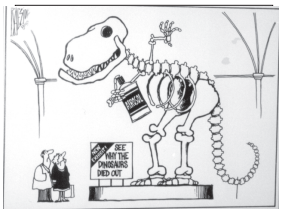
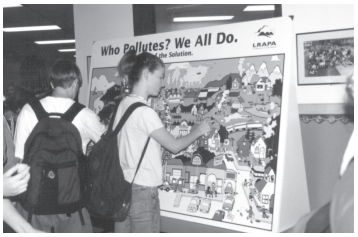


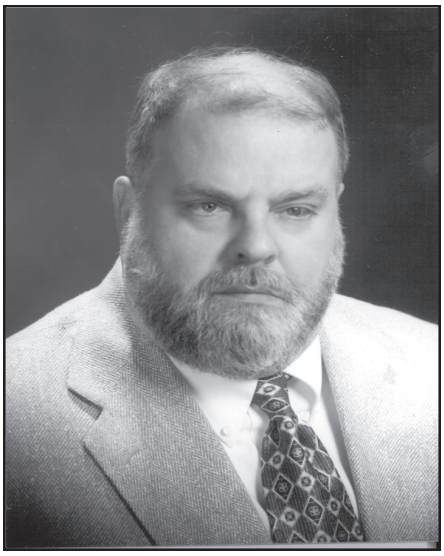


"To protect public health, community well-being and the environment as a leader and advocate for the improvement and maintenance of air quality in Lane County."

2002 Annual Report

1010 Main Street
Springfield, Oregon 97477
Phone (541) 736-1056
Toll-free 1-877-285-7272
Fax (541) 726-1205
E-mail: lrapa@lrapa.org
Website: www.lrapa.org

Director's Message



Brian Jennison, Ph.D.
Director

2002 was a difficult year for LRAPA. The general economic downturn meant reduced permit revenues, and our inability in the 2001 legislative session to increase Lane County's share of the state general fund dollars allocated to air pollution programs meant that we had to lay off two positions, including the emission inventory specialist. Slow sales at Airmetrics also caused us to scale back operations and outsource more of the assembly operations, thus resulting in three further layoffs.

Oakridge mayor Don Hampton and Eugene at-large representative Al Johnson completed their terms on the Board of Directors; we thank them for their service. The major issue in 2002 was presenting amendments to the existing woodstove ordinances in Eugene and Springfield, and helping the citizens of Oakridge develop such an ordinance for their community. Originally adopted as PM_{10} control measures, the amended wood-stove ordinances now focus on the control of fine particulate ($PM_{2.5}$). Further, these ordinances now prohibit the burning of garbage in a woodstove or fireplace.

Permit activity was steady in 2002, despite the downturn in construction review and revenues. Although all Title V federal operating permits have now been issued, several were modified during the year, and the level of permitting, compliance assurance, monitoring and administrative responsibilities associated with this program remains high.

Funding was secured to continue operating the air toxics monitoring site in south Eugene through the end of 2003; preliminary data show that our community is exposed to the usual suite of urban air toxics, associated primarily with internal combustion engines and common manufacturing and household solvent use. The federal clean engine and clean diesel initiatives should significantly reduce these levels of potentially harmful chemicals in our urban air, although these will not be fully implemented for several more years. Through our public education efforts, LRAPA will continue to inform the citizens of Lane County about alternatives they themselves can adopt to reduce their daily use or production of some of these chemicals.

I would like to thank all LRAPA staff for their continued efforts to manage the day-to-day affairs of the agency. Everyone has pulled together to fill-in for those positions that were lost, and this extra effort is recognized and appreciated.

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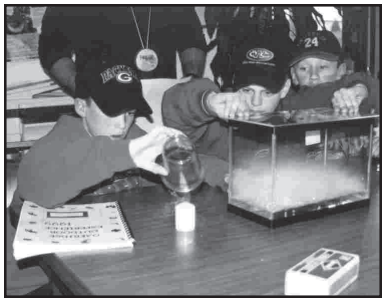
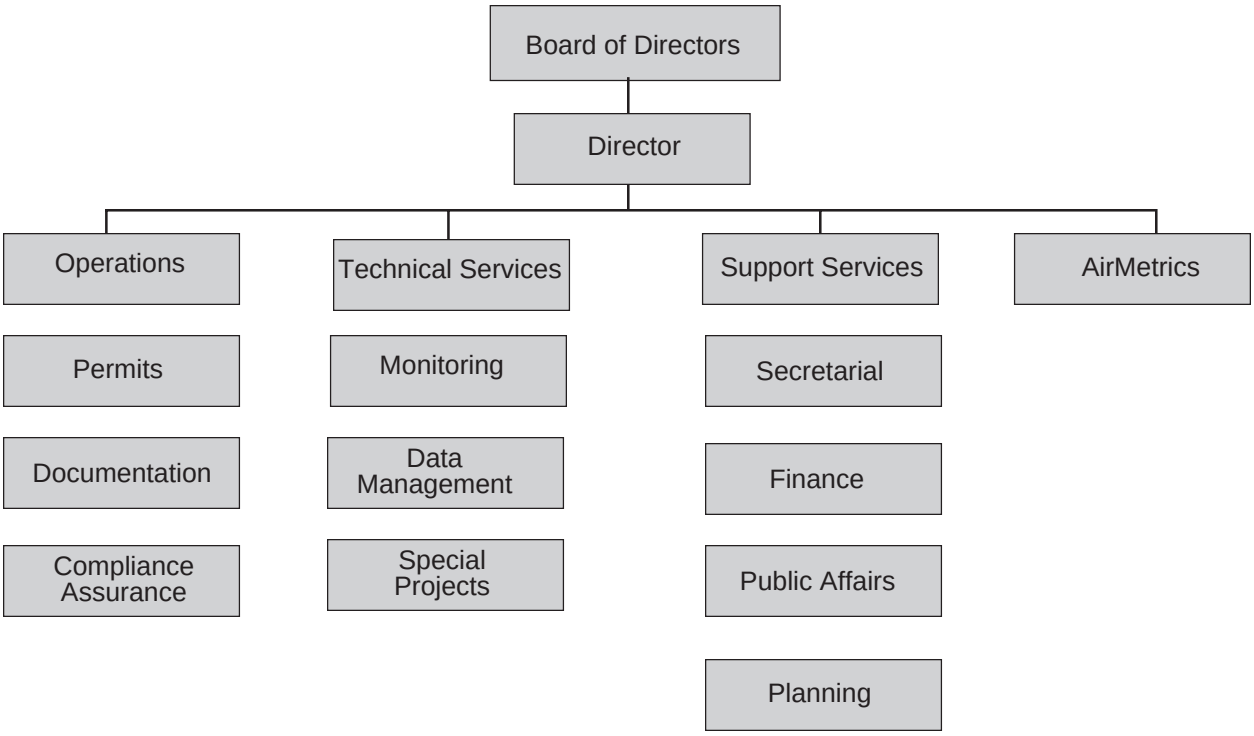


LRAPA Organization

The board of directors appoints 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.

Staff Organizational Chart



LRAPA Phone Numbers

Business Office 736-1056
Home Wood Heating Advisory Line 746-HEAT
Backyard Burning Advisory Line 726-3976
24-Hour Complaint Line 726-1930
Toll-Free Line 1-877-285-7272
LRAPA Air Line ..... 485-2000, ext. 4273
Website: ..... www.lrapa.org
E-mail: ..... lrapa@lrapa.org

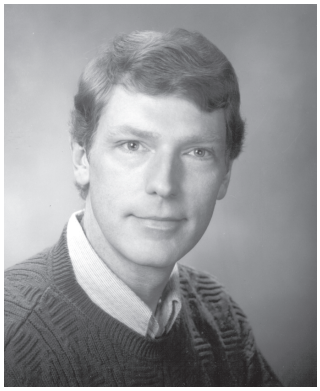
LRAPA Organization

2002 LRAPA 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 by their respective city councils and the Lane County Board of Commissioners. Membership includes 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 city of Oakridge, and one at-large representative appointed by the board. Cities with more than one member may appoint the second or third member from the public within their jurisdictions.

Carol Tannenbaum- Chair
3 yrs. service
LRAPA Board Appointment

Pete Sorenson - Vice-chair
4 yrs. service
Lane County Board of Commissioners



Al Johnson
8 yrs. service
Eugene City Council Appointment

Betty Taylor
6 yrs. service
Eugene City Council

Don Hampton
3 yrs. service
Oakridge City Council

Shannon McCarthy
2 yrs. service
Eugene City Council Appointment

Dave Ralston
2 yrs. service
Springfield City Council Appointment

2002 LRAPA Citizens Advisory Committee

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

Russ Ayers - 3 yrs. service service — Chair
Representing Major Industry
Dave Breitenstein- 5 yrs. service — Vice-Chair
Representing General Public
Lorena Young - 11 yrs.
Representing General Public
Doug Brooke - 3 yrs. service
Representing Industry
Larry Dunlap - 4 yrs. service
Representing Public Health
Paul Engleking - 5 yrs. service
Representing Environment
Jennifer Juden -3 yrs. service
Representing General Public
Rick Rogers - 4 yrs. service
Representing Fire Suppression
John Tamulonis - 5 yrs. service
Representing Planning
Fred Walter - 11 yrs. service
Representing General Public
Bill Young - 2 yrs. service
Representing Agriculture

2002 LRAPA Budget Committee

The LRAPA Budget Committee consists of the LRAPA Board of Directors plus seven board-appointed citizens. The committee meets yearly to review and approve LRAPA's budget request. 2002 appointed committee members include:

Tom Gentle
John Woodrow II
Sean Wilson
Landa Gillette
Trish Binder
Jack Bynum
Eric DeFreest
Shannon McCarthy
Dave Ralston
Pete Sorenson
Carol Tannenbaum
Betty Taylor
Don Hampton
Al Johnson

PROGRAM OPERATIONS

The LRAPA staff consists of 18 professional and technical employees (17.9 full-time equivalencies) who perform permitting, enforcement, planning, clerical, financial, enterprise, and public information and outreach programs.

OPERATIONS — PERMITTING, COMPLIANCE AND ENFORCEMENT

Permitting - establishes conditions under which regulated industrial sources may operate.
Compliance/Enforcement - assures permitted sources comply with permitting requirements; enforces agency rules and regulations through education and enforcement actions.

TECHNICAL SERVICES — MONITORING AND DATA MANAGEMENT

Monitoring- collects ambient air quality data and provides quality assurance.
Data Management - determines whether ambient air quality standards are being met, and provides technical assistance for program priorities and planning.

AIRMETRICS

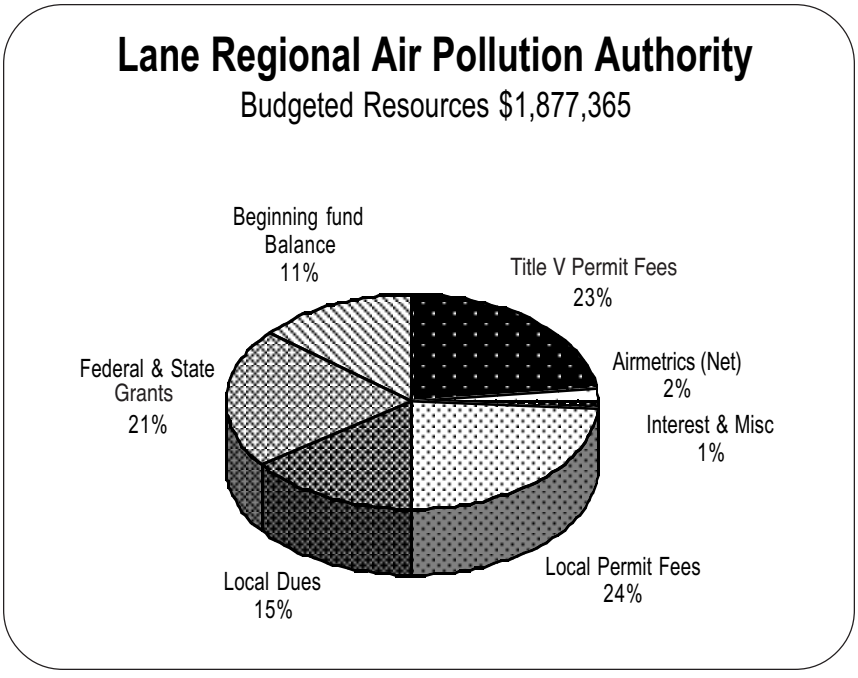
Manufactures and markets portable air-sampling devices and services.

ADMINISTRATIVE

Public Education and Information - promotes public understanding, education and awareness of local air quality issues.
Air Quality Planning - identifies present and potential future air quality problems and develops appropriate control strategies.
Finance - provides the agency with full financial management services.
Human Resources - manages agency personnel matters.

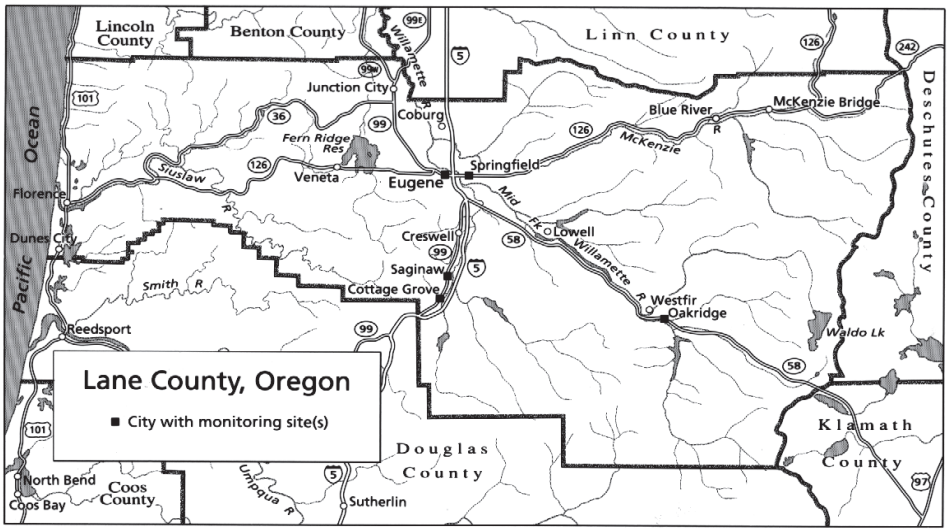
FUNDING/BUDGET

LRAPA's funding sources include: local contributions (Lane County and the cities of Eugene, Springfield, Oakridge and Cottage Grove); state and federal grants; industrial and open burning permit fees; asbestos demolition/renovation fees; AirMetrics sales and services; and miscellaneous contracts.



LANE COUNTY

THE SETTING, TOPOGRAPHY AND METEOROLOGY



Lane County map highlighting locations of cities with air monitoring sites.

THE SETTING: THE WILLAMETTE VALLEY

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 around 322,959 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 190,757 residents. (*U.S. Census, 2000*)

TOPOGRAPHY AND METEOROLOGY

Many of the inland areas of Lane County experience periods of air stagnation. When this happens during winter months, cold air often becomes trapped near the valley floor with slightly warmer air aloft, creating temperature inversion conditions. The combination of cold, stagnant air and restricted ventilation causes air pollutants to become trapped near the ground. Wintertime temperature inversions contribute to high particulate levels, while summertime inversions contribute to increases in ozone levels, both causing the local air quality to deteriorate.

The city of Oakridge, on a good air quality day, verses a poor air quality day. Smoke from woodstoves and fireplaces gets trapped in the city during periods of winter air stagnation.

NATIONAL AMBIENT AIR QUALITY STANDARDS

The Environmental Protection Agency (EPA) has established health-based National Ambient Air Quality Standards (NAAQS) for six air pollutants (criteria pollutants): particulate matter (PM_{10} and $PM_{2.5}$), ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2) and lead (Pb). Areas that fail to meet the NAAQS are designated "non-attainment" and are required to develop plans to come into compliance with the standards.

PARTICULATE MATTER (PM) - FEDERAL STANDARDS

There are four particulate standards: two for particles 10 microns and smaller in size, and two for fine particulates measuring no larger than 2.5 microns in size.

- Annual PM_{10} Standard — The standard is met when the three-year average of the annual mean PM_{10} concentration at each monitoring site is less than or equal to 50 micrograms per cubic meter.

- 24-hour PM_{10} Standard — The standard is met when the second highest value at each monitoring site is less than or equal to 150 micrograms per cubic meter.

- Annual $PM_{2.5}$ Standard — The standard is met when the three-year spatially-averaged annual mean at each monitoring site is less than or equal to 15 micrograms per cubic meter.

- 24-hour $PM_{2.5}$ Standard — The standard is met when the three-year average of the 98th percentile value at each monitoring site is less than or equal to 65 micrograms per cubic meter.

OZONE - FEDERAL STANDARD

The ozone standard is attained when the consecutive three-year average of the annual fourth highest daily maximum eight-hour average concentration does not exceed 0.08 parts per million.

Federal Ambient Air Quality Standards

Pollutant	Federal Standard	Monitoring Status in Lane County
Particulate ($PM_{2.5}$)		
24-hour standard	65 ug/m^3	Required
Annual standard	15 ug/m^3	Required
Particulate (PM_{10})		
24-hour standard	150 ug/m^3	Required
Annual standard	50 ug/m^3	Required
Carbon Monoxide (CO)		
8-hour average	9 ppm	Required
1-hour average	35 ppm	Required
Ozone (O_3)		
8-hour average	0.08 ppm	Required
Sulfur Dioxide (SO_2)		
24-hour average	0.14 ppm	Not required
1-hour average	0.10 ppm	Not required
Nitrogen Dioxide (NO_2)		
Annual average	0.05 ppm	Not required
Lead (Pb)	1.5 ug/m^3	Not required

ug/m^3: micrograms per cubic meter
ppm: parts per million

CARBON MONOXIDE - FEDERAL STANDARD

There are two carbon monoxide standards, a one-hour and an eight-hour standard.

- One-hour Standard — The standard is met when the maximum one-hour average concentration does not exceed 35 parts per million.

- The Eight-hour Standard — The standard is met when the maximum eight-hour average concentration does not exceed nine parts per million.

LANE COUNTY ATTAINMENT HISTORY

In Lane County, three criteria pollutants have historically been of concern: particulate matter, ozone, and carbon monoxide. The Eugene/Springfield area is monitored for all three pollutants, while the city of Oakridge is monitored for particulate matter only.

PARTICULATE MATTER (PM)

Particulate matter is measured at three locations in Eugene, two locations in Springfield, and one each in Oakridge, Cottage Grove, and Saginaw. In Lane County, two areas, the Eugene/Springfield urban area and the city of Oakridge, have been designated "non-attainment" for PM_{10}. Both areas currently meet the standard and are in the process of regaining attainment status.

- The Eugene/Springfield area was designated a "non-attainment" area on January 10, 1980, for exceeding the 24-hour secondary "total suspended particulate" (TSP) standard.
- The TSP standard was changed to the PM_{10} standard (particulate matter 10 microns in size or smaller) in 1987.
- The Eugene/Springfield area was redesignated a PM_{10} "non-attainment" area on August 7, 1987.

  — Last exceeded the standard in 1987.
- Oakridge was proposed a PM_{10} "non-attainment" area in September 1992, and designated on January 20, 1994.

  — Last exceeded the standard in 1993.
- On September 16, 1997, EPA established daily and annual $PM_{2.5}$ standards that were immediately challenged by industry.
- In March 1998, $PM_{2.5}$ monitoring began in Eugene/Springfield.
- In November 1998, $PM_{2.5}$ monitoring began in Oakridge.
- On February 27, 2000, the U.S. Supreme Court unanimously upheld the new standards.

  — Both Eugene/Springfield and Oakridge currently meet the $PM_{2.5}$ standards.
  — Oakridge occasionally experiences high concentrations of $PM_{2.5}$ but so far has not exceeded the standards.

OZONE (O3)

Ozone is measured at one site in Eugene and one in Saginaw. Lane County is in attainment with the federal ozone standards.

- In 1970, EPA established a one-hour ozone standard.
- In May 1974, the Eugene/Springfield area began monitoring ozone and has continued to measure ozone, although the area has remained in attainment.
- In 1997, the standard was changed to an eight-hour standard, but this was challenged by industry.
- In 2000, the U.S. Supreme Court unanimously upheld the eight-hour standard.

CARBON MONOXIDE (CO)

The Eugene/Springfield area was designated a "non-attainment" area for CO in the late 1970s, but was later redesignated an attainment area.

- In 1970, EPA established an eight-hour CO standard.
- In 1971, LRAPA began monitoring CO in downtown Eugene.
- On March 3, 1978, the Eugene/Springfield area was designated a "non-attainment" area for CO.

  — Last exceeded the standard in 1986.
- On February 4, 1994, the Eugene/Springfield area was redesignated an "attainment" area.

Air Quality Index

The EPA developed the Air Quality Index to provide the public with timely and easy-to-understand information on the health implications of local air quality.

- **"Good"**
  Air quality is considered satisfactory and air pollution poses little or no risk.

- **"Moderate"**
  Air quality is acceptable; however, at these levels there may be a moderate heatlh concern for a very small number of individuals.

- **"Unhealthy for Sensitive Groups"**
  Certain groups of people who are particularly sensitive to the harmful effects of certain pollutants are likely to be affected at this level.

- **"Unhealthy"**
  The general public may begin to experience adverse health effects. Members of sensitive groups may experience more serious health effects.

Air Quality Index Summary				
Eugene/Springfield (number of days)				
Year	Good	Moderate	Unhealthy (Sensitive)	Unhealthy
2002	302	56	7	0
2001	304	54	7	0
2000	313	47	6	0
1999	323	38	4	0

Totals using CO, $PM_{2.5}$ and O_3 data.

Air Quality Index Summary				
Oakridge (number of days)				
Year	Good	Moderate	Unhealthy (Sensitive)	Unhealthy
2002	247	94	14	3
2001	270	61	23	2
2000	276	71	16	1
1999	255	64	12	1

Totals using CO, $PM_{2.5}$ and O_3 data.

CRITERIA POLLUTANTS

Pollutant	Description	Sources	Health Effects	Environmental Effects
Particulate Matter PM	PM_{10} — Respirable particles less than 10 microns in size $PM_{2.5}$ — Respirable particles less than 2.5 microns in size	Wood burning; Industry; Fugitive dust; Construction activities; Street sand application; Combustion sources; Transportation; Open burning; NOx, SO_2, VOC gases	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	Causes reduced visibility and haze
Carbon Monoxide CO	An odorless, colorless gas which is emitted primarily from any form of incomplete combustion	Gasoline and diesel-powered mobile sources, such as autos, trucks, buses and locomotives; Wood burning; Open burning; Industrial combustion sources	Deprives the body of oxygen by reducing the blood's capacity to carry it; Harmful to unborn children; Causes headaches, dizziness, nausea; High doses may cause death	N/A
Ozone O_3	A gas associated with smog; formed when nitrogen oxides (NOx) and volatile organic compounds (VOC) react with one another in the presence of sunlight and warm temperatures	VOCs and NOx from gasoline-powered mobile sources; Industry; Power plants; Gasoline transfer and storage; Paints and solvents; Consumer products	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	Can cause damage to plants and trees; smog can cause reduced visibility; Attacks rubber products
Nitrogen Dioxide NO_2	A gas produced as a by-product of high burning temperatures	Combustion processes — fossil fuel power, motor vehicles, industry; Home heating; Fertilizer manufacturing	Harmful to lungs, irritates bronchial and respiratory systems; Increases adverse symptoms in asthmatic patients	Contributes to acid fog and rain, which can damage plant and aquatic life; Can cause reduced visibility; Precursor to smog
Sulfur Dioxide SO_2	A pungent, colorless gas that combines with water vapor to become sulfurous acid (H_2SO_3), which, when combined with oxygen, produces sulfuric acid (H_2SO_4), a very corrosive and irritating chemical	Fossil fuel power plants; Nonferrous smelters; Kraft pulp production	Irritates respiratory system; Increases the risk of adverse symptoms in asthmatic patients	Contributes to acid fog and rain, which can damage plant and aquatic life; Dissolves stone and corrodes iron and steel; Can contribute to reduced visibility
Lead Pb	A widely used metal, which may accumulate in the body	Leaded gasoline; Battery manufacturing; Battery recycling; Smelting; Paint	Causes intestinal distress, anemia and damage to the central nervous system, kidneys and brain; Children more adversely affected than adults	Harmful to wildlife

PARTICULATE MATTER DATA

YEARLY PM_{10} LEVELS — 1991 - 2002 (ug/m³)

Site #	Site Name	Notes	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
2018056	Lane Community College (dwntwn)	a	25	25	21	21	18	21	17	19	19	19	17
		b	61	68	66	52	60	52	63	47	51	53	46
		c	54	59	42	49	46	49	56	45	50	35	45
		d	0	0	0	0	0	0	0	0	0	0	0
2018058	Key Bank— Hwy 99N	a	31	33	31	27	22	23	20	20	21	21	21
		b	123	103	125	84	66	50	68	53	78	70	71
		c	98	92	62	70	60	49	67	41	54	65	67
		d	0	0	0	0	0	0	0	0	0	0	0
2018060	Amazon Park	a	25	24	20	19	17	19	15	18	18	18	---
		b	101	70	71	63	61	54	59	60	58	62	---
		c	55	64	46	57	45	53	49	46	55	35	---
		d	0	0	0	0	0	0	0	0	0	0	---
2030003	Willamette Activity Ctr.— Oakridge	a	32	32	26	23	22	21	19	20	23	24	25
		b	178	166	144	142	84	96	80	99	89	108	94
		c	161	151	143	135	78	90	79	73	73	80	83
		d	2	1	0	0	0	0	0	0	0	0	0
2033060	Springfield City Hall	a	27	28	24	22	19	21	19	16	20	19	17
		b	56	66	74	48	58	57	62	57	56	45	55
		c	55	61	51	44	55	49	59	56	46	38	51
		d	0	0	0	0	0	0	0	0	0	0	0
2009002	Harrison Elem. Sch. — Cottage Grove	a	27	26	23	22	19	20	17	19	18	17	19
		b	69	68	109	93	52	75	50	49	38	44	57
		c	60	67	57	46	49	54	48	41	35	37	54
		d	0	0	0	0	0	0	0	0	0	0	0
2018063	Santa Clara	a	---	---	20	18	17	---	---	---	---	---	---
		b	---	---	107	68	59	56	---	---	---	---	---
		c	---	---	100	63	56	32	---	---	---	---	---
		d	---	---	0	0	0	0	---	---	---	---	---

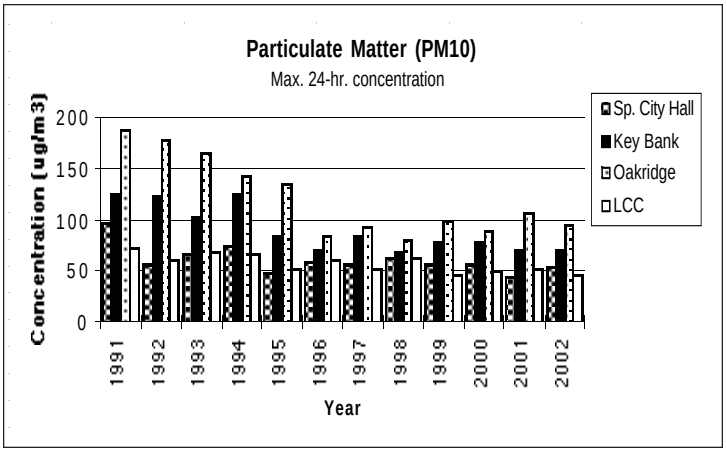
Standards:

24-hour average — 150 micrograms/cubic meter

Annual arithmetic 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
- --- No data collected at site during year



YEARLY $PM_{2.5}$ LEVELS (ug/m³)— 1999 - 2002

Site #	Site Name	Notes	1999	2000	2001	2002
2033061	**Springfield High School**	**a**	---	8.8	8.4	8.3
		b	36.5	37.3	43.7	35.3
		c	26.5	35.4	34.3	26.2
		d	0	0	0	0
2018060	**Amazon Park**	**a**	8.6	9.4	9.4	9.9
		b	52.6	58.8	50.6	56.2
		c	36.3	52.5	34.3	46.2
		d	0	0	0	0
2030003	**Willamette Activity Ctr. - Oakridge**	**a**	13.0	13.1	13.7	14.0
		b	72.0	74.2	95.7	80.3
		c	57.0	63.4	59.5	55.4
		d	1	1	3	3
2000036	**Delight Valley School - Saginaw**	**a**	6.7	6.7	7.0	6.7
		b	24.7	20.9	26.8	22.0
		c	20.8	18.8	17.1	18.1
		d	0	0	0	0

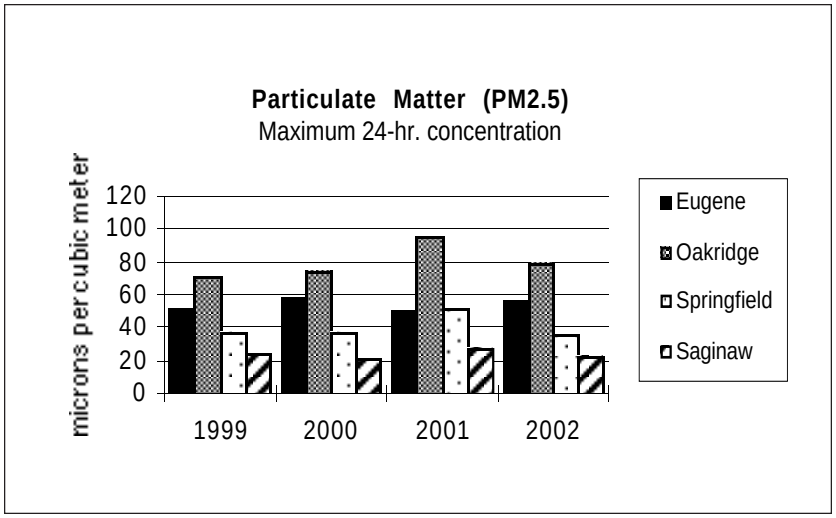
Standards:

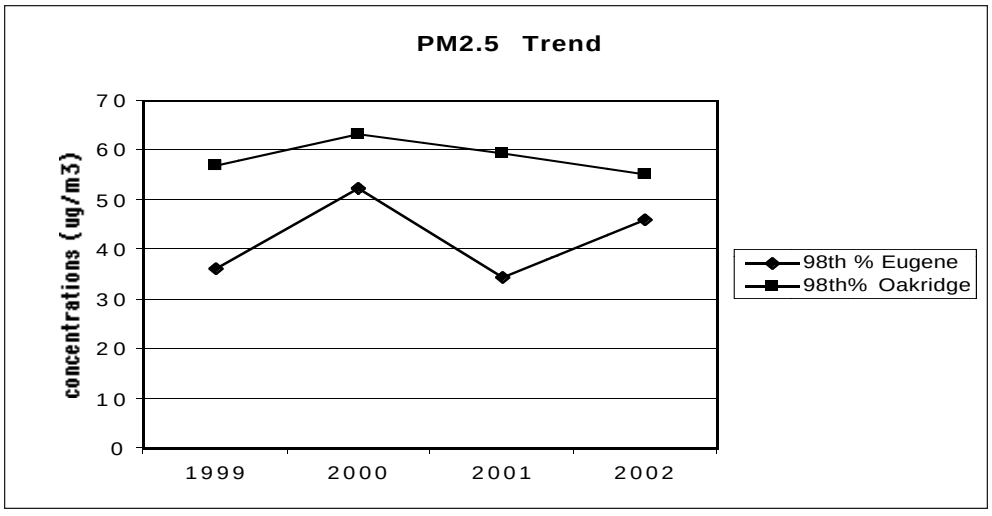
Annual arithmetic mean — 15 micrograms/cubic meter

24-hour average — 65 micrograms/cubic meter of the 98th percentile of measured concentrations

Notes:

a	Annual arithmetic mean
b	Highest 24-hour concentration
c	98th percentile concentration
d	Number of days over 24-hour standard
---	No data collected at site during year





OZONE DATA

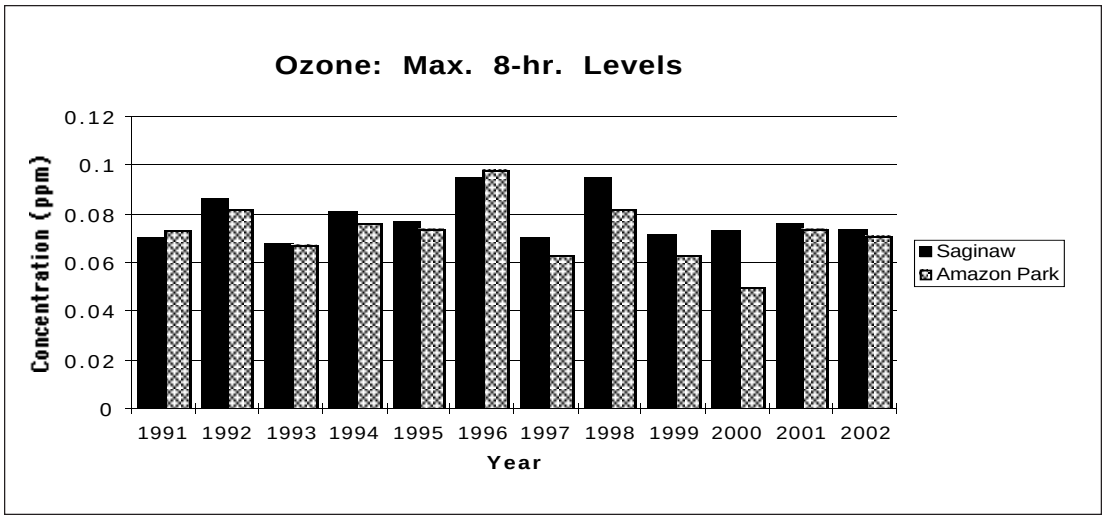
YEARLY EIGHT-HOUR OZONE LEVELS — 1991 - 2002 (ppm)

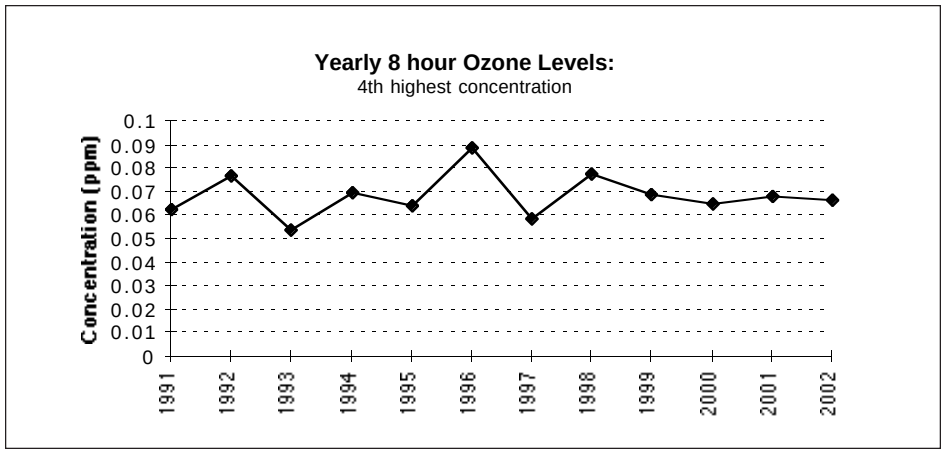
Site #	Site Name	Notes	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
2000036	**Delight Valley School — Saginaw**	**a**	.086	.068	.081	.077	.095	.070	.095	.072	.073	.076	.074
		b	.077	.054	.070	.064	.089	.059	.078	.069	.065	.067	.065
		c	3	0	1*	0	6*	0	2	0	0	0	0
2018060	**Amazon Park**	**a**	.082	.067	.076	.074	.098	.063	.082	.063	.050	.074	.071
		b	.071	.056	.068	.060	.084	.057	.073	.057	.047	.062	.067
		c	2	0	0	0	3*	0	0	0	0	0	0

Standard:
Fourth highest 8-hour average: 0.08 parts per million
(technically must be ≥ 0.085 ppm for an exceedance)

Notes:

a	Highest 8-hour concentration
b	4th highest 8-hour concentration
c	Number of exceedances
---	No data collected at site during year
*	Prior to the 1998 established standard; not a formal exceedance





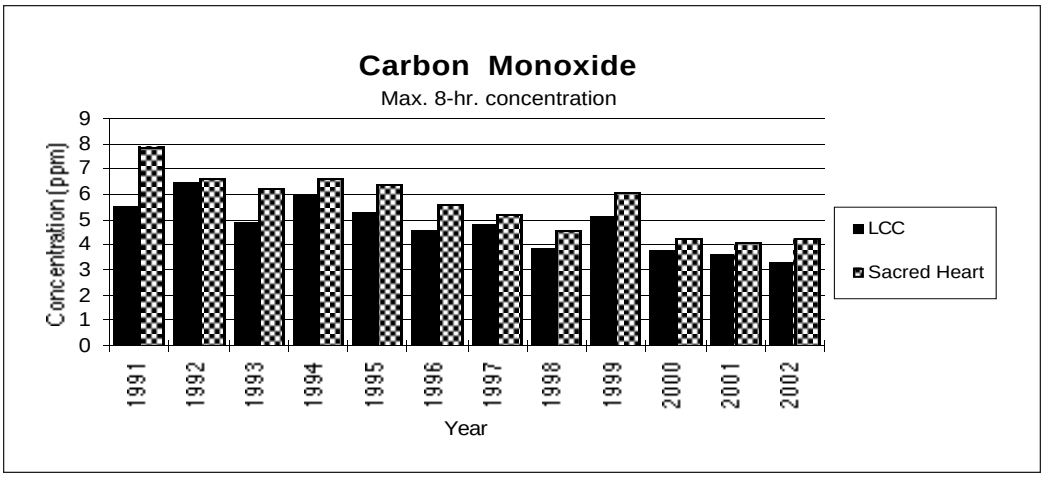
CARBON MONOXIDE DATA

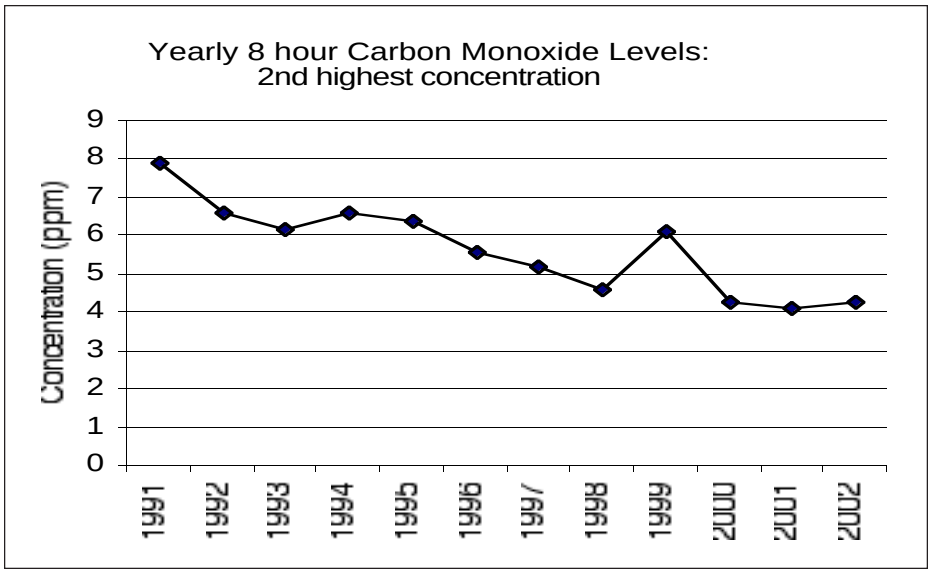
YEARLY CARBON MONOXIDE LEVELS — 1991 - 2001 (ppm)

Site #	Site Name	Notes	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
2018056	Lane Comm. College (downtown)	a	6.5	4.9	6.0	5.3	4.6	4.8	3.9	5.1	3.8	3.6	3.3
		b	5.5	4.7	4.5	4.7	4.6	4.7	3.9	3.9	3.5	3.6	2.9
		c	0	0	0	0	0	0	0	0	0	0	0
2018058	Sacred Heart Medical Center	a	6.6	6.2	6.6	6.4	5.6	5.2	4.6	6.1	4.3	4.1	4.3
		b	6.4	5.9	6.3	5.7	5.5	5.2	4.6	4.9	4.3	3.9	4.2
		c	0	0	0	0	0	0	0	0	0	0	0

Standard:
8-hour average — 9 parts per million

Notes:
- **a** Highest 8-hour concentration
- **b** 2nd highest 8-hour concentration
- **c** Number of exceedances
- --- No data collected at site during year





Lane County Home Wood Heating Programs

The Eugene/Springfield urban area and the city of Oakridge have home wood heating advisory programs due to episodes of poor wintertime air quality. Residential wood stove smoke is a major source of PM_{10} and $PM_{2.5}$ emissions in these areas. Home wood heating advisory programs in Lane County use a simple "green, yellow, red" advisory system to inform residents whether or not wood-burning is allowed. The programs do not generally ban all burning, but rather ban visible emissions during "red" advisory periods. Residents are notified of the daily advisories through local media, such as newspapers, radio and television stations. In addition, residents may call a 24-hour advisory line for up-to-date information. While home wood heating is allowed on most days, the agency encourages residents to avoid burning to reduce the health impacts associated with the inhalation of wood smoke.

Eugene/Springfield Program

The Eugene/Springfield urban area began its home wood heating advisory program in 1986 to reduce pollution caused by home wood heating, a major wintertime source of particulates. Eugene/Springfield was designated a federal non-attainment area on August 7, 1987, after violating the federal PM_{10} standards on various occasions in past years. The program changed from voluntary to mandatory in January 1991, as part of LRAPA's federally required implementation plan designed to bring the area back into compliance with the PM_{10} standards.

The Eugene/Springfield mandatory program is now in its 12th season. Residents living within the Eugene/Springfield Urban Growth Boundary (ESUGB) are affected by the program, which runs from November 1 through the end of February. Residents with economic hardship may be granted an exemption from the program on a yearly basis.

In addition to the "green, yellow, red" advisories, the mandatory program includes a Phase II "red" advisory, which prohibits all burning in wood stoves (without an exemption) in cases of severe deterioration in air quality.

Because this program is mandatory, residents who violate a "red" advisory provision may be fined up to $500. No "red" advisory periods have been called since the inception of the program, nor have either the PM_{10} or $PM_{2.5}$ standards been exceeded.

Oakridge Program

The city of Oakridge adopted its home wood heating advisory program in 1989, after air quality data showed Oakridge exceeded the federal PM_{10} standard on numerous occasions. Five years later, on January 20, 1994, EPA officially declared Oakridge a PM_{10} non-attainment area. The 2001-2002 season marked the 13th season of the program.

As in the Eugene/Springfield urban area, the advisory season runs from November 1 through February. However, unlike Eugene/Springfield, strategies in the Oakridge program have remained voluntary. The Oakridge plan was adopted by EPA in March 1999, and became effective on May 14 of that year.

During 2002, LRAPA began working with the city of Oakridge on a city-initiated ordinance to develop a mandatory wood burning control program. A city-operated program to replace old, uncertified wood stoves with cleaner burning systems, a tarp giveaway program, enhanced public education, and measures to reduce road dust have all been successful in improving the community's air quality.

LRAPA uses the $PM_{2.5}$ standard when determining home wood heating advisories. Advisories are determined by comparing current pollution levels to current meteorological conditions and weather forecasts.

* "Green" advisories are called when pollution levels are forecast to be less than 40 ug/m^3 (micrograms per cubic meter) – the standard being 65 ug/m^3.
* "Yellow" advisories are called when pollution levels are forecast to be greater than or equal to 41 ug/m^3, but less than 54 ug/m^3.
* "Stage I Red" advisories are called when pollution levels are forecast to be greater than or equal to 55 ug/m^3, but less than 65 ug/m^3.
* "Stage II Red" advisories are called when levels are forecast to be greater than or equal to 65 ug/m^3.

EUGENE/SPRINGFIELD HWH ADVISORIES
1992 - 2002 SEASON

Season Year	Yellow	Red I	Red II	PM Exceedances
*2002-2003	4	0	0	0
*2001-2002	5	0	0	0
*2000-2001	6	0	0	0
*1999-2000	0	0	0	0
*1998-1999	0	0	0	0
1997-1998	0	0	0	0
1996-1997	0	0	0	0
1995-1996	0	0	0	0
1994-1995	0	0	0	0
1993-1994	0	0	0	0
1992-1993	3	0	0	0

**Based on $PM_{2.5}$ monitored levels*

OAKRIDGE HWH ADVISORIES
1992 - 2002 SEASON

Season	Yellow	Red	PM Exceedances
*2002-2003	29	0	0
*2001-2002	11	0	0
*2000-2001	35	2	2
*1999-2000	11	0	2
*1998-1999	6	0	1
1997-1998	1	0	0
1996-1997	5	0	0
1995-1996	5	0	0
1994-1995	7	3	0
1993-1994	16	3	0
1992-1993	11	7	1

**Based on $PM_{2.5}$ monitored levels*

Firewood	Available Heat Million Btu/Cord 20% Moisture
Tree Species	
Alder	20
Apple	35
Ash	27
Birch	24
Cedar	16
Cherry	25
Cottonwood	17
Elm, American	18
Fir, Douglas	23
Fir, White	19
Hemlock	21
Juniper	25
Madrone	34
Oak, Red	29
Oak, White	33
Maple	25
Pine, Lodge pole	20
Pine, Ponderosa	18
Pine, White	18
Poplar	12
Walnut, Black	25
Walnut, English	25
Willow	16

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.

Oakridge

Green— Burn cleanly. Use only dry, well-seasoned wood.

Yellow— Don't burn unless absolutely necessary.

Red— Stop using wood stoves and fireplaces.

2002 Home Wood Heating Exemptions (Eug./Spfld.)

Number of applications received *(economic need only)*	30
Number of exemptions granted	30

Where to find advisory information

- ✔ Major area radio stations
- ✔ Local television stations during weather portion of newscasts
- ✔ Local newspaper weatherpages
- ✔ Guardline — 485-2000, ext. 4273
- ✔ Home wood-heating call line — **746-HEAT (746-4328)**

OPERATIONS — PERMITTING

LRAPA-issued operating permits are required for a number of industries and businesses in Lane County. Of the 196 permitted sources in Lane County, 176 have basic Air Contaminant Discharge Permits (ACDP), and 20 hold Title V Federal Operating Permits.

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 (see pg. 10), 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.

Industrial source categories 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, sources of toxic air pollutants, and any source emitting more than 10 tons per year of any combination of criteria pollutants.

2002 Permitting Summary –
January 16, 2002 - January 15, 2003

- Permits issued or renewed 41
- Permits modified 31
- Industries inspected 34

ASBESTOS ABATEMENT

Remodeling and renovation projects in Lane County that include asbestos abatement must register with LRAPA. In 2002, LRAPA documented 313 notifications of asbestos abatement projects. LRAPA inspected 106, or 33 percent, of all projects. Fourteen violations were found. By category, the total number of abatement projects included:

- Residential 168
- Schools 25
- Business/Industry 111
- Other 9

ENFORCEMENT

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.

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.

LRAPA collected $49,590 in penalties during 2002. All penalties collected are forwarded to Lane County; however, attorney fees associated with contested cases are deducted first.

- Administrative warnings/ Notices of non-compliance: 129
- Notices of violation w/ civil penalty: 72

COMPLIANT RESPONSE

It is LRAPA's policy to investigate in a timely manner every complaint called into the agency. Staff investigated 950 formal complaints in 2002. Field burning complaints, however, are typically not investigated by staff, but forwarded to the Oregon Department of Agriculture, which has jurisdiction.

The number of complaints, and percent changes from 2001, by category, are as follows:

- Backyard burning ..... +24%
- Dust ..... -7%
- Field burning ..... +48%
- General air quality 0%
- Home wood-heating ..... +26%
- Industry ..... -76%
- Miscellaneous ..... -23%
- Open burning ..... +38%
- Slash burning ..... +28%
- Unknown ..... +7%
- Total complaints ..... -27%

TECHNICAL SERVICES —

MONITORING AND DATA MANAGEMENT

LRAPA's monitoring network consists of ten monitoring sites, which include three meteorological sites. LRAPA's network samples for particulate matter, ozone, carbon monoxide, and hazardous air pollutants (added in 2002).

The agency's in-house laboratory analyzes samples collected from the monitoring network, and staff regularly calibrate all network equipment.

AIRMETRICS

AirMetrics is an LRAPA enterprise which manufactures an inexpensive, portable, battery-operated air sampler patented as the MiniVol. The sampler has been adapted to sample gaseous pollutants, such as carbon monoxide and nitrogen oxides, as well as particulates (PM_{10} and $PM_{2.5}$).

The MiniVol and related products are sold worldwide with nearly 50 percent of annual sales being international.

Sales for the '01-'02 fiscal year totaled $747,400, with a net profit to the agency of $34,000. Revenues generated by the enterprise are allocated to help defray capital costs.

EDUCATION AND OUTREACH —

LRAPA understands that public education is an integral part of any program if lasting behavioral changes to reduce air pollution are to occur.

The agency provides education to the community in a number of different ways, including forming partnerships with local media and other private and public entities; providing written materials such as brochures and fact sheets; making presentations to service-clubs, professional associations and schools; participating in local fairs and trade shows; and sharing agency information on its website: www.lrapa.org.

2002 projects included:

- Fourth grade classroom presentation program - visited 91 classes, reaching nearly 2,300 students;
- Earth Day Celebration;
- Oakridge Health Fair;
- Oakridge outdoor school program;
- Home Wood Heating season advisory program;
- Ozone Action Day advisory program;
- New-home-buyer direct mail program, reaching more than 4000 home-buyers;
- Eugene Commute Challenge.

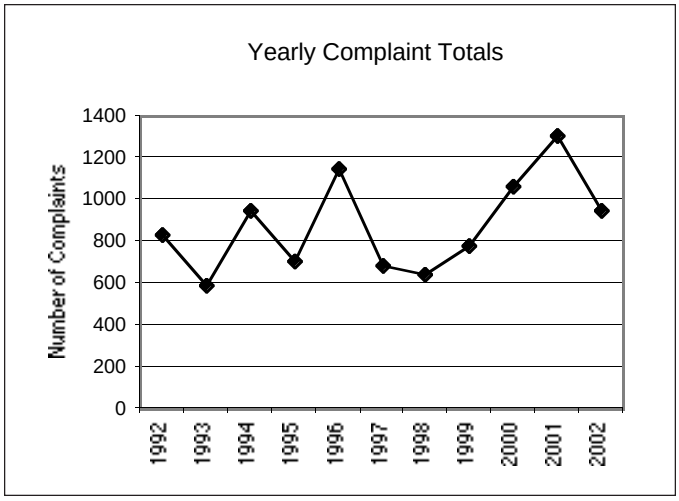
SPECIAL PROJECTS —

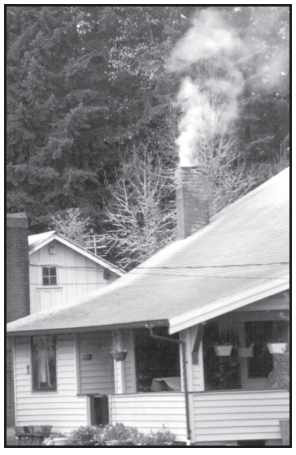
- Hazardous Air Pollution (HAP) monitoring site in the metropolitan area (in progress, grant funded).
- PM_{10} public education for Eugene/Springfield and Oakridge (ongoing, grant funded).
- "Fast Track Ozone Reporting" effort to include Lane County data in EPA's national effort Air Now (in progress, grant funded).
- Statewide toxics emission inventory partnership with the Oregon Department of Environmental Quality.
- Statewide "Streamlined Permitting Process Improvement Team," to improve efficiency in the process of providing air permits for industrial sources in Oregon (in progress).

LRAPA monitoring site: one of three sites equipped to collect and log both pollution and meteorological data.

COMPLAINTS 1992 - 2002

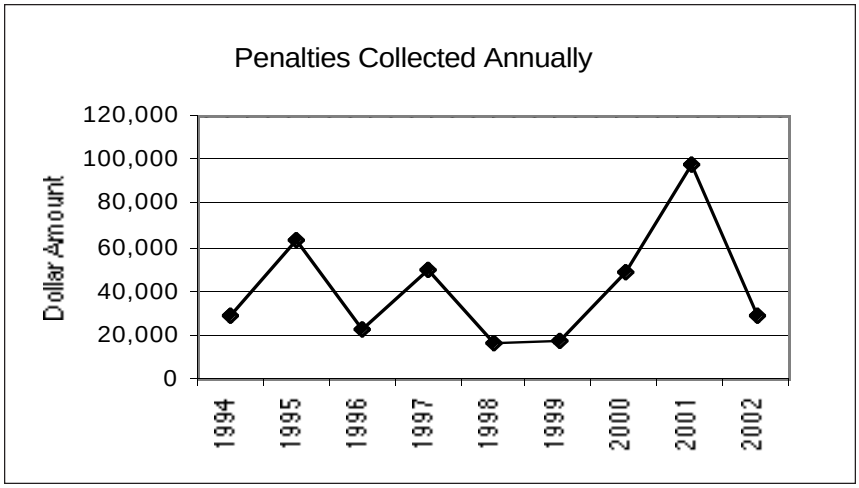
Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Backyard burning	60	63	88	50	85	77	71	104	91	98	122
Dust	7	14	8	17	18	19	30	17	17	27	25
Field burning	417	187	407	301	747	247	218	279	198	199	294
General air quality	2	5	3	5	3	4	7	11	4	4	4
Home wood heating	40	53	48	41	38	52	45	53	37	58	73
Industry	111	111	134	99	92	111	99	118	492	689	168
Miscellaneous	47	19	45	35	25	27	31	46	46	44	34
Open burning	69	85	74	77	89	91	98	91	91	103	142
Slash burning	42	16	64	29	16	16	13	9	35	18	23
Unknown	38	36	78	50	37	39	26	55	49	61	65
Total	833	589	949	704	1150	683	638	783	1060	1301	950





Enforcement Actions 1994 - 2002

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002
Administrative warnings and Notices of non-compliance	32	47	89	75	57	91	118	102	129
Notices of violation w/ civil penalty	54	33	25	12	17	39	80	64	72
Total civil penalties collected $$	29,560	63,958	22,635	49,950	16,775	18,070	49,437	97,584	49,590



Field Burning Summary

The Department of Agriculture has jurisdiction over field burning in Oregon. However, because of local public interest, LRAPA summarizes field burning data in the southern Willamette Valley, including Benton, Linn and Lane counties. Oregon law allows up to 65,000 acres to be open-burned annually — 40,000 acres for normal applications and 25,000 acres for steep terrain and specially identified species, and an additional 37,500 acres of propane flaming. There have been no limitations on stack burning. The total acreage burned in the southern Willamettte Valley in 2002 was 35,483 acres. There was one official intrusion into the area, registering one hour of impact. LRAPA received 294 field burning complaints.

Field Burning Year-end Totals

Year end	S. Willamette acres burned	Number of intrusions	Impact hours	Number of complaints
2002	35,483	0/Eug. 1/Spfld.	0/Eug. 1/Spfld.	294
2001	34,684	0/Eug. 0/Spfld.	0/Eug. 0/Spfld.	199
2000	33,930	0/Eug. 0/Spfld.	0/Eug. 0/Spfld.	198
1999	33,560	1/Eug. 1/Spfld.	2/Eug. 2/Spfld.	279
1998	30,503	0/Eug. 0/Spfld.	0/Eug. 0/Spfld.	218