Bayou Lafourche Region
Subject of Data Study

$100,000 NASA Project Begins in July

Baton Rouge, La. The Bayou Lafourche region of southern Louisiana will be the subject of a remote sensing data study under a $100,000 grant by NASA's Earth Resources Laboratory.

Dr. Elvin J. Dantin Sr., director of Louisiana State University's Division of Engineering Research, said the three-year study will be directed by Charles A. Whitehurst, professor of engineering research and assistant to the director of the division.

The project will involve aerial flight patterns by NASA using remote sensing equipment to record such data as multispectral and thermal imagery of the surface. "Ground truth" teams will operate in the Bayou Lafourche Basin collecting field samples of water and soil and photographing ground level topography and vegetation, Dr. Whitehurst explained. The data obtained from remote sensors will be correlated with that from the ground truth teams. The first flight is scheduled for July.

Ridges, Boundaries

The objectives of the research effort include studying the topographic characteristics of "ridges" and boundary areas in the region of Bayou Lafourche in an effort to determine optimum locations for evacuation routes, hurricane protection structures, canal systems, and areas most suited to land reclamation.

Another aim of the project is to study the differences between marsh and estuarine areas that are thriving with marine and biological activity and areas where there is no activity.

The research program will also seek to define the various possibilities for land, marsh, and estuarine use for the future and to prepare an environmental atlas for the Bayou Lafourche area.

The project will also attempt to establish long-range environmental quality monitoring needs including remote sensing techniques, and to forecast future environmental problems and research needs.

Because most of the inputs and outputs are controllable or measureable the 207-mile bayou and the associated alluvial ridges and marsh lands constitute a unique system for an in-depth study of environmental and pollution conditions affecting the region, Dr. Whitehurst said.

Serve as Model

Such a study of the area can serve as a model for the many similar waterway areas in the state and adjoining coastal region, he added.

The entire area serves as an excellent model for making a number of environmental studies which are interrelated with respects to present and potential impacts on biological, social and economic factors, land use and ecological considerations, he added.

Whitehurst, who joined the LSU faculty in 1963, holds a bachelor of science from LSU, a master's from Southern Methodist University and a PhD from Texas A&M, all in mechanical engineering. He is currently manager of the NASA sustaining grant, an interdisciplinary research program at LSU.

The summer researchers who will assist Whitehurst in the remote sensing data project include an LSU faculty member, a graduate student and four undergraduates. Four Nicholas State University professors and four undergraduates will also participate.