The increasing proportion of the U.S. population that is Black and Hispanic has profound implications for the aquatic science community as will continuing underrepresentation by American Indians and Pacific Island Americans.

They are now profoundly underrepresented and more than half of the existing aquatic science community will be eligible for retirement in the next 60 months.
Ocean and Coastal Literacy in the United States

The State of the American Public's Knowledge on Ocean Policy Issues

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The State of the American Public’s Knowledge on Ocean Policy Issues

It is important for the selfish interests of ocean related professions and institutions to be concerned about diversity in the workplace.

(nor about CR, EO, reparations - its good strategic planning)
The Conference on Ocean Literacy (CoOL)

Background

- ICOSRMI-endorsed high level conference to promote ocean literacy
- Conference was held on June 7-8, 2006
- 200 Attendees in Washington, DC and 300 at 5 Regional Workshops
GOAL 1: Engage High Level Speakers

Results:

- CEQ Chairman James Connaughton
- DOI Deputy Secretary Lynn Scarlett and DOC Deputy Secretary David Sampson
- Assistant Secretary of Education Tom Luce
- NOAA Under Secretary Conrad Lautenbacher
- EPA AA for Water, Ben Grumbles
- Jean-Michel Cousteau and Sylvia Earle

Goal 2: Extend the conference beyond Washington

Results: 5 Regional Workshops at

- Aquarium of the Pacific, CA
- J.L Scott Aquarium, MS
- John C. Shedd Aquarium, IL
- National Mississippi River Museum & Aquarium, IA
- National Aquarium in Baltimore, MD
Goal 3: Generate recommendations to inform future ocean education efforts under the U.S. Ocean Action Plan

Results:

Panelists asked to identify challenges and opportunities and recommend next steps.

Formal Education Panel
Moderator: Dan Barstow, TERC
Panelists:

- Dr. Sylvia Earle
- Dr. Gerald Wheeler NSTA
- Richard Steinke, MD Dept of Education
- Dr. Gerald Lieberman, State Education and Environment Roundtable
- Mr. Larry Snowhite, Houghton-Mifflin
Formal Education Panel
Recommendations:

- Get involved at all levels, from national to state and local
- Focus on teachers
- Connect to earth system science and environmental education efforts
- Scale up to reach larger audiences
- Engage and coordinate Federal efforts

Informal Education Panel
Moderator: Ted Beattie, Shedd Aquarium
Panelists:

- Dr. Jerry Schubel, Aquarium of the Pacific
- Paula Coble, University of South Florida
- Dr. Jackie Ogden, Disney’s Animal Kingdom
- Julie Scardina, Sea World-Busch Gardens
Informal Education Panel
Recommendation:

- Form an active, energized, informal science network to develop and deliver a comprehensive, well branded ocean literacy program for the public.

Regional Approaches Panel
Moderator: Dr. Sharon Walker, USM - Scott Aquarium
Panelists:

- Dr. Dana Sitzler AK SeaLife Center
- Dr. Paul Sandifer NOAA
- Jerry Enzler, MS River Museum and Aquarium
- Craig Strang, UC Berkeley
- Dr. Sharon Walker, Gulf of Mexico Alliance
Regional Approaches Panel
Recommendations:

- Strengthen regional networks
- Develop coordinated messages

Media Panel
Moderator: Ellen Prager, ORRAP
Panelists:

- Bill Blakemore, ABC News
- Cheryl Lyn Dybas, NSF/Freelance Journalist
- Mark Bauman, National Geographic Society
Media Panel
Recommendations:

- Make it relevant to people’s lives
- Speak the language of media representatives
- Provide imagery
- Stick to the science
- Invest in messaging

Future Workforce Panel
Moderator: Dr. Matt Gilligan, Savannah State University
Panelists:

- RADM Fred Byus, Oceanographer of the Navy
- Dr. Judith Vergun, University of Hawaii
- Dr. Larry Robinson, Florida A&M Univ.
- Dr. Maria Alvarez, El Paso Community College
Admiral Byus stressed three themes:

- A diverse entry pool
- Continued career progression
- Work place empowerment and treatment

Increase of African American and women officers selected to significant leadership positions.

What are Model Programs? (Judith)

- Dr. Brian Bingham, Shannon Point Lab, WWU - MIMSUP
- Dr. Ben Cuker HU: ASLOMP, MAST, Hall-Bonner Program for Minority Doctoral Scholars in the Ocean Sciences
- Dr. Eda Davis-Butts at Oregon State University - SMILE
- Dr. Judith Vergun at the University of Hawai‘i at Manoa - NAMSS, Diversity Internship Program, and the Hawai‘i Kumu Ola STEM Program
- Dr. Ashanti Pyrtle at the University of South Florida - Minorities Striving and Pursuing Higher Degrees of Success in Earth System Science (MS PHD’S)
- Dr. Matt Gilligan SSU, Bridge/HBOI, CIRE/SkIO
Educational Partnership Program with Minority-Serving Institutions (Larry)

Jan. 19, 2007 - Conrad C. Lautenbacher on NOAA’s

- $62.5 million to five universities and their 31 partners for Cooperative Science Centers over five years.
- African American PhDs in both the atmospheric and environmental sciences has doubled.
- Helping universities to further develop programs in marine, atmospheric, and environmental sciences as well as remote sensing and scientific instrumentation.
- Served to increase collaborative research between NOAA scientists and researchers at Minority-Serving Institutions. (student traffic)

NIH-NIGMS models and Community Colleges (Maria)

- Bridges Program - links community colleges with baccalaureate-granting institutions.
- MARC program that support students at the junior and senior level.
- Bridge Program that transitions students from Master-granting institutions to Ph.D.-granting institutions
- MBRS-RISE Program that provides support throughout the whole spectrum.
Building a Future Workforce

Recommendations:

- Ask the right questions (e.g. Why aren’t good models replicated?)
- Include community colleges
- Develop an excellence in science award
- Include the disabled
- Link marine labs and MSI’s (MUI?) (2006 ASLO, JGeosci. Ed)

Though HBCUs enroll only 13% of the African Americans who are in college, they award 40% of the science degrees earned by African Americans in the U.S. (45% of agriculture and natural resources degrees)
Marine Laboratories and Minority Serving Institutions (MSIs) Can Work Together to Build a Diverse and Innovative Ocean Workforce.

There are marine labs that are not properly staffed and equipped to offer quality and accessible research experiences for undergraduates and there are MUIs that are not properly staffed and equipped to prepare students for geo/aquatic science research and education careers.
Effective Collaboration/Partnerships/programs

- Critical mass goals and proven elements/methods
- Patience
- Mutual respect
- Reward system
- Multicultural competency of staff

Elements of a Collaborative Capacity-Building Proposal

(Growing your own)

- MUI funded for new faculty position(s) (partnering marine lab alum. Recruiter for marine lab.) to build geoscience research/ed. capacity. New facilities (research labs.)
- Marine lab funded for new staff (educator, REU coordinator, partnering MSI alum.) to build multicultural education capacity (and pursue advanced degree). New facilities (housing)
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