Executive Summary

The Environmental Sciences Institute was established as an independent unit in 1995 and given degree-granting status in February of 1996. The Master’s degree was the first to be offered in 1996 and the Doctor of Philosophy and Bachelor of Science Degrees were initiated in 1999 and 1998, respectively.

In support of the graduate programs in particular, the Institute has had a strong emphasis on research activities. The result is a highly productive unit as measured by traditional standards such as publications, research grants awarded and the production of graduate students. In fact, the research productivity of the ESI is one of the highest among the colleges and schools at FAMU and among those at peer institutions in the state and the nation. This productivity has been generated by a small but energetic group of faculty and postdoctoral fellows. There were only 9 faculty members, including the Director, and four research postdoctoral fellows. Over 80% of the faculty published papers in the 2005-2006 academic year. This small group produced nearly 40 publications in peer-reviewed scientific journals, books and reports, generated $4.5 million in research grants and graduated four Ph.D. students. The ESI is proud of its diverse graduate student population; we are particularly pleased to report that the Institute has emerged in the last two years as the largest producer in the nation of doctorate degree holders of African descent in the environmental sciences.

Among the publications produced include seven authored or co-authored by Dr. Elijah Johnson. Among the distinguished publications include four book chapters authored by Dr. Henry Neal Williams in Bergey’s Manual of Systematic Bacteriology (Second Edition, Volume Two, 2005) described as the world’s leading authoritative volume on bacterial systematics. Authorship is by invitation only. Williams has also recently completed a chapter for another book, Predatory Prokaryotes – Biology, Ecology and Evolution. Several others in ESI have also authored book chapters including Drs. Ashvini Chauhan and Theresa Goedeke. Dr. Larry Robinson was a contributing author to two reports issued by the National Academy of Sciences National Research Council, one of the most prestigious scientific organizations in the nation.

Among the $4.5 million in grant awards received was the prestigious award from the Doris Duke Charitable Foundation in which FAMU was selected to serve as a host for the prestigious Doris Duke Conservation Fellows Program during the next two academic years. The Fellows Program is the nation’s premier leadership development program for future conservation leaders pursuing master’s degrees in multidisciplinary environmental studies programs. Only eight universities received an award including Cornell, Duke, Northern Arizona, University of California-Santa Barbara, University of Michigan, University of Wisconsin-Madison, and Yale. Florida A&M University was the first
Historically Black College/University recipient of the award, which supports two graduate students at the Master's level for two years to study in the area of conservation. Dr. Richard Gragg is the Principal Investigator. The ESI also was the recipient of a $1 million HBCU-RISE grant from the National Science Foundation. Dr. Williams and Dr. Jennifer Cherrier serve as the PI and co-PI, respectively.

The Institute continued to receive annual funding in the amount of $2.5 million for the Environmental Cooperative Science Center supported by the National Oceanic and Atmospheric Administration. Dr. Larry Robinson is the PI for the grant and the Center’s Director. The Center has also applied for an award from NOAA to support student victims from Hurricane Katrina. Meanwhile ECSC has awarded an undergraduate award to a Katrina victim, Ms. Sherrita Commey, a freshman transfer undergraduate student from Xavier University who began her studies in the spring semester and earned a 3.5 GPA. Other grant recipients included Dr. Elijah Johnson who was awarded $500,000 from NOAA to recruit and train high school students in the NOAA sciences. Funding also continued under the CHOICE grant to Dr. Richard Gragg. An award from the Title III Program at FAMU continued to provide critical support for enhancing the environmental Sciences graduate program.

The ESI faculty and students also received prestigious recognition and appointments. Dr. Richard Gragg, Associate Director of ESI, was appointed by Governor Jeb Bush to the State of Florida Environmental Regulation Commission. In a regulatory role of the Florida Department of Environmental Protection (DEP), the Department is charged with keeping Florida's waters clean, the air clear of pollutants, and the land free from contamination. Dr. Gragg’s term is from December 2005 until July 2007. Aaron White, a graduate student, was selected as only one of 12 students from around the state to serve as a gubernatorial fellow. Dr. Jennifer Cherrier, Associate Professor, was featured in a Tallahassee Democrat article on women in science.

Dr. Larry Robinson was one of 14 members of a prestigious National Research Council (NRC) committee that recently issued a report entitled “Managing Coal Combustion Wastes in Mines.” As a result of concerns for public health and the environment associated with mine placement of coal combustion residues (CCRs), the U.S. Congress directed the Environmental Protection Agency (EPA) to commission an independent study. This resulted in the NRC forming the Committee on Mine Placement of Coal Combustion Wastes. Whereas the National Academies of Science, Engineering and Medicine are “The Advisors to the Nation on Science, Engineering and Medicine”, the National Research Council is the principal operating agency of the National Academies, which conducts the studies upon which the advice is often based.) Dr. Robinson was also a panelist at the Conference on Ocean Literacy in June 2006. The conference was coordinated by the National Marine Sanctuary Foundation, in conjunction with the White House Council on Environmental Quality, and the White House Office of Science and Technology Policy. Sponsors include the U.S. Department of Commerce’s National Oceanic and Atmospheric Administration, NASA, the National Science Foundation, the U.S. Department of the Interior, the U.S. Environmental Protection Agency and the U.S. Navy. Dr. Robinson’s presentation focused on the positive impacts that ECSC, ESI and
other NOAA MSI programs are beginning to have on the statistics of minority scientists nationwide.

Graduate and undergraduate students in the ESI continued to be active in representing the Institute and FAMU at professional scientific meetings in the United States and abroad. Recently, Jacqui Y. Harris, Environmental Sciences Institute (ESI) Master’s student won first place in a student poster competition at The Coastal Society 20th Annual International Conference held May 14-17 in St. Pete Beach, FL. Ms. Harris’ poster was entitled, “The Use of Hyper-spectral Remote Sensing to Characterize Phragmites Austalis”. Graduate students Andrea Bain, Natasha Henry and Angel Wynn and undergraduate student Toni-Ann Hylton presented posters exhibiting their research at the 13th Annual Ocean Sciences Meeting, a joint conference of The American Society of Limnology and Oceanography (ASLO), The American Geophysical Union (AGU), The Oceanography Society (TOS), and the Estuarine Research Federation (ERF). The conference was held February 20-24, 2006 in Honolulu, Hawaii. All of the student presenters are academic scholars funded by the Environmental Cooperative Sciences Center (ECSC) through a grant from NOAA. Li Zhao traveled to Kona, HI to present her work at the Seventh International Conference on Methods and Applications Radio-analytical Chemistry (MARC VII). Aaron White, ESI Doctoral Student and 2005/2006 Gubernatorial Fellow, participated in a poster presentation at the 26th Annual International Sea Turtle Society held in April 2006 in Crete, Greece. Our students are doing exciting work and sharing their research throughout the world.” These valuable experiences often lead to positions for our students following graduation.

Five recent graduates from the ESI doctoral program are employed in various agencies and institutions. Dr. Dennis Apeti is employed in NOAA’s National Ocean Service in Silver Springs, MD. Dr. Franklin Nwagbara is employed at the Florida Department of the Environmental Protection, Tallahassee, FL. Dr. Sekeenia Haynes is at the US Geological Survey in Tallahassee, FL. Dr. Shayla Williams is at NOAA’s National Marine Fishery Service in New Jersey, and Dr. Li Zhao will assume a postdoctoral position at FAMU.

The Environmental Cooperative Science Center and the ESI have been selected to host the National Oceanic and Atmospheric Administration (NOAA) Educational Partnership Program with Minority Serving Institutions’ (EPP/MSI) Fourth Education and Science Forum to be held October 30 – November 1, 2006, on the campus of Florida A&M University (FAMU). The Education and Science Forum is designed to bring together representatives from government, research, academic and private sector communities who are engaged in activities that support NOAA’s mission, and who have an interest in providing educational and career opportunities for students, particularly from underrepresented and underserved communities. The Forum typically attracts about 400 participants for whom it provides opportunities to share the results of education, outreach and research in atmospheric, environmental, marine and remote sensing science; and to assess the accomplishments of the Educational Partnership Program.
This year’s report shows a continued growth in ESI research activities that extends back 10 years since it became an independent unit. In that time the ESI has generated nearly $30 million in research funding contributing millions of dollars to the University through indirect costs that supports many administrative, academic and other infrastructure-building activities. In addition, the ESI has fully supported the vast majority of graduate students that have matriculated through the program. Without this support many of these students would not have been able to attend school and earn their degrees. Environmental Sciences is one of the state targeted programs and contributes to the discipline’s workforce in Florida and the nation. ESI is hopeful of soon receiving $12 million funding for continuation of the Environmental Cooperative Science Center. With continued support such as this, and from the administration, the ESI has the potential to increase its research capacity and the number of students. Particularly at the undergraduate level, ESI offers students the opportunity to learn science through the myriad of research experiences provided by the Institute’s faculty and programs. Based on the publication rate of its faculty and research fellows of nearly 4 papers per member, the level of grant support and the production of graduate students, ESI has achieved pre-eminence in its research activities among its peers. The ESI is clearly well along on its quest to establishing a world-class research program.

Submitted by HN Williams, 2006