

FULTON COUNTY TAXPAYERS FOUNDATION

501©(3) Non-Profit Advocate of Lower Property Taxes in Atlanta/Fulton

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Local Warming: Consequences and Opportunities of Climate Change for Atlanta

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Introduction

Atlanta is no stranger to weather disasters. In 2004, the remnants of Hurricane Frances caused \$41 million dollars damage in Atlanta, mostly from flooding owing to overburdened and outdated storm sewer systems. During 2007, Georgia has seen the worst drought and largest forest fire in over 100 years, with damage estimated at over \$1 billion. No single weather event can be directly attributed to global warming; however, we can expect the frequency and severity of flooding, droughts and forest fires to increase in the coming decades owing to global climate change. But the costs to the region inflicted by global warming could be far more extensive and complex than simply adding the cost of increasingly frequent and severe weather disasters.

What Georgia Will Feel Like?

The earth is getting warmer, and scientists conducting research on global climate change overwhelmingly agree: most of the warming since the mid 20th century has been caused by humans, primarily through burning fossil fuels such as coal and petroleum. Climate model projections suggest that average global temperatures could increase from 3 to 10 degrees Fahrenheit by 2100, the range reflecting the amount of carbon dioxide and other greenhouse gases that might actually be put into

the air, plus uncertainties in the climate models. Georgia can expect warmer temperatures to be accompanied by more severe heat waves, increased heavy rainfall events, and more severe and longer droughts.

While we need to continue with aggressive efforts to reduce carbon emissions, it has been difficult to obtain the requisite international agreements and actually implement strategies to reduce emissions quickly enough to avert changes in climate. We need to pay more attention to how the world will actually cope with the consequences of global warming. The problem of increasing carbon dioxide in the air is global, but the consequences of climate change are entirely local. Communities and local and state governments are giving increasing attention to adaptation strategies. Adaptation refers to changes in natural or human systems that moderate harm or exploit opportunities.

From Global to Local

Most of global warming's local perils are familiar problems, though with a considerable magnification factor. National assessment reports and studies by Georgia's scientists have examined the impacts of global warming on our region. Specifically, the impacts described here for Atlanta focus on human health, water resources, agriculture and forestry, air and water quality.

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Issue	Projected Impact of Status Quo	Counter-Measure(s)
Heat Waves	<ul style="list-style-type: none"> Average summer high of 96 degrees in Atlanta with extreme temperatures reaching 115 degrees within the next century. Damages in excess of \$6 billion and at least 200 deaths annually. With a warming of only 2 degrees (which is likely over the next few decades), heat related deaths in Atlanta are expected to increase from 78 annually now to anywhere from 96 to 247 people per year, with major heat waves associated with even greater loss of life. 	Reduction in use of fossil fuels, less forest cutting, more planting of trees
Water	<ul style="list-style-type: none"> Extreme Flooding: More intense thunderstorms and episodes of heavy rainfall. Substantial property damage, loss of life, ecosystem damage, and environmental damage due to flooding. Severe flooding coupled with Atlanta's inadequate storm sewer system could result in water tainted with raw sewage, pesticides, petroleum products, animal waste, and dead animals. Extreme Drought: The economic impact in North Georgia of the current drought has been estimated at \$1.3 billion. As the population of metro Atlanta grows 60% by 2020, water shortages will be common. 	<p>A first step in adapting to drought should be the adoption of the Georgia statewide water management plan, <i>Georgia's Water Resources: A Blueprint for the Future</i>.</p> <p>Additional reservoirs, water recycling, desalinization plants, conservation.</p>
Air Quality	<ul style="list-style-type: none"> Worsening air quality with continued burning of fossil fuels on a per capita basis. The population of the region is expected to increase 40% by 2030. Doubling of unhealthy "red alert" air quality days for metropolitan Atlanta within the next 3 decades; 	The adoption of readily available measures to lower emissions from power plants and automobiles would provide major public health benefits by improving air quality.
Infectious Diseases	<ul style="list-style-type: none"> Increasing temperatures and humidity bring an increased risk of mosquito borne diseases, specifically yellow fever, dengue, and West Nile Virus. Significant fatality rates. 	The only real defense is control of mosquitoes.
Agriculture	<ul style="list-style-type: none"> Longer growing seasons and possibly greater near-term yields for crops such as peanuts, soybeans and cotton – although such benefits would subside as temperatures continue to rise. With prolonged droughts, the state's agricultural productivity will become more dependent on irrigation. 	Farmers can switch crops or vary planting dates, patterns of water usage, crop rotations, and the application of fertilizers and pesticides. Improvements in forecasting weather on monthly to seasonal time scales would enhance the ability of farmers to manage their crops.
Forests	<ul style="list-style-type: none"> This past year, 80-90% of last winter's regeneration planting fell victim to the drought. The pine beetle is spreading and damaging drought-weakened trees. The long-term stress from prolonged droughts, fires and changing insect populations could substantially diminish the forests particularly in the southern part of the state. 	Commercial forestry adaptations could include salvaging dead and dying timber and replanting species appropriate to a new climate. An aggressive fire management strategy will be needed.

Risks and Opportunities

The risks from global warming exist in a broader context of natural climate variability, resource depletion, environmental degradation, and population increase. *The greatest economic loss to Atlanta and Fulton County could result from increasing water shortages and further degrading air quality, as businesses and industries decide that Atlanta's environment cannot sustain long term operations for their companies nor provide a desirable quality of life for its employees.* Atlanta's "brand" as economic and cultural center of the southeast is currently qualified by poor air quality and massive traffic jams. Add unreliable water supply and unsustainable growth with lack of planning, and Atlanta could look much less attractive for future economic development.

We can change Atlanta's brand to become the model of how a city can grow prosperous, secure, innovative and healthy by managing our natural resources in a sustainable way and confronting climate change. The forward looking planning required to develop a strategy for adaptation to climate change can be used as an opportunity to plan broadly for a sustainable prosperity, by doing planning for land use, transportation systems, disaster management, and reducing our carbon footprint.

Dealing with climate change is both necessary and feasible. The best climate change strategies combine adaptation with reducing our carbon footprint and protecting our natural resources, since it will be much more difficult to adapt to faster warming rates. Several cities and states are leading the way: Seattle, King County and the state of Washington; Chicago and Illinois; the state of California; and the state of Florida.

So what should Atlanta and Fulton County be doing? We need to start engaging in serious long-term planning on the issues of sustainable development that includes land use, transportation systems, water systems, and reducing emissions and build climate change risks into the policy development process. Here is what we can start doing right now:

No.	Recommendation
1	Assess our water resources, future needs, and the engineering and policies required for a sustainable water supply
2	Improve Atlanta's storm water management and sewer system. This will not only diminish the damage from floods, but will also support Atlanta's overall water management and help control mosquito borne diseases.
3	Aggressively protect our trees. Besides the direct economic value of our forests, trees are our front line for a livable climate by moderating the temperature and retaining moisture in our soils. Further, trees remove carbon dioxide from the air.
4	Enhance our public transportation system. Plans are already on the table for an enhanced regional transit system and the so-called "brain train". In addition to reducing our carbon footprint, the reduced emissions from an enhanced public transportation system will have a dramatic impact on our air quality (not to mention our traffic problem).
5	Implement energy conservation and efficiency strategies. The up-front investment will provide payback within a few years in terms of substantially reduced energy costs. In addition to reducing our carbon footprint, the emission reductions will have a substantial beneficial effect on our air and water quality.
6	Further reduction in carbon emissions will require clean energy technologies. The single most effective thing we can do in the short term is not to build any more coal burning power plants until clean coal technologies are available.

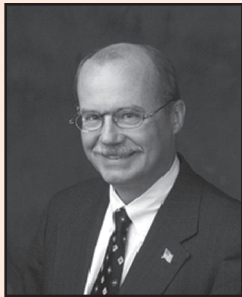
Conclusion

All of the measures recommended for adapting to climate change and reducing emissions will further benefit the region through improved air and water quality, improvements to the region's traffic problems, more reliable water supply, greater resilience to weather disasters, and lower energy costs. Further, our national political leaders have made reducing our dependence on foreign oil a national imperative. *The global need to reduce greenhouse gas emissions is arguably the biggest entrepreneurial opportunity the United States has known.* Surely this is an opportunity for Atlanta, particularly given the existing technological base in our universities and industries. Investments made in a more sustainable environment and reducing our vulnerability from climate change are investments in sustainable prosperity and economic growth for the region.

Call-to-Action – In Spring 2008, the FCTF will be sponsoring an all-day Global Warming Summit at Georgia Tech. The focus will be how Georgia can adapt to climate change. Featured speakers include **Dr. Judith A. Curry**, Chair of the School of Earth and Atmospheric Sciences – Georgia Institute of Technology, **Andrew Revkin**, Lead Environmental Reporter for the New York Times, **Dr. James Curran**, Dean of the Emory School of Public Health, **Dr. Jeremy Hess**, Center for Disease Control, and **Jeff Garwood**, CEO of GE Water and **James Stokes**, President of the Georgia Conservancy.

Look for more information in the coming months.

**Fulton County Taxpayers Foundation
Cordially invites you to a luncheon
at 103 West (103 West Paces)
Noon, February 20th, 2008**



Senate President Pro Tem Eric Johnson
will speak on his proposal to

“Significantly Reduce Property Taxes”

Senate President Pro Tem Eric Johnson has filed a proposal that would freeze existing residential property taxes, stating “Georgia homeowners have had no protection from backdoor tax increases; my proposal would significantly reduce property taxes.” Senator Johnson not only serves as Senate President Pro Tem, but is also Chairman of the Senate Administrative Affairs Committee, having been named one of “100 Most Influential Georgians” by both Georgia Trend and James Magazines.

Ticket Price: \$50.00 (tax-deductible). Admission price includes 3-course lunch and valet parking. Space is limited! Order tickets online www.fcta.us, via phone 404-869-6066, or make checks payable to:

Fulton County Taxpayers Foundation
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