LANE REGIONAL AIR POLLUTION AUTHORITY

1980 ANNUAL REPORT

1244 WALNUT STREET
EUGENE, OREGON
97403

LANE REGIONAL AIR POLLUTION AUTHORITY

BOARD OF DIRECTORS

1980

Otto t'Hooft, Chairman	Lane County
Bill Hamel, Vice-Chairman	Eugene
Bob Adams	Springfield
Jack Delay	Eugene
John Lively	Springfield
Emily Schue	Eugene
Bill Whiteman	Cottage Grove

Donald R. Arkell, Director

LANE REGIONAL

AIR POLLUTION AUTHORITY

(503) 686-7618
1244 Walnut Street, Eugene, Oregon 97403

Donald R. Arkell, Director

Note

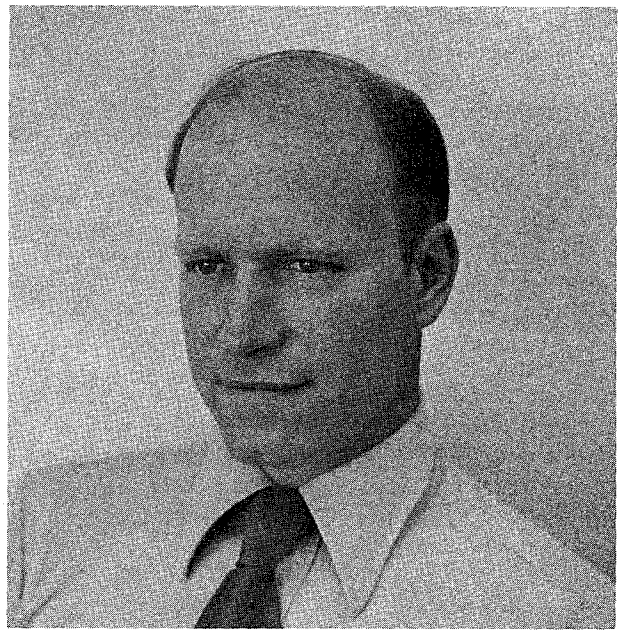
Page 16 Table III PM TREND DATA

The key printed at the top of the chart incorrectly identifies △ as reflecting levels in Downtown Eugene, when it actually represents air pollution levels in Downtown Springfield.

TABLE OF CONTENTS

APPENDICES

I *MESSAGE FROM THE DIRECTOR*



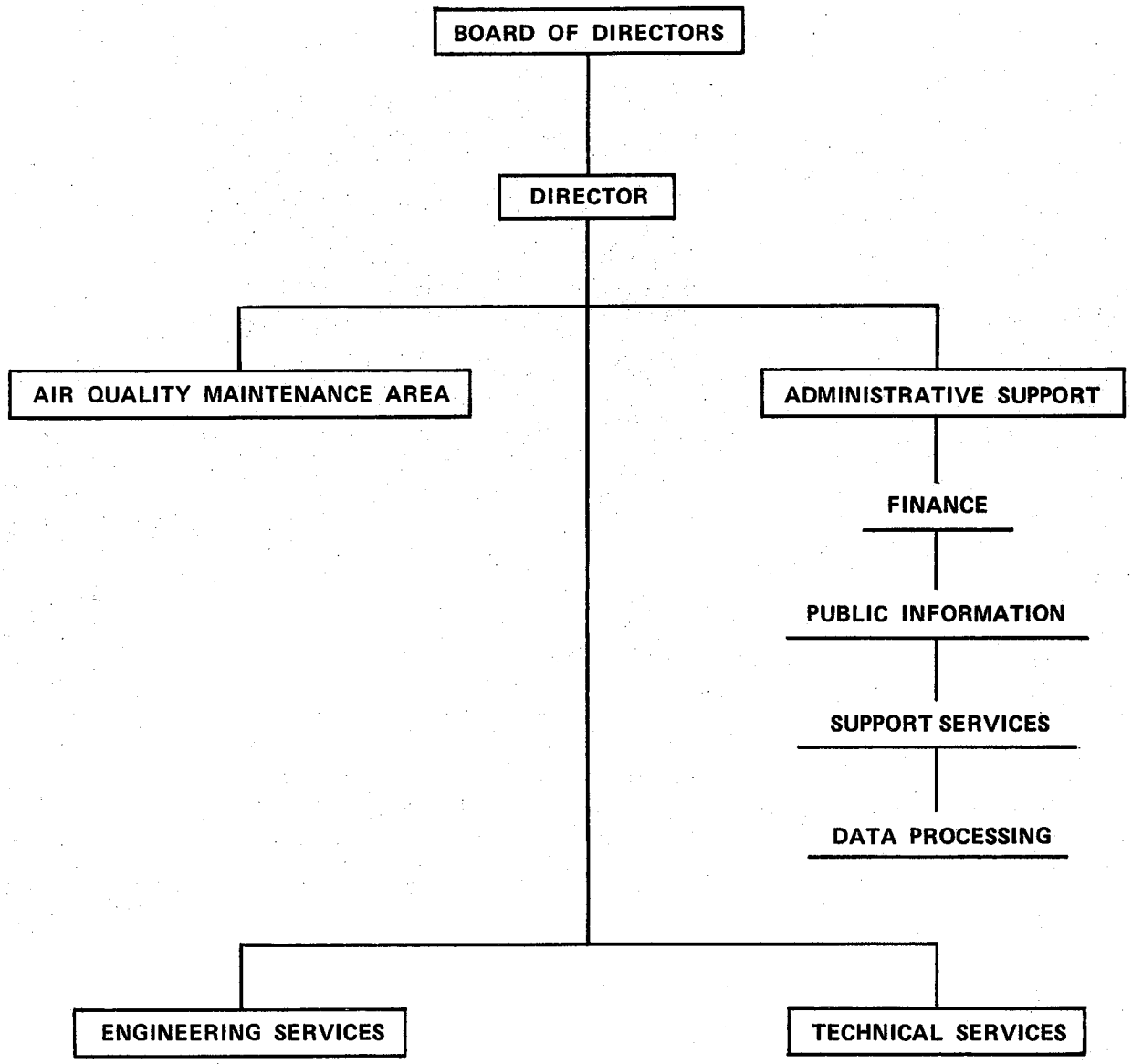
The year 1980 was marked by a number of significant events which begin a new phase in the evolution of the Lane Regional Air Pollution Authority.

First and perhaps most important for Lane County, was LRAPA's assumption of primary responsibility for air quality planning, characterized by the completion of the Eugene/Springfield Air Quality Maintenance Area Plan. The strategies contained in the Plan were selected with primary emphasis on air quality effects and responded successfully to the mandates of State and Federal regulations. LRAPA, and with it, other elements of the community, embraced the concept of managing our air resources, which goes beyond the simpler, more traditional philosophy of reducing emissions to the maximum extent possible from every industrial source. The AQMA Plan incorporates control strategies involving both the private and public sectors of the community, recognizing that air pollution control cannot rely entirely on "technical fix" solutions. Future air quality management, if it is to be successful, must include the whole community, and must involve personal habits and lifestyles, as well as technical hardware.

The economic slowdown, as it extends into 1981, has brought about a period of austerity and conservative program development for the Authority. We elected to allow attrition to diminish our numbers which, in turn, has necessitated spreading what remains of our staff across an undiminished array of responsibilities. There has emerged real challenge to our ability to satisfy these obligations and responsibilities with maximum efficiency and lowest cost. The fact that the Authority was on schedule for all of its goals set for FY 80/81 and has every prospect of finally achieving those goals by June of 1981 attest to the willingness of those involved with the Agency to convert what would appear to be a period of decline into one of opportunity. We look forward to bright prospects of doing our part to maintain clean air in Lane County, thus contributing our share toward enhancing that sometimes elusive condition called "quality of life."

DONALD R. ARKELL

LRAPA PROGRAM ORGANIZATION
1980



II *LRAPA HISTORY AND PURPOSE*

The Lane Regional Air Pollution Authority was created in 1968 through an intergovernmental agreement which was the original commitment between Lane County and the Cities of Eugene and Springfield. This commitment clearly sets forth the public policy in Lane County, and defines the purpose of LRAPA.

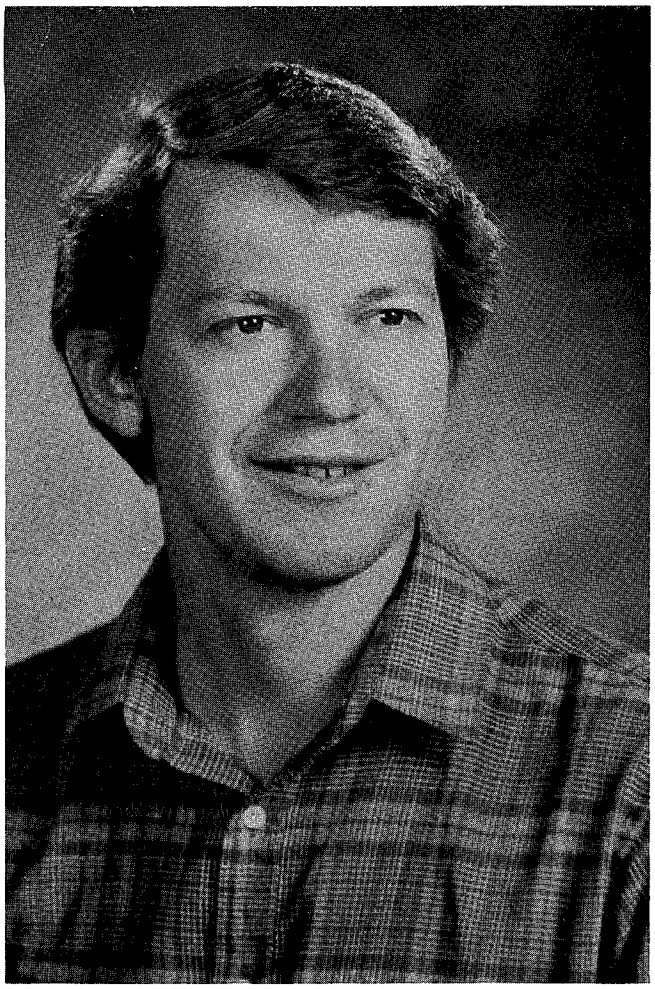
> *"To maintain such a reasonable degree of purity of air resources in Lane County to the end that the least possible injury should be done to human, plant or animal life or to property, and to maintain the public's enjoyment of our natural resources inasmuch as it can be consistent with the economic and industrial well- being of the area."*

This policy is reflected in the Rules & Regulations of the Authority and in the program activities of the staff.

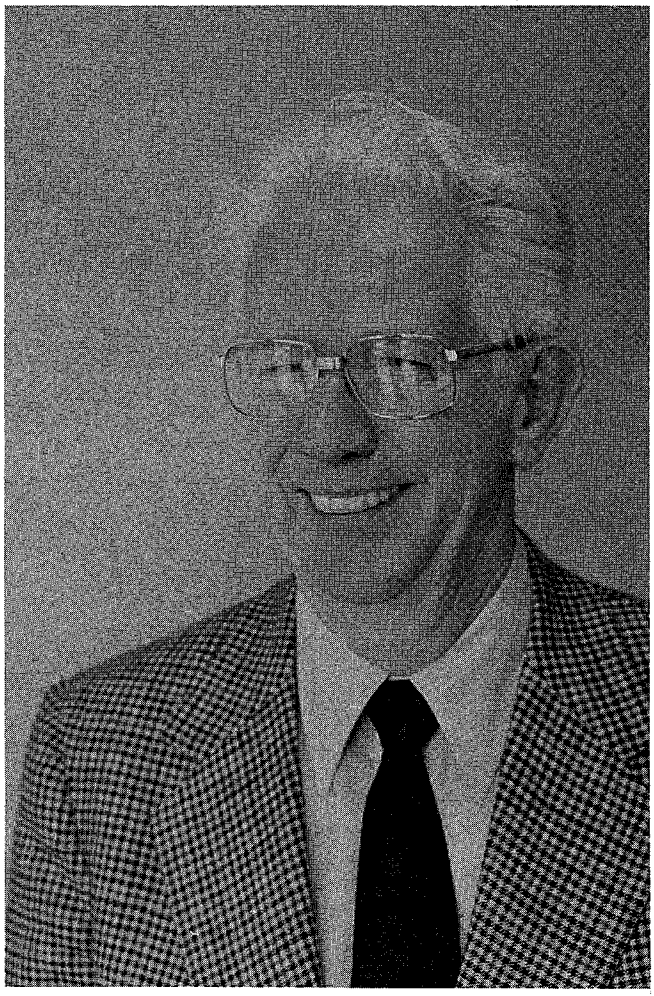
The present membership on the LRAPA Board of Directors reflects a broad constituency. Elected officials from Lane County, Eugene, Springfield and Cottage Grove represent a wide spectrum of urban and rural interests throughout Lane County.

Although the Authority's program must meet minimum State and Federal requirements, administrative policies and priorities are locally derived. This allows appropriate action on air quality problems, delivered in a timely manner.

LRAPA provides technical expertise which is responsive to needs in Lane County, irrespective of circumstances elsewhere in the State. LRAPA is readily accessible at the board, administrative and technical levels. The Authority is accountable through the elected officials serving on the Board and through the local staff. Finally, LRAPA is sensitive to local concerns through frequent, direct contact with other local interests.



OTTO t'HOOFT
LRAPA BOARD CHAIRMAN
1980



BILL HAMEL
LRAPA BOARD VICE-CHAIRMAN
1980

III *BOARD OF DIRECTORS*

The Lane Regional Air Pollution Authority Board of Directors began the year by electing Lane County Commissioner Otto t'Hooft as Chairman and Eugene City Councilor Bill Hamel as Vice-Chairman for 1980.

At the same meeting the Board was told that Lane County's air quality in 1979 was generally good. However, the Eugene-Springfield area continued to violate standards for one pollutant, Particulate Matter.

Veneer Dryers

Much of the Board's attention throughout 1980 was focused on implementation of LRAPA's veneer dryer regulations. This item alone was the primary subject of discussion during four of the Board's twelve meetings in 1980.

The rule was adopted by the Board in 1979, and was similar to veneer dryer rules adopted by the Oregon Environmental Quality Commission. Twenty-six veneer dryer facilities operating 55 individual dryers were affected by the LRAPA rule, which required the installation of pollution control equipment. Because of a serious downturn in the lumber market, several companies expressed difficulty in attaining compliance.

Two companies located in West Eugene asked for a one-year delay in meeting the veneer dryer emission requirements. The Board voted to deny both requests, based on insufficient cause and the belief that an unfair disadvantage to the other firms in compliance would result.

Following that action, the Board reviewed Oregon's air pollution control rules, expressing concern that the rules would cause some companies to move elsewhere, rather than comply with the veneer dryer regulation. The staff report concluded that is unlikely that differences in air pollution regulations are a significant factor in decisions wood products industries make about relocating, and there are other, much larger economic factors at work. The report went on to say that there was no indication of industries moving from one state to another to escape air pollution control rules.

Three additional variance requests were considered by the Board before the year's end, and some additional time beyond the December 31st deadline was granted in two of the cases, with the condition that both companies meet emission standards while installation of control equipment was taking place. The third action was to allow a restart of the mill facility at Westfir, under restrictive operational conditions.

EWEB

The poor lumber market had other effects.

The Eugene Water & Electric Board (EWEB) requested a variance to allow the utility to burn a mixture of coal and wood waste, because of a shortage in the supply of hogged fuel. The Board ruled that the utility's request would be granted, provided strict limitations on burning operations be observed and that EWEB report the results of a boiler study, including plans for future control and compliance with emission standards, by mid-1981.

Lane County Resource Recovery Facility

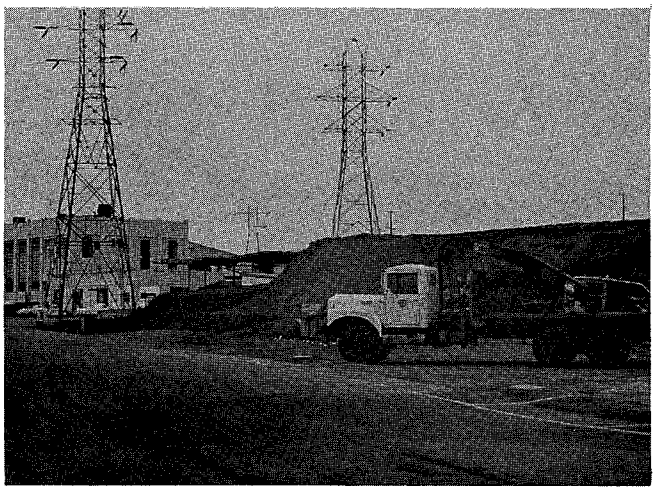
The Board extended a variance to Lane County to operate its solid waste Resource Recovery Facility on a test basis. This request followed an explosion at the plant which caused lengthy delays in testing the facility.

Kingsford

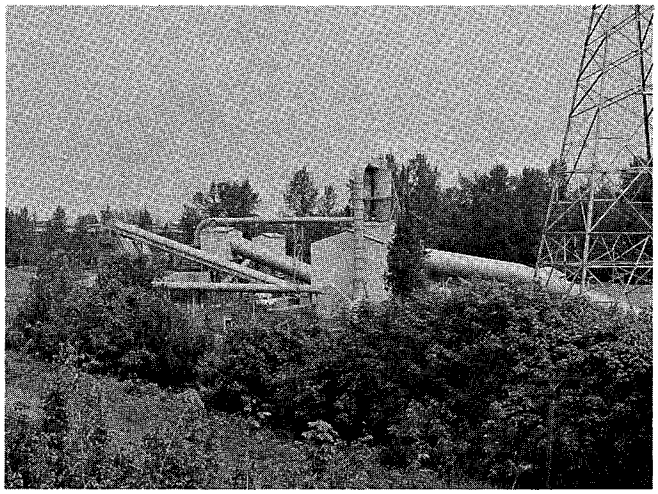
Particulate emissions from the Kingsford Charcoal Manufacturing Plant in Springfield will be significantly reduced within the next two years, under terms of a compliance schedule approved by the Board in January. The Board approved a schedule that will result in an 80-90% reduction in emissions by December 31, 1982, by limiting particulate emissions to 10 pounds per ton of charcoal produced.

The compliance schedule outlined two options by which the plant could reach compliance: co-generation of electricity with EWEB or the installation of necessary air pollution control equipment. The co-generation option was not selected, and Kingsford is now proceeding toward compliance by installing the necessary control equipment.

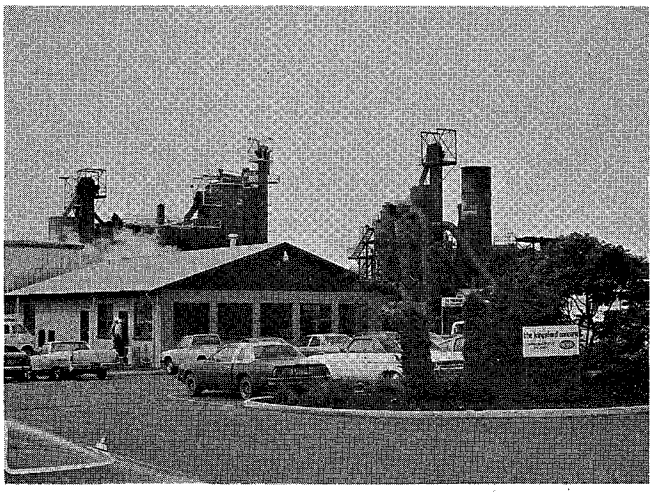
Implementation of LRAPA's veneer dryer regulation was perhaps the major topic of discussion by the Board in 1980.



A shortage of hogged fuel prompted EWEB to request permission to burn a coal/wood waste mixture at its steam generating facility near downtown Eugene.



Lane County's solid waste Resource Recovery Facility continued to experience problems in 1980. The Board extended a variance allowing operation of the facility on a test basis.



A Board-approved compliance schedule for Kingsford initiated a comprehensive air pollution control program at the Springfield plant.

1980-81 Budget

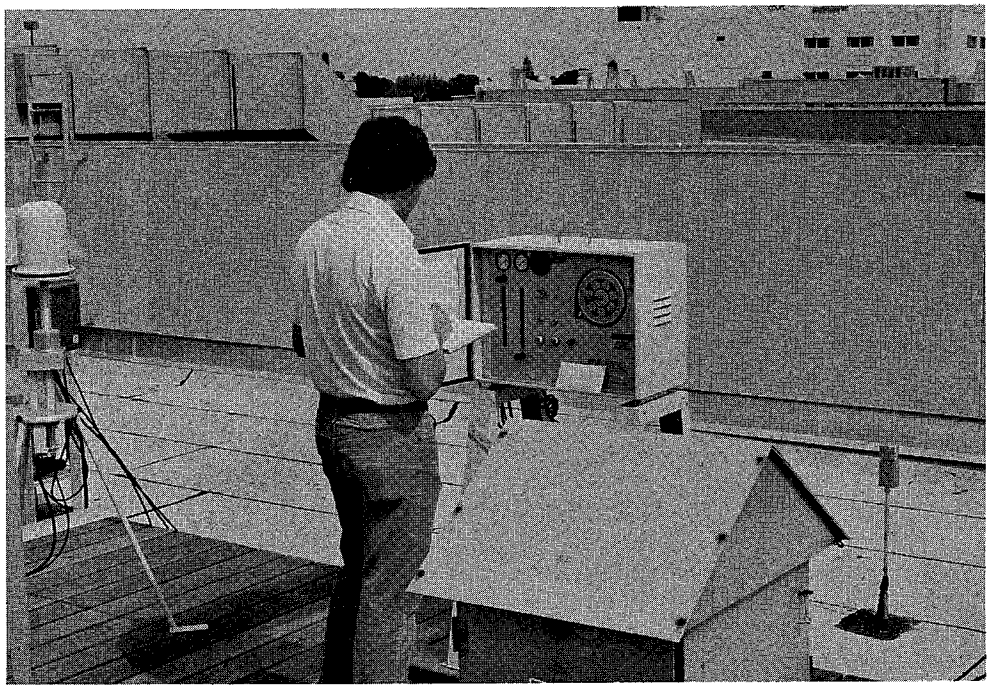
In fiscal matters, the Board, at its March meeting, approved a 1980-81 operating budget of $560,499. The budget and program anticipated a 10% increase in dues contributions from the local governments. In addition, the Board approved a capital reserve fund allocation from reserves of $140,000 to enable the Authority to relocate its offices. The Board had been notified that the leased office space in the Oakway Mall would substantially increase in cost beginning in July 1980.

Civil Penalty Schedule

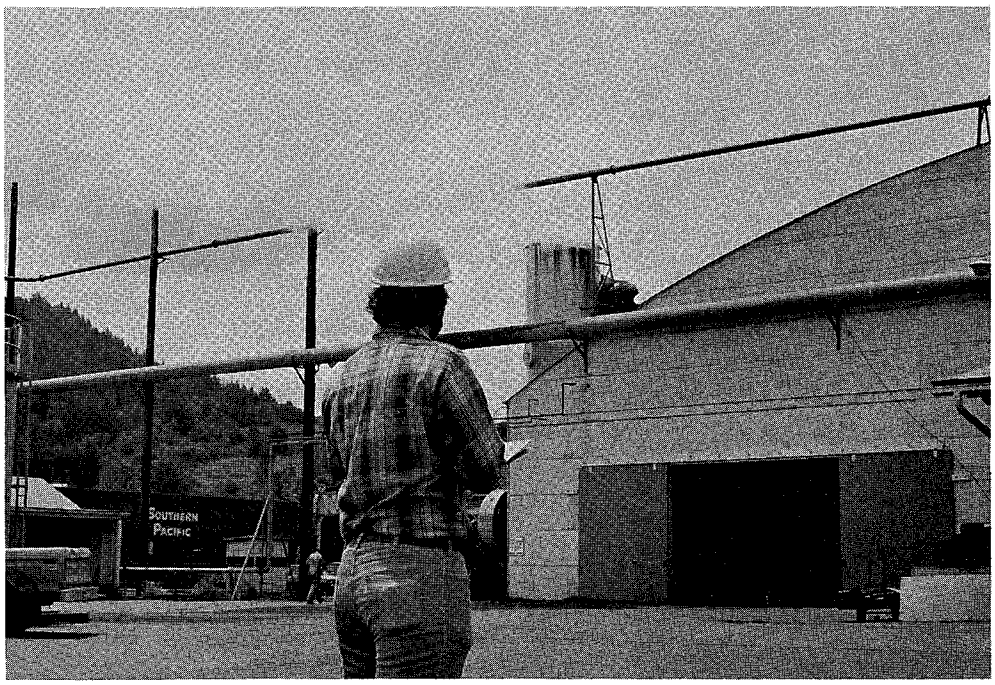
The Board approved a new civil penalty schedule at its May meeting, which increased the maximum fine for air violations from $500 to $10,000 per day. The new schedule was identical to the civil penalty schedule adopted earlier in the year by the Environmental Quality Commission.

AQMA Plan

A two-year effort to develop a local control plan to allow the area to attain and maintain the standards for Particulate Matter culminated in November when the Board unanimously adopted a three-phased program which included, among other things, road dust controls and additional industrial emission controls as strategies. The Plan, recommended for Board approval by a local citizens advisory committee, was forwarded to the Department of Environmental Quality for concurrance. The plan was eventually forwarded to the U.S. Environmental Protection Agency as part of Oregon's Revised State Implementation Plan.



LRAPA technicians regularly service the 19 air pollution monitoring sites located throughout Lane County.



LRAPA field engineers routinely visit plant sites, working with industry in managing their individual air pollution control programs.

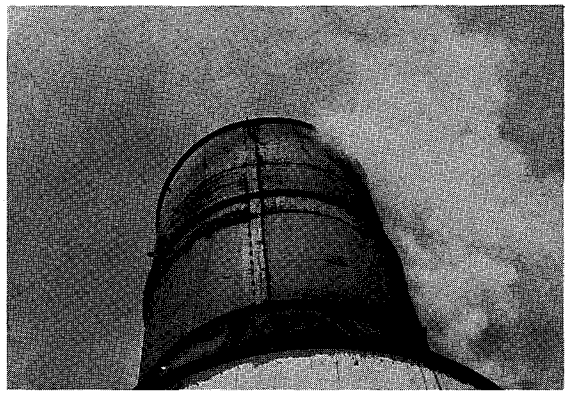
IV *PROGRAMS*

The Lane Regional Air Pollution Authority has, through the years, developed a comprehensive air quality program meeting the needs of a changing Lane County environment. Historically, LRAPA has accomplished its purpose in two specific program areas.

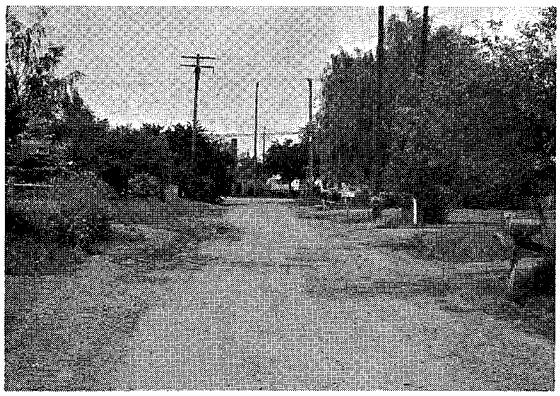
Technical Services provides information about air quality through a network of continuous monitors. This information helps answer three questions: How much air pollution there is now; how the air pollution levels have changed (providing a measure of the Authority's effectiveness); and how much control is necessary to achieve an acceptable level of air pollution.

Engineering Services includes the regulatory arm of the Authority. The field activities of Engineering Services fulfill two purposes: To reduce and maintain emissions of air contaminants from existing sources at predetermined levels; and to assure that emissions of air contaminants from new sources do not jeopardize the achievement of acceptable levels of air pollution. The Authority's emerging role in community and industrial development was marked with an outline for emissions growth management contained in the Air Quality Maintenance Area Plan, which is explained later in this report.

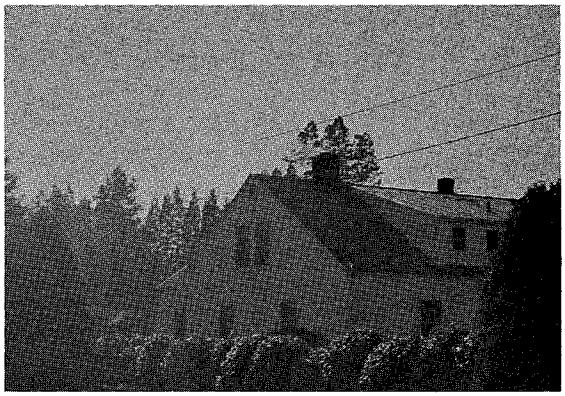
Local Air Pollution Sources



Industry

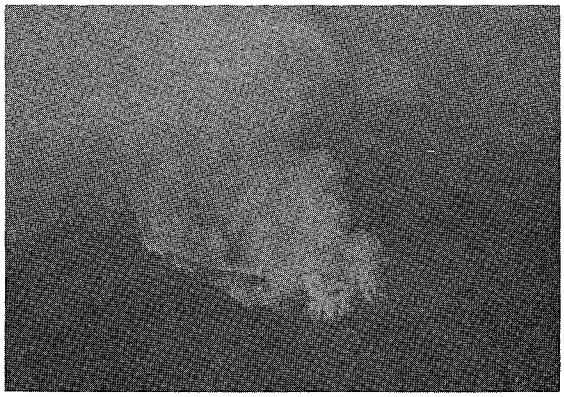


Road Dust

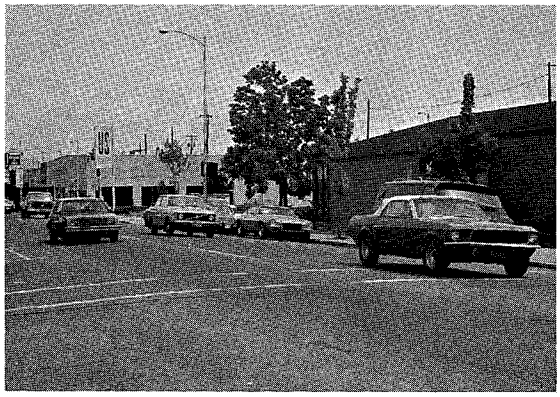


Wood Stoves

Field Burning



Slash Burning



Automobiles

TECHNICAL SERVICES

The LRAPA Technical Services section measures and analyzes the general air quality in Lane County and conducts special monitoring projects. The purpose of this program is threefold:

1. To provide the public with up-to-date information about which pollutants are in the air we breathe;
2. To provide a way to measure the effectiveness of current and past efforts to reduce the concentrations of air pollutants;
3. To guide future efforts in improving the quality of the air we breathe.

Air quality was measured at 19 different locations throughout Lane County in 1980, excluding those sites where the mobile air sampling van was used. Each site is listed in Table I, along with the period of operation and type of sampling performed.

As data needs change, the monitoring network is adjusted. As a result, sites are added or phased out accordingly, which accounts for several sites which were in operation for only a portion of the 1980 calendar year.

All of this sampling is performed under the scrutiny of a rigorous quality assurance program which assures that the data is accurate. Analysis and interpretation of the data is also an important function of the Technical Services section. Through this effort the attainment status of the Eugene/Springfield Metropolitan Area is determined and the effectiveness of selected control strategies can be evaluated.

Pollutants

Three of the criteria pollutants are routinely monitored: Particulate Matter, Carbon Monoxide and Ozone.

Particulate Matter consists of solid or liquid particles suspended in the air, ranging in size from 0.1 micrometers to approximately 100 micrometers in diameter. Comparatively speaking, a human hair is approximately 80 micrometers in diameter, while tobacco smoke particles average 0.5 micrometers. The smallest individual particle visible to the human eye is approximately 40 micrometers in diameter.

There are many sources of Particulate Matter in Lane County, including dust from paved and unpaved roads and agricultural tilling, industrial emissions, combustion sources such as field and slash burning, and more recently, wood stoves from home heating. There are a number of natural sources which also affect air quality such as windblown dust, salt from sea sprays, pollens, forest fires, and now, what may be the most spectacular source, a volcano.

Particulate Matter in the ambient air is routinely sampled every sixth day throughout the year at sites located throughout Lane County. Data gathered is used to determine whether or not the federal standards are maintained. In addition, anticipating a new standard for *Inhalable Particulates,* a network of samplers measuring very fine particles has been established. Data gathered from these sites will allow an initial determination of attainment status for Inhalable Particulates, once that standard is adopted, and whether or not additional control measures will be required.

Finally, smoke intrusions from field and slash burning have constituted a continual nuisance problem for the Eugene/Springfield Metropolitan Area. To aid in identifying and defining the extent of these intrusions, nephelometer sites measuring visibility have been established in Coburg, downtown Eugene and downtown Springfield.

Carbon Monoxide is a colorless, odorless gas created by incomplete combustion processes. The primary source is considered to be automobile exhaust, although other combustion sources such as wood stoves and fireplaces also emit CO.

Carbon Monoxide is measured continuously 24-hours a day. A permanent monitoring site has been established in downtown Eugene, and a mobile sampling van, which contains Carbon Monoxide measuring equipment, is used at so-called "hot spots" throughout the metropolitan area to supplement the data gathered at the permanent site.

Ozone is a colorless gas with a pungent odor, and is one of the prime constituents of "smog." Unlike Carbon Monoxide which is emitted directly into the air, Ozone is formed through photochemical reactions in the atmosphere between oxides of nitrogen and hydrocarbons. Like Carbon Monoxide, automobile emissions constitute the major local source of oxides of nitrogen and hydrocarbons. In addition, there are areawide sources of hydrocarbons such as gasoline storage tank facilities.

Ozone is measured continuously 24-hours a day. The one permanent monitoring site is located in South Eugene. To supplement data collected at this site, the mobile sampling van is also used during the peak Ozone season (summer and early fall) to measure levels at other points downwind of the metropolitan area.

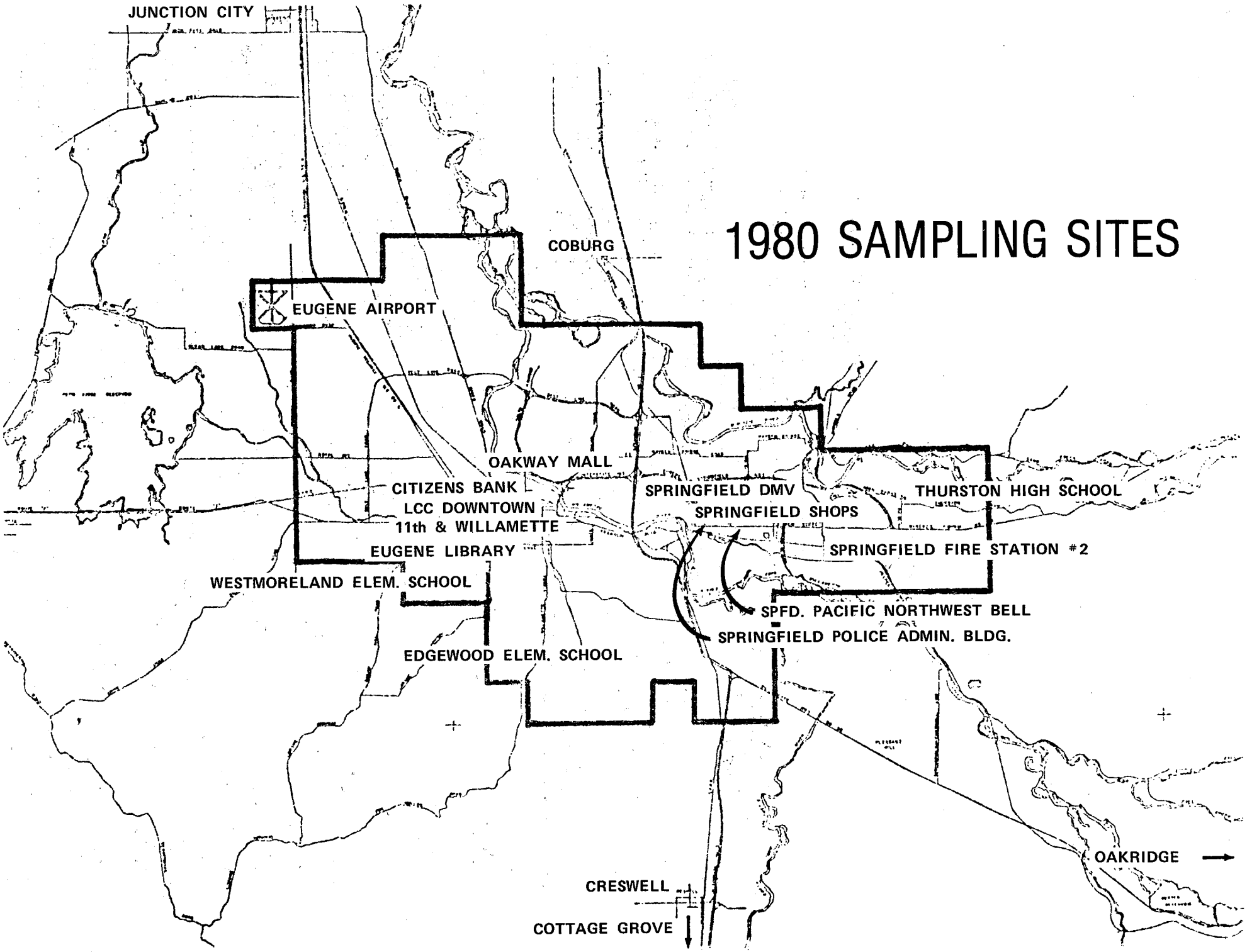

1980 SAMPLING SITES
JUNCTION CITY
COBURG
EUGENE AIRPORT
OAKWAY MALL
CITIZENS BANK
LCC DOWNTOWN
11th & WILLAMETTE
EUGENE LIBRARY
WESTMORELAND ELEM. SCHOOL
EDGEWOOD ELEM. SCHOOL
SPRINGFIELD DMV
SPRINGFIELD SHOPS
THURSTON HIGH SCHOOL
SPRINGFIELD FIRE STATION #2
SPFD. PACIFIC NORTHWEST BELL
SPRINGFIELD POLICE ADMIN. BLDG.
OAKRIDGE
CRESWELL
COTTAGE GROVE

TABLE I

1980 SAMPLING SITES

Site	Period of Operation	PM	IP	Visibility	CO	O_3
Edgewood Elem. School	Jan - Dec	X				X
Westmoreland Elem. School	Jan - Dec	X	X			
11th & Willamette	Jan - May	X			X	
Oakway Mall	Jan - Dec	X				
Citizens Bank (Highway 99)	Nov - Dec	X	X			
Eugene Library	Jan - May	X	X			
LCC Downtown	Jun - Dec	X	X	X	X	
Eugene Airport	Jan - Dec	X				
Springfield Police Admin.	Jan - Dec	X	X	X		
Spfd. Fire Station #2	Nov - Dec	X	X			
Springfield Shops*	Jan - Dec	X				
Spfd. Pacific NW Bell	Jan - Dec	X	X			
Spfd. Dept. Motor Vehicles	Jan - Dec	X				
Thurston High School	Jan - Dec	X				
Oakridge*	Jan - Dec	X				
Coburg	Jan - Dec	X	X	X		
Junction City*	Jan - Dec	X				
Creswell	Jan - Jun	X				
Cottage Grove	Mar - Dec	X				

* These sites do not meet the required siting criteria. Data collected cannot be used to determine attainment status.

PM	Particulate Matter
IP	Inhalable Particulates
CO	Carbon Monoxide
O_3	Ozone

TABLE II

1980 PM DATA SUMMARY

Site	# of Samples	Annual Geometric Mean/ug/m^3	2nd Highest 24-hr Average/ug/m^3
Edgewood Elem. School	59	28	88
Westmoreland Elem. School	60	46	154
Oakway Mall	57	44	122
Citizens Bank (Highway 99)	9	--	112
Eugene Library	25	38	80
LCC Downtown	35	49	126
Eugene Airport	60	32	108
Spfd. Police Admin. Bldg.	61	52	144
Spfd. Fire Station #2	10	--	82
Springfield Shops*	61	68	142
Spfd. Pacific NW Bell	60	56	119
Spfd. Dept. Motor Vehicles	61	52	115
Thurston High School	61	47	164
Oakridge*	61	47	115
Coburg	61	33	99
Junction City*	60	43	110
Creswell	27	--	63
Cottage Grove	49	42	108

*These sites do not meet the required siting criteria. Data collected cannot be used to determine attainment status.

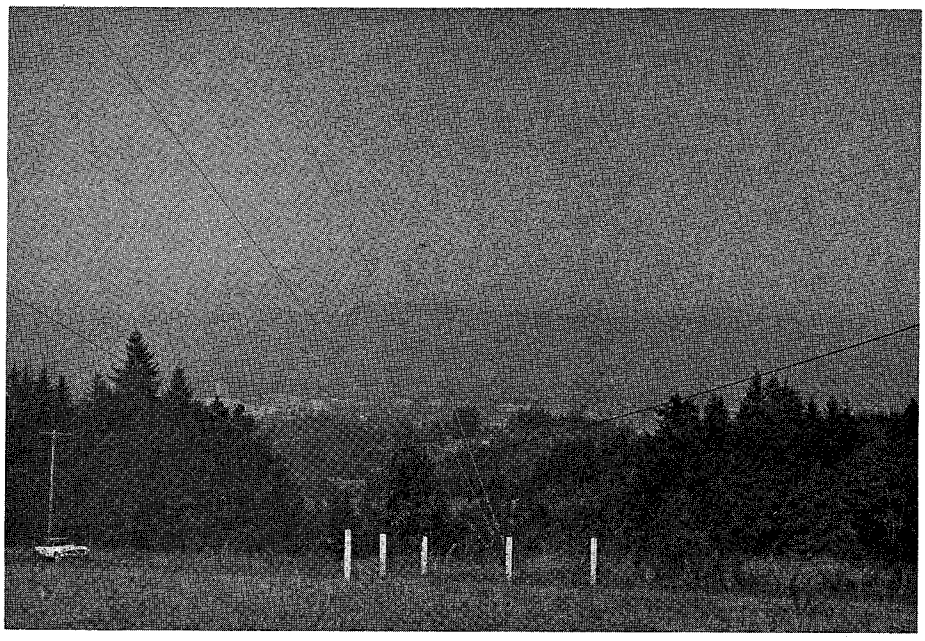
Primary Standards

24-Hour 260 ug/m^3
Annual Geometric Mean 75 ug/m^3

Secondary Standards

24-Hour 150 ug/m^3
Annual Geometric Mean 60 ug/m^3

Meteorology



Meteorology also affects air quality. Not only will certain weather conditions allow the buildup of air pollutants in the atmosphere, but they can also cause increased emissions from some sources such as wind-blown fugitive dust. The relationships between meteorological conditions and air pollution concentrations vary with each pollutant.

Particulate Matter concentrations tend to rise when the weather is dry with light winds and poor vertical mixing in the atmosphere. These conditions can occur any time of the year. Exceedences of the Federal Secondary Standard for Particulate Matter have been recorded in the Eugene/Springfield Metropolitan Area for the past several years. Consequently, the area has been designated as a "non-attainment area", or Air Quality Maintenance Area for this pollutant.

High Carbon Monoxide levels will occur during the winter months when temperatures are low and winds are light with poor vertical mixing. Exceedences of the Carbon Monoxide Standard occur quite infrequently in Lane County. When high levels are recorded, they are generally found to be near major streets and intersections in the downtown areas, which contain heavy volumes of slow moving traffic.

On the other hand, high Ozone levels will occur during the summer and early fall months when temperatures are high, skies are generally clear with light to moderate winds, and solar radiation is at its peak. Exceedences of the Federal Ozone Standard occur infrequently in Lane County, with peak levels generally found downwind of the metropolitan area.

1980 Air Quality

Generally, 1980 was marked by reduced levels of Particulate Matter, while Carbon Monoxide and Ozone levels remained nearly the same as the previous year.

No exceedences of the annual standards for Particulate Matter were recorded during 1980. Two sites, Westmoreland Elementary School and Thurston High School, exceeded the 24-hour Secondary Standard. At least one or more sites exceeded the 24-hour Secondary Standard on 3 of 61 sampling days during the year. The data for all of the sites in operation is summarized in Table II. These values can be compared with 1979 values, when 6 of the 61 sampling days showed at least one site exceeding the 24-hour Secondary Standard. The Annual Geometric Means show a similar reduction in 1980. The annual trend depicting the past four years is presented in Table III.

Whenever there are significant changes in air pollution levels there are two fundamental causes; meterological conditions or changes in emissions, or a combination of both.

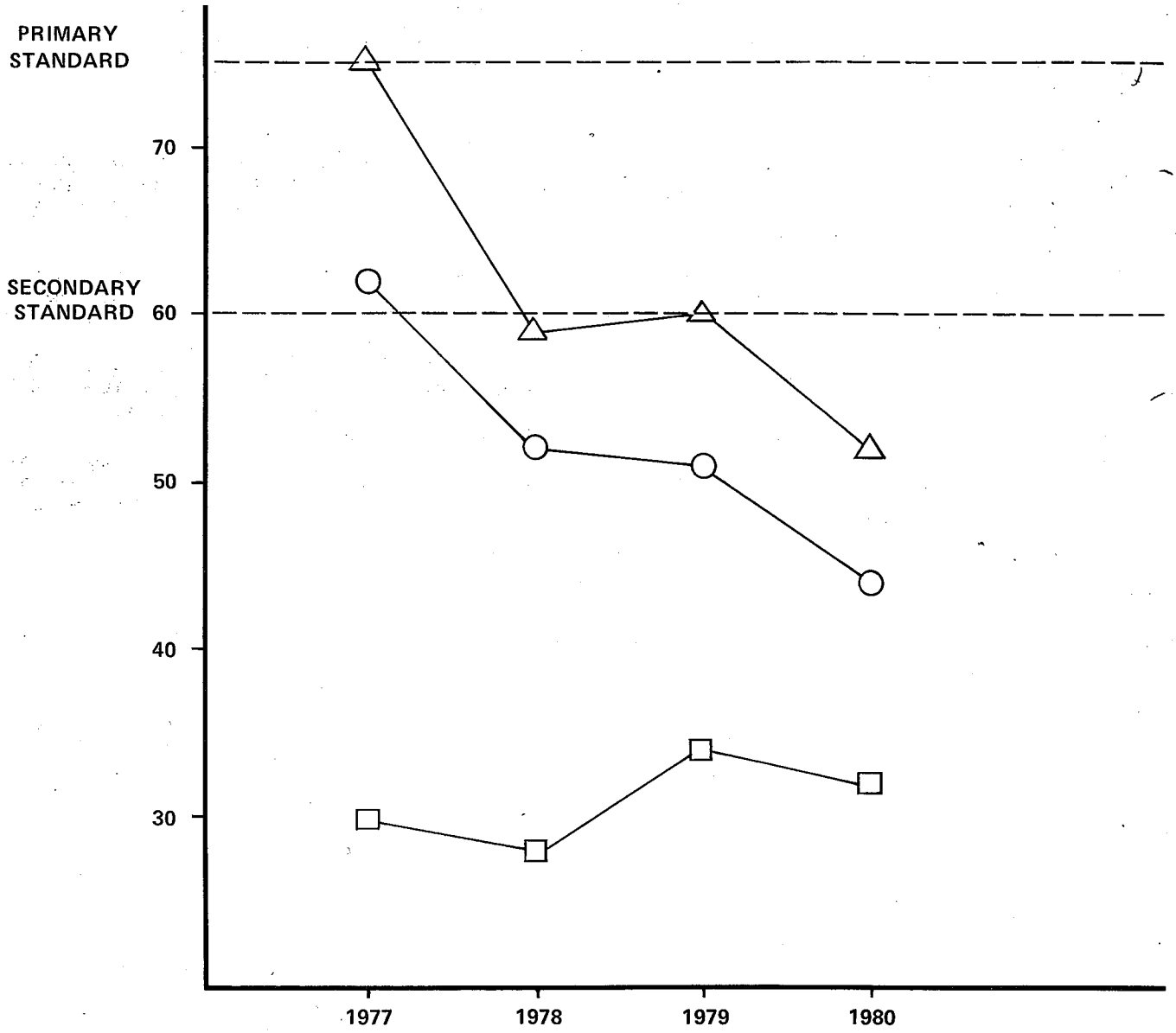
The improvement in Particulate Matter levels can likely be attributed in part to changes in emissions including a general reduction in industrial emissions due to the implementation of tighter veneer dryer controls and periodic plant closures, a reduction in unpaved road dust emissions due to road paving, and an estimated 6-7% reduction in average daily traffic significantly reducing emissions from paved roads, which represent the largest source category of dust emissions in the local area.

TABLE III

PM TREND DATA

(ANNUAL GEOMETRIC MEAN)
(ug/m^3)

Site	1977	1978	1979	1980
Downtown Eugene	62	52	51	44
Downtown Springfield	75	59	60	52
Eugene Airport	30	28	34	32



Attributing the reduced concentrations of Particulate Matter to meteorological conditions is more complicated, though such factors as precipitation, temperature, and wind do affect the levels. The variations in the monthly geometric means at the downtown Eugene, downtown Springfield, and Eugene Airport monitoring sites (Table IV) can partially be explained upon close examination of the monthly meteorological data summarized in Table V. For example, the month of June showed a large difference in Particulate Matter levels between 1980 and 1979. Coincidentally, June of 1980 had higher total precipitation, which would be a significant factor in accounting for the difference. Similar meteorological events occurred in most of the remaining months. Thus, it is evident that the combination of emissions reductions and higher precipitation levels would result in the differences in Particulate Matter levels between the two years.

Carbon Monoxide concentrations were comparatively low in 1980, with only 2 exceedences of the 8-hour Standard recorded (Table VI). Those exceedences occurred in mid-December, during one of the longest air stagnation periods on record. Poor mixing and low wind speeds combined with the cold temperatures to form meteorological conditions necessary for high Carbon Monoxide levels to occur.

Though 1980 registered one more CO exceedence than was recorded in 1979, concentrations in the Eugene-Springfield area are not considered to be serious, due to the infrequent occurrence of violations. However, the potential for more frequent exceedences exists as the metropolitan area continues to grow. LRAPA will continue to monitor local Carbon Monoxide to determine trends, and the need for additional control strategies.

Ozone levels remained low in 1980. No exceedences of the Federal 1-hour Standard were recorded. In fact, such violations have not been recorded in Lane County for the past 6 years. The State of Oregon has retained a Secondary Ozone Standard. One exceedence of that standard was recorded in 1980, as depicted in Table VII.

Special Sampling Projects

Many of the special sampling projects undertaken by LRAPA involve the Authority's specially equipped Mobile Air Sampling Van.

In addition to the routine monitoring previously discussed, the Technical Services section conducted several special sampling projects in 1980.

- The mobile van was used to conduct Carbon Monoxide sampling at three potential "hot spots" in the metropolitan area; Broadway & Patterson, 6th & High, and Coburg Road & 3rd Street. No violations were recorded at either of the sites and levels were either comparable to or less than those recorded at the permanent Carbon Monoxide monitoring site in downtown Eugene.

TABLE IV

MONTHLY GEOMETRIC MEANS
(ug/m^3)

	Eugene		Springfield		Airport	
	1979	1980	1979	1980	1979	1980
Jan	80	50	79	65	33	26
Feb	59	52	70	56	27	33
Mar	44	32	57	42	23	18
Apr	41	32	40	46	15	28
May	54	29	63	41	39	21
Jun	47	28	93	30	61	25
Jul	63	41	70	57	56	44
Aug	44	60	49	73	41	63
Sept	79	56	81	62	81	46
Oct	41	86	51	88	32	67
Nov	42	40	44	40	24	23
Dec	38	46	56	46	25	20

TABLE V

METEOROLOGICAL DATA SUMMARY

	Total Precip.		# of Rainy Days		# of PM Sampling Days With Rain	
	1979	1980	1979	1980	1979	1980
Jan	2.98	7.45	12	15	2	3
Feb	9.52	4.68	24	14	4	1
Mar	3.12	5.11	13	16	3	2
Apr	4.71	4.20	19	13	3	3
May	2.61	1.39	7	10	1	2
Jun	0.56	2.06	3	12	0	3
Jul	0.41	0.39	2	3	0	0
Aug	3.46	0.02	10	1	2	0
Sept	2.32	0.75	7	7	0	2
Oct	8.12	1.90	14	6	3	2
Nov	6.09	8.66	14	15	3	3
Dec	7.38	14.73	15	15	1	2

- The van was also used to measure Ozone levels at Saginaw (just north of Cottage Grove) during the summer months to determine the extent of urban air pollution in rural areas. Levels were significantly higher than those recorded at the permanent site in South Eugene, however no violations were recorded. The Saginaw area remains in attainment of the Federal Ozone Standard.
- With the assistance of a Federal supplemental grant, LRAPA began the computer model calibration and validation study outlined in the Eugene/Springfield AQMA Control Plan. This required Particulate Matter monitoring in previously unmonitored AQMA grids where exceedences of the standard were predicted by the model. Chemical analysis of the filters is also required to help identify the causes of the high levels in those grids. To provide this data, two sites were established, Springfield Fire Station #2 and the Citizens Bank Building on Highway 99. Chemical analysis will also be performed on filters taken from two existing sites which have historically recorded high levels, Westmoreland Elementary School and Springfield Pacific Northwest Bell. This project will continue through 1981, with a final report due in early 1982.
- Surface meteorological data is being collected at three sites as part of the AQMA Plan, representing a continuation of the existing meteorological network involving sites at Westmoreland Elementary School, Oakway Mall, and the Springfield Police Administration Building.
- Three Inhalable Particulate sites were established as part of the AQMA Plan, at Coburg Elementary School, LCC Downtown, and the Springfield Police Administration Building. The LCC site is one of 100 special sites established nationwide by the EPA. Data collected will provide the basis for evaluation of a new Inhalable Particulate Standard.

TABLE VI

HISTORICAL EXCEEDENCES OF 8-HOUR CO STANDARD

January 1977 - December 1980

Date	Peak 8-Hour Avg mg/m^3
January 7, 1977	12.0
January 10	10.2
January 20	11.0
January 27	10.3
October 28	10.5
November 4	10.6
December 20	11.3
January 4, 1978	11.9
December 13	11.0
January 10, 1979	13.3
December 12, 1980	11.6
December 16	13.2

8-hour Average Standard. . . . . 10.0 mg/m^3

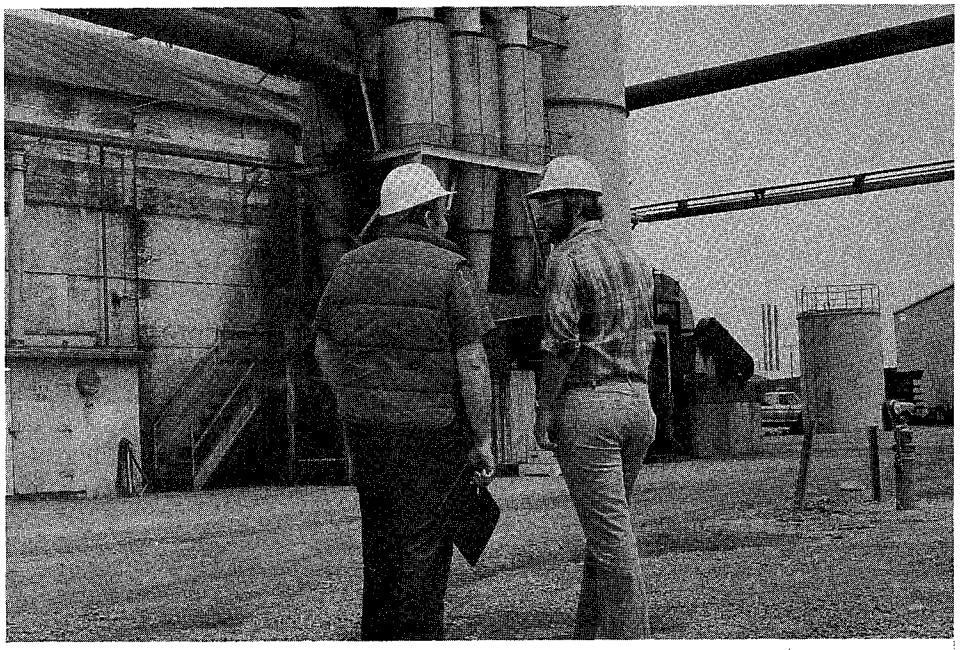
TABLE VII

HISTORICAL EXCEEDENCES OF 1-HOUR OREGON OZONE STANDARD

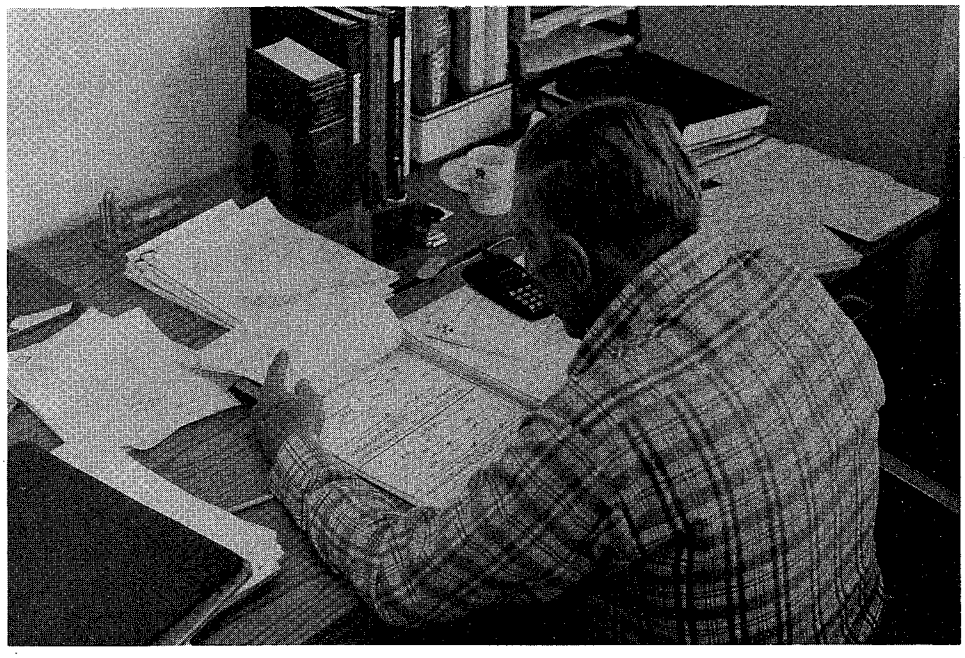
August 1977 - July 1980

Date	Peak 1-hour Average
August 12, 1977	172
August 15	161
August 16	226
October 12	191
July 25, 1978	179
July 15, 1979	185
July 16	183
July 17	172
July 30, 1980	179

1-hour Average Standard (Oregon) . . . 160 ug/m^3



Engineering Services involves field activities. . . . . .



. . . . . .and technical program planning, which includes regular review of over 200 company permits in Lane County.

ENGINEERING SERVICES

One of the primary functions of the Lane Regional Air Pollution Authority is to protect and enhance air quality through an effective Engineering Services program which limits the total emissions to the lowest levels practicable.

Engineering Services is a combination of field activities and technical program planning, consisting of three primary areas of operation: Engineering; Enforcement; Program Planning.

The purpose of Engineering is to conduct the review of permits and control equipment for new and existing sources to assure that designs and specifications meet the requirements of the Authority. Engineering also maintains an extensive file of information on emissions from sources within Lane County.

The Enforcement function is the primary field activity. It is designed to work with industry in the management of their individual pollution abatement activities, to prevent violations, and respond to citizen complaints. Special corrective procedures are activated 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.

The third area, Program Planning, involves strategy development of procedures for field activities, designed to maintain an effective and efficient field program.

The industrial source permit program is the basis for most of the activity in Engineering Services. A total of 201 permits are held by 171 companies in Lane County. Most of the industrial emissions involve wood products-related processes, including sawing, planing, veneer and plywood manufacturing, a variety of finished wood products, and combustion of wood waste in industrial and municipal boilers. LRAPA's emissions inventory shows a total of 8,517 tons of particulate matter being emitted each year by these sources.

Other emissions from sources outside of LRAPA's permit program also contribute to the overall air pollution situation in Lane County. These sources include motor vehicles, wood stoves and fireplaces, traffic on paved and unpaved roads, field burning and slash burning, and pulp and paper operations. The emissions inventory shows a total of 5,311 tons of Particulate Matter being emitted from these sources.

The following summary reflects the significant activities of the Engineering Services section in 1980:

Permit Program

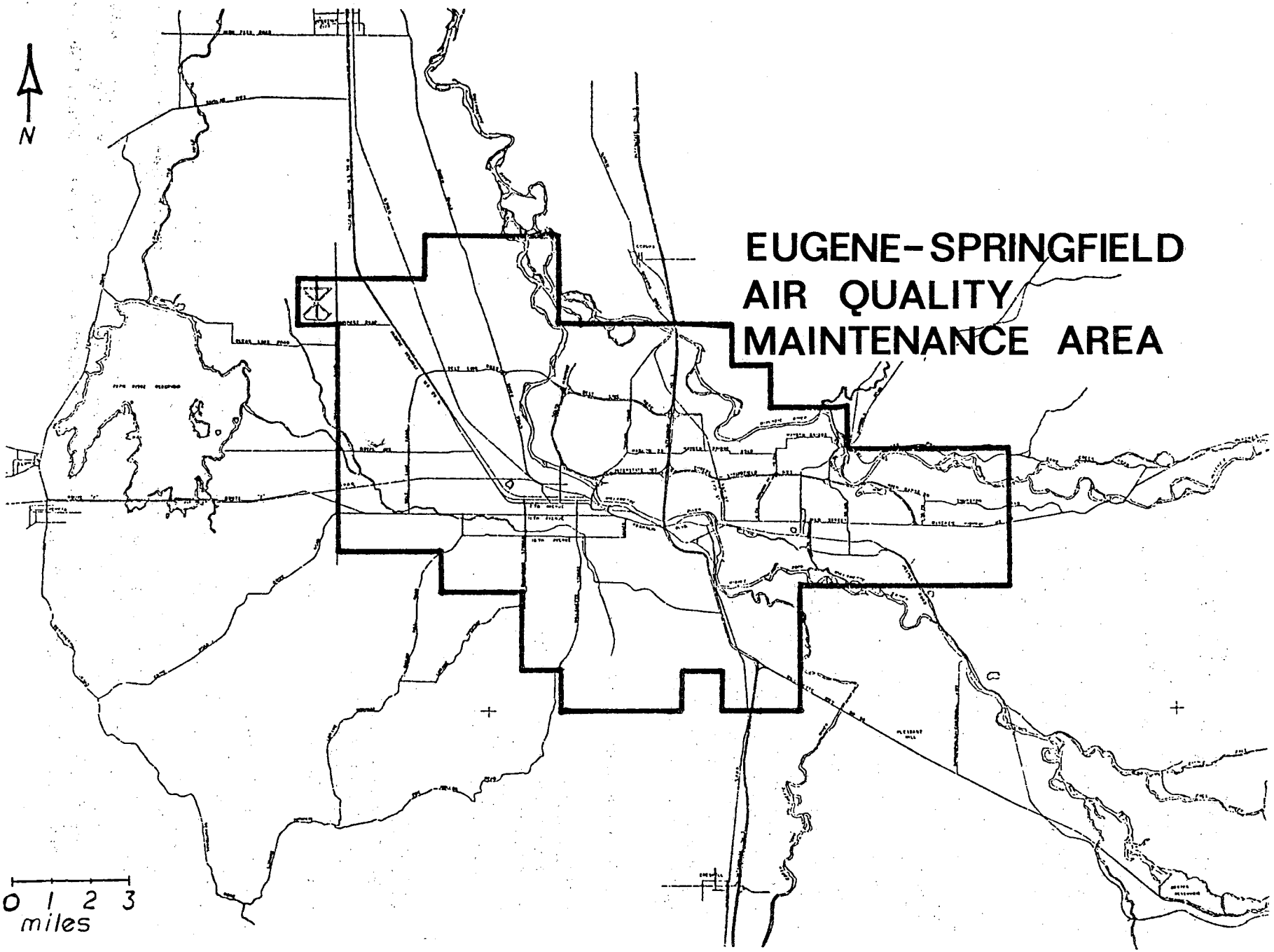
- 6 New Industrial Permits Issued
- 18 Existing Permit Renewals Issued
- 3 Permit Modifications Issued
- 63 Permit Compliance Determinations Completed

Inspections

- 200 for Annual Permit Review
- 50 for New Construction Review
- 220 in Response to Citizen Complaints
- 1,400 Routine Surveillance Inspections

Other On-Going Activities

- 26 Notices to Proceed with Construction of Control Equipment
- Responses to 1,190 Complaints. Most occurred in large numbers for short periods of time involving field and slash burning smoke intrustions.
- 101 Reported Upset Conditions. An Upset Condition is defined as a breakdown in equipment resulting in excessive emissions for a period of 3 minutes or longer.
- 5 Formal Enforcement Actions. The Authority's preventive field program is, for the most part, successful in minimizing the need for punitive enforcement actions for violations of permit conditions.
- 24 Open Burning Permits Issued. The Authority administers an open burning permit program for commercial/industrial and demolition activities.


N
EUGENE-SPRINGFIELD
AIR QUALITY
MAINTENANCE AREA
0 1 2 3
miles

V AIR QUALITY MAINTENANCE AREA PLAN

The Clean Air Act of 1970 and the Clean Air Act Amendments of 1977 establish requirements specifying the methods and schedule by which National Air Quality Standards must be attained throughout the country. States are required to develop plans for each non-attainment area outlining steps to be taken to attain the Standards by December 31, 1982. The individual State plan is referred to as a State Implementation Plan, or SIP.

There are three non-attainment, or Air Quality Maintenance Areas (AQMA's) in Oregon: Portland, Medford/Ashland, and Eugene/Springfield.

The Eugene/Springfield area was initially designated as an AQMA by the Environmental Protection Agency in 1974. The area was redesignated as being in non-attainment of the Federal Secondary 24-hour Standard for Particulate Matter in January 1980. The designations were made because the air quality of the area registered exceedences of that Standard and because additional exceedences are projected to continue in the forseeable future.

The EPA also established guidelines calling for public participation in the local control plan development process. As a result, a 25-member Citizens Advisory Committee representing various public and private interests in the community, was formed in early 1978. This committee would spend the next 2½ years reviewing technical data and discussing possible alternatives to be included in a local control strategy. Committee membership included representatives from the local governments, various state agencies, industry, labor, business, private interest groups and the general public. Committee staff was provided by the Lane Regional Air Pollution Authority and the Department of Environmental Quality, though LRAPA assumed primary responsibility for developing a plan, based on the Committee's recommendations, in early 1980.

After exhaustive discussion and consideration, and much staffwork, the Committee adopted a control plan on September 17, 1980. The plan was then forwarded to the LRAPA Board of Directors for public hearing and adoption on November 6th, then sent to the Environmental Quality Commission for concurrance. EQC action is anticipated in early 1981, after which the plan will be included in Oregon's Revised SIP and sent to the EPA for final approval.

The major causes of emissions in the AQMA were industrial point sources and dust from paved and unpaved roads. More importantly, it was found that these emissions did not have a uniform impact on air quality throughout the AQMA. A grid model was used to estimate the relative benefits of various strategies. What resulted was a mix of strategies calling for emission reduction action in both the public and private sectors.

The control plan deals with the local Particulate problem in three phases.

Phase I, to run from 1981-1987, calls for the paving of 10 miles of unpaved roads in the area, 5 miles each in Eugene and Springfield. These roads were identified as representing approximately 85% of the unpaved road dust emissions inside the two cities.

Phase I also calls for the control of industrial air conveying systems, such as cyclones, emitting over 3 metric tons of Particulate Matter per year. Control is to be achieved by means of fabric filtration, such as baghouse (which constitutes a 98.5% control device). Planing mills, sander and particleboard operations are examples of plants which use cyclones.

Finally, Phase I calls for a metropolitan-area weatherization program which, when implemented over the next 6 years, could achieve a reduction in the use of wood as a home heating fuel. Implementation of this program is dependent on the Cities of Eugene and Springfield, as well as local utilities, adopting weatherization programs.

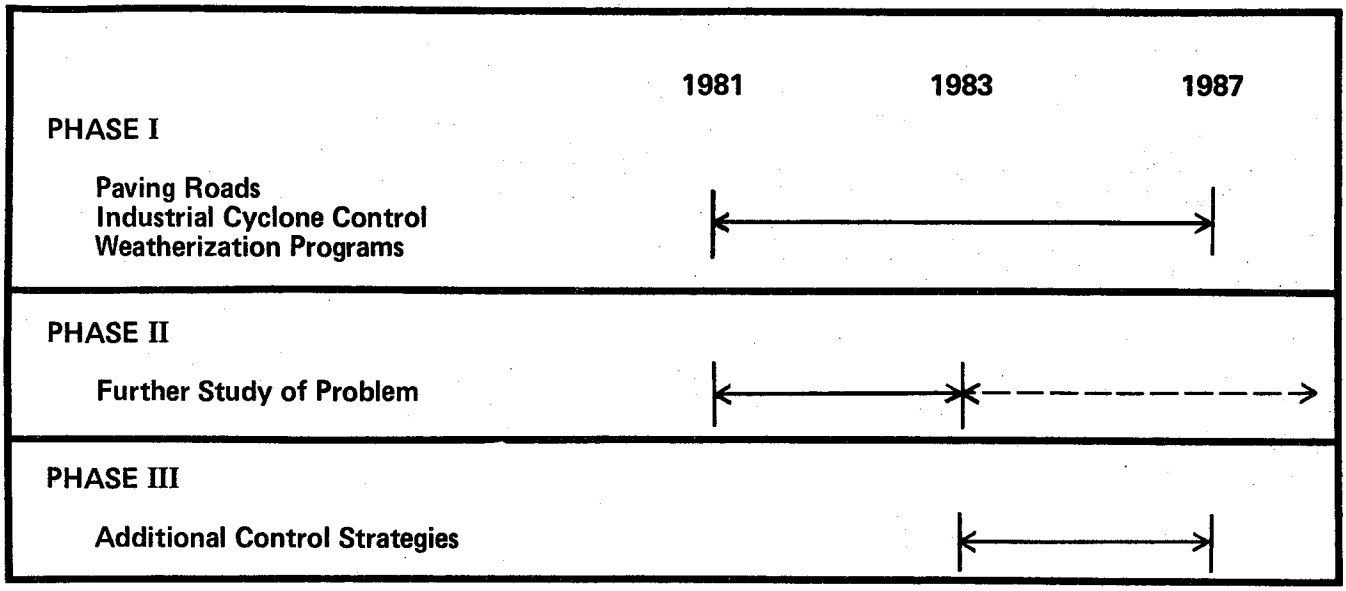
These particular strategies were selected because it was believed that they can be implemented quickly, are cost-effective, and can result in emission reductions in core areas benefiting the most people.

However, the Phase I programs will not, by themselves, result in attainment of the Federal Secondary Standard. In order for this to occur, it is probable that source categories must be addressed about which relatively little is currently understood. Therefore, Phase II will be implemented, involving further studies of the local problem. Phase II extends from 1981-1983 and beyond, if necessary. The Phase II studies are designed to improve the grid model, improve the data base itself, and to evaluate the effectiveness of other alternative strategies.

Phase III, which is scheduled to begin in 1983, will involve additional control strategies in the form of ordinances, regulations, etc., to complete clean-up in the remaining areas. Additional recommendations on which strategies are appropriate will be made by the Citizens Advisory Committee, based on the results of the Phase II study effort.

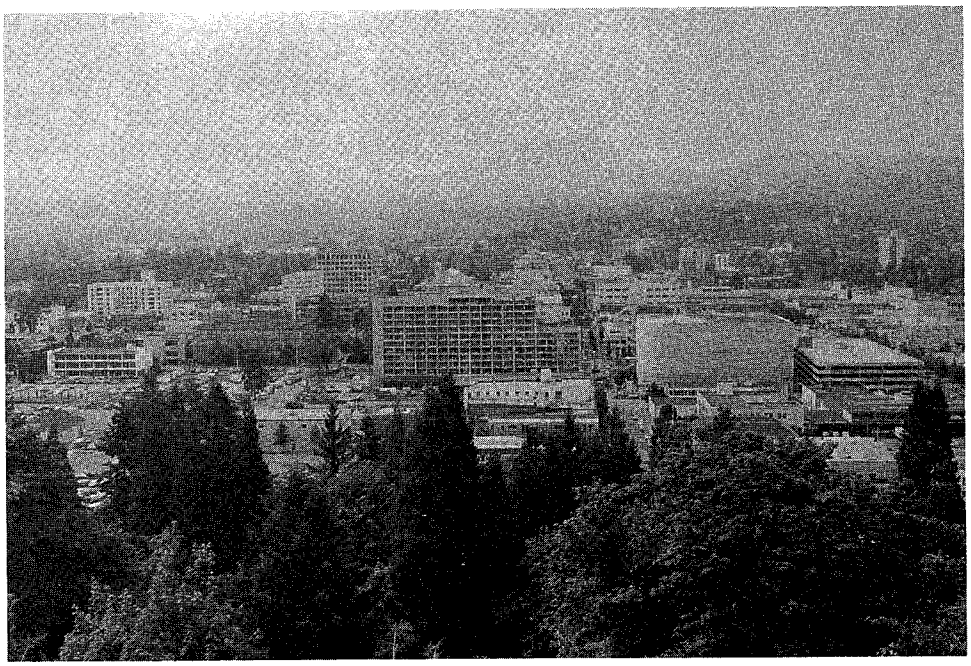
EUGENE-SPRINGFIELD AQMA CONTROL PLAN

TIMETABLE



The plan also provides an emissions growth management plan which allows for continuing economic growth while limiting the corresponding increase in Particulate emissions. This will be accomplished by employing a growth management tool known as "controlled trading," involving the creation of growth increments, and emissions offsetting and emissions banking programs. These trading concepts will be locally-adopted regulations patterned after the State's proposed New Source Review Rules. The effects of sources located outside the AQMA will also be considered in these new regulations. The EQC is expected to act on the proposed rules in early 1981, with LRAPA Board action in adopting the same set of rules likely to take place shortly thereafter.

Both Eugene and Springfield indicated their support of the plan, particularly its phased control strategy approach and treatment of the various sources. Both cities pledged cooperation regarding the road paving strategy. They also commented on the importance of the emissions growth management section of the plan, saying that final decisions must remain with the public sector.



Future growth means increased LRAPA involvement in community planning decisions; assisting growth in a way that still protects our air resource.

VI *FUTURE DIRECTION*

Future years will take the Lane Regional Air Pollution Authority into new activity areas. While LRAPA will continue its ongoing functions of industrial source regulation, enforcement, and air quality monitoring, there are strong indications that the Agency's traditional role of reviewing and permitting individual point sources alone will not be sufficient to adequately address future air quality concerns. LRAPA believes that its role in management of the air resources in Lane County must include active contact and communication with planners, industrial associations, local governments, and individual corporations, so that pertinent air quality information is considered when critical decisions are made regarding future community development, including a diversified industrial base. Therefore, LRAPA anticipates increased involvement in community planning decisions in the next few years.

The initial emphasis will be modest; to improve the data base and the Authority's ability to present the information in a useful format. Of course this effort coincides with the implementation of the AQMA plan, particularly the Phase II study effort.

In addition, the LRAPA Advisory Committee was reactivated in late 1980 to assist the Authority in developing an emissions growth management plan. The AQMA Plan outlines the anticipated approach for controlling emissions growth, employing such methods as the "bubble" concept, "offsetting," and "controlled trading." These are means to allow industry to grow in an area where air quality is not in compliance with standards, and not add to the air quality problem.

In the past, LRAPA has made a conscious effort to consider the economic, as well as social needs of Lane County when carrying out the local air pollution control program. This was the case when the Authority, in its early years, phased out open burning dumps and wigwam waste burners in the County. Local considerations played a significant role in the development of the AQMA control plan. That tradition continues now as there is a major effort to enhance the economic and social needs in the community to attract new industry. The Lane Regional Air Pollution Authority is assisting such growth in a way that still protects our delicate air resource.