

LOUISIANA WATER RESOURCES RESEARCH INSTITUTE LOUISIANA STATE UNIVERSITY

MISSION STATEMENT

The Louisiana Water Resources Research Institute is federally mandated to perform a statewide function of promoting research, education and services in water resources. To support these activities, the federal government provides annual funding for research grants and to administer the grant program. The Institute also receives state funding, partially as a match for the federal funding. The Institute also engages in contract research independent of the federal program.

Specifically, the purpose of the Institute is to; Plan, facilitate and conduct research to aid in the resolution of State and regional water problems, Promote technology transfer and the dissemination and application of research results, Provide for the training of scientists and engineers through their participation in research, Provide for competitive grants to be awarded under the Water Resources Research Act

The Institute is a multidisciplinary center for addressing water issues in the state, drawing on faculty from multiple departments and Universities. In this regard, the Institute serves as a resource for state officials who want unbiased, scientifically defensible information on how to address the State's water problems.

RESEARCH PRIORITIES 2006 Hurricane Katrina and Rita Impacts on Water Quality. In August and

September 2005, the coastal parishes of Louisiana were devastated by two large hurricanes. Urban floods, oil spills, and discharge of contaminated floodwater to Lake Pontchartrain are some of the more well-known impacts from Hurricane Katrina while storm surge moving into the contaminated Calcasieu estuary of southwest Louisiana was a potential impact from Hurricane Rita. Proposals are requested that address assessment of water quality impacts in the period approximately 6-12 months after the passage of these storms. Other funding sources have addressed data collection immediately after the event (NSF SGER grants). These projects should focus on the presence or absence of an environmental signal from Katrina or Rita some months after the storm. Projects may involve water or sediment quality measurements or other indicators of water quality impacts (i.e., presence or absence of aquatic life, bioaccumulation/bio-concentration of toxins in fish species, etc.). Although projects which only include a modeling component will be considered, priority will be given to projects that add to the data record following these storms.

Hydrologic processes following Hurricane Katrina and Rita. Storm surge was responsible for most of the loss of life and property associated with these 2 storms. Proposals are requested that would continue to refine the prediction of the magnitude and timing of storm surge during Hurricanes approaching coastal Louisiana. Appropriate projects may include sensitivity analysis to changes in storm track or assessing the effect on navigation channels on surge magnitude. In addition, proposals that would hind cast the mitigation of storm surge by changes in land coverage or the presence of coastal structures are particularly encouraged.

SIGNIFICANT ACCOMPLISHMENTS

LWRRRI performance during Hurricane Katrina. LWRRRI made significant contributions during the response to Hurricane Katrina. The Institute led water sampling teams into the New Orleans area as early as September 3rd, 2005 and collected the first water

quality data on floodwaters. This culminated in the first peer-reviewed publication on Hurricane Katrina in the ACS journal, *Environmental Science & Technology* published on the web on October 12th, 2005 (<http://pubs.acs.org/cgi-bin/sample.cgi/esthag/asap/html/es0518631.html>). The results described in the paper have been widely disseminated in the media and among federal agencies responding to the cleanup. In addition to this research effort, LWRRRI provided leadership within LSU and among state researchers (<http://www.katrina.eng.lsu.edu/index.htm>): facilitating researcher access to New Orleans, organizing research exchanges with the LSU Hurricane Center and documenting media contacts. The attention on LWRRRI has been particularly significant since much of the early work on the vulnerability of New Orleans to hurricanes was done within LWRRRI by the previous director, Dr. Joseph Suhayda and collaborators. All of these early studies have been posted on our website (http://www.lwrrri.lsu.edu/1998_2002_WEB.htm) and received thousands of hits immediately following the storms..

CURRENT FUNDING

- LWRRRI State Funding \$70,427
- LWRRRI USGS Program Administration 2005 \$33,874
- Hazardous Substance Research Center S&SW (HSRC) \$10,944
- Louisiana Spatial Reference Center (LSRC/C4G) \$10,944
- EPA EPSCoR/LEQSF \$258,029
- LA Board of Regents Health Excellence Fund \$120,000
- HSRC S&SW \$354,649
- CICEET-NOAA, \$250,000
- LA DEQ, \$381,000
- University of New Hampshire \$230.023

OUTREACH & EDUCATION

LWRRRI Web Site – A web site is maintained to facilitate access to regional and national water information by local, state & federal ☛

organizations and agencies. Water information includes events, conferences, and meetings, LWRRI publications, and current Louisiana environmental legislation.

LAWATER is a new portal website developed by LWRRI designed to bring together the diverse web resources dealing with water resources in Louisiana for use by water professionals, researchers, students and other stakeholders. In addition, LAWATER will be directly linked with LWRRI's digital water library project which is providing electronic copies of all of the published Bulletins from the Institute, dating back to 1966.

Web site:

<http://www.lwrri.lsu.edu>

LAWATER: <http://www.lawater.lsu.edu>

Education & Training – LWRRI

expended \$57,289 in student and graduate assistantships from USGS and State Funds. An additional \$108,300 was generated in funds from grants and contracts, totally \$165,589 spent on undergraduate and graduate students in FY2004-05. On average we train ten to fifteen students a year.

CONTACT INFORMATION

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