

Potomac Environmental Research and Education Center
George Mason University
An Overview

The Potomac Environmental Research and Education Center (PEREC) will be dedicated to research and education to promote informed stewardship of the Potomac River and its watershed. Research conducted at the Center will seek to attain a greater understanding of the functioning of natural ecosystems and the impact of human activities on our environment. This will include both basic research to establish new knowledge and applied research to apply current concepts to environmental problems. Educational activities of the center will include courses for advanced undergraduates in Biology and other natural sciences and graduate students in Environmental Science and Public Policy. The Center will also be involved in outreach to K-12 students in collaboration with Prince William County Schools and other local school systems. A key feature of all educational activities will be an emphasis on field and laboratory experiences centering around the Potomac River and the Occoquan National Wildlife Refuge.

The Center will be located at the Belmont Bay development in a building to be built specifically for environmental education and research. A major thrust of the center will be research by faculty, post-doc's and graduate and undergraduate students. To this end state-of-the-art laboratory facilities will be constructed by the developer to GMU specifications. Each of the six faculty housed at the center will have a full-sized research laboratory. In addition, research support rooms will be provided including a shared lab equipment room, live organism culture room, molecular techniques room, culture transfer room, cold room, growth chamber, sample storage and processing rooms, microscope room, radioisotope storage and use room, equipment storage and repair room, and graphics and GIS laboratory. The building will be located on the Occoquan River adjacent to the Belmont harbor and within a few hundred yards of the Occoquan National Wildlife Refuge. One of the newest additions to the National Wildlife Refuge system, this one square mile refuge has wetlands, open meadows, streams, and a pond providing unparalleled opportunities for environmental education and research. The harbor will provide dockage for boats allowing access to the tidal Potomac River and its tributaries which will constitute a second major nexus of research and educational activities. A large boat will be needed to take classes out onto the river. Other facilities anticipated at the site include a public aquarium and a branch of the Virginia Science Museum. The site is in close proximity to Mason Neck with Gunston Hall, Pohick Bay Regional Park, Mason Neck National Wildlife Refuge and State Park, and Kaneshaw Creek marsh (proposed for inclusion in the National Estuarine Research Reserve System).

The Center staff will include six full-time faculty (one of whom will act as director). In addition, post-docs, graduate research assistants, externally funded technicians, and graduate and undergraduate students pursuing research will be accommodated. Space will also be allocated on an as needed basis to faculty from the main campus for research activities which would benefit from the location and facilities of the center. Two lecture rooms and two teaching labs will be available for courses which will benefit from the location and facilities of the center. Four existing graduate courses have been identified which would be taught completely at the center. One new upper level undergraduate course entitled Aquatic Communities will be created to take advantage of the unique opportunities of the center. Other courses have been identified which will take advantage of the center as a base for field trips on the river or to the refuge and use lecture and lab facilities for introducing material, analyzing samples, or reviewing findings. In addition educational activities involving local K-12 classes and the community at large will be hosted by the center in these facilities.