AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

Air Quality in San Diego County

San Diegans most sensitive to air pollution:

People with cardiovascular disease	175,000
People with chronic respiratory disease	225,000
Elderly (over 65)	240,000
Children under 14	500,000
Athletes	175,000
Total	1.3 million

Source: American Lung Association

Monitoring Stations

Attainment Status

Pollutant	Attainment Status	
	State	Federal
Carbon Monoxide	Attainment	Attainment
Lead	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Ozone	Non-Attainment	Non-Attainment
PM-10	Non-Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment

Health Effects

- Particulate Matter (PM 10)
  - Collects in lungs where it can increase number and severity of asthma attacks, cause aggravated bronchitis, and cause other lung diseases
  - Can also exacerbate other illnesses

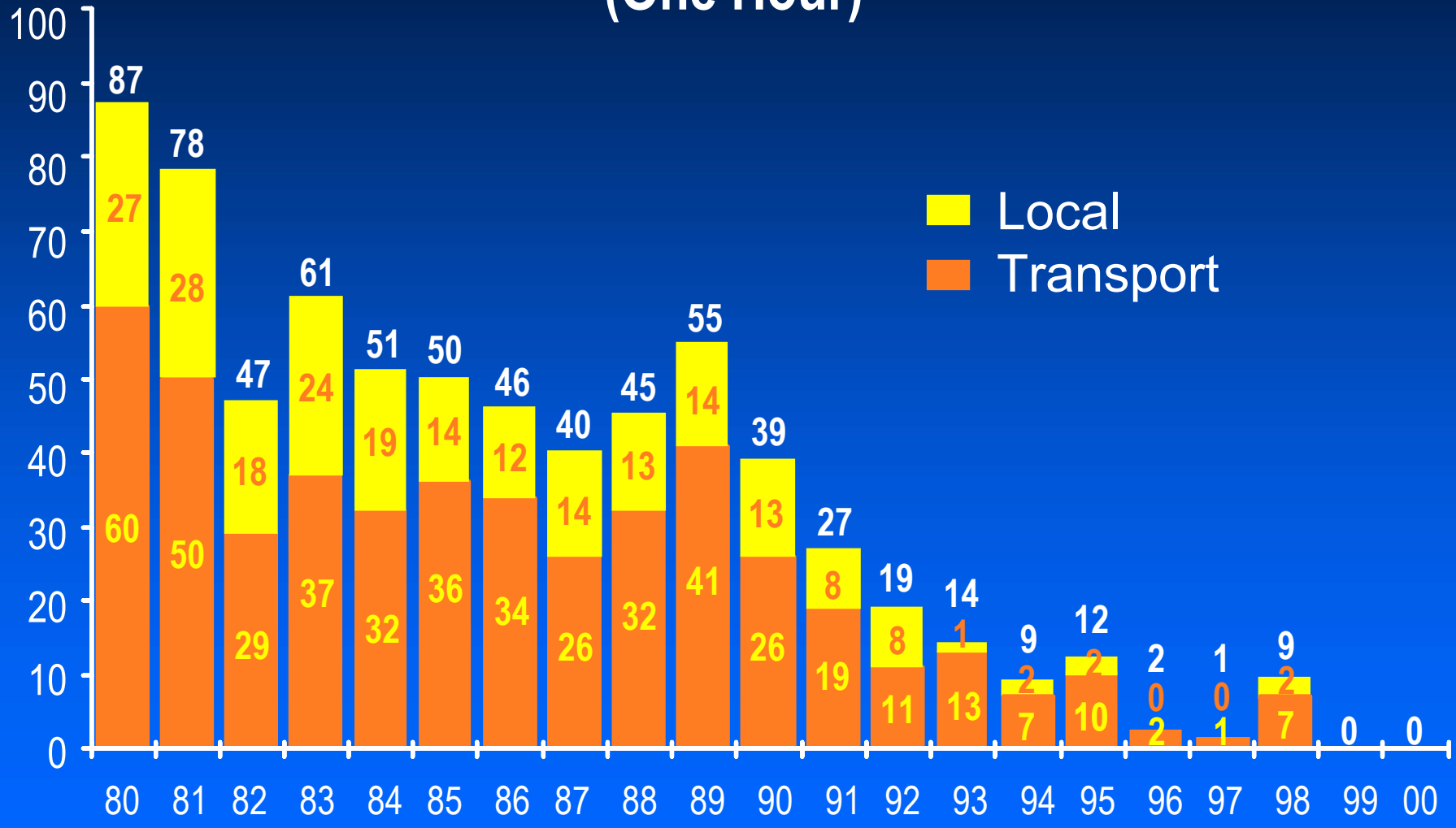
State PM-10 Standard

- Extremely difficult to meet because of natural PM sources
- Only one California air district in attainment (Lake County)
- Emission reduction plan not required by ARB for PM-10
- APCD motor vehicle emission reduction incentive programs (particulates)
- Diesel particulate reductions planned by ARB

Health Effects

- **Ozone**
  - Strong irritant, can restrict airways resulting in difficulty breathing and forcing respiratory and cardiovascular systems to work harder
  - Chronic exposure reduces lung capacity, lowers stamina, and leaves people vulnerable to long-term respiratory problems
  - Especially harmful to children, senior citizens and those suffering from asthma or existing heart and lung disease

Number of Days Exceeding Federal Clean Air Standard
(One Hour)



California Ozone Trend

Region	Days Over Federal Standard		
	1990	2000	% Change
Los Angeles	131	33	-75%
San Joaquin	45	30	-33%
Sacramento	16	5	-68%
Bay Area	2	3	+33%
San Diego	39	0	-100%

Federal 1-hour Ozone Status

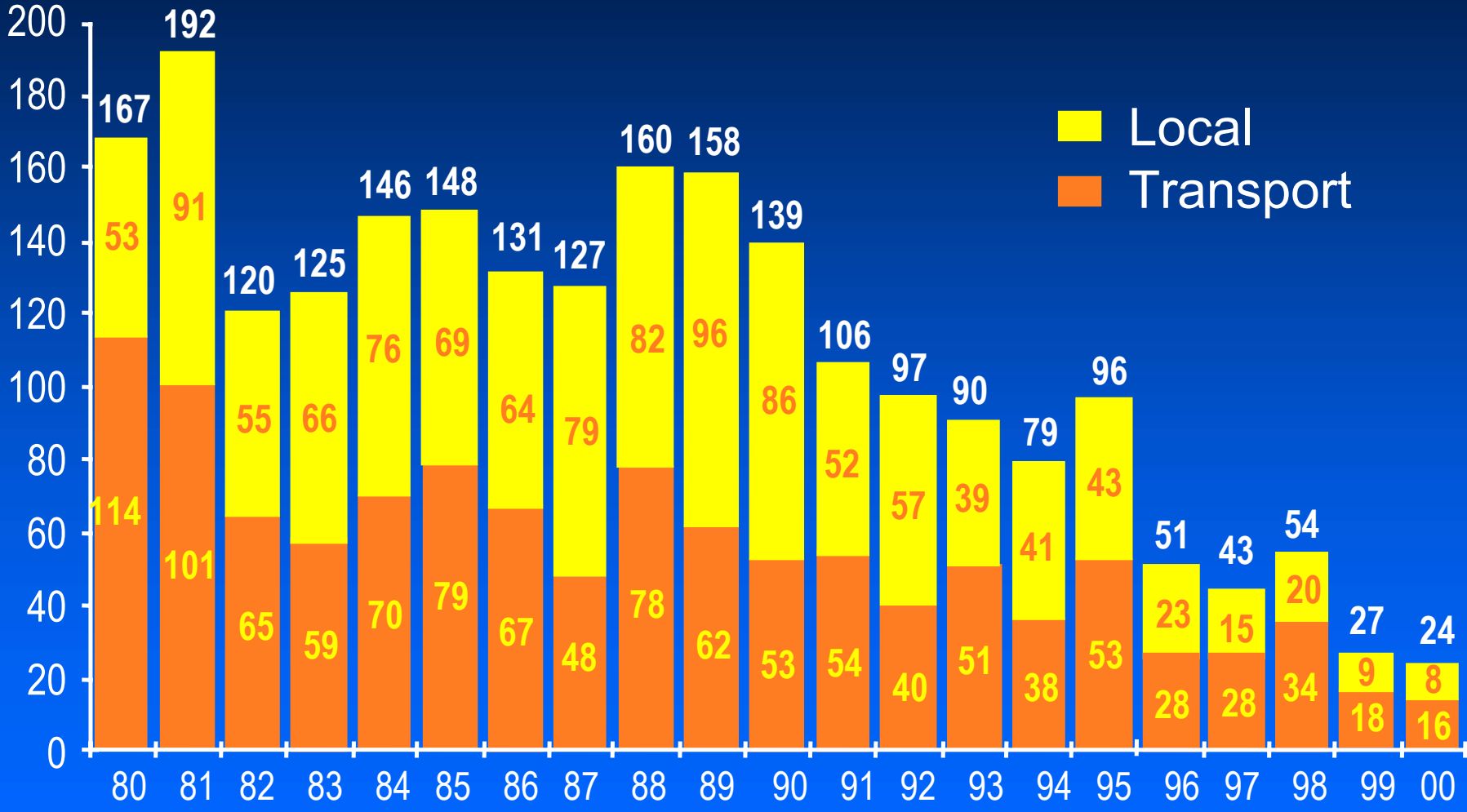
	1996	1997	1998	1999	2000	2001
Chula Vista	0	0	0	0	0	0
El Cajon	0	0	0	0	0	0
Oceanside	0	0	0	0	0	0
Kearny Mesa	0	0	0	0	0	1
Escondido	0	0	0	0	0	1
Alpine	2	1	8	0	0	1
Downtown	0	0	0	0	0	0
Otay Mesa	0	0	0	0	0	0

Federal 1-hour Ozone Status

Alpine Monitoring Station
(exceedances > 12 pphm)

	1996	1997	1998	1999	2000	2001
Local	0	0	1	0	0	0
Transport	2	1	7	0	0	1
TOTAL	2	1	8	0	0	1

Number of Days Exceeding State Clean Air Standard
(More Stringent) (One Hour)



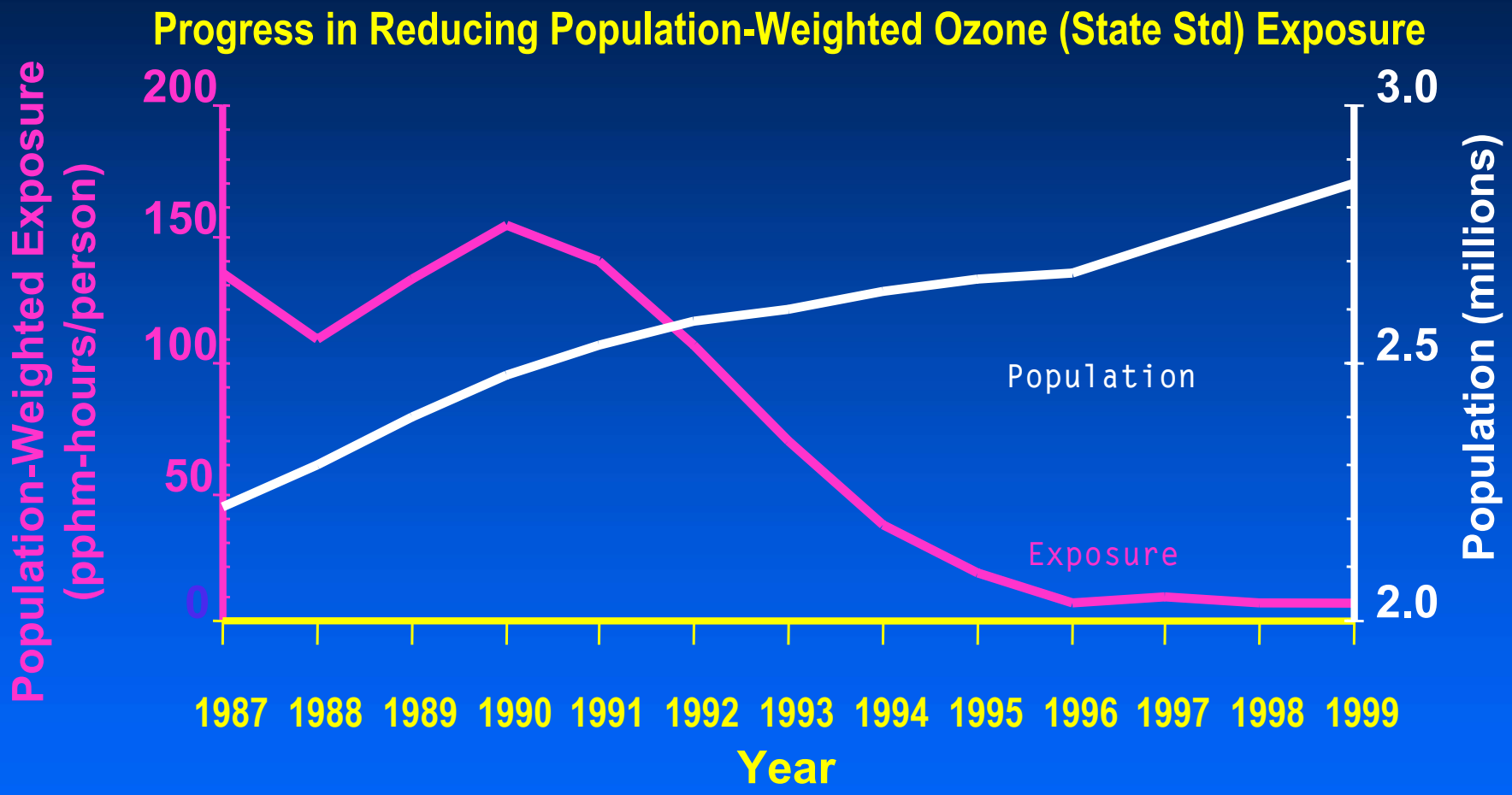
California Ozone Trend

Region	Days Over State Standard		
	1990	2000	% Change
Los Angeles	185	115	-38%
San Joaquin	131	114	-13%
Sacramento	50	42	-16%
Bay Area	14	12	-14%
San Diego	139	24	-83%

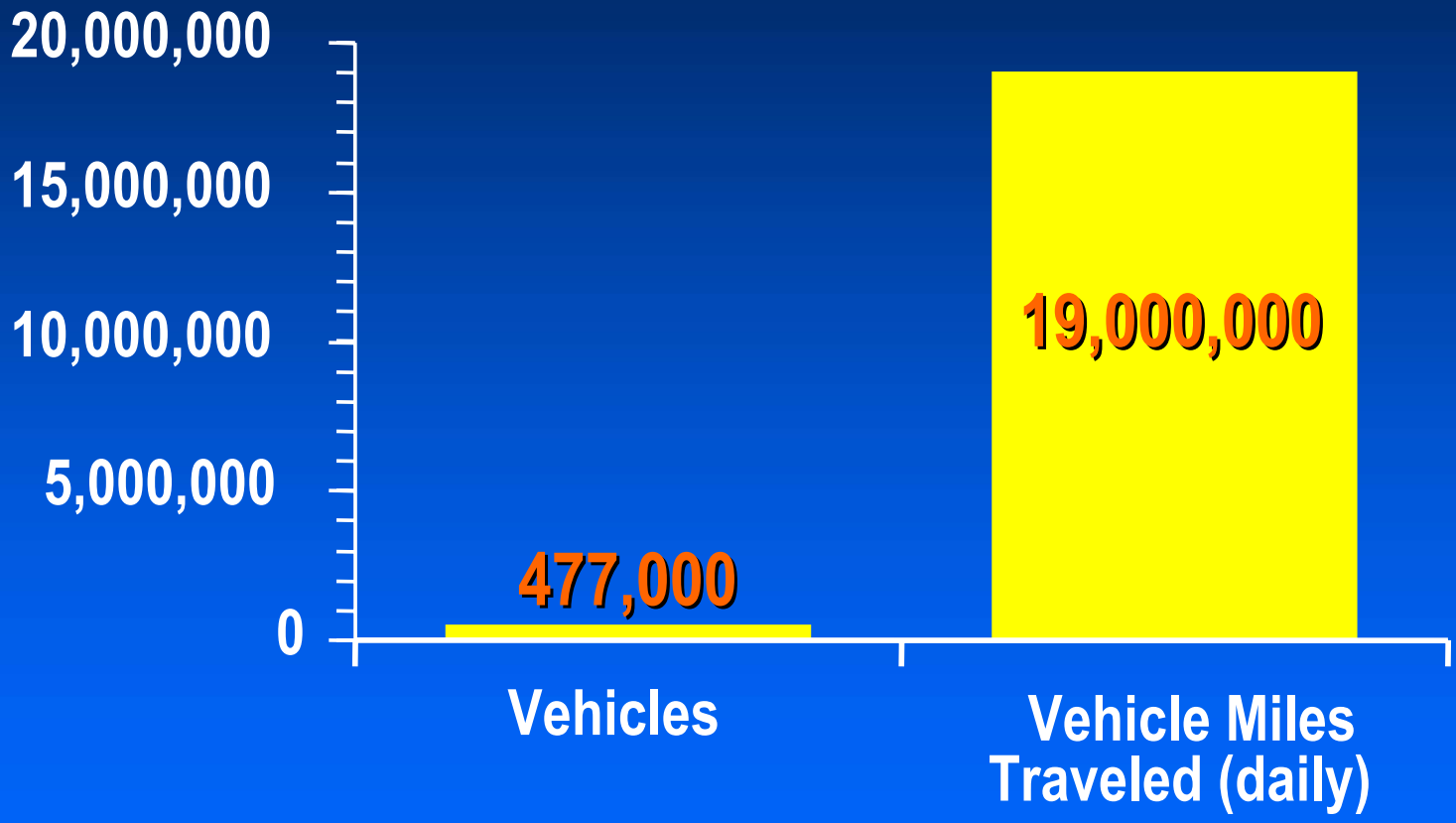
California Ozone Trend

Region	Peak Levels (parts per billion)		
	1990	2000	% Change
Los Angeles	330	184	-44%
San Joaquin	170	165	-3%
Sacramento	150	138	-8%
Bay Area	130	152	+17%
San Diego	200	124	-38%

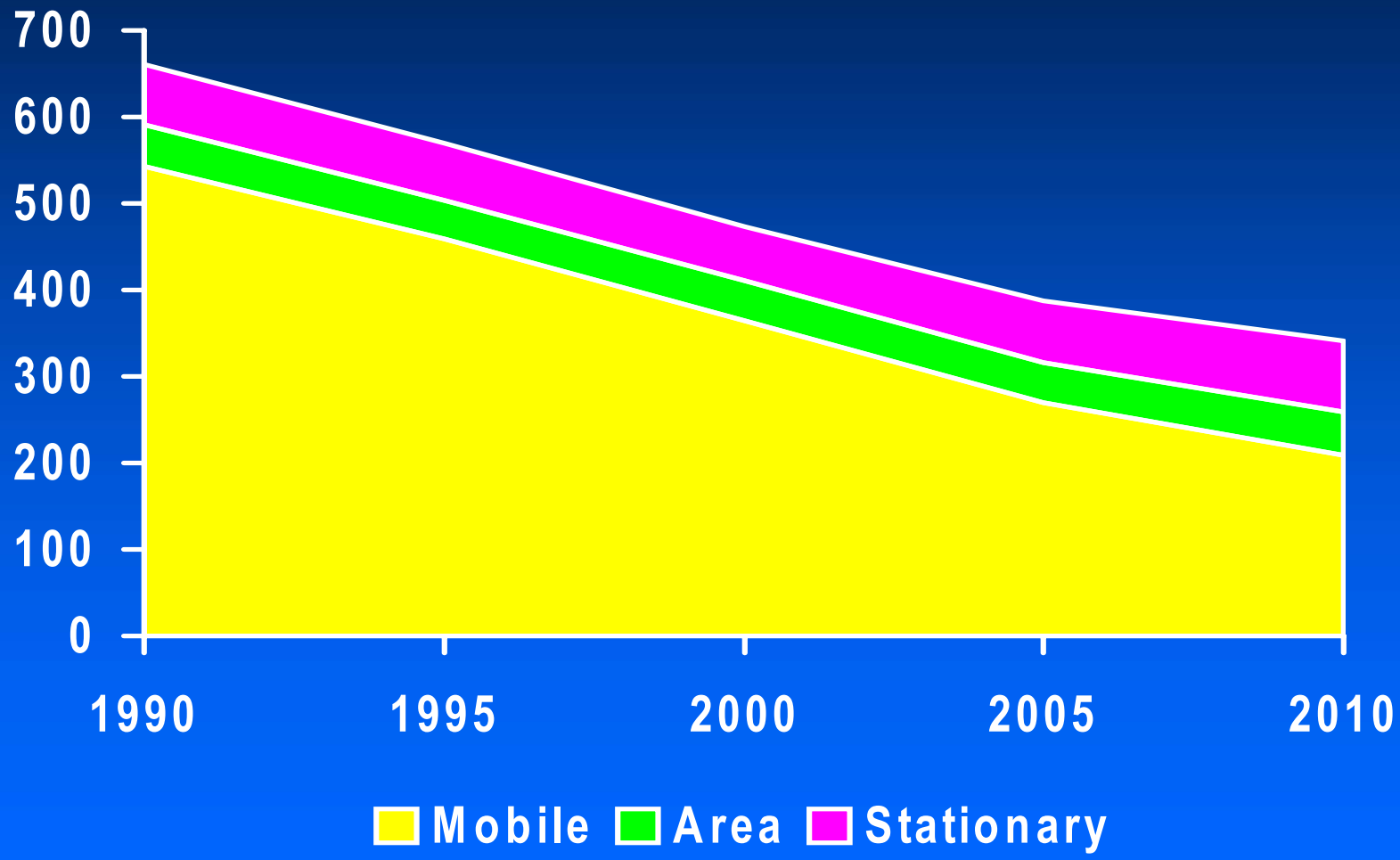
Air Quality Improvement



Growth Increase
1987 - 1999



Local Ozone Precursor Emissions Trends (tons/day)



Reductions on the Horizon

- Passenger cars and trucks
- Heavy-duty trucks
- Off-road equipment
- Interstate transportation sources
- Motorcycles
- Pleasure craft
- BACT, BARCT
- Regional Air Quality Strategy (S/S)

Regional Air Quality Strategy

- Updated in August 2001
- Additional future emission reductions
  - Architectural coatings (paints & varnishes)
  - Enhanced vapor recovery (gasoline stations)
  - Above-ground gasoline storage tanks
  - Solvent degreasers
  - Large bakery ovens
  - Coatings on plastic parts, rubber & glass
  - New residential water heaters

New Federal Standards

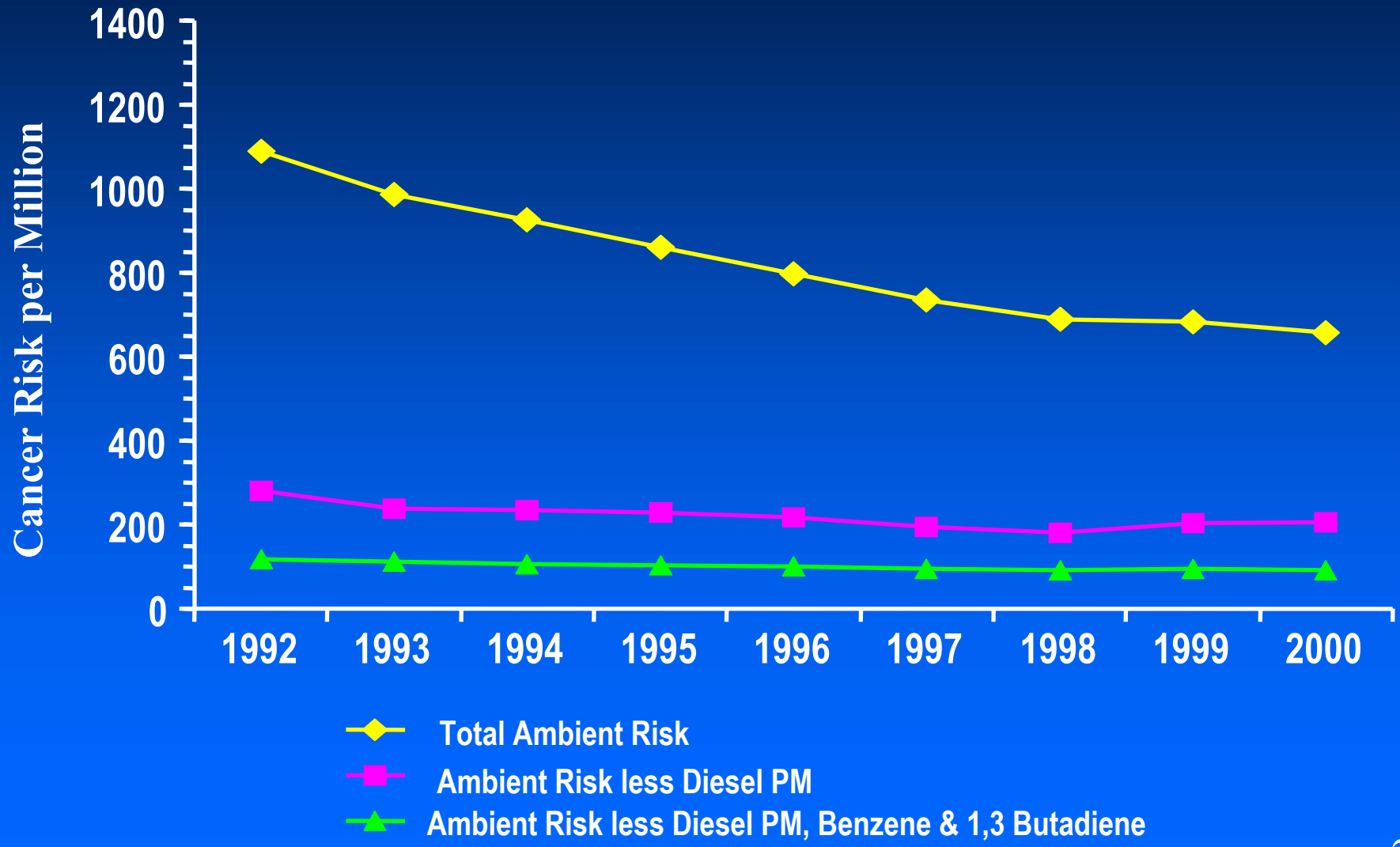
- New standards established in 1997
- 8-hour ozone standard to protect against longer exposure periods
  - More stringent than federal 1-hour standard
- Daily & yearly fine particulate matter standards ($PM_{2.5}$) for particles reaching deepest into lungs
  - Daily standard less stringent than state standard
  - Annual standard more stringent than state standard

Status of New Standards

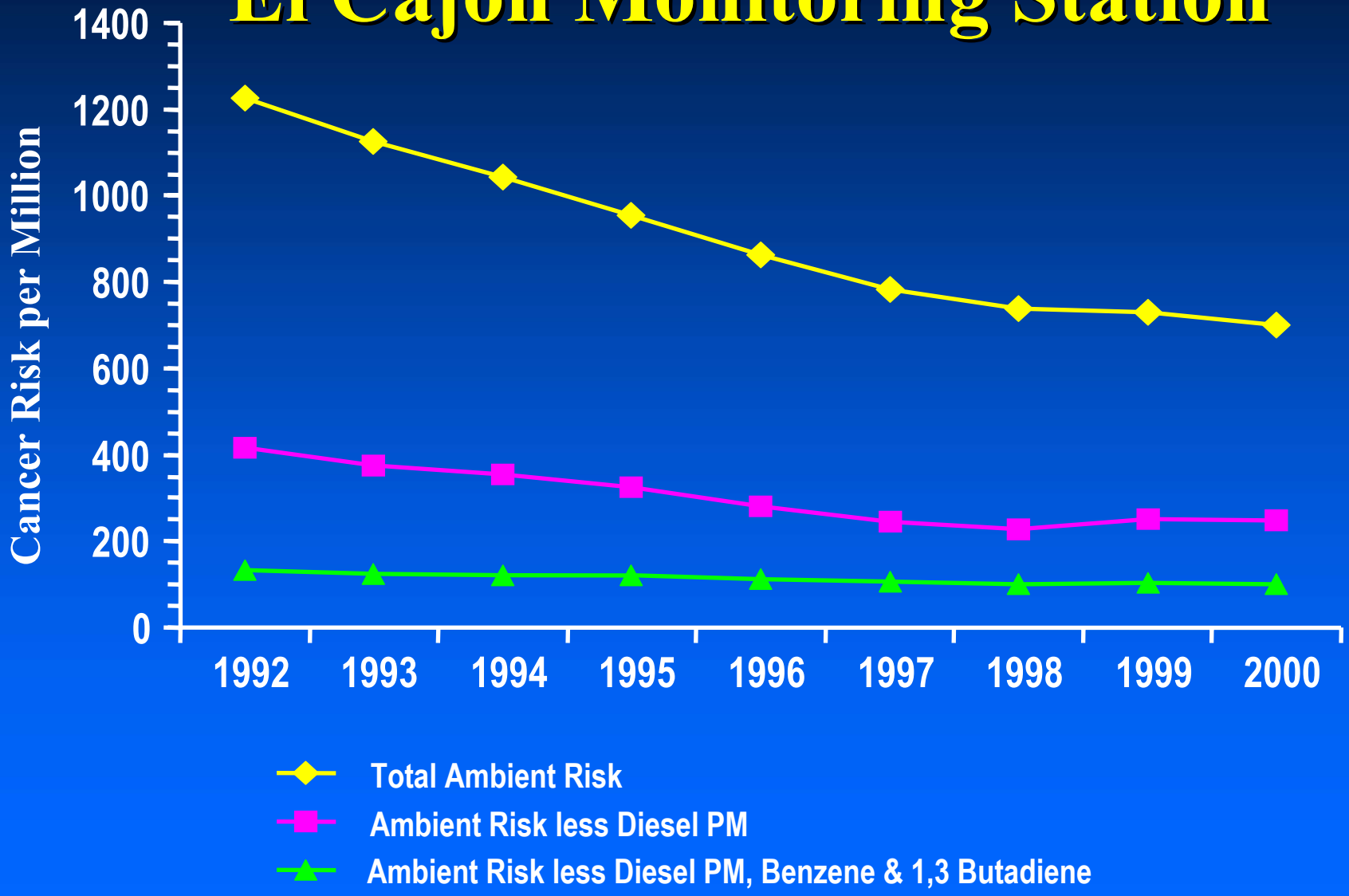
- Standards suspended due to litigation
- Court decision expected in mid-2002
- Additional delays are possible
- If standards affirmed in 2002:
  - Attainment status decided in 2003
  - If nonattainment, attainment plan with control measures due in 2006
- Nonattainment for 8-hour ozone
- Likely nonattainment for $PM_{2.5}$

Toxic Air Contaminants

Incremental Cancer Risk
Chula Vista Monitoring Station

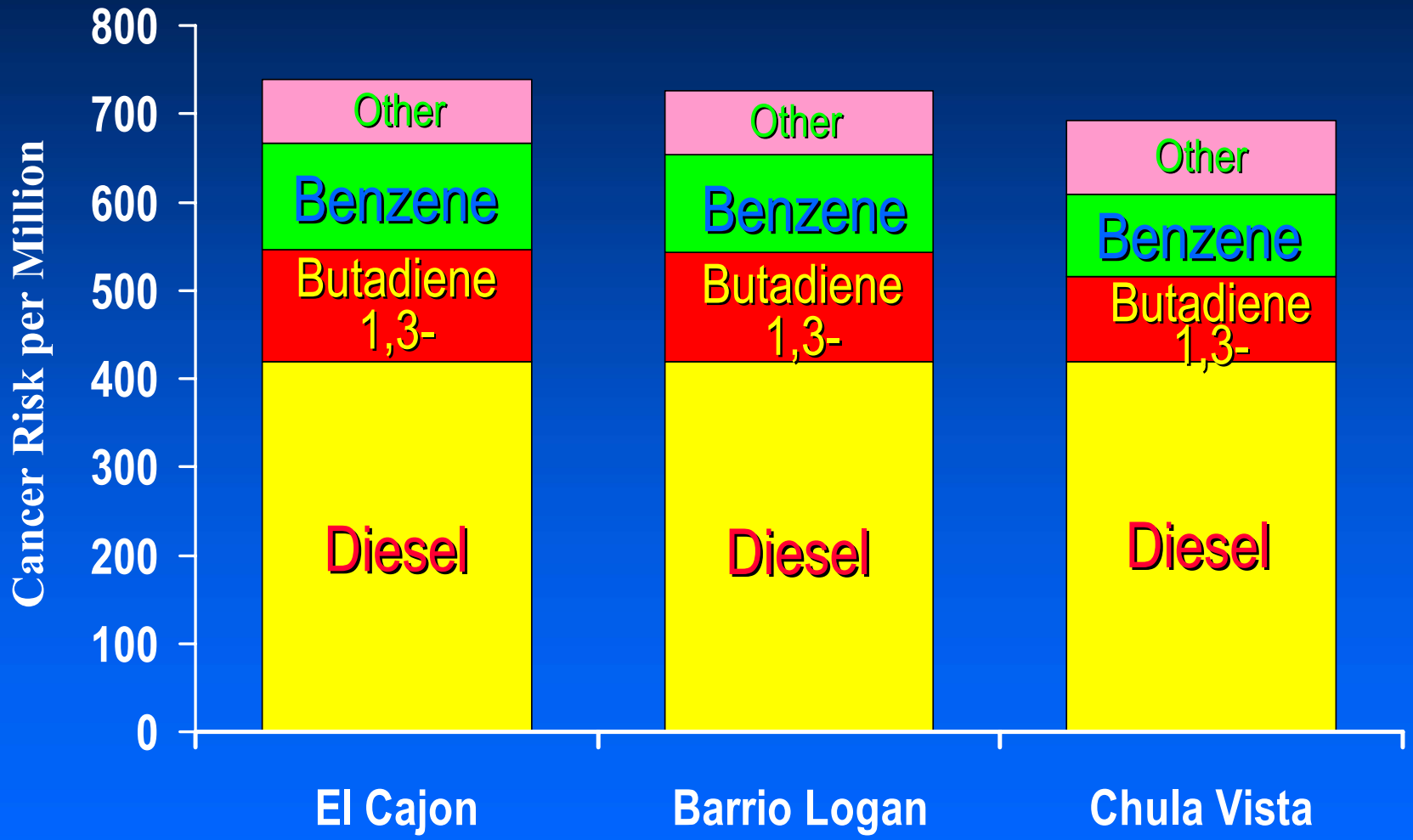


Incremental Cancer Risk
El Cajon Monitoring Station



Estimated Cancer Risk

October 1999 to March 2000



Toxic Emission Reductions

- 67% (4,300 tons per year) reduction in estimated permitted source emissions since 1989
- Unknown reductions in mobile, area, natural source emissions

Toxic Emission Reduction Programs

- Air Toxics "Hot Spots" (Rule 1210)
- Air Toxics New Source Review (Rule 1200)
- ATCM's (state) and NESHAPS (federal)
- APCD motor vehicle emission reduction incentive programs
- Motor Vehicle emission reduction programs, including diesel reductions (state and federal)

California Cancer Risks

Region	Cancer Risks (including diesel)
Los Angeles	995
Bay Area	619
San Diego	612
San Joaquin	555
Sacramento	494

California Cancer Risks