

LUMCON's DeFelice Marine Center has many experimental facilities available to complete a wide variety of research projects. The location of the marine center and the existing scientific research infrastructure are one of the greatest strengths of LUMCON.

## **Aquaculture and Aquaria**

Nearly 50 tanks, aquaria, and aquaculture mesocosms with running seawater and filtration are located on the marine center property. These include an assortment of tank sizes and designs housed in a variety of locations that allow for customized environmental control during experimental research. Each system is able to provide both high- and low-salinity as well as filtered and unfiltered seawater.

## **Environmental Chamber and Incubation Capabilities**

Three large walk-in environmental chambers that are available for shorter- or longer-duration experiments. There are also extensive incubation capabilities including several illuminated, temperature-controlled incubators; multiple low-temperature BOD incubators; and a temperature-controlled shaker table incubator available for culturing and experimental applications.

## **Racetrack Flume**

A specially-designed racetrack flume system that allows for investigation into the effects of hydrodynamics on organisms, sediments, and physical processes. The racetrack flume at the marine center is one of the largest on the gulf coast. With easy access to both sea water and fresh water this is an ideal set up for more complicated experiments that are just too difficult for a field setting.

## **Marsh Mesocosm Facility**

LUMCON's marsh mesocosm facility is being completed with funding to the Coastal Waters Consortium from the Gulf of Mexico Research Initiative. The facility consists of 12 experimental tanks (10' diameter, 5' tall) each paired with a tidal surge tank (6' diameter, 5' tall). Designed to mimic the surrounding marshes, water is pumped from the bayou then to the paired mesocosm. Each mesocosm experiences a flushing rate of 10% per day (similar to the water residence time of Terrebonne Bay).

