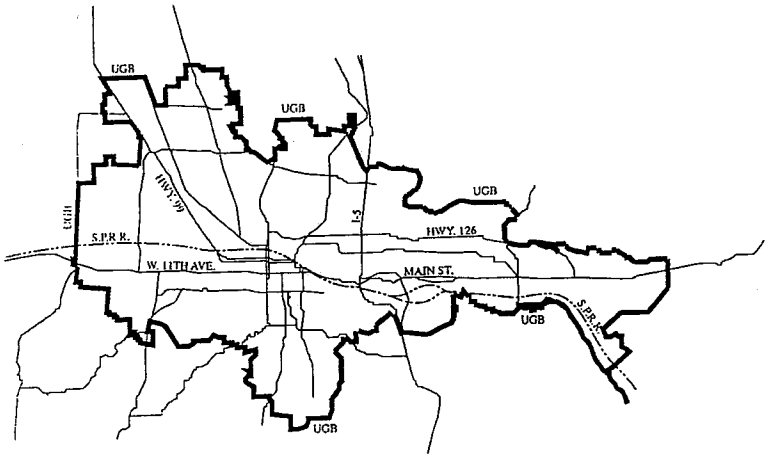
Local Pollution Trends







The Eugene/Springfield area experienced its second mandatory residential home wood heating advisory season in 1992. The program, which limits residential wood burning (with the exception of pellets in pellet stoves) during episodes of poor air quality, was developed in response to the area's federal PM_{10} non-attainment status designation. LRAPA began a volunteer residential home wood heating advisory and curtailment program in Eugene/Springfield in 1986 to reduce pollution caused from residential home heating, a major wintertime source of particulates in the Eugene/Springfield area.



Eugene/Springfield Urban Growth Boundary

Residents living within the Eugene/Springfield Urban Growth Area (ESUGA) are affected by the mandatory program.

A similar volunteer program was adopted by the city of Oakridge in 1989, when air quality modeling demonstrated Oakridge exceeded the federal PM_{10} standards. On September 9, 1992, Oakridge was officially designated a "non-attainment" area by the federal government.

Oakridge also initiated a wood heating advisory program. Both programs use a "green, yellow, red" advisory system to inform the public whether or not they may burn. A violation of the advisory occurs when visible chimney smoke is observed during a "red" period. The program provides exemptions for residents who qualify under economic need guidelines and for those whose sole source of heat is wood (sunsets 6/30/96). Residents who violate a red advisory under the mandatory provisions in the Eugene/Springfield area may be fined $50 to $500.

1992 Home Wood Heating Exemptions

Number of applications received	401
Number of exmptions granted	399
Economic need exemptions	76
*Sole source exemptions	296
Economic need/sole source exemptions	27
Number of exemptions denied	2

*Sole source exemption sunsets 6/30/96

Wood Burning Advisories
(November — February)

Eugene/Springfield

Green— means air quality is good at this time and unrestricted use of a wood heating device is allowed.

Yellow— means air quality is deteriorating. Residents are asked to cut back on home wood heating use.

Red I— means air quality is reaching an unhealthy stage. Visible smoke from a chimney will result in a violation, unless the resident has an exemption. Burning is allowed if done without producing any visible smoke.

Red II— means all burning must stop. Use of a pellet stove is allowed if no visible smoke is emitted into the air.

Remember, visible smoke from a chimney on a red day may result in a $50 to $500 fine.

Oakridge

Green— Burn only dry, well-seasoned wood.

Yellow— Don't burn unless absolutely necessary.

Red— Stop using wood stoves and fireplaces.

Where to find advisory information

- ✔ Major area radio stations
- ✔ Local television stations during weather portion of newscasts
- ✔ Local newspapers
- ✔ Eugene/Springfield area home wood heating call line — **746-HEAT**
- ✔ Oakridge home wood heating call line — **782-2414**

Oakridge Demonstration

Oakridge was chosen the site for a '92-'93 demonstration project aimed to improve air quality by replacing old, uncertified wood stoves with cleaner heat systems. The federal government declared Oakridge a "non-attainment" area in September 1992, for violating federal air quality standards for particulate matter less than 10 microns in size (PM_{10}). Since the winter of '88, Oakridge has exceeded the federal standard 19 times. According to federal law, any area expected to exceed the standard more than once per year in any three-year period is given "non-attainment" status.

Project funding, provided by EPA, was available to low-to-moderate income level residents through grants and no- or low-interest loans. About $100,000 was originally made available for the project, which was scheduled for completion June 1993. An additional $130,000 has been earmarked for the project available to Oakridge later in 1993.

Wood stoves may be replaced with electric, propane or oil heat systems, pellet stoves or certified cord-wood wood stoves. An estimated 40 wood stoves will be replaced with the initial funding and an additional 50 stoves with the second round of funds. Results of the program will help demonstrate the effectiveness of wood stove replacement programs as air pollution reduction measures. If the program proves successful, it will be used to show to the state legislature how similar projects might be used to help other areas meet federal ambient air quality health standards.

Oakridge was selected for the project because of the city's geographic location and economic situation. Once a logging community, the city faced community-wide closure of its timber-related industry with the decline of available timber harvest. The community has virtually no industry, which provided the ideal situation for this demonstration project.

Open Burning Highlights

In October 1992, the LRAPA Board of Directors voted to amend LRAPA open burning regulations to further restrict open burning in populated areas of the county.

Amendments to the Title 47 regulation will halt most residential burning within the Eugene/Springfield Urban Growth Area (ESUGA) and prohibit commercial, demolition and industrial burning within that area.

The new rules, effective January 1, 1993, were designed to help minimize the impact of smoke within the Eugene/Springfield urbanized area. Enforcement of the residential burning regulations was postponed until June 16, '93, to give residents and staff time to gear up for the changes.

The new rules will allow only those residents who live on lots one-half acre or larger in size within the USEGA to open burn yard debris. The rules prohibit all residential open burning on lots smaller than one-half acre located within the USEGA. Materials allowed burned will be limited to woody debris only.

The new LRAPA rules are compatible with current bans established for areas within the city limits of both cities. Currently, no burning is allowed in Eugene. In the city of Springfield, only those residents who live on lots one-half acre or larger in size may burn.

Burning of materials such as garbage, plastic, rubber products, petroleum-treated materials, animal remains or any other material which normally emits dense smoke, noxious odors or hazardous air contaminants is banned in all areas, statewide.

Residents who live outside the ESUGA within rural fire protection districts east of the coast range may burn only on LRAPA-approved burn days during the open burning season, from October 1 through June 15 of each year. LRAPA provides to the community current burning advisory information through its 24-hour backyard burning advisory call line at 726-3976.

Regulating open burning has been part of LRAPA's program for years. The agency decided to revisit the issue as a result of public complaints regarding open burning practices within populated areas. A thorough public comment campaign, was conducted, which included letters to residents who practiced open burning, as well as to those who registered complaints.

Field Burning Highlights

In 1992, 87,606 acres were open burned in western Oregon. Of those, 51,813 acres were burned in the southern Willamette Valley. When compared to 1991 figures, acreage open burned in western Oregon was down 13 percent; however, open field burning in the southern Willamette Valley was down by 6 percent.

The '92 season was the first season where limits were placed on the number of acres open burned and propane flamed, and where registration of acreage for stack-pile burning was required. During the 1992 season, Oregon law allowed up to 165,000 acres to be open burned in the Willamette Valley. The acreage limit for propaning was 75,000 acres. Fields propane flamed during the season totaled 29,135 acres. Growers registered 107,089 acres for stack/pile burning, and burned 14,107 acres.

While fewer acres were burned, the number of hours smoke from field burning impacted the Eugene/ Springfield area was substantially greater than the previous year. Eugene experienced 12 official impact hours (cumulative hours of smoke intrusion into the urbanized area) in 1992, compared to two hours in 1991. Springfield experienced 11 impact hours in '92, compared to three hours in '91.

LRAPA received 417 field burning complaints in 1992, compared to 834 in '91. The number of complaints received by the agency this year (1992) was fairly similar in number to other years, with the exception of the 1991 season. The number of complaints received during the '91 season may have been high due to public expectation of a field burning phase-down bill which came out of the 1991 Oregon Legislature. The legislation placed acreage limits and registration requirements on growers, to be phased in over a five-year period. People may have assumed passage of the bill was going to result in an immediate reduction in smoke impacts. In addition, the 1991 season extended further into the year, with open burning continuing into the month of November. In comparison, most burning was completed before October during the 1992 season.

When comparing the number of acres burned to number of complaints recorded yearly, complaints continue to climb in relationship.

Field Burning -Year-end Totals

Year end	S. Willamette acres burned	Number of intrusions	Impact hours	Number of complaints
1992	51,813	2/Eug. 1/Spfld.	12/Eug. 11/Spfld.	417
1991	55,205	2/Eug. 2/Spfld.	2/Eug. 3/Spfld.	834
1990	97,106	1/Eug. 3/Spfld.	6/Eug. 23/Spfld.	508
1989	103,569	1/Eug. 2/Spfld.	3/Eug. 4/Spfld.	349
1988	105,303	0/Eug. 5/Spfld.	0/Eug. 14/Spfld.	374

The 1990 Clean Air Act (CAA) amendments, signed into law by President Bush, established changes to the Act which address different aspects associated with air pollution in the U.S. In Lane County specifically, the amendments have had significant affects on two LRAPA programs: the hazardous air pollutant program and federal permitting program.

Title III — Hazardous Air Pollutants

As part of LRAPA's program to meet 1990 Clean Air Act requirements, the agency has begun to develop an inventory of hazardous air pollutants (HAP) as defined by the Environmental Protection Agency. LRAPA will use this information to help meet upcoming requirements of Title III of the Act, relating to the regulation of HAPs.

Title III of the CAA lists 189 hazardous air pollutants. Sources emitting 10 tons of any single HAP or 25 tons of any combination of listed HAPs are considered major sources and eventually will be required to install maximum achievable control technology. Sources, such as chemical manufacturing, pulp mills, chrome plating, dry cleaners and auto body paint shops, will be required to install controls according to a predetermined schedule under the CAA. Many of these HAP sources already have controls.

LRAPA, in an attempt to identify affected sources in Lane County, conducted a direct-mail survey to about 350 potential sources. The initial findings suggested about 10 to 15 sources in Lane County will qualify as major HAP sources. The agency will begin to work with these sources to ensure they will be in compliance with requirements.

Among local industry groups likely to be affected by this program are resin manufacturers (methanol, formaldehyde), particle board plants (formaldehyde), dry cleaners (perchlorethylene), auto body paint shops (various solvents such as toluene, trichloroethane and methyl ethyl ketone), and fiberglass manufacturers (styrene).

Title V — Federal Permitting Program

Title V of the Clean Air Act (CAA) requires all states to develop comprehensive permit programs for major industrial sources, to be submitted to EPA (Environmental Protection Agency) by November of 1993. Major sources are considered those sources which emit 100 tons per year or more of any criteria pollutant. The programs must be 100 percent self sufficient. The CAA requires fees be charged, sufficient to cover all expenses of the permit program, including program development, permit processing, compliance assurance, emissions inventorying, reporting and monitoring. The 1991 Oregon Legislature authorized a $13 per-ton emission fee to be collected from major sources required to apply for federal permits. LRAPA worked individually with affected sources to determine their emission levels. Fees were collected on 7,800 tons of emissions the first year.

During 1992, LRAPA staff refined the emission inventories for pollutants emitted by affected sources and established new permitted limits for some pollutants covered by the CAA, but not as yet regulated locally. Staff also began working with the Department of Environmental Quality (DEQ) to develop state rules with which to implement a common statewide program.

After inventorying possible sources in Lane County, it was determined that 21 sources within the county will be affected under Title V rules. Five of these sources have elected to limit operation to stay below the 100 ton per-year standards and avoid most of the federal permit program requirements.

LRAPA initiates enforcement actions in instances of excessive industrial air pollution, illegal open burning activities, improper handling or transport of asbestos-containing materials, and failure to obtain necessary air pollution permits prior to construction or operation. Enforcement actions may include civil penalties of up to $10,000 per day.

There are three classes of violations and three magnitudes of the violation within each violation class. Violations are classed according to risk of harm to public health or the environment, with Class I being most severe and Class III least severe. The magnitude of violation within each class depends on the extent of deviation. Deviations are categorized either major, moderate or minor, with substantial, significant or slight deviation from the standard. The violation class and magnitude of deviation are used in conjunction with a matrix to determine a penalty.

Several factors may influence the size of the penalty. These include financial benefit derived from the violation, intent, seriousness of the offense, past violations and cooperation to correct the violation.

A violation of a LRAPA regulation may result in a Notice of Non-Compliance, Notice of Violation With Intent to Assess Civil Penalty, or Notice of Civil Penalty Assessment.

Notices of Non-Compliance are most often issued in cases of paper violations, such as failure to submit a report, or when negligence causes a violation of emission limits. Usually issued as warning notices, they may require some corrective action within a specified time period.

Notices of Violation With Intent to Assess Civil Penalty are issued when a previous Notice of Non-Compliance has not resulted in compliance, or when there is an intentional act which creates emissions above the allowed standards. These notices may be issued for first time offenses of Class I violations (such as exceeding ambient air quality standards, emitting potentially hazardous emissions, operating a source without a permit, violating asbestos regulations, and burning illegal materials), or repeated or continued violations of other rules or permit conditions, such as paper violations. They may also stipulate corrective action be taken.

A Notice of Violation with Civil Penalty is typically issued for a repeated or continued violation, when a Notice of Violation with Intent to Assess Civil Penalty fails to achieve compliance, or when the terms of an order are not met.

A respondent must answer the Notice within 21 days from the date of service. The respondent may pay the penalty or comply with the requested action, request a hearing on any appeal, or admit to the violation but seek a reduction of any penalty.

Enforcement Actions

Year	1988	1989	1990	1991	1992
Administrative warnings and Notices of non-compliance	5	14	2	10	10
Notices of violation	11	16	11	19	10
Notices of violation with civil penalty	9	8	8	23	11
Total $$ collected	3,300	4,640	1,250	10,565	5,500

LRAPA staff places a high priority on addressing complaints. The staff logged 833 formal complaints during 1992.

Every formal complaint to LRAPA is investigated by LRAPA staff. The majority of complaints involve those concerning industry fumes and odors, backyard and other types of open burning, excess wood stove smoke, and field and slash burning. Nearly half of the 1992 complaints were related to agricultural field burning.

Yearly Complaints : 1988-1992

Complaints

Year	1988	1989	1990	1991	1992
Backyard burning	59	46	54	46	60
Dust	13	8	0	11	7
Field burning	344	349	508	834	417
General air quality	13	9	24	17	2
Home wood heating	26	29	50	49	40
Industry	110	100	114	146	111
Miscellaneous *	(32)	(68)	120	59	47
Open burning *	---	---	85	59	69
Slash burning	67	41	247	28	42
Unknown	2	30	36	58	38
Total	666	680	1238	1307	833

* Began calculation in 1990

Miscellaneous totals in 1988, 1989 include all complaints logged in catagories not listed on this chart

If you have an air pollution complaint . . . call us.

LRAPA staff strive to respond to complaints which are within the agency's jurisdiction. The agency has a 24-hour recorded complaint phone line — **726-1930** Complaints during normal business hours are handled by LRAPA staff at **726-2514**

Community Outreach

Community outreach and public education are important parts of LRAPA's general program. Increased public awareness about the health effects of poor air quality is essential with a program such as LRAPA's, which depends on individual and community ownership of local air-quality issues.

LRAPA provides these services to the community in several different ways.

- Local media: Staff is in daily contact with local media, who, in turn, disseminate air quality information to the general public. Press releases, public service announcements and paid advertising are used to inform the public of important issues.

- Print material: LRAPA provides to the general public print information in the form of brochures, fact sheets, newsletters and annual reports. A large selection of brochures is available on a wide-range of topics, produced by LRAPA, DEQ, EPA and the American Lung Association.

- Library materials: The agency has an extensive library of air pollution literature which is open for public use during normal business hours. The Federal Register, case studies, scientific and environmental magazines, text books and statistical information are available in the library.

- Presentations: Staff members are frequently asked to speak on air-quality-related issues before service clubs, professional associations, public schools and private corporations.

- Local fairs/trade shows: LRAPA takes advantage of local fairs and events whenever possible as a means to enhance the public's awareness of air quality issues.

- Intergovernmental projects: Working with other agencies on air-quality-related projects has become commonplace for LRAPA. Several joint transportation-related projects were team efforts by LRAPA, Lane Transit District, the cities of Eugene and Springfield, and several state agencies to enhance local awareness. Projects promoting alternative modes of transportation have included direct mailings, transportation fairs, transportation demand management incentive programs with area businesses and participation in various transportation-related committees.

As population continues to increase in Lane County, LRAPA has become more involved with community planning and transportation-related issues. The agency believes heightened public awareness is essential in sustaining a high quality of life in the midst of population expansion and its related transportation growth. Working on community planning projects at ground-level has helped establish commitments from local planners and elected officials to include air quality concerns in their planning processes. Metropolitan planning has moved from a planning process which reinforces the use of single-occupancy-vehicles, to one which promotes alternative transportation, be it pedestrian, bicycling, carpooling or mass transit.

Oregon's Land Conservation Development Commission's (LCDC) Transportation Planning Rule 12, adopted in May 1991, requires metropolitan areas to reduce vehicles miles traveled by 10 percent within 20 years, and 20 percent within 30 years. This requirement has prompted cities and counties to develop aggressive transportation plans.

In Lane County, most of the transportation-related development has occurred in the major metropolitan area — the Eugene/Springfield area. The city of Eugene, due to its population and size, has been most aggressive in its efforts to meet the Rule 12 goal to combat detrimental effects of population and vehicular growth. The city of Springfield, with less than half the population of Eugene, is in the early stages of developing a similar plan.

LRAPA and other local agencies are working cooperatively to maintain operable transportation systems and clean air.

Eugene's Central Area Transportation Study, or CATS, is one such plan with which the agency has been involved. The plan is an update of an earlier parking and circulation plan for the city, which affects projects and developments that contain large parking structures, such as malls and apartment complexes, and major street-widening projects. Maintaining acceptable ambient air quality levels is among the plan criteria. LRAPA has adopted and incorporated CATS into its own implementation plan to comply with federal air quality standards for carbon monoxide. A comparable parking and circulation plan is under development by the city of Springfield.

In other areas, LRAPA has become involved with various local and state committees which analyze and review ways to influence alternative transportation modes. Coordinated projects with LRAPA and the cities of Eugene and Springfield, the Oregon Department of Energy, Oregon Department of Transportation and the local transit district have become commonplace. Cooperatively, the agencies and organizations have participated in projects such as transportation surveys, employment-based pilot projects, and community-wide direct-mail campaigns designed to promote strategies which change commuting habits

The community has succeeded in combining efforts to stress the importance of a proactive approach to the reduction of single-occupancy vehicles and understands the challenge of long-term change. Vehicle traffic in most urban areas increases four times faster than population growth. Statistically, it is only a matter of time before motor vehicle pollutants will saturate the airshed. LRAPA will continue its involvement with the community in the attempt to curb the car to maintain clean air for a livable community.

Special Studies and Projects

Special studies carried out by LRAPA may be wholly conducted internally, or in support of planning or community development efforts by other local, state and federal agencies. These studies are conducted in addition to routine agency functions and often require the use of additional temporary staff.

Among 1992 special studies:

- Cottage Grove PM_{10} saturation monitoring
- Eugene-area CO saturation monitoring
- Eugene/Springfield residential wood stove/ wood heating use survey
- Oakridge State Implementation Plan — in progress

LRAPA phone numbers

Business Office	726-2514
Eugene/Springfield Home Wood Heating Advisory Line	746-HEAT
Eugene/Springfield Backyard Burning Advisory Line	726-3976
Oakridge Home Wood Heating Advisory Line	782-2414
24-Hour Complaint Line	726-1930

250/5/92