

# Research and Value for North Carolina

*How facilities-and-administrative funds sustain research at the University of North Carolina at Chapel Hill*

## What F&A Funds Mean to North Carolina

Facilities-and-administrative funds, also known as the “over-head” from contracts and grants, enable the University of North Carolina at Chapel Hill to conduct vital research that provides **25,000 jobs** in the state, attracts talent to our campus, and enhances the well-being of North Carolinians in all 100 counties. In fields such as medicine, chemistry, genomics, and biotechnology, scientific breakthroughs will soon inspire substantial new industries and technologies. With the use of F&A funds, Carolina has carefully positioned itself to become a national leader in these strategically important fields, laying the foundation for a surge of economic growth in the state. To maintain our leadership and competitive advantage, we will need to retain the full use of our F&A funds.

## Financial soundness depends on F&A funds.

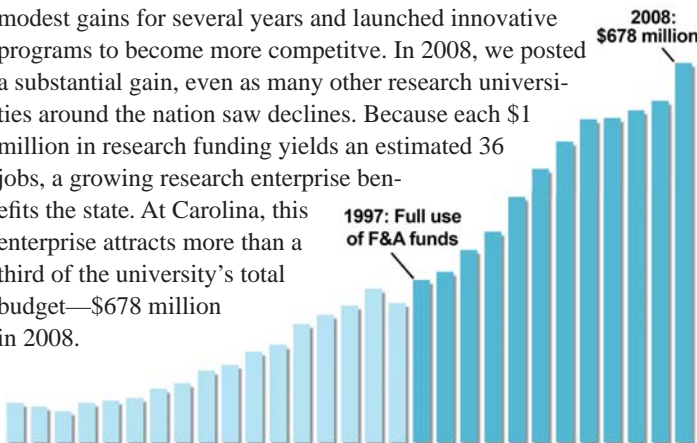
In almost every sector of the university, we rely on F&A funds to meet our financial obligations and to fulfill our mission of teaching, service, and research. A reliable stream of F&A revenues helps us achieve a favorable bond rating, which enables us to lower construction budgets by reducing the cost of borrowing. A substantial threat to our F&A revenue could jeopardize our bond rating and escalate our costs. And, because our F&A rate agreements with the federal government are based on full F&A reimbursement, a loss of F&A would violate our agreements and put future funding at risk.

## Economic progress depends on F&A funds.

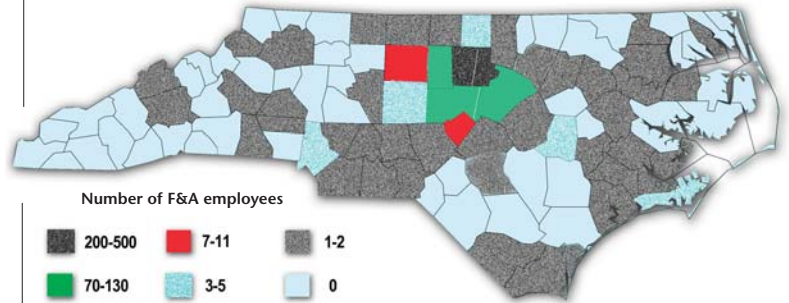
Outside funding has a substantial impact on the state’s economy. It also attracts talented faculty and students who create the new technologies and innovations North Carolina will need to recover its economic momentum. Using F&A funds, Carolina launches new companies that create jobs for the state. In 2008 alone, we helped start five new companies, several of which are developing new treatments for disease. One Carolina startup, MegaWatt Solar, has contracted with Piedmont Electric and installed a solar power plant in Caswell County. F&A funds also support research on problems facing the state and its businesses, including marine trades, business clusters, workforce housing, and steps to prevent predatory lending.

## Grants depend on F&A funds.

After 1997, when we began receiving the full measure of our F&A reimbursements, total research funding accelerated. In 2004, when federal funding leveled off, we maintained modest gains for several years and launched innovative programs to become more competitive. In 2008, we posted a substantial gain, even as many other research universities around the nation saw declines. Because each \$1 million in research funding yields an estimated 36 jobs, a growing research enterprise benefits the state. At Carolina, this enterprise attracts more than a third of the university’s total budget—\$678 million in 2008.



## Employees depend on F&A funds.



*North Carolina counties with UNC-Chapel Hill employees paid from facilities-and-administrative funds (February 2009).*

In February of 2009, 1103 Carolina employees were paid at least in part from the \$32.3 million in F&A funds devoted to salaries campuswide. These salaries represent a \$32.3-million impact on the state’s economy. More importantly, they support a great many tax-paying employees and their families. These employees, who live in more than a third of North Carolina counties, are vital to our programs in research and education.

## Employees paid from F&A funds (February 2009).

	Permanent	Temp.	Total	F&A Salary
Faculty	57	1	48	\$2.2 mil
EPA Non Faculty	121	95	216	\$8.1 mil
SPA	700	129	829	\$22.0 mil
<b>Total</b>	<b>878</b>	<b>225</b>	<b>1103</b>	<b>\$32.3 mil</b>

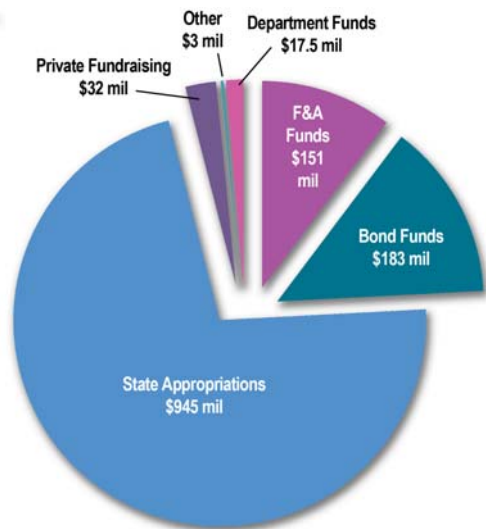
## Service depends on F&A funds.

F&A funds help support a number of public-service projects of demonstrated value to the state. Here are just a few examples:

- **Disaster preparedness:** advanced mapping and data analysis to predict the effect of storms on flood-prone coastal areas.
- **Environment:** research and monitoring to enhance and protect fisheries, coastal resources, water quality, and mountain forests.
- **Public health:** studies of genetic abnormalities caused by viruses such as influenza, research into the relationship between influenza and nutrition, and investigations of racial and ethnic factors in health care.

## Research compliance depends on F&A funds.

In many cases, F&A-funded employees provide services required by state or federal law, and compliance mandates are increasing. We estimate that the total campus F&A expenditure for research compliance is at least \$4 million per year. For example, staff paid from F&A funds monitor the use of human subjects or laboratory animals in research, satisfying federal mandates. F&A-funded employees also administer research contracts and grants, fulfill reporting requirements, report and license inventions, create start-up companies, and help manage offices and labs. Without these employees, the university could not meet its legal obligations.



*Funding sources for current and authorized capital construction projects at UNC-Chapel Hill. Departmental funds include F&A. F&A also funds debt service on many existing campus buildings.*

### Capital projects depend on F&A funds.

During fiscal year 2008, Carolina spent \$19.9 million of its F&A reimbursements on facilities construction and renovation. Several building projects now under way or recently completed depend heavily on F&A funds. Here are several examples:

- Science Complex Phase II: \$10 million from department funds, \$22 million from private fund raising, \$56 million from F&A funds.
- Bell Tower Development (Science Complex Phase III): \$183 million from state and auxiliary bonds, \$30 million from state appropriations, \$19.3 million from F&A funds.
- Dental Sciences: \$99 million from state appropriations, \$6 million from private fund raising, \$20.5 million from F&A funds.
- Research Resource Facility: \$7.5 million from department funds, \$9 million from F&A funds.

Each of these facilities will house research and education programs designed to improve our citizens' health and quality of life.

In addition, nine major projects, including the Biomedical Research Imaging Building and the Morehead Planetarium addition, have been authorized for construction and depend on F&A funds for a large portion of their funding.

### Debt service depends on F&A funds

During fiscal year 2008, Carolina spent \$16.2 million of its F&A reimbursements on debt service for capital projects. This was an increase of more than \$9 million, or more than 33 percent, over comparable expenditures of F&A cost reimbursements on facilities construction, renovation or debt service in the previous fiscal year. Our plan for paying for capital projects assumes a stream of F&A revenues increasing at an average rate of 5 percent per year. In other words, our construction commitments are based on the assumption that our current F&A revenues will *increase*, not decrease.

### Equipping new buildings depends on F&A funds.

Campus facilities, especially science buildings with high-tech laboratories and instruments, are expensive to furnish and equip. New buildings require an estimated 5-10 percent of the construction cost in additional funds to outfit them in ways that would maximize their potential. At Carolina, most of that investment will come from departmental sources comprised primarily of F&A funds.

### Teaching depends on F&A funds.

Without F&A funds, it would be almost impossible to train students in the technical disciplines. In the School of Public Health alone, \$366,000 in F&A funds was spent on education. Training students is a primary reason for university research, and graduate students and undergraduates alike learn by experiencing first-hand the excitement of discovering new knowledge. Approximately one third of Carolina's graduating seniors have been involved in a research project. Many students publish their findings in top-rated journals, and their projects often lead to external research grants. Examples of undergraduates' research topics include the following:

- effectiveness of Latino-owned credit unions
- challenges facing the hosiery industry
- educational needs of at-risk children
- role of calcium in AIDS dementia
- effect of vitamin E on prostate cancer
- determinants of economic growth in North Carolina

### Libraries depend on F&A funds.

A portion of F&A cost reimbursements goes each year to strengthen libraries. In fiscal year 2008, \$493,848 was allocated to purchase materials and to pay operating expenses, an increase of more than 43 percent over the previous year. A research university must provide access to the latest research materials so that its faculty members and students can conduct state-of-the-art research.

### Competitiveness depends on F&A funds.

As grant funding has become harder to find, Carolina has invested a portion of its F&A funds to help our faculty members compete and sustain their research. Examples include the following:

- *Bridge funding*: In fiscal year 2008, Carolina invested more than \$1 million in awards to investigators whose grants had not yet been renewed but who had proposals pending with an excellent chance of success. Bridge funding allows a faculty member to keep a laboratory in operation and its researchers employed.
- *Seed funding*. Small research awards help faculty members undertake new projects, learn new techniques, collect pilot data, or conduct preliminary work that makes a project more competitive. Often, these small grants yield big results. For example, Noel Brewer from the School of Public Health used a \$3800 seed grant to win a grant of \$412,000 from the Centers for Disease Control to study vaccine coverage among African American women. Laurence Katz from the School of Medicine used a \$4,000 seed grant to leverage more than \$375,000 in funding for his work on repairing brain injury after near drowning.
- *Matching funds*. Many funding agencies require us to commit our resources to match a portion of the grant we receive. Without F&A funds for this purpose, we would lose many of the big grants that support our research and help educate our students.

### Innovation depends on F&A funds.

Strategic investments of F&A funds help Carolina advance the quality of its research and gain a competitive advantage in the knowledge economy. For example, Carolina has used F&A funds and state support to invest in data visualization, which makes vast arrays of data understandable and available for practical application. Visualization is rapidly becoming indispensable in almost every field of science. One example is the Virtual Lung Project, which will enable researchers to understand the complex workings of the lung and to develop new treatments for diseases such as cystic fibrosis.