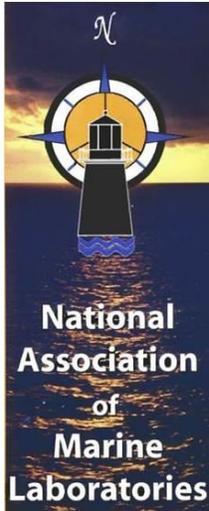


# National Association of Marine Laboratories



*W. J. DeFelice Marine Center, Cocodrie, Backyard  
This is not Kansas anymore, but Florida Atlantic University,  
Harbor Branch Oceanographic Institution*

**Documents for the  
National Association of Marine Laboratories  
Biennial Meeting  
October 11-13, 2015**



**NATIONAL ASSOCIATION OF MARINE  
LABORATORIES  
BIENNIAL MEETING**

**Florida Atlantic University,  
Harbor Branch Oceanographic Institution**

**OCTOBER 11-13, 2015**

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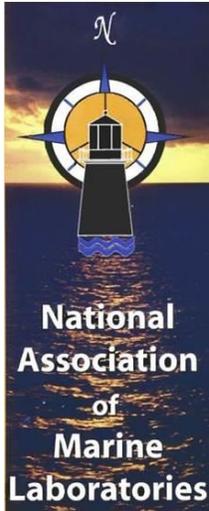
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**NATIONAL ASSOCIATION OF MARINE  
LABORATORIES  
BIENNIAL MEETING**

**Florida Atlantic University,  
Harbor Branch Oceanographic Institution**

**OCTOBER 11-13, 2015**

**AGENDA**

**Sunday, October 11, 2015**

5:00 pm **Reception and dinner** Harbor Branch

7:00 pm **Committee Meetings** as necessary

Treasurer  
Membership  
Nominations  
Education

**Monday, October 12, 2015**

8:30 am **Review of Agenda and Logistics**, Dr. Nancy Rabalais

8:40 am **Welcome and Introductions**, Dr. Nancy Rabalais  
Dr. Megan Davis, Florida Atlantic University

9:00 am **Public Policy**, Chair Mike DeLuca

9:00 am The National Perspective – Joel Widder and Meg Thompson, Federal Science  
Partners (call in)

9:20 am Activities of Public Policy Committee, Mike DeLuca

9:40 am NAML, NCOOS Activities, Dr. Nancy Rabalais

9:50 am Congressional Briefing, Mike De Luca

10:00 am BREAK

10:30 am **Mini-Symposium on Sea-Level Rise**

10:30 am Dr. Tiffany G. Troxler, Sea Level Solutions, Florida International University

- 10:55 am Selling sea level rise to local governments on the St. Johns River, Florida, Dr. Robert Virnstein, Seagrass Ecosystems Analysts
- 11:15 am Sea-Level Rise and NAML Laboratories, Dr. William Nuttle, Integration and Application Network, University of Maryland Center for Environmental Science
- 11:35 am Actions to be Taken
- NOON LUNCH, Harbor Branch
- 1:00 pm **Business Meeting, Part I**
- 1:00 pm Minutes of last several meetings, Dr. Sandra Gilchrist  
 NAML Biennial Meeting in Honolulu October 29, 2013  
 Public Policy and Business March 2014  
 Public Policy and Business March 2015
- 1:15 pm NAML Secretariat Report, Burk Associates, Inc. (call in)  
 Membership  
     Additions, New Membership Requests  
     Bringing Back Into the Fold  
     Deletions  
 Web Site Status and Issues  
 Finances  
     Treasurer, Dr. Jim Sanders  
     Need for a budget committee  
     Need for a formal audit process
- 2:15 pm Nominations of new members, president-elect, Nancy Rabalais
- 2:30 pm BREAK
- 3:00 pm **Mini-Symposium, Regional Observations** Dr. Steve Weisburg  
 Indian River Lagoon Observing Network, Dennis Hanisak, Harbor Branch  
 NAML and Regional Networking Activities  
     WAML developing a proposal to NSF about using the WAML labs as an  
     OA monitoring network for the west coast, Dr. Steve Weisburg  
 ASLO national observing network, who?  
 Other networking activities on regional or nation scale, discussion  
 Actions Forward
- 4:00 pm **Business Meeting, Part II**
- 4:10 pm International Efforts, Dr. Ivar Babb (call in)

- 4:10 pm NAML Education Committee, Dr. Jan Hodder (call in)  
Update on Activities  
Art and Science  
Coordination of efforts to increase enrollment of under-represented students in  
ocean sciences
- 4:20 pm NAML/OBFS partnerships, Dr. Sarah Oktay (call in) Mike DeLuca
- 4:30 pm **Tour of Harbor Branch Oceanographic Institution**, Dr. Shirley Pomponi
- 6:00 pm DINNER on your own  
Seaway Drive, close to Hutchinson Island Plaza, walking distance to several  
restaurants

**Tuesday, October 13, 2015**

**8:30 Business Meeting, Part III**, Mike DeLuca

- 8:30 am Review of Federal Science Partners
- 9:00 am Review of Burk Associates, Inc., the NAML Secretariat
- 9:45 am Regional Meetings
- 10:45 am Reports of Regional Meetings
- 11:00 am Actions to be Taken
- 11:30 am **Other Business**
- 12:00 pm **Adjournment**
- 12:00 LUNCH
- 1:00 pm Tour of Smithsonian Marine Station, Dr. Valerie Paul



## **Tiffany G. Troxler, Ph. D.**

Southeast Environmental Research Center (SERC) and Department of Biological Sciences, Florida International University, 11200 SW 8th St, OE 148, Miami, FL 33199; troxlert@fiu.edu; Office: 305-348-1453; Lab: 305-348-7479  
Website: <http://wetland.fiu.edu/>

---

### **EDUCATION**

- 2005 Doctor of Philosophy: Biological Sciences. Department of Biological Sciences, Florida International University, Miami, FL 33199; Dr. Daniel Childers, major advisor  
*“Investigating Ecosystem Responses to Hydrologic Change and Mechanisms for Nitrogen Sequestration in Seasonally Flooded Tree Islands of the Southern Everglades”*
- 2001 Master of Science: Biological Sciences. Department of Biological Sciences, Florida International University, Miami, FL 33199; Dr. Daniel Childers, major advisor  
*“Investigating Tree Island Community Response to Increased Water Flow on Seasonally Flooded Tree Islands in the Southern Everglades”*
- 1997 Bachelor of Science: Environmental Sciences. Department of Environmental Studies, Florida International University, Miami, FL 33199
- 1993 Bachelor of Arts: Anthropology. Department of Anthropology, Tulane University, New Orleans, LA 70118; Minor: Ecology. Department of Ecology, Evolution, and Organismal Biology

### **RESEARCH INTERESTS**

Coastal wetland ecosystem dynamics; global environmental change; conservation, management and restoration of wetland and upland ecosystems; plant-soil interactions along environmental gradients; ecosystem carbon assessment; carbon-water interactions

### **PROFESSIONAL EXPERIENCE**

#### Research Experience

- 2014 – present Research Associate Professor, Southeast Environmental Research Center and Department of Biological Sciences, Florida International University, Miami, FL
- 2011 – 2013 Program Officer and Visiting Researcher, Intergovernmental Panel on Climate Change (IPCC) Task Force on National Greenhouse Gas Inventories Technical Support Unit, Institute for Global Environmental Strategies, Hayama, Japan
- 2010 – 2013 Assistant Research Faculty, Southeast Environmental Research Center, Florida International University, Miami, FL

Troxler is a research scientist with **FIU’s Southeast Environmental Research Center** and **Department of Biological Sciences**. Her research focuses on informing management and restoration of coastal and freshwater wetland ecosystems. Some of the projects she leads include collaborative efforts that examine the effects of salinity inundation on soil carbon balance in Everglades coastal wetlands. She is a national greenhouse gas inventories review expert for the

United National Framework Convention on Climate Change in the Land Use, Land-Use Change and Forestry sector. Troxler is project collaborator and working group co-lead in the **Florida Coastal Everglades LTER program**. She works to foster local, national and international collaborative research with the aim of addressing local to global-scale sustainability challenges.

## **Sea Level Solutions Center launches**

Posted by [JoAnn Adkins](#) × 08/25/2015 at 11:47 am

With rising seas threatening coastal communities all across the world, FIU has launched the Sea Level Solutions Center to help people understand, adapt and persevere. FIU ecologist **Tiffany Troxler** will serve as director.

The center combines expertise in the natural, physical and social sciences, along with architecture, engineering, computer sciences, law, communications, business, health and tourism management to develop long-term strategies in the face of rising seas. FIU's Miami location will be key in advancing the center's mission. South Florida is particularly vulnerable because of the large number of assets exposed to the effects of sea level rise.

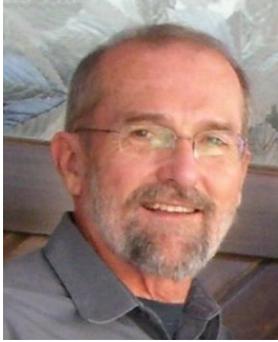
“Rising seas are a topic of grave concern around the world, and most societies will feel the effects,” said FIU President Mark B. Rosenberg. “While successful adaptation to sea level rise is local in nature, it will take international, national, regional, as well as local cooperation to develop and implement the necessary policies and strategies to address this global threat.”

The FIU Sea Level Solutions Center will focus on envisioning and designing safe, resilient, prosperous and sustainable 22<sup>nd</sup> century coastal communities by focusing on the science behind the rising seas, preservation of governance systems, infrastructure challenges and solutions, business impacts, supply chain challenges, ecosystem dependencies, and personal assets. It will work with local governments, business and community leaders to accelerate adaption planning.

The center will support efforts to finance and implement plans through local, state and federal funding sources while drawing on collaborations with governments and the private sector, leveraging existing partnerships and creating new ones. The center is also dedicated to training a new generation of scientists, planners, designers, engineers, architects and communicators to develop sustainable solutions to this and other climate change impacts.

“Through its support for the Sea Level Solutions Center, Florida is poised to tackle challenges and advance opportunities brought forward by rising sea level,” Troxler said. “Collaborative efforts fostered by the center will advance science-based actions to mitigate rising concentrations of greenhouse gases and discover transdisciplinary sea level rise adaptation solutions to serve regional, national and global communities.”

FIU has been leading initiatives in South Florida to advance the science of sea level rise, including fostering strong partnerships with municipalities and other stakeholders to develop and implement mitigation and adaptation plans. The Sea Level Solutions Center will bring these multi-disciplinary efforts together in ways that will foster creative solutions to the complex issues of climate change through collaborative research, education, public outreach and engagement. Key partners in all of these activities will include researchers from other universities, the **Florida Climate Institute**, scientists, practitioners, business leaders, community leaders and the general public.



Robert Virnstein, PhD  
Seagrass Ecosystems Analysts  
142 Elgin Road  
East Palatka, FL 32131  
Tel: 386-546-0204  
email: [seagrass3@gmail.com](mailto:seagrass3@gmail.com)

Courtesy Affiliated Research Professor at Florida Atlantic University, East Palatka, Florida  
Environmental Services

Current Marine Science and Ecology,  
Seagrass Ecosystems Analysts,  
Florida Atlantic University

Previous St. Johns River Water Management District

Education The College of William and Mary

Dr. Robert Virnstein is the former SJRWMD scientist, now a private consultant (Seagrass Ecosystems Analysts).

Consultant

Marine Science and Ecology, 1986 – Present (29 years)

Owner

Seagrass Ecosystems Analysts, 1986 – Present (29 years), East Palatka, FL

Courtesy Affiliated Research Professor, Florida Atlantic University, 2013 – Present (2 years)

President, St. Johns River Institute, Inc., 2012 – Present (3 years), East Palatka, FL

Environmental consultant, Self-employed, 1986 – Present (29 years)

*Environmental Scientist VI*

St. Johns River Water Management District

1988 – 2008 (20 years) Palatka, FL

### **Seagrass hints at Indian River Lagoon rebound**

Jim Waymer, FLORIDA TODAY 7:48 a.m. EDT July 27, 2015

Green shoots of recovery are sprouting up throughout the Indian River Lagoon.

A three-year, \$110,000 experiment has offered hints of hope that the lagoon's seagrass can recover from a freefall, triggered by a 100-mile-long algae bloom in 2011.

In still-barren spots where scientists transplanted seagrass from healthier areas of the lagoon, grass grew back, but often, not for long.

Some of the transplants couldn't withstand the voracious appetites of manatees, sea turtles and other marine grazers. The small transplants, encircled within plastic fences or metal cages, became salad bars for long-famished grazers that have for years faced slim pickings for seagrass. Manatees often munched up what grew back once protective metal cages or plastic fences were removed, or pinfish swam through openings in the plastic fences for a meal. But the bottom line was what scientists had hoped to prove....



# Integration & Application Network

Communicate better. Empower change.



Bill Nuttle

[wnuttle@eco-hydrology.com](mailto:wnuttle@eco-hydrology.com)

## SUMMARY

Consultant in environmental science, ecosystem management and hydrology, with experience in wetlands, estuaries, and water management. Registered professional engineer in Ontario.

## EMPLOYMENT

- 1986- Consultant in Environmental Science, Hydrology, and Water Resources
- 1997- Courtesy faculty, Southeast Environmental Research Center, Florida International University, Miami, Florida
- 2000-2001 Director, Everglades Department, Division of Watershed Research and Planning, South Florida Water Management District
- 1998-2000 Executive Officer, Science Program for Florida Bay and Adjacent Marine Systems

## EDUCATION

- 1986 PhD, Civil Engineering, Massachusetts Institute of Technology  
[Elements of Salt Marsh Hydrology](#)
- 1980 MS, Civil Engineering, Massachusetts Institute of Technology  
[The Flow of Water in Salt Marsh Peat](#)
- 1982 BS, Civil Engineering, University of Maryland

## PROFESSIONAL EXPERIENCE

- 2003- Proposal Review Board, Governor’s Coastal Research and Development Program (Louisiana)
- 2003- Technical Advisory Board, Coastal Restoration and Enhancement Through Science and Technology (Louisiana)

## Dr. Stephen Weisberg, Southern California Coastal Water Research Project



Stephen B. Weisberg is a biologist who specializes in the design of environmental monitoring programs. He received his undergraduate degree from the University of Michigan in 1974 and his Ph.D. from the University of Delaware in 1981. Dr. Weisberg joined SCCWRP in September 1996. His present research efforts focus on the development of coordinated, integrated, cost-effective regional monitoring in the Southern California Bight.

### EDUCATION:

Ph.D., Biology, University of Delaware, 1981

B.G.S., University of Michigan, 1974

### AREAS OF EXPERTISE:

Dr. Weisberg is Executive Director of the Southern California Coastal Water Research Project Authority (SCCWRP), a research agency created to provide the scientific foundation for water quality management in California. Dr. Weisberg's research focuses on developing molecular tools to support environmental monitoring. He serves on a number of Governing Boards of other organizations involved with development and adoption of new technologies, including the Southern California Coastal Ocean Observing System. He also serves on numerous scientific advisory committees, including the State of California's Clean Beach Task Force, the California Ocean Protection Council Science Advisory Team, the California Water Quality Monitoring Council, and the California Sea Grant Advisory Team.

### PROFESSIONAL EXPERIENCE:

Executive Director, Southern California Coastal Water Research Project Authority. Costa Mesa, CA. 1996-Present

Manager, Monitoring and Field Operations, Versar, Inc. Columbia, MD. 1987-1996

Scientist, Martin Marietta Environmental Systems. Baltimore, MD. 1981-1987

### PROFESSIONAL APPOINTMENTS:

California Ocean Protection Council Scientific Advisory Team (2008-Present; Co-Chair 2009)

California Ocean Protection Council's Acidification and Hypoxia Science Panel (2013-Present)

California Current Acidification Network Steering Committee (Chair, 2013-Present)

California Water Quality Monitoring Council (2008-Present)

California Sea Grant Advisory Board (2011-Present)

University of Southern California Sea Grant Advisory Board (1998-Present)

California Clean Beach Task Force (2001-Present)

Standard Methods Committee - Biological Examination, American Water Works Association (2012-Present)

Ocean Acidification International Reference User Group, Ocean Acidification International Coordination Centre (2013-Present)

US EPA Science Advisory Board Report on the Environment Committee (2010-Present)

Chapman University School of Earth and Environmental Science Advisory Council (2013-



## Principal Investigator

**M. Dennis Hanisak, Ph.D.**

Research Professor

772-242-2306

[dhanisak@fau.edu](mailto:dhanisak@fau.edu)

M. Dennis Hanisak is a Research Professor at Harbor Branch, Director of its Marine Ecosystem Health program, and Director of Education. He has more than 30 years of experience in marine biology and ecology, with emphasis on marine plants, particularly macroalgae (seaweeds) and seagrasses. He has worked at Harbor Branch since 1977, conducting research on marine plants in the Indian River Lagoon and in other parts of Florida, the Bahamas, and the Caribbean. Dr. Hanisak is the author of more than 70 scientific publications, a frequently invited participant at national and international meetings and workshops, a past President of the International Phycological Society and a past President and Chairman of the Board of Trustees of the Phycological Society of America. He is a co-author of *Submersed Plants of the Indian River Lagoon: A Floristic Inventory & Field Guide*, a comprehensive floristic compendium for those who wish to increase their botanical or ecological knowledge of Florida's remarkable Indian River Lagoon. Research in his lab currently focuses on determining the relationships of water quality with seagrass and with algal communities (both benthic seaweeds and phytoplankton) in the Indian River Lagoon and understanding and preventing losses in shallow and deep water coral communities that result from both natural and anthropogenic causes. Other interests include physiological ecology of marine plants (macroalgae and seagrasses), nutrient dynamics, coral reef ecology, biology of deep-water macroalgae, and aquaculture (particularly marine plant cultivation).



# **NAML Biennial Meeting October 2015**

**A Public Policy Briefing to the  
National Association of Marine Laboratories  
by Federal Science Partners**

# NAML Public Policy Priorities for FY 2016

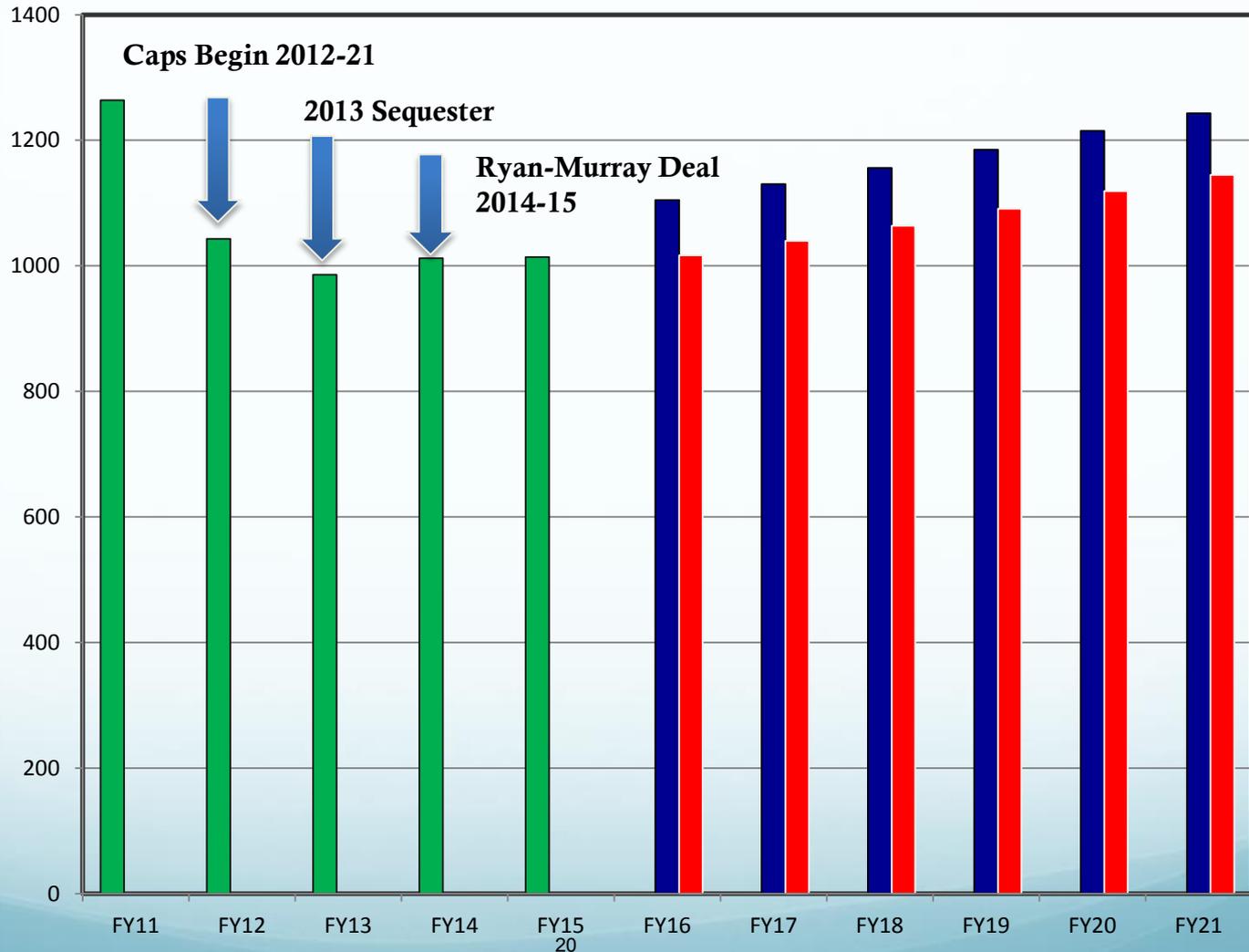
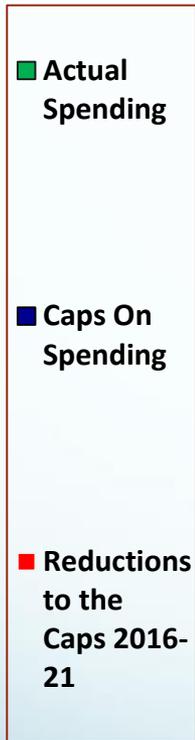


NAML's priorities are drawn from and strongly support two recent reports from the National Academy of Sciences: Sea Change: 2015-2025 Decadal Survey of Ocean Sciences (DSOS); and Enhancing the Value and Sustainability of Field Stations and Marine Laboratories in the 21<sup>st</sup> Century. Current public policy objectives for NAML include:

- Enhance science, education and public engagement at marine labs by supporting the continued development of their unique assets and qualities that allow them to prepare the next generation of scientists, expand opportunities for active learning and collaborative research, and explore a wide range of approaches to engage the public. This includes strong sustained support for competitive merit-based ocean, coastal, and Great Lakes research provided by relevant federal agencies to address the research priorities identified in Sea Change;
- Promote a network for discovery and innovation via Federal and non-Federal support to build and maintain a modern infrastructure for research, education, and networking including advanced internet connectivity and cyber infrastructure;
- Pursue financial sustainability by developing business plans that foster the unique value of marine labs, creating mechanisms to establish reliable based funding, and diversifying approaches to obtain supplemental support – such as a national partnership program to co-locate federal scientists and infrastructure at NAML facilities; and
- Develop metrics for demonstrating the impact of marine labs in research, education, and public engagement.



# Federal Discretionary Spending Profile (\$ in billions)



# Status of FY16 Appropriations Process



- Federal agencies operating under a continuing resolution (CR) until Dec 11 which has most programs operating at levels slightly below the FY15 level.
- NSF and NOAA will obligate funding for new awards at about 80% of what the CR would allow. NIH will make awards at about a 90% rate.
- FY16 appropriations remain pending while discussions regarding the adjustment of statutory spending limits proceed between the House, Senate, and the White House. Situation made more complex by the retirement of Speaker Boehner.
- The White House and Congressional Democrats want to eliminate the sequester and raise the spending caps on discretionary spending. House Republicans want to raise the spending cap on defense while cutting non-defense programs further; White House says it will only support an increase in defense spending if non-defense programs are also addressed.
- The President has said he will not sign another short-term CR beyond Dec 11. But negotiations are likely to drag on until the end of the calendar year or even into January 2016.
- A deal to modestly raise the the spending caps is likely to be wrapped up in a legislative package that is likely to also include legislation to reauthorize surface transportation programs, increase the debt ceiling, and extend specific expiring tax breaks.
- What does this mean for ocean, coastal, and Great Lakes research and education programs? Adjusting the overall spending caps (upwards) could allow appropriators to provide modest increased support in FY16 for relevant research and education programs at NSF, NOAA, NASA, DOE, NIH, EPA, USGS, etc. above currently pending FY16 marks.

# FY16 Funding Status of NSF Programs (\$ in millions)



NSF Appropriations Account	FY15	FY16	House	Senate
<b>NSF TOTAL</b>	<b>7344.2</b>	<b>7723.6</b>	<b>7394.2</b>	<b>7343.8</b>
<b>Research and Related Activities</b>	<b>5933.7</b>	<b>6186.3</b>	<b>5983.6</b>	<b>5933.6</b>
Geosciences Directorate	1304.4	1365.4	□	
Polar Programs	436.4	449.5		
Ocean Sciences	356.0	369.6		
Research	169.2	184.1		
Education	5.0	2.7		
Infrastructure/Facilities	181.8	182.8		
Academic Fleet	85.0	85.0		
IODP	48.0	48.0	50.0	
OOI	41.0	41.0		
Research Resources	5.8	5.8		
Regional Class Research Vessels	2.0	3.0		
<b>Major Research Equipment Facilities</b>	<b>200.8</b>	<b>200.3</b>	<b>200.0</b>	<b>200.0</b>
OOI	0.0	0.0		
<b>Education and Human Resources</b>	<b>866.0</b>	<b>962.6</b>	<b>866.0</b>	<b>866.0</b>

★ Funding for NSF Geosciences and its programs not generally specified in the committee's recommendations but report language provides NSF fairly explicit guidance that could result in steep reductions to NSF geosciences and social sciences

# FY16 Funding Status of Select NOAA Programs (\$in millions)



NOAA Program	FY15	FY16	House	Senate
<b>Total NOAA</b>	5448.9	5982.6	5176.3	5381.6
<b>Office of Oceanic &amp; Atmospheric Research (ORF)</b>	432.9	484.7	409.7	436.0
Ocean & Coastal Research	172.1	186.4	170.2	179.7
<b>Sea Grant College Program</b>	67.3	68.5	64.8	72.8
Ocean Exploration and Research	28.0	19.3	32.0	22.3
<b>Integrated Ocean Acidification</b>	8.5	30.0	8.4	11.0
Coastal, Ocean & Great Lakes Labs & Inst.	27.0	27.0	25.0	32.0
Sustained Ocean Obs and Monitoring	41.3	41.6	40.0	41.6
Weather Labs and Coop Insts.	70.0	68.1	75.0	70.0
<b>Climate Research</b>	158.0	188.8	128.0	153.0
<b>National Ocean Service (ORF)☐</b>	481.1	547.1	466.5	497.4
Navigation, Observations, & Positioning	192.5	198.5	191.5	203.5
IOOS Regional Observations	29.5	29.5	29.5	29.5
Coastal Science & Assessment Response & Rest	80.0	85.6	79.0	81.6
<b>Competitive Research</b>	9.0	13.0	9.0	9.0
Ocean and Coastal Management	208.6	266.0	196.0	212.3
<b>Coastal Management Grants☐</b>	71.1	116.1	65.0	39.6
Coral Reef Program	26.0	26.1	26.0	75.0
<b>National Estuarine Research Reserve System</b>	21.3	21.3	20.0	26.0
Sanctuaries and Protected Areas	48.5	48.3	45.0	23.0
<b>National Marine Fisheries Service (ORF)</b>	822.1	888.2	967.6	830.6
<b>National Weather Service (ORF)</b>	954.2	963.6	967.6	977.0
<b>NOAA Education</b>	27.6	16.4	16.4	26.6

☐



# FY 16 Funding Status of Select NASA and Navy Programs (\$ in millions)



NASA Appropriations Account	FY15 Final	FY16 Request	FY16 House	FY16 Senate
<b>Total NASA</b>	<b>18010.2</b>	<b>18529.1</b>	<b>18529.1</b>	<b>18289.5</b>
Science	5244.7	5288.6	5237.5	5295.0
<b>Earth Science</b>	<b>1772.5</b>	<b>1947.3</b>	<b>1682.9</b>	<b>1931.6</b>
Earth Science Research	?	485.3	?	?
Earth Systematic Missions	?	895.2	?	?
Earth System Science Pathfinder	?	267.7	?	?
Earth Science Multi-Mission Operations	?	190.7	?	?
Earth Science Technology	?	60.7	?	?
Applied Technology	?	47.6	?	?
Surface Water and Ocean Topography	?	78.3	?	?
NPOESS/Suomi NPP	?	?	?	?

?

Navy Research and Development	FY15 Final	FY16 Request	FY16 House	FY16 Senate
<b>Total Defense RDT&amp;E (in millions)</b>	<b>64006.5</b>	<b>69976.4</b>	<b>66150.7</b>	<b>70324.6</b>
Navy RDT&E	15954.6	17885.9	17237.7	18236.1
<b>6.1 Basic Research</b>	<b>650.2</b>	<b>586.9</b>	<b>586.9</b>	<b>671.9</b>
University Research Initiatives	133.9	116.2	116.2	146.2
In-House Laboratory Independent Research	19.1	19.1	19.1	19.1
Defense Research Sciences	497.1	451.6	451.6	506.6
<b>6.2 Applied Research</b>	<b>869.9</b>	<b>864.6</b>	<b>896.3</b>	<b>949.2</b>
Power Projection Applied Research	95.8	68.7	73.7	86.7
Ocean Warfighting Environment Applied Research	65.4	42.3	72.3	42.3
Undersea Warfare Applied Research	86.9	123.8	123.8	152.4
Defense-Wide RDT&E	17225.9	18329.9	18207.2	18926.4
<b>6.3 Advanced Technology Development</b>		3229.8	3328.3	3148.0
Strategic Environmental Research Program		65.9	55.8	65.9

# FY 16 Funding Status for Selected EPA Programs (\$ in millions)

Environmental Protection Agency	FY15	FY16 Request	FY16 House	FY16 Senate
Research: Safe and Sustainable Water Resources	107.4	111	102.6	104.9
Research: Sustainable and Healthy Communities	150	139.2	135.1	135.1
Science and Technology	734.6	769.1	704.9	703.9
<b>Great Lakes Restoration</b>	<b>300</b>	<b>250</b>	<b>300</b>	<b>300</b>
Chesapeake Bay	73	70	60	73
San Francisco Bay	4.8	4	4	4.8
Puget Sound	28	30	28	30
Long Island Sound	3.9	2.9	3.9	3.9
Gulf of Mexico	4.5	3.9	3.9	8.1
South Florida	1.7	1.3	1.3	1.3
Lake Champlain	4.4	1.4	1.4	4.4
Lake Pontchartrain	0.9	0.9	0.9	0.9
Southern New England Estuaries	5	5	0	5
<b>National Estuary Program/Coastal Waterways</b>	<b>26.7</b>	<b>27.3</b>	<b>25.1</b>	<b>27.3</b>
Wetlands	21.1	23.3	19.8	20.5
Water: Human Health	98.5	125.8	93.3	97.5
Water Quality Protection	210.4	254.3	192.6	195.3



# Recent NAML Public Policy Activities



- **Joint Meeting between NAML and OBFS – Future Direction of NSF FSML Program based on NAS Report**
- **Ocean Acidification Capitol Hill Briefing, Fall 2015**
- **Development of NAML Public Policy Agenda for FY 2016**
- **NAML Public Policy Meeting, March 2015 – included participation for senior officials from NOAA, NSF, Senate Appropriations Subcommittee, OBFS, Ocean Leadership, DSOS Presentation**
- **NAML Review and Statement of Support for NAS Decadal Survey of Ocean Sciences (DSOS)**
- **Development and submission of FY16 appropriations testimony**
- **September Meeting between NAML and NCCOS Leadership on science priorities**

# Continuing and Upcoming NAML Public Policy Activities



- Collaboration with like-minded organizations and institutions concerned with funding for earth/geo/climate research at relevant agencies: America COMPETES; Appropriations – as Congress moves to resolve funding issues for FY16 and perhaps FY17.
- Participation in the development of legislation including: Appropriations; Sea Grant Reauthorization Act; National Estuary Program (NEP) Authorization bill; IOOS Reauthorization bill; Development of NAML position on legislation as determined by Public Policy Committee
- NCCOS request for NAML views on science priorities
- Capitol Hill Briefing Planned on coastal science supporting coastal economies – Nov 20, 2015
- Development of NAML Public Policy Agenda for FY 2017 – Dec 2016 – Jan 2017.
- Continue collaborative relationship with OBFS in re value of FSML's for research & education
- Analysis of FY17 Administration budget request – expect Administration to propose elimination of Prescott grants (again), NOAA Coastal Storms program, scale back NOAA education programs, NOAA re-evaluating cooperative institutes (CI21) – what does that mean?
- NSF – expect funding reductions on large scale infrastructure for ocean sciences per DSOS – impact on the academic fleet, OOI, new regional vessels?

# COASTAL SCIENCE FUELING COASTAL ECONOMIES

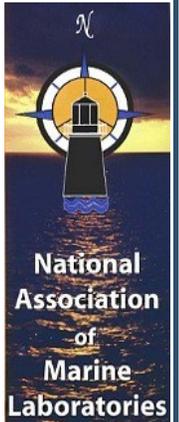
Using Geoscience Research to Accelerate Innovation and the Coastal Economy

Sponsored by Senator Bill Nelson | Presented by the National Association of Marine Laboratories

## November 20, 2015

Noon — 1:30 p.m.

Capitol Visitor Center, Room SVC 202



### **DON KENT**

***Aquaculture Reinvigorates the Coastal Community***

Director, Hubbs SeaWorld Research Institute  
San Diego, California

### **ALAN D. STEINMAN**

***Ecosystem Restoration in the Great Lakes Yields  
Renewed Economic Activity in Region***

Director, Annis Water Resources Institute  
Grand Valley State University  
Allendale, Michigan

### **LISA AUERMULLER**

***Coastal Resilience—Reducing the Cost and Vulnerability  
To Future Storms and Flooding***

Rutgers University  
New Brunswick, New Jersey

### **MEGAN DAVIS**

***Community Involvement for the St. Lucie Estuary  
Leads to Water Project Investments***

Interim Executive Director, FAU Harbor Branch  
Fort Pierce, Florida

*Advance registration required to meet security requirements.*

Please RSVP to [jwiddler@federalsciencepartners.com](mailto:jwiddler@federalsciencepartners.com) by November 13, 2015.

## Coastal and Ocean Research Discussion

### NCCOS NAML Meeting

12:00-4:00, Tuesday, Sept. 29, 2015

Consortium for Ocean Leadership, 1201 New York Ave NW # 420, Washington, DC 20005

#### Goals of Meeting:

- *NCCOS gains feedback on strategic direction of its ocean and coastal science portfolio.*
- *NCCOS and NAML gain insights into their respective organizations.*
- *Discuss next steps on collaboration*

#### AGENDA

- 1200-1220 Welcome, Goals, Introductions — *Mary Erickson, Nancy Rabalais/Joel Widder*
- 1220-1235 Overview of NCCOS Portfolio — *Mary Erickson*
- 1235-1250 NAML's Emerging Network Philosophy -- Mike DeLuca/Nancy Rabalais
- 1250-1300 Review Questions to Guide Discussion — *Mary Erickson*
1. In what direction is the science headed in each of the NCCOS focus areas?  
What are the most pressing needs?
  2. Within the context of the NCCOS portfolio, identify/describe disruptive changes affecting our coasts and oceans with potential to catch our collective science community off-guard.
    - a. In a similar way, identify/describe breakthrough technologies.
    - b. What are the things we'll be able to do in the future that we can't do today because of xxx technology, technique, etc.?
  3. What do you see as emerging issues in applied ecosystem sciences?
- 1300-1330 Coastal Resilience and Climate Vulnerability
- 1330-1340 Break
- 1340-1410 Stressor Impacts, Mitigation and Restoration
- 1410-1440 Marine Spatial Ecology
- 1440-1510 Social Science
- 1510-1530 Time Held for Follow-ups, Extended Discussion
- 1530-1600 Recap & Clarify; Wrap Up and Next Steps on Collaboration — *Mary and Nancy/Mike*

List of NAML/NOAA attendees for September 28, 2015:

1. Nancy Rabalais, LUMCON
2. Robert Dickey, University of Texas Marine Science Institute
3. Mike DeLuca, Rutgers University
4. Guy Meadows, Michigan Technological University, Great Lakes Research Center
5. Joel Widder, Federal Science Partners
6. Meg Thompson, Federal Science Partners
  
7. Mary Erickson, Director, NCCOS
8. John Christensen, Branch Chief in NCCOS Center for Coastal Monitoring & Assessment (CCMA)
9. Mike Fulton, Branch Chief in NCCOS Center for Coastal Environmental Health & Biomolecular Research (CCEHBR)
10. Lieutenant Commander (LCDR) Denise Gruccio, Branch Chief in NCCOS Center for Coastal Fisheries & Habitat Research (CCFHR)
11. Ruth Kelty, NCCOS HQ staff
12. Rob Magnien, Director, NCCOS Center for Sponsored Coastal Ocean Science (CSCOR)
13. Suzanne Skelley, Branch Chief in NCCOS Center for Coastal Environmental Health & Biomolecular Research (CCEHBR) and Director, Cooperative Oxford Lab

**National Association of Marine Laboratories  
Winter Meeting  
3-4 March 2014  
Consortium for Ocean Leadership Headquarters  
Washington, DC**

Minutes of the Biennial Meeting in Honolulu, October 2013, were introduced and Nancy noted that corrections were needed, and that she would make them. It was moved and seconded by Lou Burnet and Mike Crosby, respectively, to approve the edited Minutes. The motion passed. The approved minutes will be posted on the new NAML web site.

<http://www.naml.org/meetings/2013%20Fall/Minutes%20Honolu%20biennial%202013.pdf>

**NAML Business Meeting  
March 1, 2015**

*Burnett, President of SAML*, read into minutes the positive votes from SAML members in support of the recommendation for Michael Orbach and Robert Van Dolah receiving NAML emeritus status. Their Emeritus Status has been incorporated into the NAML web site.

*President Rabalais* read into the minutes the NAML Board of Directors approval of the following members via email votes:

- Auburn University Marine Extension and Research Center (AUMERC) (SAML); approved July 2014
- University of Georgia Marine Institute at Sapelo Island (SAML); approved July 2014
- Chincoteague Bay Field Station, Virginia (SAML); approved February 2015
- University of Rhode Island, Graduate School of Oceanography (NEAMGLL); approved February 2015

These new members have been added to the NAML web site.

Yokum moved to accept the minutes as read and Pomponi seconded. There were no corrections. *Approval of minutes from March 3-4, 2014 meeting passed with a voice vote.*

Yokum further moved and Pomponi seconded to approve the Emeritus Members nominated by SAML as read into the minutes and the SAML and NEAMGLL membership nominations as read into the minutes. *The motion passed with a voice vote.*

<http://www.naml.org/meetings/2015%20Winter/Draft%20Minutes,%20NAML%20Winter%20Meeting%202015.pdf>

**ACTION ITEM**

Approve minutes of the March 1, 2015 NAML business meeting

<http://www.naml.org/meetings/2015%20Winter/Draft%20Minutes,%20NAML%20Winter%20Meeting%202015.pdf>

## **Integrate NAML into the NOAA/NCCOS Coastal Ocean Monitoring and Assessment Network**

NAML membership possesses network-level capacity to monitor, sample and assess environmental conditions at significantly enhanced spatial and temporal scales that are relevant for science-based management of coastal resources and ecosystems. The association capability aligns well with the local, regional and national mandate of NOAA/NCCOS to understand the dynamics of living marine resources, to assess the impacts of human activity on ecosystem services, and to develop adaptation strategies to environmental change. NAML occupies a unique niche in environmental sensing because individual laboratories are co-located among rich ecosystems and vibrant coastal communities. Therefore, instruments, data, and knowledge reside in areas where the need is most critical. As an example, the Western Association of Marine Laboratories, one of the regional associations within NAML, is developing the capability to assess ocean acidification in coastal ecosystems that are complicated by nearshore physical and biogeochemical processes. NAML laboratories are also well-positioned to help communities enhance their resilience to climate change (SLR, flooding, coastal storms), and are centers of technology innovation where new and next generation autonomous sensing platforms are being used to extend environmental sensing capability into coastal waters and collect data during extreme events. The *in situ* sampling and sensing capacity of NAML is also well suited for integration into existing NOAA networks such as IOOS and the agency's Sentinel Site program.

NAML seeks to identify priority issue areas and data needs that the association can collect and assimilate to assist NCCOS in providing the information and tools that coastal managers need to support science-based management and stewardship of coastal systems and communities.

### **Expected Outcome of the Meeting**

Agree to convene a NAML/NCCOS workshop to develop the required technology, data standards and data management needs that will bring the environmental monitoring, sampling and assessment capacity of NAML to bear on the research and management priorities of NOAA/NCCOS.

	paid for 2015	unpaid for 2015		
<b>NEAMGLL</b>		<b>14</b>		
<b>NAML</b>		Bowdoin College	Coastal Studies Center	NEW
		Marine Biological Laboratory	check in the mail	
	?	State University of New York	School of Marine & Atmospheric Sciences (SoMAS)	
	?	University of Connecticut	Marine Sciences/NURTEC	
	?	University of Delaware	School of Marine Science and Policy	
	?	University of New Hampshire	Jackson Estuarine Laboratory	
	?	University of Rhode Island	Graduate School of Oceanography	NEW
	?	Institution	Institution	
	associate ?	Environmental Protection Agency	Atlantic Ecology Division	
	associate ?	NOAA GLERL		
	associate ?	NOAA	Great Lakes Observing System	
<b>SAML</b>		<b>48</b>		
<b>NAML</b>		Florida International University	Center	
		Hampton University	Science	
		Louisiana Dept. of Wildlife and Fisheries	Grand Isle Marine Lab	
		NOVA Southeastern University	Oceanographic Center	
		South Carolina Aquarium	South Carolina Aquarium	NEW
		Christi	Center for Coastal Studies	
		South Carolina Department of Natural Resources	Marine Resources Research Institute	
	associate ?		Smithsonian Tropical Research Institute, Panama	
	associate ?	Smithsonian Institution		
	associate ?	NOAA-NOS	NOAA-NOS, Beaufort Lab	
	associate ?	NOAA-NMFS	Galveston Laboratory	
<b>WAML</b>		<b>21</b>		
<b>NAML</b>		Alaska SeaLife Center	Alaska SeaLife Center	
		Aquarium of the Pacific	Aquarium of the Pacific	
		Hawai'i Pacific University	The Oceanic Institute	
		Humboldt State University	Telonicher Marine Laboratory	
		Stanford University	Hopkins Marine Station	
			Richard B. Gump South Pacific Research Station	
		University of California, Berkeley		
		University of California, Santa Cruz	Long Marine Lab	
		University of Oregon	Oregon Institute of Marine Biology	
	associate ?	NOAA	Kasitsna Bay Marine Laboratory	
	associate ?	NOAA Fisheries	Center	
	associate ?	NOAA Fisheries	Auke Bay Laboratories	
	associate ?	NOAA Fisheries	Northwest Fisheries Science Center	
	associate ?	NOAA Fisheries	Center	
Total		<b>83</b>		
NAML				

**National Association of Marine Laboratories**  
**Profit & Loss by Class**  
**January through December 2014**

6:01 PM  
09/15/2015  
Accrual Basis

	<u>Total Annual Meeting</u>	<u>General &amp; Administrative</u>	<u>Public Policy</u>	<u>TOTAL</u>
<b>Income</b>				
4000 · Membership Dues				
4000.10 · Dues - Large Laboratory	-	42,500.00	-	42,500.00
4000.20 · Dues - Medium Laboratory	-	37,500.00	-	37,500.00
4000.30 · Dues - Small Laboratory	-	14,000.00	-	14,000.00
<b>Total 4000 · Membership Dues</b>	<b>-</b>	<b>94,000.00</b>	<b>-</b>	<b>94,000.00</b>
4100 · Meeting Income				
4100.10 · Registration	1,080.00	-	-	1,080.00
<b>Total 4100 · Meeting Income</b>	<b>1,080.00</b>	<b>-</b>	<b>-</b>	<b>1,080.00</b>
4200 · Contributions	-	-	1,200.00	1,200.00
4500 · Other Income	-	3,168.00	-	3,168.00
<b>Total Income</b>	<b>1,080.00</b>	<b>97,168.00</b>	<b>1,200.00</b>	<b>99,448.00</b>
<b>Gross Profit</b>	<b>1,080.00</b>	<b>97,168.00</b>	<b>1,200.00</b>	<b>99,448.00</b>
<b>Expense</b>				
6030 · Bank Charges	-	427.18	-	427.18
6040 · Contractors/Consultants	776.88	6,500.00	52,500.00	59,776.88
6050 · Credit Card Fees	-	326.41	-	326.41
6080 · Food Functions	363.41	-	1,908.00	2,271.41
6120 · Legal	-	88.00	-	88.00
6130 · Management Fee	-	27,083.30	-	27,083.30
6140 · Postage and Delivery	-	100.61	-	100.61
6150 · Posters/Signs	91.10	115.49	-	206.59
6160 · Printing	-	2,019.84	-	2,019.84
6200 · Travel	138.55	-	29.01	167.56
6210 · Web Hosting	-	1,000.00	-	1,000.00
6300 · Miscellaneous	-	850.00	-	850.00
<b>Total Expense</b>	<b>1,369.94</b>	<b>38,510.83</b>	<b>54,437.01</b>	<b>94,317.78</b>
		39		
<b>Net Income</b>	<b>(289.94)</b>	<b>58,657.17</b>	<b>(53,237.01)</b>	<b>5,130.22</b>

National Association of Marine Laboratories  
**Profit & Loss by Class**  
 January through August 2015

6:04 PM

09/15/2015

Accrual Basis

	<u>Biennial Fall Meeting</u>	<u>General &amp; Administrative</u>	<u>Public Policy</u>	<u>TOTAL</u>
<b>Income</b>				
4000 · Membership Dues				
4000.10 · Dues - Large Laboratory	0.00	32,500.00	-	32,500.00
4000.20 · Dues - Medium Laboratory	0.00	40,500.00	-	40,500.00
4000.30 · Dues - Small Laboratory	0.00	16,000.00	-	16,000.00
<b>Total 4000 · Membership Dues</b>	<b>0.00</b>	<b>89,000.00</b>	<b>-</b>	<b>89,000.00</b>
4100 · Meeting Income				
4100.10 · Registration	200.00	0.00	2,755.00	2,955.00
<b>Total 4100 · Meeting Income</b>	<b>200.00</b>	<b>0.00</b>	<b>2,755.00</b>	<b>2,955.00</b>
4200 · Contributions	0.00	500.00	-	500.00
4500 · Other Income	0.00	0.00	19.00	19.00
<b>Total Income</b>	<b>200.00</b>	<b>89,500.00</b>	<b>2,774.00</b>	<b>92,474.00</b>
<b>Gross Profit</b>	<b>200.00</b>	<b>89,500.00</b>	<b>2,774.00</b>	<b>92,474.00</b>
<b>Expense</b>				
6020 · Audio/Visual	0.00	0.00	1,716.91	1,716.91
6030 · Bank Charges	0.00	293.63	-	293.63
6040 · Contractors/Consultants	0.00	0.00	40,000.00	40,000.00
6050 · Credit Card Fees	0.00	1,680.67	-	1,680.67
6080 · Food Functions	0.00	0.00	6,934.80	6,934.80
6130 · Management Fee	0.00	21,666.64	-	21,666.64
6150 · Posters/Signs	0.00	90.10	-	90.10
6200 · Travel	0.00	0.00	323.66	323.66
<b>Total Expense</b>	<b>0.00</b>	<b>23,731.04</b>	<b>48,975.37</b>	<b>72,706.41</b>
<b>Net Income</b>	<b>200.00</b>	<b>65,768.96</b>	<b>(46,201.37)</b>	<b>19,767.59</b>

# Summary:

Brought forward: ~\$53,707

Cash on hand: \$72,555

## Revenues

2014: \$99,448

2015: \$92,474, to date

## Expenses

2014: \$94,318

2015: \$72,706, to date

Known, major expenses, per year: \$92,500

Federal Science Partners: \$60,000

BAI: \$32,500

## Profit (loss):

2014: \$5,100

2015: ~(\$11,000) Assumes no further dues collection, so conservative

## Summary, and my thoughts

- Given our starting funds, and profit from 2014, we can handle a \$10K loss per year, for about 5 years, but one bad year or a declining trend...
- We need to stop covering meeting costs, not pay for food, use a reasonable registration fee to cover room/AV expenses
- Regionals and NAML board need to continue their recruitment efforts. SAML has been very proactive this year—new, more useable websites will help greatly here

## Burnett, Louis E

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**From:** George, Albert <AGeorge@scaquarium.org>  
**Sent:** 23 June, 2015 12:23 PM  
**To:** Burnett, Louis E  
**Cc:** kmills@scaquarium.org  
**Subject:** RE: South Carolina Aquarium's Application Letter to Join SAML and NAML

Dear Dr. Burnett:

Per your request see the below information in relation to background information on SCA. Let me know if the below information will suffice.

Since 2000, the South Carolina Aquarium has served as a powerful conduit for conservation education and outreach in the southeastern United States, welcoming more than 7 million guests and educating more than 1 million schoolchildren. The Aquarium is an acknowledged leader in field-based conservation initiatives, STEM education programming, and conservation science interpretation. Its Sea Turtle Care Center is considered an international model for its innovative care of sick and injured sea turtles, and for corresponding community engagement and outreach. Recently the Aquarium unveiled a five-year Watershed Vision and fundraising initiative to expand its capacity; chief among its primary objectives is the establishment of a formal Department of Conservation and the inaugural hiring of a Director of Conservation. One of the goals of the new department is the establishment of a comprehensive strategy to better engage the broader community in understanding and protecting precious marine and freshwater resources.

Thanks,

Albert

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**From:** Burnett, Louis E [mailto:BurnettL@cofc.edu]  
**Sent:** Tuesday, June 23, 2015 12:15 PM  
**To:** George, Albert  
**Cc:** Mills, Kevin  
**Subject:** RE: South Carolina Aquarium's Application Letter to Join SAML and NAML

Dear Albert,

Thanks for the application. If you could provide just a little more background on SCA, it would be helpful. This can be boilerplate stuff. I just want to make sure that this information is available as we go through our various layers of approval.

Thanks,

Lou  
\*\*\*\*\*

Lou Burnett, President 2014-2015  
Southern Association of Marine Laboratories (SAML)  
[BurnettL@cofc.edu](mailto:BurnettL@cofc.edu)

<http://saml.naml.org>  
<http://naml.org>

Grice Marine Laboratory  
College of Charleston  
205 Fort Johnson  
Charleston, SC 29412

Burnett Office: (843) 725-4824  
Burnett Lab: (843) 762-8755  
Email: [BurnettL@cofc.edu](mailto:BurnettL@cofc.edu)  
Lou Burnett Web: <http://burnettl.people.cofc.edu>

---

**From:** George, Albert [<mailto:AGeorge@scaquarium.org>]  
**Sent:** 23 June, 2015 11:43 AM  
**To:** Burnett, Louis E  
**Cc:** [k mills@scaquarium.org](mailto:k mills@scaquarium.org)  
**Subject:** South Carolina Aquarium's Application Letter to Join SAML and NAML

6.23.15

Dr. Lou Burnett, President 2014-2015  
Southern Association of Marine Laboratories (SAML)  
[BurnettL@cofc.edu](mailto:BurnettL@cofc.edu)

<http://saml.naml.org>  
<http://naml.org>

Grice Marine Laboratory  
College of Charleston  
205 Fort Johnson  
Charleston, SC 29412

Dear Dr. Burnett:

The South Carolina Aquarium is writing this letter with the intent to become a regular member of the Southern Association of Marine Laboratories (SAML) and the National Association of Marine Laboratories (NAML). We are excited about the prospect of becoming a member of both organizations and would like to thank you, SAML and NAML for your consideration of the South Carolina Aquarium's application.

Sincerely,

**Albert A. George II**  
**Director of Conservation**

**South Carolina Aquarium**  
100 Aquarium Wharf  
Charleston, SC 29401

(843) 577-3474  
[scaquarium.org](http://scaquarium.org)

*Leading the way to connect people with water, wildlife and wild places.*

The Governing Board voted unanimously to accept the SAML nomination for the South Carolina Aquarium (SCA) to join NAML.

Burnett, Louis E

Jun 23, 2015

to Albert, qwhite, voletya, eggleston, linda, me, gilchrist, ebankss, thompsjb

Dear Albert,

Good to hear from you. I think the South Carolina Aquarium (SCA) with its missions would make a good SAML/NAML member. The process is fairly straightforward. The procedures are outlined at <http://www.naml.org/members/join.php>. You just send an email to me as president of SAML and I will take it from there. Regular membership is what you want. This gives you membership in SAML as the regional organization as well as NAML. The dues for SCA would be annually a total of \$700 (\$200 to SAML and \$500 to NAML); I'm guessing on this because the dues are scaled to the size of the organization, but \$700 would be the minimum.

Let me know if you have any questions. I hope you are settled in your new job!

Best wishes,

Lou

\*\*\*\*\*

**From:** George, Albert [mailto:[AGeorge@scaquarium.org](mailto:AGeorge@scaquarium.org)]

**Sent:** 19 June, 2015 9:05 AM

**To:** Burnett, Louis E

**Cc:** [mgilligan22@gmail.com](mailto:mgilligan22@gmail.com)

**Subject:** Process for SCA to join the SAML

Dr. Burnett;

Thanks again for taking time to meet with me a little over a month ago. I have hit the ground running here at SCA. I am currently defining the parameters for the new conservation department. Chief of which would be to connect SCA to scientific organizations like SAML. What would be the process for SCA to become a member?

Thanks,

Al

**Albert A. George II**

**Director of Conservation**

**South Carolina Aquarium**

100 Aquarium Wharf

Charleston, SC 29401

[\(843\) 577-3474](tel:(843)577-3474)

[scaquarium.org](http://scaquarium.org)

# BOWDOIN COLLEGE

Dr. Graham Shimmield  
Executive Director, Bigelow Laboratories for Ocean Sciences  
President, NEAMGLL  
PO Box 380  
East Boothbay, ME 04544

May 11, 2015

Dear Dr. Shimmield,

As Director of the Bowdoin College Coastal Studies Center (CSC) I am writing to request Regular Membership in the Northeastern Association of Marine & Great Lakes Laboratories (NEAMGLL) and the National Association of Marine Laboratories (NAML).

The Bowdoin Coastal Studies Center is a relatively new marine laboratory on the East Coast. The 118-acre property was deeded to Bowdoin College in 1981 as a gift from the Thalheimer family. The development of new buildings and research infrastructure was made possible with a gift from Leon and Lisa Gorman, and the CSC was dedicated in 1998. Historically, the CSC has served as a field site and marine teaching laboratory for the Bowdoin Departments, including Biology, Earth and Ocean Sciences (formerly Geology), and the Environmental Studies Program.

Starting with a favorable outside review in 2011 and my recruitment in 2013, the CSC is undergoing a new wave of expansion in programming and research infrastructure. We will retain and preserve the remarkable undeveloped coastal habitats that are the cornerstone of the CSC, while expanding our abilities to host the best in marine science teaching and research. As you are well aware, our geographic position at the southern edge of the Gulf of Maine provides a sentinel location to understand the ecological impacts of a changing ecosystem in a diversity of near shore habitats. Thus we are reaching out to national and international research communities to attract expertise in benthic ecology, with a focus on climate change and invasion biology. I believe this expansion will uniquely position us among our peers institution, by linking our tradition of strong undergraduate education with the best in cutting-edge field and laboratory research.

Some notable CSC developments during my leadership include:

- The CSC will host the first Bowdoin Marine Science Semester, Fall 2015. This semester is an immersion experience in marine field-centered coursework and independent research taught in residence at the CSC and through field seminars in the Gulf of Maine and beyond. Open to Bowdoin and visiting undergraduates, the semester consists of four marine-centered courses that are taught sequentially in 3-4 week modules by Bowdoin faculty and visiting scholars.

DEPARTMENT OF BIOLOGY

- Completion of a \$500K renovation of the Marine Laboratory building, including seawater improvements, new experimental aquaria, and a dry laboratory space to support microscopy and molecular biology. We have also been recommended for an NSF FSML award that will build an experimental seawater laboratory, adding new capacity and precision to control temperature, oxygen, and carbonates in experimental settings.
- The addition of three new FTE lines to grow our CSC staff. The positions include an Assistant Director, Marine Laboratory Technician, and Laboratory Instructor for CSC based teaching. Searches will begin immediately.

I believe that membership in NEAMGLL/NAML is a key step in our new growth phase. Membership will give us greater connectivity to the broader community of marine laboratories, and allow us to build partnerships with our Gulf of Maine neighbors.

I look forward to your response.

Sincerely,

David B. Carlon

Director, Coastal Studies Center  
Associate Professor of Biology  
Bowdoin College

- B. Standing committees shall include, but not be limited to, the following:
1. Nominating Committee. Appointed by the President before July 1 of each election year to prepare a slate of nominations for the office of Vice-President/President-Elect. It shall consist of members from the Regional Organization from which the President-Elect is to be elected. The chairman shall be the immediate past president of the Association. In the event he/she is unable to serve, the President may appoint any eligible individual as defined above.

#### ARTICLE IV

##### Election of Vice-President/President-Elect

###### Section 1: Candidates

Candidates for the office of Vice-President/President-elect shall be regular delegates of the Association. The office must be rotated between members of each region and organization.

###### Section 2: Nominations

Candidates shall be nominated by the Nominating Committee. **Notice of such nominations shall be given by the Nominating Committee to all members at least thirty (30) days prior to the meeting at which the election shall take place.** Additional candidates may be nominated by regular members at the meeting at which the election shall take place.

###### Section 3: Election

The officer shall be elected from among the nominees by majority vote during the biennial meeting of the Association in the last year of the incumbent's term of office.

-----

August 5, 2015, Steve Weisberg, Report from WAML meeting at the end of July  
 I wanted to let you know that we had a very effective, and well attended, WAML meeting last week. I am writing you because you tasked me with ensuring we have a WAML candidate for NAML President-elect that we can name at the next NAML meeting. I think we ended up with a good choice:

Bob Cowen. We selected Bob for this role because not only does he has the personality for such a role, but he also has worked at labs in other parts of the country which gives him perspective that will help him lead a national organization.

Bob Cowen has held leadership roles in labs in three different affiliate society geographies, and his google scholar profile so you can see his publication history (extensive). WAML thought he would be the best candidate WAML could put forward. A good combination of tempered personality, leadership skills, good speaking ability, and scholarship credibility. He should play well to both the membership and to Capitol Hill.



*Hatfield Marine Science Center*

***Bob Cowen, Director 2013–Present***



Dr. Bob Cowen began as Hatfield Marine Science Center’s newest Director in July 2013. Previously, he was the Robert C. Maytag Chair of Ichthyology at the University of Miami’s Rosenstiel School of Marine and Atmospheric Science and the Associate Dean for Research. He had served on the faculty at the University of Miami since 1998, and

before that he was a member of the faculty of State University of New York at Stony Brook. He received his Ph.D. from the Scripps Institution of Oceanography in San Diego, California. Dr. Cowen has extensive experience in marine science, including coastal fish ecology, fishery oceanography, larval transport, and marine organism population connectivity from both the Atlantic and Pacific Oceans. His additional expertise in marine education will serve Hatfield Marine Science Center well in the development of an expanded marine science curriculum and in support of the center's research and outreach endeavors.

Fine-scale planktonic habitat partitioning at a shelf-slope front revealed by a high-resolution imaging system, AT Greer, RK Cowen, CM Guigand, JA Hare  
Journal of Marine Systems 142, 111-125, 2015

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Close encounters with eddies: oceanographic features increase growth of larval reef fishes during their journey to the reef, K Shulzitski, S Sponaugle, M Hauff, K Walter, EK D'Alessandro, ...  
Biology letters 11 (1), 20140746, 2015

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Effects of ocean acidification on the larvae of a high-value pelagic fisheries species, mahi-mahi *Coryphaena hippurus*, S Bignami, S Sponaugle, RK Cowen  
Inter-Research, 2014

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The role of internal waves in larval fish interactions with potential predators and prey  
AT Greer, RK Cowen, CM Guigand, JA Hare, D Tang  
Progress in Oceanography 127, 47-61, 2014

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Environmental drivers of the fine-scale distribution of a gelatinous zooplankton community across a mesoscale front, JY Luo, B Grassian, D Tang, JO Irisson, AT Greer, CM Guigand, ...  
Inter-Research, 2014

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Hidden thin layers of toxic diatoms in a coastal bay  
AHV Timmerman, MA McManus, OM Cheriton, RK Cowen, AT Greer, ...  
Deep Sea Research Part II: Topical Studies in Oceanography 101, 129-140, 2014

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Hatfield Marine Science Center Dynamic Revetment Project DSL permit# 45455-FP: Monitoring Report February 2014, R Cowen, W Nelson, J Allen, S Arbuckle, C Folger, 2014

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Early life history and fisheries oceanography: new questions in a changing world  
JK Llopiz, RK Cowen, MJ Hauff, R Ji, PL Munday, BA Muhling, MA Peck, ...  
The Oceanography Society, 2014

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Across-shore variability in plankton layering and abundance associated with physical forcing in Monterey Bay, California  
JC Sevadjian, MA McManus, J Ryan, AT Greer, RK Cowen, CB Woodson  
Continental Shelf Research 72, 138-151, 2014

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**From:** Herman Hummel <[Herman.Hummel@nioz.nl](mailto:Herman.Hummel@nioz.nl)>  
**Date:** Tuesday, August 18, 2015 at 10:28 AM  
**To:** Ivar Babb <[Ivar.Babb@uconn.edu](mailto:Ivar.Babb@uconn.edu)>  
**Cc:** Christiaan Hummel <[Christiaan.Hummel@nioz.nl](mailto:Christiaan.Hummel@nioz.nl)>  
**Subject:** MARS Directors and WAMS General Assembly meeting; 21-23 October; Sopot, Poland

Dear Ivar,

As you may know, this year's MARS Directors and WAMS General Assembly meeting will be organised from 21<sup>st</sup> of October till the 23<sup>rd</sup> of October in Sopot, Poland.

We wonder if you are coming to this meeting also this year? In case you will come to the meeting we have a request. During the preparations for the meeting we came across your name in a report called "Enhancing the Value and Sustainability of Field Stations and Marine Laboratories in the 21<sup>st</sup> Century". Would it be possible for you to give (during a 20 minute presentation in the WAMS part of the meeting) an overview on this subject, how it is dealt with, and what the role of WAMS (and NAML and MARS) could be? If you accept this request, could you send us a tentative title that we want to use for the mailings that we will send end of August?

In case you face difficulties in attending the meeting, maybe we can assist in (part of) the problems.

Sincerely,  
Herman

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### **Tentative programme MARS Directors meeting 21- 23 October**

Wednesday, 21st of October

Location: Institute of Oceanology (IOPAN), Sopot

08:30 - 09:30 : Registration  
09:30 - 13:00 : Plenary meeting: The science-policy interface: translating marine science into political action and vice versa.  
13:00 - 14:00 : Lunch  
14:00 - 15:30 : Discussion  
Discussion points are (amongst others):  
- The MSFD, and the Descriptors of Good Environmental Status (GES)  
- Long Term observation series  
- The importance of marine stations  
15:30 - 16:00 : Celebration of the 20th anniversary of MARS  
16:00 - ... : Social programme and conference dinner.

Thursday, 22nd of October

Location: Hel Marine Station , University of Gdansk, Hel (transport from 08:30 by boat or bus)

11:00 - 13:00 : Marine science: A global dimension  
13:00 - 14:00 : Lunch  
14:00 - 16:00 : Discussion  
16:00 - ... : Social programme and dinner in Hel

Friday, 23rd of October

Location: Institute of Oceanology (IOPAN), Sopot

09:00 - 11:00 : Plenary meeting  
11:00 - 12:00 : Discussion  
12:00 - 13:00 : Lunch  
13:00 : Departure

**Babb,**

**Ivar** <ivar.babb@uconn.edu

>

to: Herman Hummel  
<Herman.Hummel@nioz.nl>

cc: "babb@uconn.edu"  
<babb@uconn.edu>,  
Christiaan Hummel  
<Christiaan.Hummel@nioz.nl>,  
Nancy Rabalais  
<nrabalais@lumcon.edu>,  
Mike De Luca  
<deluca@marine.rutgers.edu>,  
Michael Thorndyke  
<mike.thorndyke@bioenv.gu.se>

**MARS Directors and WAMS General Assembly meeting; 21-23 October; Sopot, Poland**

**Babb, Ivar** <ivar.babb@uconn.edu>

Aug  
18

to me, Mike

Nancy, Mike,

See the email below. As you may know, I believe very strongly in the potential role that NAML can play on the global stage and have tried since 2011 to keep our foot in the door w/ the development(s) of WAMS (World Association of Marine Stations), and have attended a WAMS

meeting in Portugal in 2011 and repeatedly tried to get WAMS representatives here to the States (on their own nickel, which hasn't panned out).

As one of the authors of the NAML-OBFS Strategic Visioning report that catalyzed the NRC report reference below, I would be happy to attend the meeting in the fall in Poland to speak to the NRC report (although I would need to get some financial support as discretionary funds are very low here, Hermann does suggest they might be able to offset some costs).

As an fyi, I was also at the recent Global Ocean Science Education meeting held at URI that is seeking ways to better network ocean science education globally. I also attended last years European Marine Science Educators Association (EMSEA) meeting in Sweden, and am trying to get UConn to pay for some of my travel to attend their meeting this year in late September. As you know I am on our NAML Ed Committee and working w/ Jan and Alan Berkowitz et al to move forward on the recommendation from the NRC report re: developing a more substantial, quantitative (vs anecdotal) set of metrics on the impact of place-based, experiential learning.

So, I remain interested in the global facet of NAML/WAMS etc..but realize that you two are the current Directorate of NAML, and wanted to send you this note to get your take on where NAML strategically should be headed re: the international community.

I personally think the time is right to move more energetically on this opportunity. In fact, in the spirit of keeping things moving w/in a volunteer organization like NAML, I think we should contemplate forming an "International Committee"...seek our members who have interest and/or are developing international ties and who might want to work on behalf of NAML to ensure that we are a force w/in the global ocean science and education communities.

I will forward you another email that I just got momentarily that is a link to the survey for global marine stations. (As a side note, interestingly, the organizers of that effort have purposefully not included freshwater labs, which does exclude a few labs in NEAMGLL). I think overall it would be good to send this out to the entire membership and work w/ the MARS/WAMS to get the information from our NAML labs forwarded back to us from the SurveyMonkey for inclusion in our website

I would be happy to discuss any of this over the phone if you thought that might be a good next step.

Regards, Ivar

Ivar G. Babb

Director - Northeast Underwater Research Technology and Education Center (NURTEC)

Director - Center for Ocean Science Education Excellence – Technology & Engineering for Knowledge (COSEE-TEK)

Past-President - National Association of Marine Laboratories (NAML)

University of Connecticut at Avery Point

1080 Shennecossett Road

Groton, CT 06340

Phone: [860-405-9121](tel:860-405-9121)

# "WAMS"

## The World Association of Marine Stations

### A Network of Marine Stations and Institutes for the 21st Century



Africa





# The European Network of Marine Research Institutes and Stations

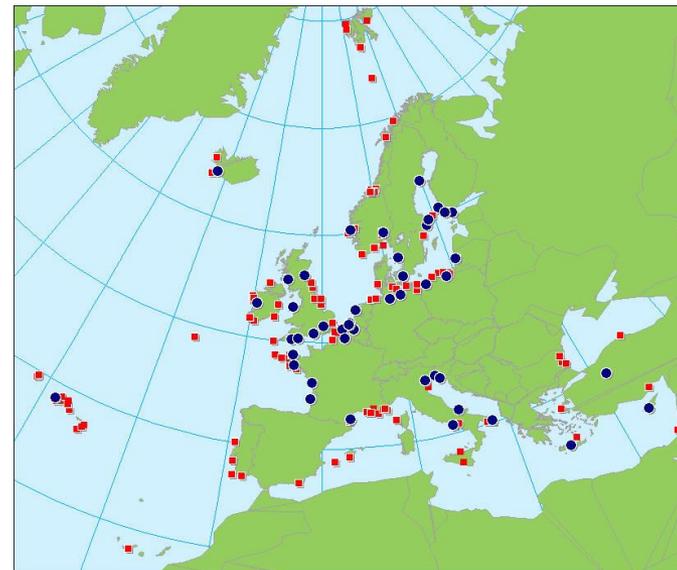
> 60+ Labs/Insts



SZN, Italy



SLC, Sweden



SAMS, UK



MBA, UK



SOI, UK



SARS, Norway



CCMAR, Portugal



AWI, Germany



SBR, France



OOVS, France



OOBS, France



HMRC, Greece

# USA

120 labs/institutes

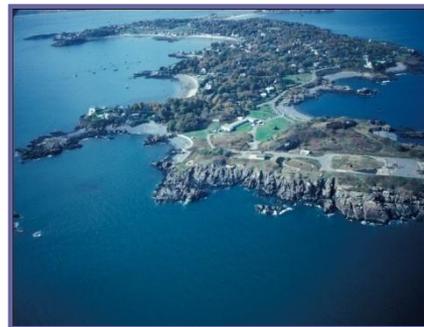
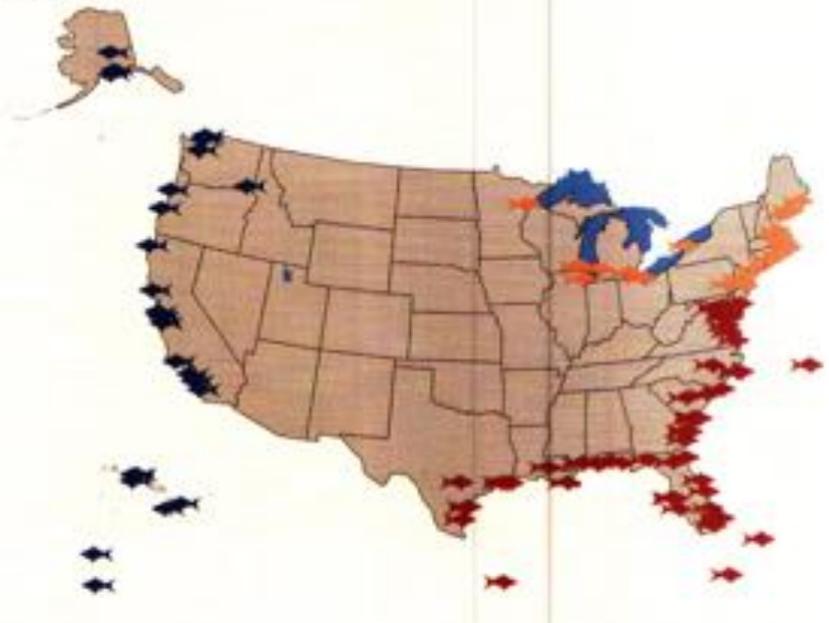


## Regional Associations of NAML:

**NEAMGLL**, Northeastern Association of Marine and Great Lakes Laboratories, includes the Mid-Atlantic, New England, and the Great Lakes states;

**SAML**, Southern Association of Marine Laboratories, includes coastal states from Maryland to Texas, and Bermuda, Puerto Rico, Panama and the Antarctic;

**WAML**, Western Association of Marine Laboratories, includes the states of the West Coast, Hawaii, Guam and Palau.



# Japan >150 (largely small) marine stations



## Organization of Marine Stations in Japan

Hokkaido Honshu  
Shikoku Kyushu  
Okinawa



### ◆ Marine Station - National University

#### Science

Graduate School of Science,  
Field Science Center, University Institute (total 21)

#### Directors Congress

#### Agriculture/Fisheries

Graduate School of Agriculture/Fisheries,  
Field Science Center, University Institute (total ~25)

#### Directors Congress

### ◆ Marine Station

- Prefectural or Private University (~10)

### ◆ JAMSTEC

(Japan Agency for Marine-Earth Science and Technology)

### ◆ Experimental Station

- Prefectural Fisheries Station (~100)

### ◆ Company; Corporation, etc



## JAMBIO: Japanese Association for Marine Biology



- ◎ Core-center for Japanese Marine Biology Network
- ◎ Cooperative management by Univ. Tsukuba and Univ. Tokyo
- ◎ Hub for Japanese scientists and organization for marine biology

Shimoda Marine Research Center, University of Tsukuba: 10 faculty member



**Main Facility** Proteomics-center, Molecular and Cellular Biology, Transgenic animals, Marine diving, Experimental ecology system, Protein DB, Marine Bio-resource (*Ciona intestinalis*)

Misaki Marine Biological Station, University of Tokyo: 5 faculty member



**Main Facility** Marine Genomics and Resource, Molecular Phylogeny, Marine diving, Sagami-Bay DB, Marine Bio-resource (*Oxycomanthus japonicus*)

# Australia

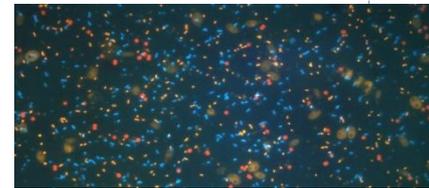
## Tropical Marine Network

- Affiliation of Six Research Stations belonging to three universities and the Australian Museum
- Based largely on the Great Barrier Reef
- Delivers co-operative education programs and Joint infrastructure developments



# ***Marine Stations are unique and essential for marine research (in partnership with vessels, satellites, remote systems etc.)***

- **Providing access to marine ecosystems including valuable (historical) time-series data**
- **Providing access to marine models for Biomedicine, ecotoxicology, biodiversity, gene discovery**
- **Providing logistics for ex situ experiments, including modern equipment for biology**
- **Providing logistics for hosting and catering**



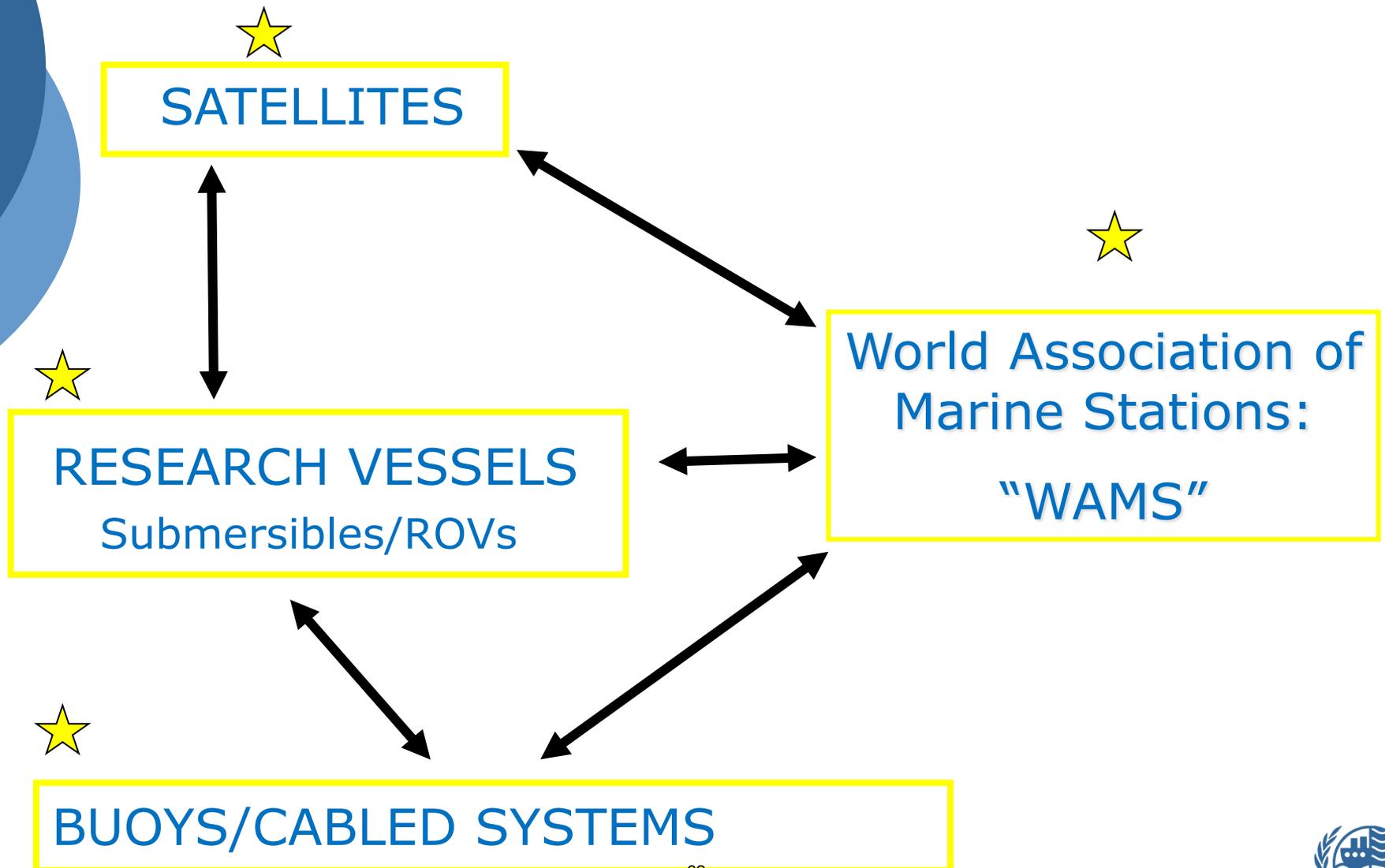
# ***Marine Stations are:***

- **ideal places to study organisms in their habitat and in the lab**
- **great places for the public to see research happening, and to increase ocean literacy. Marine labs are “windows on the ocean”**
- **able to host large numbers of students at all stages (K-16+) during the year, often in all seasons (classes, field trips, tours, internships)**
- **accessible to researchers on a regular basis, short to long term**
- **places for graduate students to begin independent research**
- **home to experts in taxonomy, ecology, oceanography, biology etc.**
- **places to teach small intensive undergraduate/graduate classes**

# ***Marine Stations Are:***

- excellent for research from molecular to ecosystem levels  
(genomics, biomedical, fisheries, development, ecology, neurobiology, physiology, biomaterials)
- ideal for long-term ecological research, real time data collection  
(e.g. to support OBIS), climate/ocean change impacts
- inexpensive test-beds for new ocean instrumentation
- land base stations for OOS, buoys and cabled arrays, submersibles/ROVs
- support bases for research vessels, boats, diving research support
- places to integrate social science and natural science research/education

# Infrastructure Needs for Ocean Research, for the Next Two Decades





## What for the future?

- **Global cooperation**
- **Regional diversity**
- **Capacity building**
- **Solidarity**



# ***WAMS Founding Steering Group:***

- MARS, The European Marine Network of Marine Institutes and Stations
- NAML, The National Association of Marine Laboratories USA,
- AMLC and CARICOMP The Association of Marine Laboratories of the Caribbean,
- JAMBIO, The Japanese Association for Marine Biology , Japan,
- PIMS, The Pacific Institutes of Marine Science,
- POGO
- Tropical Marine Network (Australia)
- GOOS – Africa (representing African Marine Laboratories)
- UNESCO IOC
- UNESCO MAB

**The scope of the activities within WAMS will address the theme of marine biodiversity and sustainability :**

**“From Genes to Ecosystems”**

## ***WAMS activities and mission***

- Exchange programmes, (e.g. Global ERASMUS programme)
- Training and education,
- Capacity building
- “In kind” sharing of data and access to facilities,
- Joint development and harmonization of techniques and methods,
- Integrated research strategies.
- WAMS fellowships, (WAMS trust fund in cooperation with the IOC).

***Particularly important activities for WAMS in its initial phase should be:***

- Inventory of the WAMS membership marine sites
- Portal site for each marine station
- ***Capacity building for Developing Nations***

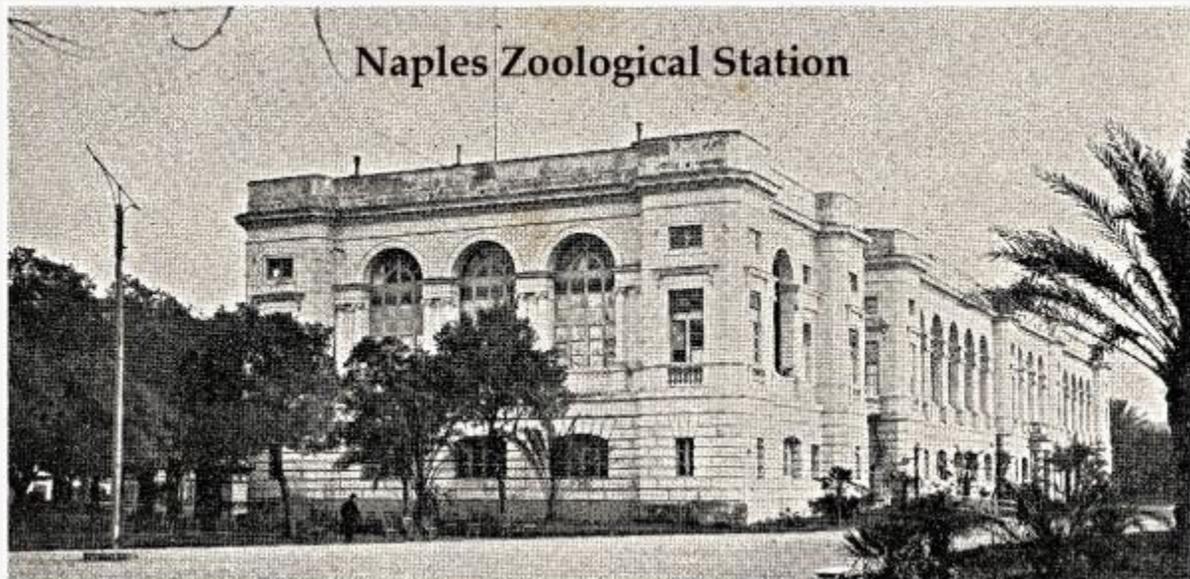
# *The Time is right for WAMS*

... "Knowledge about marine biodiversity .....is extensive owing to ...centuries of its study in many places and by a variety of enterprises. ....the innumerable academic institutions with shore facilities for study of the marine environment .....have provided foci of research and knowledge....." Fautin et al. (2010) PLoS ONE 5(8)

"Another point of consensus .....is the inventory of threats to marine biodiversity. Indeed, most threats identified ....are true for the entire world."  
Birmingham Science News Examiner August 5<sup>th</sup> 2010

# MARS Network

## The European Network of Marine Research Institutions and Stations



The **MARS network** is a foundation created by, and open to, Europe's marine research institutes and stations.

- members are world leaders in fundamental marine research and have important research facilities available that allow direct access to the sea.
- the network serves furthermore as a forum and as an interest group and communicates with international organisations and the managers of European research, including the Commission of the European Community in Brussels.
- members are located all over Europe, along the shores of the Atlantic Ocean, the North, Irish, Baltic and Adriatic Seas, and the Black and Mediterranean Seas.
- the network aims to provide a platform which helps to delineate overarching marine research themes, to promote cooperation, and to share relevant expertise and facilities in the marine realm.

## World Association of Marine Stations (WAMS)

The World's leading Marine Station Networks have recently come together in a global initiative to create the World Association of Marine Stations.

### Benefits will include:

- Integrated global response to climate change impacts on marine ecosystems, their sustainability and biodiversity.
- Increased focus on capacity building for marine research in developing nations.
- Global training and education programmes for young marine scientists.
- Joint development and harmonization of techniques and methods.
- Integrated research strategies, and increase knowledge on the science of MPAs and Marine Reserves.

See [presentation of WAMS](#) by Mike Thorndyke, Chair of WAMS.

### WAMS and IOC

WAMS is very interested to develop its activities in collaboration with the Intergovernmental Oceanographic Commission (IOC) of UNESCO. The IOC delegates welcomed the WAMS initiative and several expressed their interest become involved in WAMS. We are very pleased with the positive response from the delegations attending the 26th session of the IOC Assembly. WAMS is an open and flexible organization and we welcome marine laboratories and institutes both large and small to join WAMS activities. We also welcome the opportunity to work more closely with IOC, in particular in connection with capacity building and concrete actions to:

- increase human potential in marine research and development
- increase opportunities for access to training and research mentoring programmes for young scientists worldwide
- increase sharing of experiences

[Read more](#) on this WAMS-IOC collaboration.

### FOR MORE INFORMATION PLEASE CONTACT

Professor Mike Thorndyke  
Royal Swedish Academy of Sciences and University of Gothenburg,  
Chair of World Association of Marine Stations (WAMS)  
Sven Lovén Centre for Marine Sciences – Kristineberg  
Fiskebackskil  
Sweden  
Tel: ++46 (0)523 185 00/54  
Cell: ++46 (0)70 242 3119  
Email: [mike.thorndyke@marecol.gu.se](mailto:mike.thorndyke@marecol.gu.se) of Marine Research Institutes and Stations

# Members

**Regular members** are laboratories, institutes or university departments primarily devoted to fundamental marine science and possessing coastal research facilities.

The MARS Network is a foundation with specific [statutes and bylaws](#).

Only directors, or their delegates, from regular members do have voting rights at general and director meetings.

The **Executive Board** can co-opt members for specific purposes. One of the co-opted members shall be the Executive Secretary to be proposed by UNESCO Venice.

Co-opted members can be appointed on the basis of being: 1) editor of the Newsletter, 2) co-ordinators of major MARS related scientific projects, 3) responsible for other duties strongly related to MARS. Co-opted members have, once invited, the same rights and duties as the regular members of the steering committee.

Membership subscription-fees are :

- 350 euros for labs with less than 25 total personnel \$398
- 700 euros for labs with between 25-50 total personnel \$796
- 1,250 euros for labs with more than 50 total personnel \$1,421

The benefits and activities that you may expect of the MARS Network membership are:

- Supporting the marine stations as an important part of Europe's scientific patrimonium
- Creating awareness of the role of the marine stations
- Improved personal and institutional relationships between member institutes
- Contacts with the managers of European research, including:
  - the European Science Foundation (ESF) in Strasbourg
  - UNESCO in Paris
  - the Commission of the European Communities in Brussels
- Symposia and workshops organized by the MARS executive and member institutes
- Exchange of personnel
- Involvement in research proposals (MARS already generated about 20 M€ in project money that went mainly to its members)
- Participating in networking in the 7th EC framework Programme and Horizon 2020
- Help for institutes with currency restrictions, e.g. in Eastern Europe
- Grants for young scientists from MARS member laboratories to visit another MARS member laboratory

## Survey for book on Marine Stations

Babb, Ivar <ivar.babb@uconn.edu>

Jul  
27

to me, Mike

Nancy, Mike,

See the link below from our international colleagues as part of NAML's involvement in the World Association of Marine Laboratories that is developing a survey to develop a global inventory of marine stations.

If you go to the link you have to answer 2 of the questions (# FTEs and one other..) before you can proceed to review the entire survey.

As you can see this questionnaire asks a lot of detailed questions about infrastructure and long term data sets etc. This would be a tremendous resource if we were able to get this completed by a majority of NAML members (in addition to our global partners)...but would require quite a bit of time to complete..

I am CC'ed on this since I did (and continue to have) an interest in the notion and potential of WAMS during my Presidency...

How would you like to proceed with this...note that this email is asking for comments on the survey...

Thanks, Ivar

**From:** Christiaan Hummel <[Christiaan.Hummel@nioz.nl](mailto:Christiaan.Hummel@nioz.nl)>

**Date:** Monday, July 27, 2015 at 11:14 AM

**To:** Ivar Babb <[Ivar.Babb@uconn.edu](mailto:Ivar.Babb@uconn.edu)>, "[tplatt@dal.ca](mailto:tplatt@dal.ca)" <[tplatt@dal.ca](mailto:tplatt@dal.ca)>, "[b.degnan@uq.edu.au](mailto:b.degnan@uq.edu.au)" <[b.degnan@uq.edu.au](mailto:b.degnan@uq.edu.au)>, "[inaba@kurofune.shimoda.tsukuba.ac.jp](mailto:inaba@kurofune.shimoda.tsukuba.ac.jp)" <[inaba@kurofune.shimoda.tsukuba.ac.jp](mailto:inaba@kurofune.shimoda.tsukuba.ac.jp)>, "[kinaba\\_phd@yahoo.co.jp](mailto:kinaba_phd@yahoo.co.jp)" <[kinaba\\_phd@yahoo.co.jp](mailto:kinaba_phd@yahoo.co.jp)>, "[psnelgrove@mun.ca](mailto:psnelgrove@mun.ca)" <[psnelgrove@mun.ca](mailto:psnelgrove@mun.ca)>, "[i.tibbetts@uq.edu.au](mailto:i.tibbetts@uq.edu.au)" <[i.tibbetts@uq.edu.au](mailto:i.tibbetts@uq.edu.au)>

**Cc:** "[mike.thorndyke@bioenv.gu.se](mailto:mike.thorndyke@bioenv.gu.se)" <[mike.thorndyke@bioenv.gu.se](mailto:mike.thorndyke@bioenv.gu.se)>, Herman Hummel <[Herman.Hummel@nioz.nl](mailto:Herman.Hummel@nioz.nl)>

**Subject:** Survey for book on Marine Stations

Dear WAMS member,

We have finally composed the survey for the Book on Marine Stations. The link to this draft survey is: <https://www.surveymonkey.com/r/WWVRNN8> . We would like you to take a look at the survey, and see if you have any suggestions, additions or comments. If so, please email them to the MARS secretariat : [Christiaan.hummel@nioz.nl](mailto:Christiaan.hummel@nioz.nl), or [ormars@nioz.nl](mailto:ormars@nioz.nl) at latest on Sunday 2 August.

Sincerely,

Christiaan Hummel

**From:** Herman Hummel <[Herman.Hummel@nioz.nl](mailto:Herman.Hummel@nioz.nl)>

**Date:** Monday, August 10, 2015 at 6:24 AM

**To:** Michael Thorndyke <[mike.thorndyke@bioenv.gu.se](mailto:mike.thorndyke@bioenv.gu.se)>, kinaba\_phd <[kinaba\\_phd@yahoo.co.jp](mailto:kinaba_phd@yahoo.co.jp)>, Ivar Babb <[Ivar.Babb@uconn.edu](mailto:Ivar.Babb@uconn.edu)>, Christiaan Hummel <[Christiaan.Hummel@nioz.nl](mailto:Christiaan.Hummel@nioz.nl)>

**Cc:** "[tplatt@dal.ca](mailto:tplatt@dal.ca)" <[tplatt@dal.ca](mailto:tplatt@dal.ca)>, "[b.degnan@uq.edu.au](mailto:b.degnan@uq.edu.au)" <[b.degnan@uq.edu.au](mailto:b.degnan@uq.edu.au)>, "[inaba@kurofune.shimoda.tsukuba.ac.jp](mailto:inaba@kurofune.shimoda.tsukuba.ac.jp)" <[inaba@kurofune.shimoda.tsukuba.ac.jp](mailto:inaba@kurofune.shimoda.tsukuba.ac.jp)>, "[psnelgrove@mun.ca](mailto:psnelgrove@mun.ca)" <[psnelgrove@mun.ca](mailto:psnelgrove@mun.ca)>, "[i.tibbetts@uq.edu.au](mailto:i.tibbetts@uq.edu.au)" <[i.tibbetts@uq.edu.au](mailto:i.tibbetts@uq.edu.au)>

**Subject:** RE: Survey for book on Marine Stations

Dear all,

Thanks for your replies (and thanks to Ivar for already answering some questions).

Regarding the specific remarks.

- 1) We have contacted the helpdesk of SurveyMonkey and it is NOT possible to show a summary window before final submission. Nevertheless, a feedback mechanism is built in in our procedure. Firstly for the booklet this is the normal proof-reading of the manuscripts (which will be distributed per contributor to their station). Secondly for the website, we will give all contributors a (password protected) admission to their entries, whereby they can make changes to their entries.
- 2) The word "all" has been removed.
- 3) Indeed "permanent" may have different connotations in different regions. At the other hand, we have to take care also to make a distinction between those stations with lots of (temporary) students and those with more fixed staff. So, there will always be some confusion whatever term we use. We have now copied the MARS approach indicating "total personnel (in fte)" and added "(excluding students)".
- 4) Although political maybe sometimes correct, the booklet (and website) will be on marine stations (as are the intentions of WAMS and MARS, and is the title of the booklet), and thus we should not start to add the freshwater stations (making the booklet being on Aquatic stations). It would cause an endless discussion, and also a huge incomprehensible booklet – we should avoid that.
- 5) A sentence has been added, indicating the cooperation in WAMS.

Best wishes, Herman and Christiaan

Very short member survey about art programs at FSMLs:  
<https://www.surveymonkey.com/s/JFD7W9X>

### **New Working Group on Art at FSMLs**

At the September 2014 OBFS/NAML Joint Meeting in Woods Hole, Dr. Jerry Schubel [made a presentation](#) on the recent National Academy of Sciences report, “[Enhancing the Value and Sustainability of Field Stations and Marine Laboratories in the 21<sup>st</sup> Century.](#)” In his talk, Dr. Schubel took the FSMLs to task for often failing to connect new data and knowledge through to policy and action, something that becomes more and more critical to our facilities’ survival as time goes by.

Many of us feel that art can create the emotional connection to science that is needed to link this chain of progression, and can provide unexpected new ways of perceiving problems, issues, and potential solutions. During a lunch table conversation, an official working group on art at field stations and marine labs formed.

The purpose of the working group is to explore the intersection of art and science, provide examples, and share ideas and resources. Integrating art into field science programs is new ground for many stations, and we can all use some aid in figuring out the deep potential of this partnership, and how art can improve our operations, connect us to new stakeholder groups, and help us achieve our missions in a changing physical and political climate.

The working group now has a blog at [fmsl-art.blogspot.com](http://fmsl-art.blogspot.com). The list of participants is posted. If you would like to be added to the group, or to post something to the blog, please contact the current Group Coordinator, Faerthen Felix ([ffelix@berkeley.edu](mailto:ffelix@berkeley.edu)).

At present, we’d particularly like to build a reference library of case studies for art at FSMLs. The blog already has a few examples, including Philippe Cohen’s list of programs from the 2012 OBFS art at field stations poster session; the H.J. Andrews “Ecological Reflections” program; and program descriptions from the University of Nebraska, Lincoln’s Cedar Point Biological Station and UC Berkeley’s Sagehen Creek Field Station. Please consider helping us expand this resource by writing up a brief case study for your own field reserve or marine lab art program.

We’d also like to establish just how many FSMLs currently have an art or humanities program. We’ve created [a very short SurveyMonkey questionnaire](#), and we’d ask you to please take a few minutes to answer the queries about your program. If you just can’t spare the time, a simple e-mail saying, “Yes, our FSML has an art program,” or, “No, we don’t” is better than no response.

Thanks in advance for your assistance! Please don't hesitate to get in touch with me for more information about the Art @ FSMLs working group.

--Faerthen Felix, UC Berkeley - Sagehen Creek Field Station [ffelix@berkeley.edu](mailto:ffelix@berkeley.edu)

# Coastal Waters Art & Science Camp

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April Olivier  
"Window of Time"-2014

Presentation by  
Murt Conover, Senior Marine Educator  
Louisiana Universities Marine Consortium

# Coastal Waters Art & Science Camp

- Hosted by LUMCON at the DeFelice Marine Center, Cocodrie, Louisiana
- Funded by LUMCON & the Coastal Waters Consortium through a grant from the Gulf of Research Initiative
- June 2014 and June 2015 (1-week residential camp)
- Led by science educators and professional artists/educators



# Coastal Waters Art & Science Camp

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## Program Mission:

*To further scientific research experience and creative expression among students grades 8-12.*

## Program Objectives:

- (1) students gain research experience and the skills needed to execute quality field research projects*
- (2) foster environmental stewardship for Louisiana's threatened coastal ecosystems*
- (3) students will be able to effectively communicate scientifically and artistically to help educate others and to stimulate action for environmental conservation/knowledge.*



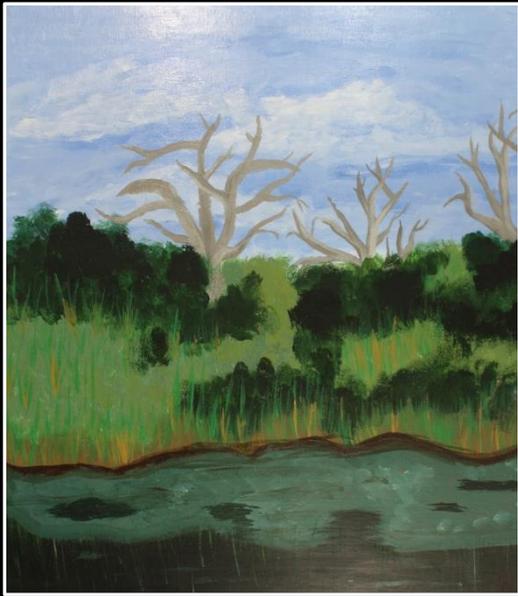
Marissa Nguyen  
"Periwinkle Parade"-2014



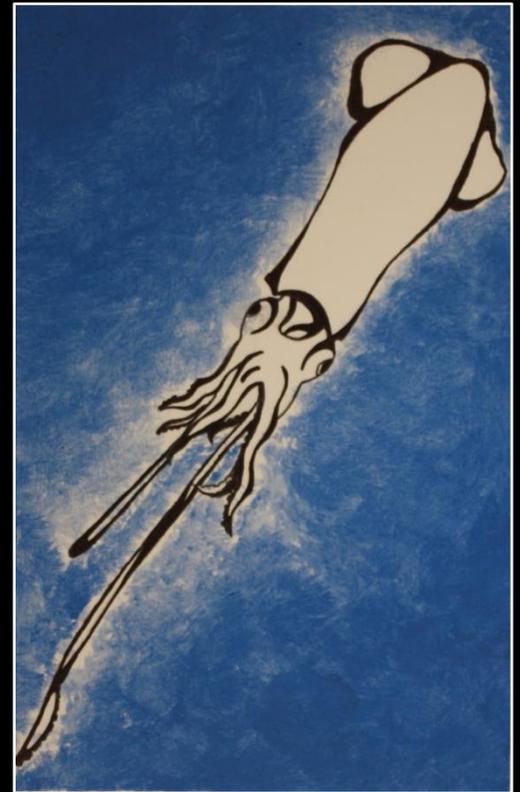
Isabelle Townsend  
"Great Blue"-2015



Grayson Goolsby  
"playful Cuteness"-2015



Hallie Rogers  
"Ghost Trees of Cocodrie"-2015



Pearlie Leaf  
"Squid"-2014



Hallie Rogers  
"Sea Ox-eye"-2015



Seletra Sylve  
"Bay Anchovy Study"-2014



## MEMORANDUM FROM FEDERAL SCIENCE PARTNERS

Washington, D.C.

Date: September 9, 2015

To: Dr. Nancy Rabalais, President, National Association of Marine Laboratories  
Mr. Mike DeLuca, Chair, NAML Public Policy Committee

Fm: Joel Widder, Partner, Federal Science Partners  
Meg Thompson, Partner, Federal Science Partners

Re: Report on Public Policy Accomplishments Since NAML's Engagement with FSP

This memorandum will provide NAML and its membership a summary of the support FSP has provided NAML and the outcomes to date of those activities. This will enable NAML and its members to evaluate the performance of FSP and provide appropriate feedback and guidance to FSP.

In May 2014 Federal Science Partners (FSP) began operations as a professional government relations consulting firm cofounded by Mr. Joel Widder and Ms. Meg Thompson. Mr. Widder and Ms. Thompson had been partners at the Oldaker Group where they had provided government relations consulting and advocacy services to NAML. NAML decided to continue its relationship with Mr. Widder and Ms. Thompson and became clients of FSP in May 2014

As in years past, FSP annually organized the discussion amongst NAML members that have led to the development of a set of NAML public policy priorities. These most recent public priorities were included in both the association's FY 2016 public policy agenda and in formal testimony submitted to the Congress. They also provide the foundation for NAML activity with relevant Federal agencies and Capitol Hill each year. These priorities were built on or evolved from the public policy priorities NAML established in prior years with the support of Joel Widder and Meg Thompson

NAML's current FY 2016 public policy priorities are also drawn from and strongly support two important reports from the National Academy of Sciences. They are: ***Sea Change: 2015-2025 Decadal Survey of Ocean Sciences (DSOS)***; and ***Enhancing the Value and Sustainability of Field Stations and Marine Laboratories in the 21<sup>st</sup> Century***. NAML established these priorities with the support of FSP and after extensive consultation and discussion among the members of the NAML Public Policy Committee and the membership of NAML. Specific priorities germane to NAML labs are:

- Enhance science, education and public engagement at marine labs by supporting the continued development of their unique assets and qualities that allow them to prepare the next generation of scientists, expand opportunities for active learning and collaborative research, and explore a wide range of approaches to engage the public. This includes strong sustained support for competitive merit-based ocean, coastal, and Great Lakes research provided by relevant federal agencies to address the research priorities identified in *DSOS*;
- Promote a network for discovery and innovation via Federal and non-Federal support to build and maintain a modern infrastructure for research, education, and networking including advanced internet connectivity and cyber infrastructure;
- Pursue financial sustainability by developing business plans that foster the unique value of marine labs, creating mechanisms to establish reliable based funding, and diversifying

approaches to obtain supplemental support – such as a national partnership program to co-locate federal scientists and infrastructure at NAML facilities; and

- Develop metrics for demonstrating the impact of marine labs in research, education, and public engagement.

**RECENT ISSUES AND OUTCOMES**

Issue	Outcome or Status
<p><b>Advocate for “...sustained support for competitive merit-based ocean, coastal, and Great Lakes research provided by relevant federal agencies...”</b></p>	<p>NAML submitted testimony before the Appropriations Committees; met with Congressional staff, and interacted with key agency policy officials, and executed a strategy in conjunction with like-minded organizations to advocate for the support for important research and education programs in NSF, NOAA, NASA, EPA, and other relevant agencies. FSP assisted NAML to take a leading role in advocating for broad support for the geosciences – with a particular focus on ocean, coastal, and Great Lakes research and education.</p> <p>Additionally FSP assisted NAML in successfully advocating for protection or restoration of funding for key extramural programs. These included the restoration of funding for Prescott marine mammal stranding program, enhanced support for the Sea Grant program, and rejection of the Administration’s plan to terminate various STEM education programs in NOAA, NSF, NASA, and EPA.</p> <p>With respect to FY 2016 funding (which is still pending), the Senate is recommending funding the Sea Grant program at a total of \$72.8M, a record level of funding for this extramural program. In addition, the Senate’s FY16 recommendations include the restoration of the Prescott marine mammal stranding program, extramural funding for ocean acidification research, the request for the Integrated Ocean Observing System program at \$29.5 million; \$70 million for Coastal Zone Management Grants; \$5 million for Regional Coastal Resilience Grants; and \$23 million for the National Estuarine Research Reserve System which is \$1.7 million above the President’s request and the same as the FY15 level. The Administration’s proposal for STEM education termination/reorganization was also rejected by the Committee, as was the Administration’s request to compete with the private sector for non-federal resources needed for research, education, and conservation programs.</p> <p>In recent years funding for NSF’s FSML program has grown to a level of about \$5M – representing a doubling over the FY 2012 level. Focusing on NSF’s support for the FSML activity was a key priority of NAML that was informed and impacted by both advocacy efforts supported by FSP with both key agency decision makers and Congressional audiences,</p>

	<p>coordination and collaboration with like minded organizations such as the Organization of Biological Field Stations, the NSF supported workshop on the future for FSML's and the NAS report, <b><i>Enhancing the Value and Sustainability of Field Stations and Marine Laboratories in the 21<sup>st</sup> Century</i></b>. All of these activates contributed to informing decision makers of the vital infrastructure needs of marine laboratories to better support on going research and education activities.</p> <p>FSP planned and executed NAML's October 22, 2014 Congressional briefing on Ocean Acidification in the Capitol Visitor Center and chaired by Mike DeLuca. The briefing ran from noon until 1:30PM and attracted 70 congressional and agency staff.</p>
<p><b>Conduct an effective winter public policy meeting attracting influential speakers, create meaningful opportunity to discuss NAML priorities, and cover topics important to the membership</b></p>	<p>FSP, working under the guidance of the NAML public policy committee, planned and organized its public policy winter meetings in Washington, D.C. in March 2014 and March 2015. In preparation for these meetings FSP provided strategic advice and support that enabled NAML to develop its public policy agenda, which impacted the sessions and speakers, invited to participate in the NAML winter meetings. FSP worked to structure these meetings to serve as opportunities for NAML to convey its views on relevant ocean, coastal and Great Lakes research and education issues with key decision makers in an effective constructive, meaningful set of interactions with various federal officials. The March 2015 meeting included senior officials from NOAA, the new division director for ocean sciences from NSF – Dr. Richard Murray, key staff from the Senate Appropriations Committee, and one of the first briefings by members of the NAS Committee responsible for the <b><i>Sea Change: 2015-2025 Decadal Survey of Ocean Sciences (DSOS)</i></b>. FSP worked with NAML's leadership to arrange for this briefing, set up Dr. Murray's presentation that reflected NSF's preliminary reaction to the report, and then provided NAML opportunity to adopt a resolution in support of the DSOS report and present it to Dr. Murray at the time he met with NAML.</p> <p>FSP prepared comprehensive briefing materials for all NAML attendees that included the agenda, bios of the speakers, and highlighted issues to discuss with the speakers that would convey NAML's concerns or interests to these speakers.</p>
<p><b>NOAA Education Program Support</b></p>	<p>NAML, with the assistance of FSP, engaged with NOAA and the Appropriations Committees to reverse proposed Administration budget reductions to NOAA education programs.</p> <p>In 2014, Craig McLean, then Acting Assistant Administrator for NOAA Research (the Office of Oceanic and Atmospheric Research or OAR) released a draft strategic plan and asked for comments from interested</p>

	<p>parties. Working with Jim Sanders, Nancy Rabalais and Mike DeLuca – FSP put together and submitted a comment letter based on the overall OAR plan and a copy of NAML's FY15 public policy agenda.</p> <p>FSP provided support for the development and submission of NAML's comments on the NOAA Education Strategic Plan in April 2015.</p> <p>Growing out of the March 2015 public policy meeting came an invitation from Dr. Mary Erickson, Director of NOAA's National Centers for Coastal and Ocean Science (NCCOS) for NAML to meet with Dr. Erickson and her staff in a forum to discuss the NCCOS strategic priority areas and the most pressing science needs within those priorities with the objective of identifying opportunities for collaboration with NAML members. FSP has supported engagement with Dr. Erickson and her staff, and FSP will support the NAML NCCOS Forum in September 2015.</p>
<b>NAML Public Policy Committee</b>	<p>FSP provided strategic counsel and professional staff support for monthly public policy conference calls. Provided analysis, briefings, and status reports on impact of the sequester and other legislative issues. Worked closely with the public committee to develop annual public policy agenda and testimony to House and Senate Appropriations Committees regarding FY 2016 budget developments related to ocean, coastal, and Great Lakes research and education.</p> <p>FSP provided public policy support at the joint meeting with the Organization of Biological Field Stations at the Marine Biological Laboratory, Woods Hole, which took place on September 20-24, 2014.</p> <p>FSP Provided, as requested, public policy support at NAML Regional meetings. FSP supported SAML's May 2014, NEAMGLL's June 2014 meeting, and SAML's May 2015 meetings.</p>
<b>Analysis and Information Provided to NAML Membership</b>	<p>FSP drafted and provided written reports to the NAML membership as events warranted on such topics as the impact of the continuing resolution on funding for key NOAA and NSF programs, status of and implications of ongoing FY 2016 appropriations process and key developments, recommended and assisted NAML in determining NAML involvement on pending legislation and agency program developments such as the Sea Grant reauthorization bill, legislation to reauthorize the impending Integrated Coastal and Ocean Observation System, NOAA's CI21 exercise (NOAA's review of its cooperative institute program), Review of NERRS by Blue Ribbon Panel, etc.</p>
<b>NAML public policy agenda</b>	<p>FSP works closely with the NAML Public Policy Committee and NAML membership annually to develop a prioritized public policy agenda</p>

	reflecting the views and issues of primary concern to the NAML membership in a manner that effectively communicates these issues to key decision makers in the relevant federal agencies and the Congress. The NAML public policy agenda becomes an underlying guiding set of principles for the objectives of the annual March public policy meeting in Washington.
<b>Issue Advocacy</b>	On behalf of NAML and its members, FSP has engaged with other like-minded organizations (OBFS, NERRA, CSO, SGA, IOOS Association, etc.) to develop successful Congressional support for restoration of STEM programs, express concern about “attacks” on federal funding for geosciences research, generate Congressional directives that accompany appropriations bills calling on NOAA to strengthen its extramural funding support for NAML members; supported efforts in the Senate to increase funding for various extramural programs providing support for coastal resiliency.
<b>Selected Work Products</b>	<a href="#">FY 2016 NAML Public Policy Agenda</a> <a href="#">FY 2016 NAML House Appropriations Committee Testimony</a> <a href="#">FY 2016 NAML Senate Appropriations Committee Testimony</a> <a href="#">FY 2016 “Geo Community” Testimony on Geosciences – A Leading Role Played by NAML/FSP</a> <a href="#">March 2015 NAML Public Policy Briefing Book</a> <a href="#">NAML Resolution on DSOS</a>

Suggested Individuals NAML Leadership May Wish to Consult to Assess FSP Performance:

- Dr. Richard Murray, Division Director for Ocean Sciences, National Science Foundation
- Dr. Holly Bamford, Acting Assistant Secretary for Conservation and Management, NOAA
- Dr. Richard Spinrad, Chief Scientist, NOAA
- Dr. Russell Callendar, Acting Assistant Administrator, National Ocean Service, NOAA
- Ms. Josie Quintrell, Executive Director, IOOS Association
- Dr. Sylvain de Guise, President, Sea Grant Association (Director of Conn Sea Grant Program)
- Mr. Kolo Rathburn, Professional Staff Member, Senate Commerce-Justice-Science Appropriations Subcommittee
- Mr. Allen Cutler, Professional Staff Member, Senate Commerce-Justice-Science Appropriations Subcommittee



June 1, 2015

Mike Deluca  
President-Elect, National Association of Marine Laboratories  
Rutgers University  
88 Lipman Drive  
New Brunswick, New Jersey 08901

Mike,

Per our discussion on May 15<sup>th</sup>, please find an outline of activities pursued on behalf of the National Association of Marine Laboratories. It has been our pleasure to serve the Association over the past two years. We have successfully transitioned NAML from a volunteer managed entity to a professionally maintained and code-compliant non-profit organization. I look forward to discussing additional utility and resources that we may be able to offer to the Association.

Please let me know if you have any questions or comments.

Respectfully,

David A. Drupa  
Secretariat, NAML  
1313 Dolley Madison Blvd. Suite 402  
McLean, VA 22101

**Management services provided:**

Operations in support of the Association's mission consist of eight employees who regularly manage NAML's affairs.

- David Drupa – Secretariat / Association Liaison
- Tammy Liberati – Reception and Customer Service Representative
- Heide Rohland – Membership Manager
- Tiffany Binnix - Process Accountant (payable / receivables)
- Nguyen Phan – Controller (budgeting / analysis / banking / audits and reporting)
- Rob Clayton – CFO (IRS compliance / tax filing / code compliance)
- Brett Burk – BAI Principal (general non-profit administration / counsel / contract review)
- Jill Drupa – Meetings Manager (liaison with local arrangements vendors / site management)

**Day to day functions of our team include:**

- Fielding calls from member labs and representatives
- Managing member institution contact lists and representative contacts
- Invoicing member institutions for membership dues
- Accounting for both parent and regional dues allocations
- Management and maintenance of website NAML.org

**Episodic and scheduled functions:**

- Managing / renewing Association insurance policies
- Managing non-profit compliance filings
- Managing IRS compliance (non-profit / political advocacy) and tax filings
- Meeting coordination / contract review (both national and regional)
- Monthly reconciliation of accounts (credit card merchant accounts / bank statements)

## **Notable work on behalf of the Association:**

**March 2014** – At the Winter Policy Meeting of the Association, we announced significant progress on the transition from administration operations housed at Woods Hole Oceanographic Institution to our headquarters in McLean, Virginia. This included the establishment of new bank accounts, new credit card processing accounts, as well as a new transaction acceptance portal. Although our management contract was signed during 2013, it took us several months to obtain significant operational materials / direction from the Association. ***BAI did not charge NAML for service rendered on its behalf until the Spring 2014 meeting.***

**2014** - BAI was able to completely renovate the NAML.org website to include added functions and utility. We took control of the website in early 2014 and were able to port legacy programming into open-source code which should make future updates and transitions easier to accomplish. Working with Lou Burnett, we've facilitated the development of a dynamic Association presence including the availability of updated / new regional microsites for NAML's regional organizations.

**In mid 2014**, we discovered an anomaly in the Association's IRS non-profit status. While attempting to set up a listserv through a non-profit service we often utilize, it came to our attention that NAML's 501 c3 status had been revoked several years earlier. Further investigation showed that multiple filing requirements had been missed. Through a protracted process of retroactive filings and applications, we were able to re-secure tax-exempt status on behalf of the Association. **Effective May 2015**, NAML is again recognized by the IRS as a 501c3 in good standing. There is a possibility that we may be fined for missed filings. We are pro-actively managing the situation to avoid any further negative exposure. I am cautiously optimistic that we have put this issue behind us.

**2015** – Working with Joel Widder and Meg Thompson, we were able to secure favorable accommodations and meeting space for the 2015 NAML Winter Policy Meeting at the W Hotel in Washington, DC.

**2015** – Since obtaining the appropriate IRS tax status, we have reapplied for non-profit member management tools including open-source listserves and mail-service applications which should allow NAML to better communicate internally and with its members. We expect final approval within the next two weeks.

## **Anticipated projects moving forward:**

- Establish an Association calendar of operations
- Develop internal communication instruments to simplify notification and discussion between member laboratories
- Establish bi-weekly or monthly teleconferences with President and/or Executive Committee to discuss projects / processes.
- Develop improved AMS (association management software) to facilitate smoother administrative management of member database.

**Areas of concern:**

Communication. My subjective opinion is that we have had less than optimal coordination between the Board of Directors and the Secretariat. I think we (Secretariat / NAML) would benefit from regularly scheduled meeting to establish and/or discuss priorities and benchmarks.

I have had consistently positive interactions with NAML's members, Board and vendors. I am confident we will be able to continue to positively develop our working relationship through this process of evaluation and discussion.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "David A. Drupa". The signature is fluid and cursive, with a large loop at the end.

David A. Drupa  
NAML Secretariat