

APPENDIX P

October 23, 2002

MEMORANDUM

To: Committee on Educational Planning, Policies and Programs

From: Molly Corbett Broad

Subject: Establishment of the Center for Applied Aquatic Ecology at North Carolina State University.

Request to Establish

In June 2000, North Carolina State University received authorization to plan the Center for Applied Aquatic Ecology. The planning is now complete, and NCSU has submitted a request to establish this unit as an institutional research center. The following sections briefly summarize the information provided by NCSU to satisfy the requirements of Chapter 1200.6[R] in the *University of North Carolina Policy Manual*.

Goals and Objectives

North Carolina is the major epicenter for toxic *Pfiesteria* outbreaks in the nation. *Pfiesteria* is regarded as an indicator of poor water quality. In recent years, North Carolina has become recognized throughout the country in its struggle to confront serious water quality issues. Increasing populations of people, swine, and poultry have compounded the water policy issues and the water quality impacts confronting state and local governments. The goal of the center is to provide policy makers with information needed to form and revise regulations aimed at optimizing responsible management of water resources from the perspective of protecting fish and human health. Specifically, the center will:

- Conduct applied research on freshwater, estuarine, and marine resources of North Carolina, with emphasis on solutions for chronic and acute impacts of nutrient over-enrichment and other pollution that contribute to toxic *Pfiesteria* outbreaks, other harmful algal blooms, degradation of seagrass meadows and other critical vegetation habitats, decline of fish populations, and detrimental effects to human health;
- Provide training and support opportunities for advanced undergraduate students, graduate students, and post-doctoral fellows; and
- Serve as a focal point for the continuing advancement of research on the toxic *Pfiesteria* complex.

Relevance to Institutional Mission; Relationship with Existing Academic Units

The center developed from a core of research personnel in NCSU's Aquatic Botany Laboratory, one of the premiere aquatic research laboratories in the world. It has collaborated with seven departments and six colleges at NCSU, seven UNC centers and institutes, and more than 40 institutions worldwide. While other research facilities in the state work on issues related to those studied by the center, no other center has a unique, long-term emphasis on Pfiesteria and other harmful algal blooms, or on assessment of pollutant impacts to fishery habitats spanning freshwater, estuarine, and marine ecosystems.

Anticipated Effects on Instructional Programs

Since the center's planning efforts began in 1999, its faculty have generated considerable interest from domestic and international students at undergraduate and graduate levels. Overall, more than 15 students have received advanced training through its intern and graduate programs. Its faculty are also actively involved in community outreach education, having spoken at more than 100 schools throughout North Carolina. The center has developed an extensive childhood education outreach program as part of its "Discover Your Watershed" summer day-camp program. Designed to promote environmental awareness and stewardship for 5th-8th grade public school students, the program has involved more than 400 students to date. Such instructional programs will increase as the center develops further.

Administrative Structure

The center's Director will be Dr. JoAnn Burkholder, Professor of Aquatic Biology and Adjunct Professor of Marine, Atmospheric, and Earth Sciences. The Director will report to the Head of the Botany Department and the Dean of the College of Agriculture and Life Sciences. An External Advisory Council, composed of seven representatives from academia, state government, environmental groups, and foundations, will provide guidance on the center's programs and activities. The representatives have a diverse and complementary background of knowledge and experience in water quality issues.

Budget and Anticipated Sources of Funding

The center's first- year base operational budget for personnel and facilities, funded by NCSU, is expected to be \$600,000. The base operating budget is projected to increase little during the center's subsequent four years of operations. The center's instrumentation was obtained with a \$1 million allocation of non-recurring State appropriations, and approximately \$700,000 in programmatic support is expected to derive from external funding each year. Currently the center holds 14 active grants, contracts, and memoranda of agreements totaling more than \$3.4 million. Nine proposals, totaling more than \$4.3 million, are currently pending. No additional state funding is requested with this establishment.

Space and Capital Needs

The center's facilities, which are unique and offer research opportunities in aquatic sciences unlike any other laboratory in the world, are currently located in off-campus rental space, paid for with recurring research funds and federal grant

support. Current faculty using the facilities will not require new positions, and no immediate needs for additional capital equipment or library resources are planned. Discussions are currently underway regarding the possibility of relocating the center to NCSU's West Research Annex. Any future expansion or relocation of the center's operations would be supported from grants, foundations, and expansion budget requests. Support for current space, resident faculty, and permanent staff positions are not contingent on additional State funding.

Recommendation

It is recommended that North Carolina State University be authorized to establish the Center for Applied Aquatic Ecology.