



## THE GARDEN CLUB OF AMERICA

### POSITION PAPER — 2005

*The Garden Club of America supports independent, academic, peer-reviewed scientific research as the basis for formulation of responsible public policy and legislation, as well as appropriate funding to ensure quality results.*

### GCA SUPPORTS CLEAN AIR

Clean air is essential for healthy plants, animals and people. The Garden Club of America supported the Clean Air Act of 1970. Air pollution continues to be a problem nationwide, and some power plants, refineries and manufacturing facilities continue to violate federal emission standards. In order to improve air quality and to reduce the risks of climate change, GCA supports the following goals:

- Reduction of three pollutants – **Sulfur dioxide (SO<sub>2</sub>)**, **Nitrogen oxide (NO<sub>x</sub>)**, and **Mercury (Hg)** – that are affecting the quality of the air and adversely affecting the habitat of all living things: plants, animals and humans.
- Reduction in the amount of **Carbon dioxide (CO<sub>2</sub>)**, and other greenhouse gases released to the atmosphere, as the changing climate may pose the greatest risk to biodiversity in the coming century.
- Reduction of these four chemicals through an integrated strategy of regulated emission caps, improved energy efficiency and greater use of renewable energy sources.
- Enforcement of New Source Review, a key provision of the 1977 Amendment to the Clean Air Act, which requires old power plants to modernize their pollution controls whenever they make major repairs or renovations.

#### GLOSSARY OF TERMS

**Sulfur dioxide (SO<sub>2</sub>)** - Sulfur in coal becomes sulfur dioxide (SO<sub>2</sub>), when coal is burned. SO<sub>2</sub> acidifies lakes, streams and soil, diminishes crop yields, deteriorates buildings, and creates haze which pollutes national parks and urban areas.

**Nitrogen oxide (NO<sub>x</sub>)** - Nitrogen oxide is produced when coal is burned. Winds carry these acid pollutants far from their sources. Acid pollutants fall to earth in wet form (acid rain, snow, mist or fog), or dry form (acid gases or dust). Nitrogen oxides and hydrocarbons combine in the atmosphere to form ground level ozone, the major constituent of smog. Human exposure can produce shortness of breath, asthma, and over time, permanent lung damage. Smog can reduce crop yields and damage plants, including forests, food crops and ornamentals.

**Mercury (Hg)** - Mercury is a nerve poison that builds to hazardous levels when released into the environment. The chief source of mercury is coal-fired power plants. Mercury deposition into water bodies can contaminate fish, especially those fish which are higher on the food chain. Forty-one states have issued advisories warning against the consumption of a range of these freshwater and/or marine fish.

**Carbon dioxide (CO<sub>2</sub>)** - Carbon dioxide is the gas most responsible for climate change. This heat-trapping gas is released by burning of fossil fuel (coal, oil and natural gas), flaring of natural gas, changes in land use (deforestation, burning and clearing land for agricultural purposes), and manufacturing of cement. These activities account for half of the warming potential caused by human activity.

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The purpose of The Garden Club of America is to stimulate the knowledge and love of gardening, to share the advantages of association by means of educational meetings, conferences, correspondence and publications, and to restore, improve and protect the quality of the environment through educational programs and action in the fields of conservation and civic improvement.