

LANE REGIONAL AIR POLLUTION AUTHORITY

ANNUAL DATA REPORT

1971

*This report is a condensed summary.
The full report is available upon request.*

LANE REGIONAL AIR POLLUTION AUTHORITY

Route 1, Box 739

Eugene, Oregon 97402

LANE REGIONAL AIR POLLUTION AUTHORITY

Field Sampling Network

June 1971

Continuous Air Monitoring Station: 1 Operational Site
Continuous Suspended Particulate,
Carbon Monoxide,
Hydrocarbon Measurements

Eugene - 11th near Willamette

Intermittent Air Monitoring Station: 1 Operational Site
Grab Carbon Monoxide Measurement

Springfield - 5th & Main

High Volume Stations: 5 Operational Sites
Suspended Particulate Measurement

Eugene (1) - City Hall

Rural (1) - LRAPA Building, Airport

Springfield (2) - City Library
City Shops

Junction City (1) - City Library

Particle Fallout Stations: 21 Operational Sites
Settled Particulate Measurement

Eugene (4) - City Hall
6th & Garfield
50 N. Danebo
Willamette High School

Rural (2) - LRAPA Building, Airport
Lane BPA Substation

Springfield (6) - City Library
City Shops
Water Treatment Plant
3400 "N" Street
Yolondo Elementary School
Fire Station #2, 47th & Main

Rural (2) - Fire Station, Thurston Waltherville
Mohawk Elementary School

Cottage Grove (2) - City Hall
1133 East Main

Oakridge (1) - Fire Station

Lowell (1) - PNB Building

Junction City (1) - City Library

Veneta (1) - Western Lane Fire Protection Association

Florence (1) - City Shops

Weather Stations: 3 Operational Sites
Wind Speed, Direction & Temperature Measurements

Eugene - Skinners Butte

N of Coburg - Natural Gas Substation

N of Coburg - Proposed Site

PARTICLE FALLOUT STATIONS

Field Sampling Method: Dustfall Bucket
1971

City	Field Station Area	Field Station Site	Primary Purpose	Station No.
Eugene	Residential/Commercial	City Hall	Surveillance	20-18-32
	Residential/Commercial	Willamette High School	Surveillance	20-18-35
	Industrial	6th & Garfield	Surveillance	20-18-29
	Industrial	50 N. Danebo Ave.	Enforcement	20-18-31
	Rural	Wilkins Road, Route 2	Surveillance	20-00-05
	Rural	LRAPA Bldg., Airport	Surveillance	20-00-33
	Rural	Lane BPA Subst., Neilson	Surveillance	20-00-34
	Springfield	Residential/Commercial	Yolanda Elem. School	Surveillance
Residential/Commercial		Fire Station No. 2	Surveillance	20-33-20
Residential/Commercial		Treatment Plant	Surveillance	20-33-36
Residential/Commercial		City Library	Surveillance	20-33-37
Industrial		3400 N. Street	Surveillance	20-33-32
Industrial		City Shops	Enforcement	20-33-35
Rural		Rural F.D., McKenzie Hwy	Surveillance	20-00-07
Rural		Mohawk Elem. School Rt.1	Surveillance	20-00-21
Cottage Grove	Residential/Commercial	Fire Department	Surveillance	20-09-01
	Residential/Commercial	1133 E. Main St.	Enforcement	20-09-16
Oakridge	Residential/Commercial	Fire Department	Surveillance	20-30-01
	Residential/Commercial	Pacific Northwest Bell	Surveillance	20-27-01
Junction City	Residential/Commercial	High School	Surveillance	20-24-01
	Residential/Commercial	City Library	Surveillance	20-24-04
	Rural	Hayes Road	Surveillance	20-00-04
Veneta	Residential/Commercial	Western Lane Forest Protection Dist.	Surveillance	20-36-01
	Residential/Commercial	City Shops	Surveillance	20-21-13

SUSPENDED PARTICULATE

1971

City	Station Location	Field Station No.	Suspended Particulate ($\mu\text{g}/\text{m}^3$) Average														
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN		
Eugene	City Hall	20-18-32	130	101	91	97	77	71	94	100	121	81	81	45	87		
Springfield	City Library	20-33-37	113	82	81	88	66	65	94	100	111	107	85	64	88		
Springfield	City Shops	20-33-35	86	73	109	148	68	157	126	121	116	91	88	108	108		
Junction City	City Library	20-24-04	56	51	46	50	40	39	71	93	97	83	58	55	62		
Rural	LRAPA, Airport	20-00-33	37	18	28	32	31	29	45	48	65	40	35	19	36		

PARTICLE FALLOUT
(by stations)
1971

City	Field Station No.	No. Sampling Months	Particle Fallout (grams/square meter/month)												Arith. Mean		
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		Min.	Max.
Eugene	20-18-32	12	2.8	4.3	3.4	3.1	4.1	1.9	2.0	3.8	5.0	1.9	4.1	3.7	1.9	5.0	3.3
	20-18-35	12	0.7	1.8	2.6	1.9	3.0	2.1	2.5	2.1	3.5	1.5	1.0	2.0	0.7	3.5	2.0
	20-18-29	12	4.4	6.0	6.0	5.3	6.7	3.9	2.9	4.8	5.5	3.8	6.5	5.2	2.9	6.7	5.1
	20-18-31	11	7.2	13.4	15.5	28.1	23.2	16.8	14.7	17.6	14.5	11.2	12.1	-	7.2	28.1	15.8
Springfield	20-00-33	10	1.3	1.1	1.8	-	-	0.7	0.7	3.4	2.5	1.6	1.9	2.4	0.7	3.4	1.7
	20-00-34	12	1.0	0.9	0.6	0.7	2.0	0.5	1.3	1.5	2.5	1.2	1.7	3.3	0.5	3.3	1.4
	20-33-15	11	1.4	1.4	1.8	1.4	3.2	1.4	1.2	-	2.7	2.5	1.0	3.3	1.0	3.3	1.9
	20-33-20	12	1.5	3.0	3.1	3.1	5.3	2.2	2.7	4.0	4.7	2.6	1.3	3.1	1.3	5.3	3.1
	20-33-36	7	1.0	1.9	3.5	-	1.5	0.8	-	2.8	3.4	-	-	-	0.8	3.5	2.1
	20-33-37	12	1.4	5.6	4.2	4.7	3.4	1.6	2.7	3.1	4.9	3.9	5.7	3.3	1.4	5.7	3.7
	20-33-32	11	2.5	3.7	-	3.1	4.1	2.2	2.8	3.8	4.6	3.2	1.8	3.1	1.8	4.6	3.2
	20-33-35	12	4.5	4.7	5.5	10.7	5.4	5.0	4.3	6.5	6.7	4.1	3.4	4.1	3.4	10.7	5.4
	20-00-07	12	1.5	1.6	1.6	2.1	3.5	1.4	2.1	3.7	3.8	1.6	2.2	2.7	1.4	3.8	2.3
	20-00-21	12	1.9	1.6	1.8	1.9	2.6	0.8	1.0	0.8	2.7	2.2	2.4	4.9	0.8	4.9	2.1
	20-09-01	11	1.9	2.6	3.5	4.6	3.9	-	1.6	2.0	3.3	2.0	2.6	5.1	1.6	5.1	3.0
	20-09-16	12	3.2	4.0	3.8	4.3	5.4	2.9	4.1	4.0	5.8	3.2	3.3	5.0	2.9	5.8	4.1
Oakridge	20-30-01	12	4.6	5.5	5.5	4.2	5.7	2.1	2.4	2.8	6.0	3.7	4.2	6.8	2.1	6.8	4.5
Lowell	20-27-01	12	0.8	0.6	0.7	1.0	2.3	1.1	0.7	1.9	2.6	1.2	1.4	1.2	0.6	2.7	1.3
Junction City	20-24-04	12	1.0	4.0	3.5	3.0	6.2	1.8	2.8	4.1	6.1	2.0	1.6	3.3	1.0	6.2	3.3
Veneta	20-36-01	10	-	0.7	2.6	3.6	1.7	0.9	1.3	0.9	2.8	1.5	3.8	-	0.7	3.8	2.0
Florence	20-21-13	10	-	5.0	9.4	2.3	6.7	3.1	2.5	0.6	3.8	1.0	-	9.2	0.6	9.4	4.4

SUSPENDED PARTICULATE STATIONS

Field Sampling Method: Hi Volume Sampler

1971

City	Field Station Area	Field Station Site	Type of Station	Primary Purpose	Station No.
Eugene	Residential/Commercial	City Hall	PAMS	Surveillance	20-18-32
Springfield	Residential/ Commercial	City Library	PAMS	Surveillance	20-33-37
	Industrial	City Shops	Special PAMS	Enforcement	20-33-35
Junction City	Residential/ Commercial	City Library	PAMS	Surveillance	20-24-04
---	Rural	LRAPA Bldg., Airport	PAMS	Surveillance	20-00-33

PAMS = Primary Air Mass Station

SUSPENDED PARTICULATE INDEX (SPI)
 Continuous Air Monitoring Station
 11th at Willamette Street

1971

Month	1 Hour (ug/m ³)		8 Hour (ug/m ³)		24 Hour (ug/m ³)	
	Max. Average	Monthly Ave.	Max. Average	Monthly Ave.	Max. Average	Monthly Ave.
January						
February						
March						
April						
May	145	38	46	16	34	11
June	100	33	45	18	34	13
July	370	74	221	50	89	34
August	516	93	130	37	67	21
September	392	88	135	52	77	38
October	196	94	122	64	110	52
November	176	85	133	56	80	40
December	176	59	106	38	64	25

CARBON MONOXIDE (CO)

Continuous Air Monitoring Station
 Lane Regional Air Pollution Authority Building

1971

Month	1 Hour (mg/M ³)		8 Hour (mg/M ³)		24 Hour (mg/M ³)	
	Max. Average	Monthly Ave.	Max. Average	Monthly Ave.	Max. Average	Monthly Ave.
January	3.4	1.5	2.0	1.2	1.6	0.9
February	4.6	1.5	3.3	1.0	2.3	0.8
March	1.7	1.3	1.7	1.0	1.5	0.8
April						
May						
June						
July						
August						
September						
October						
November						
December						

CARBON MONOXIDE (CO)

Continuous Air Monitoring Station
11th at Willamette Street

1971

Month	1 Hour (mg/m ³)		8 Hour (mg/m ³)		24 Hour (mg/m ³)	
	Max. Average	Monthly Ave.	Max. Average	Monthly Ave.	Max. Average	Monthly Ave.
January						
February						
March						
April						
May	5.8	3.3	4.4	2.4	4.1	2.0
June	5.8	2.7	3.2	2.0	2.4	1.6
July	5.2	3.1	4.0	2.3	3.4	2.0
August	7.5	3.8	6.0	3.0	4.5	2.5
September	9.2	5.1	5.6	3.2	4.1	2.6
October	12.7	6.4	7.7	4.3	6.5	3.3
November	16.1	7.8	9.9	4.8	5.7	3.5
December	10.4	5.7	6.4	3.9	5.1	2.8

CARBON MONOXIDE (CO)

Intermittent Air Sampling Stations
 Grab Sampling Time: 10 min. Periods

1971

Sampling Station Location	Station Classification	Concentration Levels (mg/M ³)	Number of Mid-afternoon Grab Samples at the Specific Concentrations						
			Jan.	Feb.	Mar.	Apr.	May	June	July
Lane County Courthouse East 8th near Oak	Mobile PGLMS	0 - 5	1	1	8				
		6 - 10	5	6	0				
		11 - 16	0	1	0				
		17 - 22	0	0	0				
		23 & above	0	0	0				
Eugene Uptown Willamette Near 11th	Mobile PGLMS	0 - 5	2	4	8				
		6 - 10	4	4	0				
		11 - 16	0	0	0				
		17 - 22	0	0	0				
		23 & above	0	0	0				
Eugene Mall Broadway near Willamette	Mobile PGLMS	0 - 5	1	3	7				
		6 - 10	5	3	1				
		11 - 16	0	2	0				
		17 - 22	0	0	0				
		23 & above	0	0	0				
Springfield Fire Dept. North "A" near 4th	Mobile PGLMS	0 - 5	1	4	7				
		6 - 10	5	2	1				
		11 - 16	0	2	0				
		17 - 22	0	0	0				
		23 & above	0	0	0				
Springfield Downtown Main near 6th	Mobile PGLMS	0 - 5	1	2	4				
		6 - 10	2	1	2				
		11 - 16	3	4	1				
		17 - 22	0	1	0				
		23 & above	0	0	0				

CARBON MONOXIDE (CO)

Intermittent Air Sampling Station
 Springfield - 5th & Main Streets
 Grab Sampling Time: 15 min. Periods

1971

Concentration Levels mg/m ³	Number of Grab Samples at Each Concentration Level					
	July	Aug	Sept	Oct	Nov	Dec
0 - 5		15	31	29	23	31
6 - 10		25	23	20	20	13
11 - 16		3	6	5	7	4
17 - 22		3	0	0	1	0
23 & above		0	0	0	1	1

TOTAL HYDROCARBON (THC)

Continuous Air Monitoring Station

Lane Regional Air Pollution Authority Building

1971

Month	1 Hour ($\mu\text{g}/\text{M}^3$)		8 Hour ($\mu\text{g}/\text{M}^3$)		24 Hour ($\mu\text{g}/\text{M}^3$)	
	Max. Average	Monthly Ave.	Max. Average	Monthly Ave.	Max. Average	Monthly Ave.
January	2292	720	1244	458	1048	393
February	1572	655	1179	590	917	458
March	1114	720	852	590	786	524
April						
May						
June						
July						
August						
September						
October						
November						
December						

TOTAL HYDROCARBON (THC)

Continuous Air Monitoring Station

11th at Willamette Street

1971

Month	1 Hour (ug/m ³)		6:00 to 9:00 A.M. 3 Hour (ug/m ³)		8 Hour (ug/m ³)		24 Hour (ug/m ³)	
	Max. Ave.	Mon. Ave.	Max. Ave.	Mon. Ave.	Max. Ave.	Mon. Ave.	Max. Ave.	Mon. Ave.
January								
February								
March								
April								
May	2620	1211	2031	883	2030	976	1616	841
June	1507	1046	1288	799	1286	868	1057	778
July	2555	1455	1859	1192	1859	1251	1622	1095
August	2686	1659	2118	1326	2154	1369	1501	1211
September	2817	1740	2074	1352	1990	1382	1739	1250
October	3275	1621	1900	1077	2154	1232	1799	1067
November	3275	1676	1441	961	2121	1228	1370	1033
December	2882	1384	2336	884	1898	1036	1656	898