



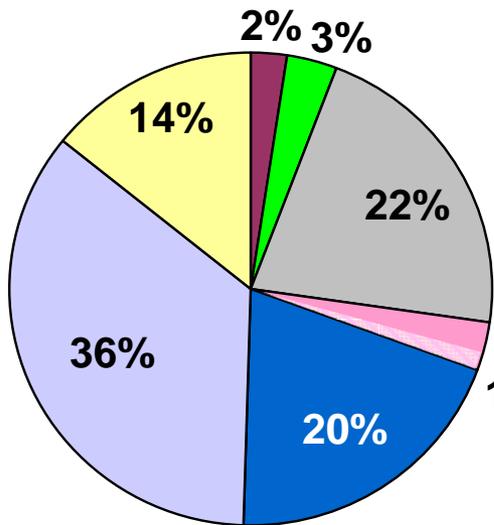
# **Stationary Source Committee Meeting**

**Agenda Item: 5**

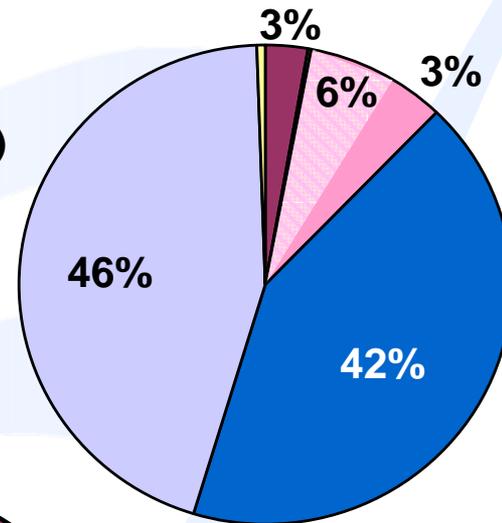
## **Bay Area Emissions Trends**

**Henry Hilken  
Director  
Planning, Rules and Research Division  
October 19, 2009**

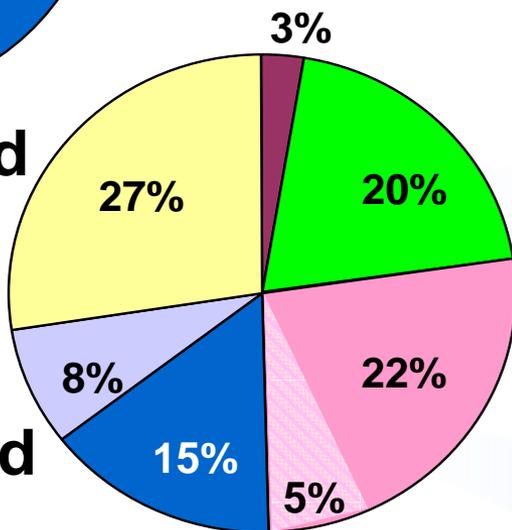
# Distribution of 2005 Annual Average Emissions



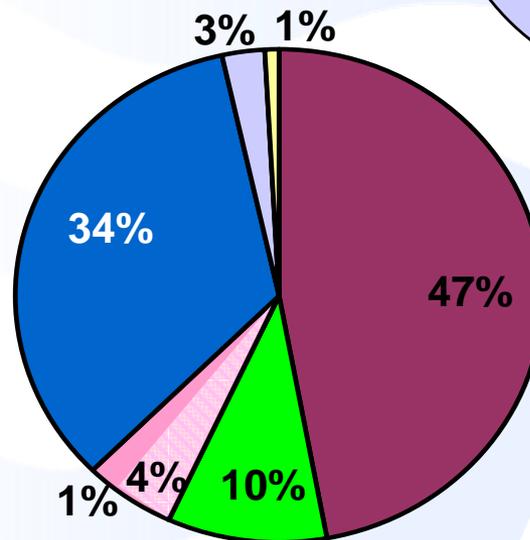
- Consumer Products
- On-Road (cars, trucks, etc.)
- Off-Road (construction, ships, trains, etc.)
- Evaporation (paints, fuels, solvents)
- Refinery (processes and combustion)
- Other Industrial / Commercial
- Combustion (residential)
- Combustion (industrial)



**ROG: 393 tpd**



**PM2.5: 86 tpd**



**NOx: 521 tpd**

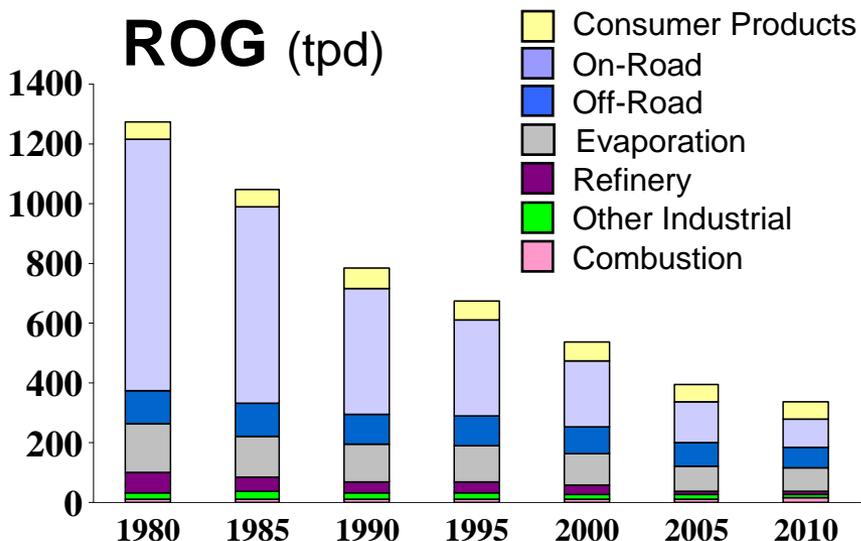
**SO2: 68 tpd**



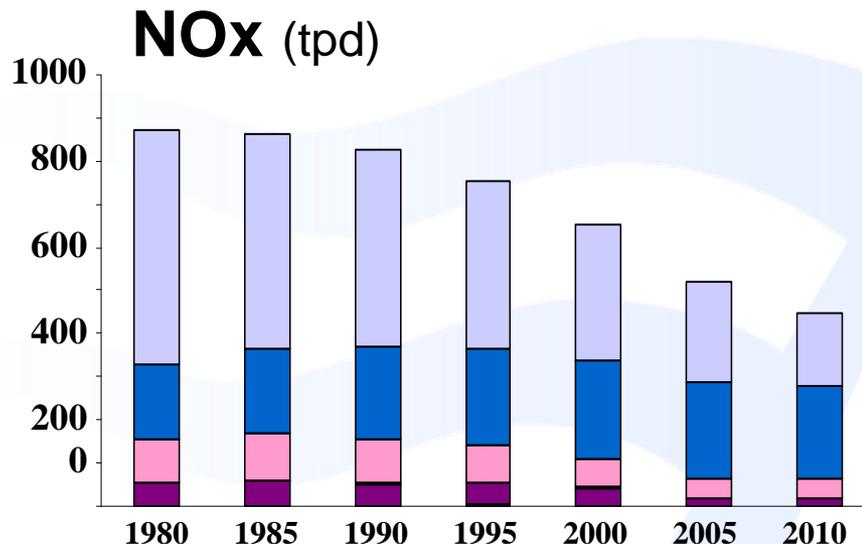
# All Sources

## Emission Trends 1980-2010

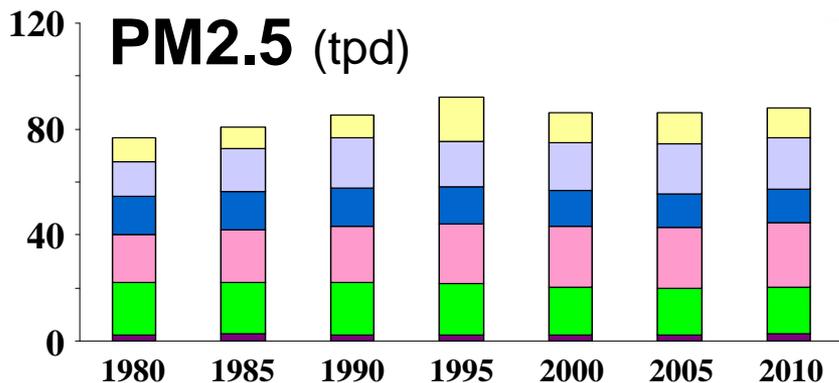
### ROG (tpd)



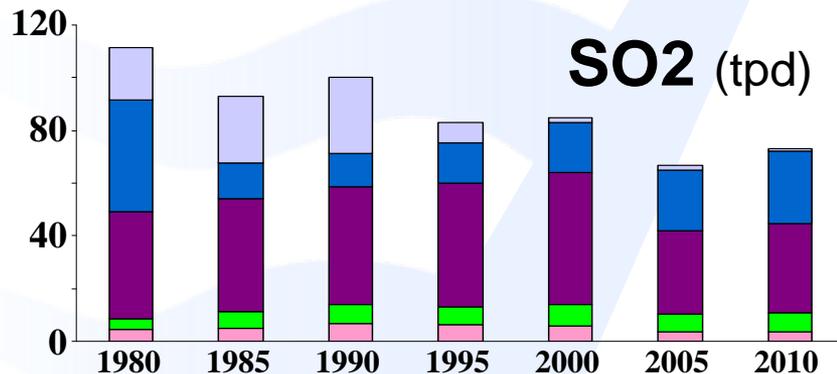
### NOx (tpd)



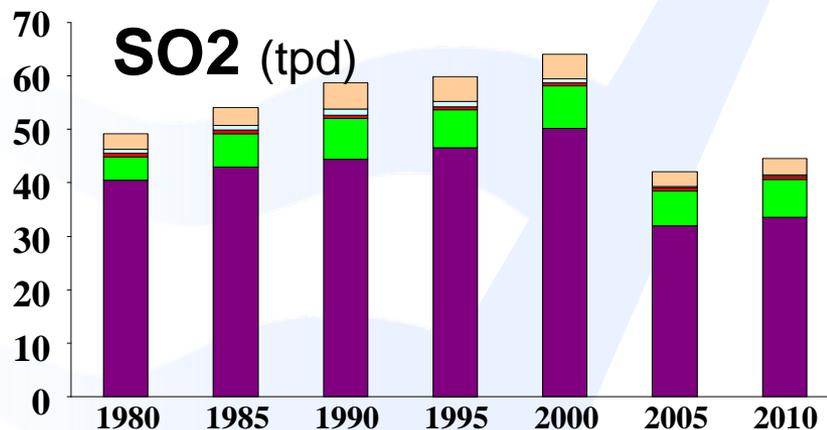
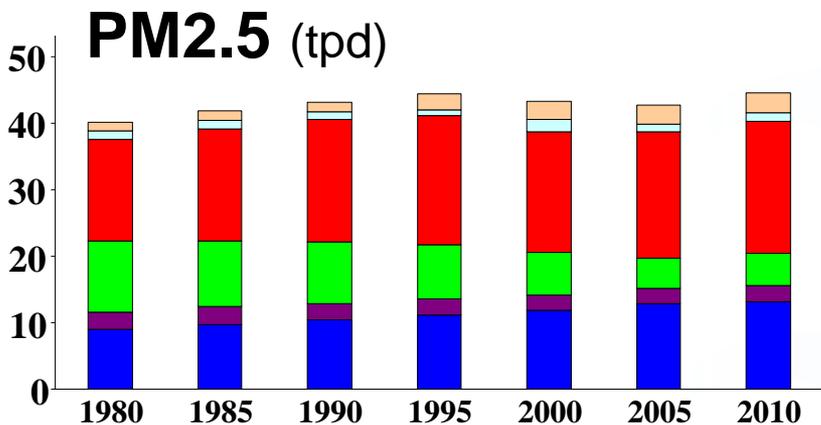
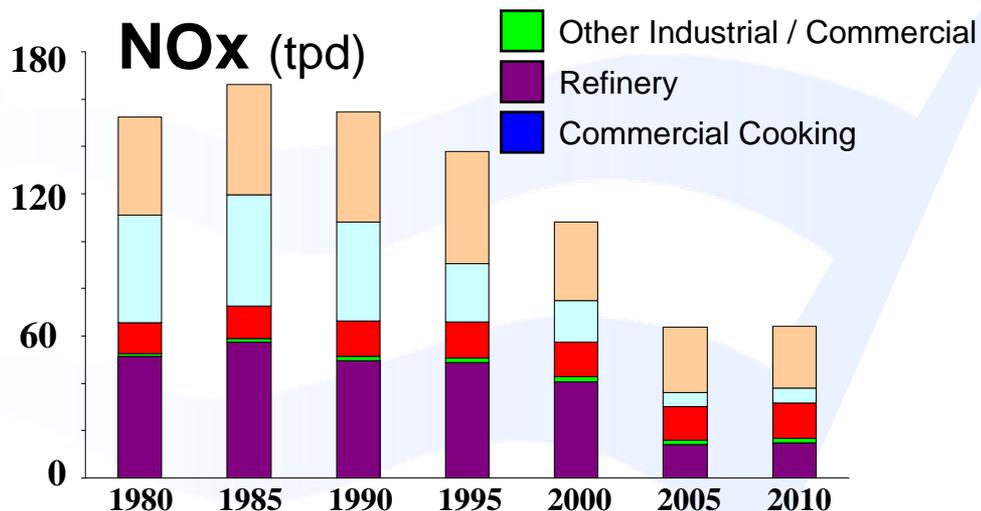
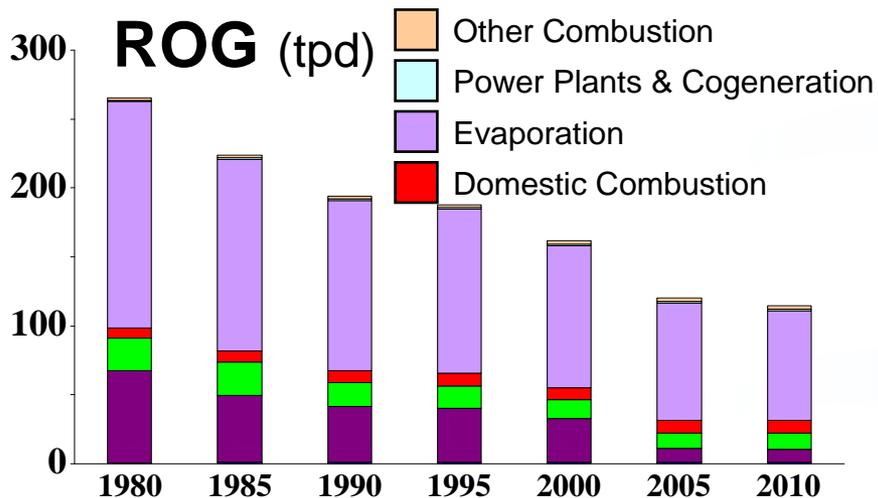
### PM2.5 (tpd)



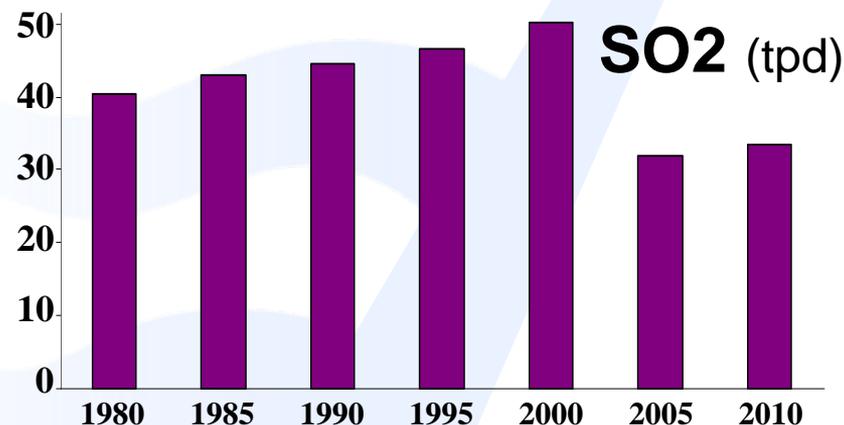
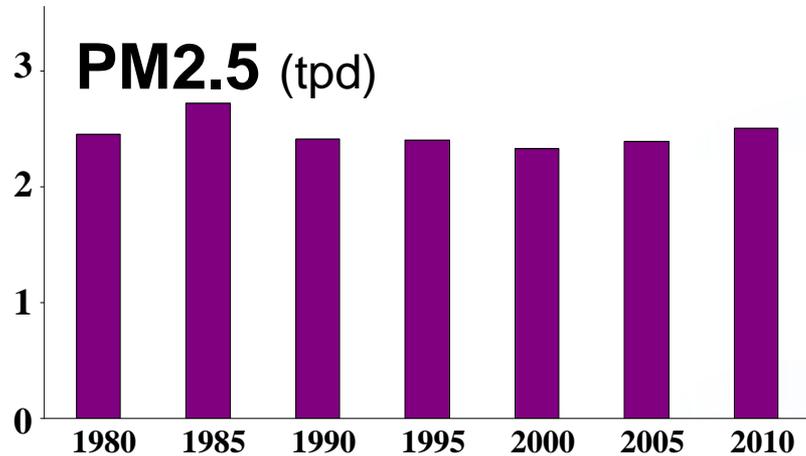
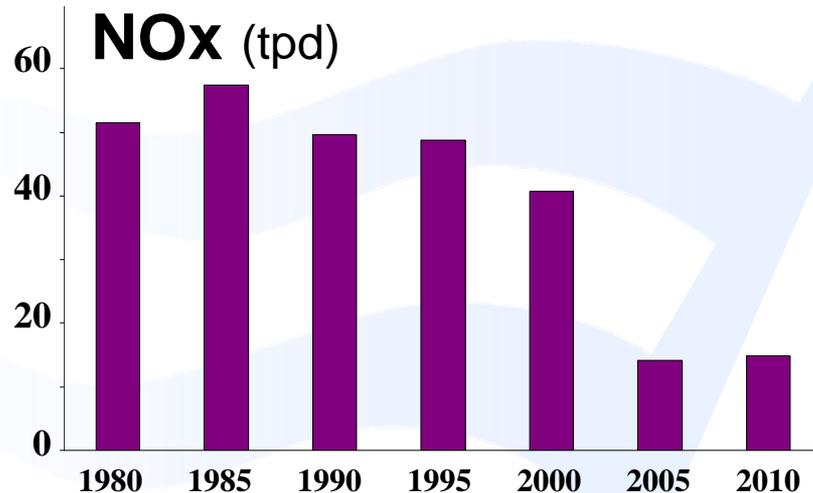
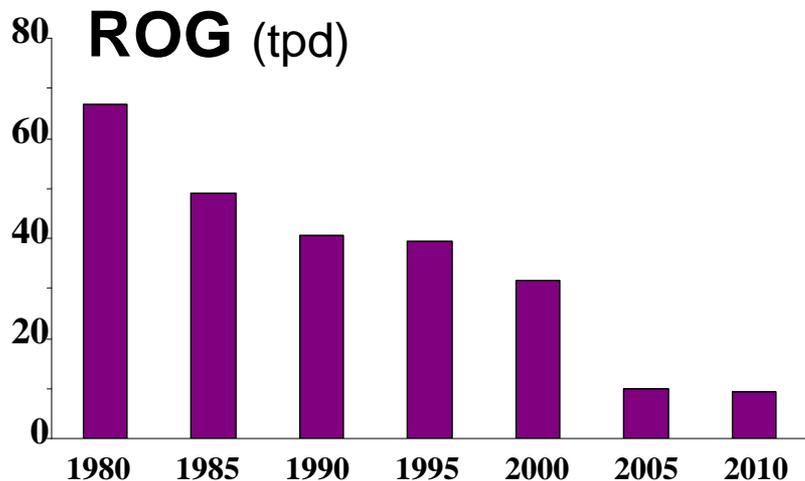
### SO2 (tpd)



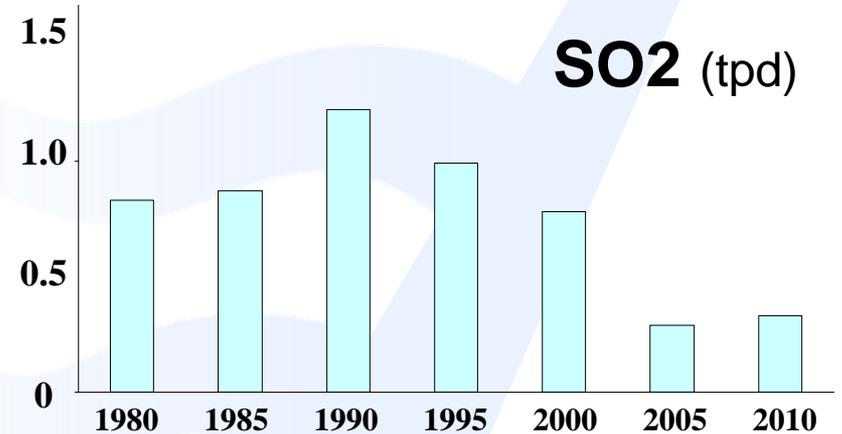
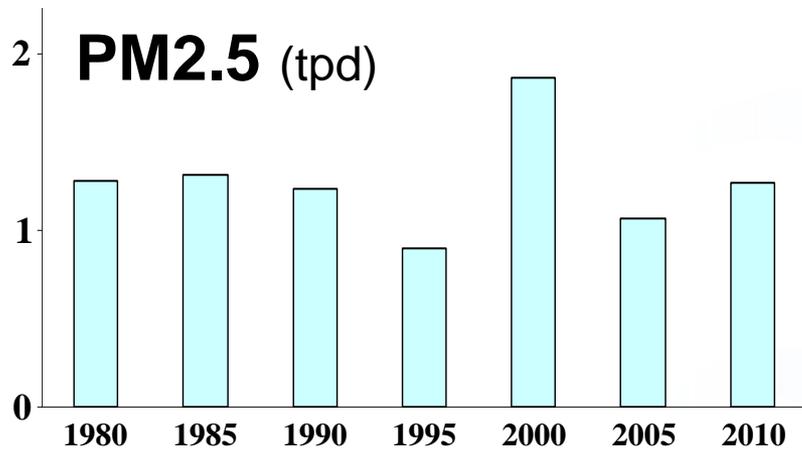
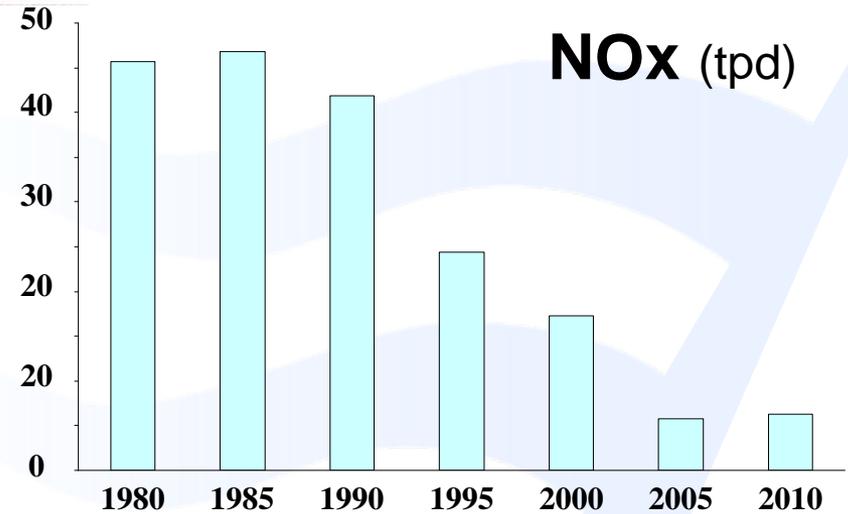
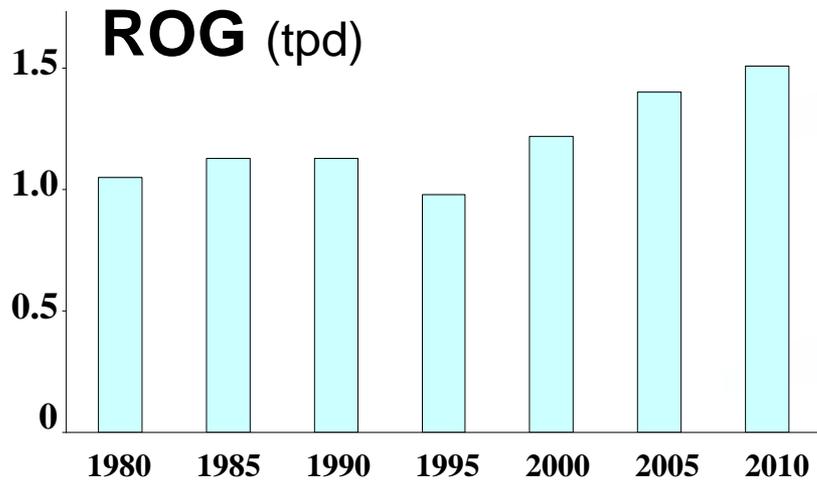
# Stationary Source Emission Trends 1980-2010



# Refinery Emission Trends 1980-2010



# Power Plants & Cogeneration Emission Trends 1980-2010





# Emission Reductions from Adopted Control Measures 1992-2008

Category	Rule(s)	Description	Dates	ROG	NOX
Surface Coating & Solvent Use	8-51	Adhesives	Nov 92 / Jun 96	19.0	0
	8-3	Architectural Coatings	Nov 01 / Dec 08	9.2	0
	8-32	Wood Furniture and Cabinet Coatings	Nov 96	6.2	0
	8-16, 20, 45	Solvents Used for Surface Preparation / Clean-up of Solvents	Oct 01	5.1	0
	8-45	Automotive Refinishing	Dec 08	3.7	0
	--	All Others	n/a	5.4	0
			<b>Subtotal</b>	<b>48.5</b>	<b>0</b>
Fuels / Organic Liquids Storage & Distribution	8-7	Gasoline Dispensing Facilities	Nov 99	3.8	0
	8.5	Storage of Organic Liquids	Jan 93 / Dec 99	3.5	0
	--	All Others	n/a	0.6	0
			<b>Subtotal</b>	<b>8.0</b>	<b>0</b>
Refinery & Chemical Plant Processing	8-18, 22, 25	Pumps, Valves, Flanges & Compressor Seals	Mar 92	6.5	0
	8-8	Refinery Waste Water (Oil-Water) Separators	Sep 04	2.1	0
	12-11, 12	Flare Monitoring & Minimization*	Jun 03 / Jul 05 / Apr 06	0.6	0
	--	All Others	n/a	1.5	0
			<b>Subtotal</b>	<b>10.7</b>	<b>0</b>
Other Control Measures	8-40	Prohibit Aeration of Petroleum Contaminated Soils	Dec 99	2.7	0
			<b>Subtotal</b>	<b>2.7</b>	<b>0</b>
Combustion of Fuels	9-7, 10	Boilers, Steam Generators & Process Heaters	Jan 94 / Sep 92	0	35.9
	9-8	Internal Combustion Engines	Jan 93 / Jul 07	0	27.5
	9-11	Electric Power Generating Boilers	Feb 94	0	17.5
	9-9	Control of Emissions from Stationary Gas Turbines	May 93	0	7.0
	--	All Others	n/a	0	5.7
			<b>Subtotal</b>	<b>0</b>	<b>93.6</b>
			<b>TOTAL</b>	<b>69.9</b>	<b>93.6</b>

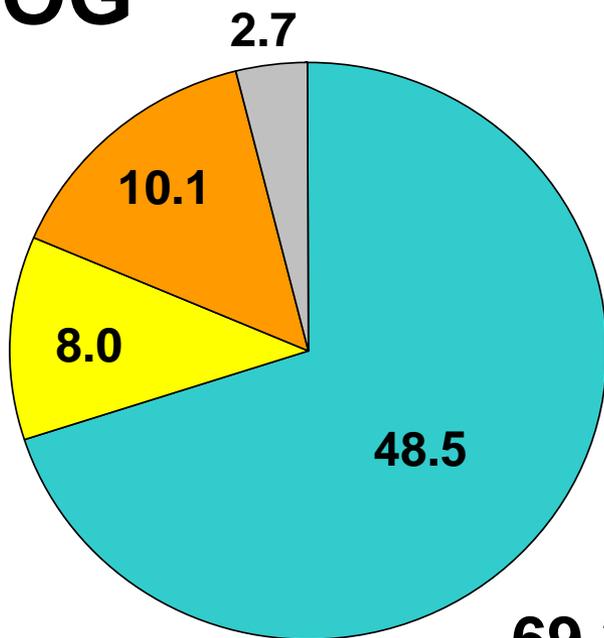
\* SO2 emission reduction for flares was 0.9 tpd



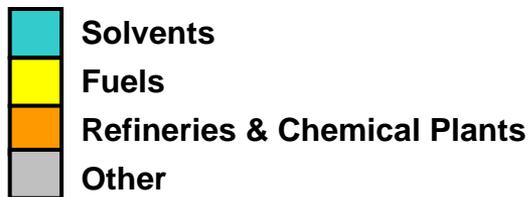


# Emission Reductions from Adopted Control Measures 1992-2008

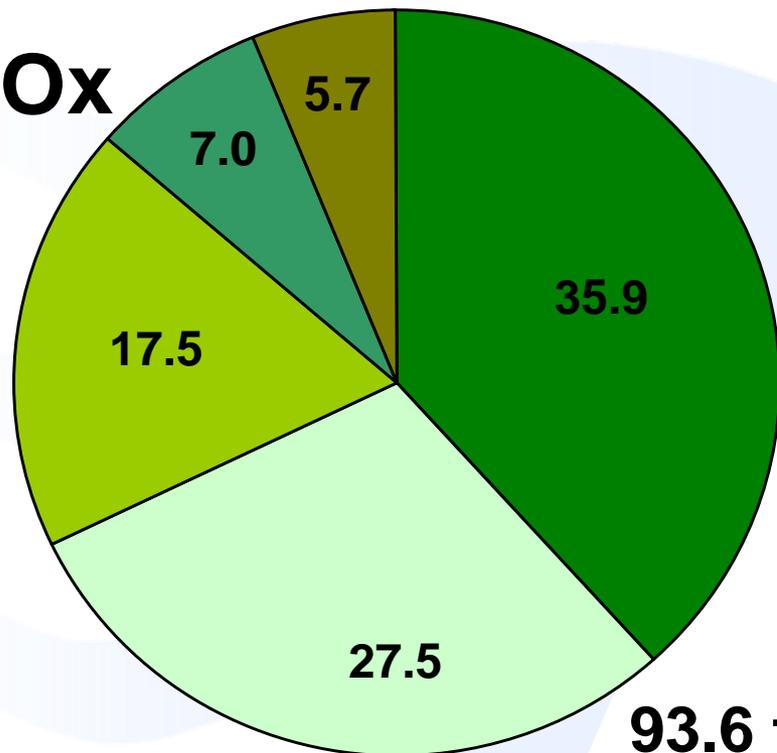
## ROG



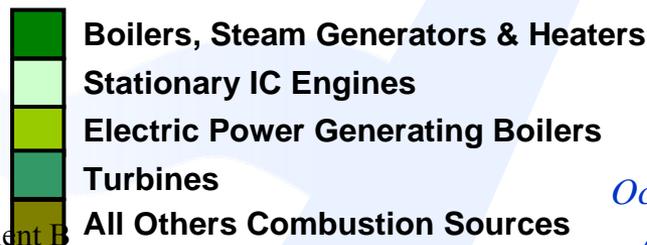
**69.3 tpd**



## NOx



**93.6 tpd**



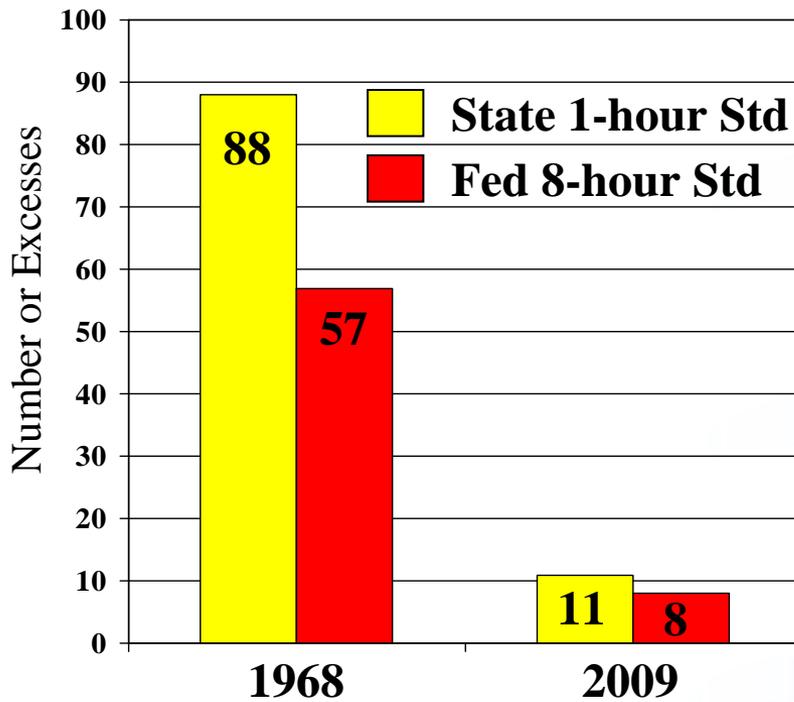
Attachment B

October 19, 2009  
 Agenda Item: 4  
 Slide 8



# Trends in Air Quality Monitoring Data

## Excesses of Ozone Standards



## Cancer Risk

