



**Portland Air Toxics Community
Assessment Monitoring Project
2005**

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**National Air Monitoring Conference
November 2006**



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Presentation Outline

- Purpose
- Study Area
- Standard Methods
 - Results
- Method development
 - QC issues
- Conclusions



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Project Objectives

- Oregon's Air Toxics Program
 - Inform stakeholder group
 - Identify sources
- Respond to neighborhood concerns

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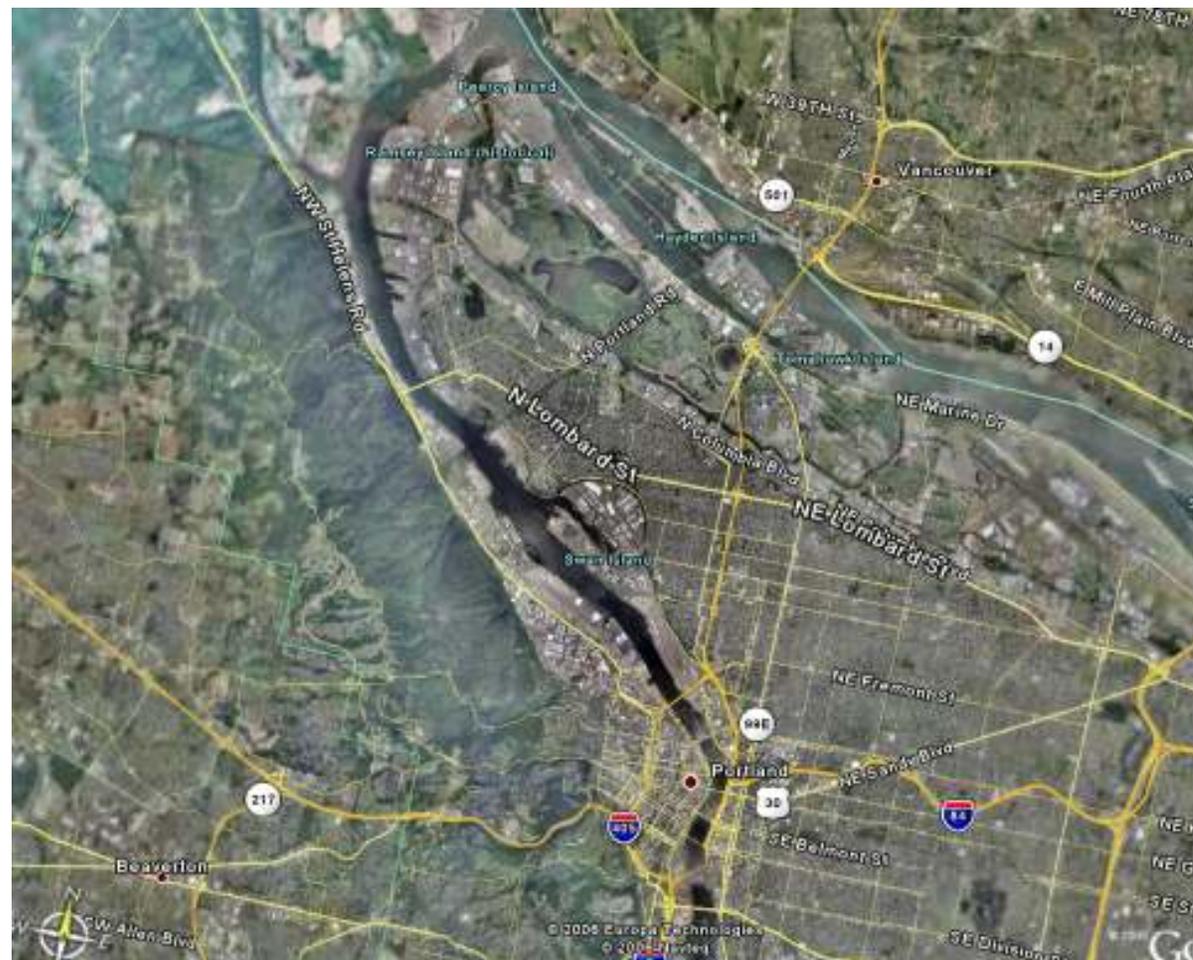
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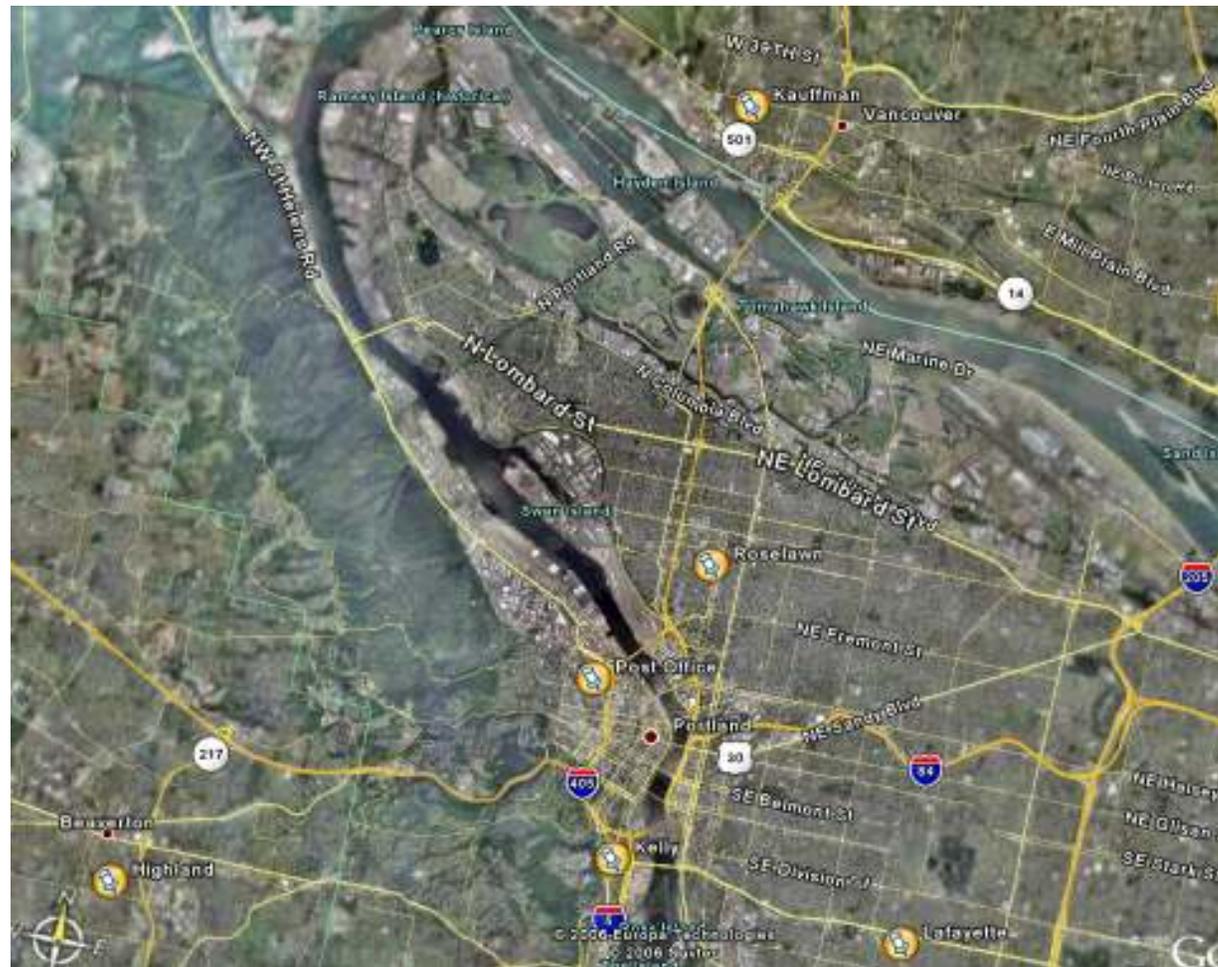
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“Standard” Methods

- VOC
- PM 10 Metals
- Carbonyls
- PAH
- Hex Cr
- Black Carbon

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Results - VOC

	Annual Averages (ppbV)			
	o-Xylene	m, p-Xylene	Toluene	Methylene Chloride
Highland	0.11	0.28	0.08	0.69
Lafayette	0.33	0.51	0.33	1.12
Post Office	0.25	0.69	0.16	1.93
Roselawn	0.19	0.55	0.13	1.13
Kelly	0.12	0.33	0.11	0.89
Kauffman	0.14	0.39	0.13	0.91

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Results – Metals

	Annual Averages (ng/m3)				
	As	Pb	Mn	Ni	Cr (VI)
Highland	1.06	3.18	3.82	<1.0	<0.042
Lafayette	1.32	5.72	6.37	1.75	<0.042
Post Office	0.93	6.60	41.88	4.24	0.045
Roselawn	1.74	11.73	15.86	1.76	<0.042
Kelly	1.22	5.79	19.18	1.78	<0.042
Kauffman	1.03	3.82	8.00	1.09	<0.042

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Results - Carbonyls

	Annual Averages (ug/m ³)	
	Acetaldehyde	Formaldehyde
Highland	1.25	1.58
Lafayette	1.64	2.14
Post Office	1.66	2.4
Roselawn	1.53	2.17
Kelly	1.48	2.16
Kauffman	1.43	1.97

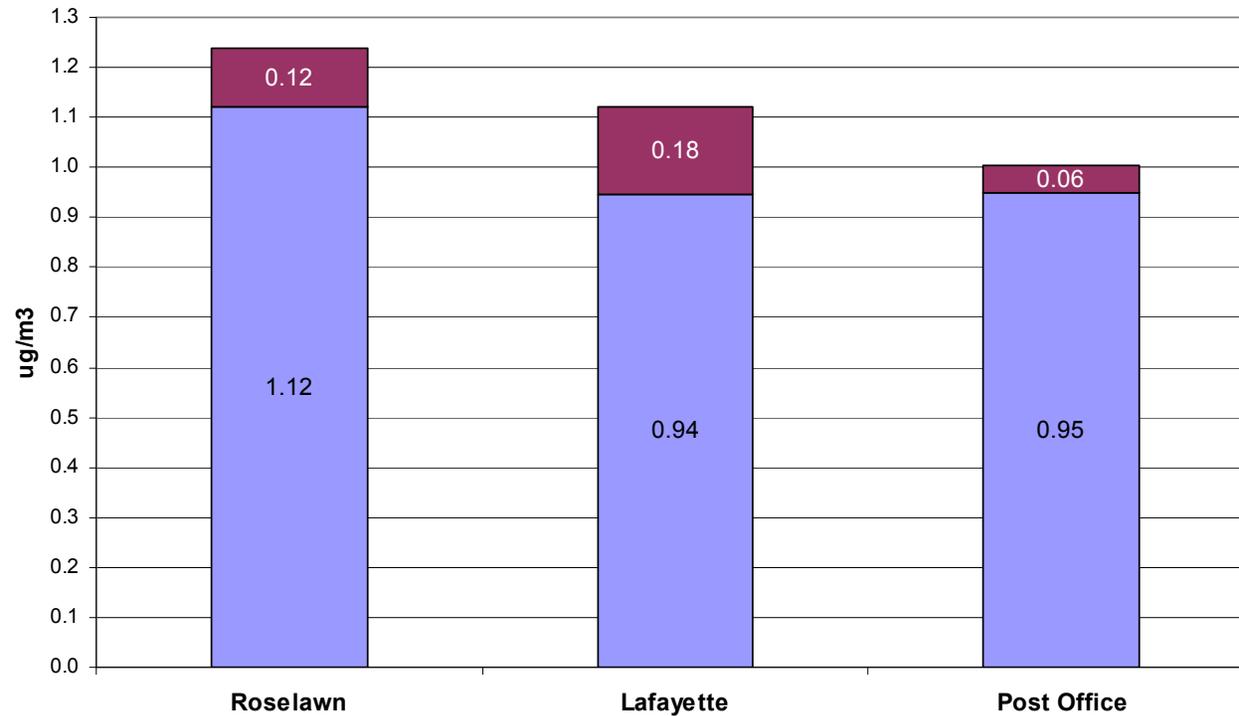
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Results – Black Carbon

Annual Average BC and UV



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Method Development – Hourly VOC



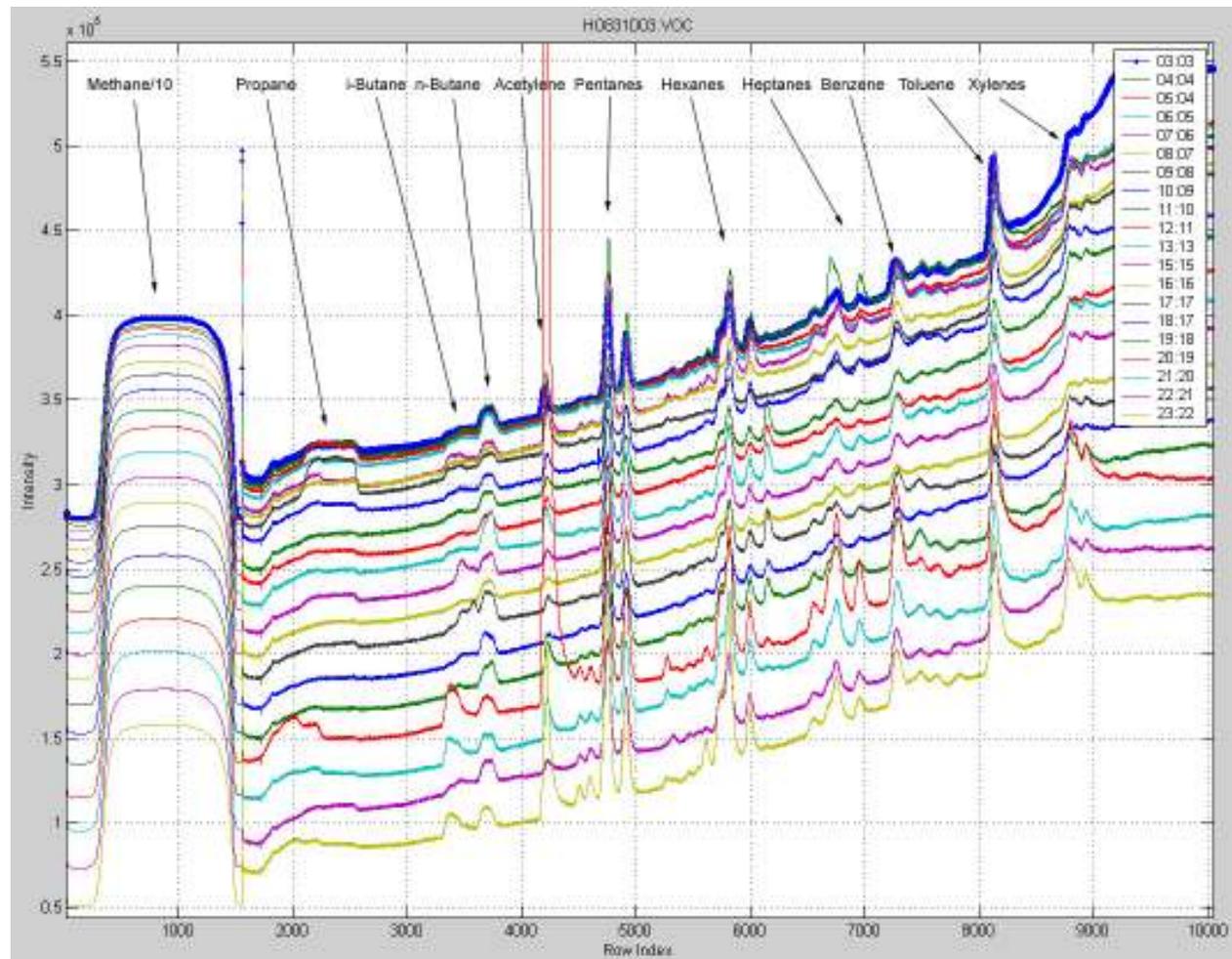
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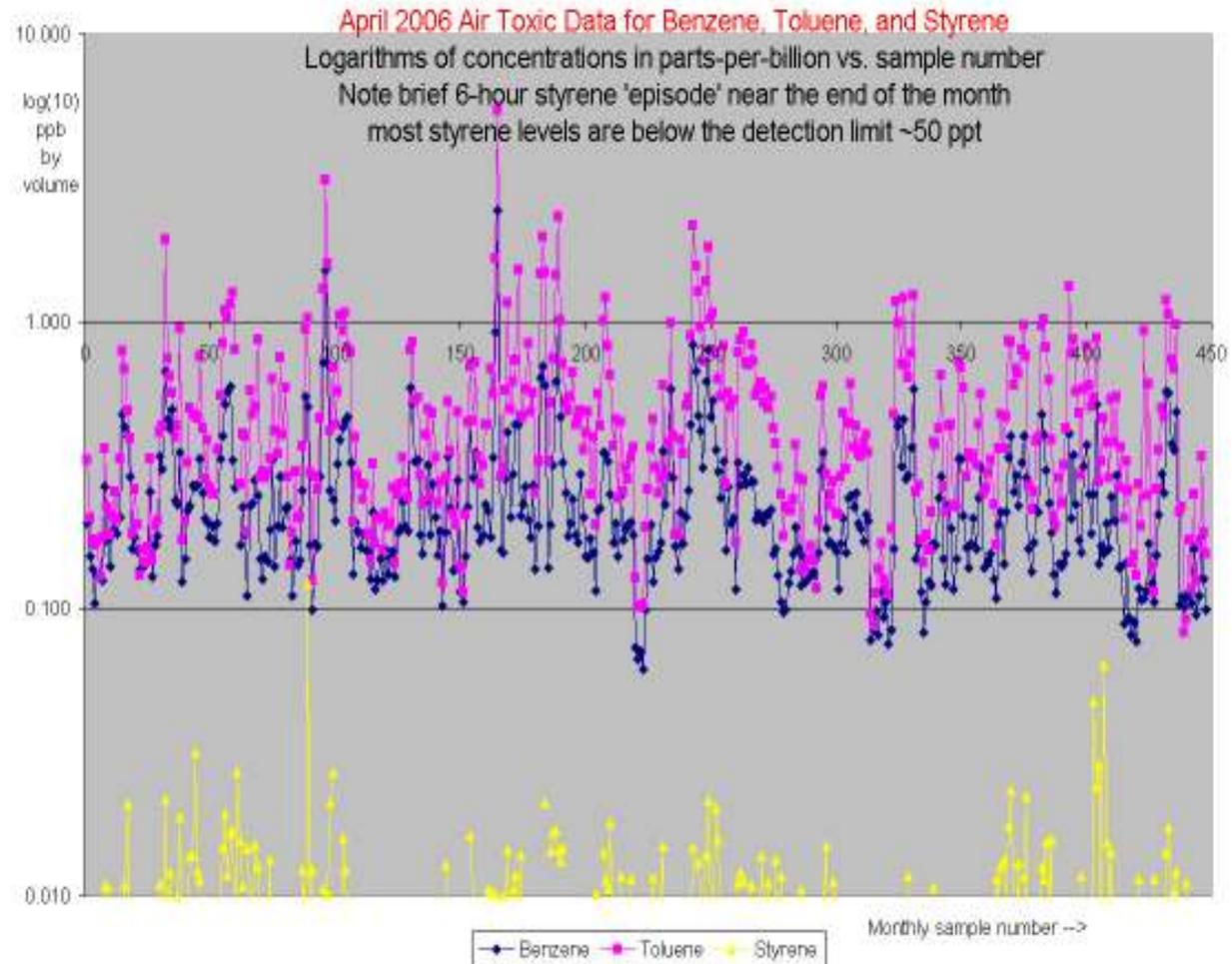
Results – Hourly VOC



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Results – Hourly VOC





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“Standard” Method QC Issues

- Chromium (VI) loss
- Benzene contamination



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Summary

- Differences in neighborhoods
 - Not just motor vehicle related
 - Localized sources
- Still to do
 - Look at woodstoves / diesel
 - Look at trends
 - Use the hourly VOC to find sources
 - Monitor to model comparisons