

# AQUATIC FACILITIES & ENGINEERING

## ***Background Information and Project Justification***

The Marine Resources Center's sophisticated life support and water treatment systems enhance both the quality of organisms provided and the diversity of research that can be conducted within the building. As many as ten different regimens of seawater can be provided simultaneously to any of the research or animal holding areas.

In addition to raw seawater and a filtered/ozonated water supply, eight independent recirculating seawater systems provide flexible tailoring for almost any aquatic environment. Recirculated seawater is ozone-sanitized to control fouling organisms and facultative pathogens. Accurate temperature and photoperiod control within the building allow for the manipulation of the reproductive state of organisms.



## ***Primary Objectives:***

- Maintain all incoming seawater supply lines, filtration systems, and treated-water heat exchangers to ensure reliability and safeguard the organisms being cultured and held.
- Fabrication of pumping systems, low voltage control and monitoring equipment.
- Assist in the construction of experimental aquatic holding and rearing systems for both freshwater and marine organisms.
- Support routine security checks and troubleshoot failures of pumps, temperature sensors, and the ozone distribution system

## ***Resources Available for this Project:***

- 24 hour access to the MBL library including pre-paid copying card for copying reprints etc.
- Access to an MBL computer terminal for literature/web searches.
- Availability of specific MRC general use equipment.

## ***Skills Required:***

- Aptitude for understanding aquatic animal husbandry, physiology, and behavior.
- Accurate record keeping skills (written weekly progress report required).
- Ability to work independently with minimal supervision.

***Estimated Time Commitment:*** For a full time intern, 40 hrs/week.

***Project Supervisor:*** Bill Mebane, Superintendent, Aquatic & Engineering Division