



FACSIMILE TRANSMISSION SHEET

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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for International Affairs

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Bethany - This is the MSI initiative
Louise Koch and I described
to you last Monday (8/23).
Please call if you have questions.

Thanks

Jacqueline

Support for Minority Serving Institutions (+ 4 FTEs, + \$50,000,000): NOAA requests an increase of \$50,000,000 and four FTEs to develop a Minority Serving Institute Education Initiative aimed at building capacity at minority serving institutions (MSIs). The purpose of the program is to increase the number of minorities that graduate and receive training in the natural and social sciences as they relate to: atmospheric, environmental and oceanic sciences (AEOS). This initiative will cut across all of the NOAA strategic themes and help to train more students at targeted institutions to create a more representative workforce in the scientific and social sciences related areas integral to NOAA's mission. To date NOAA's support (e.g., infrastructural development, research funding, collaborative partnerships) for minority serving institutions has been disproportionately low. This program is aimed at increasing overall AEOS program capacity within the MSI community.

Background: The number of minorities graduating with sciences and engineering degrees continues to be disturbingly low based on statistics from the National Science Foundation. Data on Ph.D.'s awarded to minorities in 1997 illustrate that of the 600 Ph.D.s awarded in Earth, Atmospheric and Marine Sciences only 9 degrees were awarded to African Americans, 15 to Hispanics (including Puerto Rican and Mexican Americans) and 2 to Native Americans. Since approximately 40% of minorities receive their undergraduate degrees at MSIs, the challenge faced by the MSI community, therefore, is to establish strong research and training programs, including graduate degree granting programs, in AEOS at their campuses. This initiative is aimed at establishing new programs in collaboration with MSIs to increase the number of graduates with AEOS degrees and to provide NOAA with an opportunity to broaden its science and technology capability within all U.S. communities.

Proposed Action: NOAA will significantly increase its relationship with Minority Serving Institutions - including Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions, and Tribal Colleges and Universities, as well as other institutions that have a successful record in producing African American, Hispanic and Native American scientists in NOAA's targeted science areas. This effort expands upon partnerships established with an HBCU Consortium which was established to build capacity and increase the number of graduates in AEOS.

There are four core components of this initiative. They are: 1) Creation of three *Collaborative Science Centers*, one each in ocean, atmospheric and environmental sciences. These Centers will represent the earth systems sciences component of the larger Department of Commerce Center of Excellence Initiative. The Science Centers will include collaborative research activities in AEOS, establishment of a distinguished faculty position to direct activities at the centers, faculty/staff exchanges, and creation of an electronic linkage among participating MSIs to support distance learning capabilities (\$25 million); 2) the *Graduate Scientist Program* will focus on recruitment of minorities and provide funding for full-time academic training in AEOS (\$5 million); 3) the Environmental Entrepreneurship Program will provide funds to MSIs to support research for sustainable management in natural resource depleted environments. The program will seek to collaborate with other bureaus of DOC such as EDA and will encourage community participation as a key component of its project support (\$15 million); and, 4) the

Student Fellowship Program which is a component of the larger Department of Commerce Student Fellowship Program will target MSI students in their junior year who have an interest in AEOS. The program will provide scholarships during the junior and senior years to students who make a commitment to obtain degrees in the natural resources science and related management fields. Internships and will be available at NOAA during their Junior and Senior academic breaks (\$5 million).

Funds budgeted for each component includes grants, program administration and other overhead costs.

Benefits: (1) Build capacity at institutions with a track record of training minority scientists, engineers and social scientists in atmospheric, oceanic, environmental sciences and management.

(2) Increase the number of minority graduates with degrees in NOAA's targeted areas.

Measures of Performance

1. Number of students *graduated* with advanced degrees from the **Collaborative Science Centers** funded at minority serving institutions, in AEOS.

2001	Estimate	50
2002	Estimate	100
2003	Estimate	150
2004	Estimate	200
2005	Estimate	300

2. Number of minority students and staff supported in the **Graduate Scientists Program, Student Fellowship Program, the Environmental Entrepreneurship Program** and through faculty/staff exchanges:

2001	Estimate	300
2002	Estimate	300
2003	Estimate	300
2004	Estimate	300
2005	Estimate	300

OUT YEAR CHANGE ESTIMATES

Funding Requirements to Accomplish These Performance Measures

MSI Changes from FY2000 (BA in Thousands)

FY 2001	\$50,000
FY 2002	\$50,000
FY 2003	\$50,000
FY 2004	\$50,000

FY 2005 \$50,000

NOAA FY 2001
NOAA's Minority Serving Institution
Capacity Building Partnership Program

Background:

The National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce has made a commitment to expand and strengthen its partnerships with Minority Serving Institutions (MSIs) as stated in Presidential Executive Orders 12876, 12900, and 13021 for Historically Black Colleges and Universities, Hispanic American Education Institutions and Tribal Colleges and Universities respectively. The Agency will use this collaboration as another important mechanism to accomplish its mission which is to describe and predict changes in the Earth's environment, and conserve and manage wisely the Nation's coastal and marine resources to ensure sustainable economic opportunities. The agency's plan for the future is guided by the concept of sustainable development, and as such, the human resource and the diversity of the nation's population are key to the agency's goal to effectively manage the nation's natural resources.

The number of minorities graduating with science and engineering degrees, continues to be disturbingly low based on statistics from the National Science Foundation. Data on Ph. D.s awarded to minorities in 1997, illustrate that of the 600 Ph. D.s awarded in earth, atmospheric and marine sciences, only 9 degrees were awarded to African Americans, 15 to Hispanics (including Puerto Rican and Mexican Americans) and 2 to Native Americans. Since approximately 40% of minorities receive their undergraduate degrees at MSIs, the challenge faced by the MSI community, therefore, is to establish strong research and training programs, including graduate degree granting programs, in atmospheric, environmental and oceanic sciences (AEOS) at their campuses.

Proposed Action

The NOAA Minority Serving Institutions Initiative consists of four new programmatic components. The initiative is aimed primarily at increasing the opportunities and available programs for students and individuals in related professions to pursue research and educational programs in atmospheric environmental and oceanic sciences, principally among MSIs. The intent of the program is to develop an initiative to provide quality education necessary to serve the interests of NOAA and the nation at large, using natural and established linkages between MSIs and Federal government institutions, in conjunction with other research institutions and the facilities of NOAA. The program will consist of both long and short term training initiatives and will be designed to address the full spectrum of capacity building opportunities including internships, short term training, funding for graduate study and research and most important, establishing cooperative programs of excellence with NOAA, to conduct state of the art research and train students in AEOS and related fields.

Public private partnerships, community involvement and outreach activities will be key components of this initiative. The participation of the private sector will ensure that students receive training and conduct research with strong applied components and in the process, create opportunities that may eventually lead to career paths. The involvement of state, local and tribal partners will strengthen the linkages necessary to effectively contribute to natural resource management and capture the public outreach component of this initiative.

The program will consist of the following components:

- Establish three **Cooperative Science Centers** that will concentrate on three targeted AOES science areas.
- Establish a **Junior Year Scholarship/Fellowship Program** to support the training and eventual employment of students attending MSIs and trained in AOES.
- Establish a **NOAA Graduate Scientist Program**
- Develop an **Environmental Entrepreneurship Program**

Cooperative Science Centers

The goals of the Cooperative Science Centers are to develop and train students, professionals and technicians to meet the needs of governments, industry, commerce and trade, and the academic community in the AOES areas. The program will focus on building and strengthening capacity at MSIs in AOES disciplines and create a partnership with NOAA and among MSIs with courses or programs in the targeted AOES areas that will allow for the sharing of skills and expertise mutually beneficial to all participants. A key objective of the Centers is to strengthen the capability at MSIs to develop and successfully bid for large research and development grants, that are available from organizations, such as the National Science Foundation. The partnerships developed between NOAA and the Centers, will allow participating institutions to strengthen their educational and outreach capabilities beyond what any one MSI institution could do independently.

The Cooperative Science Centers will be established at MSI institutions with established programs and graduate degrees in the AOES disciplines. These three centers, one each in Atmospheric, Oceanic and Environmental sciences, will be designated through a competitive selection process. Institutions will have an opportunity to bid for a center based on criteria such as: number of students graduated with AOES degrees; research funds received; cooperative programs with NOAA; existing infrastructures; institutional matching funds.

A Distinguished Professorship will be created at each of the three Science Centers. These three professors will be selected based on their outstanding contributions within their fields, and will be required to develop significant research projects for their respective centers, with other professors and post doctoral candidates, for a period of no more than five consecutive years. These distinguished professors will also be responsible for preparing periodic symposia on their current research areas, publishing papers and conducting research within their AOES disciplines.

Faculty and staff exchanges, as well as IPAs shall be a major component of the Science Centers. NOAA staff will be utilized to teach courses, develop curricula or conduct research. MSI staff will use the opportunity during the exchange period to participate in collaborative research or other agreed upon activities during their tenure at NOAA.

Telecommunications technology has become an important tool utilized in the academic community to share courses and other data. The establishment of electronic linkage capabilities at the Science Centers will be supported to expand communication and to increase the availability of instructional material AOES among MSI institutions through distance learning. Many MSIs currently have electronic linkage capabilities at their campuses, however, the focus of this activity is to ensure electronic linkage at the three Science Centers and MSIs with an interest in obtaining access to courses or seminars offered at another location.

The Graduate Scientist Program (GSP)

The Graduate Scientist Program (GSP) is specifically designed to recruit and provide graduate level training to outstanding minority and women candidates for AOES employment within NOAA. The goal of the GSP is to improve NOAA's overall representation of minorities and women and in the mission-related occupations, and to ensure a diverse work force of qualified employees within the agency. This program will offer two opportunities to candidates.

One program option will train individuals in a pre-determined course of study to meet the specificity of NOAA's scientific occupations. It will include one-year of university training and one year as an intern at the agency. A second program option requires the candidate to work at NOAA for one year prior to acceptance and attendance in a graduate level program in one of the NOAA mission related occupations and which will conform to OPM qualification requirements.

NOAA will hire qualified candidates for the program who have graduated with a Bachelors or Masters degree in science or social science including technological fields such as economics, planning, geography, law enforcement, computer science etc., but who do not possess the required training in a specific NOAA- related discipline. Upon completion of training, candidates will be required to commit to an employment tenure at the agency based on the duration of their training.

An important component of the program is to establish mentorships between students participating in the program and career NOAA employees. This linkages will also serve to strengthen opportunities for collaborative research in NOAA priority areas and with research programs at universities.

Student Fellowship Programs

The goal of this program is to increase the number of students who undertake course work and graduate with degrees in the targeted areas integral to the NOAA mission and, to create a pipeline of potential NOAA employees, that are representative of the diversity of the nation. This program will be targeted at students entering their junior year who have an interest in AEOS, and who have completed their sophomore year at an MSI. The program will be established as a component of the larger Department of Commerce Student Fellowship Program.

Approximately twenty-five candidates will be selected annually for this six-week program. As part of this program, NOAA will develop a training module designed to provide students with an in depth understanding of the agency and its mission. Candidates will rotate for a one week duration among the five line offices, where they will have an opportunity to learn about the programmatic and research objectives of the office and, potential career opportunities at the agency. Students who maintain an acceptable academic standing (B average in their major field) and make a commitment to pursue degrees in AEOS will be offered annual scholarships and the opportunity to return to participate in the internship program at NOAA the following summer.

At the end of the summer internship, each student selected to continue in the program will be assigned a mentor from one of the NOAA line offices who will work closely with the student to guide training and research activities. Mentors will be selected based on: their strong commitment to student training; experience in research or operational aspects in AEOS; sensitivity to the needs of minority trainees; and, ability to provide the intellectual stimulation of the trainee through ongoing interaction.

Mentors will also closely monitor the student's activities during their tenure and training and, are expected to function as a "role model" for the duration of the students' association with the program. Mentors and trainees are expected to meet at regular intervals and discuss the trainee's career goals and options, offer advice and provide opportunities for higher education to the trainee.

Environmental Entrepreneurship Program

The Environmental Entrepreneurship Program will provide funds to MSIs to support training research, outreach and job creation for effective management in natural resource depleted environments. The program will be geared toward restoring depleted habitats by supporting management-based research, technical training and economic development projects through the creation of small business opportunities for local communities. This program will seek to collaborate with other bureaus of the Department of Commerce such as the Economic Development Administration, the National Institute for Standards and Technology, the Small Business Administration and the Economics and Statistics Administration. Community participation will be encouraged to the maximum extent feasible.

This program will rely heavily on graduates with academic training in natural resources management and the technical skills needed to implement resource restoration projects. Support will also be provided for small scale infrastructural development necessary for resource management activities, job creation and small business development pertinent to the depleted ecosystems.

Management oriented research will be sponsored to understand the nature and extent of environmental degradation within local communities. The results of such research must be in direct response to community economic development initiatives.

A successful Environmental Entrepreneurship Program will provide training and skills to individuals to successfully enter the job market in resource management fields. It will also create small business development opportunities for trainees in the area of environmental mitigation, which includes business management and nurturing in business incubators.