

VIMS Eastern Shore Seawater Laboratory (ESSL)

Size

The main laboratory building occupies 7,597 square feet. The nearby pump house occupies 300 square feet. The total footprint of the building, including porches and a 4,600-square-foot deck for outside experiments, is 12,500 feet.

Cost and Funding

The lab was built at a cost of ~ \$2.8 million. The total project cost, including demolition and abatement, was \$3.67 million. Building costs were funded through revenue bonds issued by the Virginia College Building Authority, as authorized by an act of the Virginia General Assembly during its 2008 session.

Timeline

The Facilities Management Office at VIMS gave the contractor the official “Notice to Proceed” with construction on April 13, 2010. Substantial completion was attained on February 3, 2012.

Design and Construction

The building was designed by VIA design architects, pc of Norfolk, Virginia with input from users at VIMS. The General Contractor was NASON Construction, Inc. of Salisbury, Maryland. Exterior walls are 10-inch-thick reinforced concrete, with easily re-configured interior partitions. The floors incorporate linear drains and smoothed concrete for easy cleanup of spilled seawater. All materials were designed to be corrosion resistant due to the seaside environment, including the concrete walls, fiberglass railings and platforms, fiberglass doors, hurricane-resistant glazing, and Kynar™-coated aluminum roofing and metalwork. The project was designed to meet requirements for a LEED-certified building.

Seawater

Seawater to the lab is provided by 8 pumps, each with a design flow of 230 gallons per minute, for a total flow of 1,840 gallons per minute. Temperature, salinity, filtration, and



other parameters are controlled with portable equipment at the point-of-use. The lab is designed as a flexible space into which individual researchers can move tanks of varying sizes as needed. Tanks will likely range from 200 to 2,000 gallons.

Elevation

The building, which sits in FEMA Zone VE (Coastal High Hazard), is flood-proofed to 14 feet above mean sea level, with an elevation at grade of 6 feet and a floor elevation of 9 feet.

Use and Users

The laboratory and its running-seawater systems are used for research on coastal marine ecology and aquaculture in a high-salinity environment. Use is by resident ESL scientists, faculty and graduate students at the main VIMS campus in Gloucester Point, and by visiting researchers and students from institutions in Virginia (e.g., William and Mary, ODU, Hampton University), the broader United States (e.g., Indiana University), and overseas (e.g., Bangor University in Wales).



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