

Fairfax County Effort to Support Global Climate Change Strategy

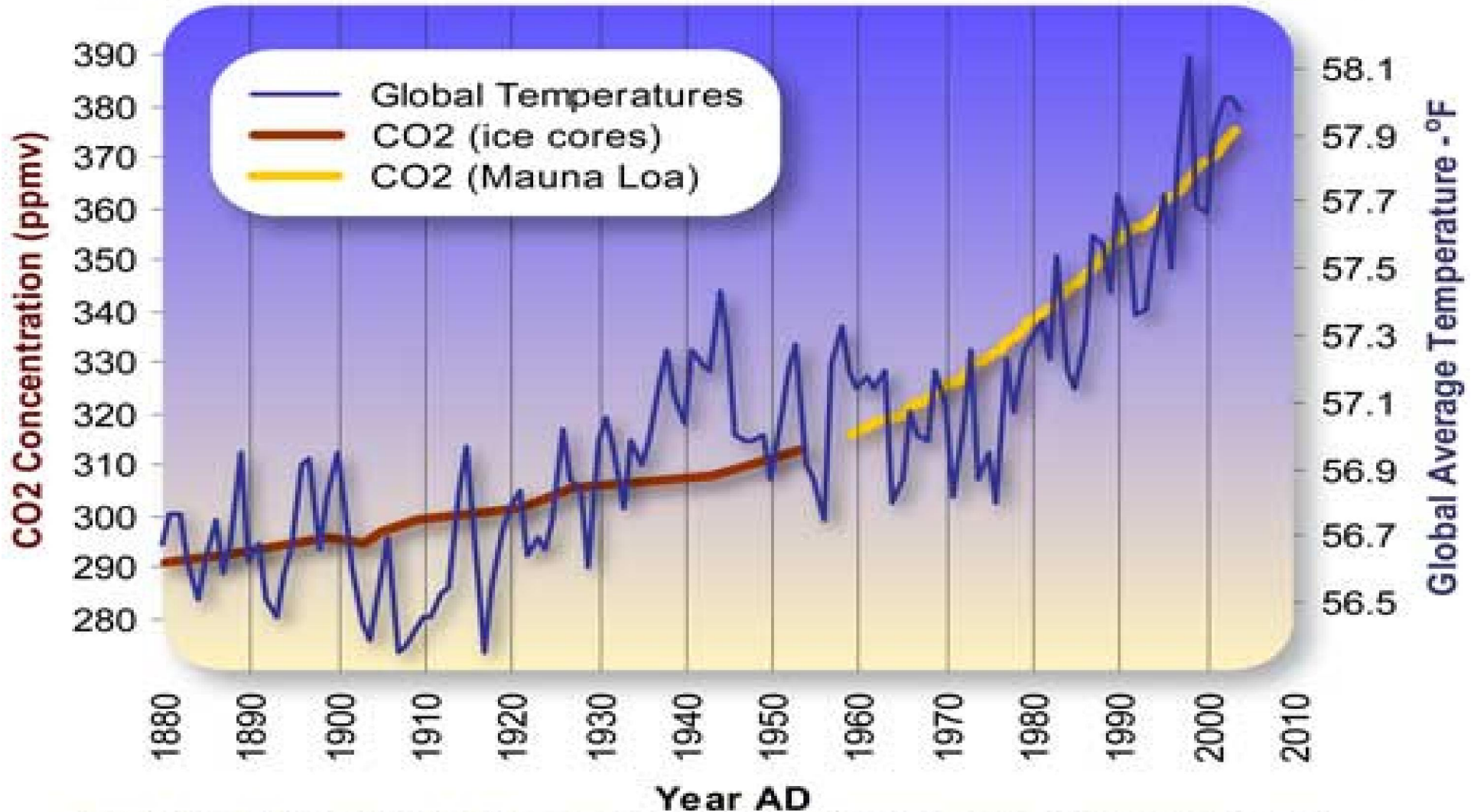
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Air Quality Section
November 2, 2006



Outline

- ❶ **Background**
 - ❶ **Hot topic, Local chapter of Sierra Club / Cool Cities Program, and US Mayor Climate Protection Agreement / Kyoto Protocol**
- ❷ **Sierra Club's 8 steps**
- ❸ **Stock of Fairfax County's effort**
 - ❶ **Transportation**
 - ❷ **Energy efficiency**
 - ❸ **Renewable Energy**
- ❹ **Reporting to the Board**

Global Average Temperature and Carbon Dioxide Concentrations, 1880 - 2004



Data Source Temperature: ftp://ftp.ncdc.noaa.gov/pub/data/anomalies/annual_land_and_ocean.ts

Data Source CO2 (Siple Ice Cores): <http://cdiac.esd.ornl.gov/ftp/trends/co2/siple2.013>

Data Source CO2 (Mauna Loa): <http://cdiac.esd.ornl.gov/ftp/trends/co2/maunaloa.co2>

Graphic Design: Michael Ernst, The Woods Hole Research Center





Early Warning Signs



Early Warning Signs



<http://www.climatehotmap.org/>

Fingerprints and Harbingers



Heat waves and periods of unusually warm weather

Sea level rise and coastal flooding



Glaciers melting

Arctic and Antarctic warming



Spreading disease



Earlier spring arrival



Plant and animal range shifts and population declines



Coral reef bleaching



Downpours, heavy snowfalls, and flooding



Droughts and fires



Cool City Initiative

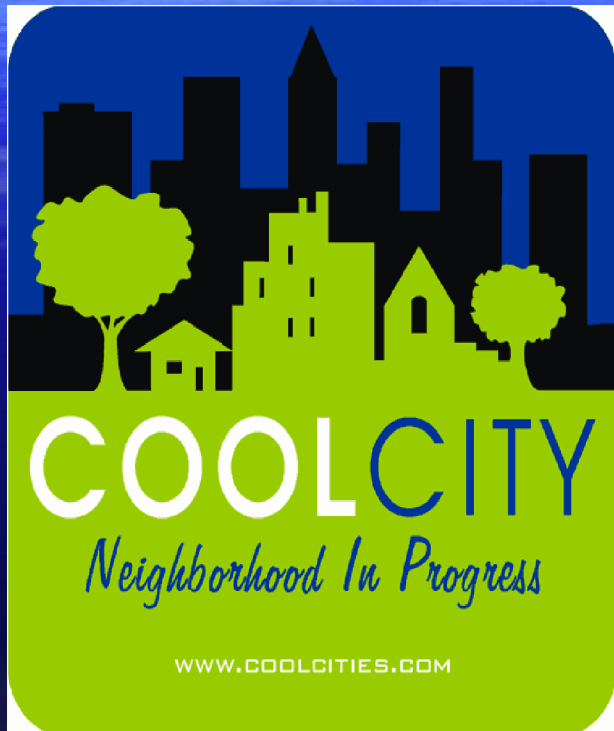
- Seattle Mayor Greg Nickels initiated - U.S. Mayors Climate Protection Agreement on February 16, 2005 - the same day that the Kyoto Protocol treaty took effect in 141 nations.



- By March 2006, more than 200 Mayors representing more than 42 million Americans in 38 states have signed on an Agreement pledging to reduce CO₂ pollution citywide by 7% below 1990 level by 2012.



Cool City Initiative.... Sierra Club



Four Steps to Become a Cool City

- 📌 Take the “Cool Cities” Pledge - commit to reduce CO₂ 7% below 1990 by 2012.
- 📌 Conduct a Global Warming Emissions inventory.
- 📌 Create a solution plan.
- 📌 Implement and monitor progress.



Great Falls Group of the Sierra Club's Expectations

1. **Provide an annual accounting for CO2 emissions from directly controlled sources.**
2. **Set CO2 reduction goals for directly controlled sources that exceed the 2012 Climate Protection Agreement goal [7 percent reduction from 1990 levels by 2012].**
3. **Define the base and promote maximum inclusiveness of direct CO2 sources.**
4. **Establish a reliable Baseline Year for directly controlled sources;**
5. **Promote reductions of global warming gases through indirectly controlled sources such as policies regulating commercial and residential development and transportation policy.**
6. **Provide an annual report of the county's progress.**
7. **Hire an energy specialist to direct the county's program.**
8. **Provide interested citizens and groups access to appropriate staff to be supported by a recognized citizens' advisory function."**



Fairfax County's Initiatives

- 1. Transportation sector**
- 2. Energy efficiency**
- 3. Renewable Energy**



County Green Vehicle Solutions



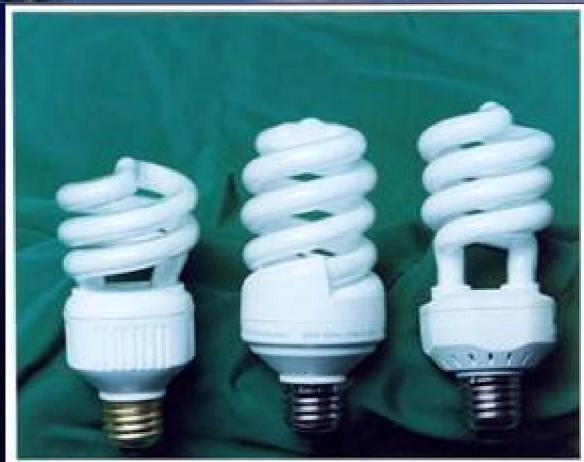
- **Green Fleets**
 - § Hybrid vehicle program
 - § Heavy-duty diesel retrofits
 - § Ultra-low sulfur diesel

- **Hybrid Vehicle Incentives**
 - § None

- **Clean Buses**
 - § School bus diesel retrofits
 - § Ultra-low sulfur diesel
 - § Connector bus diesel retrofits

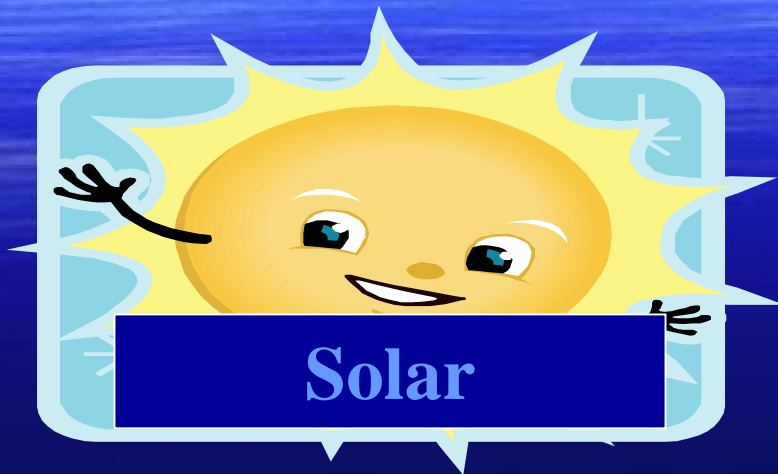


County Energy Efficiency Solutions



- **Making New Buildings More Energy Efficient**
 - § Green building policy
 - § Building automation systems
 - § Energy star compliant equipment
 - § Commissioning Building Heating and Cooling Controls
- **Energy Efficiency Retrofits to Existing Buildings**
 - § Change a light campaign
 - § Light switch sensors
 - § 1% reduction / year goal
 - § 75 buildings retrofitted with energy conservation measures
 - § Commissioning Building Heating and Cooling Controls
- **Energy Efficient Street Lighting**
 - § Traffic light replacement program (LED)

County Renewable Energy Solutions



- **Renewable Energy Standards**
 - § 5% wind energy for county facilities
 - § Landfill Gas utilization project at West Ox facility
 - § Waste to Energy Initiative
- **Solar & Geothermal Installations**
 - § None
- **Utility Contracts**
 - § Changed VEPGA by-laws to allow local governments to purchase renewable energy
 - § Changed state law allowing SIP credit for renewable energy



Air Quality Improvement Projects

FY 2004 – FY 2006 Carryover Funding

<u>EIP Actions</u>	<u>Funding Allocated (\$)</u>
Pedestrian Improvements	375,000
Clean-fueled public transportation vehicles	150,000
Air Quality Monitoring Equipment	50,000
Air quality Education	45,000
Clean Air Partners	30,000
5% wind energy purchase for county facilities	445,000
Landfill Gas Utilization	150,000
Plant Trees in Parking Areas of Government Centers	70,000
<u>Plant Trees Around Government Owned Facilities</u>	<u>100,000</u>
Total	1,415,000

*Bus retrofits - \$

*Hybrid Vehicle Replacement - \$



Recommendations

- **Make Global Climate Change the theme of the 2009 Environment Improvement Program (EIP).**
- **County staff will recommend additional actions to reduce CO₂ through the EIP FY 2009 program.**



Six Basic Elements

- **Does your jurisdiction have a climate change initiative, program, or policy?**
 - § **NO**
- **How did your jurisdiction develop this policy?**
 - § **Do not have one in place yet.**
- **Where are climate change-related programs housed in your jurisdiction? Which agency has the lead?**
 - § **Crosscutting in nature - multiple agencies and departments; considering new staff position to handle coordination.**



Contd...

- **What technical support is/was needed for developing a climate change program?**
 - § Establishing reasonable base year, and
 - § Conducting GHG inventory.
- **What were/are some of the obstacles to initiating a climate change program in your jurisdiction?**
 - § Technical expertise
 - § Staffing
- **What were/are some of the opportunities for initiating a climate change program in your jurisdiction?**
 - § Opportunity to streamline environmental initiatives and conserve resources.

Thank You!

