

National Water Research Institute

May 2, 2008 E-Newsletter

Dr. Nancy Rabalais of the Louisiana Universities Marine Consortium to Receive NWRI's 2008 Clarke Prize

NWRI is pleased to announce that marine hypoxia expert Nancy N. Rabalais, Ph.D., will be the fifteenth recipient of the NWRI Athalie Richardson Irvine Clarke Prize for excellence in water research. Rabalais is Executive Director and Professor of the Louisiana Universities Marine Consortium in Chauvin, Louisiana, which provides coastal laboratory facilities to Louisiana universities and conducts research and educational programs in the marine sciences.

For over 25 years, Rabalais has dedicated her career to understanding and mitigating the effects of human-induced changes in water quality, particularly the long-term environmental impacts of excess nutrients and petroleum contamination on marine ecosystems. She is renowned for her seminal research on understanding and characterizing hypoxia, or severe oxygen depletion, in water resources, bringing this crucial issue to the forefront of water science.

Hypoxia is an extensive and persistent phenomenon that is caused by increased nutrients in water. Nutrients, such as nitrogen and phosphorous, can lead to excessive growth of algae, which in turn can damage marine habitats and harm marine organisms due to lack of oxygen in the water. These "dead zones" significantly impact commercial and recreational fisheries and the health of coastal environments. At present, there are 400 dead zones along the world's coasts, many of which are located near the mouths of river systems.

Since the mid-1980s, Rabalais has been the driving force behind identifying and characterizing the dynamics of the large hypoxic region in the Gulf of Mexico, which receives excess nutrients from the Mississippi River. For instance, her team recognized that much of the nutrients in the Mississippi River originated from agricultural runoff caused by increased fertilizer application and artificial soil drainage.

Such efforts have delineated the relationship between a large, nutrient-rich river, its watershed, the nutrients in the discharge, and the coastal ecosystem, and have resulted in national and international interest, such as an Action Plan endorsed by states, federal agencies, and tribes to reduce hypoxia through improved nutrient management in the Mississippi River watershed and coastal waters of the Gulf of Mexico.

The 2008 Clarke Prize will be presented to Rabalais on Thursday, July 10, 2008, at the Fifteenth Annual Clarke Prize Lecture and Award Ceremony, to be held at the Hilton Waterfront Beach Resort in Huntington Beach, California. More information about the Clarke Prize can be found at www.nwri-usa.org/ClarkePrize.