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Katrina/Rita Impacts on Federal Funding Programs

This, the third in a series, includes more excerpts from "The Impact of Katrina and Rita on Federally Sponsored Science and Engineering Research and Education Programs: A White Paper on Louisiana's Immediate Needs, Recovery & Revitalization, and Advancement." Dr. Kerry Davidson, Board of Regents Deputy Commissioner for Sponsored Programs, and Dr. Michael Khonsari, Associate Commissioner for Sponsored Programs Research and Development and LA EPSCoR Project Director, submitted the Report on behalf of the Louisiana Research Task Force. It was distributed in October 2005 to the Office of Management Budget, the White House office responsible for devising and submitting the president's annual budget proposals to Congress, as well as federal funding agencies, and State and U.S. senators and representatives.

On the scale of singular events that transform societies, the impact of Hurricanes Katrina and Rita exceed anything yet experienced in our nation. Louisiana's society, economy and culture have suffered severe setbacks. The destructive impact has been equally colossal and pervasive.

Among the hardest hit is Louisiana's higher education and research community, which has been at the forefront of the State's efforts to create an economy based on science and technology to complement its traditional reliance on natural resources and tourism. State and federal agencies and the private sector had invested substantial capital in the Greater New Orleans Area to amplify the research enterprise and expand the science/engineering pipeline, particularly for minorities. All institutions affected by the hurricanes had brought resources and energy into this process.

Federal research and development obligations to Louisiana totaled approximately $432 million in 2002, according to National Science Foundation (NSF) statistics. Also according to NSF, in 2003, universities in the New Orleans area accounted for approximately 62 percent of federal research funding for higher education in Louisiana. The following are brief summaries of research impacts on just six federal funding agencies.

Impact on Department of Defense-Funded Research Programs (DoD) One of the largest sources of federal research and development funding, DoD plays a major role in the State's research and education enterprise. Its wide variety of topics include advanced manufacturing technologies and industrial processes, bioenvironmental hazards, maritime technologies, and cancer research.

Approximately 40 percent of DoD funding goes directly to universities in the New Orleans area. Major programs and initiatives at affected universities include the Tulane University (TU) Integrated Bioenvironmental Hazards Research Program, the Univeristy of New Orleans (UNO) Gulf Coast Region Maritime Technology Center and the Advanced Materials Research Institute, the Xavier University (XU) Breast Cancer and Prostate Cancer Centers, and the TU Interoperability, Pervasive Computing and Security Program.

The post-hurricane environment does offer a unique opportunity to study important topics in an atmosphere that places increased importance on bioenvironmental hazards, on inoperability of computing and information networks, and on devastated maritime settings. The need to reestablish research activities at these facilities is thus particularly acute.

Aerial photograph of the University of New Orleans campus, taken on September 4, 2005 by the United States Airforce Auxiliary Civil Air Patrol.

Impact on Department of Energy-Funded Research Programs (DOE) Prior to the hurricanes, the State's researchers were contributing significantly to DOE's goals of a diverse supply and delivery of reliable, affordable energy. DOE-funded projects contributing to national security, the economy, and environment include 20 that are current as well as many more recently completed. Many also have advanced the development of an energy-related research infrastructure that includes faculty and student researchers actively involved at national laboratories.

The hurricanes that have threatened to derail the transformation of the economy to one that is knowledge-based have also generated statewide collaborations and synergies that will position the State as a leader in disaster recovery, revitalization and advancement.

Impact on NASA-Funded Research Programs The National Aeronautics and Space Administration has made significant investments in the Gulf Coast region. Over $300 million per year comes to the Lockheed-Martin Michoud facility, one of the State's largest employers of high-tech workers. Louisiana also interacts significantly with the John C. Stennis Space Center to the east and Johnson Space Center to the west. Of particular concern are joint programs between these major centers and Louisiana universities that may suffer from the aftermath of the hurricanes.

Over 40 percent of NASA's obligations to colleges and universities in Louisiana are directed to institutions in the affected areas. This represents a considerable investment in research, development and education programs and an important part of the area's economy.

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Impact on National Institutes of Health- Funded Programs (NIH) Prior to Hurricane Katrina, NIH funding enabled Louisiana to form a vibrant biomedical research enterprise, attracting top-quality biomedical researchers in diverse health science disciplines, including neuroscience, hypertension, and cancer research.

NIH-sponsored research is largely concentrated in New Orleans, at the Louisiana State University Health Sciences Center-New Orleans (LSUHSC), TU, Tulane University Health Sciences Center, UNO and XU.

The teaching hospitals associated with the medical schools responsible for most of the clinical research are closed and require major renovations. Patients involved in clinical trials are dispersed across the country and missing important follow-up visits, important archival research samples were damaged, and all LSUHSC experimental animals have reportedly died.

Charity Hospital has been closed and a site for the New Orleans General Clinical Research Center must be found for ongoing clinical research protocols. Much of the roughly $150 million per year in NIH-supported research will thus be negatively impacted.

Impact on NSF-Funded Programs According to a March 2005 survey, there are approximately 5,350 faculty members in Louisiana, primarily in science and engineering disciplines, who are eligible to submit proposals to the National Science Foundation. Of that number, 54 percent—roughly 2,900—are located in New Orleans and have thus been directly affected by Katrina.

NSF funding has notably advanced Louisiana's research infrastructure, especially in fostering interdisciplinary and multi-institutional collaborations. It is NSF financial backing that has enabled Louisiana EPSCoR to serve as a catalyst to fundamentally change the State's research culture: from one where competition between institutions was the norm to one built on long-term collaborations maximizing existing strengths. The result was a 59 percent increase in research productivity from 2000–2004.

NSF funding is vital for both the cutting-edge science and engineering it supports and its mission to serve multiple K-16 research and educational populations. Its focus on the inclusion of underrepresented minorities is particularly important in Louisiana, where 32.5 percent of the population is African-American. As the agency designated to support all science and engineering fields, the revitalization of NSF-sponsored programs is critical to Louisiana's recovery.

According to National Science Foundation statistics, 2002 federal research and development obligations to Louisiana totaled approximately $432 million.

Agencies	(in thousands)
Department of Agriculture	$ 46,627
Department of Commerce	4,539
Department of Defense	148,841
Department of Energy	5,199
Department of Health & Human Services	144,052
Department of the Interior	20,594
Department of Transportation	3,128
Environmental Protection Agency	3,423
National Aeronautics & Space Administration	31,473
National Science Foundation	24,113
Total	**$431,989**

NSF Division of Science Resources Statistics, ***Federal Funds for Research and Development: Fiscal Years 2002, 2003 and 2004***

Impact on U. S. Department of Agriculture-Funded Programs (USDA) The multi-billion dollar industry comprised of agriculture, forestry, and other natural resource enterprises is one of the hardest hit segments of the economy. Early estimates suggest an immediate economic impact of over $1.59 billion with the numbers expected to increase significantly once the infrastructure is more fully restored. The long term effects could be even more devastating.

Both the LSU and Southern University (SU) Agricultural Centers play integral roles in supporting Louisiana's agricultural industries, sustaining rural areas and encouraging efficient use of resources through research and educational programs conducted by their experiment stations and the education/outreach services undertaken by their extension services. Between 2000-2005, USDA's Cooperative State Research, Education and Extension Service awarded Louisiana over $13.7 million.

LSU's AgCenter has extension/outreach offices in all 64 parishes; likewise, SU's AgCenter serves over 28 parishes. Between them they possess a comprehensive mechanism for disseminating information throughout the State. Through their educational programs at the local level, they are providing a wide variety of critical information on hurricane recovery. Unfortunately, these institutions were themselves directly impacted by the hurricanes.

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