

Athens Rotary Club
Wednesday, January 23, 2008 • Holiday Inn

Good afternoon, and thank you for extending once again the invitation to talk with you about the University of Georgia and those issues and opportunities which touch both town and gown.

Pardon me for stating the obvious, but the greatest challenge everyone in this community faces is the drought. Following close behind that is the larger issue of how we use energy and resources. UGA is the largest customer of Athens-Clarke County when it comes to water, and we write a pretty good check to Georgia Power every month, as all of you do. Given where prices are and what the future is likely to hold, I hope this is one in a series of conversations about how the university and the Athens community can work together to conserve precious resources.

Having said that, I do want to update you on the two major initiatives under way at UGA. As you may have read, the Regents on Monday accepted the report of the consultant on expanding medical education in Georgia. That report calls for up to 60 medical students per year enrolling in a program on the Navy School property.

We expect the first 40 students to enroll in the fall of 2009 at an alternate site until we take possession of the Navy School property when it is vacated by the Navy.

This is, of course, very good news for UGA and for the Athens area and has tremendous economic development potential. But it is important to remember that this is first and foremost an effort to meet the critical need for physicians in Georgia. If UGA can be a part of meeting that need, we will have done the state a great service.

The second initiative is the National Bio and Agro-Defense Facility, or NBAF. As David Lee has told you, Georgia is one of the finalists for this facility, which would be the federal government's premier site for research into preventing and responding to threats to human safety and the food supply caused by zoonotic pathogens, or those animal-borne diseases which can infect humans. This, too, has tremendous economic development potential for this area -- up to \$1.5 billion over 20 years, according to a Vinson Institute study -- and is a very exciting opportunity for the university.

Let me share with you some of our thinking about

why both of these opportunities are not only right for UGA, but for the Athens region and the state as a whole.

Among states with medical schools, Georgia ranks 35th in medical students per capita; overall, Georgia ranks 39th in the number of physicians per capita. This is now the ninth-largest state in the nation, yet our people, particularly outside urban areas, are woefully underserved in terms of access to medical professionals.

The health of Georgians is not good. A report by the United Health Foundation ranks Georgia 40th, based on criteria including the prevalence of smoking, binge drinking, obesity, infectious disease and other factors. The MCG/UGA Medical Initiative is a significant part of how Georgia should address these needs, and the Athens area offers much in addition to the Navy School property to support expanded medical education in Georgia:

- National- and world-class faculty in the basic sciences
- Top-quality teaching facilities
- Top-quality research space
- A Pharmacy school and a Vet school
- Administrative and student support infrastructure

Over the past decade, with significant support from the legislature, UGA has focused much of its research effort on growing the biomedical and health sciences program. The Biomedical and Health Sciences Institute serves as an umbrella over the vast amount of UGA research into those areas. The Georgia Cancer Center is doing very good basic research into the causes and mechanisms of cancer.

The state's first public College of Public Health focuses on the broad issues of quality of life for Georgians and is symbiotic with physician training.

There are also other areas of expertise at UGA that complement medical education -- communications, journalism, public administration, law, public health, social work, to name a few. That is one of the primary benefits of the research university -- the opportunities to work together. These UGA strengths mesh nicely with the research and clinical capacity of MCG.

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Northeast Georgia is also home to several progressive and expanding hospitals, which offer the opportunity to integrate the development of new residency programs with the MCG/UGA Medical Initiative. (We have had good discussions with the two local hospitals, and Northeast Georgia Medical Center in Gainesville is also supportive.)

The link between graduating from medical school in Georgia and practicing in Georgia is strong, so creating the opportunity for educating more physicians in Georgia is critical to meeting the state's need for more doctors.

Both institutions recognize that further close collaboration is necessary if the System is to meet the state's need for more physicians and health care workers. UGA has an obligation and a duty to apply its resources in service to the people of this state. The UGA/MCG Medical Initiative fulfills that obligation and meets that duty, and I am excited about the future of medical education in Athens.

Equally strong is the case for locating the National Bio- and Agro-Defense Facility here. This, too, is part of the modern land-grant mission. We must identify the greatest challenges facing Georgia and this nation, and apply the university's resources to them.

NBAF, at approximately 500,000 square feet, will employ an estimated 250-350 federal employees when it opens. These are the kind of well-educated, high-salaried people that every community in this nation are looking for. It will also offer good jobs at the entry level and economic opportunities at the periphery for suppliers and other biotech industries.

These economic development opportunities are part of the quality of life equation that we are all engaged in solving. Good jobs for the people of Athens and the economic impact of a facility like NBAF are important to the economic health of this community.

Georgia has become a world leader in global health, especially in the areas of infectious diseases, vaccines and food safety. The primary strength of Georgia's NBAF proposal lies in the efficiencies and effectiveness that the NBAF would gain by locating near this critical mass of assets in

and near Athens. This impressive mix will provide a full complement of expertise, technologies and facilities for disease surveillance, diagnosis, prevention and treatment. Local complementary resources include:

- UGA's nationally recognized expertise and programs in zoonotic, emerging, re-emerging infectious diseases and avian medicine.
- The Animal Health Research Center, which is the only stand-alone BSL-3AG facility on an American university campus.
- The USDA Agricultural Research Service Southeast Poultry Research Laboratory, with internationally acknowledged expertise in infectious diseases of poultry, plus molecular diagnostics and vaccine development.
- The Richard B. Russell Agricultural Research Center.
- A strong partnership with Merial's world-class expertise and facilities for development of animal vaccines.

Other critical resources located within a 70-mile radius include the Centers for Disease Control and Prevention, Emory University, Georgia Tech, Georgia State University, the Medical College of Georgia and the Morehouse School of Medicine.

Additional Georgia assets include Hartsfield-Jackson Atlanta International Airport, other high-level biocontainment facilities, expertise in construction and operations of high-level biosafety facilities, low costs for construction and the low cost of living.

As I said in the State of the University speech last week, these are opportunities for which we could not have planned but for which we have been preparing for a decade or more. By investing in research facilities such as the Complex Carbohydrate Research Center, the Animal Health Research Center and the Coverdell Center for Biomedical and Health Sciences, we have established a core of biomedical and health sciences researchers that make UGA a strong contender for NBAF.

We would appreciate your support on these two proposals.

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Now, back to water and energy. I want to tell you some of what UGA has done to reduce water use and instill a sense of conservation on campus. Frankly, I am proud of what is happening on campus, especially with the students, who have taken to this issue with energy and creativity and enthusiasm.

But first, some background and context. There has been a real shift in how environmentalism is viewed in this country in the past decade or so. We all recall the derogatory term "environmentalist wacko" that was applied to anyone who expressed a concern about the impact on the environment of decisions and development.

I was at Pepperdine in the mid-1980s at the height of the environmentalist movement and was often the point person for the university on those issues. While I may have disagreed with the positions taken by some on those issues, I never doubted their sincerity. In fact, I admired the passion with which they held those views.

The reality today is that much of what the environmentalists were pushing for is mainstream today. Who would have imagined back then that the University of Georgia would provide recycling bins for every desk and recycle up to 17 percent of its total waste each year? Who would have foreseen that UGA would install low-flow showerheads in the residence halls and low-flow toilets across campus, saving up to 30 million gallons per year? Who would have believed that this institution would be converting to "green" cleaning products – at a saving of some 20 percent?

Concern for the environment is a part of everyday business in the 21st century. It's not a special interest; it's not a minority position; it's not a side issue. It is part of every construction decision we make, virtually every management decision we make, and many of our purchasing decisions.

That's what I like to call "responsible environmentalism." It includes sustainability as part of the decision-making process. Those concerns become part of the management calculus – they don't control the process, nor are they eliminated from the process.

The first thing I want you to know about UGA's

response to the drought is this: We have not asked for and will not ask for any exemption from the restrictions. Not for the rare and fragile plants in the Botanical Garden. Not for the historic lawns of North Campus and the greenbelt of South Campus. Not even for Sanford Stadium.

This is a time to be a good citizen and find ways to help. My perception is that the sense of crisis has eased somewhat this winter, but all the signs are that could feel the pain this spring and summer.

I was pleased to learn this week that Bear Creek Reservoir is virtually full. This community – town and gown – has responded to the drought crisis in ways that no other county in the state has. It's something about which we can all be proud. We have been far ahead of the rest of the state, and largely through the voluntary efforts of many of you.

At UGA, we were down 10 percent in water use for the entire second half of the year over the same period in 2006. In November, the campus used 20 percent less water than the previous year, primarily with savings in research facilities, irrigation and the stadium.

Let me share some of what we have already done to conserve water.

- UGA been focusing on ways to reduce water usage long before the drought reached its current crisis level. Physical plant is more than halfway through a plan to modernize shower heads, toilets and washing machines across campus, which, as I mentioned, will save up to 30 million gallons per year.
- Dexter Adams, who is in charge of the landscaping that gives UGA the character we all value, has been planting more native species which use less water and can withstand periodic dry spells.
- The "Every Drop Counts!" campaign is spreading the message that reducing water use is both an institutional and individual responsibility. The posters around campus and the website have been very effective in helping all of us see how we can each save water.
- We turned off the fountains months ago

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and have found creative ways to water athletic fields without using county water sources. We installed rain gardens along Lumpkin Street in conjunction with city's work there. Those gardens divert excess rainwater into specifically designed plantings which filter water out of the stormwater system.

The task force on water use found that the largest user – at 31 percent – is research. Instruction uses 21 percent; cooling 20 percent; housing 14 percent, irrigation nine percent; and dining five percent. I was surprised, as I think many faculty were, that research was the leading water user. The good news is that we think there are some newer technologies we can install that will reduce water usage.

But the fact that research is the largest user of water on the UGA campus points to the complexity of this issue. Conducting research into areas of interest and concern to Georgians is one of our core missions as a land-grant university.

Much of that research is dependent upon a steady supply of water.

The good news is that our researchers managed to cut down their water usage by 9 million gallons from July to November. That was simply by changing their practices, not by installing new equipment or spending more money. We're off to a good start on that score. We can't – and won't – stop doing research. We will honor our responsibility to be good stewards of the resources we need to carry out our mission. And we will continue to upgrade the technology to reduce water use without hampering the ability of our researchers to carry out their programs.

The drought and reducing our water use have been high-profile issues this year, but another concern, with roots going back for several years as well, is rising energy costs. We have all felt the sting of that increase, but the scale of the University of Georgia results in some pretty impressive – or frightening, if you're Tim Burgess – numbers:

UGA's utility costs have risen more than \$10.2 million, or 71 percent, since 2004.

The cost of coal has tripled. Natural gas is up 65 percent. Electricity has almost doubled – 83 percent.

During that same period of time, we have received \$4.2 million in relief funding from the state, leaving a projected deficit for FY09 of \$6.3 million.

How have we responded? By aggressively seeking out and implementing energy conservation measures.

In the past decade, we have reduced UGA's energy consumption per square foot by 19 percent. This has been accomplished despite the addition of several research-intensive facilities – such as the Coverdell Center, the Complex Carbohydrate Research Center and the Animal Health Research Center – as well as new student housing on East Campus and the Student Learning Center.

Research facilities, by their very nature, must be fully operational 24 hours a day and have technological requirements that require a constant source of energy. Additionally, facilities such as the libraries and the student centers operate 18-20 hours a day.

Nonetheless, our energy consumption has been relatively flat thanks to construction standards for new facilities and the implementation of energy-saving measures. The cost of energy per square foot on campus, however, has increased 50 percent.

Just last week at the meeting of the Board of Regents, I presented the report of a task force on system energy use which I chaired. The goal of this task force is to provide a formal framework to help the University System and its member institutions pursue efficiency and sustainability projects.

Careful management of resources is necessary if the University System is to avoid having already limited dollars diverted from our primary mission of teaching, research, and service. These current and future efforts demonstrate our commitment to responsible environmental leadership.

In the public sector and the private sector, significant increases in expenses like energy costs are difficult challenges to manage. It is hard for any of us to raise enough revenue to cover the 50 percent increase in energy costs. We are being active with conservation measures, cutting back on operating hours and promoting awareness.

I daresay we have each thought more about water in

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the past year or so than we had in our entire lives before that. (Well, that may not be true for Arnett, whose academic background is in watershed management. But for the rest of us . . .)

The good news for UGA is that we have been successful in managing these challenges. Without, frankly, much help from the state, we have reduced both energy use and water usage. It's taken great leadership from people like Danny Sniff and Ralph Johnson, whose expertise has been invaluable. It's taken buy-in across the campus and a realization that everyone, everyone has an important role to play in the institution's success.

The cumulative impact of thousands of small decisions has been tremendous.

The challenges remain, of course. While the reservoir is full today, the rainfall deficit is still quite large, and if we don't get a lot of rain between now and early summer when the air conditioning comes back on, we could be facing a situation more dire than last year's.

And with crude oil hovering around \$90 a barrel, there is no reason to anticipate any meaningful drop in energy prices.

That being the case, we will continue to do what we have been doing, and we will look for ways to conserve more water and more energy. We will also expand the research that we are doing in these areas, particularly bioenergy and biofuels, as these hold the promise for widespread relief from energy pressures.

Last summer, a team led by Alan Darvill at the CCRC was awarded a \$20 million Department of Energy grant, part of a \$125 million nationwide project headquartered at the Oak Ridge laboratory. The research will focus on unlocking the energy potential of cellulose in plant cell walls.

We also have numerous biofuel projects ongoing in our Department of Engineering Outreach.

If successful, this research could have a profound impact on American life. And it will have fulfilled our public service mission in a way that helps UGA be a good steward of natural resources. That's a winning proposition all the way around.

I'll close there to leave ample time for the very good discussion we always have at this time. Thank you for your attention.