1984
ANNUAL
REPORT

LANE REGIONAL AIR POLLUTION AUTHORITY

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Board of Directors
1984

Bill Rogers, Chairperson.....Lane County
Richard Hansen, Vice-Chairperson.....Eugene
John Lively.....Springfield
Bill Whiteman.....Cottage Grove
Emily Schue.....Eugene
Sandra Rennie.....Springfield
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Dick Nice.....Fire Suppression
Harold Youngquist.....Public Health
Owen Brown.....Utility
Sylvia Gagnon.....General Public
Harold Babcock.....Utility

Donald R. Arkell, Director

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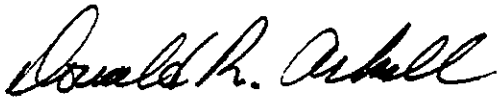
I MESSAGE from the DIRECTOR

Annual reports are usually designed to tie together, in a positive way, the year's activities of the organization, to comment on the organization's status at the end of the year, and perhaps to examine the coming year.

Clearly the most publicized theme for LRAPA in 1984 was future funding for the agency, as the three-year period of negative cash flow drew to a close and the agency's cash reserves were expended. LRAPA's staff, Board of Directors, and advisory Committee concluded their assessments, initiated in 1983. Their findings formed the basis for affirming that LRAPA has a very favorable cost/benefit ratio and is essentially operating a "base level" program to cope with current and near-term air quality problems. What became more clear was the need to find more stable funding to secure the agency's future as much as possible, and to ensure that the agency's programs continue to be responsive to the needs of Lane County.

An unfortunate side-effect of the focus on finances is that it becomes easy to lose sight of the specific program accomplishments of the agency in 1984, such as: completion of the industrial emission control strategy in the Eugene-Springfield Air Quality Maintenance Area Control Plan; installation of improved controls at several industrial facilities; continued improvement of the agency's intergovernmental relationships; and several significant studies which provide more complete understanding of how sources affect air quality. These will serve to guide our future programs to assure cleaner air, and to assure that development can proceed without undue insult to our environment. The day-to-day work to reduce existing air pollution, coupled with planning for the future, is the true "heart" of LRAPA's program and, in reality, reflects the advantages of maintaining a local air quality program.



II ABOUT LRAPA....

Lane County's long history of dealing with local issues at the local government level is evident in the continued operation of the Lane Regional Air Pollution Authority (LRAPA).

LRAPA administers an air quality program that is tailored to fit the needs of the local communities in Lane County while ensuring that minimum federal and state air pollution control requirements are met.

Organized in 1968 through a local intergovernmental agreement, LRAPA is financially supported by contributions from Eugene, Springfield, Cottage Grove and Lane County, as well as by federal and state grant monies, agency permit fees, and miscellaneous contracts.

LRAPA's jurisdiction applies to all air pollution sources throughout Lane County, except field burning, slash burning, and transportation. The latter sources are controlled through programs operated by the State Department of Environmental Quality and the State Department of Forestry.

Agency policy decisions are made by a Board of Directors composed of three elected officials from the City of Eugene, two from the City of Springfield, and one each from the City of Cottage Grove and Lane County. Agency staff is composed of specialists operating in such program areas as engineering and enforcement, monitoring and data analysis, planning, and public information.

In summary, the Lane Regional Air Pollution Authority is a local agency serving the air quality needs of Lane County in a way that is consistent with local priorities and goals.

III BOARD of DIRECTORS

With one exception, membership on the Lane Regional Air Pollution Authority Board of Directors remained the same in 1984 as the previous year. Serving as the board Chair for 1984 was Lane County representative Bill Rogers, with Eugene representative Richard Hansen serving as Vice-Chair. Rogers and Hansen joined holdovers Sandra Rennie and John Lively (both representing Springfield), Bill Whiteman (Cottage Grove), Emily Schue and Debra Ehrman (both representing Eugene) on the board.

Ehrman was the third Eugene City Councilor to fill that city's third seat on the LRAPA Board during the year, following the withdrawal of Cynthia Wooten and Joyce Nichols. Wooten announced in March that she would be vacating her LRAPA Board position. Nichols was appointed to fill the vacancy, although she, too, stepped down after losing to Ehrman in the May Primary election.

While the issue of woodstove air pollution and the air pollution compliance effort of a Springfield charcoal manufacturing plant dominated the board's activities in 1983, many different items were considered by the board in 1984.

The board continued its involvement with the woodstove issue by actively supporting the state's proposed two-phased woodstove emission standard system developed by a special state woodstove advisory committee (see "Advisory Committee" section of this report). The board's position was expressed by LRAPA Director Don Arkell at a DEQ public hearing held in Eugene in early May.

Slash burning was the subject of discussion at the board's June meeting, when officials from the Willamette National Forest provided an update on Western Oregon slash burning activities. Specifically

discussed were the history of slash burning in Western Oregon (particularly in the Willamette Valley), slash burning smoke management as it relates to the Federal Clean Air Act and to total airshed management, and developments involving wood utilization as an alternative to slash burning.

The issue of open burning was back before the Board during the summer months. The board adopted revisions to the agency's open burning regulations in August; revisions intended to simplify the regulations for easier use and understanding.

The proposed revision prompting the most discussion involved the agency's open burning policy statement. As originally proposed, the policy statement would have read, "...to eliminate open burning practices." When finally adopted, the statement was expanded to read, " to eliminate open burning practices where alternative disposal methods are feasible."

The original proposal caused concern among some boardmembers, as well as some Lane County fire districts, interested citizens and citizen groups. Their concern was that adopting the original policy statement could eventually lead to a ban of all open burning in Lane County.

Other changes involved prohibiting commercial open burning in Western Lane County, outside Florence (where such burning was already prohibited), unless a special permit is first issued by LRAPA; and adding two Willamette Valley fire districts inadvertently omitted from the list of districts included under the residential burning season restrictions.

Other than those changes, LRAPA's open burning requirements remained the same.

The remaining major activities undertaken by the board in 1984 had to do, in one way or another, with agency finances.

The board adopted a 1984-85 agency budget in April, enabling LRAPA to maintain a baseline program in the coming fiscal year. The $543,000 approved budget represented an approximate 6% increase over the '83-84 operating budget, primarily due to increased unemployment insurance premiums resulting from agency personnel layoffs in 1982.

One feature of the approved budget was the commitment to expend the agency's remaining reserve funds in order to maintain the baseline program in '84-85. Use of LRAPA reserves began in 1982, when contributions from the local governments were cut by 35%. Exhausting the reserves in '84-85 will necessitate a significant increase in new revenues in 1985-86, in order to maintain the baseline program at that time.

In view of the predicted revenue shortfall in '85-86, the board created a subcommittee composed of Rogers, Rennie, and Ehrman, to explore the agency's revenue picture. After deliberating for nearly two months, the subcommittee recommended a number of funding strategies to the full board, including seeking additional federal, state and local government revenues, in that order. The subcommittee also recommended examination of agency permit fees charged by the Authority, and that any adjustments made in those fees should be instituted in those source categories which create the greatest ongoing workload. The recommendations were adopted by the full board at the October meeting.

IV ADVISORY COMMITTEE

The Lane Regional Air Pollution Authority's Advisory Committee studies various air pollution issues of local concern and, when appropriate, makes recommendations to the Authority's Board of Directors. The committee is composed of 13 members representing various segments of the community including the general public, industry, fire suppression, agriculture, public health and community planning. For the second year in a row Darrel Spiesschaert, District Forester for the Western Lane District of the State Department of Forestry, served as committee Chairperson, while Kathryn Barry, representing industry, served as 1984 Vice-Chairperson.

The Advisory Committee was active in 1984, moving from such projects as evaluating the advantages of a local air pollution agency and developing procedures for coordinating air quality planning activities with local industrial growth and development, to woodstove air pollution and open burning.

The committee reviewed the proposed rules governing emissions from new woodstoves. The proposed rules, part of Oregon's new woodstove certification law that will take effect in 1986, were developed by the State Woodstove Advisory Committee. After discussing the proposed rules with representatives from the woodstove manufacturing industry, the Advisory Committee provided comments to the Board of Directors. In generally supporting the proposed rules, the committee recommended the following modifications:

* The State Woodstove Advisory Committee should be an on-going committee charged with periodic review of the State Woodstove Certification Program, providing technical input to the Environmental Quality Commission.

* The woodstove test method adopted should be mutually agreeable

to the State and the woodstove industry;

* A strong education program must be included as part of the certification program, to emphasize the economic and air quality advantages of proper operation and maintenance of woodburning appliances;

* There should be further investigation into the feasibility of providing tax incentives for replacement of catalysts and for changing over from existing stoves to new ones which meet the standards;

These recommendations eventually formed the basis for the Authority's testimony on the proposed rules at a public hearing held by the Department of Environmental Quality.

As part of a general review and update of LRAPA's rules and regulations conducted by the staff, the Advisory Committee provided comments on the agency's open burning regulations. Most of the comments were directed toward clarifying the rules to aid public understanding. Almost all of the comments were adopted by the LRAPA Board of Directors.

V PROGRAMS

ENGINEERING SERVICES

MONITORING & DATA ANALYSIS

PLANNING & PROGRAM DEVELOPMENT

ENGINEERING SERVICES

One of the primary functions of the Lane Regional Air Pollution Authority is to protect Lane County's air quality through an effective Engineering Services program which limits the total air polluton emissions to the lowest practical levels.

Engineering Services is a combination of engineering and field activities.

The purpose of engineering is to conduct the technical review and evaluation of air pollution permits and control equipment for new and existing sources, to make sure that LRAPA requirements are met. Engineering also maintains an extensive file of information on emissions from industrial sources within Lane County.

Enforcement of the agency's regulations is the primary field activity carried out through Engineering Services. This part of the program is designed to work with industry in the management of their individual pollution control activities, to watch for violations, and respond to citizens' complaints. Special corrective procedures are initiated when an emission limit is exceeded or a rule of practice is violated. The principal purpose of enforcement is to correct the discrepancies and, in extreme cases, to penalize the offender.

Field Activities

In the process of conducting scheduled site inspections, the field engineer also performs routine surveillance of numerous other sources in assigned geographic areas of Lane County. These inspections aid in preventing minor air polluton problems from becoming major ones. In addition, they provide a "presence" in the field that helps deter excessive emissions and violations of emission regulations. Field follow-up is also required to investigate reported

upsets of air pollution control equipment. An effort is made to eliminate recurrance of upsets and to maximize the operation of the pollution control equipment. This assures a more continuous, consistent emission control program. A total of 77 upset conditions were reported by local industry in 1984, down from 85 reported upsets in 1983, and 100 in 1982.

Individual attention is provided in the investigation of specific air pollution complaints. The Authority tries to mitigate these complaints as they arise. The complaints will often serve as a basis for correcting problems not previously noted by the company or the field engineer. A total of 117 source-specific complaints were dealt with by the field staff in 1984. This is in addition to 208 complaints received on residential woodheating, backyard burning, field burning, slash burning, and general poor air quality.

Although the Authority pursues a conciliatory enforcement approach, specific violations occur each year. A total of 18 administrative warnings, notices of violations, and civil penalties were issued in 1984 for violations of permit conditions, excessive air pollution discharges, and open burning violations.

The Engineering Services staff also considered 13 special open burning requests during the year. These requests are to burn waste that is prohibited from being burned without special authorization. Each request requires a field inspection to assess the situation.

Finally, two significant indirect source permits were issued by LRAPA in 1984 involving the proposed Chambers Connector and the 6th/7th Street Widening Project, both in Eugene.

An indirect source refers to any construction project which either directly or indirectly causes an increase in motor vehicle activity, such as highway construction, construction of retail, commercial and industrial facilities, construction of a parking facility,

etc. An indirect source permit is issued by LRAPA if it is found that the project will not cause or exascerbate a violation of an air quality standard.

The indirect source permit for the 6th/7th Street Widening Project was issued to the Oregon Department of Transportation following considerable public coment to the Authority. The permit contained several conditions requiring early attention to the traffic congestion at the I-105 intersection with 7th Street. Suggested options included widening of 7th to Blair Street, re-opening the on-ramp to two lanes, and traffic direction signs for heavy duty vehicles. Other conditions involved dust control measures during construction, new traffic signal controllers, and provisions for allowing LRAPA to perform periodic air monitoring around the site.

Specific Source Highlights

There were a number of air pollution-related activities undertaken by specific local industries in 1984 that were worth noting.

Dow Corning Company in Springfield undertook two specific projects to control air pollution emissions. The company rebuilt its primary baghouse, following a period of excessive bag failure which resulted in heavier-than-normal particulate emissions. The company also undertook a project to reduce fugitive dust emissions by installing a bulk dust handling facility to transport collected waste silica fume. Rather than haul the waste to the landfill, or bag the fume for resale (both of which can produce fugitive dust), the company can now load the fume directly on rail cars for transport and sale.

Other industrial construction activities in 1984 included the installation of baghouses at Weyerhaeuser Company and Rosboro Lumber Company, both is Springfield, to enable the companies to reach compliance with LRAPA's dry material cyclone regulations. In addition,

approval was given to Willamette Industries (also Springfield) to install a new high-efficiency collection system, in order to comply with the same regulations. Finally, Georgia-Pacific in Springfield replaced their dry material handling sytem, for the same reason. In effect, 1984 was a year in which local industries, working with LRAPA, made a concerted effort to achieve compliance with the agency's dry material cyclone regulations, with success.

Fire consumed three significant sources in Lane County during 1984; Premier Plywood at Westfir, the Murphy Company at Natron (southeast of Springfield), and a major portion of Real Wood Products in Eugene. All three companies have maintained their air pollution permits with LRAPA.

In another, separate effort to improve the level of compliance assurance from major industrial sources, the Engineering Services program began an accelerated source testing program in 1984. A compliance source test consists of physically sampling a process exhaust and calculating an emission rate based on in-stack conditions. These tests, which can either be conducted by LRAPA staff or an independent source testing company hired by the industry, are used to demonstrate or confirm compliance or non-compliance with the emission standards.

The Engineering Services staff observed and evaluated five compliance source tests in 1984: Wildish Sand & Gravel, Eugene Sand & Gravel, Morse Brothers, Premier Plywood (before it was destroyed by fire), and Jasper Planing Mill. All five source tests indicated compliance with emission standards.

Testing can also be conducted to obtain data from a specific source in order to estimate emission rates of a specific pollutant on a day-to-day basis. Such a test was performed by LRAPA staff at the Eugene Water & Electric Board, to determine emissions of fine particulate. Several similar tests are planned for 1985. Data from

these tests will eventually be used to estimate the fine particulate emissions from industry in this area.

The Engineering Services program became more involved with emissions of asbestos in 1984. Asbestos is used as an insulating/fireproofing material for boilers and associated equipment, and structural members of buildings. It is also used in a number of other applications, including automobile brakes, and construction materials such as asphaltic concrete.

LRAPA is responsible for regulating asbestos emissions from certain categories of activity, including manufacture of asbestos products, new construction which involves asbestos spray coating and, most frequently in Lane County, the demolition of structures and equipment which contain asbestos. Proper containment and handling of asbestos materials minimizes the asbestos fibers in the air, thus reducing the risk to workers and to the general public. For demolition, the proper procedure includes careful handling during the demolition or dismantling of equipment or buildings, and double-bagging of material for final disposal in a landfill.

The rules require that LRAPA be notified 10 days prior to demolition to make sure that the contractor performing the demolition work is fully aware of handling and transportation requirements. The Authority may also coordinate the final disposal with the landfill site operator, in this case Lane County. There were 31 such removal project notices received by LRAPA in 1984. Two of the significant projects involved removing asbestos material inside an old recovery furnace building at the Weyerhaeuser plant in Springfield, and removal of asbestos on the outside of the Science Building at the University of Oregon in Eugene.

The University of Oregon project was particularly noteworthy, in that it sparked a considerable amount of public interest and discussion. The project involved removal of asbestos on the exterior

structural beams of the Science Building. During the removal process, each side of the building was completely wrapped in a plastic-like cocoon. The project was completed within LRAPA's requirements. Outside monitoring showed very low levels of suspended asbestos fibers.

MONITORING & DATA ANALYSIS

The Monitoring & Data Analysis program, formerly known as Technical Services, is responsible for the air pollution monitoring network that the Authority operates in Lane County. This includes operating the equipment and reporting the measurements to the Department of Environmental Quality and the Environmental Protection Agency. In addition, this program participates with the Planning & Program Development section in performing short-term monitoring studies involving special air pollution problems. Finally, Monitoring & Data Analysis assists the Engineering Services program in performing tests on industrial sources of air pollution.

Monitoring Network

The ambient air monitoring network maintained by the Authority is shown in Figure 1 and summarized in Table 1.

Particulate matter (PM) has historically been the pollutant whose measured concentrations have frequently exceeded the Federal standards. Consequently, the authority operates more PM monitoring stations than for any other pollutant. Monitoring stations are maintained at nine sites located from the Mahlon-Sweet Airport northwest of Eugene/Springfield to the Harrison Elementary School in Cottage Grove (20 miles south of Eugene/Springfield); from the Willamette Activity Center in Oakridge (35 miles east of Eugene) to the KUGN radio station in west Eugene. This geographically widespread network measures "total suspended particulate" matter (TSP), which is usually defined as particulate matter with sizes less than 50 micrometers in diameter.

Because of remodelling to the structure, the PM monitoring stations located on the old Springfield Library and the Springfield Police Administration Building (two adjacent structures) were

FIGURE I

1984 MONITORING NETWORK

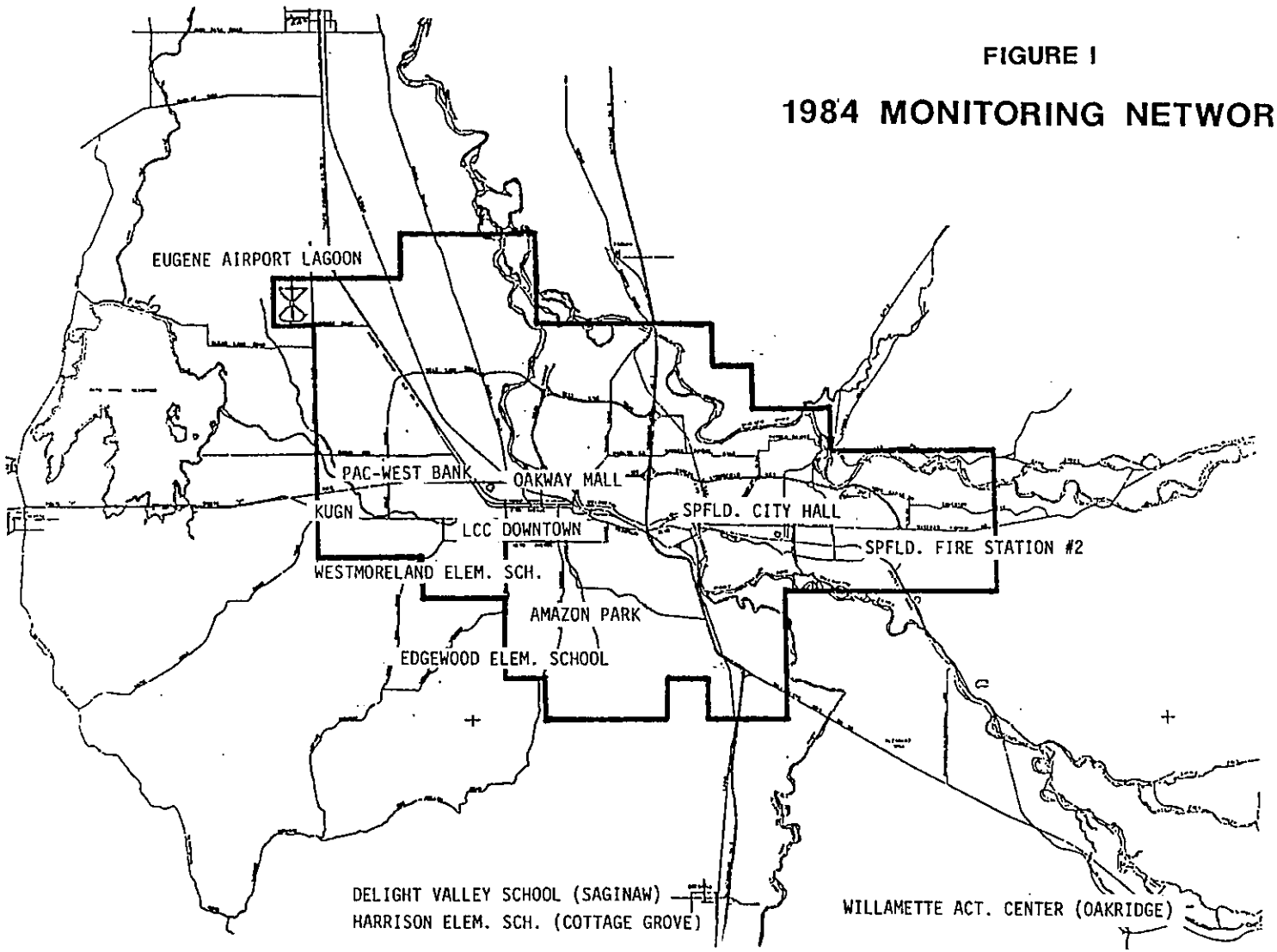


TABLE I

1984 MONITORING NETWORK

	PM	IP	Vis	CO	O_3	SO_2	Met
Lane Community College (Downtown Eugene)	X	X	X	X			
Westmoreland Elementary School (Eugene)	X						
Pacific Western Bank (Eugene)	X						
Springfield City Hall	X	X	X			X	
Springfield Fire Station #2 (East Main)	X						
Eugene Airport Lagoon	X						
Amazon Park (Eugene)	X	X	X	X-1	X-1		
Edgewood Elementary School (Eugene)					X		
Harrison Elementary School (Cottage Grove)	X						
Delight Valley School (Saginaw)		X	X		X-2		X-2
Willamette Activity Center (Oakridge)	X						
KUGN (Eugene)			X				X
Oakway Mall (Eugene)							X

X-1 Seasonal Sampling: Wintertime CO; Summertime O_3

X-2 Seasonal Sampling: April-October O_3, Mt

PM Total Particulate Matter (Hi-Volume Sampler)

IP Inhalable (Fine) Particulate Matter (lo-Volume Sampler)

Vis Visibility (Nephelometer Measuring Particulate Matter)

CO Carbon Monoxide

O_3 Ozone

SO_2 Sulfur Dioxide

Met Meteorological Site

discontinued at the start of the year. In anticipation of this shutdown, the Springfield City Hall monitoring station was established in 1983.

The Environmental Protection Agency has proposed a new particulate matter standard specifically for "respirable particles," known as "PM-10", or particles with a diameter of less than 10 micrometers. The anticipation of this new standard has caused the Authority to reevaluate the PM network. While road dust and industrial plants were considered to be the major sources of TSP, a major source of PM-10 is expected to be residential woodheating. To measure the impact of this wood smoke, a new monitoring station was established in the Amazon Park, a residential neighborhood in south Eugene. In addition to this site, equipment designed to measure PM-10 was also installed at the LCC Downtown (Eugene) and Springfield City Hall sites.

The number of Carbon Monoxide monitoring stations increased in 1984. The Authority has operated a station in downtown Eugene since 1971. However, the proliferation of residential woodheating has caused this source to become a major contributor to local carbon monoxide levels. A monitor for this gas was located at the Amazon Park PM-10 monitoring station. Because this site is located about 100 meters from the nearest roadway, the impact of automobile-related carbon monoxide on the concentrations measured should be minimized.

The ozone monitoring network also underwent modifications in 1984. A new ozone monitoring station was established at the Amazon Park site. This site was selected because the old ozone monitoring site at the Edgewood Elementary School in south Eugene (in operation since 1974) was determined to no longer meet EPA siting criteria. The Amazon Park site is intended to replace the Edgewood School site.

The Authority operates one sulfur dioxide monitoring station. The concentrations measured at this site (Springfield City Hall) have never been higher than about one percent of the EPA standard. Conse-

quently, LRAPA expects to suspend monitoring for this pollutant sometime in 1985 or 1986.

Data Summary

A summary of the TOTAL SUSPENDED PARTICULATE concentrations (annual geometric mean, highest and second-highest 24-hour concentrations, and the number of standard exceedences) is listed in Table 2. None of the stations had an annual geometric mean in excess of either the primary (75 micrograms TSP per cubic meter of air) or the secondary (60 micrograms TSP per cubic meter of air) federal standard.

None of the TSP stations recorded an exceedence of the 24-hour primary standard (260 micrograms TSP per cubic meter of air). However, 5 of the stations recorded exceedences of the 24-hour secondary standard (150 micrograms per cubic meter). Of these stations, two (Pacific-Western Bank on Highway 99 in northwest Eugene and the Willamette Activity Center in Oakridge) recorded two exceedences and are thus considered to be in violation of the 24-hour secondary standard.

The high concentrations measured in Oakridge occur only during the winter season. Because of the topography of the area, pollutants generated in the community are not readily-dispersed. Smoke from residential woodheating is the most likely source. To confirm this belief, a more extensive monitoring effort is planned in Oakridge for the winter of 1985-86.

Table 3 is a data summary of the long-term TSP trends from three sites; downtown Eugene, downtown Springfield, and Mahlon Sweet Airport. The highest and second-highest 24-hour concentrations, as well as the number of exceedences of the federal 24-hour secondary standard (150 ug/m-3), and the annual geometric means for each of the three sites are listed. The highest and second-highest readings have gener-

TABLE 2

COMPARISON OF TSP VALUES
AT SAMPLING SITES (ug/M^3)

1982 - 1984

First Column: Annual Geometric Mean
Second Column: Highest 24-Hour Average
Third Column: 2nd Highest 24-Hour Average
Fourth Column: Number of Standard Exceedances

Site	1982	1983	1984
Eugene Airport	27/115/85/0	25/120/88/0	25/87/78/0
Westmoreland Elem. Sch.	40/226/201/3	36/156/141/1	37/166/137/1
LCC Downtown	39/206/137/1	34/101/87/0	36/152/134/1
Pac-West Bank, Hwy. 99	55/262/252/2	53/188/155/2	55/200/161/2
Amazon Park	--	--	32/100/94/0
Spfld. Fire Station #2	46/211/138/1	44/107/106/0	45/172/124/1
Spfld. City Hall	--	--/114/104/0	38/133/121/0
Harrison Elem. Sch. (C.G.)	39/163/145/1	41/128/117/0	37/143/100/0
Willamette Act. Cent. (Oak.)	--	--/104/79/0	43/245/166/2

-- Incomplete Data

Annual Primary Standard: 75 ug/M^3
Annual Secondary Standard: 60 ug/M^3

24-Hour Primary Standard: 260 ug/M^3
24-Hour Secondary Standard: 150 ug/M^3

TABLE 3

TSP

LONG-TERM TRENDS

1971-1984

	DOWNTOWN EUGENE				DOWNTOWN SPRINGFIELD				MAHLON SWEET AIRPORT			
	Highest	2nd High	# 150	Mean	Highest	2nd High	# 150	Mean	Highest	2nd High	# 150	Mean
1971	397	227	11	49	246	227	10	77	118	102	0	26
1972	218	214	7	68	347	242	15	83	121	111	0	30
1973	203	187	5	63	271	256	13	91	107	94	0	25
1974	207	161	3	63	229	166	3	71	306	194	3	36
1975	157	117	1	49	197	177	4	61	158	79	1	22
1976	295	213	5	67	206	187	5	66	321	113	1	29
1977	255	180	3	66	238	184	5	73	105	88	0	30
1978	161	140	1	52	168	142	1	59	105	98	0	28
1979	204	143	1	51	250	161	2	60	185	133	0	34
1980	159	136	1	52	158	144	1	53	139	108	0	32
1981	110	99	0	42	104	90	0	43	96	91	0	31
1982	206	137	1	39	160	136	1	36	115	85	0	27
1983	101	87	0	34	108	94	0	36	120	88	0	25
1984	152	134	1	36	133	121	0	38	87	78	0	25

Annual Primary Standard: 75 ug/M^3 24-Hour Primary Standard: 260 ug/M^3

Annual Secondary Standard: 60 ug/M^3 24-Hour Secondary Standard: 150 ug/M^3

ally decreased over the years, with a few exceptions. The same is true for the number of secondary standard exceedences. The annual geometric means for the airport site (a rural location that is usually upwind from the Eugene-Springfield Metropolitan Area and surrounded by agricultural land) have remained quite constant through the years. The means for the two downtown sites, however, showed a steady decrease through 1981, but have remained constant since then.

As mentioned earlier, the Authority also conducts monitoring for repirable particles (PM-10) at three sites: LCC downtown, Amazon Park, and Springfield City Hall. The data is summarized in Table 4.

EPA has proposed ranges for new respirable particulate standards. The final standards, when selected from those ranges, will replace existing TSP standards. Specifically, the EPA proposal calls for a new PM-10 Annual Primary Standard to be selected from a range of 50-65 micrograms per cubic meter of air, and a 24-hour Primary Standard from a range of 150-250 micrograms per cubic meter of air.

The PM-10 data contained in Table 4 reflects a full year of monitoring at Springfield City Hall, and nine months at both Eugene sites. This would explain the discrepancy in the highest 24-hour readings since Springfield's maximum was recorded in January and the two Eugene maximums were registered in September. PM-10 levels are thought to reach their peaks during the winter months when residential woodburning takes place. For this reason, Springfield's maximum reading is probably a more accurate indication of the local area's highest PM-10 levels.

The highest concentrations of CARBON MONOXIDE are measured during the winter season when extended periods of light winds and low atmospheric mixing heights frequently occur. This stagnant meteorological condition is conducive for the accumulation of pollutants, such as carbon monoxide, at ground level.

TABLE 4

PM_{10} SUMMARY

1984

	Annual Mean	Highest	2nd High.
LCC DOWNTOWN	18.6	42	39
AMAZON PARK	20.5	56	46
SPRINGFIELD CITY HALL	27.5	108	80

EPA Proposed Standard Ranges:

Annual Primary Standard: 50-65 ug/M^3
24-Hour Primary Standard: 150-250 ug/M^3

The downtown Eugene carbon monoxide monitoring station is located at a heavily-travelled intersection (11th & Willamette Streets). The station is situated so that the maximum impact of traffic-generated carbon monoxide can be measured. A monitoring station has been located at that intersection since 1971.

The Amazon Park site was established in March, 1984, at the end of the 1983-84 heating season.

Table 5 contains a summary of the 8-hour averages from the downtown site since 1971, and from the Amazon Park site in 1984. The highest and second-highest concentrations at the downtown site have remained between 9.5 milligrams (which is below the standard) to about 14 milligrams (well above the standard), with no obvious trend. The number of exceedences of the standard has fallen at that site over the years. In fact, either no exceedences or just one exceedence has been recorded per year at the site since 1981. No exceedences were recorded at the Amazon Park site in 1984, with the highest and second-highest readings remaining well below the 8-hour CO standard.

While a 1-hour federal standard exists (40 milligrams CO per cubic meter of air), an exceedence of that standard has never been measured in Lane County. Consequently, a 1-hour average summary is not listed.

A summary of the OZONE data from the three monitoring stations is depicted in Table 6. None of the stations recorded an exceedence of the 1-hour standard in 1984. In fact, since the Authority initiated a monitoring program for ozone in 1974, exceedences of the standard have been recorded in only two years; 1974 and 1981.

Statistical tests comparing the Edgewood School and Amazon Park data show that the ozone concentrations measured at the two sites are nearly identical. Consequently, the Edgewood School station will be eliminated from the Authority's monitoring network in 1985.

TABLE 5

CARBON MONOXIDE
8-HOUR AVERAGES
1974-1984

	LCC DOWNTOWN			AMAZON PARK		
	Exceed.	Highest	2nd High.	Exceed.	Highest	2nd High.
1971	0	9.9	9.1			
1972	10	18.3	15.6			
1973	3	10.5	10.4			
1974	0	10.0	9.6			
1975	2	11.1	10.6			
1976	10	14.1	13.9			
1977	9	12.2	11.5			
1978	3	11.9	11.0			
1979	1	13.2	10.0			
1980	1	13.3	11.6			
1981	0	9.5	9.4			
1982	1	10.1	9.6			
1983	2	11.1	10.8			
1984	1	10.1	9.1	0	5.8	4.7

8-hour Carbon Monoxide Standard: 10 mg/M^3

TABLE 6

OZONE

1-HOUR AVERAGES

1974-1984

	EDGEWOOD ELEM. SCH.			AMAZON PARK			SAGINAW		
	Exceed.	Highest	2nd High.	Exceed.	Highest	2nd High.	Exceed.	Highest	2nd High.
1974	2	245	240						
1975	0	139	137						
1976	0	114	112						
1977	0	229	191						
1978	0	179	154						
1979	0	185	183						
1980	0	152	146						
1981	3	258	244						
1982	0	168	163				0	182	159
1983	0	183	171				0	171	167
1984	0	184	180	0	184	184	0	188	165

1-Hour Ozone Standard: 235 ug/M^3

Eugene-Springfield experienced 13 total hours of smoke impact attributed to field burning in 1984, up slightly from the 10 total hours recorded the previous year.

Eugene's 2 hours of significant smoke were the result of separate intrusions. The first occurred on the morning of July 26, as residual smoke drifted into the area from burning conducted the day before. The other intrusion occurred on the night of August 12, from general burning.

The 11 hours of significant smoke impact in Springfield occurred on five separate occasions, resulting in the highest number of intrusions in that city in several years. Intrusions occurred on July 25 (3 hours), August 3 (3 hours, in combination with smoke from slash burning), August 5 (2 hours, one of which is classified in the "heavy" range), and August 12 (2 hours), all resulting from general burning. The remaining intrusion hour was registered on August 1, as a result of a wind shift that brought in smoke from a single burn near Junction City.

An AIR POLLUTION INDEX (API) is calculated daily for the three pollutants discussed in this report. The pollutant with the highest index becomes the API for that day and is reported to the local media. The API summary for 1984 is shown in Table 7. Of the 366 days in 1984 (leap year added one day), 68% were "good" air quality days, 31% were "moderate," and less than 1% were classified as "unhealthful." These figures compare with a 74% "good" rate and a 25% "moderate" rate in 1983.

The Authority continued to provide API forecasts in 1984. The forecasts apply to the next day's projected reading. These forecasts, though unsophisticated in nature, were fairly accurate in 1984, with the pollutant being correctly forecast 94% of the time (compared to 87% in 1983. The forecast level was, on the average, within 5 points

of the actual level recorded the next day (compared to 7.5 points the previous year.)

TABLE 7

	GOOD	MOD	UNHEALTH.	TOTAL
Carbon Monoxide	91	61	1	153
Ozone	147	35	0	182
Particulate Matter	12	19	0	31
TOTAL	250	115	1	366

PLANNING & PROGRAM DEVELOPMENT

The Planning & Program Development section develops policies and procedures to integrate federally-mandated requirements with the social and economic needs of Lane County, particularly with regard to community growth. In so doing, the Authority maintains contact with local governmental agencies and community groups including planning departments, chambers of commerce, and economic development organizations. This planning approach helps to promote growth management that not only meets the above needs, but also the air quality needs of Lane County.

The ongoing program of intergovernmental planning resulted in the Authority commenting on several local projects in 1984. These included the paving of parking lots in Springfield, potential indirect sources in Eugene and Lane County, and the River Road/Santa Clara sewer plan element.

Of major significance were our comments on the 6th & 7th Street widening project in Eugene which, through our indirect source permit program, required measures to be taken to mitigate the associated air quality impacts. (For specific information, see discussion in the Engineering Services section of this report.) The same was true of our comments involving the Chambers Connector project in west Eugene.

Also of major significance were our comments on the update of the "Eugene-Springfield Area 2000 Transportation Plan," or "T-2000 Plan." Adopted in 1978 as an element of the original Metropolitan Area General Plan, T-2000 used the land use and development policies of that general plan to develop the required transportation facilities which would meet the projected needs of the urban area through the year 2000. LRAPA is vitally interested in the T-2000 Plan because providing for adequate transportation facilities and reducing dependence on the automobile are positive steps in reducing local air pollution. In addition, T-2000 was used as a basis for the development of the

1979 Eugene-Springfield State Implementation Plan Revisions for carbon monoxide.

Since the adoption of T-2000, several significant developments have taken place, including adoption of a new Metropolitan Area General Plan in 1982, which necessitated a review and update of the transportation plan. Our comments on the evaluation noted all of the changes in the population and transportation projections that went into the T-2000 computer model. As a result, a re-analysis of the air quality impacts in the update process will now be undertaken.

LRAPA's comments on the River Road/Santa Clara Land Use Element encouraged the addition of language that notes the potential for air quality problems in that area as growth occurs, and provides for extensive buffer strips between residential developments and industries, when needed. The comments were particularly directed toward the proposed Irving Light-Medium Industrial Area, which is bordered on three sides by low density residential zoning.

In addition to the planning component, the Planning & Program Development section also coordinates any special projects undertaken by the Authority. The major special project completed in 1984 was a study to evaluate the "representativeness" of the permanent carbon monoxide monitoring site in downtown Eugene.

The Eugene-Springfield area is currently designated as being in nonattainment of the federal 8-hour carbon monoxide standard. Air quality data collected in the past several years indicates that this area is rapidly approaching attainment. Since Eugene-Springfield's attainment status for carbon monoxide is determined from a single permanent monitoring site, the study was conducted to determine the adequacy of that site. Sixteen temporary monitoring sites were established throughout the metropolitan area, with carbon monoxide measurements being taken on weekdays during the study period. The results of

the study demonstrated that the permanent site does, indeed, adequately represent the general peak CO levels in the Eugene-Springfield Metropolitan Area and is, in fact, a suitable indicator of local CO attainment status. However, a micro-scale "hot spot" site was identified at the intersection of 7th & Jefferson Streets, located on the outskirts of the Eugene Central Business District. The study concluded that this site may require a special control strategy to achieve attainment. However, the study also concluded that this "hot spot" was of a localized nature, not representing general carbon monoxide levels throughout the metropolitan area. The discovery of this "hot spot" figured prominently in the Authority's comments on the 6th & 7th Street widening project mentioned earlier.

As part of the effort to provide for needed special projects, the Planning & Program Development section was also involved in obtaining supplemental grants from the EPA in 1984. Projects funded by these grants, to be undertaken in 1985, included a follow-up "hot spot" CO study, a sulfur dioxide/total suspended particulate study near a major industrial source in Springfield, and a program improvement package to include industrial compliance source testing, woodstove public education, and revision of local rules.

As a follow-up to the 1982 Eugene-Springfield Home Heating Survey, the Planning & Program Development section conducted a similar survey in 1984. This survey followed the same basic procedures as the 1982 survey, asking questions regarding how much and what types of wood are burned, when the burning takes place, etc.

Results of the 1984 survey indicated that more local residents burn wood and more cords of wood are being burned than was the case in 1982. Specifically, 64% of all local households actually burn wood, compared to 54% in 1982. The average household burns 1.9 cords of wood per year, compared to 1.7 cords in the previous survey. This translates into 92,000 cords burned locally in 1984, compared to

70,000 cords burned in 1982, which is a 30% increase.

The major State Implementation Plan project completed during 1984 was the Reasonable Further Progress (RFP) reports for particulate matter and carbon monxode covering the previous year (1983). These reports provide an update of the emission inventory for each pollutant and an evaluation of the local area's progress toward achieving air quality standards.

As depicted in Table 8 below, particulate emissions continued to decline in 1983, with the three major source categories all showing reductions. LRAPA believes that the reduction in industrial emissions was due to continued local economic sluggishness, or reduced industrial activity. Reductions in other sources were primarily due to reduced population and increased rainfall in 1983. However, transportation-related carbon monoxide emissions (shown in Table 9) increased in 1983, primarily because of increased tailpipe emissions and an increase in vehicle trips in the Eugene-Springfield Metropolitan Area that year.

TABLE 8

Source Category	Particulate Emissions (Tons/Yr) 1982	1983
Residential Woodheating	2,886	2,559
Fugitive Dust	2,813	2,699
Industrial Processes	5,348	5,244
Other	321	336
	11,348	10,838

TABLE 9

Source Category	Carbon Monoxide Emissions (Tons/Yr.) 1982	1983
Industrial Processes	2,301	2,242
Residential Woodheating	17,660	15,772
Transportation	37,462	39,540
Other	471	491
	57,894	58,045