



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

BAAQMD

Climate Protection Program

Presented to NARC Conference
June 26, 2005

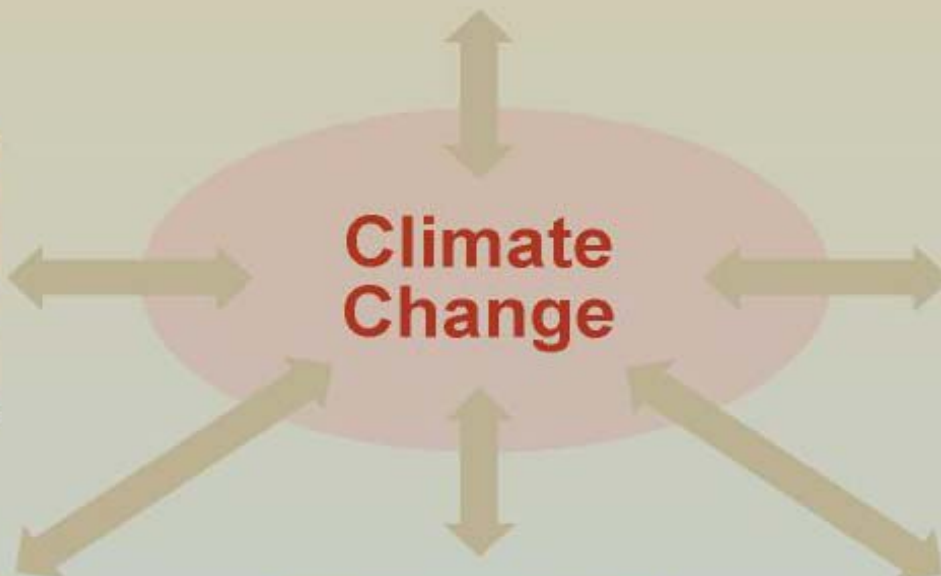
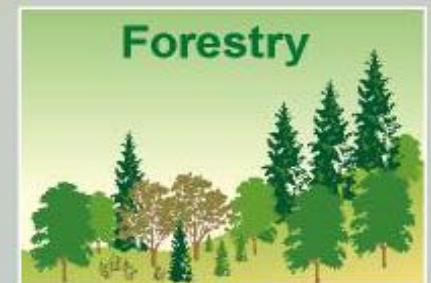
By Ina Shlez
Principal Environmental Planner

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Climate Protection Program

- Global Climate Change and regional air quality: Why is the District interested?
- Sources of GHGs
- Co-benefits of reducing GHGs and criteria and toxic air contaminants
- Bay Area climate initiatives
- History of program
- District role in the future

Linkages between climate change and other environmental issues



Future Climate-related Challenges for Bay Area



- Bay Area population increase from 7 million in 2000 to 8.8 million by 2030
- CA GHG emissions increase of 32% between 1990 and 2020
- Temperature increase of 2.5°F - 10.4°F by 2100
- Rising sea levels along the coast, also affecting San Francisco Bay and the San Joaquin Delta
- Increases in heat-related deaths, infectious diseases, and higher risks of respiratory problems caused by poor air quality



Global Climate Change and Regional Air Quality

- Higher temperatures increase emissions
 - Increased ozone formation
 - Evaporation of petroleum-based products
 - Biogenic emissions
 - Emissions from power generation
 - Photochemical reactions
 - Increased particulate matter (PM) formation
 - Emissions from power generation
 - Biogenic emissions
- Continued warming threatens to erode air quality improvements made in Bay Area in past 50 years

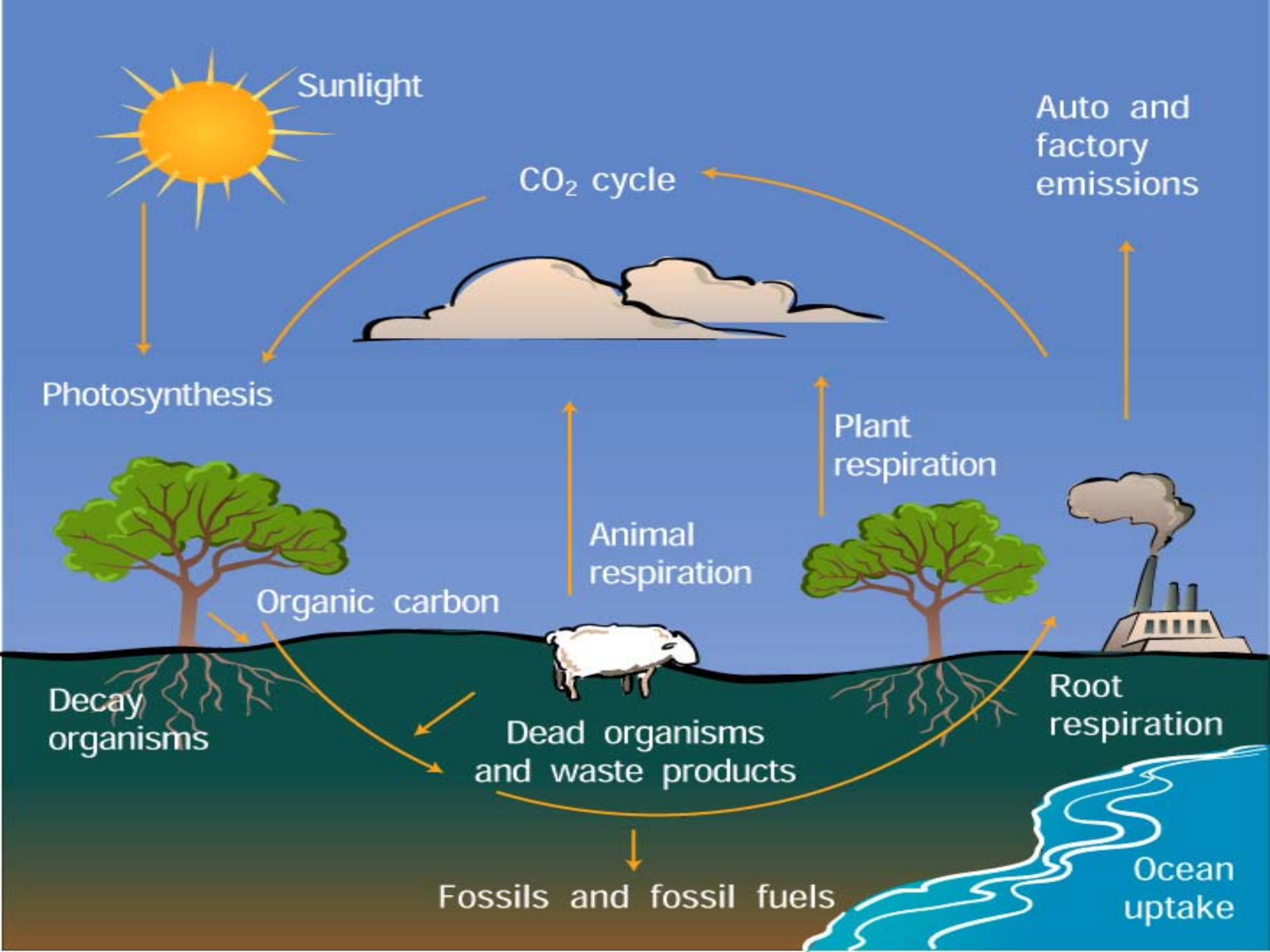
Greenhouse Gases

CO₂ is the principal greenhouse gas contributing to global warming

The other important gases are:

- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF₆)
- Tropospheric Ozone (O₃)

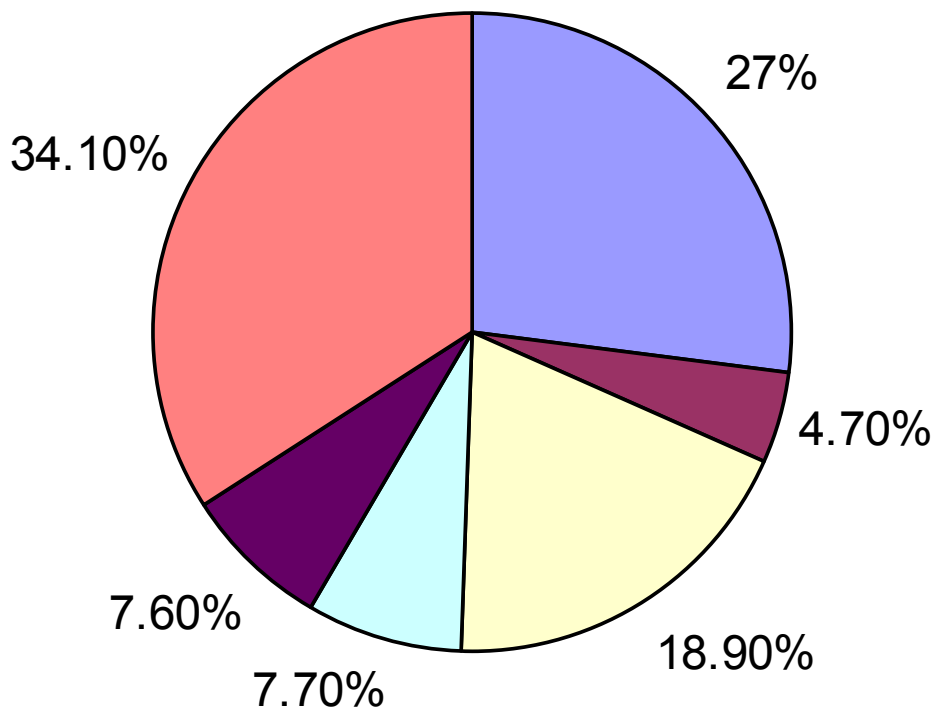




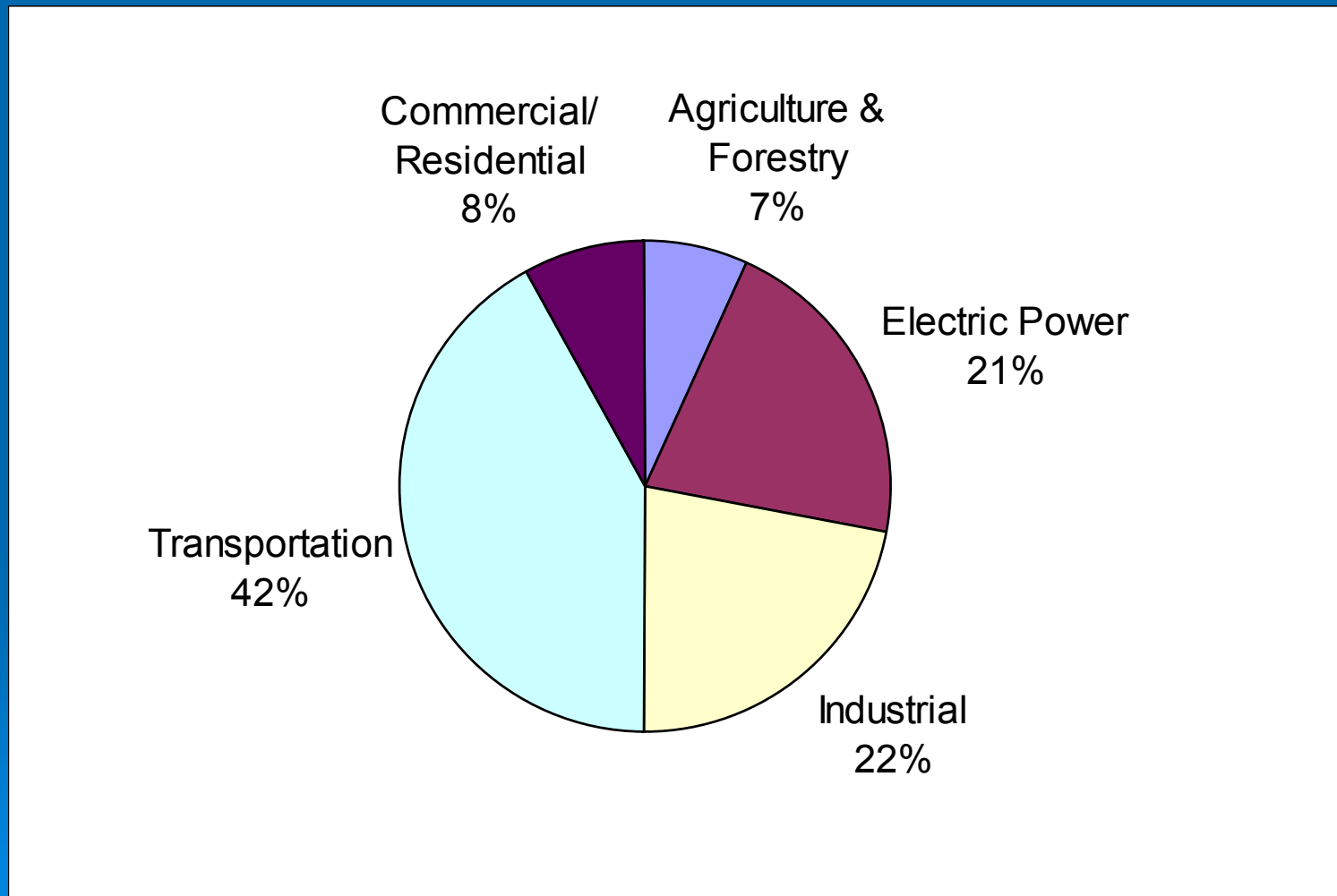
US GHG

Emissions by Sector

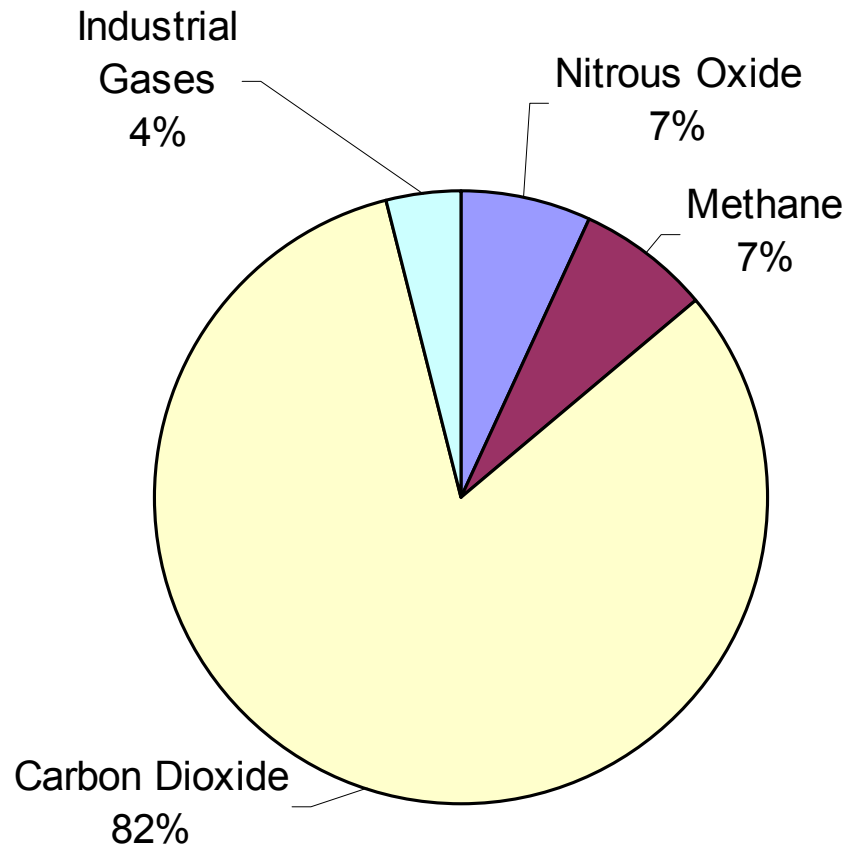
US Sources of GHG - 2001



Sources of GHG in CA



CA GHGs - Composition



Co-benefits



- Reducing GHGs and criteria and toxic air contaminants
 - Many sources of NO_x, VOCs, and PM are the same as GHG sources – specifically fossil fuel combustion



- Numerous District programs to reduce criteria pollutants also reduce GHGs
 - Energy efficiency – electricity generation
 - Transportation Control Measures (TCMs) – Vehicle Miles Traveled (VMT)
 - Smart growth
 - Low-emission Vehicles (LEVs)



State-wide Efforts

- Recent Executive Order S-3-05 set GHG emissions reduction targets:
 - To 2000 levels by 2010; to 1990 levels by 2020; to 80% below 1990 levels by 2050
- ARB rules for light-duty motor vehicles
 - Starting in 2009 model year
 - By 2020: 18% GHG emissions, 6 tons/day of ozone forming pollution
 - By 2030: 27% GHG emissions, 10 tons/day of ozone forming pollution

State-wide Efforts

- California Climate Registry working with industries and utilities to inventory and track GHG emissions
- Stringent energy efficiency standards
 - Building efficiency (2003)
 - Appliance efficiency (2004)
 - CA standards often adopted by other states/US
- Rulemaking underway to require GHG emissions reporting as a condition of state licensing of all new electricity generating facilities
- California Renewable Portfolio standards
 - 20% Renewable by 2017
 - Applies to private utilities

Bay Area: Some Local Climate Initiatives

- **Sonoma County** – started a climate change initiative to inventory and set GHG emissions reductions targets – 25% below 1990
- **Sustainable Silicon Valley** – working with local industries to improve energy efficiency and set GHG emission goals
- **Marin County** - addressed climate change in the county plan
- **San Francisco** - compiled a GHG emission inventory and set emission reduction targets – 20% below 1990
- **Contra Costa** - Creating guidelines for County activities to address Climate Change

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Climate Protection Program History

- Interest from staff and the new Executive Director spurred action
- Advisory Council resolution – April 2005
- Board of Directors passed resolution acknowledging climate change was happening and creating Climate Protection Program – June 1, 2005
- Currently developing programs

Climate Protection Program Goals and Initiatives

- Provide regional support and leadership
- Collaborate with other regional and State efforts
- Develop inventory of GHGs for the region
- Hosting forums to coordinate climate protection initiatives
- Create guidance for new initiatives
- Technical assistance to local stakeholders
- Public education and outreach campaigns
- Work with internal District programs and staff
- Inventorying our own GHG emissions and setting reduction targets

Next Steps



- Involving local stakeholders in development of the program: what is most needed in the region?
- Rolling out emissions inventory data for the region and assessing biggest sources
- Developing new outreach tools and materials

For More Info

Visit the BAAQMD Climate Protection
Website:

www.baaqmd.gov/pln/climatechange.htm

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