

**Ar Limpo para América Latina  
São Paulo, Brasil  
25-27 de julio de 2006**

# **El Índice Metropolitano de Calidad del Aire de la Ciudad de México**

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Gobierno del Distrito Federal  
México, la Ciudad de la Esperanza



Secretaría del Medio Ambiente

# ¿ Cómo informar la Calidad del Aire ?



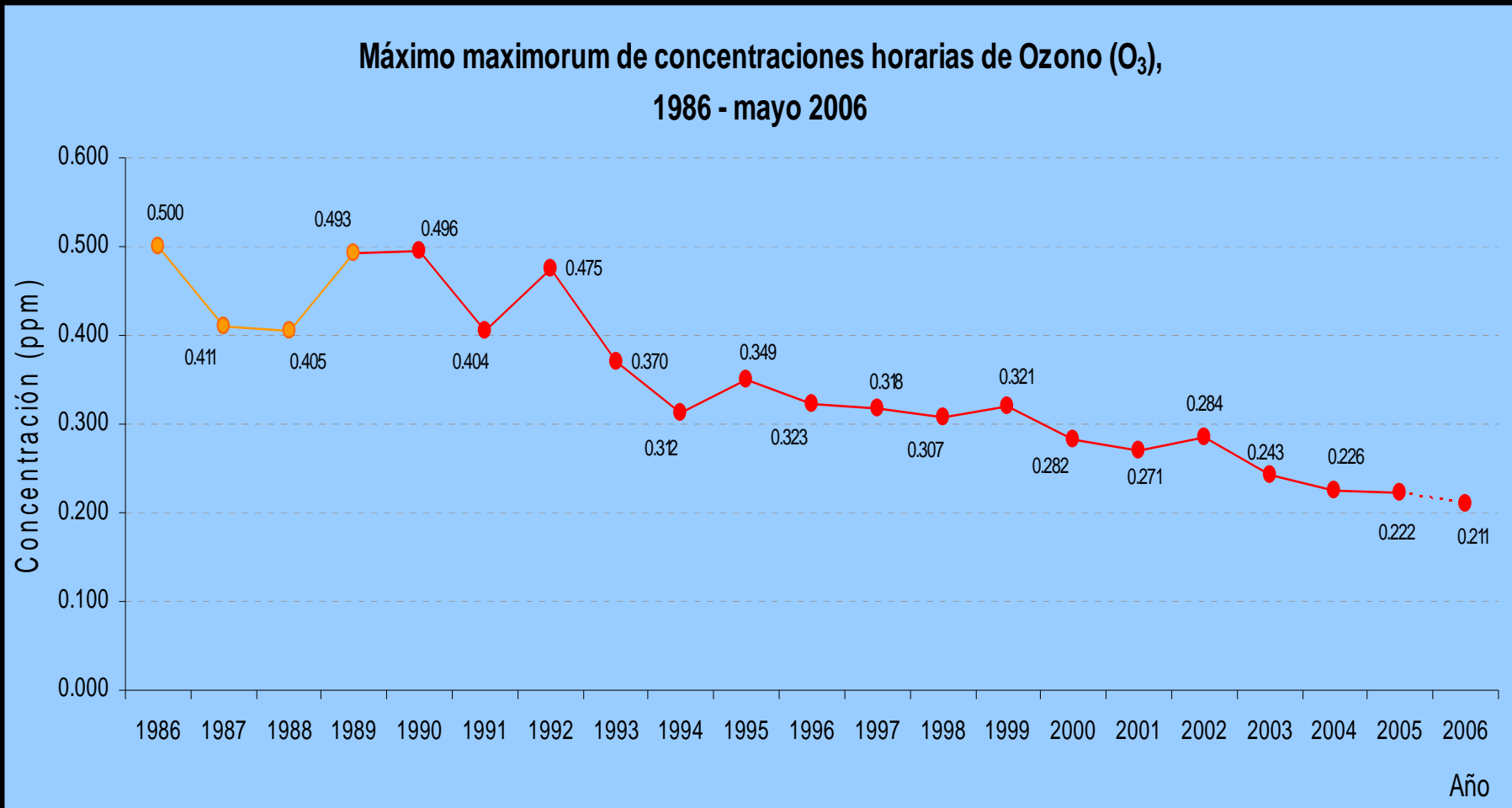
- Un indicador deberá tener una base científica en relación con los efectos en la salud de la población.
- Un mismo indicador "normalizado" deberá reflejar el estado de la calidad del aire de los distintos contaminantes gaseosos y particulados.



# Comunicación de Riesgos

<b>Buena</b>	<i>Adecuada para llevar a cabo actividades al aire libre</i>
<b>Regular</b>	<i>Se pueden llevar a cabo actividades al aire libre Posibles molestias en niños, adultos mayores y personas con enfermedades</i>
<b>Mala</b>	<i>Causante de efectos adversos a la salud en la población, en particular los niños y los adultos mayores con enfermedades respiratorias como el asma o del corazón. Evite las actividades al aire libre, esté atento a la información de calidad del aire. Acuda al médico si presenta síntomas respiratorios o cardiacos.</i>
<b>Muy Mala</b>	<i>Causante de mayores efectos adversos a la salud en la población en general, en particular los niños y los adultos mayores con enfermedades respiratorias como el asma o del corazón.  Evite salir de casa y mantenga las ventanas cerradas, esté atento a la información de la calidad del aire. Acuda al médico si presenta síntomas respiratorios o cardiacos.</i>

# Tendencia de los máximos anuales de ozono 1990 – Mayo 2006



# Pronóstico del IMECA de O<sub>3</sub>



Gobierno del Distrito Federal  
Secretaría del Medio Ambiente

## SISTEMA DE MONITOREO ATMOSFÉRICO DE LA CIUDAD DE MEXICO

### PRONOSTICO DE OZONO PARA EL VALLE DE MEXICO

FECHA DE VALIDEZ : 22-JULIO-2006

HORAS	CALIDAD DEL AIRE	RIESGOS
07-21	BUENA [0-50]	No hay riesgo a la salud para la población en general.

CALIDAD DEL AIRE	ACCIONES RECOMENDADAS
BUENA	Puedes realizar actividades al aire libre, hacer ejercicio o salir a pasear. " No se espera un aumento de la contaminación en el corto plazo "
REGULAR	Puedes realizar actividades al aire libre, hacer ejercicio o salir a pasear. "Consulta el Índice de Calidad del Aire, la contaminación puede aumentar"

# ¿ Cómo se informa la Calidad del Aire ?



[www.sma.df.gob.mx/simat](http://www.sma.df.gob.mx/simat)



# ¿ Cómo se informa la Calidad del Aire ?



<b>Calidad del aire</b>		
22/07/2006 a las 10:00		
<b>Zona</b>	<b>Ozono</b>	<b>PM10</b>
Noroeste	12	24
Noreste	6	36
Centro	5	-99
Suroeste	9	22
Sureste	6	19
<b>Indice UV</b>		<b>3</b>
Datos cortesía de la <a href="#">SMA</a> del DF		

La Jornada, 20 de julio de 2006

reforma.com



## **¡Qué Ciudad tan limpia!**

Este lunes, los capitalinos tuvieron una jornada poco contaminada, pues el Sistema de Monitoreo Atmosférico registró menos de 50 puntos IMECA.  
Foto: Julio Argumedo

Reforma, 17 julio 2006



# TEPORINGO

TE INVITA A JUGAR Y CONOCER  
EL AMBIENTE DE LA CIUDAD

el imeca en tu delegación

Caminio a Casa

Protegete del sol

Sopa de Letras

Galeria de Amigos

otros sitios para  
jugar y aprender

Lluvia Ácida





# Conclusión

Es necesario el empleo de indicadores de calidad del aire confiables, oportunos y sencillos de entender como una medida de protección de la salud pública.



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# *Air Quality Health Index*

Prepared for Susan Stone US EPA  
For UN CSD conference on health effects  
air pollution associated with energy use



# *The Case for Revisiting Air Quality Indices in Canada*

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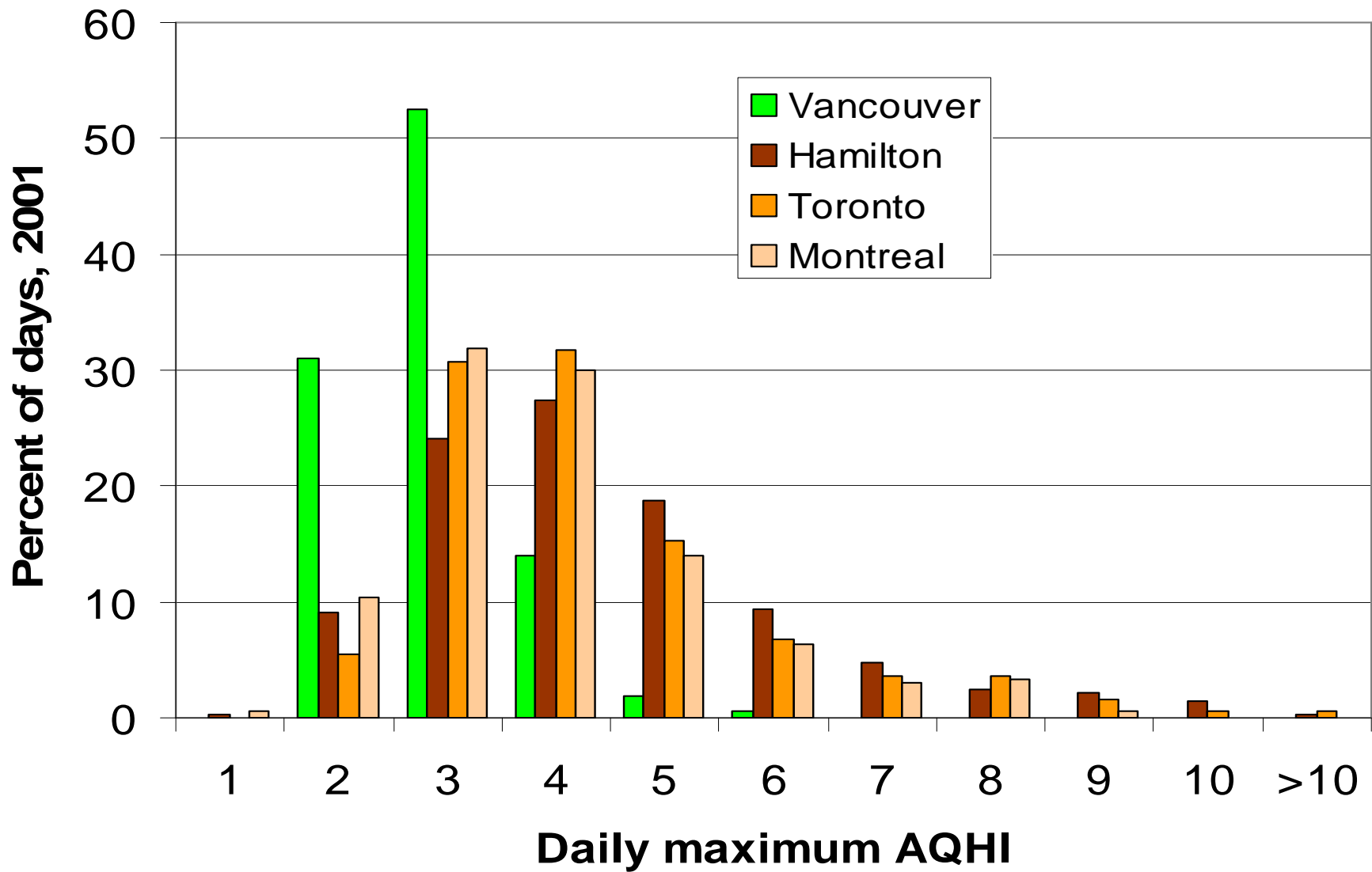
- Existing AQIs do not reflect current scientific evidence:
  - *Additive effects of multiple pollutants*
  - *effects at low levels of exposure (no-threshold)*
- Unevenly applied across Canada
  - *Formulations (pollutant averaging times, pollutants included, thresholds)*
  - *Health protective advice*
- Public misperceptions of air quality and health
  - *Confirmed by Public Opinion Research*



# Concept

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- Decouple air quality regulation from provision of health advice
- Uses results from studies of short term health effects
- Multi-city Canadian analysis
- Mortality/ (morbidity)
- Sum of risk from multiple pollutants ( $O_3$ , PM and  $NO_2$ )
- Rolling 3 hour concentrations
- 0-10+ scale
- Sensitivity analysis:
  - Number of pollutants, single/multi-pollutant models
  - Other sources of risk coefficients (NMMAPS, APHEA, meta-analysis)





# AQHI Presentation: UV Like

- Illustrates level of health risk with colour & number scale of 0-10+
- Labels the level of HEALTH risk as “low”, “moderate”, “high” or “very high”
- Forecasts local air quality for the current and next day
- Empowers individuals to decide how they might be at risk
- Provides health messaging to tell Canadians—both general & at-risk populations—how to minimize that risk

The screenshot shows the AQHI website for Toronto. The current AQHI is 2 (Low Health Risk) at 9:00 AM EST on February 14, 2007. The forecast shows a maximum of 5 (Moderate Health Risk) today, 1 (Low Health Risk) tonight, and 2 (Low Health Risk) tomorrow. The website includes a navigation menu, a search bar, and a footer with the Environment Canada logo and website address.

**AIR QUALITY HEALTH INDEX**  
Choose a location  
Fredericton  
Montreal  
Toronto  
Go

**Toronto**

0 1 2 3 4 5 6 7 8 9 10 +  
0-3 Low 4-6 Moderate 7-10 High 10+ Very High

**Current**  
9:00 AM EST  
February 14, 2007

**At risk population:** 2  
Low Health Risk

**General population:** 2  
Low Health Risk

**Forecast**

Today's Maximum	Tonight's Maximum	Tomorrow's Maximum
5 Moderate Health Risk	1 Low Health Risk	2 Low Health Risk
Health Message	Health Message	Health Message

**Who is at risk?**  
People with heart or lung conditions are the most affected by air pollution.  
For further information on the impact of air quality on your health consult your local Public Health Unit office, talk to your physician or visit the BC Health Guide (<http://www.bchealthguide.org/>).

**Did you know...**  
Riding your bike, walking or rollerblading to work is healthy for you and keeps the air clean.

[Click Here for Past Conditions](#)

The AQHI is an initiative between Environment Canada, Health Canada, The Ontario Ministry of the Environment, Toronto Public Health and ...

Canada's Clean Air Act  
72 Hours - Is your family prepared?

## *For more information*

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Environment Canada

Dave Henderson – [dave.henderson@ec.gc.ca](mailto:dave.henderson@ec.gc.ca)

Michael Howe – [mike.howe@ec.gc.ca](mailto:mike.howe@ec.gc.ca)

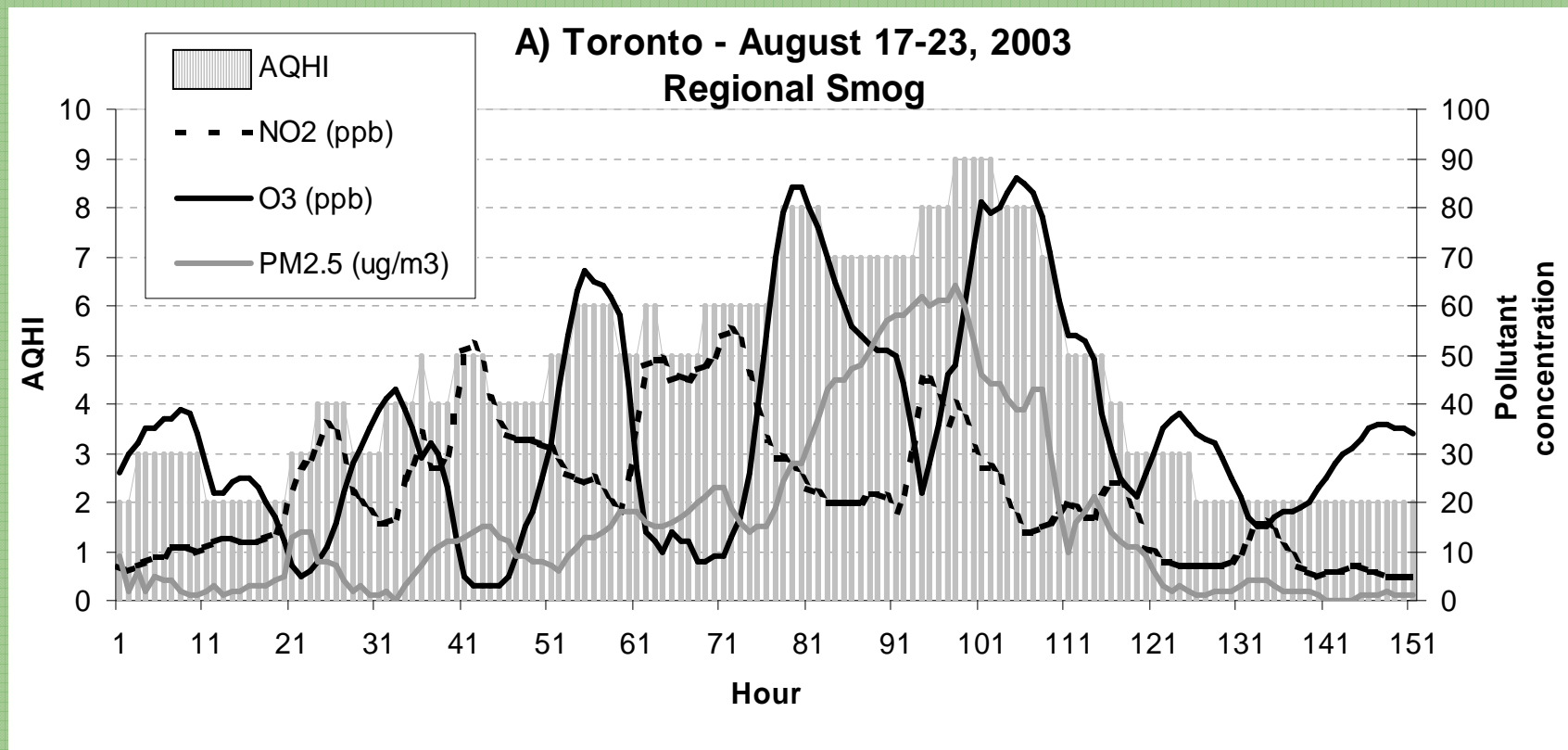
Health Canada

Tonya Bruin – [tonya\\_bruin@hc-sc.gc.ca](mailto:tonya_bruin@hc-sc.gc.ca)

Dave Stieb – [dave\\_stieb@hc-sc.gc.ca](mailto:dave_stieb@hc-sc.gc.ca)

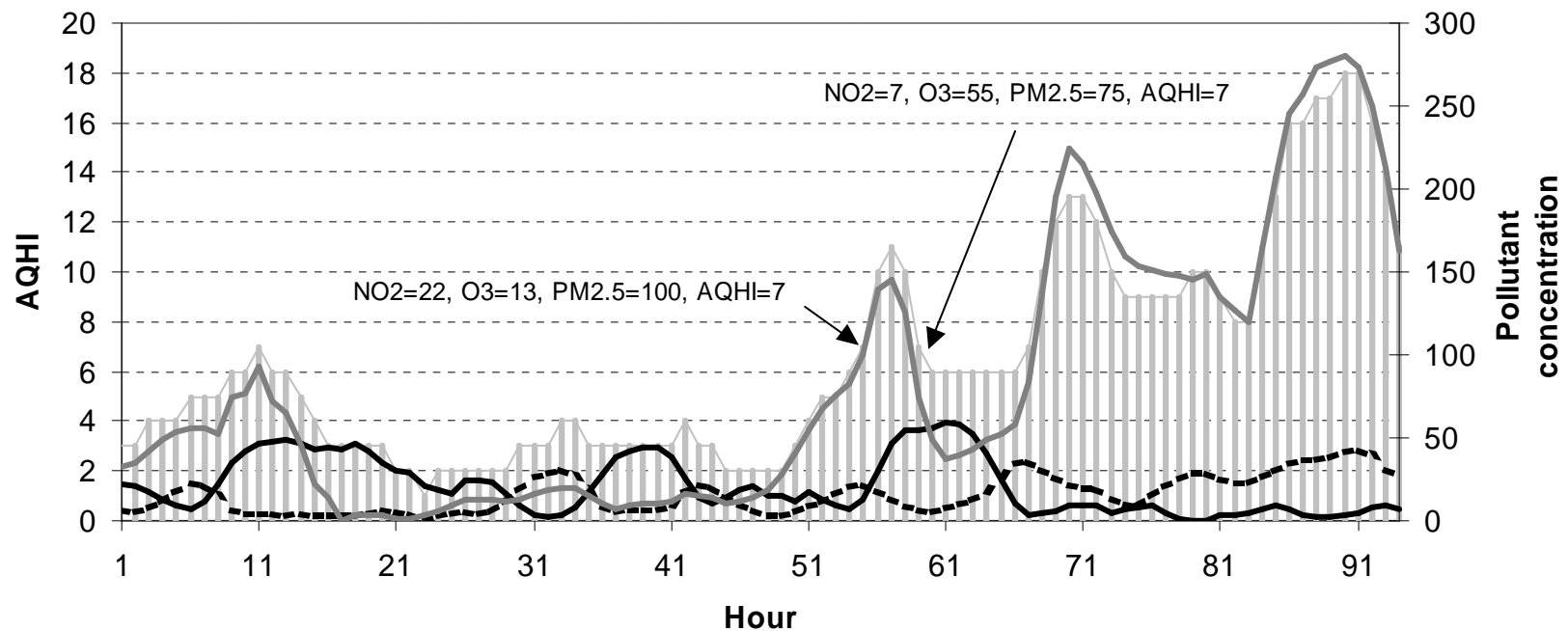


# Multi-Pollutant Performance



# Single Pollutant Performance

**B) Kelowna - August 18-21, 2003  
Forest Fires**





- [Home](#)
- [Current AQHI](#)
- [All Communities AQHI](#)
- [Recent History AQHI](#)
- [Air Pollution & Health](#)
- [About the AQHI](#)
- [More Information](#)
- [What do you Think?](#)
- [Tell A Friend](#)

## AQHI Categories

Air Quality Health Index Levels of Risk	Numerical Value	Accompanying Health Messages for At Risk Populations and the General Population	
		At Risk Population	General Population
<b>Low Health Risk</b>	<b>0 – 3</b>	Enjoy your usual outdoor activities. Follow your doctor's advice for exercise.	Ideal conditions for outdoor activities such as, sports, biking or walking.
<b>Moderate Health Risk</b>	<b>4 – 6</b>	If you have heart or breathing problems, and experience symptoms, consider reducing physical exertion outdoors or rescheduling activities to times when the index is lower. Follow your doctor's usual advice about managing your condition.	No need to modify your usual outdoor activities.
<b>High Health Risk</b>	<b>7-10</b>	Children, the elderly and people with heart or breathing problems should reduce or reschedule physical exertion outdoors to periods when the index is lower, especially if they experience symptoms. If you have heart or breathing problems, follow your doctor's usual advice about managing your condition.	Anyone experiencing discomfort such as coughing or throat irritation should consider reducing or rescheduling strenuous outdoor activities to periods when the index is lower.
<b>Very High Health Risk</b>	<b>Above 10</b>	Children, the elderly and people with heart or breathing problems should avoid physical exertion outdoors. If you have heart or breathing problems, follow your doctor's usual advice about managing your condition.	Everyone should consider reducing or rescheduling strenuous outdoor activities to periods when the index is lower, especially if they experience symptoms.