

FOREWORD

This, the third *Expanding Opportunities in Oceanic and Atmospheric Sciences* Conference was significant in several ways. First, it was a follow-up and extension of the work of two previous *Expanding Opportunities Conferences* held in 1995 and 1999. Second, it provided a forum for the dedication in memory of Dr. Nancy Foster who championed the Expanding Opportunities cause beginning with the first Conference in 1995. Third, the number of participants in attendance exceeded each of the first two Conferences which indicates that the issues of diversity and true equal opportunity are crucial for all in our schools and businesses, and, more generally, in society and our nation. Thus, Conference participants came to work actively on developing strategic actions to expand diversity and opportunities for individuals from traditionally under-represented ethnic groups in the marine, atmospheric, and environmental fields.

In commissioning this document, the Conference Steering Committee hopes that it will serve not only as a source of information about the Conference, but also to bring fruition to the call for action. To meet the challenges of the 21st Century, America must mobilize and take full advantage of all its human resources. This means that the American workforce who contributes to oceanic, atmospheric, and environmental sciences must be representative of the diversity that is present in the American society. As minority underrepresentation in these fields is a complex and pervasive issue, a simplistic approach to increasing the numbers of minorities in the occupational and educational sectors will not work. What is needed to produce a workforce which reflects the diversity in the general population are long-term, system-wide, and permanent changes. The implementation of such fundamental changes is essential to attract, educate, employ, and retain minorities in the occupational and educational sectors.

This document may serve as a resource for policymakers in educational and occupational sectors, educators at all levels, historians, and other parties interested in expanding opportunities for minorities in the marine and atmospheric sciences. In addition, many of the issues discussed and recommendations which emerged during the Conference reflect broader social, political, and economic issues related to minority funding, support for structural change, and retention of minority employees. Consequently, the document has potential utility and relevance that extend beyond this Conference to individuals, groups, and organizations who share an interest in and commitment to increasing the participation of traditionally under-represented minorities in the oceanic, atmospheric, and environmental sciences. The Conference produced a number of substantive and far-reaching discussions, recommendations, and subsequent actions. While details of these are presented in the body of this report, the themes and concerns that were raised most frequently are highlighted below.

The Need for Clearer Communication

The need for greater and clearer communication continuously emerged throughout the Conference. One panelist expressed his dismay that with all the programs NOAA had available to students, very few of the students present at the Conference knew about them. Greater communication was called for to publicize the activities of NOAA and its Line Offices so that the larger public is aware of what these agencies do. It was also called for in creating more effective

partnerships between MSIs, private industry, and the government. Finally, more communication is needed at the legislative level to convince Congress that these programs deserve to be funded. This concern, the need for greater communication, was expressed more frequently than any other in the Conference. It remains a real obstacle for increasing and improving diversity as this is the third Conference, and the call for greater communication has been made at each one. There have been improvements—a central NOAA web-page for diversity has been created, and there is a feeling among students that their mentors are communicating well—but there is much work to be done.

The Need for More MSI Initiative

MSIs and HBCUs need to take a greater initiative in establishing partnerships, understanding business arrangements, and developing science majors. MSIs need to objectively assess their strengths and weaknesses, market their advantages, and seek partnerships that will produce mutual benefits.

The Need for Partnering Support

Many participants talked about the difficulties of establishing partnerships. The most frustrating partnership experiences were those that had been developed through a single contact person. If that contact person left, the entire project fell apart. Several Conference participants advocated advisory councils for partnerships so that the long-term interests of the collaborative work would be promoted, regardless of individual commitment, and incorporated within the structure of the host partner.

The Need For Faculty Support

A number of faculties expressed frustration at being overworked, trying to put together partnerships, write proposals, do significant research, write articles, and teach class. Faculty enthusiasm for and participation in increasing and sustaining diversity must be supported. As much as feasible, faculties could be provided opportunities by university administrations such as short-term leaves of absence to participate in faculty exchange; a faculty's mentoring of disadvantaged students and involvement in outreach programs should count toward tenure; and faculty members should have support in writing grant proposals.

The Need For Money

“Money is nice,” said one participant. And more money is nicer. With the federal budget facing more severe cutbacks than ever, several participants talked about the practical side of getting money. They advocated that the search for money be personal. Faces, real people from NOAA, from the HBCUs, from partnering industries must lobby Congress in person. In addition, most Congressional members are unaware of the deep commitments NOAA has made to education and

diversity. Congressional members must see the practical workings of NOAA and must understand that the research NOAA does is enhanced by this attention to education and diversity.

The Need For Student Support

This area has seen improvement since the first Expanding Opportunities Conference. Participants spoke more of the retention with an eye to very practical concerns. For instance, internships are valuable to students, but little accommodation is made for housing or for travel costs to and/or from the internship location. Without a secure way of finding affordable, short-term housing, many students must turn down opportunities. Likewise, minority students often have needs that are not acknowledged or addressed by program directors.

The Need for Outreach

Outreach needs to happen at all levels—community, pre-school to post-graduate, internationally, and among scientific disciplines. Outreach that emphasizes collaboration, communication, and cultural awareness forms the basis for ethical work—work that supports not just the diversity of people but their well-being as well—work that increases knowledge while respecting land and culture.

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