

NATIONAL SEA GRANT ADVISORY BOARD

SEPTEMBER 23-24, 2013

FALL 2013 MEETING

BRIEFING BOOK

**STONE LABORATORY
GIBRALTER ISLAND, OHIO**



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Agenda



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**National Sea Grant Advisory Board (NSGAB) Fall Meeting
September 23-24, 2013
AGENDA
Stone Lab, Gibraltar Island, Ohio**

Federal Register Notice: <https://www.federalregister.gov/articles/2013/09/11/2013-22005/national-sea-grant-advisory-board>

Monday, September 23, 2013

8:00 am-10:00 am Biennial Report Committee (Dick West, Dale Baker, Patty Birkholz, Rosanne Fortner, Nikola Garber)

Monday, September 23, 2013

OPEN TO THE PUBLIC 10:00am – 5:00pm

10:00 – 10:15 Introductions, review of agenda, approval of minutes (Rollie Schmitten, Acting Chair NSGAB)

10:15 - 10:30 Chair's update (R.Schmitten, Acting Chair, NSGAB)

10:30 – 11:15 National Sea Grant Office (NSGO) update (Leon Cammen, NSGO)

11:15 – 11:45 Sea Grant Association Update (LaDon Swann, President, Sea Grant Association)

11:45 – 1:00 Lunch

1:00-2:00 Ohio Sea Grant Presentations (Jeff Reuter, Director, Ohio Sea Grant)

2:00 -2:15 Break

2:15 -3:15 Planning, Implementation & Evaluation (PIE) Program Assessment Committee Report, Discussion and Vote (Sami Grimes, NSGO, Dick West, NSGAB)

3:15-3:45 Virginia Sea Grant College Status Report, Discussion and Vote (Harry Simmons, NSGAB)

3:45-4:45 Sea Grant Reauthorization Planning (L. Cammen, NSGO, R. Schmitten, NSGAB)

4:45-5:00 Discussion of afternoon topics and wrap-up (R. Schmitten, NSGAB)

5:00 Meeting recessed until 9:00 Tuesday 9/24

5:00 – 5:30 Tour of Gibraltar Island and Stone Lab

**National Sea Grant Advisory Board (NSGAB) Fall Meeting
September 23-24, 2013
AGENDA
Stone Lab, Gibraltar Island, Ohio**

Tuesday, September 24, 2013

8:00-9:00 Board Business Meeting (Elizabeth Ban, NSGO)

Tuesday, September 24, 2013

OPEN TO THE PUBLIC

9:00-10:00 Allocation Committee Report, Discussion and Vote (Dick Vortmann, NSGAB, L. Cammen, NSGO)

10:00-10:15 Break

10:15-11:00 Biennial Report to Congress Discussion (D. West, NSGAB, Nikola Garber, NSGO)

11:00-11:45 National Ocean Service Reorganization, (Holly Bamford, NOAA)

11:45-1:00 Lunch

1:00 – 1:30 Nominating Committee Slate, Discussion and Vote (R. Schmitten, NSGAB)

1:30-1:45 Public Comment Period (R. Schmitten, NSGAB, E. Ban, NSGO)

1:45-2:15 Sea Grant Education Impacts (Rosanne Fortner, NSGAB)

2:15-2:45 Mission of the National Sea Grant Advisory Board (D. West, NSGAB)

2:45-3:00 Discussion of afternoon topics and wrap-up (R. Schmitten, NSGAB)

3:00 Meeting Adjourned

Draft Minutes

March 2013



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National Sea Grant Advisory Board (NSGAB) Meeting
 March 4-6, 2013
 Meeting Minutes

The Melrose Hotel
 2430 Pennsylvania Avenue NW
 Washington, DC 20037

Sunday, March 4, 2013

8:00 AM—Introductions, review agenda, approval of minutes, etc. (Dr. Nancy Rabalais, Chair, NSGAB)

Roll Call:

Board Attendees present: Nancy Rabalais, Bill Stubblefield, Rollie Schmitt, Paulinus Chigbu, Amber Mace, Rosanne Fortner, Dick West, Dale Baker, Frank Beal, Dick Vortmann, Jeremy Harris, Harry Simmons, Patty Birkholz, Leon Cammen (*Ex-Officio*).

National Sea Grant Office: Elizabeth Ban (Designated Federal Officer), Nikola Garber, Sami Grimes, Amy Painter, Dorn Carlson, Gene Kim, Mike Liffmann, Chris Hayes, Joshua Brown, Terry Smith, Hank Hodde, Gabe Dunham, Chelsea Berg, Jonathan Eigen.

Other attendees:

LaDon Swann—Sea Grant Association, Chair
 Jennifer Maggio—National Sea Grant Office, Contractor, 2020 Company LLC
 Julie Galkiewicz—National Sea Grant Office, Contractor, 2020 Company LLC
 Stuart Levenbach— Office of Management & Budget
 Paul Bradley— Office of Management & Budget

September Draft Minutes (H. Simmons, 2nd R. Schmitt, all approved)

Dr. Fortner noted to Ms. Ban on Page 19 of the minutes, Crisis of Extension Agents... Ms. Ban replied she will correct the minutes.

Chair Update (N. Rabalais, NSGAB)

Dr. Rabalais made a few comments to the committee in regards to Sequestration and how funding will be a lot tighter, for example, travel. Dr. Rabalais reported the Biennial Report to Congress is complete; and was presented to the NOAA Scientific Advisory Board where it was well received. In the next Biennial Report they will be more geared towards focus teams and groups that feed into the National Program. These are important activities because it is a way to get information from the bottom up. Through these various programs, we stay connected. We don't just meet twice a year; we do things all year long. We try to keep Sea Grant in the eye of the elected officials.

National Sea Grant Office (NSGO) Report (L. Cammen, NSGO)

Dr. Cammen welcomed the New Board Members and thanked those who participated in the Peer Review Panel, the Biennial Report Committee as well as the 2014-17 Network Strategic Planning. Admiral West gave a special thanks to Ms. Amy Painter for her hard work on the Biennial Report. Dr. Rabalais thanked Dr. Amy Scaroni (not present) for her help as well.

Year in Review:

Accomplishments, Planning Implementation and Evaluation (PIE) Cycle, National Grants Portfolio, Superstorm Sandy Response, NOAA Engagement and Congressional Engagement.

Sea Grant FY2012 PM's & Metrics:

It was noted there will be a joint committee with the SGA to try and collect accurate measurements between degrees awarded and students supported.

Outlook Year Ahead:

Admiral West reported to the new Board Members that there is a formal recommendation that has been approved. It was noted that NOAA is developing their 5 year Research Plan that reacts to the recommendations. Dr. Kathy Sullivan will be responsible for reacting to the report.

Budget Update:

Currently the NSGO is holding off on RFP's. The window is bumping up against Grants Online and if we don't put out the RFPs there is no way funding is guaranteed. If that happens the National Office will hold the results of the competition and when funding becomes available they can either add funding in or fund half this year and half next year. If we know we will not get funding we will let the programs know before they become more involved.

Outlook- FY 13 Appropriations:

Sea Grant has 3 budget lines and the National Office would like to see them be combined as one total. It has an impact on base funding and currently Congress hasn't been separating the budget.

Outlook-Competitions:

This year the National Office will fund 4 regions instead of 8 for the Regional Collaboration Grants. Projects will be larger and more competitive.

Outlook-Aquaculture:

Extension projects are planned for this year.

Outlook-Community Climate Adaptation:

The plan is for the National Office to fund ten projects through base funding. If there is a 5% sequester, other funding will have to be found. Participants of the 30K and 100K will meet next week in Santa Monica to review the progress of these reports.

Sea Grant Association (SGA) Report & SGA Ad Hoc Growth Team (L. Swann, President, SGA)

Reviewed Past President Pennock; SGA Past Presidents; 2013 Board of Directors; SGA Standing Committee; 2009-13 Focus Teams; Sea Grant Growth Committee.

Sea Grant Week 2014 will be St. Petersburg Beach, FL September 8-12, 2014

Dr. Stubblefield believes marketing is the key and that the National Office needs help. It cannot be done without effective partnerships and the NSGO needs resources to have a continual presence in the administration.

SGA Ad Hoc Growth Team: Dr. Swann reported the committee would like input on the growth and strategies and what needs to be included.

Discussion

The group discussed the need to look for external funding and not just federal funding. It was noted that the SGA is a C-4 and is currently looking into funding from the Cresci Foundation. The group encouraged growth and in looking at new ways of leveraging funds including local funding from Mayors, county commissions, etc. and partnerships. There needs to be a plan on how to receive funding from other areas. A good way to do this would be to find out how other programs are receiving external funds and ask them to share their stories and ideas. Currently the National Office hasn't looked into private sector funding, but it something to look into. It was suggested to look further into C-3 and outside funding. OMB suggested Sea Grant look into what is organic in the new and emerging themes and what can be marketed. Fisheries extension is an area that is not crowded and he doesn't see it mentioned enough.

Office of Management and Budget (OMB) Panel (S. Levenbach and P. Bradley, OMB)

Dr. Rabalais introduced Dr. Levenbach and Dr. Bradley.

OMB: Dr. Levenbach reported the decisions that impact NOAA are indirectly impacted by other areas. Dr. Stubblefield asked if it would be adventitious to put NOAA in the Department of Interior. Dr. Levenbach replied this has been discussed.

Normal Budget Timeline: Dr. Bradley reported it is helpful to put into context how the budget is formulated from OMB to Congress. At any given point in time the agency is working on 3 budgets: current to execute, coming budget year and the initial stages of implementing the first out year budget.

Current Budget Timeline: Dr. Bradley reported there have been sever dates given, but nothing is final. Dr. Levenbach noted the best time to come into OMB is around September to talk about the budget. Also to think about what tools

OMB has. They are able to do pass backs. It is essential guidance for the agency. Sometimes there are management actions. Here are some issues we might see within NOAA with respect to Sea Grant. This is helpful to put together a budget. It is important to know it isn't just a number, it is management.

Budget Structure Drive to decision making: Dr. Levenbach noted budget lines are important especially during sequester and general context. Funding is tracked through the budget line. It is the unit in which we negotiate agencies. The more budget lines, the more OMB and the hill will have control over the agencies budget. NOAA has the most budget lines. You can't move more money across the budget lines without congressional approval. It is important during sequester because it impacts how it is being allocated.

Balancing: Dr. Levenbach reported the burden is on OMB to demonstrate how the budget should be shifted around or cut to get within guidance. An issue with budgets is that the Agency's mission overlaps. Dr. Stubblefield asked what they mean by agency mission. Dr. Levenbach replied it is what is in the agencies mission. The agency would be NOAA's mission.

How Does OMB Prioritize: OMB noted it is hard to know what is going on with all programs, but it is important to know who is using their funds and who can make the most significant impact.

Discussion:

Dr. Bradley noted that the impacts and reporting used by Sea Grant are exemplary. They are really important within OMB and an invaluable way to look at each aspect of a program and quantitatively see how effective the program is. Dr. Bradley gave examples of Sea Grant's performance measures. They are an important tool in the OMB decision making process. It is important that it be quantitatively measured. The more rigorous back up Sea Grant's impacts the more effective of a program is it. Dr. Levenbach also reported performance measures are very valuable in the budget context. There are a lot of decisions being made in a very short time. Dr. Bradley replied the performance measures on the report are fantastic and gives a great sense that it isn't just numbers, but the range on what is important for the different communities in the nation

Sea Grant Reauthorization Planning (R. Schmitten, NSGAB)

There is an upcoming NSGCP Reauthorization program in FY-15. Given the political climate it has been discussed whether the NSGO should reauthorize again or allow it to roll over. The first time in forty years we haven't rolled over the reauthorization. OMB suggested creating a one page bill that reauthorizes the program. It doesn't require a lot of effort and minimizes what can be done. There are a lot of risks with the current state of the Hill. If the NSGO is looking to make policy changes to the reauthorization as opposed to having a current authorization it may be worth taking the risk if you have a good strong support. Performance measures are important to OMB and on the Hill. It means we have credibility that we know what we are doing. There has to be credibility before the NSGO can market themselves.

Sea Grant Response to Super Storm Sandy (J. Brown, NSGO)

Impacts to Sea Grant, Sea Grant Constituents, NSGCP Response, New Jersey Response, New York Response, Other Impacts, Future Actions.

Several Board members commented that infrastructure doesn't seem to be of importance and Congress needs to get involved. Katrina involved total destruction and it is predicted to happen more and more in the future. It was recommended that Sea Grant take a major lead in responding to the immediate needs, but also think on the long term and convince people not to live where they live, etc. A discussion followed on the pros and cons that came out of Super Storm Sandy as well as the highlighted resilience and how Sea Grant is working with communities. It was noted there needs to more talk on how it is going to get done and how to find other funding instead of the traditional ways of going to Congress.

Budget Update (L. Cammen, NSGO)

Dr. Cammen stated that final budget decisions have not yet been made, only generalities. Sea Grant as well as other offices has put together a plan with a 5.1% reduction and how that would be met. The National Office will be held to the plans. No word yet on whether they have been approved. If somehow Sea Grant can roll the budget lines into one, it would be a big difference and the cuts would be more flexible. Sea Grant has to get out RFPs which will hopefully have enough caveats. Proposals will be put in by Sea Grant for the Sandy Supplemental based on suggestions of what has been suggested by directors. They will be forwarded to DOC, then to OMB and Congress. There is no current outcome.

It was noted that there were several comments made about extreme weather events that were already experienced during Katrina yet we still keep making the same mistake. It is a very important role for Sea Grant to play in better educating the public so that real measures can be taken to change the structure. One of the bigger questions is how people react once they get their information. There is need for social science research and where people get their information and how the weather service can use that information in getting the word out. There is a need for the weather researchers to get better warnings out to the public. Sea Grant can be a major resource in getting the word out.

A discussion followed on flooding and wave damage and how some coasts were protected and some were not. There needs to be research on what worked and what didn't. There was also dialogue on technical assistance and what outreach can be offered to people trying to cover from disasters. It was suggested that the NSGO create partnerships due to lack of funding. The National Office has the credibility, just not the funding to make it work.

There was a misconception regarding who is getting the word out about what Sea Grant does. OMB noted it was difficult not having good information on where the immediate impacts and challenges are when looking at the Presidential Supplemental. The fishing communities were a good example. One role Sea Grant could play post storm is as an information provider to OMB and Congress and what communities are doing. It was noted that Sea Grant does provide the correct information and by the time it get to OMB a lot of it has been chopped. It was agreed that more people need to stand up and say what Sea Grant does for them, not just to Congress.

Performance Review Panel & Strategic Plan Update (S. Grimes, NSGO)

SG Planning, Implementation and Evaluation Process; overview of PIE; Planning.

Dr. Stubblefield wanted to clarify the next planning will not being until 2020. Ms. Grimes replied yes.

2014-2017 National Performance Measures:

It was noted that some programs haven't been reviewed in 7 years and at some point the evaluation process needs to be wrapped up. A discussion followed on the strategic planning process and performance measures. Many of the programs were asked to revise their plans based on the results of the PRP.

Implementation; evaluation, 2013 Performance Review Panel, PRP Members:

It was explained what the scores mean for programs according to the NSGO policy. Programs were given the opportunity to point out factual errors that may have affected their scores. If there was no error, scores were final. Programs then receive met funding based on their scores. If after 4 years the program didn't fix the identifiable problem, they are taken to the Advisory board for decertification.

2012 Planning and Evaluation Activities:

The scores were normalized (lowest mean score and raised them proportionally; higher scores were lowered to get identical means scores). The scores for each program were then weighted based on level of effort in each of the focus areas. Admiral West said that we need to capture this information in the next Report to Congress. Several of the Board members suggested that we need an evaluation of the Sea Grant evaluation process to ensure that the process is to enhance the program. Ms. Grimes and Mr. Hayes of the NSGO will be taking this on.

Virginia Sea Grant College Status (D. Carlson, NSGO)

Sea Grant Program succession:

There are twelve steps to Virginia Sea Grant becoming a College status. The review is much more comprehensive and is a very big deal for the campus. Virginia has previously lost their status and they have turned around. There are no financial implications in have a college status. It was noted it is more important to know how the state matching funds will support the federal dollars. Currently there is no formal request only the intent to apply. Once the application is received a formal request will be given to the NSGAB for review. It was noted there is a policy that there can only be one Sea Grant College in each State. The NSGAB could consider another institution, but it costs money for every program that is added. There is a program in every coastal city. DC doesn't currently have a Sea Grant Program because they are not in a coastal zone.

Sea Grant Legislation Reauthorization (R. Schmitt, NSGAB)

Required Action for Sea Grant, National SG College Program Act Reauthorization, Projected timeline for Sea Grant Reauthorization FY 2015-2020

Discussion:

There was a discussion on the Administrative cap and the need for it to be removed in the next reauthorization. It was suggested a smaller group and go to the House and give them views from the NSGAB. Then that group should report on the findings and recommendations they have. There is a worry from the group on asking to remove the cap at this time. It was noted that Dr. Kathy Sullivan is that it is not the time to keep your head down, but to show what an incredible program Sea Grant is and that the country can't live without it. It was noted the SGA was firmly committed to maintain the cap. The NSGAB replied the only way for Sea Grant to grow is to remove the cap. Dr. Stubblefield noted from his understanding the SGA is firmly committed to maintain the cap. Dr. Swann replied that the SGA are sympathetic to the National Office on the need for resources but believe in the cap for the federal government. Admiral West noted we have 3 groups sitting here and monitor how the National Office works. It is an issue that needs to be resolved. There needs to be a look at the value the Sea Grant Office can add above the program. Admiral West noted there was a similar discussion prior to the last reauthorization so they created a joint SGA and NSGAB committee to review the National Office. The Board spent a lot of time and created a [report](#) that discusses that.

Biennial Report Follow-up Discussion (D. West, NSGAB)

It was agreed upon during the last reauthorization that the NSGAB press for re-designation. Term limits were added as 2 four year terms. Issues were reviewed that are necessary to address during the next report, for example the administrative cap. The last page is important for new folks because it lists all the reports and studies done by Sea Grant. The Board will be asked to do another report in eighteen months and they are asking for volunteers to help. It was noted the report is helpful in preparing as a new member.

Motion to Recess: West, 2nd Simmons.

All in favor.

Meeting in recess until 9:30 am Tuesday, March 5.

March, 5, 2013

9:30 AM- 12:00 PM-Open To Public

Role of the Focus Teams (G. Kim, NSGO)

The focus team reports are a great tool and it was discussed that they should be promoted further. For someone without a long history or no history in Sea Grant, the focus teams and reports are a very useful way to absorb what is going on and the intent of the whole Sea Grant program. These teams are very connected to the National Strategic Plan and focus areas. The NSGO would welcome feedback for a focus team deliverable and how to promote them.

Hazard Resilience in Coastal Communities Presentation (H. Hodde, NSGO)

Healthy Coastal Ecosystems Presentation (G. Dunham, NSGO)

Safe and Sustainable Seafood Supply Presentation (G. Dunham, NSGO)

Sustainable Coastal Development Presentation (H. Hodde, NSGO)

Public Comments:

Ms. Ban (DFO) stated that they received one public comment in writing prior to the meeting and that it was included in the briefing book (available online) Two additional members of the public are here to speak to the Board.

Barbara Blakistone, National Fisheries Institute:

Good Morning! My name is Dr. Barbara Blakistone, and I am the Director of Scientific Affairs for the National Fisheries Institute (NFI) in McLean, Virginia. The National Fisheries Institute (NFI) is the nation's leading advocacy organization for the seafood industry. Its member companies represent every element of the industry from the fishing vessels at sea to the national seafood restaurant chains. From responsible aquaculture, to a marketplace supporting free trade, to ensuring consumers have the facts on the health benefits of fish and shellfish, NFI and its members support and

promote sound public policy based on scientific research. NFI is pleased to offer its perspective on the state of seafood science and technology research.

NFI and its associated group the Seafood Industry Research Fund are quite concerned that traditional sources of funding to support seafood research are being diverted to fishery management, sustainability, and consumer social communication and outreach. There is a current trend toward large grants on basic research. For example, NFI is an advisor to the NoroCORE grant housed at North Carolina State University for norovirus research. Funding for NoroCORE is \$5 million each year for 5 years of research. Norovirus is a specific topical area within food safety and the virus affects many commodities, not just seafood, so the work is broadly applicable, but a large allotment of funds from USDA are then narrowed to microbiology. Government agencies appear to have forgotten the world of food science which includes not just the microbiology to keep food safe, but that food must be harvested, processed and packaged and it takes chemists to understand the keeping of that food, how to retain the nutrients, and how long it will last in storage.

NFI finds it puzzling that the National Sea Grant College Program has all areas focused on the environment. For NFI a "safe and sustainable food supply" means seafood from water to TABLE. Because many of us work in offices and rush home in hopes of a tasty, quick to fix meal, that means food science has been at work. Your website notes that, "With international seafood imports on the rise, and fish diseases and contamination escalating, the safety of our seafood is a growing concern." The Board should know that between 2005 and 2010 there were 2,348 illnesses attributed to all imported food and a mere 141 of those were from seafood. None was from aquacultured seafood. Our tables are safe, though continued vigilance is ever in order.

The Board itself has no one representing the processing side of the seafood industry and therefore no perspective on what it takes to get seafood out of the water, processed and prepared for the consumer to serve. NFI is not suggesting the environment where fish live be ignored. What we are recommending is a partnership to understand and enhance water to table, but we are concerned not even partnerships listed on your website mention anything to do with processing the harvest from the sea. And there is a harvest. Your website notes that, "The rising demand for seafood, coupled with the decline of many U.S. fisheries, has led to a seafood trade deficit of \$9 billion per year." NFI commends the great job that NOAA has done in managing U.S. fisheries and has them on track to be the best managed in the world. NOAA has made sure the supply of U.S. fisheries is not declining.

Given the situation I have described, NFI asks for continued dialogue on funding research at our Sea Grant colleges not only for fisheries management but for seafood science and technology. Industry government partnerships are often the best means to advance science. The NFI's Seafood Industry Research Fund sponsors \$150,000 a year in applied research. This is a humble amount not intended to replace what government agencies can do. If Americans are to follow the USDA Dietary Guidelines recommendations on seafood consumption, we'll need to couple programs in fisheries management and seafood science and technology. Together we can feed Americans and keep them healthy by eating seafood, the best source of omega-3s.

Thank you for your time and attention, and I hope we can indeed continue to dialogue.

Christina DeWitt, Oregon State University:

I am Christina DeWitt, Director of the Oregon State University Seafood Research and Education Center (Sea-REC), and a seafood scientist. I am testifying in front of this Committee because of my concern about the disinvestment of this critical field over the past decade. I would first like to highlight some of the successes from seafood science and education because of Sea Grant support over the years. This includes the development, training and implementation of Seafood HACCP for the industry during the 1990s which continues to this day. This was a tremendous achievement and demonstrated the importance of collaboration among Sea Grant extension, the FDA and the seafood industry in creating a program for the national good. The Seafood HACCP program is now viewed as a model for other food systems to use as they implement the new food safety regulations under the FDA Food Safety and Modernization Act. There were many other Sea Grant funded research programs such as surimi work done at North Carolina and Oregon State Universities which laid the foundation of a billion dollar industry in the U.S. and throughout the world. Seafood science programs at Alaska, Oregon, Louisiana, Florida, North Carolina, Delaware, Rhode Island and many other states (including now closed programs in Washington, California, Massachusetts, and Texas) helped local industries address problems in safety, new product development, smoked fish, shrimp processing, marketing and a host of other issues. This solid interaction between science and industry created an excellent foundation for the evolution of the industry and an understanding of the use of science-based information for economic growth and financial stability of rural counties where fisheries play an important role. We should also not overlook the work of Sea Grant funded faculty and programs at universities that dedicated their research and education efforts in working with industry and the consumer in communication of the important health benefits and risks in seafood consumption.

I am concerned that this work and these linkages are not getting the necessary focus and support by Sea Grant and other national funding agencies when the need for seafood research and education is as great as ever. There is inadequate investment and understanding of fisheries and aquaculture as integrated food systems producing more than \$5 billion dollars in economic benefits. The importance of fish in the diet, as demonstrated in the news last week of the impact of the 'Mediterranean Diet' in the reduction of coronary heart disease is one example of the role that seafood education can play in improving the health of the nation. Yet despite these benefits, U.S. per capita consumption of seafood is lower today than 30 years ago. Issues around seafood safety, such as histamines in scombroid fish, still require research to ensure the safety of the catch. Post-harvest reduction of fish waste, nutraceuticals, innovative processing technologies, and traceability through DNA analysis, are all cutting edge fields that should be supported through Sea Grant programs.

I am concerned that the disinvestment in seafood science is also occurring at the university level where administrators feel that programs that lack opportunities in research/education funding are a low-priority and vulnerable for budget cuts. This vicious circle results in faculty not being replaced, education programs not being continued and a disruption of an important pipeline of well-trained young people into the seafood industry. This is especially critical today when students are showing renewed interest in food systems related disciplines. We should remind ourselves that fisheries, their sustainability and environmental impacts, depend on an economically sound seafood industry that can supply the consumer with safe and wholesome seafood products. This is best achieved through strong and innovative research and seafood programs supported by Sea Grant which should continue to fund seafood science as they have done in the past.

Discussion:

Dr. DeWitt said that there are a lot of projects that she and her colleagues are still working on, however they are seeing programs stop at a significant pace. The problem is that they can't go after USDA because we are supposed to get money from NOAA and NOAA has stopped supporting seafood research. When you don't get the funding, you aren't supported by your local university. They are in a tenuous position because they are the only food system that can't access seafood funds. They have to leverage what Sea Grant is doing and bring USDA in. Seafood science needs a way to compete for funds and there is no competition. Dr. Cammen asked about the FDA. Dr. DeWitt replied that they don't support other research only their own. It is only USDA and Sea Grant. Dr. Stubblefield asked if the FDA could pass money to Sea Grant to fund your research. Senator Birkholz suggested they look into the Farm Bill. Mr. Schmitt and Dr. Kim both discussed the concern with the government moving away from seafood and who has been affected. Dr. Cammen will set up a meeting to continue the conversation.

Vote for New Nominating Committee (N. Rabalais, NSGAB)

Rabalais (Chair), Schmitt (Vice Chair), Simmons, Stubblefield

Motion to approve-Vortmann, 2nd Baker, all in favor.

Motion approved.

The Nominating Committee will nominate the next set of officers, including chair, vice chair and member at large.

Motion for recess- Simmons, 2nd Baker, all in favor.

Motion approved.

Joint Session with Sea Grant Association-Open to Public

SGA President's Report (L. Swann, SGA)

Paul Anderson (Director, Maine Sea Grant) was elected as chair for the External Relations Committee.

ERC Report-Budget Presentation-Joel Widder

Programmatic Request for \$70M-Ask for support.

It was asked if education programs would be consolidated into the Department of Education. There needs to be more clarification on what is meant by consolidation. Everyone needs to be more careful about advertising Sea Grant as a major education activity until we know the nature of the consolidation plan. A discussion followed on the funding and cap. It was asked by Sea Grant Directors to talk to stakeholders and try to get them to interact with delegation using the template created and to share a copy of the letter so they can keep track of who they are sent to. Karl Havens asked to have a copy of the letter and who signed it to keep track of which states are involved as well as any response.

Update on the NSGAB (N. Rabalais, Chair, NSGAB)

The SGA agreed there needs to be more time for discussion because there isn't during their meeting. They discussed creating a committee on metrics and would like to work with the NSGAB. It was noted that OMB would look over impacts which is a good idea because they feed directly into the Biennial Report to Congress. It is useful when going on the Hill or speaking to the State Legislature

NOAA Research Update & Discussion (R. Detrick & C. McLean)

Dr. Detrick noted the connections all of you make with local communities in your various regions and effectiveness in translating the science that we do into forms, tools and information through our various stakeholders at the local community level. It is integral to maintain the support in NOAA research. Dr. Detrick commended Sea Grant officers that were involved in Super Storm Sandy. They offered great advice on how to be resilient. That is great work that makes it so well regarded within NOAA.

Budget Updates:

Dr. Detrick reported it sounds like from reading the paper that neither party is interested in shutting down the government. We try to protect our people, not only federal. We have tried to maintain our core mission capabilities. We've tried to portion the cuts between internal and external in proportion to their size in our budget. The spending plan is now going through the approval process. We won't be doing anything immediate between now and March 27. The FY14 budget request hasn't been released yet and we expect it to be presented to Congress towards the end of the month. NOAA received \$380M from the Sandy supplemental. There is a variety of different purposes. The most that is relevant to OAR was \$50M for lab and cooperative institutes for sustained observations, weather predictions, ocean and coastal research. We solicited input from our labs cooperative institutes and programs for ideas as to how we could address the language in the bill. There was a lot of great feedback. We took those ideas and developed a spending plan that addresses those issues. That spending plan has also gone forward to Congress and OMB and eventually will find its way to the Hill for approval around March 15, 2013.

Reauthorization:

Dr. Detrick noted it is not too early to think about reauthorization. We would like this to move forward. We really need to know what our FY14 budget is going to look like and the long term impact before we get into further discussions.

NOAA SAB R&D Portfolio Review Task Force:

Dr. Detrick explained this is a review of NOAA's research portfolios. That review is nearly completed and we're expecting it to go out for public comment. We have taken those comments seriously and expecting them to present to the Science Advisory Board in March. NOAA will have a year to respond to recommendations.

5-Year Research and Development Plan:

Dr. Detrick noted the intent was to develop a plan from 2013-2017. The plan is now available for public comment at www.nrc.noaa.gov/plans.html. It will not be finalized until we have the final portfolio review.

Goals:

Dr. Detrick discussed the four main goals in NOAA's next generation Strategic Plan.

4 main goals in NOAA's next generation strategic plan

Dr. Rabalais noted many coastal and marine researchers around the US would say she is pleased to hear you say equitability between internal and external and feel external has been taking a lot of cuts and not just sequestration. The more we continue to engage the better off we will be. Dr. Detrick replied it is a commitment he has made within OAR. An SGA member asked how we can better integrate research across NOAA. Sometimes activities going on in other line offices and they don't recognize the resources that the Sea Grant Program can provide them. Dr. Detrick replied he thinks it is second nature to us to think of Sea Grant when thinking of engaging stakeholders, sometimes that doesn't always happen. It is something we need to work on. We try sometimes and I have heard Captain McLean discuss using the Sea Grant Program in meeting other line office planning objectives. It is important to try and talk and make connections, but we also need to show where we can help.

NOAA Leadership Update (K. Sullivan, Acting Administrator, NOAA)

Dr. Sullivan reported it is imperative to look at what NOAA does and show how it is important to the nation. There is a plethora of needs, constituents and voices in the coastal zone. The challenge is to find themes that we all need and want

together. When we can find that, all of our voices come across to stakeholders and funders. That is something we need to continue to have dialogue on with the SGA. It needs to be something that is build and share together.

Messaging Opportunities:

Dr. Sullivan said that events of the past year have provided a fresh and novel opening and reawaken a level of interest in NOAA and new audiences that can engage and help in new ways. Super Storm Sandy in particular has shifted the debate in our arenas. We are moving into a different error and need more robust solutions. We have the ability to create conversations from civic to national and get ideas on where to build and what science we need to forward our discussions. I think there is a fresh idea. Dr. Sullivan applauded Sea Grant for the help received after Sandy. That is a real proof of value that will stand the test of time.

Budget Outlook-FY14 and Sequestration:

Dr. Sullivan assured everyone they are looking and working as hard as they can internally. They share much the perception that the budget shown in FY 13 isn't a good balance. We heard a lot of opportunities that help the effected region and build better resiliency.

Swearing in of New Board Members:

Dr. Sullivan provided the Oath of Office to the new National Sea Grant Advisory Board members: Dale Baker, Paulinus Chigbu, Rosanne Fortner and Amber Mace. (All members had previously been sworn in prior to the start of the Board Meeting on 3/4/13.)

Joint meeting of the National Sea Grant Advisory Board and Sea Grant Association was adjourned.

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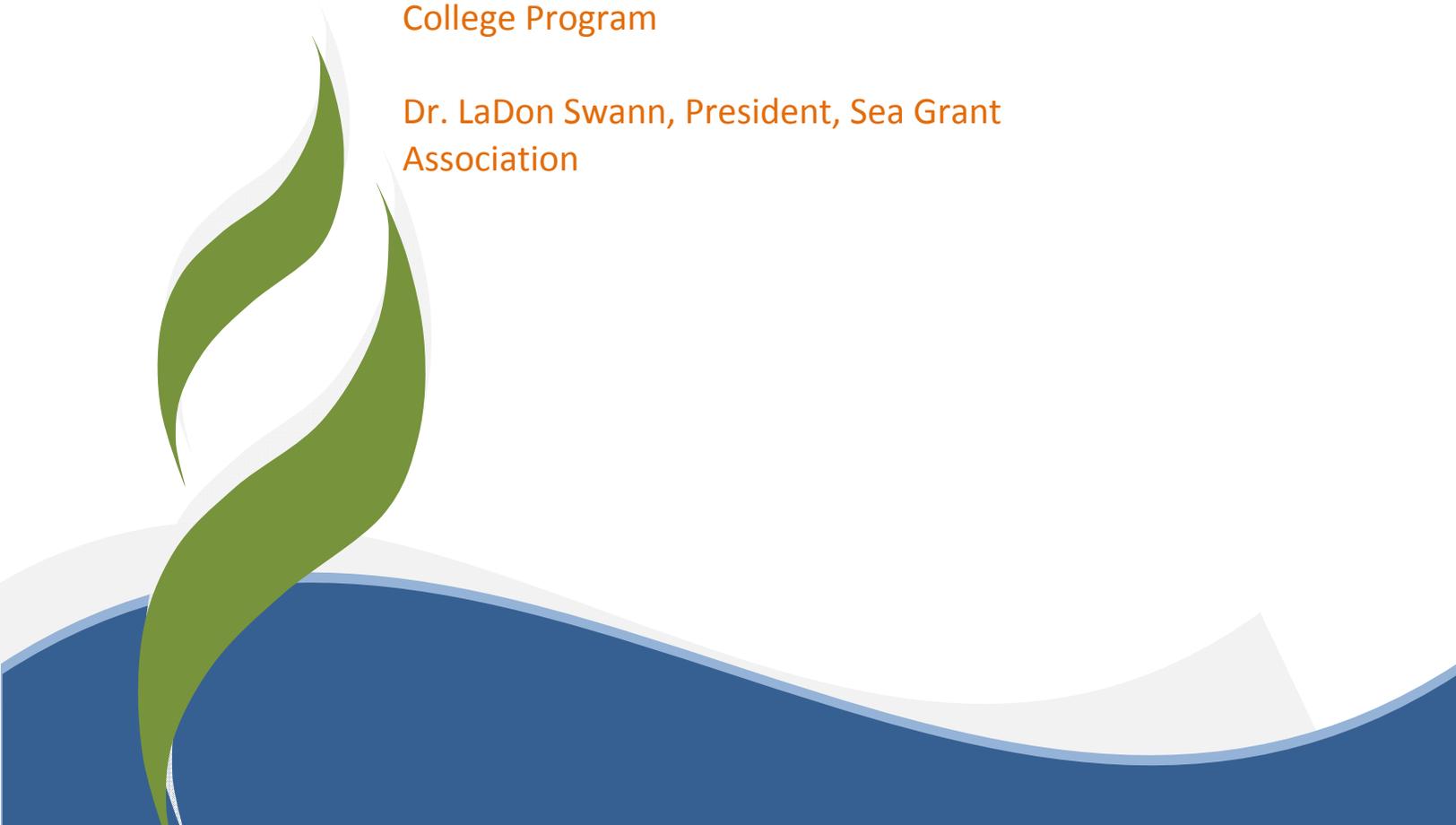


Bios:

Mr. Rolland (Rollie) A. Schmitten, National Sea Grant Advisory Board

Dr. Leon Cammen, Director, National Sea Grant College Program

Dr. LaDon Swann, President, Sea Grant Association



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Rollie Schmitt (Vice Chair)
Leavenworth, Washington

Rolland A. (Rollie) Schmitt has been a natural resources manager for the past 38 years; focusing on marine fish and mammals for the last 25 years. He has served as the Washington State Director of Fisheries. The federal (National Marine Fisheries Service) West Coast Regional Director of 6 states; the National Director of Marine Fisheries; the US Department of Commerce Deputy Assistant Secretary for International Affairs (NOAA), and the National Director of Marine Habitat Conservation. During his career he served 4 presidents with Presidential appointments as the: US Tuna Commissioner, US Atlantic Salmon Commissioner, and served 10 years as the US International Whaling Commissioner. Among his many awards and recognitions include: Presidential Merit Award, Trout Unlimited Washington Sportsman of the Year, Presidential award for outstanding achievement of a Vietnam veteran, and the Department of Transportation (USCG) Commandant's Award for Meritorious Public Service. In 2005, Mr. Schmitt retired and moved back to Sockeye Point Lodge in Washington State where he continues to work on marine and fresh water resource issues.



Dr. Leon Cammen
Director, National Sea Grant College Program

Dr. Leon M. Cammen is the Director of NOAA's National Sea Grant College Program. Since joining Sea Grant in 1990, Dr. Cammen has been a Program Officer for about half the state Sea Grant Programs and has served as Research Director. From 2004 to 2010, he was the Program Manager for NOAA's Ecosystem Research Program, a matrix program that includes the programs and laboratories from OAR, NOS and NMFS that deal with coastal and ocean ecosystem research.

Prior to joining Sea Grant, Dr. Cammen was a research scientist at Bigelow Laboratory for Ocean Sciences in Maine. His research interests include benthic ecology, the microbial loop, respiratory physiology, benthic-pelagic coupling, and ecosystem modeling. Dr. Cammen has authored over 30 publications in the fields of marine ecology and biological oceanography

Dr. Cammen received his Ph.D. in Zoology from North Carolina State University in 1978. He carried out postdoctoral research as a National Research Council Canada Fellow at the Bedford Institute of Oceanography, as a NATO Fellow at the Institute of Ecology and Genetics of Aarhus University in Denmark, and at Skidaway Institute of Oceanography. In addition, he has been a visiting scientist at Odense University in Denmark and a visiting professor at Aarhus University, teaching Marine Ecology and Microbial Ecology.



LaDon Swann
President, Sea Grant Association

LaDon Swann is Director of the Mississippi-Alabama Sea Grant Consortium (MASGC), and Director of the Auburn University's Marine Programs. He received BS and MS from Tennessee Technological University and a Ph.D. from Purdue University. LaDon is responsible for implementing practical solutions to coastal issues through competitive research, graduate student training, and extension and outreach and K-12 education in Alabama and Mississippi. LaDon also has over 26 years of experience designing, delivering and evaluating engagement programs addressing local, regional and national needs. LaDon is actively involved in regional engagement through the NOAA Gulf of Mexico Regional Collaboration Team, multiple Gulf of Mexico Alliance priority issues teams. During 2010 and 2011 LaDon served on the Oil Spill Recovery Commissions for Alabama and Mississippi, Gulf Coast Ecosystem Restoration Task Force, and served as a primary point of contact for NOAA's engagement efforts. In 2012 LaDon served on the Mississippi GoCoast 2020 oil spill recovery planning effort. LaDon is the President of the National Sea Grant Association, member of the Ocean Research Advisory Panel and co-chair of Sea Grant's Hazard Resilient Coastal Communities Focus Team. LaDon is also a past-president of the U.S. Aquaculture Association. LaDon's wife Roberta and sons, William and Gage, live near Dauphin Island, AL.

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Bio:

Dr. Jeffrey M. Reutter, Director, Ohio Sea Grant



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Jeffrey M. Reutter, Ph.D.

Jeffrey M. Reutter began working on Lake Erie as a graduate student at Stone Laboratory in 1971 and has directed four programs at The Ohio State University since 1987: F.T. Stone Laboratory, the Ohio Sea Grant College Program, the Center for Lake Erie Area Research, and the Great Lakes Aquatic Ecosystem Research Consortium, a consortium of

top scientists at 12 Ohio colleges. He received his BS and MS from Ohio State in fisheries management and his Ph.D. from Ohio State in Environmental Biology. He has been a member of the Ocean Research and Resources Advisory Panel (ORRAP) where he chaired the Education Sub-Panel and served on the Research to Application Task Force. He served for 21 years on the Council of Great Lakes Research Managers for the International Joint Commission in US Department of State with six years as US Co-Chair, and has been the President of the National Association of Marine Laboratories (NAML) and the Ohio State Chapter of the Scientific Research Society, Sigma Xi. He is the US Co-Chair of the Great Lakes Regional Research Information Network (GLRRIN) and the Lake Erie Millennium Network. He is the nutrient loading targets subcommittee chair for the Ohio Phosphorus Task Force and the Annex 4 subcommittee of the Great Lakes Water Quality Agreement.

Dr. Reutter is an aquatic biologist and limnologist with a keen interest in research, education, and outreach and making complex science issues understandable to elected officials, managers, and decision makers. He is the author of over 150 technical reports and journal articles, and a frequent lecturer on issues related to the changing Lake Erie ecosystem, harmful algal blooms, nutrient loading, aquatic invasive species, linking environmental health and coastal economic development, Great Lakes research needs and priorities, the importance of science education and research, and the importance of scientists communicating with the public. While at OSU he has aided in the development of 20 endowments, supported over 2300 students with scholarships, fellowships, and employment opportunities, and supported research projects to over 275 different principal investigators at 20 Ohio colleges and universities.

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PIE Assessment Committee Report



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Planning, Implementation and Evaluation (PIE) Assessment Charge
From Leon Cammen, Director, NSGO
March, 2013

Subject: Charge to the National Sea Grant Advisory Board to Review the Sea Grant Program's Planning, Implementation and Evaluation System (PIE System).

Purpose: To review and recommend necessary changes to the integrated PIE System.

Background: In 1994, the National Research Council (NRC) reviewed the NOAA National Sea Grant College Program (NSGCP). In its *Review of the NOAA National Sea Grant College Program* report, the NRC recommended several actions, including systematic, periodic reviews of each Sea Grant program. In response to the NRC, NSGCP developed the program review and evaluation process used to review the Sea Grant programs by an external Program Assessment Team every four years since 1998. The National Sea Grant College Program Act Amendments of 2002 (P.L. 107–299) directed NOAA to contract with the NRC a second time to review the evaluation process and make recommendations to improve its effectiveness. The resulting NRC report, *Evaluation of the Sea Grant Review Process* (2006), included a total of 24 recommendations in the following categories: strategic planning; evaluation; periodic assessment and performance criteria; program assessment teams and site visits; and, improving program cohesion, coordination, and oversight.

In order to address the 2006 NRC recommendations, the Director of the NSGCP executed a new, integrated model for strategic planning, implementation and evaluation. This integrated planning, implementation and evaluation system (or PIE System) begins with rigorous strategic planning at both the National and State levels that lasts two years. The plans are then implemented with coordinated and collaborative research, outreach and education activities at the state level for four years. On an annual basis, programs evaluate progress against their plans in a report to the National Sea Grant Office (NSGO) that shares the program's impacts and accomplishments towards their plan goals, and the program's performance measures and metrics. Then, every four years, a Performance Review Panel (PRP) conducts a retrospective evaluation of the impact of the programs relative to their four-year strategic plans by reviewing these annual reports. In addition to the PRP, once every four years, a review team visits each Sea Grant program to review and discuss broad issues related to: 1) program management and organization, 2) stakeholder engagement, and 3) collaborative network activities. These site review teams prepare a report with findings, suggestions and recommendations to improve the Sea Grant program's performance. Finally, the NSGO meets each year to discuss the progress of each state program relative to its plan, and to identify potential areas for improvement. Once every four years, this NSGO review is expanded to include a performance evaluation and rating of all programs based upon the PRP and site visit reports. State programs have the opportunity to submit a memorandum to the NSGO responding to findings in both the site visit and PRP reports, which is also used as part of the NSGO review.

Charge to the National Sea Grant Advisory Board: Since this was the first time through all elements of the PIE system, we want to capitalize on an opportunity to look back at the entire PIE process and make improvements where needed. The National Sea Grant Advisory Board should assess the implications of the PIE System, reviewing what worked, what didn't, and recommending revisions for the next four years.

Participants: The Advisory Board, through the appointment of an appropriate subcommittee, will carry out this review. The subcommittee should include Board members, Sea Grant Directors, and a person from the National Sea Grant Office. The National Office is prepared to provide staff support and travel funds as necessary to facilitate the subcommittee's discussions.

Potential Schedule: A Report by the committee should be available for discussion at the fall, 2013 Board Meeting.

National Sea Grant Advisory Board Assessment of Sea Grant's Planning, Implementation and Evaluation Process Report September 2013

I. Introduction

Charge to the National Sea Grant Advisory Board

The National Sea Grant College Program (NSGCP) Director charged the National Sea Grant Advisory Board (NSGAB) to assess the lessons-learned from the 2010-13 Planning, Implementation and Evaluation (PIE) cycle. Capitalizing on the completion of this first cycle of the PIE process, the NSGAB should base recommended revisions for the 2014-17 cycle by reviewing what worked well and what did not from the 2010-13 cycle.

The NSGAB developed a subcommittee (PIE Assessment Committee) with membership from the Advisory Board, Sea Grant Directors and the National Sea Grant Office (NSGO).

This committee reviewed all PIE guidance and informational documents, which included feedback from the Performance Review Panels and Site Visit panelists, the Sea Grant Network, and a Sea Grant Association survey on the entire PIE process. When reviewing materials and making any recommendations, the committee ensured that the PIE process met standing legislative requirements:

- National Network should have a strategic plan (Legislation – 1123D2a)
- All programs must have a four year plan that establishes priorities for the National Sea Grant College Program (Legislation – 1123C1)
- All programs must implement their plans (Legislation – 1126D1)
- All programs must be evaluated (Legislation – 1123D3a)
- Every two years – the NSGAB is to report to Congress on the progress made toward meeting the priorities identified in the National Network plan (Legislation – 1128B2)

Overarching Findings

After several weeks of document reviews and conference calls, followed by an in-person meeting, the committee agreed with the following as overall guidance for their PIE assessment:

The Planning, Implementation, and Evaluation (PIE) process has a good structure and meets the recommendations from the 2006 National Research Council Report, *Evaluation of the Sea Grant Program Review Process*. The first cycle was largely successful; however, it was too big and costly. The committee also found that all the components of the evaluation process were not well integrated into an overall assessment of the individual Sea Grant programs (programs) or the Sea Grant network.

II. Findings and Recommendations

Below are recommendations to improve the efficiency of the current PIE process without compromising the ability to evaluate programs and the overall Sea Grant network.

PLANNING

Findings

The National Sea Grant College Program (NSGCP) has a rigorous and thorough planning process at both the National and program level. Currently, planning at the National and program level happens simultaneously, with programs needing to ensure their plans align with the National Network plan. This simultaneous timing of the plans can be confusing and require significant additional work to ensure this alignment.

In the current planning process, programs are required to request permission from the National Sea Grant Office (NSGO) to make changes to their strategic plans. This requires time and effort from both the program and the NSGO for minor changes (i.e., changes in personnel and funding), and is inefficient.

Recommendation P-1: The NSGCP should continue initiating a broad National Network Strategic plan based on National Ocean Policy and NOAA top-down mission requirements. Once this national plan is complete, the programs will then develop their own plans based on this broad national strategic plan. The individual program will receive approval of their strategic plan from the NSGO.

Recommendation P-2: Minor changes in program plans do not need to be approved by the NSGO. Adjusting performance measure targets should be *strongly* discouraged. Programs should contact the NSGO for proposed changes to their individual plans to address only *significant* emerging or unexpected issues (e.g., Hurricane Sandy, Gulf Oil Spill, or irradiation of a new aquatic invasive species).

IMPLEMENTATION

Findings

Implementation happens at different levels within the National Sea Grant Program. At the National level, activities are organized into focus areas. Focus areas are managed by focus teams.

The original expectations of these Focus Teams were to:

1. Facilitate planning, implementation, synthesis and reporting of Sea Grant activities and accomplishments;
2. Identify new opportunities and directions for Sea Grant national and regional initiatives;
3. Catalyze cooperative efforts among Sea Grant programs, the NSGO, NOAA, other agencies and stakeholder organizations, and NGO's; and
4. Provide a mechanism to further solidify Sea Grant's local, regional, and national identity.

These tasks are important and should be continued. Currently, for various reasons (including budget constraints) these tasks are not being fully met. The focus teams are large (64 members) and

geographically dispersed. Focus Team contributions to the Sea Grant mission have been limited with most of the participation done by the Sea Grant Fellows and Focus Team Chairs and Vice-Chairs. Our committee recognizes that these Sea Grant mission tasks should reside within the NSGO, but the NSGO currently lacks the capacity to address all four expectations.

Recommendation I-1: The NSGCP Director should find more efficient ways to accomplish each of the four tasks currently given to the large focus teams. Examples of Teams that could perform these tasks could include:

- An external panel,
- Smaller, more narrowly directed Focus Teams,
- A NSGAB subcommittee, or
- NSGO staff (redirected from other efforts).

EVALUATION

Findings

The current evaluation process of the individual Sea Grant programs includes annual reports from the programs, an annual NSGO review, a program site visit, and performance review panels. During the annual review, the NSGO reviews the programs' annual reports, site visit reports, and performance review panel findings and any programs' responses. The site visits review the performance of the programs in three areas: 1) program management and organization, 2) stakeholder engagement, and 3) collaborative network/NOAA activities. The performance review panels evaluate the results (impacts, accomplishments and success of reaching performance measures) of the programs. The site visits and performance review panels are conducted once during the four-year evaluation cycle. These evaluation processes are compartmentalized and not fully integrated into the overall evaluation of the program.

Recommendation E-1: Integrate annual reviews, site visits, and an external evaluation panel into an overall four-year evaluation process.

Annual Reports

Findings

The committee finds the annual report a necessary part of the PIE process, and an important part of the program evaluation. On an annual basis, programs submit a report to the NSGO. These annual reports include impacts and accomplishments, and progress towards performance measures and metrics. All annual report information is currently submitted by the programs into a database known as PIER (Planning, Implementation and Evaluation Resource). Thus, the PIER outputs assume a much higher priority than simply tracking database input. Annual Reports can track progress; however, they should not be the only source of data for the overall program evaluation process.

The annual report serves as an 'annual review of programs' and also serves as a performance progress report for the purpose of grant renewal.

Recommendation E-2: Continue on-going, joint, NSGO/SGA efforts to improve NSGO annual reporting guidance, particularly the definitions of performance measures and metrics.

Recommendation E-3: The format of the PIER outputs should be improved to enhance usability across the various reporting and performance evaluation needs across the network.

Annual Review Process

Findings

The annual review conducted by the NSGO is an important process to assess each program on an annual basis. This is an opportunity for the programs to work closely with the NSGO program officer to demonstrate annual results through their annual report. The NSGO also includes the site visit report, the performance review panels' findings and ratings, and program responses in the year the annual review is conducted. However, the results of these NSGO reviews are not included in the four-year evaluation process that affects merit funding. There are portions of the NSGO annual review process that are closed to the programs.

Recommendation E-4: We encourage constructive feedback between the NSGO program officer and the Sea Grant program to assure continued improvement and cooperation. The committee feels this is an important step to improve the annual review process which should be included as input to the four-year evaluation. The role of the program officer should be that of a liaison (honest-broker), communicating with programs.

Recommendation E-5: The results of the annual reviews should be included in the program's four-year evaluation process.

Recommendation E-6: The program Director should be invited to all segments of the NSGO annual reviews for their program.

Site Visits

Findings

The site visit proved to be a valuable part of Sea Grant program assessment. The site visit team meets with the program management team, advisory committees, and university administration to review and discuss broad issues related to 1) program management and organization, 2) stakeholder engagement; and 3) partnerships with the Sea Grant Network and NOAA. There is network consensus on the success of the site visits; however, the site visit reports have not been adequately integrated into the overall four-year evaluation process.

Recommendation E-7: The site visit report should be included as an influential input to the program's four-year evaluation.

Recommendation E-8: With inclusion of the site visit reports in the four-year evaluation process, there should be new training and guidance developed, for the NSGAB, the NSGO and individual programs, on how the site visit will be used in the evaluation process.

Performance Review Panel

Findings

The current performance review panels (PRPs) assess the impacts of the program by focus area. The simultaneous performance review of all programs by the same panelists allow for consistent rating within panels. However, due to the amount of material provided by the programs, the review was very labor intensive. The impacts were not prioritized by the programs, which made it difficult for the reviewers to evaluate their relative importance in their program goals. Separating program results into focus areas assessed by separate PRPs was perceived as inhibiting a consistent scoring across the four focus areas. An analysis of the performance review scoring however showed no significant difference between panels.

The impacts across focus areas for the individual programs and the network were lost by separating the program results by focus areas.

Recommendation E-9: The committee recommends the PRP be replaced with the external evaluation panel.

Recommendation E-10: The committee supports the concept of all programs being evaluated simultaneously every four years by a 'National Sea Grant External Evaluation Panel' to evaluate each individual program in the following categories:

Program Director's Impact Report	50%
Site Review Team (SRT) Report	35%
Annual Review Summary	15%

- The external evaluation panel should be comprised of members from the NSGAB, NOAA, other State/Federal Agency Officials, and leaders from academia/industry.
- The NSGCP Director, in consultation with the NSGAB and Sea Grant Directors, shall develop guidance for producing the three documents as well as evaluation/rating criteria to be used by the external evaluation panel.
- Limitations should be set on the volume of material presented to the National Sea Grant External Evaluation Panel:
 - Program Director's Impact Report should not exceed 15 pages.
 - Directors should explain how their program accomplished their individual Sea Grant program plans.
 - The SRT Report should not exceed 10 pages.
 - The NSGO program officer Annual Review Summary:
 - A brief presentation, and
 - Annual review summary memorandums (should not exceed 6 pages).

Recommendation E-11: The External Evaluation Panel will give each program a rating, which should be used by the NSGCP Director to determine merit funds.

Timing of the External Evaluation Panel

Finding: The committee recognizes there are two guiding principles in a conceptual review framework:

1. A Sea Grant program should be evaluated based on its success over a full four-year strategic planning window.
2. A Sea Grant director needs to be informed about his/her projected funding level prior to planning for the next four-year Omnibus program.

Due to time restraints, it is impossible for a full review of a four-year Omnibus (strategic plan cycle) to occur immediately following a cycle and a determination of base/merit funding by the NSGCP Director prior to beginning of the next four-year cycle. It is more important for a program Director to know future funding levels for research, outreach and education work plan development, than to have an exclusive review of only a specific strategic plan window.

Recommendation E-12: The committee feels that a mid-cycle review (year three) is the best option to allow proper time for the previous cycle's research accomplishments to become impacts and External Evaluation Panel results to be synthesized by the start of the next cycle. Site visits should occur in years one and two.

III. General Recommendation

The NSGAB PIE Assessment committee recommends, with implementation of any or all of the NSGAB recommendations contained in this report, the NSGCP Director coordinate evaluation guidance with the Sea Grant Directors and the National Sea Grant Advisory Board.

NSGAB PIE Assessment Committee

NSGAB

Dick West - Chair
 Dale Baker
 Amber Mace
 Bill Stubblefield

NSGO

Sami Grimes - co-Chair
 Chris Hayes

SGA

Sylvain DeGuise, CT Program Director
 Jim Hurley, WI Program Director

Virginia Sea Grant College Status Report



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National Sea Grant Advisory Board
A Federal Advisory Committee



September 11, 2013

Dr. Nancy Rabalais
Chair, National Sea Grant Advisory Board
c/o NOAA/Sea Grant, R/SG
1315 East West Highway
Silver Spring, MD 20910

Dear Dr. Rabalais:

This letter constitutes the report of the ad hoc committee appointed by you, in consultation with the National Sea Grant Office, to review and evaluate the Virginia Institute of Marine Science (VIMS) application of May 2013, and to make recommendations on whether the Virginia Sea Grant Program meets the pre-requisite requirements for designation as Sea Grant College Status.

The committee consisted of the following four members of the National Sea Grant Advisory Board: Dr. Rosanne Fortner, Dr. William Stubblefield, Dr. Paulinus Chigbu, and myself as Chair. The committee conducted its review in accordance with Section 15 CFR Part 918.3 (b) that describes "Guidelines for Sea Grant Colleges and Regional Consortia."

This report is organized into three sections: 1) General findings and recommendations, 2) Specific findings with respect to the ten pre-requisite requirements for College Status and 3) Conclusions.

Virginia Sea Grant's application for College Status was submitted on May 31, 2013. The committee reviewed this application, the results of the two most recent external reviews of the Virginia Sea Grant program, along with other materials, and conducted a site visit on September 5 and 6, 2013, to assess the program's satisfaction of the requirements for college status. This report contains the results of that review.

General findings and recommendations

Based on the college status application and exceptional briefing materials provided by Virginia Sea Grant, the supplementary reviews and other materials provided by the National Sea Grant Office, and the site visit to Virginia Sea Grant on September 5 and 6, 2013, the committee finds that the Virginia Sea Grant Program meets all of the pre-requisite requirements set forth in regulation at 15 CFR 918.3 for designation as Sea Grant College Status.

The committee recommends that the Sea Grant Advisory Board communicate to the Director of the National Sea Grant College Program an unqualified recommendation that Virginia Sea Grant should be designated a Sea Grant College.

Findings on specific criteria

(1) Leadership. Is the candidate an intellectual and practical leader in marine science,

engineering, education, and advisory service in its state and region?

Yes. The leadership of VIMS and Virginia Sea Grant has impressively resurrected a decertified program, transforming it into one that is widely recognized as an intellectual and practical leader by the major institutions in the state and region.

The committee saw evidence of the respect placed in Virginia Sea Grant by the Governor's office, state and Federal agencies, other state academic institutions, and stakeholders.

This success was accomplished through

- adopting an inclusive, full-blown partnership model which maximizes networking with natural resource managers, academic institutions and stakeholders.
- employing progressive solutions to Virginia issues and overall program constraints, for example with the innovative "research fellowship" approach to maximizing the effect of limited research dollars.
- seeking out and using the best talent available to deliver information and services to their constituents
- providing high quality science, engineering, education and advisory services relevant to the needs of the state.

(2) *Organization.* *Has the candidate created the necessary management organization to carry on a viable and productive Sea Grant Program, and does the candidate have backing of its administration at a sufficiently high level to fulfill its multidisciplinary and multifaceted mandate?*

Yes. The Director of the Sea Grant Program reports directly to the Dean/Director of VIMS, who in turn reports directly to the Provost of the College of William & Mary in Virginia. The Program has the support of its institution up to the Provost and President of the College, as well as of its partner academic institutions (University of Virginia, Virginia Tech, George Mason University, Virginia Commonwealth University, and Old Dominion University) at the Director to Vice President levels, through its Policy Oversight Board. Strong partnerships between these institutions exist at all levels of the organizations, demonstrating Virginia Sea Grant's mastery of networking as an organizational tool.

Somewhat unusual to many Sea Grant programs, the Virginia Sea Grant Program utilizes a Research and Education Advisory Committee (REAC) that serves as the primary point of contact for interaction with the partner institutions. The REAC advises the Virginia Sea Grant Director on program direction and priorities, strategic planning, partner institution benefits and responses to national program reviews. This Committee also serves to advance the communication between the Sea Grant program and the partner institutions.

The College of William & Mary in Virginia is both the parent institution of the Program's host entity VIMS, and a partner of Virginia Sea Grant.

It is noteworthy that when the Virginia Sea Grant Program at VIMS was initially constituted, it had four formal partners. Since then, two additional academic institutions approached the Program seeking partnership, and have become Program partners.

(3) *Relevance.* *Is the candidate's program relevant to local, State, regional, or National*

opportunities and problems in the marine environment? Important factors in evaluating relevance are the presence of an emphasis on marine resources, and the extent to which capabilities have been developed to be responsive to that need.

Yes. The committee found strong evidence of effective use of External Advisory Committee (EAC) to identify and respond to the needs of the Program's stakeholders. The Program's stakeholders include NGOs, industry, federal agencies, and state agencies.

VIMS receives direct funding from the state, and has many research and advisory responsibilities toward the state built into state legislation, which Virginia Sea Grant helps discharge.

Virginia Sea Grant also maintains a second advisory committee composed of researchers, which provides input on local research needs, as well as on processes of soliciting and selecting research projects to assure continued relevance and effectiveness.

(4) Programmed team approach. *Does the candidate have a programmed team approach to solving marine problems, which includes relevant, high quality, multidisciplinary research with associated educational and advisory services capable of producing identifiable results?*

Yes. The Program's commitment to a high quality, multidisciplinary approach that integrates research and associated educational and advisory services was shown by its hiring of extremely qualified staff to maintain these functions, and support for modern educational and communications services, such as the Bridge educational resources website and a modern Communications Center staffed and equipped to handle modern, multimedia communication efforts strategically. Research is well integrated with other functional areas through the research fellowship program mentioned above, and the linking of research fellows with outreach mentors.

Virginia Sea Grant makes use of all of its partner academic institutions to maximize the scientific disciplines at its disposal, and is very active in regional programs as well, such as MARCO and regional CZM efforts. It hosted the Mid-Atlantic Sea Grant Regional Research Competition, for the first time drawing in Sea Grant Programs as far away as NY and NC.

(5) Education and training. *Is education and training clearly relevant to National, regional, State and local needs in fields related to ocean, Great Lakes, and coastal resources? (Education may include pre-college, college, post-graduate, public and adult levels.)*

Yes. The Program has many examples of tailoring its research, education and outreach efforts to meet national, regional, and local education needs. Their research fellowships provide not only research impacts, but also intense training for the graduate students. Several specialized training and internship programs have been designed around local needs.

Their work with the American Culinary Association is an excellent example of marrying the education needs of local students and professionals in a manner relevant both to Virginia's economic well-being, and the health and sustainability of Virginia's natural marine resources. Other impressive projects include internships in communication, photography, law and coastal policy.

The Virginia Coastal Policy Clinic, a partnership between VASG, VIMS, and William & Mary Law School, gives law students hands-on experience working on policy analysis for Virginia

communities. The Clinic is a prime example of a forward thinking educational tool that recognizes the current educational need Sea Grant can fill in areas beyond the traditional natural sciences.

The committee was especially impressed with the Program's development and maintenance of the Bridge, which provides marine science educational resources to teachers and students through use of modern technology, a massive specialized volunteer support structure, and access to numerous datasets.

(6) Advisory services. *Does the candidate have a strong program through which information, techniques and research results from any reliable source, domestic or international, are communicated to, and utilized by, user communities? In addition to the educational and information dissemination role, does the advisory service program aid in the identification and communication of user communities' research and educational needs?*

Yes. Virginia has more than one institution with Marine Advisory Science capability, and here as in other areas, Virginia Sea Grant's networking helps to maximize its usefulness to the state, in a wide range of areas from seafood safety and quality control to new marketing strategies, to working waterfronts.

Virginia Sea Grant has recognized the need to establish a Spanish language capability to address this group of stakeholders, and has done so aggressively.

Many examples of advisory assistance were presented to the committee by stakeholders who thanked Virginia Sea Grant for its help. A stakeholder with a crab processing business gave Virginia Sea Grant full credit for the continued survival of that industry in Virginia.

(7) Relationships. *Does the candidate have close ties with Federal agencies, State agencies and administrations, local authorities, business and industry, and other educational institutions? Do these ties: (i) ensure the relevance of its programs, (ii) give assistance to the broadest possible audience, (iii) involve a broad pool of talent in providing assistance and (iv) assist others in developing research and management competence? (The extent and quality of an institution's relationships are critical factors in evaluating the institutional program)*

Yes. As might be expected from a Program whose major strength is networking and partnerships, Virginia Sea Grant effectively networks with state agencies (including Virginia Agriculture, Fisheries, Consumer Services and Public Health Agencies and Virginia CZM), federal agencies (including FDA, USDA, USFWS, OER, OCRM and the NERR Program in NOAA).

Virginia has developed some very successful mechanisms for interaction with stakeholders and state institutions, including periodic stakeholder input events, research symposia, and receptions held in the State capital.

Discussions with representatives from the Program's formal partners demonstrate that the benefit the partners see in the partnership is not just in access to competitive research funds, but also the opportunity for their researchers to expand their capabilities and usefulness by drawing on experts in other disciplines at other institutions, to the improvement of their overall research efforts. Indeed, some Partners noted that even though a PI from their institution had not yet won a VA Sea Grant research competition, they still strongly support the Partnership because of the

cross-institution and cross-disciplinary team building opportunities that it affords.

Concrete examples of the benefits of partnership were given, including an in-person endorsement by the Dean of the William & Mary law school of the Coastal Policy Program jointly established by the Law School and Virginia Sea Grant.

(8) Productivity. *Does the candidate have substantial strength in the three basic Sea Grant activities: research, education and training, and advisory services?*

Yes. Many examples of the impacts of VA Sea Grant research, education, and advisory services were provided, which illustrate the strength of their activities.

In the recent "PRP" external performance review of Sea Grant Program impacts, the reviewers noted that Virginia Sea Grant was meeting or exceeding expectations in its impacts in every topical area it was engaged in.

In one example from the PRP review, the work of Virginia Sea Grant in developing weather monitoring systems and models and training stakeholders and officials in their use was cited as being partially responsible for the successful evacuation of nearly 200,000 people during Hurricane Irene in 2011, potentially resulting in reductions in the loss of life and property.

Numerous other examples of the positive impacts of Virginia Sea Grant's research, education and advisory activities were presented at the site visit and in the materials provided to the reviewers.

(9) Support. *Does the candidate have the ability to obtain matching funds from non-Federal sources, such as state legislatures, university management, state agencies, business, and industry? A diversity of matching fund sources is encouraged as a sign of program vitality and the ability to meet the Sea Grant requirement that funds for the general programs be matched with at least one non-Federal dollar for every two Federal dollars.*

Yes. The Program has done an effective job of identifying and securing matching and leveraged funds. Their available matching funds have actually increased significantly since 2007, through increased partner membership and new state funds. VIMS has sought state funding to support VA Sea Grant positions and infrastructure.

The strength of VA Sea Grant's institutional support was clear during the recent recession. VIMS took substantial state budget cuts over the 2008-2010 fiscal years that amounted to a reduction of more than 30% in operating funds and resulted in laying off 22 staff employees and leaving 10 faculty positions vacant. Even at this time, VIMS maintained its commitment to VASG, filling some vacated extension positions, sustaining less than federally negotiated overhead rates on administration and extension accounts and charged no overhead on communication and pass-through sub-awards, and provided annual support of immediate needs (e.g. equipment, salary).

Discussions with top leadership of the College of William & Mary in Virginia made it clear that even though VIMS gets funding directly from the state and thus does not pay overhead costs to the University, William & Mary still values and supports VIMS and Virginia Sea Grant. The President of William & Mary made clear his commitment to the Sea Grant program during a dinner at his home.

(10) Continuity of high performance. Does the candidate demonstrate the ability to continue the pursuit of excellence and sustain the following? (i)high performance in marine research, education, training, and advisory services; (ii)leadership in marine activities including coordinated planning and cooperative work with local, state, regional, and Federal agencies, other Sea Grant programs, and non-Sea Grant universities; (iii)effective management framework and application of institutional resources to the achievement of Sea Grant objectives; (iv)long-term plans for research, education, training, and advisory services consistent with Sea Grant goals and objectives; (v)furtherance of the Sea Grant concept and the full development of its potential within the institution and the state; (vi)adequate and stable matching financial support for the program from non-Federal sources; and (vii)effective system to control the quality of its Sea Grant programs.

Yes. The committee believes that from all indications, Virginia Sea Grant is a Program on the ascent. The Program has been populated with extremely capable people garnering great respect among their peers and partners. This respect was demonstrated many times, and from numerous different individuals, during the site visit. The number of unsolicited, heartfelt compliments about Dean John Wells, Director Troy Hartley, and Assistant Director Susan Park from partners and stakeholders was especially remarkable. The entire team is experienced in marine science, very talented, and very committed to the success of the Program.

The partners are well integrated into the Program, and show a similar high level of commitment and enthusiasm.

There is every indication that the Program will continue to exhibit the highest level of performance into the future, and seems on its way to become one of the premier Sea Grant Programs in the country.

Conclusions

The committee finds that under the Virginia Institute of Marine Science, the Virginia Sea Grant Program has undergone a major transformation from not meeting the standards for performance for a Sea Grant Program, to a high-performing Program that has gained the trust and admiration of all of its institutional partners and stakeholders in general.

The committee finds that Virginia Sea Grant meets all of the requirements for College status, and unanimously and enthusiastically recommends that VIMS be granted the designation of Sea Grant College.

Respectfully Submitted,



Harry Simmons
Chair, Virginia College Status committee

Allocation Committee Report



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NATIONAL SEA GRANT
ALLOCATION COMMITTEE # 3

REPORT TO THE NATIONAL SEA GRANT ADVISORY BOARD

September 23, 2013

NATIONAL SEA GRANT ALLOCATION COMMITTEE # 3

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THE NATIONAL SEA GRANT ALLOCATION COMMITTEE 3's REPORT

Introduction

The National Sea Grant Advisory Board's Allocation Committee 3 was created by the National Sea Grant Director to once again try to address a long standing problem of a rational allocation of annual appropriations among the state programs. This question was first addressed back in 2003 with AC -1 and, when that recommended solution did not resolve the issues, was addressed again by AC -2 in 2010. AC -2 created a conceptual framework and a set of guiding principles for a budget allocation process but did not delineate the details of how to achieve such. To this end the NSGO Director asked the Advisory Board to create yet another committee to finalize a recommendation.

The AC-3 Committee comprised the following people:

Dick Vortmann, National Sea Grant Advisory Board: Committee Chairman
 Dick West, National Sea Grant Advisory Board
 Bill Stubblefield, National Sea Grant Advisory Board
 Frank Beal, National Sea Grant Advisory Board
 Sylvain DeGuise, Sea Grant Association (President Elect)
 Jonathan Pennock, Sea Grant Association (Past President)
 Jim Eckman, Sea Grant Association
 Mike Liffmann, National Sea Grant Office
 Jonathan Eigen, National Sea Grant Office
 Joshua Brown, National Sea Grant Office (staff support, non voting member).

The Committee engaged in significant email dialog over a three month period, analyzing previous studies, drafting position papers, discussing and debating issues and narrowing the range of relevant options. This productive effort culminated in an intensive two day in-person meeting at NSGO headquarters in August. At that time the Committee reached broad consensus and produced the recommended strategies and timetables presented in this Report.

A brief recap of the perceived Problems with the current allocation Process

(A non prioritized list extracted form previous reports)

1. There are significant differences in the amount of funding each state program receives
 - i. These differences largely correlate to the age of the program
 - ii. More recent programs receive far fewer dollars
2. There is no defensible logic supporting the current allocation process
 - i. Other than "that is how it has always been"
3. The current process is difficult to explain and defend to Congress when seeking appropriations

4. Federal funding for the total S/G program has in recent years been relatively flat in nominal dollars and has been declining in real dollars (i.e. purchasing power dollars)
5. This “inequity” between the individual programs’ funding was addressed in the AC-1 (2003) with the corrective actions being largely based on the use of the growth in annual appropriations
6. The corrective solution proved ineffective as there was little if any annual budget growth in nominal dollars
7. The current “inequity” problem has been exacerbated by the decline in the total appropriated dollars measured in real dollars
8. The decline in purchasing power allocations to the “smaller budget” programs increasingly threatens the viability of the three product line S/G model
 - i. The objective of research spending being at least 40% of the total state program has become difficult to achieve (that target having already been reduced of necessity from 50%)
 - ii. At some point the dollars available for each of the three product lines do not allow for viable /cost effective products
 - iii. The basic minimum administration cost of a state program has tended to remain fixed in real dollars (as cost of living increases have been given)
 1. This consumes a steadily increasing % of the state’s total nominal dollar allocation
 2. At some point, it becomes difficult to justify a small program due to its excessively high program administrative costs with little money left over for real product
9. Only a minority of the total Federal funds are awarded amongst state programs based on merit or competition in the current allocation process.
 - i. Criticism in Congress that this is simply a state “block grant” program
10. There is no “needs” basis to justify allocation amongst the state programs in the current process
11. There is no mandate for regional research or cooperative efforts between individual programs to address regional needs
12. Current mandated cap of 5% on administrative costs at NSGO
 - i. With the cost of minimum staffed administrative effort growing in nominal dollars, with a relatively flat total Federal S/G budget in nominal dollars, the result is fewer people at NSGO to effectively administer the national program

NSGO Director’s Charge to AC 3:

Purpose: to develop a strategy and timeline for implementing the funding allocation principles recommended by the NSGAB second allocation committee (AC-2).

Charge to AC-3: building on the work of AC-2, AC -3 should develop a series of strategies and timelines to adopt and implement the allocation frame work.

AC 2's Principles:

Maintain the National Network (i.e. a program in every state)

Preserve the Sea Grant Model (i.e. the three “product” model)

Funding to State Programs:

Statutory limit: no state can receive more than 15%

Need-driven

Competitive

Merit- based

Stable funding to manage program (i.e. a set minimum funding to each program)

Institutionalize regional research

Program Directors retain discretion within their program, help set regional priorities

Total state budgets strive for 40% research

AC 2's Recommended Allocation Policy Framework (% numbers are all of 100%)

State (75% Federal Funds)

- ii. Base to program –Needs Based (**50%** Federal Funds)
 - 1. Administration/Extension/Education/Communication/ Research
 - 2. Fair and equitable needs based distribution of funds to state programs
- iii. Regional Competitive Research (**15%** Federal Funds)
 - 1. Regionally funded NSIs; competitive among states within region
 - 2. Total determined by needs based allocation by states within region
- iv. Merit Pool – Competitive (**10%**)
 - 1. Administration/Extension/education/communication/ Research
 - 2. Competitive based on past performance
- v. Total state budgets should strive for 40% research

National (25% Federal Funds)

- vi. Competitive National Programs
 - 1. fellowships
 - 2. National Strategic Investments
 - vii. NSGO
- (AC-2 did not sub-allocate this 25%)*

Unresolved (and /or unrecognized) “Issues” from AC -2:

When AC-3 began addressing its task, it became apparent that there were several unresolved or unrecognized issues inherent in AC-2’s recommendation. These were identified as follows:

Given a declining total S/G budget (in real dollar terms) the principle of preserving the network (i.e. having a program in every state) is in conflict with the principle of preserving the three product model (particularly when the “research” product is intended to be at least 40%)

The desire to have stable funding to manage programs (i.e. a minimum level of funding to be cost effective) is at odds with the goal of preserving a program in every state.

“Minimum level” was never defined but this becomes a critical input variable in any recommended allocation methodology.

If all you have to work with for the “needs based” state pieces is 50% of the total national budget (per the above table: i.e. you can not include the 15% Regional competitive nor the 10% merit pool as there can be no assurance each program will win their prorata share of such), then given our status quo total budget of \$63m, we only have \$31.5m to work with, or an average of only \$954,000 per program.

The desire to include a significant regional research component (15%) plus a national competitive research component is in conflict with the needs to maintain stable funding at each program.

In the extreme, do we want regional competitive research if it means we might have to close down some programs because we can not keep them at the minimum funding for cost effectiveness?

This holds true for the national competitions as well as the proposed regional competitions.

There was no conceptual outline of how regional competitive research activity would be conducted.

Having two states with two programs each, makes it more difficult to achieve these principles

Continuing to expand the National program with two “new” Coherent Area Programs (Guam and Lake Champlain) increases the budget challenges. Maintaining these two, and for certain, increasing them by any of our formulas or principles, will necessitate larger reductions elsewhere.

Concluding Summary Table of AC-3’s Recommendations

(%’s are all of 100%)

<u>AC 2’s Recommendation</u>	<u>AC 3’s Recommendation</u>	<u>Current %</u>
<u>State (75% of Federal Funds)</u>	<u>State (77.5% of Federal Funds)</u>	<u>76 %</u>
Base to prog. –Needs Based (50%)	Base to prog. Needs Base (61.5%)	70%
Administration/Extension/Education/ Communication/ Research	Administration/Extension/Educ. Communication/ Research	
Fair and equitable needs based distribution of funds to state prog.	Fair and equitable needs based distribution of funds to state prog.	
Regional Competitive Research (15%)	Regional Research (10%)	0%
Regionally funded NSIs; Competitive among states within region Total determined by need based allocation by states within region	Funds given directly to states based on need, but Programs commit to 10% for regional projects (geographically, thematic, or other agency)	
Merit Pool – Competitive (10%)	Merit Pool – Competitive (6%)	6%
Administration/Extension/education/ communication/Research Competitive based on past performance	Administration/Extension/education/ communication/Research Competitive based on past perform. Adjusted to reflect base need allocat.	
(state budgets to <u>strive</u> for 40% research)	(state budgets to <u>achieve</u> 40% research)	
<u>National (25% Federal Funds)</u>	<u>National (22.5% Federal Funds)</u>	<u>24%</u>
Competitive National Programs	Competitive National Programs	
Fellowships	Fellowships	<u>1%</u>
National Strategic Investments	National Strategic Investments (Includes Congress Directed Investments)	<u>18%</u>
NSGO (no % within “National” given)	NSGO (% within National total to be at discretion of NSGO, but with annual presentation to SGA & NSGAB of NSGO %) (Any NSGO % above current 5% is viewed as an investment to achieve a larger total Fed. Budget with lead time)	<u>5%</u>

Rationale for Recommendations

The following section explains more fully the Committee's discussion, logic and rationale for the conclusions embodied in the above percentage table. This section also presents some qualifiers around those conclusions.

Preserve a Program in Every State

Given the declining Federal budgets (as measured in purchasing power or "real" dollars") the Committee had extensive discussion on the conflict between the desired principle of maintaining the Sea Grant "network" (currently manifested by a program in every state) and the desired principle of maintaining the Sea Grant "three product" model. The difficulty, at current budget levels, of maintaining cost effective three products in the smaller budget states and maintaining the desired 40% commitment to research was recognized.

The Committee discussed the alternative of preserving the network and the three product model at the expense of collapsing some of the smaller budget state programs into one or more regions, each of which would administer multiple states and preserve a three product model presence in all states. It was recognized the resulting savings of administrative costs from the consolidation of state programs would help the preservation of the network and the three product model. It was also recognized, as a negative offset, there might be some loss of state matching funds.

The Committee ultimately concluded that while the Federal budget situation is currently grave, it is not yet sufficiently grave to recommend a partial regionalization of the network. However, it was recognized that the Committee's task was to develop a budget allocation process that was sufficiently robust to serve S/G well in increasing, static and declining budget scenarios. It was concluded that while the above recommended process would serve S/G well in increasing budget years, it would not at all function well given a significantly reduced budget, nor given a series of small but steady declining budget years, nor even a series of consecutive static budgets where the real dollar purchasing power continued to erode. If any of such budget scenarios were to occur, it is the recommendation of AC-3 that the NSGO Director work with the National SG Advisory Board and SGA, perhaps by forming an AC-4, to determine how to optimally structure a limited regional approach to maintain the national network of a three product model "presence" in every coastal state.

"Needs Based"

After considerable discussion, the Committee concluded that the budget allocations to the state programs would be based on a measure of "needs". This is consistent with what AC 2 recommended and addresses the failure of agreement in AC 1 that the "historic budget based" budget inequities would be addressed though the use of overall Congressional Budget Appropriations increases (which never occurred in sufficient magnitude to solve the problem).

"Needs" is to be a measurement of the underlying demand in each state, relative to other states, for S/G's product and services. There was substantial discussion of the criteria to measure needs. However, it was first concluded that if total Federal funding was

sufficient, the first priority “need” for a successful National Program was to maintain a program in every state and, importantly, to provide each state a program with at least the minimum budget allocation to provide a cost effective three product S/G program.

Minimum Allocation to Each State

After significant discussion, and given the pragmatic limitation of a current \$63 million total budget, it was concluded this minimum number would be \$800,000. For the two Coherent Area Programs this number will be a maximum of \$400,000 depending on their development status. These dollar numbers are to be increased each year by inflation, as reflected by the national consumer price index (CPI).

It was quickly recognized for there to be sufficient funds to have a meaningful “needs based” distribution amongst programs above the “minimum” allocation, there had to be sufficient total funds in the “State” total line in the above Percentage Chart. AC 2 recommended only a 50% allocation directly to the programs, with another 15% for Regional Competitive awards managed by NSGO and another 10% for merit awards (yielding a total to the states of 75%). However, in distributing budget based on needs these 15% and 10% pools would not be available for such distribution since they will be awarded by NSGO based on competition. Thus, there is no certainty as to what each program would receive from these two pools.

Consequently, the Committee conclude it was necessary to modify AC 2’s recommendation in the below discussed respects.

Regional Research

The 15% for competitively awarded Regional Research recommended by AC-2 would be changed to 10% and, importantly, it would not be competitively awarded and managed by the NSGO. Instead this 10% would be allocated directly to the programs together with the 61.5% base dollars, based on the same needs criteria.

The programs would be obligated to spend this additional 10% on a “regional basis”, with such being defined as i) cooperative efforts across the existing geographic regions, ii) cooperative efforts amongst any states on a “thematic” basis, or iii) in a cooperative effort with another NOAA agency. This modification from AC-2’s recommendation put more budget allocation directly into the state programs, with certainty, for their planning and personnel decisions.

Merit Pool

The Merit pool was extensively discussed, including the extreme of completely eliminating it. At the end it was recognized that the presence of a competitive merit pool was a critical ingredient to satisfy Congress’s concern that S/G was not simply a state block grant award program. Thus a 6% merit pool was concluded.

This 6% together with the National Competitive programs of approximately 18-19% generates 25% of the total S/G annual appropriation being allocated competitively amongst the programs.

Importantly, the merit pool will be awarded based on evaluated performance, but will then be adjusted to reflect the differences in the states “needs based” base allocation. If all Programs were to earn an equal evaluation score, then all programs would get the same percentage merit “adder” to their “needs” based base allocation. Thus, given an equal evaluated performance score, a large needs based state would get a larger dollar allocation from the merit pool than the equally evaluation scored smaller need based state.

Total Direct Allocation to States

Consequently, the funding distributed directly to the programs would be 71.5% of the total S/G appropriation (Base 61.5% & Regional 10 %.). This is slightly more than the current 70% the programs now receive, although it must be recognized that 10 percentage points of the 71.5 percentage points must be spent in a “regional” qualifying manner.

This 71.5% is first distributed by giving each state their minimum base funds of \$800,000. The two states which have two programs each would receive only one \$800,000 state wide distribution. This was decided to be consistent with the needs based criteria which measures “needs” at the state level. This distribution totals to be \$24 million across 29 states and two Coherent Programs. With a \$63 million total appropriation, 71.5% for the states is \$45million. Distributing the “minimums” totaling \$24 million leaves \$21 million to be distributed amongst the states based on “Needs”.

Impact of inflation and the declining purchasing power of the Federal budget appropriations

As stated above, the basic minimum budget allocation to each program (i.e. the \$800,000) will grow each year with inflation (as measured by the National Consumer Price Index, or CPI). This is necessary to maintain the purchasing power of this “minimum” budget deemed necessary for a program to be minimally efficient and cost effective.

It is important to note that to achieve this inflation adjusted minimum, it will be at the expense of the remaining budget dollars available for distribution to programs on a needs basis. As indicated above, the current total budget of \$63 million leaves only \$21million to be dispersed amongst the programs based on the needs criteria. If the total Federal budget does not increase (or worse, if it decreases), then as the aggregate of the program minimum allocations increase due to inflation, there will be less dollars to disperse based on needs.

For example, if total Federal budgets remain constant over a period of time while inflation persist, the AC-3 budget allocation methodology would have all programs, despite their respective “needs”, trending to the inflation adjusted minimum funding level. Such a result is in direct conflict with the “needs” based principles. The consequence is that in order to preserve a program in every state at this (inflation adjusted) minimum budget level, we would be sacrificing all the large “needs” based programs.

At some point, given multiple years of static total budgets or decreased total budgets, this AC-3 allocation methodology quickly becomes unacceptable. Therefore, in order to preserve robust programs in the larger “needs” based states, if any state program’s proforma “needs” based allocation falls below the then effective minimum budget level, that program could be eliminated as a stand alone program and could be consolidated into an adjoining state program which would operate across both (or more) states as a regional program. The recipient state would get the aggregate of the two (or more) states needs based allocations.

AC-3 did not define where this critical budget cut off line should be. However, the Committee does recommend that any growth in the aggregate minimum allocations that comes at the expense of the aggregate “needs” based allocation (rather than from growth in the total Federal budget) be monitored very closely by the NSGO and the NSGAB to determine when action needs to be taken to convert from this AC-3 methodology to a new Regional operating approach for S/G.

“Needs” Defined

The Committee spent considerable time in determining the best measurement of “needs”. It was recognized that for any criteria to be useful, it had to be highly relevant to the underlying causality to what S/G’s role is. A criteria had to be measurable, with readily available, objective data that reflected consistent measurements across all states and Great Lakes.

The discussion was heavily premised on S/G’s Vision and to a lesser extent its current Focus Areas (recognizing the Focus Areas are subject to change over time). The issue was to define what S/G does and then to determine who the constituents are of these S/G services and how to measure these “needs” across the states.

S/G Vision:

The National Sea Grant College Program envisions a future where **people** live, work and play along our **coasts** in harmony with the **natural resources** that attract and sustain them. This is a vision of coastal America where we use our natural resources in ways that capture the **economic, environmental and cultural benefits** they offer, while preserving their quality and abundance for *future generations*. (**Emphasis added**).

The Vision statement clearly emphasizes **people** (both current and future generations) and **coast line**. It was recognized that if there are no people present, then the aspect of coast line becomes far less relevant. Thus people should weigh much heavier than coast line.

The committee found it very difficult to develop any meaningful and consistent (across all states) data sets to measure natural resources, economic, environmental and cultural benefits. Many candidate metrics were discussed but all were ultimately rejected for one or more reasons.

For example, “fish” was debated but it was concluded that there were no readily available metrics which comprehended the different fish species, the value of such, wild fish versus aquaculture, and commercial fishing versus sport fishing. It was also recognized that a mandated catch limitation to preserve specie would unfavorably bias any use of catch or sales value of a catch.

It was also debated that the term “economic” might well be measured by GDP disaggregated to the coastal regions. However significant problems would remain. For example, consider the heavy impact say the “Wall Street” or “Hollywood” industrial/service sectors would have on certain states’ coastal GDP without having anything to do with the S/G’s mission. It was concluded that any necessary attempt to disaggregate the regional GDP by component industrial/services sectors would introduce unacceptable subjectivity as to the relevance of such sectors to S/G’s mission.

Another example which was debated was the possible use of number of universities engaged in marine related research or the number of PhD’s granted in the state. However, it was concluded that these are measures of “results”, responding to the “needs”, rather than the basic needs of the S/G mission. S/G’s mission of education is determined by the population needing the education.

At the end, it was recognized that overall, the issues of “economic, environmental and cultural benefits” expressed in S/G’s Mission were highly correlate to population and to a lesser extent to coast line. None of the several other variables that were discussed added any further clarity in differentiating the “need” for S/G services between states.

Consequently the Committee concluded that the best means of measuring relative “needs” (i.e. the underlying demand for S/G’s products and services) between the states was to use a straight forward metric of coastal population and tidal coast line, and after much discussion those two variables would be weighted 90 - 10 respectively.

Coastal population is to be measured by the Decennial United State Census, as calculated by the U.S. Census Bureau and wettable coast line is to be measured by NOAA’s Office of Coastal Resource Management.

Needs Criteria “Override”

The Committee, while committed to the “Needs Based” allocation principle, recognized the fiscal challenges of the migration from the existing historical allocation basis to the new, “need based” basis. After much discussion, it was agreed that any severe dislocation to a program from the migration to this new budget allocation process should be partially mitigated. Thus, it was concluded that any program which, after the transition period (to be 8 years as discussed below), was to incur a reduction of more than 33% relative to its current allocation, that program would have its reduction capped at 33% and the 8 year transitional phase in allocations would be adjusted accordingly.

This tempering override will be funded by a corresponding override reduction for those programs whose eighth year allocation would be greater than it currently is under the historic allocation. These reductions would be spread across those programs prorata with their share of the total increase. It is acknowledged that these are artificial overrides on the underlying logic of our recommended needs based model. However it was concluded it was necessary and fair given the magnitude of the changes on some programs from the historic to the new, needs based allocation method.

This tempering override would be gradually phased out over the following eight year period (years 9-16) such that out in year 16, the allocation would be 100% based on the needs based methodology.

National Funding

Currently 24% of the total Federal funds are held and administered by the NSGO. AC- 2 recommended this number be 25%. As seen in the above table, AC -3 set this number at only 22.5%, enabling more money for direct use by the State programs.

This 22.5% is intended for three separate uses by NSGO as follows:

- i) competitive national strategic initiatives (this line item includes any Congressionally directed programs)
- ii) Fellowships
- iii) NSGO operating costs

Currently the NSGO operating cost budget is restricted by legislation to 5% of the total Federal funding. In our recommendation we granted the NSGO full discretion over the use of entire 22.5% reserved for “National”, with no percentage cap on NSGO.

This conclusion was reached after significant discussion on the issue of NSGO’s operating budget and the current constraint of 5%. There was concern that any growth in the NSGO budget would come at the expense of moneys that otherwise would be available to the state programs. At the same time it was well recognized that there was a need to restore some of the capabilities that have been lost by NSGO over recent years due to declining budget as measured in real dollars. It was also recognized that the NSGO, unlike the state programs, could not generate any external funding to compensate for their budget declines.

It was recognized that if the current legislative cap of 5% was to be relieved in the upcoming reauthorization, then under AC -3’s recommendation, NSGO could increase their budget up from this 5%. To give comfort to the state programs that any increase above 5% wouldn’t be totally unconstrained, the Committee’s recommendation is conditioned on the principle that each year the NSGO Director would present to the NSGAB and the SGA his budget in detail delineating his objectives for any spending in excess of 5%. It was recognized that any such increase above 5% would be viewed as an “investment”. NSGO will be held accountable for a return on this investment in the form

of greater productive integration with other NOAA offices and/or increased top line Federal budgets. It was further recognized that it would most likely take 2-3 for this investment to generate such returns.

AC -3 concluded that the National office fellowships and the National strategic investments would be managed by NSGO as done currently. Any spending for NSGO's operating expenses will have to come out of these other two line items.

Phase-In Period

An eight year phase in period has been mentioned above. This eight year period was concluded upon after through discussion. Eight years was felt long enough to temper the challenge of migrating from the status quo, "historical" based allocation method to this new "Needs" base method. At the same time the eight year transition was still felt to represent a meaningful and defensible solution to the problems with the status quo budget allocation method.

The "tempering" mention above over the first years would be phased out pro rata over years 9-16. It was the Committee's recommendation that the transition to this new "needs" base methodology should commence as soon as possible. However, how it is phased into recurring planning cycles and recurring merit pool assessments is left to be determined by the NSGO Director.

Other Alternatives Considered

The Committee considered and debated a wide array of other alternatives in addition to its final recommendation. The principal alternatives considered are listed below together with a very brief explanation of why these were rejected as being inferior to the final recommendation made.

1. Do nothing; it is the wrong time to be trying to address this overall problem.
 - a. This was felt to be simply unacceptable.
 - b. This has been the "solution" for the past 10 years. It was hoped the problem would simply go away with increasing Federal appropriations, or it was felt too dangerous to "rock the boat" at that sensitive time.
 - c. As a consequence the problem never got addressed and the situation continued to worsen with on going inflation and loss of purchasing power given the relatively static Federal appropriations that materialized.

2. Leave the existing allocation concept as is but raise all Programs currently below the \$800k minimum by prorata reductions to all Programs above the minimum.
 - a. This was felt to not address the majority of the problems with the current methodology and left the current indefensible "historic" system largely in place.

3. Create the “needs” based system but raise all programs’ resulting budget up to the minimum allocation by prorata reductions to all Programs above the minimum.
 - a. This differs from the final recommendation where all programs start off at the minimum and then are increased by the “needs” based formula
4. Create the “needs” based system and any program falling below the minimum allocation would be eliminated and consolidated into an adjoining state which would assume responsibility for the resulting “region” and provide on gong three product S/G services to the entire region.
 - a. This was rejected for now as being in conflict with premise of retaining, **if possible**, a program in every state.
 - b. **However, it was recognized, as discussed in the report, that without Federal appropriation increases over the near future, this alternative must be seriously considered and most likely implemented.**
5. The Final Recommendation but without the annual CPI adjustments.
 - a. This was rejected as while it addresses the problem today, it allows for the immediate reoccurrence of the problem as inflation deteriorates the real purchasing power and thus the cost effectiveness of the minimum allocation Programs.
6. The Merit pool is applied to the aggregate of the \$800,000 minimum allocation plus the needs based allocation (versus being applied to just the needs based allocation as in the Recommendation.)
 - a. This was rejected as it was further erosion on the needs based principle.

Charts in the Appendix

The first chart depicts the declining purchasing power of the Federal appropriations over the last 40 years. Following that chart, there is a series of bar charts in the appendix to show the results of this AC- 3 Recommendation on the state programs. All charts share the same format, with annual budget dollars on the vertical axis and individual S/G Program Budgets listed on the horizontal axis. The individual program budgets are not identified by name. In all the AC -3 Committee work, the individual programs were only identified by a number, not by name, so the Committee did not see the resultant impact of its recommendations on any given program.

The programs are listed by number in the same order on each chart. That order represents the largest to the smallest program based on the current year’s budget allocation.

The first of these bar charts depicts the current budget allocation for each program. The next chart, containing two bars for each program, depicts the budget allocation by program for the first year under the AC -3 recommendations, compared to the status quo

(assuming for consistency the same total dollar Congressional appropriation as the current base year.)

The next chart shows similar data for year two under AC- 3 compared to year one. The last chart shows where each program's budget would be in year 8 under AC -3 compared to the status quo allocation today. (Again assuming eight straight years of constant level Congressional appropriations for simplicity of comparison). There is also two "data base" charts showing the source and data for the state by state population and coast line.

Concluding Comments

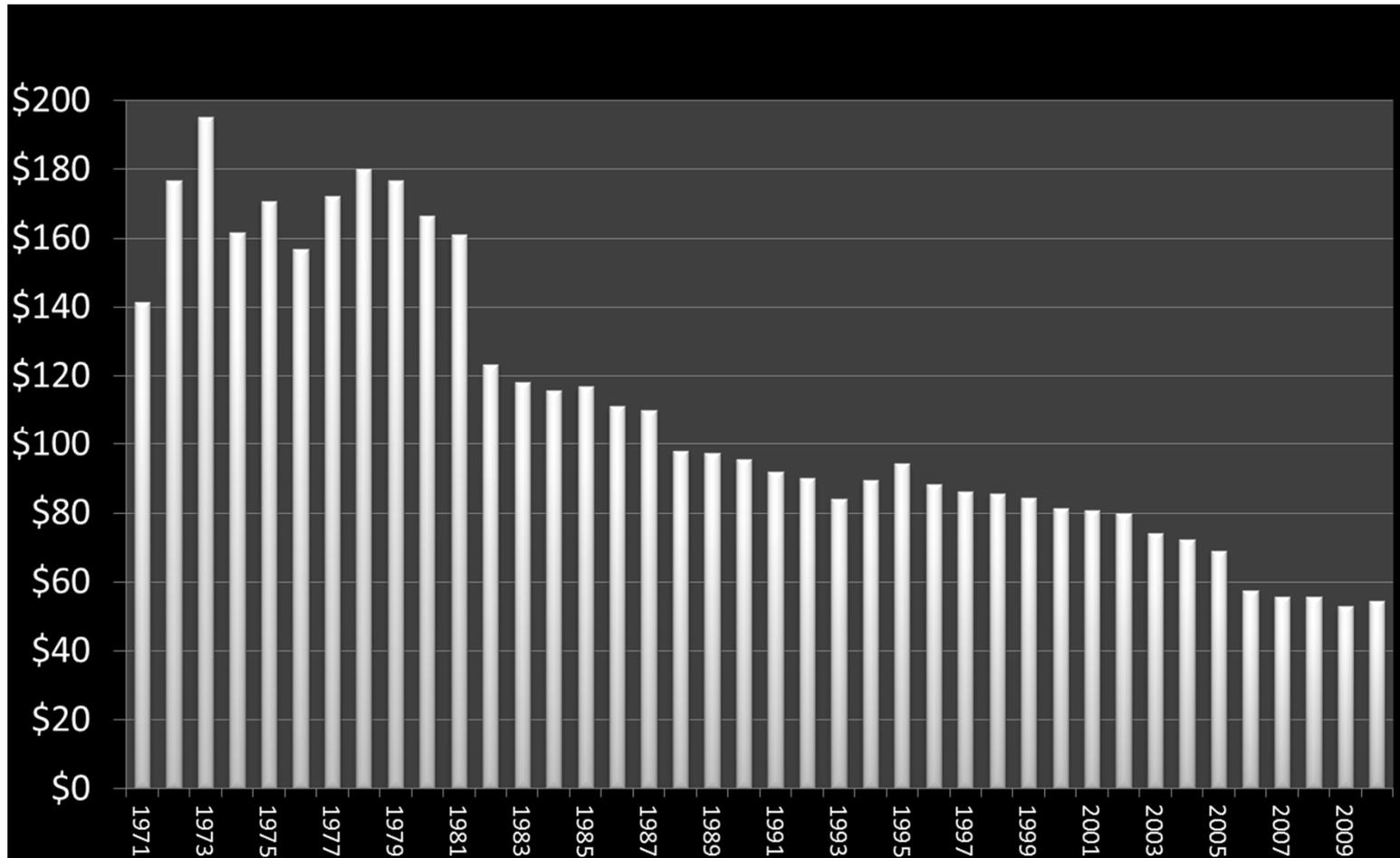
The Committee, recognizing the magnitude of the Challenge they undertook, was comfortable and confident in its final product. The opinions and beliefs from the Committee's three separate constituent groups were all heard and well discussed. All participants agreed to, and did, put the overall best interests in the National Sea Grant program and its successful future above any parochial interests. At the end of this cooperative effort, a full consensus was reached on all the recommendations.

The Committee believes its set of recommendations is well integrated and cohesive and they very effectively address the many perceived problems with the current "historical" based budget allocation system. The Committee recognizes that its recommendations will create challenges to some of the state programs. It is intended that the long phase-in period will help mitigate those challenge. But, notwithstanding these challenges, the Committee truly believes this recommended budget allocation process will serve well the National Sea Grant Program, maximizes its ability to pursue its Vision and its ability to obtain sufficient Congressional funding for this pursuit.

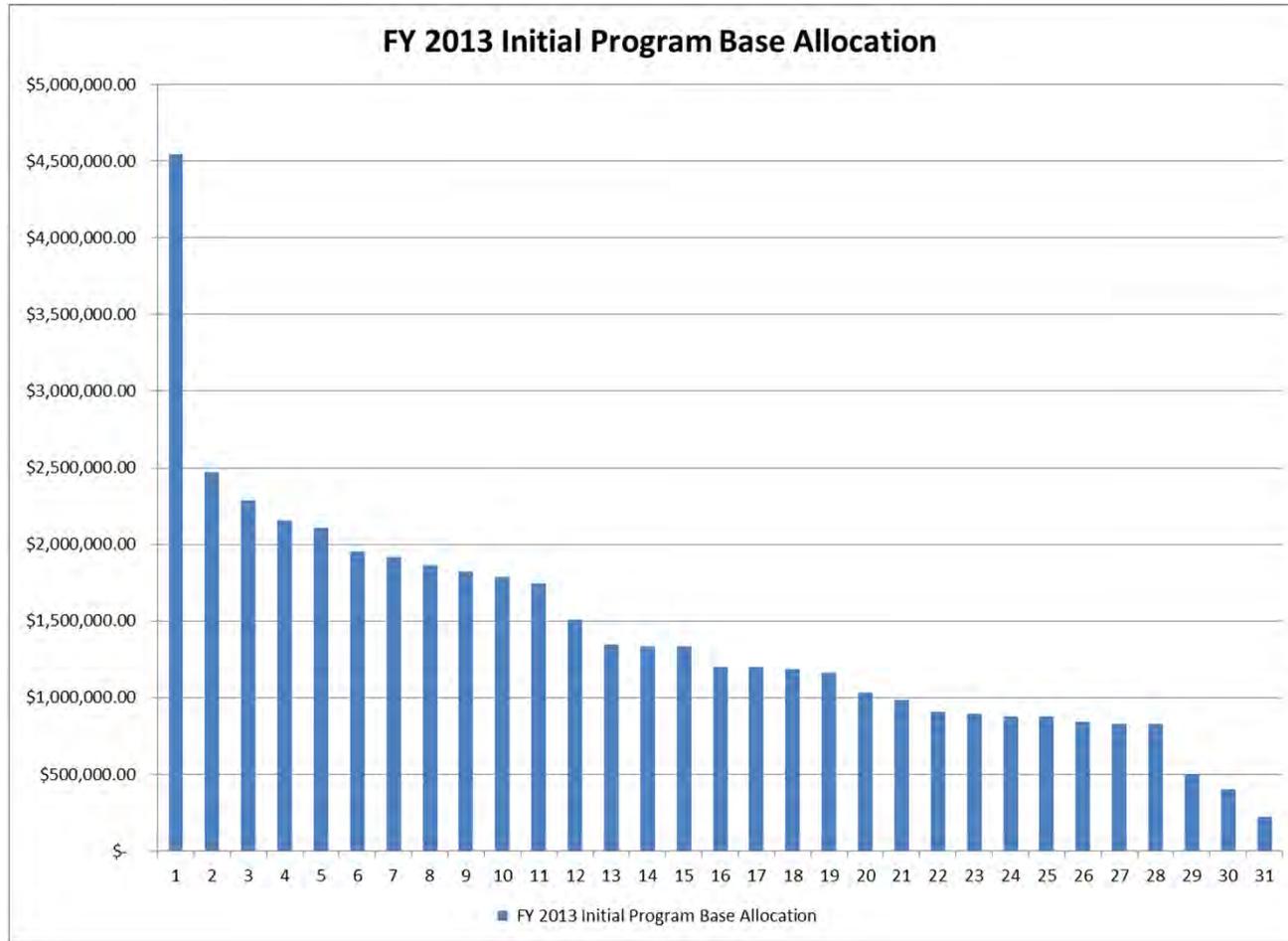
Acknowledgements

The Committee acknowledges and thanks Joshua Brown from the Sea Grant National Office for his extensive research and analysis in support of the Committee's Report.

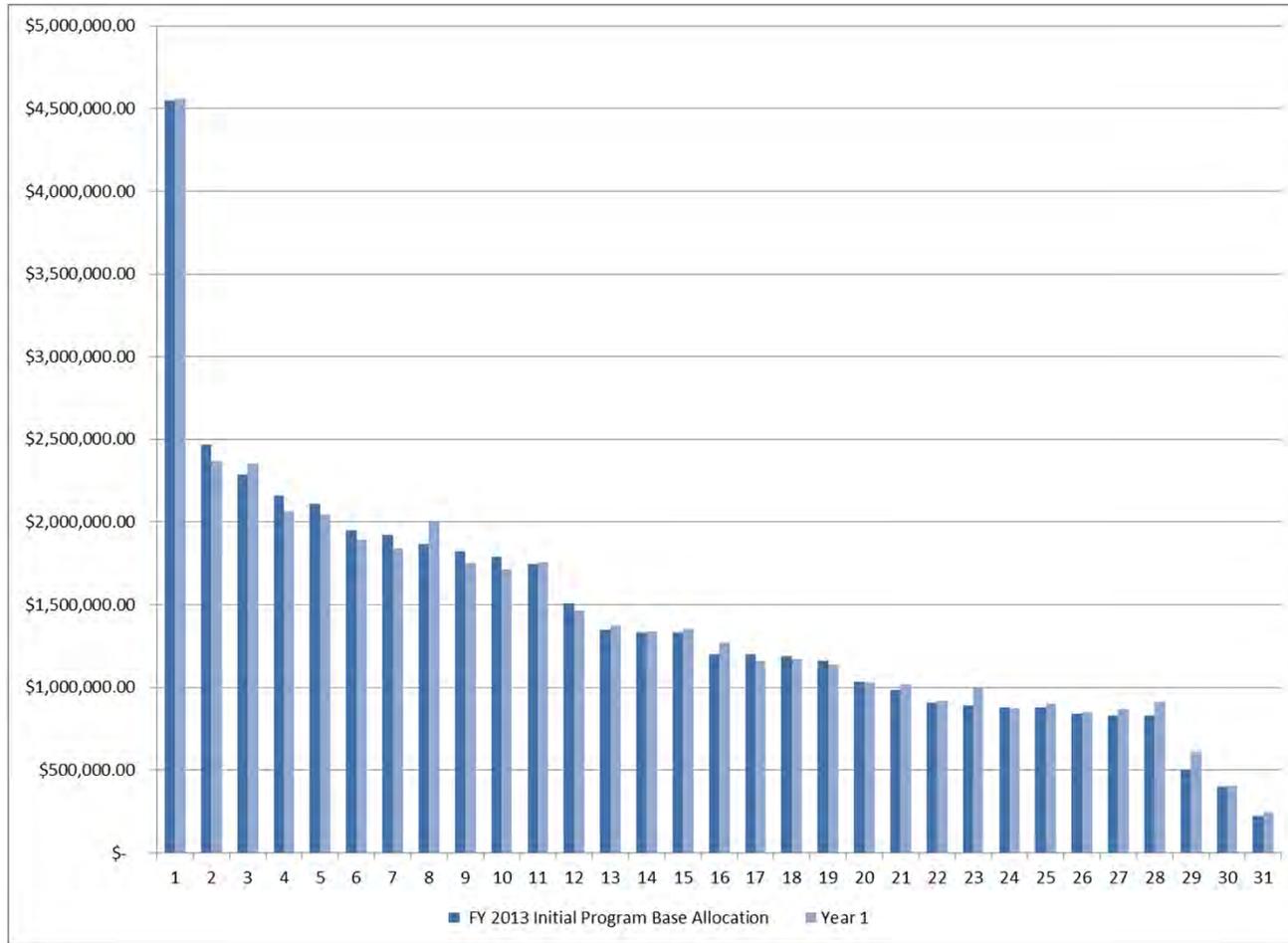
Decline in Purchasing Power



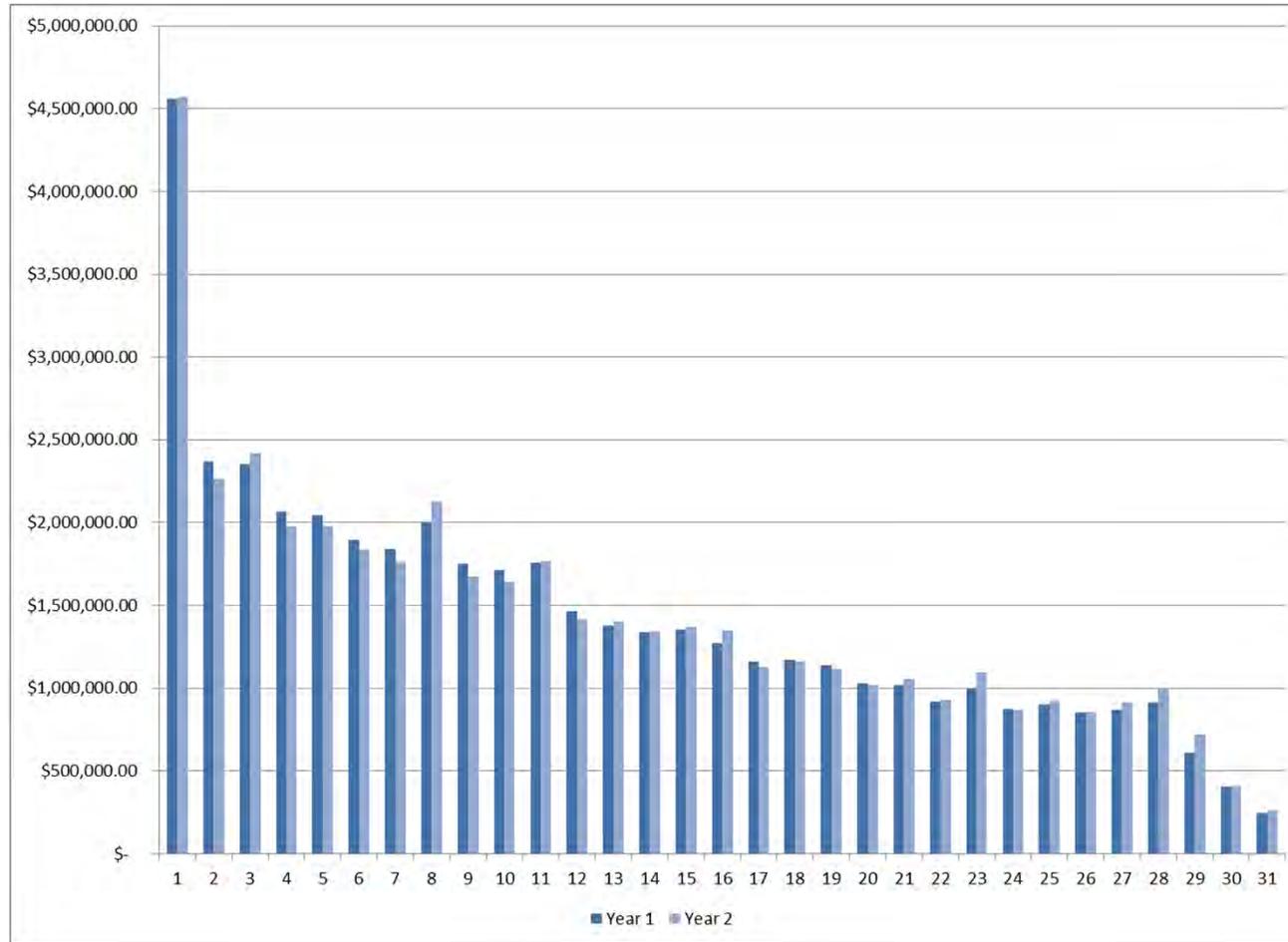
Current Allocation (2013 Base)



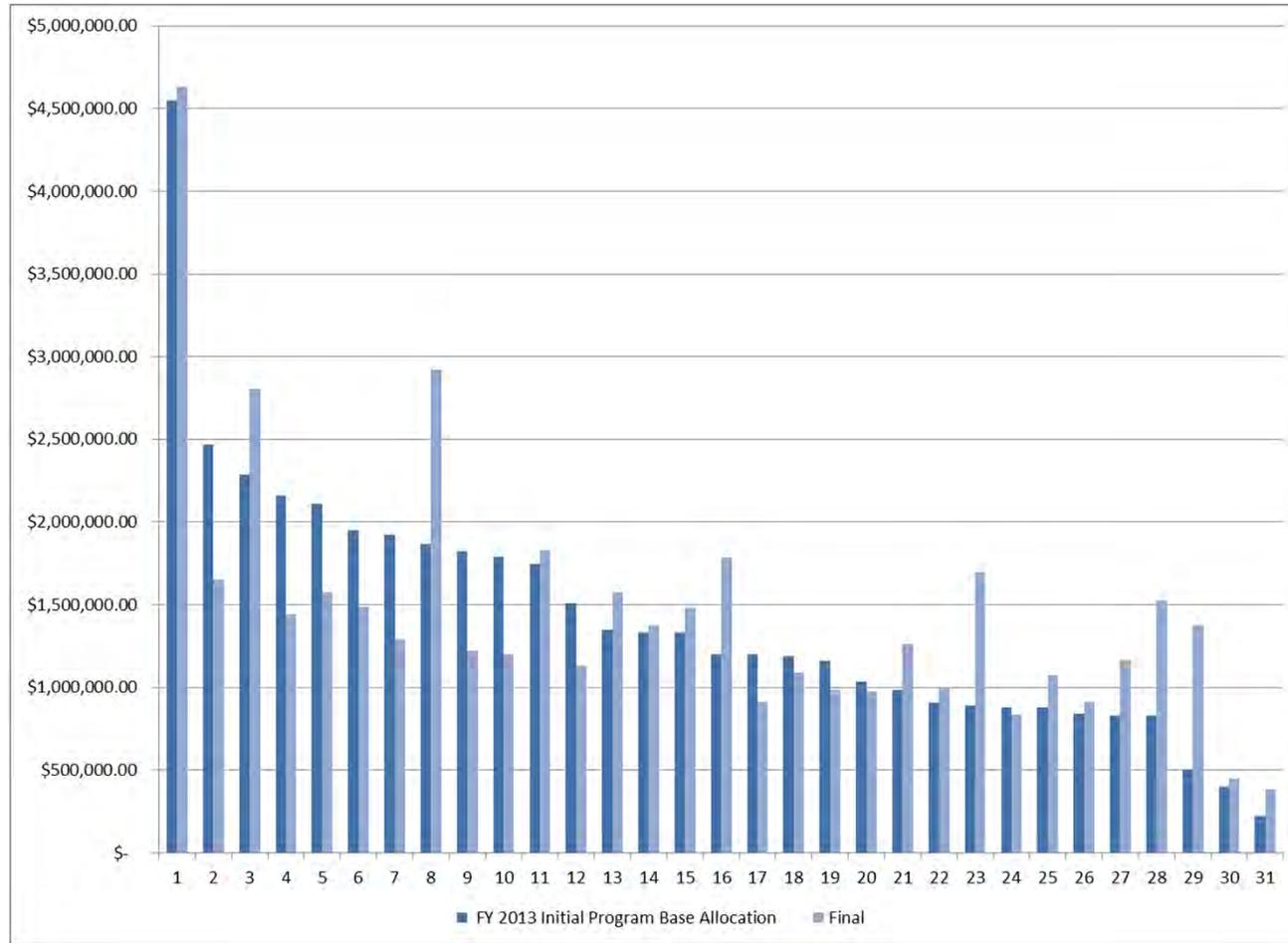
Year 0 to Year 1



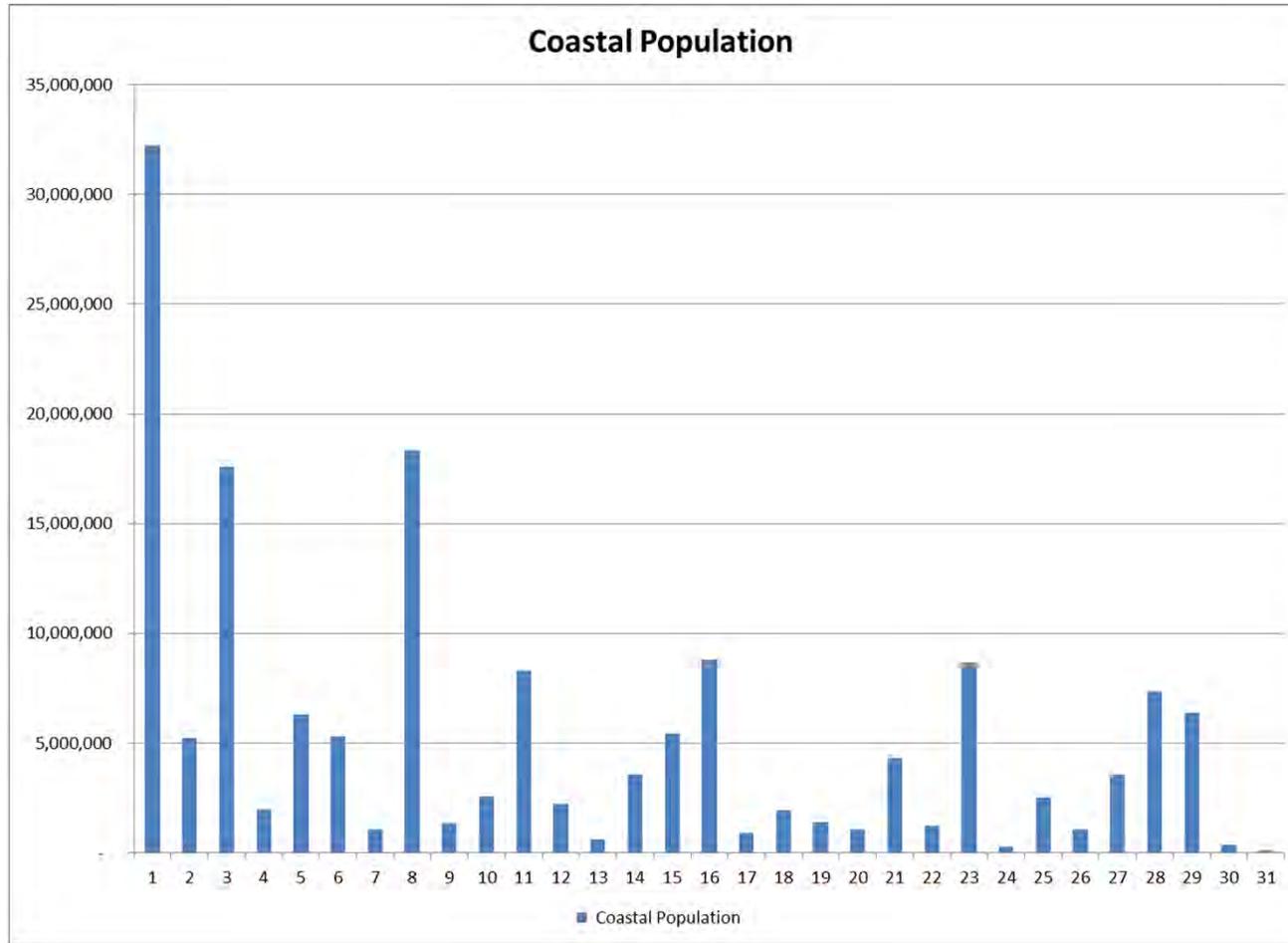
Year 1 to Year 2



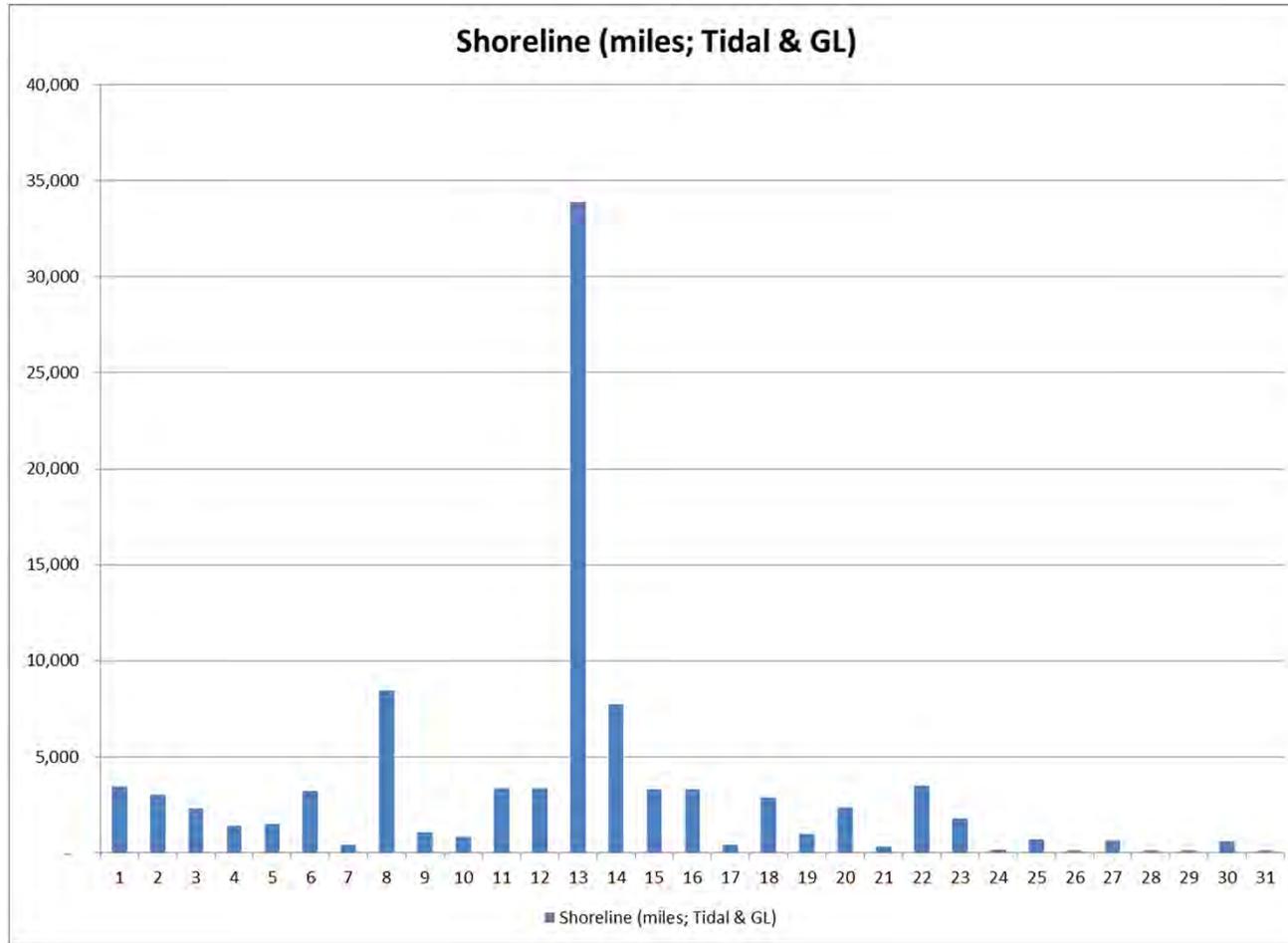
Year 0 to Year 8



Coastal Population



Coastline



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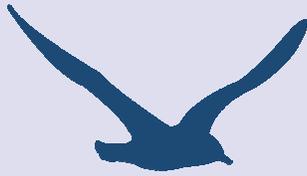


Biennial Report to Congress



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THE STATE OF SEA GRANT 2012



Impacts, Challenges, Opportunities

Biennial Report to Congress by the National Sea Grant Advisory Board



Georgia Sea Grant



Maryland Sea Grant



Oregon Sea Grant



University of Southern California
Sea Grant



Oregon Sea Grant



Alaska Sea Grant



University of Southern California
Sea Grant

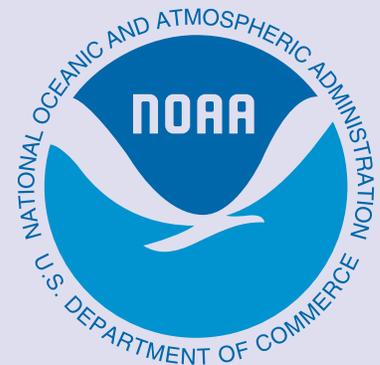


Maine Sea Grant



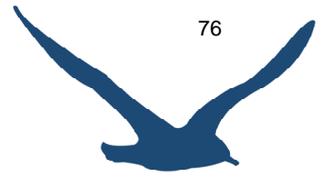
New York Sea Grant

Sea Grant



October 2012

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The State of Sea Grant 2012: Impacts, Challenges and Opportunities
 Biennial Report to Congress by the National Sea Grant Advisory Board, October 2012

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- Rear Admiral Richard D. West, U.S. Navy (Ret.), Committee Chair
- Dr. Nancy N. Rabalais, Professor, Louisiana Universities Marine Consortium
- Dr. Michael K. Orbach, Professor, Nicholas School of the Environment, Duke University
- Frank Beal, Executive Director, Chicago Metropolis 2020, former president, Ryerson International Inc.
- Dr. Gordon Grau, Sea Grant Association, Director, University of Hawai’i Sea Grant

Ex Officio Committee Member

Dr. Nikola Garber, National Sea Grant Office

National Sea Grant Advisory Board Members

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- Frank Beal, Executive Director, Chicago Metropolis 2020, former president, Ryerson International Inc.
- Senator Patty Birkholz, Director of the Michigan Department of Environmental Quality's Office of the Great Lakes, former MI State Senator
- The Honorable Jeremy Harris, Former Mayor, Honolulu, Hawaii; Member, National Academy of Science Adaptation to Climate Change Panel
- Dr. Michael K. Orbach, Professor of Marine Affairs, Nicholas School of the Environment, Duke University; Cultural Anthropologist
- Rolland A. Schmitt, Vice-Chair, Former Director, National Marine Fisheries Service (Ret.); former Deputy Assistant Secretary for International Affairs, NOAA
- The Honorable Harry Q. Simmons, Jr., Mayor, Caswell Beach, North Carolina; President, American Shore and Beach Preservation Association
- The Honorable Dr. William L. Stubblefield, Rear Admiral, NOAA (Ret.), former Director, Office of NOAA Corps Operations; former Executive Director, NOAA OAR
- Richard Vortmann, Past President, National Steel and Shipbuilding Co. (Ret.); Chair, Scripps Health
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National Sea Grant Advisory Board

A Federal Advisory Committee



Dear Members of the Congress of the United States of America,

On behalf of the National Sea Grant Advisory Board, I am pleased to transmit the second biennial report to Congress, "The State of Sea Grant 2012," as directed by the 2008 Sea Grant Act [PL 110-394]. This 2012 report follows the format of our first biennial report, "The State of Sea Grant 2010," and provides an update on the National Sea Grant College Program over the last two years.

The Advisory Board finds the National Sea Grant College Program to be effective in responding to the needs of our coastal and Great Lakes communities, and a solid investment of public monies. The National Sea Grant College Program provides the National Oceanic and Atmospheric Administration (NOAA) with the capability to address these needs in collaboration with our finest research universities.

The Program's new Planning, Implementation and Evaluation (PIE) process, directed by Congress and recommended in a National Academies report, has been implemented and applied effectively. Over the last two years, significant progress has been made to align the state Sea Grant program strategic plans with the National Sea Grant College Program Plan. An Advisory Board committee reviewed and commented on each of the state plans to ensure NOAA's National Goals are addressed. The strategic planning process for the next National Sea Grant Plan (2014-2017) has begun. By December 31, 2012, all state Sea Grant program plans will be approved and the next National Plan adopted.

Level funding and declining purchasing power continue to limit what Sea Grant can do. The Advisory Board is concerned with this decline in resources and the resultant impact on state program funds and on the Program's overall mission. Funding for the National Sea Grant College Program should grow with rising demands. However, a more needs-based allocation plan should be considered by the National Program. The five percent cap on administrative funds is limiting the effectiveness of the National Sea Grant Office, and should be reviewed in Sea Grant's reauthorization language.

Many opportunities and challenges confront the National Sea Grant College Program within a backdrop of ecological, social and economic challenges in our coastal communities and industries. The Advisory Board remains committed to working with the Program to effectively meet the needs of our coastal and Great Lakes communities. We look forward to continuing our work with the Congress, the Office of Management and Budget, the Department of Commerce, NOAA, the National Sea Grant Office, the state Sea Grant programs and the Sea Grant Association.

Dr. Nancy N. Rabalais
Chair, National Sea Grant Advisory Board

EXECUTIVE SUMMARY

THE ADVISORY BOARD IS PLEASED TO PROVIDE THIS BIENNIAL REPORT TO CONGRESS ON “THE STATE OF SEA GRANT 2012.”

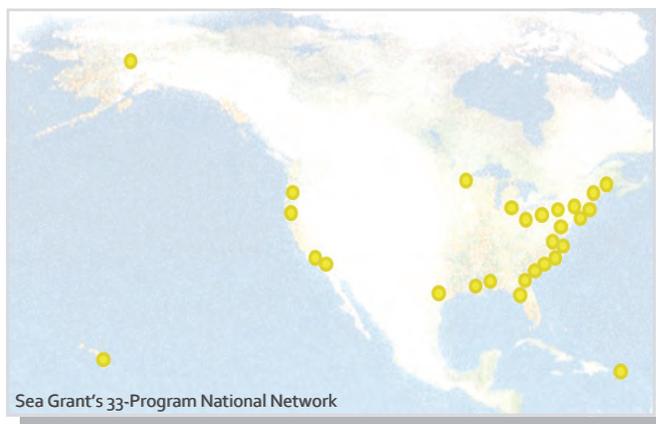
THE REPORT RESPONDS TO RECOMMENDATIONS OFFERED IN “THE STATE OF SEA GRANT 2010,” PROVIDES UPDATES ON ACTIVITIES OVER THE LAST TWO YEARS, HIGHLIGHTS SOLID PROGRAM ACCOMPLISHMENTS, MAKES RECOMMENDATIONS FOR THE FUTURE AND SUGGESTS SPECIFIC FUNDING GUIDANCE.

Sea Grant Model

The National Sea Grant College Program (NSGCP) uses the best science available to inform public and private decision-making in order to advance its mission to “Enhance the practical use and conservation of coastal, marine and Great Lakes resources to create a sustainable economy and environment.” Sea Grant experts address national priorities at the local level, while identifying citizens’ needs in order to help guide state and national research agendas. This interchange of services and information enables Sea Grant and the National Oceanic and Atmospheric Administration (NOAA) to meet demonstrated needs, support businesses and help policy-makers make balanced, well-informed, science-based decisions.

Funding

The NSGCP (also referred to as Sea Grant and the Program) combines federal funding with match funding required of the 33 university-based state programs (\$2 federal : \$1 state). Many state programs garner support from universities, local businesses and non-governmental organizations. Total investments in the Sea Grant Program over the past two years have been \$199M (\$116M federal Sea Grant; \$19M federal funding from other sources; \$64M match).



The hallmarks of Sea Grant's work are:

- Quality research to answer critical questions and deliver solutions to pressing problems.
- Local technical assistance teams that share new technologies and discoveries, and empower coastal communities to plan for and address emerging local, state and national issues.
- Education programs designed to inform citizens and help prepare the next generation of scientists and resource managers.



National Strategic Plan

Sea Grant's National Strategic Plan (National Plan) establishes direction for the NSGCP to address critical national needs in coastal, ocean and Great Lakes environments. The plan outlines four cross-cutting goals and associated focus areas reflecting America's most urgent needs, NOAA priorities and Sea Grant's core strengths.

Cross-cutting goals (These goals underpin each of Sea Grant's four focus areas.):

- 1) Sound scientific research
- 2) An informed, scientifically-literate public
- 3) Inclusive decision-making involving a wide variety of stakeholders
- 4) Relevant and timely information on climate change adaptation

Focus areas:

- 1) Hazard Resilience in Coastal Communities
- 2) Healthy Coastal Ecosystems
- 3) Safe and Sustainable Seafood Supply
- 4) Sustainable Coastal Development



A COMMITTEE OF ADVISORY BOARD MEMBERS REVIEWED AND COMMENTED ON EACH OF THE PROGRAM PLANS TO ENSURE NOAA'S NATIONAL GOALS WERE ADDRESSED.



University of Southern California Sea Grant



Planning, Implementation and Evaluation

The new Planning, Implementation and Evaluation (PIE) process directed by Congress and recommended by the National Academies has been implemented. Following the initial strategic planning phase, Site Review Teams (SRTs) visited each state Sea Grant program to assess program management and organization, stakeholder engagement and collaborative network/NOAA activities. The evaluation process continues with a National Office annual review of each program, and a comprehensive panel review of all programs that is scheduled for the fall of 2012. The next strategic planning process for the 2014-2017 National Plan is complete. By December 31, 2012, all state Sea Grant program plans will be approved, and the next National Plan adopted.

As a result of the new PIE process:

- All state strategic plans are now linked to the National Plan.
- State program performance measures and objectives are reported annually, allowing for state programs to measure progress towards their plans.
- National performance measures and metrics allow the NSGCP to track progress toward the National Plan.
- State program impacts and accomplishments are linked to state program plans.



Partnerships

The NSGCP continues to solidify its regional partnerships with each of the eight NOAA regions, bringing together academic institutions, federal, state and local government agencies, and non-governmental organizations to address regional issues. Recently, working with each of the eight NOAA regions, Sea Grant conducted research and information needs assessments. Each assessment included broad stakeholder engagement.

In the coming years, Sea Grant is committed, through regional and national initiatives, to improving the nation's ability to understand, plan for, and respond to climate variability and change along our shorelines. As a link between scientific information providers and information users, Sea Grant invests in innovative research and outreach programs that further the effectiveness of the Program's partners. There is an increasing demand for policy decisions, organizational management and decision-making that is supported by rigorous social science research. Effective use of this research has the potential to enhance public policy and improve our ability to offer citizens customized solutions to coastal problems.



North Carolina Department of Transportation

Funding Allocation

The Advisory Board recommends an assessment of funding allocation, including removal of the five percent cap on administrative functions for the National Office. We further recommend addressing allocations among federal, state and regional efforts. State programs are encouraged to meet a goal of 40 percent or more for research funding.

Findings and Recommendations

The Advisory Board finds the NSGCP to be a solid and effective investment of public monies in responding to the needs of our coastal and Great Lakes communities. Sea Grant continues to address the increasing challenges to our oceans and coasts. To maintain this direction, we recommend the following:



Maryland Sea Grant

1. **The NSGCP should continue to focus on advancing national priorities and solving problems on a local and regional basis, while remaining sensitive to local needs.**
2. **The NSGCP should continue to support tracking and reporting of the cumulative, measurable impacts of Sea Grant activities toward the achievement of national goals.**
3. **The NSGCP should continue to emphasize partnerships and collaborative efforts within the Sea Grant network and with other federal, regional, state and local agencies and organizations.**
4. **The federal budget should allocate additional resources for the NSGCP to reverse the erosion of buying power and maintain a dynamic program.**
5. **The National Sea Grant Office should review the funding structure of the NSGCP, including the allocation and distribution of funds to state programs following recommendations made in a 2011 Advisory Board report (see Appendix 2).**
6. **NOAA should continue the integration of its coastal programs to maximize its capability to address the nation's growing coastal challenges.**

INTRODUCTION

*THE NATIONAL SEA GRANT COLLEGE PROGRAM (NSGCP)
USES THE BEST SCIENCE AVAILABLE TO ADVANCE ITS MISSION TO
“ENHANCE THE PRACTICAL USE AND CONSERVATION OF
COASTAL, MARINE AND GREAT LAKES RESOURCES TO
CREATE A SUSTAINABLE ECONOMY AND ENVIRONMENT.”*

Sea Grant is a national network of 33 university-based state programs (Appendix 1), administered by NOAA through the National Sea Grant Office.



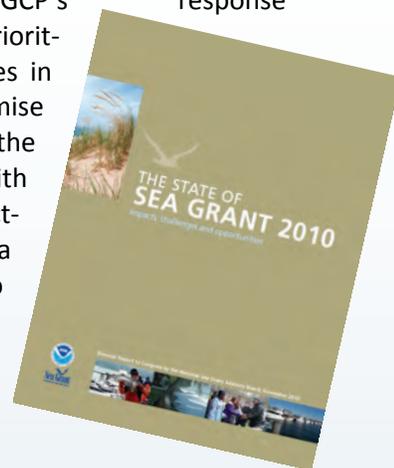
Sea Grant is advised by the National Sea Grant Advisory Board and supported by the Sea Grant Association (SGA), an association of the academic institutions that serve as host institutions for Sea Grant programs.

In 1966, Congress established Sea Grant to unite the academic power of the nation's universities with public and private sector partners in order to sustainably capture the economic and social benefits of the oceans, coasts and Great Lakes. The NSGCP was created by Senator Claiborne Pell of Rhode Island and others who shared his interest in coastal stewardship. The Program was inspired by the success of the Land Grant model, which sets the standard for combining the resources of our universities with the needs of citizens.

The 2008 Sea Grant Act [PL 110-394] requires a biennial report to Congress. This Act also redefined the National Sea Grant Review Panel as a National Sea Grant Advisory Board under the rules of the Federal Advisory Committee Act. “The State of Sea Grant 2012” provides an opportunity to review our progress over the past two years, evaluate the recommendations that were made in 2010, and suggest ways to maximize the effectiveness of the Program. Following submission of the 2010 report to Congress, Advisory Board members visited Congress, the Office of Management and Budget (OMB) and NOAA staff to determine whether the report met the intent of Congress. Based on positive feedback from these groups, this 2012 report follows the

general outline of the first biennial report, “The State of Sea Grant 2010,” and provides an update on the Program.

This report includes updates of the six actions recommended in the 2010 biennial report to Congress, an assessment of recent Sea Grant accomplishments, the NSGCP's response to changes in national priorities, the challenges it faces in trying to fulfill its promise and an outlook for the future. It concludes with recommendations for actions that will enhance Sea Grant's capacity to achieve national goals. Web links to all reports cited in the document may be found in Appendix II.



The 2012 report is organized into the following sections:

- I. Response to “State of Sea Grant 2010”
Biennial Report Recommendations
- II. The Sea Grant Model ●
- IV. National Focus Areas ●
- V. Current Activities ●
- VI. Realizing Sea Grant's Potential ●
- VII. Outlook and Recommendations

Last year, Sea Grant:

- Was instrumental in creating or retaining over 3,500 jobs and 600 businesses.
- Assisted 145 coastal communities in adopting or implementing hazard resiliency practices.
- Supported more than 1,700 undergraduate and graduate students to develop a diverse, highly qualified workforce (more on page 10).

Response to State of Sea Grant 2010

THIS SECTION SUMMARIZES ACTIONS TAKEN IN RESPONSE TO RECOMMENDATIONS FROM THE 2010 BIENNIAL REPORT.

1. The Sea Grant network must focus its efforts on advancing national priorities, while remaining sensitive to local needs.

Response: The NSGCP is a national program with local application. The Program's national priorities and impacts are reinforced by the Program, Implementation and Evaluation (PIE) system, the Focus Areas (set forth in the National Plan), and network coordination and collaboration. This focus should continue.



2. The ability to track and report the cumulative measurable impacts of Sea Grant activities on achieving national goals should be a high priority for Sea Grant.

Response: A new Planning, Implementation, and Evaluation Resources (PIER) database system is significantly improved over the former information management system. It is able to track and report cumulative and measurable impacts, metrics and performance measures. State strategic plans are linked to the National Plan's focus areas and performance measures. Using this database system, state programs report performance measures and objectives annually and measure progress. The OMB praised the NSGCP for its metrics and performance measures. The new methods for tracking and ensuring compatibility with national goals should continue.



3. NOAA coastal programs, including Sea Grant, should be more fully integrated in order to maximize NOAA's contributions to national goals.

Response: NOAA has released its *Next Generation Strategic Plan*, which includes Resilient Coastal Communities and Economies as a long-term goal. NOAA has initiated an integration process of programs under the Agency's coastal goal and has merged the Coastal Services Center with the Office of Ocean and Coastal Resource Management. Sea Grant has participated in discussions about how to better integrate NOAA's coastal programs. However, better integration with other NOAA programs continues to be a challenge and should be a priority.



Biennial Report Recommendations

- 4. Sea Grant should capitalize on its nationally recognized leadership in stakeholder engagement within coastal and Great Lakes communities as federal-state-local communication and collaboration become more critical to addressing needs and responding to crises.**

Response: Sea Grant continues to solidify partnerships with each of the eight NOAA regions, and recently conducted regional assessments of research and information needs with broad stakeholder engagement from state and local governments, mayors and community groups. The Sea Grant programs and the National Sea Grant Office should continue to identify new opportunities and directions for Sea Grant initiatives, provide mechanisms to solidify Sea Grant's federal, state, regional and local identity, and enable cooperative efforts among Sea Grant and its partners at all levels.



Illinois-Indiana Sea Grant

- 5. Sea Grant should continue to re-examine its priorities and methods of operation in order to respond to the nation's most urgent needs.**

Response: The process of aligning individual state program strategic plans with the National Plan, initiated as part of the 2009-2013 planning process and continuing with 2014-2017 planning, provides an opportunity to re-examine priorities and operational strategies. This process should remain an iterative function of NOAA and Sea Grant.



Virginia Sea Grant

- 6. Significant additional resources should be provided to the National Sea Grant College Program in order to reverse the erosion of buying power and maintain a dynamic program with rapid response capability.**

Response: This has not occurred. Additional resources have not been forthcoming. Sea Grant's level funding and the Program's subsequent loss of buying power threaten the Sea Grant model and the NSGCP's ability to address national needs on a regional basis. The NSGCP should grow with the rising demands on coastal resources and tasking of responsibilities by Congress, the Department of Commerce and NOAA.



Georgia Sea Grant

THE SEA GRANT MODEL

THE SEA GRANT MODEL COMBINES RESEARCH, OUTREACH AND EDUCATION TO PROVIDE AN INTEGRATED APPROACH TO ADDRESSING COASTAL NEEDS.

On-the-ground experts, located in every coastal and Great Lakes state and in Puerto Rico and Guam, translate sound scientific information into tools, products and services that benefit coastal residents and their communities. These experts include researchers, extension agents, communicators and educators who provide the multi-dimensional capacity to respond rapidly to the needs of each region. The state programs are hosted and supported by many of our nation's leading research universities, allowing immediate access to research capability. Programs also have active advisory boards composed of local and regional experts with extensive expertise and connections to coastal communities.

THE HALLMARKS OF SEA GRANT'S WORK ARE:

Quality research to answer critical questions and generate solutions that often include new technologies.

- Sea Grant supports the work of more than 3,000 scientists and researchers in a wide variety of disciplines from over 300 institutions. When urgent new questions arise, Sea Grant can call on this network of scientists for information and science-based solutions.



A model developed by Hawai'i Sea Grant researchers is setting a new standard for tsunami inundation mapping. NEOWAVE (Non-hydrostatic Evolution of Ocean WAVE) takes into account wave breaking, wave dispersion and more, using alternative theoretical formulations and numerical schemes. After winning the 2009 Benchmark Challenge at Oregon State University, the tsunami model has received worldwide attention. Hawai'i, Puerto Rico, American Samoa, and the Gulf coast states have adopted NEOWAVE as the standard model for tsunami inundation mapping under the National Tsunami Hazard Mitigation Program.



Oregon Sea Grant



Oregon Sea Grant



Georgia Sea Grant



Alaska Sea Grant

Outreach (engagement & technical assistance)

to share and explain new discoveries, engage citizens in decision-making processes, and empower stakeholders to address national, state and local issues as they emerge.

- Sea Grant provides a workforce of over 400 on-the-ground extension agents who generally reside in the communities they serve. As trusted experts, extension agents provide reliable technical and science-based information to residents to address local needs while also transferring research priorities back to their universities. Extension agents provide training and facilitation in areas such as sustainable planning and development, seafood safety, fishing gear enhancement and other topics that advance the safety and productivity of coastal-related commerce.

- Nearly 90 communications specialists engage and educate audiences through a variety of media, including print, web, video, social media, radio and television outlets.

Alaska Sea Grant worked with small-scale Alaska seafood processors to develop food products such as smoked salmon, dried salmon jerky, mustards and BBQ sauces, canned herring, military Meals-Ready-to-Eat salmon entrees, salsas, dried pollock, halibut skin dog treats, pickled fish, crab tails and salmon oil. Sea Grant also analyzed food and seafood products to ensure food safety and accurate labeling. As a result, 12 existing businesses expanded their product offerings, and four new businesses were established.



New Hampshire Sea Grant



Louisiana Sea Grant



Education programs designed to inform citizens in coastal and Great Lakes communities and help prepare the next generation of professionals involved with our nation’s coastal resources, communities and economies.

- Sea Grant plays a leading role in K-12, undergraduate, graduate, professional, technical and public education in coastal communities. Educators work closely with universities, the NOAA Office of Education, the National Marine Educators Association and other partners to develop formal education programs, workforce training and professional education.
- Sea Grant funding supports about 900 graduate students each year in coastal-related biological, natural and social sciences. Sea Grant’s Knauss Marine Policy Fellowship Program has brought over 900 graduate students interested in natural resource policy to Washington, D.C. to work with federal agencies and congressional offices as part of their professional training. NOAA’s National Office and the National Marine Fisheries Service established a graduate fellowship program for Ph.D. students interested in population dynamics and marine resource economics. Both fellowships have been successful in building NOAA and the nation’s workforce.

A survey of NOAA’s employees revealed that 22% of the 1,500 respondents had received training through Sea Grant in the form of fellowships, internships or research positions, and 82% stated that their Sea Grant experience helped them get their NOAA job. In addition, 94% of NOAA Sea Grant alumni said Sea Grant training or support positively influenced their professional development and achievements.



Maryland Sea Grant organized workshops to train Maryland Department of Juvenile Services teachers to operate an aquaculture system to train at-risk students in a variety of sciences, including biology, chemistry, mathematics, nutrition and small-scale engineering. Five Juvenile Youth Centers in western Maryland now use Aquaculture-in-Action to train juveniles in science and job skills. An average of 100 students per year earn their General Equivalency Diploma (GED) through the program. The Maryland Department of Labor and Licensing now awards an Aquatic Sciences Certificate to about 50 students per year.



NATIONAL FOCUS AREAS (2009-2013)

The impacts below reflect the Sea Grant model in action. The NSGCP is making significant contributions to each of its national focus areas. Highlights from the state Sea Grant programs over the last two years are below.

FOCUS AREA: HAZARD RESILIENCE IN COASTAL COMMUNITIES

Sea Grant provides research, training and technical assistance to help local citizens, decision-makers and businesses plan for hazardous events, and to respond and rebuild when these events occur. Sea Grant professionals assist in assessing risk by pinpointing vulnerabilities and using technologies to prepare for and mitigate hazards. Sea Grant is also able to respond quickly to coastal catastrophes.

Impacts

- * Lake Champlain Sea Grant worked with the Northwest Regional Planning Commission in Vermont to educate local officials on bioengineered methods for shoreline stabilization and erosion control. As a result, three towns changed zoning regulations and construction guidelines to require use of new bioengineering methods in future shoreline construction.
- * North Carolina Sea Grant specialists educated officials about potential mitigation credits for property owners who construct wind-resistant buildings. The State's Insurance Commissioner increased credits as an optional rating for wind insurance coverage, resulting in \$300M in savings on premiums for 200,000 coastal policies.
- * Oregon Sea Grant conducted outreach on the nature, likelihood, and impact of a potential Cascadia-Subduction-Zone earthquake and tsunami. As a result, several communities changed public safety and planning policies to include tsunami hazards in updated evacuation plans.
- * Florida Sea Grant worked with the Environmental Protection Agency's Charlotte Harbor National Estuary Program (NEP) to develop policies for integrating sea level rise adaptation strategies into coastal comprehensive plans. The Punta Gorda City Commission adopted the framework and is the first designated climate-ready community within the Charlotte Harbor NEP.
- * After the Deepwater Horizon oil spill, Mississippi-Alabama Sea Grant's engagement with coastal communities helped keep water-dependent businesses afloat. Researchers found a way to increase production from inland shrimp farms, resulting in an economic impact of \$175,000. Through a Sea Grant-supported pilot oyster farm, a new business sector brought in \$15,000 in 2010 and paved the way for additional oyster farms.

Lifesaving Sea Grant Mobile Technology Device Aids Rip Current Identification and Benefits the National Weather Service

Rip currents are a highly dangerous natural phenomenon. However, they receive far less publicity than other natural hazards because they are not well understood. In preparation for the summer and in time for "Rip Current Awareness Week" (June 3, 2012), the New Jersey Sea Grant Consortium debuted a mobile device technology to collect and distribute up-to-the-minute rip current data and related information. This smartphone app helps lifeguards identify and catalog rip current occurrences on their own beaches, while giving them a glimpse at what neighboring communities are experiencing in real time. The application could prove invaluable to both local lifeguards and the National Weather Service (NWS). The NWS plans to use the collected information to evaluate its rip current forecasts. The information will help scientists understand more about when and where rip currents occur, and under what conditions they are most prevalent.





Sea Grant Helps to Improve U.S. Ballast Water Policies and Management

In response to shipping industry requests for assistance to better understand ballast water regulations, Minnesota Sea Grant, along with the International Joint Commission and the Great Lakes St. Lawrence Seaway Development Corp., helped develop the Great Lakes Ballast Water Collaborative (GLBWC). Through the GLBWC, Sea Grant influenced state and federal ballast water policies by facilitating meetings and providing scientific information that helped stakeholders understand ballast water issues. Minnesota Sea Grant reports from these meetings have been cited by agencies including the USGS, EPA-Science Advisory Board, Environment Canada, state governments and the International Maritime Organization of the U.N. Ballast water regulations have been incorporated in Wisconsin and California.



FOCUS AREA: HEALTHY COASTAL ECOSYSTEMS

Sea Grant is leading efforts to understand and maintain healthy ecosystems. Sea Grant professionals work to support ecosystem-based approaches to managing the coastal environment, including restoring the function and productivity of degraded ecosystems and promoting stewardship of healthy ones.

Impacts

- * South Carolina Sea Grant and its partners worked with landowners to eradicate 1,500 acres of the invasive marsh plant, *Phragmites*, along the state's coastal waters.
- * A one-acre dune restored by Connecticut Sea Grant and partners passed its first major test during Tropical Storm Irene, migrating landward and growing, while protecting a marsh that provides up to \$114,000 in storm damage protection annually.
- * New Puerto Rico Sea Grant research enables the detection of human fecal contamination in as little as three to six hours (previously 36 hours). This near real-time assessment of beach contamination will contribute significantly to public safety and the coastal economy.
- * Delaware Sea Grant sponsored research into the identification and cultivation of native Atlantic seashore mallow as a marketable alternative to current salt intolerant crops in light of rising sea level. The plant appears to be not only a harvestable crop as a source of biofuel and animal feed, but also acts as a coastal shoreline stabilizer.
- * Louisiana Sea Grant is working with Floating Islands Environmental Solutions, Inc. (FIES) in Baton Rouge to develop a floating matrix composed of recycled plastic drinking bottles that will help stabilize marsh and island areas. Sea Grant has provided FIES with expertise on surface water treatments, regulatory issues and nutrient removal, and the company now plans to expand.



FOCUS AREA: SAFE AND SUSTAINABLE SEAFOOD SUPPLY

Sea Grant is working to ensure a sustainable supply of seafood by partnering with fishermen and fisheries managers to enhance the productivity and management of wild fisheries and exploring sustainable aquaculture techniques. Sea Grant professionals work with fishermen to develop innovative approaches, business practices and techniques that ensure financial competitiveness and environmental responsibility. Training and technical assistance programs establish and maintain safety standards for seafood in order to ensure that consumers receive safe, high quality product.

Impacts

- * Texas Sea Grant-sponsored experimental trawl gear has resulted in 20-39 percent fuel savings for Texas shrimp fishermen. To date, more than 85% of the Cameron County, Texas shrimp fleet (132 vessels) has switched to the new fuel-saving trawl gear. Since 2008, county-wide fuel savings were estimated to be 7.3 million gallons of diesel, valued at \$17.8M. An estimated 200 jobs were saved because without these fuel savings, many of the vessels would have remained idle.
- * Oregon Sea Grant funding has helped educate thousands of surimi professionals and facilitated the development of two U.S. patents for heating devices that ensure safer seafood processing and contribute millions of dollars to the seafood industry.
- * California Sea Grant is overseeing a captive broodstock program for coho salmon in the Russian River system north of San Francisco Bay. In March 2011, an estimated 192 adults returned to the region to spawn, compared with 3 or 4 adults per year for the last decade. By November 2011, there were 5,375 wild "young-of-the-year" coho in 18 of 23 tributaries surveyed between May and September.
- * Michigan Sea Grant established a business relationship with a large seafood processing company, enabling producers to sell fish frames, pin bone meat and small fish for use in kosher products. The processing company pays \$12,000 per truckload. This new revenue has allowed Michigan fishers to make a profit from waste they had previously been paying to store and send to the landfill.
- * Maine Sea Grant worked with the Maine Lobstermen's Association to apply on behalf of all Maine lobstermen to the United States Department of Agriculture's Trade Adjustment Assistance Program. More than 2,600 lobstermen are participating in this business development and financial assistance program, which has the potential to provide \$9.1M to Maine's fishing families by the end of the program in 2013.

Sea Grant develops efficient, effective electronic reporting for recreational fishing data

With funding from North Carolina Sea Grant, a fishery specialist and a programmer designed a pilot project called RecText, to test their electronic reporting method for recreational angler catches. Initially, six charter boat captains used cell phones to text their fishing reports to an online database using Twitter. Data collected through RecText may contribute valuable information to state and federal resource managers about the health of game fish populations. Maryland and National Marine Fisheries Service officials are utilizing RecText by testing operational adaptations of the system.





Sea Grant recycles millions of pounds of plastic, saving jobs, money and the environment

Ohio Sea Grant's Clean Marinas Program partnered with Mondo Polymers of Marietta, Ohio, to recycle shrink wrap. Since 2007, more than 1.2 million pounds of shrink wrap and greenhouse plastic from over 120 coastal marinas were recycled into guardrails that are now protecting over 225 miles of the state's highways. This effort created jobs, saved individual marinas an average of \$700 per year in disposal costs, and produced a reusable, cheaper product for Ohio taxpayers. With help from Ohio Sea Grant, five other states replicated Ohio's innovative program, which resulted in the collection of 500,000 pounds of plastic.



Last year, Sea Grant programs throughout the nation certified 804 Clean Marinas.



FOCUS AREA: SUSTAINABLE COASTAL DEVELOPMENT

Sea Grant professionals provide science-based information and strategies designed to enhance waterfront economic activities and to preserve cultural traditions. Sea Grant provides legal analysis and technical assistance to ensure public access to beaches and waterfronts, and engages coastal communities and decision-makers in sustainable planning processes.

Impacts

- * Rhode Island Sea Grant worked with the state's Coastal Resources Management Council to develop and implement Special Area Management Plans (SAMPs). SAMPs are scientific ecosystem-based management plans that comprehensively review ecosystems, regulatory environments and social structures and propose guidance on regulations to be adopted by the state. On July 22, 2011, Rhode Island's 7th SAMP became the largest ever, covering nearly 1,500 square miles.
- * University of Southern California Sea Grant worked with the former Public Works Commissioner and the Bureau of Sanitation to develop a low-impact development ordinance designed to balance multiple uses and optimize environmental stability. The ordinance was endorsed by the Los Angeles City Council and signed by the Mayor.
- * A Wisconsin Sea Grant researcher developed an analytical approach for defining the physicochemical forms of methylmercury, copper and cadmium in water. This model enables more accurate estimation of bioconcentration factors and toxicity of these metals. The model was adopted by the U.S. EPA to predict the toxicity of trace elements to various organisms in areas targeted for contaminant remediation.
- * Virginia Sea Grant supported the marine recreational boating industry by providing research and training to support access to funds under the Department of Interior Boating Infrastructure Grant Program (BIG). BIG competitive applications have helped generate almost \$1M of new investment at Commonwealth marinas. This funding translated into \$2.1M in economic impact to Virginia, which was further increased by \$600,000 in match from local marinas and communities, for a total impact of \$2.7M during 2010-2011.

CURRENT ACTIVITIES

THE NSGCP IS SUPPORTING IMPLEMENTATION OF THE NATIONAL OCEAN POLICY, PREPARING FOR REAUTHORIZATION OF THE SEA GRANT ACT AND DEVELOPING A NEW STRATEGIC PLAN.

UNITED STATES NATIONAL OCEAN POLICY

The recently released National Ocean Policy represents the work of many individuals representing a broad range of stakeholders from federal, regional, state and local governments and organizations. The National Ocean Policy highlights ecosystem-based management, the development of emerging sustainable resources such as aquaculture and renewable energy, coastal and ocean literacy and workforce development, and habitat restoration, all of which are also featured prominently in Sea Grant's National Plan. The policy recognizes the need for engagement with coastal and inland stakeholders in all facets of policy development and implementation, and the important role of social science. For the past few years, Sea Grant has been working with coastal communities to help them plan for an uncertain future and find ways to mitigate changes such as rising sea level and increased coastal flooding—a need also highlighted by the National Ocean Policy. These are some of the ways Sea Grant has responded to, and in many instances anticipated, the priorities of the National Ocean Policy.

REAUTHORIZATION

The National Sea Grant College Program Act was first enacted in 1966 and was most recently amended in 2008 (PL 110–394). In preparation for the 2015 reauthorization, the Advisory Board, the National Office and the SGA are reviewing congressional guidance, current Sea Grant policies and Sea Grant successes in implementing the National Ocean Policy. Sea Grant will be prepared to assist Congress in developing proposed language for the 2015 reauthorization of the NSGCP.

STRATEGIC PLANNING PROCESS:

2014-2017 NATIONAL SEA GRANT PLAN

Sea Grant is completing its 2014-2017 strategic planning process with a National Strategic Planning Committee with members from the Advisory Board, the National Office, the SGA and NOAA. The state Sea Grant programs are providing input from their stakeholders to inform the National Plan. This approach enables the state program plans and the National Plan to be developed in tandem and to reflect a broad array of stakeholder needs, with the goal of developing an integrated National Plan with a discrete set of national performance measures that will be common to both sets of plans. State Sea Grant programs will still have the flexibility to add performance measures unique to their local needs.

In November, a subcommittee of the Advisory Board will review the 2014-2017 state plans to ensure sufficient rigor and alignment with the National Plan. The National Plan will be adopted by the end of 2012, with performance targets for 2014-2017. The timing of this process will allow Sea Grant programs to issue Requests for Proposals (RFPs) for 2014-2015 that reflect priorities from the new plans.

Leveraging federal dollars for greater impact

Sea Grant is required to match every \$2 of federal funding with \$1 of non-federal funds. Total investments in the Sea Grant Program over the past two years have been \$199M (\$116M federal Sea Grant; \$19M federal funds from other sources; \$64M match). By leveraging federal funds, Sea Grant expands its reach and effectiveness in planning for and managing the future of America's ocean, coastal and Great Lakes resources.



SOCIAL SCIENCE



There has been an increasing demand, within and outside NOAA, to merge social science research with the physical and biological sciences that are the foundation of the Sea Grant Program. Effective use of social science research can guide and improve scientific research, enhance public policy, and improve our ability to offer citizens customized solutions to coastal problems.

Sea Grant programs are conducting 68 competitively funded social science projects, including collaborative regional projects in New England, the Gulf of Mexico and the Pacific. The two-year projects are funded at a total of \$9.6M in federal

funding and \$4.6M in match funding for 2012 and 2013, including a contribution of \$0.7M from NOAA's Coastal Services Center and the Environmental Protection Agency for the Gulf of Mexico.



Projects include:

- Delaware Sea Grant is investigating the economic impact of offshore wind farms on coastal tourism and beach use in the region.
- Maine Sea Grant, through the seafood links project, is promoting sustainable seafood in the state.
- South Carolina Sea Grant is assessing socio-ecological relationships and environmental values in the face of demographic changes in its coastal communities.

Sea Grant Helps Small-Scale Fisherman Thrive in a Challenging Economy

A movement is underway to preserve the jobs and livelihoods of fishermen, to open new markets for locally caught seafood and deliver fresh, safe and sustainable catch to consumers. Sea Grant programs, in partnership with small-scale fishermen, are at the forefront of this Local Catch movement.

Sea Grant has conducted social science market research and pioneered innovative direct marketing, branding and business strategies that are creating new revenue streams and opportunities for fishermen. These efforts are creating competitive advantages over foreign producers, preserving valuable fishing jobs and maintaining a proud cultural heritage and way of life in coastal communities throughout the country. Sea Grant programs are working with fishermen and industry to establish Community Supported Fisheries (CSF) and brand identities for locally-caught fish, both of which are helping fishermen sell their catch directly to consumers. These business models were the focus of a May 2012 Sea Grant-sponsored roundtable and Congressional briefing, and a CSF summit supported by Sea Grant and the National Marine Fisheries Service held in May 2012 in Portsmouth, New Hampshire.

CLIMATE ADAPTATION



Sea Grant is committed to improving the nation's ability to understand, plan for and respond to climate variability and change along our shorelines. As a dynamic link between the scientific community and coastal stakeholders, Sea Grant is invested in innovative research and outreach programs that further the effectiveness of the Program's federal, state, regional and local partners.



In 2010, the National Office initiated the Coastal Communities Climate Adaptation Initiative (CCCAI), a grants competition available to Sea Grant programs to conduct rapid-response, community-based demonstration projects that enhance climate adaptation. The primary objectives are to provide the communities with sufficient information to consider alternatives, enable them to make well-informed decisions, and ultimately to develop and implement customized solutions.



Currently, Sea Grant programs are conducting 35 competitively funded climate-related research projects. These two-year projects are funded at a total of \$4.1M in federal funding and \$2.0M in match funding for 2012 and 2013.

Projects include:

- Woods Hole Oceanographic Institution Sea Grant is supporting a project to determine the impact of transgenerational exposure of bay scallops to ocean acidification.
- Georgia Sea Grant is working to prioritize geo-spatial risks for climate adaptation outreach in that state.
- New Jersey Sea Grant is leading a project investigating economic vulnerability to changing climate conditions in an effort to promote adaptation, resilience and sustainability.



PARTNERSHIPS



By working across institutional and geographic boundaries, the NSGCP is able to leverage its talents, capabilities and resources. Several regional governors' associations have invited Sea Grant to serve as the lead coordinating body for regional coastal science priorities. Others, such as the Gulf of Mexico Alliance, rely heavily on Sea Grant involvement.

At the national level, Sea Grant partners with the National Marine Fisheries Service, the National Weather Service, the National Ocean Service and the Office of Oceanic and Atmospheric Research in order to advance NOAA's mission. This year, Sea Grant is working with the National Weather Service on its Weather-Ready Nation initiative to help communities prepare for and recover from weather-related disasters. Sea Grant is conducting extension and outreach activities for NOAA's Coastal Storms Program in the Gulf of Mexico and Pacific regions and will soon be involved in the Great Lakes.

The NSGCP continues to solidify regional partnerships with the eight NOAA regions, bringing together academic institutions, federal, state and local government agencies, and non-governmental organizations to address regional issues. Sea Grant and NOAA's Office of Program Planning and Integration have called for projects

that support Sea Grant's National Plan 2009-2013 and the NOAA FY2012 Annual Guidance Memorandum. These initiatives address topics including: climate adaptation, marine debris, sustainable seafood, inundation forecasts, coastal and marine spatial planning, Arctic research and management, Gulf of Mexico restoration and ecosystem-based management. For FY 2012, regional proposals addressed topics such as marine debris, sustainable coastal development, NOAA Weather-Ready Nation, improving inundation forecasts and responding to whale entanglement.

Sea Grant also has ongoing national partnerships with other federal agencies, including the **Environmental Protection Agency**, the **United States Department of Agriculture** and the **Federal Emergency Management Agency** on topics ranging from the safe disposal of unused medications to climate extension to disaster recovery.

Last year, Sea Grant volunteers contributed more than 300,000 hours of service.



Sea Grant and Partners Team Up to Help Working Waterfronts Prosper

In October 2011, the U.S. Commerce Department's Economic Development Administration (EDA) awarded a \$297,643 grant to the Island Institute of Rockland, Maine, to identify and disseminate best practices to help Working Waterfronts achieve long-term economic prosperity. The research will identify strategies, practical methods, and financial mechanisms to address current economic challenges and maintain the economic resilience and diversity of coastal communities. This project is a collaborative effort among the Island Institute, the Maine, Virginia, and Florida Sea Grant College Programs, the National Sea Grant Law Center, the Urban Harbors Institute and Coastal Enterprises, Inc.

REALIZING SEA GRANT'S POTENTIAL

THE NATIONAL SEA GRANT COLLEGE PROGRAM HAS MADE PROGRESS IN PROMOTING ITS SMALL PROGRAMS.

We are pleased to report that Guam and Lake Champlain Sea Grant have met the requirements for designation as Sea Grant "Coherent Area Programs." Coherent Area Program status is followed by Sea Grant Institutional Program status, the last step prior to formal designation as a Sea Grant College. With satisfactory performance, Guam and Lake Champlain Sea Grant will be assured of continued NOAA funding and expanded programmatic responsibilities.

Declining Resources

The Advisory Board is concerned with the decline in resources and the subsequent negative impact on state program funds and on the NSGCP's overall mission. The Program's output in terms of applied research, planning for sustainable coastal communities and support for other NOAA and state-based functions remains strong, but is being compromised in the face of declining resources, especially at the state level. At a minimum, the NSGCP's budget should grow with the rising demands on coastal resources and tasking of responsibilities by Congress, the Department of Commerce and NOAA. Additionally, we recommend the development of a more needs-based allocation plan.

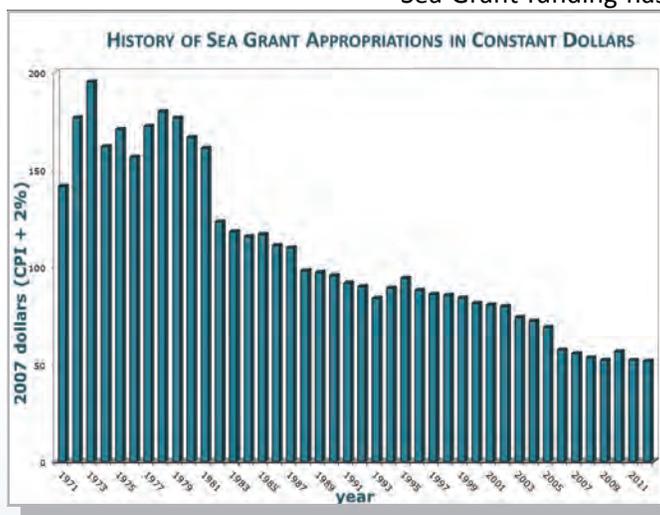
Administrative Cap

The five percent cap on administrative funds for the National Office has had a negative impact on the staffing and expertise in this office and should be reconsidered in an overall examination of funding guidance. The Advisory Board reviewed the National Office staffing in 2008. Our report identified that the five percent legislative cap coupled with a flat budget is leading to fewer, less experienced staff members in the face of increasing NOAA demand. Over the past seven years, the National Office has lost one-third of its FTEs and all four of its GS-15 positions. Presently, this office has less than half the

staff it had in 1991: 29 full-time equivalent staff positions in 1991 versus 14 today. Based on this report, the Board recommends that the five percent cap be lifted to aid in staffing of the National Office, which is responsible for the oversight of more than \$60 M in public funds. This change should be reconsidered in Sea Grant's reauthorization language for 2015.

Buying Power

The "State of Sea Grant 2010" biennial report to Congress noted that "The buying power of federal Sea Grant funding has decreased steadily over the



last two decades, leaving state Sea Grant programs with only about one-third of the buying power they had in the early 1980s. While a review of annual appropriations over time shows a modest rise in federal allocations for Sea Grant, those same dollars, when adjusted for inflation, show a significant decline in federal support and buying power." This loss of buying power was

described in detail in *Sea Grant Research: A Report of the Sea Grant Advisory Board, 2009*.

In response to the decline in buying power, the Advisory Board formed a sub-committee to review individual state program funding allocations and to update the process for determining the annual base funding for all programs in 2011. The National Office has established a follow-on "Allocation Committee" with members from the Sea Grant network to develop a revised program base funding policy.

OUTLOOK AND RECOMMENDATIONS

OUTLOOK



The NSGCP has been a valuable asset to this nation for almost 50 years. As our Great Lakes and coastal economic and environmental challenges increase, Sea Grant remains vital to solving these problems and responding to national needs on a regional, state and local basis.

Sea Grant has addressed the issues identified by this Advisory Board in our 2010 report to Congress. Despite the erosion of funding, Sea Grant programs are stepping up to partner, collaborate, innovate and find efficiencies to carry on their vital mission of research, education and outreach. Our coastal issues are only going to become more complex. Sea Grant has proven its ability to respond immediately to regional and national crises by drawing on the knowledge of local experts who are closely tied to coastal communities, and who bring to bear the resources of our nation's finest research universities.

Sea Grant will concentrate its energies where it can best advance national priorities. The Program will continue to use its model of integrated research, outreach and education to translate

sound scientific information into tools, products and services that benefit the country and its coastal communities. Sea Grant will concentrate these efforts on identified national priorities such as climate adaptation, coastal community development and response to coastal hazards, where its ability to facilitate honest exchange of information, informed decision-making and rapid response are most valuable. It will continue to educate the next generation of informed citizens, environmental professionals and the ocean-coastal-Great Lakes related workforce.



Sea Grant Invests in a Renewable Future

Through its research and outreach investments, Sea Grant is working to address many of the challenges of offshore renewable energy development, including stakeholder concerns, environmental impacts and regulatory and legal issues that will influence national policies. Offshore wind energy shows potential as a critical contribution to the nation's energy portfolio, providing a clean and inexhaustible resource that could support coastal communities. Sea Grant is currently involved with offshore wind projects proposed in Rhode Island, Maine, North Carolina, Delaware, New Hampshire and Michigan.

Ocean waves have the potential to produce low-cost electricity with minimal impacts to the environment. The majority of Sea Grant research in ocean wave energy is focused in Oregon, with additional investments in New Hampshire and Maine. This research shows promise for small-scale energy development for local communities.

Like ocean wave energy technology, tidal energy development is a potential source of predictable and regular renewable energy. Tidal energy faces challenges posed by coastline or ocean conditions. Massachusetts, New Hampshire and Hawai'i Sea Grant are invested in tidal energy research.

RECOMMENDATIONS



The Advisory Board finds the NSGCP to be an effective and solid investment of public monies in responding to the needs of our coastal and Great Lakes communities. We believe that advancing the important mission of Sea Grant will require clear demonstration of the NSGCP's contributions toward achieving national goals and a more effective integration and coordination of the nation's coastal agencies and programs. For the nation to achieve maximum benefit from the NSGCP, new strategically-directed resources are required.



- 1. The NSGCP should continue to focus on advancing national priorities and solving problems on a local and regional basis, while remaining sensitive to the needs of local communities.**

Sea Grant is a national program built on a foundation of strong federal-state-university partnerships. The new Planning, Implementation and Evaluation (PIE) system adopted in 2009 is a commitment on the part of the National Office and the state programs to undertake significant coordination and accountability activities, while responding to the most urgent priorities at regional, state and local levels. The Advisory Board has found significant progress in this area since our 2010 report to Congress.

- 2. The NSGCP should continue to support tracking and reporting of the cumulative, measurable impacts of Sea Grant activities toward the achievement of national goals.**

The National Office has made significant progress in developing effective performance metrics, even drawing praise from the OMB. A new Planning, Implementation, and Evaluation Resources (PIER) database system is

significantly improved over the former information management system. The system is able to track and report cumulative, measurable impacts, metrics and performance measures. State strategic plans are linked to the National Plan's focus areas and performance measures, enabling state programs to report performance measures and objectives annually, submit them to the PIER system and measure progress.

- 3. The NSGCP should continue to emphasize partnerships and collaborative efforts within the Sea Grant network and with other federal, regional, state and local agencies and organizations.**

There has been significant progress within the Sea Grant network on establishing program and regional partnerships. The Site Review Teams noted this progress in collaborative activities. The NSGCP must continue to identify regional issues that can be more effectively resolved through partnerships with other Sea Grant programs, other NOAA programs, other federal programs and state and local agencies. These partnerships will be even more important as federal funding continues to erode.

4. The federal budget should allocate additional resources for the NSGCP to reverse the erosion of buying power and maintain a dynamic program.

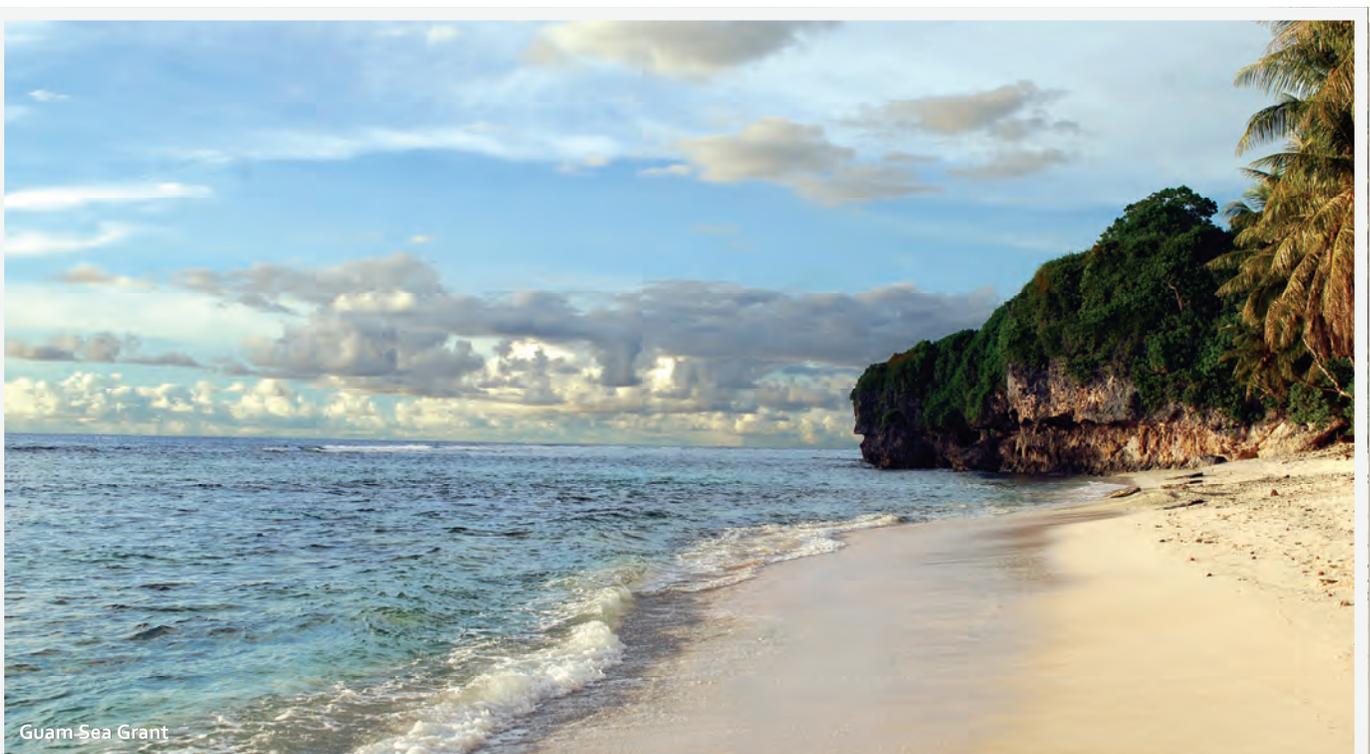
Twenty years of level funding combined with significant inflation have left the state Sea Grant programs and the National Office with substantial reductions in buying power that continues to erode Sea Grant's capacity to address increasing challenges to our Great Lakes and coastal communities. This has had pronounced effects on the National Office's ability to provide leadership and coordination and the ability of the state programs to leverage additional funds and carry out their responsibilities. Sea Grant urgently needs additional funding to continue its critical 21st century leadership and involvement in coastal crisis response and management.

5. The National Sea Grant Office should review the funding structure of the NSGCP, including the allocation and distribution of funds to state programs, following recommendations made in a 2011 Advisory Board report (see Appendix 2).

The erosion of buying power over the last twenty years has highlighted the inequity in base funding allocation to individual programs. The allocation policy has been in effect since 2003 without change and, as currently configured, is stifling the viability of the Sea Grant Program. The Advisory Board reviewed the current allocation policy and recommended a revised policy in 2011. The National Office has established a follow-on "Allocation Committee" with members from the Sea Grant network to work on the revision.

6. NOAA should continue the integration of its coastal programs to maximize its capability to address the nation's growing coastal challenges.

It is essential in an era of limited resources that NOAA build on the specific strengths of existing coastal programs, use them to meet emerging needs and provide clear direction on future roles and responsibilities.



Guam Sea Grant



APPENDIX I.

Sea Grant Program Regions

GREAT LAKES REGION

Illinois-Indiana Sea Grant College Program
 Lake Champlain Sea Grant Coherent Area Program
 Michigan Sea Grant College Program
 Minnesota Sea Grant College Program
 New York Sea Grant Institute
 Ohio Sea Grant College Program
 Pennsylvania Sea Grant Institutional Program
 Wisconsin Sea Grant Institute

NORTHEAST REGION

Connecticut Sea Grant College Program
 Lake Champlain Sea Grant Coherent Area Program
 Maine Sea Grant College Program
 Massachusetts Institute of Technology Sea Grant College Program
 Woods Hole Oceanographic Institution Sea Grant Institutional Program
 New Hampshire Sea Grant College Program
 New York Sea Grant Institute
 Rhode Island Sea Grant College Program

MID-ATLANTIC REGION

Delaware Sea Grant College Program
 Maryland Sea Grant College Program
 New Jersey Sea Grant Consortium
 Virginia Sea Grant Institutional Program

SOUTHEAST/CARIBBEAN REGION

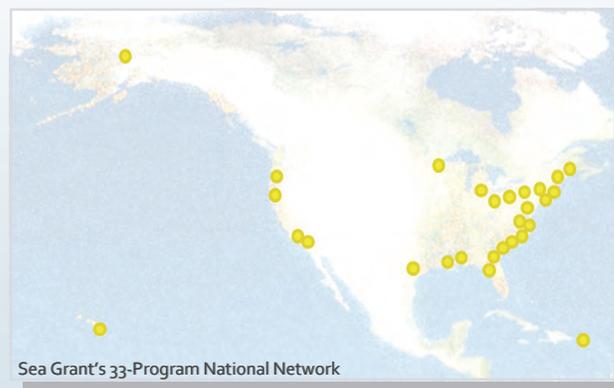
Florida Sea Grant College Program
 Georgia Sea Grant College Program
 North Carolina Sea Grant College Program
 Puerto Rico Sea Grant College Program
 South Carolina Sea Grant Consortium

GULF OF MEXICO REGION

Florida Sea Grant College Program
 Louisiana Sea Grant College Program
 Mississippi-Alabama Sea Grant Consortium
 National Sea Grant Law Center
 Texas Sea Grant College Program

PACIFIC REGION

Alaska Sea Grant College Program
 California Sea Grant College Program
 University of Southern California Sea Grant Institutional Program
 Hawaii Sea Grant College Program
 Oregon Sea Grant College Program
 Washington Sea Grant College Program
 Guam Sea Grant Coherent Area Program



APPENDIX II.



The following reports are referenced in this document.

The State of Sea Grant 2010, Biennial Report to Congress, 2010

http://www.seagrants.noaa.gov/leadership/advisoryboard/The_State_of_Sea_Grant_Biennial_Report_2010.pdf

NOAA Sea Grant Strategic Plan 2009-2013: Meeting the Challenge, National Sea Grant College Program, 2009

http://www.seagrants.noaa.gov/other/admininfo/documents/0209_stratplan.pdf

Allocation Committee Recommendations, National Sea Grant Advisory Board, 2011

http://www.seagrants.noaa.gov/leadership/advisoryboard/Reports_Allocation_CommitteeII_2011_Principles_&_Framework.pdf

Sea Grant Authorizing Legislation, as amended by the National Sea Grant College Program Amendments Act of 2008 (Public Law No: 110-394)

<http://www.seagrants.noaa.gov/other/admininfo/Legislation/SG%20Reauthorization%20-%20FY2009-14.pdf#page=13>

National Sea Grant Performance Measures and Metrics

<http://www.seagrants.noaa.gov/other/admininfo.html>

Sea Grant Research: A Report of the National Sea Grant Advisory Board, Sea Grant Advisory Board, 2009

http://www.seagrants.noaa.gov/leadership/advisoryboard/Reports/Research%20Final%20Report_2009.pdf

Staffing the National Sea Grant Office, Sea Grant Review Panel Administrative Committee, 2008

http://www.seagrants.noaa.gov/leadership/advisoryboard/ARC_Report_50208.pdf

Building Sea Grant: The Role of the National Sea Grant Office, Sea Grant Review Panel, 2002

http://www.seagrants.noaa.gov/GreenBook/gb_documents/pdf_otherfiles/ducereport.pdf

Evaluation of the Sea Grant Review Process, National Research Council, National Academy of Sciences, 2006

http://www.seagrants.noaa.gov/other/rit/NRC_evaluation.pdf

Sea Grant: Training America's Marine, Coastal and Great Lakes Scientists

http://seagrants.soest.hawaii.edu/sites/seagrants.soest.hawaii.edu/files/publications/noaa_seagrants_alumni_brochuretrifold.pdf

APPENDIX III.



Sea Grant Program Impacts

<http://www.seagrants.noaa.gov/leadership/biennialreport.html>



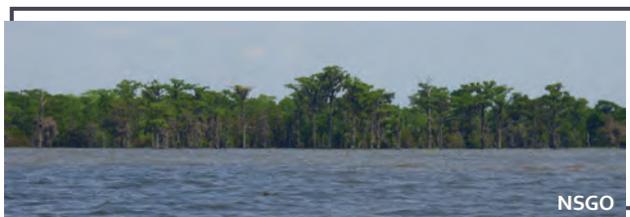
National Sea Grant College Program

FY2012 Performance Measures and Metrics

As a result of *Sea Grant* activities, the Nation achieved...

ECONOMIC BENEFITS

- \$170M** In Economic Benefit
- 630** Businesses Created or Retained
- 3,800** Jobs Created or Retained



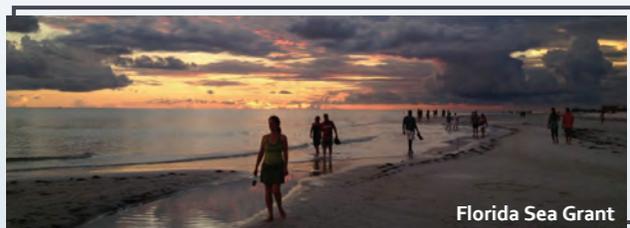
HEALTHY COASTAL ECOSYSTEMS

- 480** Ecosystem-Based Management (EBM) Tools, Technologies, and Information Services developed
- 470** EBM Tools used by Sea Grant customers
- 4,400** Resource managers use EBM
- 670,000** Acres of degraded ecosystems restored



HAZARD RESILIENCE IN COASTAL COMMUNITIES

- 450** Communities trained in resilience
- 150** Communities improved resilience



RESEARCH

- 230** Proposals funded
- 400** Peer-reviewed publications



SAFE AND SUSTAINABLE SEAFOOD SUPPLY

- 9,900** Fishers adopted responsible harvesting techniques
- 56,000** Stakeholders modified practices based on increased knowledge of safety, sustainability, and health
- 1,500** Hazard Analysis & Critical Control Points (HACCP) certifications



SUSTAINABLE COASTAL DEVELOPMENT

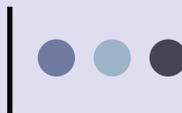
- 900** Communities implemented sustainable development practices/policies
- 800** Annual Clean Marina Certifications (since 1995)



EDUCATION, OUTREACH, AND EXTENSION

- 310,000** Volunteer hours
- 1,000** Undergraduate students supported
- 150** Undergraduate degrees awarded
- 950** Graduate students supported
- 200** Graduate degrees awarded

THE STATE OF SEA GRANT 2012: Impacts, Challenges, Opportunities



Biennial Report to Congress by the National Sea Grant Advisory Board



North Carolina Sea Grant



Alaska Sea Grant



Alaska Sea Grant

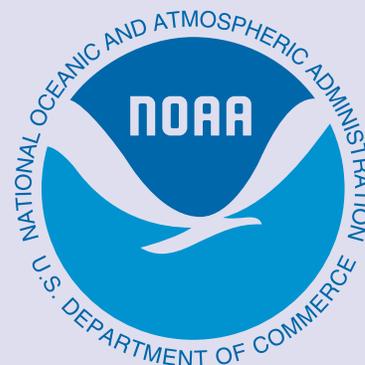


North Carolina Sea Grant



Georgia Sea Grant

Sea Grant



October 2012

Bio:

Dr. Holly A. Bamford, National Ocean Service



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Holly A. Bamford, Ph.D.
**Assistant Administrator for Ocean Services and Coastal
Zone Management, National Ocean Service**

Dr. Holly A. Bamford is the National Oceanic and Atmospheric Administration's (NOAA) Assistant Administrator for the National Ocean Service (NOS). As Assistant Administrator, Dr. Bamford provides leadership and strategic direction for NOS, which serves as the primary federal agency providing science-based solutions to address evolving economic, environmental, and social pressures on our oceans and coasts. NOS observes, measures, assesses, and manages the nation's coastal, ocean, and Great Lakes areas; provides critical navigation products and services; and conducts response and restoration activities to protect vital coastal resources.

Before being selected as the Assistant Administrator for NOS, Dr. Bamford served as the Deputy Assistant Administrator (DAA) for NOS. In this role, she managed the agency's financial and business operation and worked to strategically align and improve the performance of NOS. In 2005 she became the agency's first Director for the NOAA Marine Debris Program. As Director, Dr. Bamford formally established the Program within the agency which provided millions of dollars in national and regional grants in support of other marine debris programs and research projects. Under her leadership, the program grew to national and international recognition, and in 2008 the program was awarded a NOAA Administrators Award for successfully implementing an effective and successful program that supports NOAA's mission.

Before coming to NOAA, Dr. Bamford studied in the field of organic chemistry, quantifying the physical and chemical processes that control the transport and fate of organic contaminants. During her doctorate training, she spent much of her time in the field and on research vessels gathering data. She also was a researcher at the National Institute of Standards and Technology developing analytical methods to detect trace organic contaminants in water and air particles. Dr. Bamford has a number of peer reviewed publications that have been widely referenced in the field of environmental chemistry and water quality, including papers in *Environmental Science & Technology*, *Atmospheric Environment*, and *Environmental Toxicology & Chemistry*.

Dr. Bamford has also served on a number of science and advisory committees, including Chairperson on the Federal Interagency Marine Debris Coordinating Committee, the U.S. EPA Chesapeake Bay Program Scientific and Technical Advisory Committee, the Potomac Advisory Council, a member of the U.S. delegation at the 6th session of the Law of the Sea, and at the 2007 Ocean Policy Forum in South Korea. Dr. Bamford has presented at a number of national and international meetings, academic institutions, as well as addressed the public through national media outlets including *CNN*, *ABC News World News with Charles Gibson*, *NewsHour with Jim Lehrer*, *Good Morning America*, *Rolling Stone Magazine*, *People Magazine*, and *the Wall Street Journal*.

Throughout her academic and federal service, Dr. Bamford has received a number of prestigious awards for the demonstration of exceptional management, leadership, and partnership skills including a NOAA Bronze Medal, two NOAA Administrator's Awards, two Coastal America Presidential Partnership Awards, the U.S. Environmental Protection Agency Gulf Guardian Award, was recognized by the Washington Post in February 2010 under the Federal Player Profile, and was nominated in 2009 for a Samuel J. Heyman Service to America Medal.

Sea Grant Education Impacts



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EDUCATION

An Invisible Hand Behind Plan To Realign U.S. Science Education

Meet the master bureaucrat behind President Obama's controversial proposal to reshuffle the federal government's \$3-billion-a-year investment in STEM education

An art exhibit in downtown Washington, D.C. features the pictures and words of 89 Washington movers and shakers. The exhibit at the National Portrait Gallery, entitled *The Network*, includes high-profile politicians such as Nancy Pelosi, Eric Cantor, and Karl Rove and renowned scientists turned policymakers such as Nobelists Harold Varmus and Steven Chu. A few, like journalist Cokie Roberts, have earned fame for explaining the ways of Washington to the public. And then there's Kathryn Stack.

Stack is deputy associate director for education and human resources at the White House Office of Management and Budget (OMB). The agency exercises vast sway over government spending and regulatory practices yet prefers to operate in the shadows. So Stack's position qualifies her for the Hall of Fame of faceless government bureaucrats. But she's learned a thing or two about wielding power during a 35-year career spanning six administrations.

"Several others [in the exhibit] told me that she knows how to get things done," says Chicago artist Lincoln Schatz, explaining why he chose Stack for the exhibit, which opened in December. "They said few people understand the complexities of large bureaucracies like OMB as well as she does."

Despite her professional mask of anonymity—OMB officials declined to make Stack available for an interview—2013 may be a breakthrough year for Stack. In addition to seeing her picture hang on the walls of the National Portrait Gallery, Stack watched President Barack Obama unveil a budget initiative this spring in which she played an important role: a proposal to radically realign the federal government's \$3 billion annual investment in STEM (science, technology, engineering, and mathematics) education.

The 226 programs, which serve students, teachers, and the public, are spread across 13 agencies. The reorganization would cut

the number in half (see graphic, next page) and severely curtail STEM activities at the National Institutes of Health (NIH) (see sidebar, p. 340), NASA, and several other so-called mission agencies. At the same time, it would strengthen the efforts of the Department of Education, the National Science Foundation (NSF), and the Smithsonian Institution by designating them as lead agencies.

The proposed reshuffling hit the U.S. scientific community like a bombshell. For starters, they hadn't seen it coming and were miffed that they weren't consulted. "We are disturbed with the nontransparent process by which this proposed consolidation was developed," wrote the Association of American Universities and the Association of Public and Land-grant Universities in a 2 July letter to John Holdren, the president's science adviser.

But being shut out isn't the community's chief complaint. Three months after the plan was sent to Congress as part of the president's 2014 budget request, STEM educators are still waiting for the White House to explain how it drew up the list of programs to be ended, merged, or expanded. They also worry that the reshuffling will damage existing activities by shifting resources away from agencies with unique expertise and tools to do STEM education and asking the lead agencies to take on too much (*Science*, 19 April, p. 258).

CREDIT: LINCOLN SCHATZ, THE NETWORK (KATHY STACK), GENERATIVE VIDEO STILL, 2012

Downloaded from www.sciencemag.org on August 11, 2013

The big picture. OMB's Kathy Stack is a good example of how a career civil servant can help shape policy at the White House.

At the core of the proposal is an approach to governing, called evidence-based policy, which Stack has long championed at OMB. It calls for killing, reforming, or expanding government programs based on the results of regular, rigorous evaluations of their effectiveness. To officials in both the Bush and Obama administrations, the complex, disparate array of federal STEM education programs seemed ideally suited for the approach.

But critics say that Stack and her OMB colleagues, in their eagerness to consolidate, inverted the strategy, making decisions before the evidence was in. The result is a flawed plan, say the spending committees of both the Senate and House of Representatives. "What is proposed as a consolidation of existing STEM programs ... is really the elimination of many proven and successful programs with no evaluation on why they were deemed duplicative or ineffective," the Senate Appropriations Committee wrote last week in a report accompanying its 2014 bill for the Department of Commerce, Department of Justice, NASA, NSF, and several other agencies.

Looking for evidence

Although evidence-based policy may seem like an obvious way to make the federal government work better, it's not common practice. "Most agencies don't think about outcomes," Stack told the Society for Research on Educational Effectiveness (SREE) in a March 2011 speech. "And most of what they consider to be a rigorous evaluation isn't." At the same time, she noted, "most agencies think that everything they are doing is effective."

In addition to complacency, another major obstacle to implementing evidence-based policy is vested interests, says Robert Gordon, Stack's boss at OMB during the first 4 years of the Obama administration. "People have talked for ages about trying to rationalize and harmonize programs that were overlapping and wasteful," says Gordon, who left OMB in March to become a guest scholar at the Brookings Institution in Washington, D.C. "But it's hard to do because these programs have so many supporters."

Of course, evidence-based policy requires

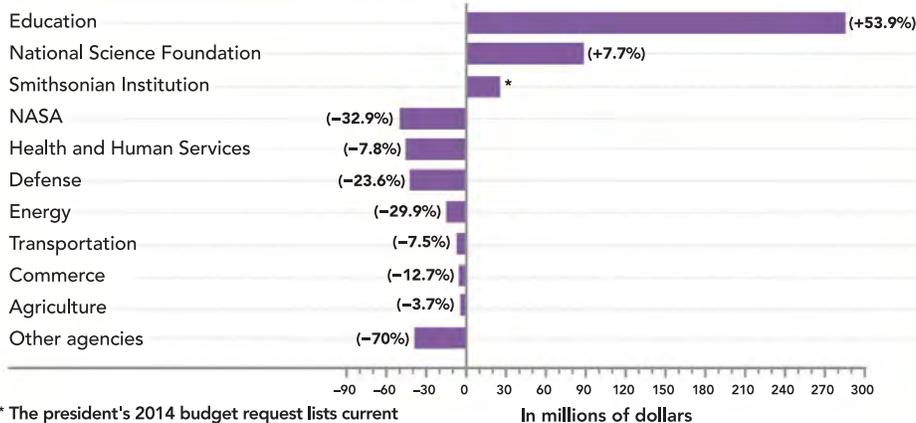
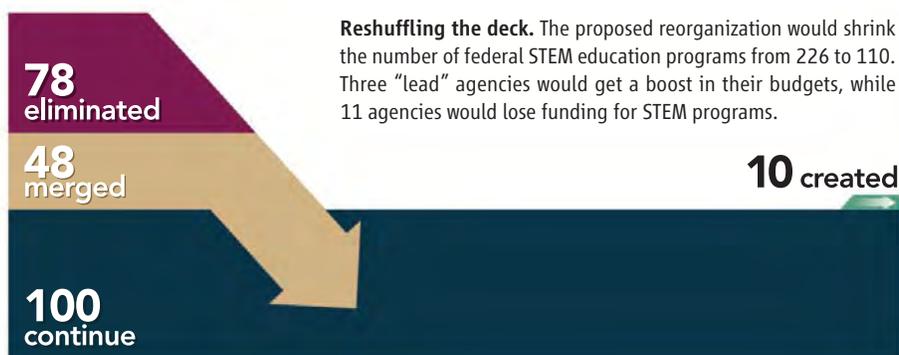
evidence. But the results of previous evaluations of STEM programs were not the driving force in selecting winners and losers, Holdren told the House science committee last month. Instead, he said, the reorganization was intended to "cut back on lower priority or narrow-purpose programs [to] make room for targeted increases in high-priority areas." Better evaluation would be a consequence, not a cause, of the reorganization, he noted. Once the reshuffling was implemented, he told legislators, the administration would be in a better position to carry out "rigorous evaluation and evidence-building strategies."

That's a reasonable approach, says Robert Shea, who was Stack's boss during most of the George W. Bush administration and is now a

drawn near-unanimous opposition from several of the congressional panels with jurisdiction over one or more of the agencies that would be affected. The House science committee, for example, last week approved a bill to reauthorize NASA programs that would prohibit the administration from implementing "any proposed STEM education and outreach-related changes proposed [for NASA] in the president's 2014 budget request." Senate appropriators were equally dismayed, telling NIH officials on 11 July to put the brakes on their plan to dismantle NIH's Office of Science Education and related grants program supporting informal health science education.

Likewise, House appropriators last week approved a bill that would restore money

Putting the Squeeze on STEM Education Programs



director in the Washington offices of Grant Thornton, a global professional services firm. "You'll never consolidate all programs with similar objectives," Shea says. "But you want to get a sufficiently small number so that they can be better coordinated."

Such arguments haven't appeased opponents of the proposed reorganization. It has

in 2014 for STEM education activities at NASA and the National Oceanic and Atmospheric Administration and put the kibosh on a realignment of undergraduate STEM education programs at NSF. The accompanying report also reflected the concerns of many science educators: "The ideas presented in the budget request lack any substantive

implementation plan and have little support within the STEM education community.”

On-the-job training

White House officials, including OMB and Stack, aren't publicly saying what they think of such rebukes. Indeed, after spending her entire career inside the federal bureaucracy, Stack knows that civil servants aren't even supposed to make policy. Yet, she has played an outsized role by focusing on how to make the wheels of government turn more smoothly.

“There are policy folks who come in from administration to administration who have great ideas, but they have no idea how government works,” she told Schatz, the artist. “I understand the culture and tools, and I know how to translate into action the big visionary ideas that political officials have.”

Those who have worked with Stack testify to her extraordinary grasp of the levers of power. “Kathy taught me, rather than the other way around,” says Gordon, a political appointee with extensive experience in Democratic policymaking circles. Jon Baron, whose non-profit Coalition for Evidence-Based Policy conducted an evaluation of STEM education programs during the Bush administration,

says that Stack “has been very successful in persuading her political bosses” that rigorous evaluation should be part of policymaking.

Colleagues say it helps that Stack doesn't have her own agenda. “She's tied for the least ideological person in government that I

“I understand the culture and tools, and I know how to translate into action the big visionary ideas that political officials have.”

—Kathryn Stack

know,” says Robert Granger, retiring president of the William T. Grant Foundation. Granger had frequent interactions with Stack when he chaired the National Board for Education Sciences within the Department of Education during the Bush administration. “Instead, she's a terrific public servant who's motivated by what she thinks will help the government spend its money well to help kids.” Baron struck a similar chord when he told the SREE

audience that “we should be glad that she uses her powers for good, and not evil.”

Stack arrived in Washington in 1978 with an undergraduate degree in government from Cornell University to work on education issues within the former Department of Health, Education, and Welfare. In 1982, she moved to OMB and began promoting the idea of using program evaluation to shape policy in education and income assistance programs.

The tide of evidence-based policy was coming in as Stack toiled away at OMB, and she rode the wave. One result: In 1993, Congress passed the Government Performance and Results Act as part of a Clinton-era campaign to “reinvent government.” And Stack played a leading role in a similar initiative under George W. Bush known as PART (Program Assessment Rating Tool).

Then, in 2007, Congress passed and President Bush signed the America COMPETES Act, which sought to boost innovation by increasing federal support for research and improving STEM education. One of its provisions called on the government to evaluate existing STEM education programs. Stack asked Baron's center to conduct a review

NIH Teaching Units, Cherished In Schools, May Be Shredded

Two miles north of its Bethesda, Maryland, campus, the National Institutes of Health (NIH) operates a supply warehouse that serves its intramural scientists. The tidy blue and white building stands out along a grimy commercial strip dotted with auto repair shops. And so do its contents: One corner of the warehouse holds what is arguably the finest collection of health science education materials in the world. But the 180 tons of lessons may soon be pulped by a local recycling company rather than used to feed hungry minds.

Since 1994, NIH's Office of Science Education has created lessons covering 19 topics incorporating the latest biomedical discoveries. Designed to appeal to middle and high school students, there's a neurobiology unit that focuses on addiction, for example, and an exploration of biological rhythms that discusses sleep disorders.

Over the years, NIH has distributed more than 450,000 copies of the supplements, free of charge. Although the 2-week units are also available online, the office maintains some 200,000 copies for teachers—probably the vast majority—who might have trouble downloading and copying them at school.

That supply is now in jeopardy, however, as a result of a government-wide restructuring of science education programs (see main story, p. 338). The White House has proposed shutting down NIH's \$4-million-a-year education office next year and ending a \$15-million-a-year grants program that supports informal science education activities outside the regular classroom. Without a budget, the office won't be able to pay its share of the rent

and utilities for the warehouse, and the material could simply be tossed.

The moves could happen as soon as 1 October, the first day of the 2014 fiscal year. NIH officials have refused to allow Bruce Fuchs, an immunologist who has directed the office since 1996, to speak with the media. But outside scientists funded by the grants program and others familiar with the office say that its nine full-time employees have been told they will be reassigned and that contract staff members will be let go.

NIH is keeping its cards close to the vest. “We have not made a final decision about whether the office is closing at the end of fiscal 2013,” says Principal Deputy NIH Director Lawrence Tabak. But he acknowledges that NIH is considering all manner of cost-saving options because of the \$1.5 billion bite taken out of the agency's overall \$30 billion budget by the government-wide cuts known as the sequester. “We have to think about our priorities and see what rises to the top,” he says.

Teachers and health science educators around the country say that closing the office would be a tragedy. For the past decade, Jodie Spitze has taught an NIH unit on bioethics to her biology students at Kent-Meridian High School outside Seattle, Washington. She says that the NIH materials fill a big gap. In addition to providing teachers with the latest research results, the units also prepare them to lead classroom discussions of hot-button issues.

“IB [International Baccalaureate] biology has a requirement to teach controversial issues like stem cell research, but there's no strategy to do it,” says Spitze, who was featured in a 2008 *Science* article on teaching bioethics in school. Teaching kids how to listen and build a convincing argument based on facts rather than opinions “can be even more important sometimes than the content,” she adds. “Otherwise, the kids with the strongest opinions wind up dominating the discussion, which just turns into a debate.”

that found only 10 of the 115 existing STEM programs had been rigorously evaluated. Of those, only four were found to have achieved their goals, which included raising student achievement in science and math, improving the skills of STEM teachers, attracting more students into STEM careers, and increasing public understanding of science.

Correcting “bad habits”

Stack doesn't claim to be an expert in STEM education. “My education credentials are probably at the bottom,” she told her SREE audience. But when the new Obama administration decided to apply evidence-based policy to STEM education, she dove in. “When Obama came in, we moved into overdrive,” Stack said. “Within weeks of taking office, they wanted a briefing from OMB on what we could do to improve government. I had learned from my STEM experience that there wasn't a lot of good evaluation out there.”

Although neither a scientist nor an educator, Stack was invited to speak to the President's Council of Advisors on Science and Technology (PCAST) in October 2009 as it prepared to launch the first of two studies of ways to improve U.S. science and math education. Stack used the opportunity to explain the rationale behind evidence-based policy.

“We have gotten into some really bad habits,” she told PCAST. “We don't challenge our assumptions that existing programs work. We plan evaluations once the programs have been up and running, when it's hard to create an experimental design with a control group. And evaluation officials are rarely part of the discussion when policymakers examine programs.” Although Stack said many agencies may not be able to conduct such high-quality evaluations, she told PCAST that “STEM is one area that may be ripest for taking this approach.”

Stack and her OMB colleagues decided to offer federal agencies the carrot of additional funding if they teamed up to design STEM education programs that could be evaluated more rigorously. “We said you can have money if you send us proposals to support [certain] research questions and to build capacity” for further evaluation. She said NSF and the Education Department, for example, were “challenged . . . to come up with a plan to improve teacher professional development.”

But money for those and other evaluation experiments dried up after the Republicans took control of the House of Representatives in January 2011 and the president and Congress struck a deal in August to reduce the federal deficit by cutting spending. “As pas-

sionate as I am about rigorous evaluation,” Stack told SREE, “it will be a hard sell to set aside large pots of money for evaluation.” Instead, she suggested agencies look for “natural experiments . . . that might show where they can cut without hurting student performance.”

It is not clear whether the plan crafted by Stack and others at OMB was adjusted before being rolled out by the White House. But its hostile reception suggests that, whatever the plan's technical merits, the Obama administration has done a poor job of selling it politically. The result has been widespread criticism from a research community that has generally applauded this White House's science initiatives.

In a time when every government program is on the chopping block, advocates of STEM education don't expect politicians to exempt their field from scrutiny. But the take-home message from the reorganization controversy, they say, is that politicians should rely on scientists and educators as well as bureaucrats to decide which STEM education programs live and die.

Kathy Stack wouldn't disagree. But her career demonstrates that a faceless bureaucrat can sometimes also be a very powerful voice in setting policy. —JEFFREY MERVIS

Jeanne Chowning, who leads a Seattle-based nonprofit organization that uses the NIH materials in teacher training workshops, says: “I don't know anything else out there that is so up-to-date. And you can count on the quality of the resources because they have been developed by top scientists.”

In North Carolina, Suzanne Wilkison runs an organization similar to Chowning's. In April, when she learned that NIH was planning to shut down its science education office, she immediately placed an order for 3000 copies of eight NIH units. “I panicked,” she admits. “I wanted to make sure we had a 5-year supply.”

Joan Thompson, a science consultant for the state's Department of Public Instruction, also placed an order. Next month, North Carolina school officials will pilot an updated course in biomedical technology, now taken by 8000 students each year, which draws upon eight of the



Principled learning. Teachers Amy Lindahl and Brandon Staton discover how to use NIH's exploring bioethics curriculum at a summer workshop.

NIH modules. Thompson says that the NIH material is a godsend for school administrators, in part because it is aligned with the next wave of education standards that many states are adopting—the Next Generation Science Standards and the Common Core standards for mathematics and reading.

Congress seems to agree that the office is worth preserving. This month, a Senate spending panel told NIH that it should “continue funding these programs in fiscal year 2014,” adding that “the Committee is not convinced that the quality of these programs

would be maintained if they were moved to other federal agencies.”

NIH's Tabak says that “of course we will consider the sentiments of the Senate.” But he notes that “we are at a very early stage” of a budget process that could extend well into fall. —JDM

NSGAB Mission



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minority and economically disadvantaged students to the program carried out under this subsection. Every 2 years, the Secretary shall submit a report to the Congress describing the efforts by the Secretary to ensure equal access for minority and economically disadvantaged students to the program carried out under this subsection, and the results of such efforts.

(b) DEAN JOHN A. KNAUSS MARINE POLICY FELLOWSHIP.—The Secretary may award marine policy fellowships to support the placement of individuals at the graduate level of education in fields related to ocean, coastal and Great Lakes resources in positions with the executive and legislative branches of the United States Government. A fellowship awarded under this subsection shall be for a period of not more than 1 year.

(c) Restriction on Use of Funds¹.—Amounts available for fellowships under this section, including amounts accepted under section 204(c)(4)(F) or appropriated under section 212 to implement this section, shall be used only for award of such fellowships and administrative costs of implementing this section.

SEC. 209. [33 U.S.C. 1128] NATIONAL SEA GRANT ADVISORY BOARD.

(a) ESTABLISHMENT.—There shall be an independent committee to be known as the National Sea Grant Advisory Board.

(b) DUTIES.—

(1) IN GENERAL.—The Board shall advise the Secretary and the Director concerning—

(A) strategies for utilizing the sea grant college program to address the Nation's highest priorities regarding the understanding, assessment, development, management, utilization, and conservation of ocean, coastal, and Great Lakes resources;

(B) the designation of sea grant colleges and sea grant institutes; and

(C) such other matters as the Secretary refers to the Board for review and advice.

(2) BIENNIAL REPORT.—The Board shall report to the Congress every two years on the state of the national sea grant college program. The Board shall indicate in each such report the progress made toward meeting the priorities identified in the strategic plan in effect under section 204(c). The Secretary shall make available to the Board such information, personnel, and administrative services and assistance as it may reasonably require to carry out its duties under this title.

(c) MEMBERSHIP, TERMS, AND POWERS.—(1) The Board shall consist of 15 voting members who shall be appointed by the Secretary. The Director and a director of a sea grant program who is elected by the various directors of sea grant programs shall serve as nonvoting members of the Board. Not less than 8 of the voting members of the Board shall be individuals who, by reason of knowledge, experience, or training, are especially qualified in one or more of the disciplines and fields included in marine science. The other voting members shall be individuals who, by reason of knowledge, experience, or training, are especially qualified in, or representa-

¹ So in law. The casing for the heading of subsection (c) of section 208 (as added by section 8(2) of Public Law 110-394) probably should appear in initial caps and small caps.

tive of, education, marine affairs and resource management, coastal management, extension services, State government, industry, economics, planning, or any other activity which is appropriate to, and important for, any effort to enhance the understanding, assessment, development, management, utilization, or conservation of ocean, coastal, and Great Lakes resources. No individual is eligible to be a voting member of the Board if the individual is (A) the director of a sea grant college or sea grant institute; (B) an applicant for, or beneficiary (as determined by the Secretary) of, any grant or contract under section 205; or (C) a full-time officer or employee of the United States.

(2) The term of office of a voting member of the Board shall be 3 years for a member appointed before the date of enactment of the National Sea Grant College Program Act Amendments of 2002, and 4 years for a member appointed or reappointed after the date of enactment of the National Sea Grant College Program Act Amendments of 2002. The Director may extend the term of office of a voting member of the Board appointed before the date of enactment of the National Sea Grant College Program Act Amendments of 2002 by up to 1 year. At least once each year, the Secretary shall publish a notice in the Federal Register soliciting nominations for membership on the Board.

(3) Any individual appointed to a partial or full term may be reappointed for one additional full term. The Director may extend the term of office of a voting member of the Board once by up to 1 year.

(4) The Board shall select one voting member to serve as the Chairman and another voting member to serve as the Vice Chairman. The Vice Chairman shall act as Chairman in the absence or incapacity of the Chairman.

(5) Voting members of the Board shall—

(A)¹ receive compensation at a rate established by the Secretary, not to exceed the maximum daily rate payable under section 5376 of title 5, United States Code, when actually engaged in the performance of duties for such Board; and

(B) be reimbursed for actual and reasonable expenses incurred in the performance of such duties.

(6) The Board shall meet on a biannual basis and, at any other time, at the call of the Chairman or upon the request of a majority of the voting members or of the Director.

(7) The Board may exercise such powers as are reasonably necessary in order to carry out its duties under subsection (b).

(8) The Board may establish such subcommittees as are reasonably necessary to carry out its duties under subsection (b). Such subcommittees may include individuals who are not Board members.

SEC. 210. [33 U.S.C. 1129] INTERAGENCY COOPERATION.

Each department, agency, or other instrumentality of the Federal Government which is engaged in or concerned with, or which has authority over, matters relating to ocean, coastal, and Great Lakes resources—

¹Margin so in law.

U.S. DEPARTMENT OF COMMERCE
CHARTER OF THE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL SEA GRANT ADVISORY BOARD

1. Committee's Official Title. National Sea Grant Advisory Board

2. Authority. The National Sea Grant Advisory Board (the Board) was established by the Secretary of Commerce as directed by Section 209 of the National Sea Grant Program Act of 1976, as amended, 33 U.S.C. 1121 et seq. (the Act). Initially chartered in 1976 under the Federal Advisory Committee Act, as amended, (5 U.S.C., App.) the Board is hereby rechartered under the same Act. The terms used in this charter shall have the same meaning as prescribed in the Act, as amended.

3. Objectives and Scope of Activities. The Board shall advise the Under Secretary of Commerce for Oceans and Atmosphere (the Under Secretary), acting for the Secretary of Commerce pursuant to Section 1122 (15) of the Act, and the Director of the National Sea Grant College Program (the Director) and meet with the Secretary of Commerce as appropriate on matters related to the responsibilities and authorities set forth in the National Sea Grant Program Act. The Board should address issues appropriate for a Federal Advisory Committee serving the National Sea Grant Program.

4. Description of Duties. Sea Grant topics the Board should address include: developing strategies for utilizing the National Sea Grant College Program to address the Nation's highest priorities regarding the understanding, assessment, development, management, utilization, and conservation of ocean, coastal, and Great Lakes resources; the designation of Sea Grant colleges and Sea Grant institutes; and such other matters as the Secretary refers to the Board for review and advice. The Board shall report to Congress every two years on the state of the National Sea Grant College Program. The Board shall indicate in each such report the progress made toward meeting the priorities identified in the strategic plan in effect under section 204 (c). The Board may exercise such powers as are reasonably necessary in order to carry out its duties. The Board shall function as an advisory body in accordance with the Federal Advisory Committee Act.

5. Agency or Official to Whom the Committee Reports. The Board shall report to the Under Secretary, acting for the Secretary of Commerce pursuant to Section 1122 (15) of the Act.

6. Support. The National Sea Grant Office, and National Oceanic and Atmospheric Administration (NOAA), shall make available to the Board such information, personnel, administrative services and secretarial assistance as may be required to accomplish duties, and will provide a Designated Federal Officer (DFO) for the Board.

7. Estimated Annual Operating Costs and Staff Years. The annual cost of operating the Board is estimated to be \$300,000 and 1.5 FTE staff support per annum.

8. Designated Federal Officer. The DFO will be a full-time employee of the National Sea Grant Office and will be appointed by the Director of the National Sea Grant College Program in accordance with agency procedures. The DFO will approve or call all of the Board meetings,

prepare and approve all meeting agendas, attend all Board meetings, adjourn any meeting when the DFO determines adjournment to be in the public interest, and chair meetings when directed to do so by the Director.

9. Estimated Number and Frequency of Meetings. The Board shall meet on a biannual basis and, at any other time, at the call of the Chairperson or upon the request of a majority of the voting members or of the Director, with approval by the DFO.

10. Membership and Designation. The Board shall consist of fifteen voting members, appointed by the Under Secretary, acting for the Secretary of Commerce pursuant to Section 1122 (15) of the Act, in accordance with the provisions and prohibitions of Section 1128(c) of the Act. Members will be selected on a clear, standardized basis, in accordance with applicable Department of Commerce guidance. The Director and a Director of a Sea Grant Program, who is elected by the various Directors of Sea Grant Programs, shall serve as nonvoting members of the Board.

Not less than eight of the voting members of the Board shall be individuals who, by reason of knowledge, experience, or training, are especially qualified in one or more of the disciplines and fields included in marine science. The other voting members shall be individuals who, by reason of knowledge, experience, or training are especially qualified in, or representative of, education, marine affairs and resource management, extension services, state government, industry, economics, planning, or any other activity which is appropriate to, and important for, any effort to enhance the understanding, assessment, development, management, utilization, or conservation of ocean, coastal and Great Lakes resources.

A full term of office of a voting member of the Board shall be four years. A voting member may be reappointed to no more than one additional full term. The Director may extend the term of office of a voting member of the Board once by up to one year. Board members will serve at the discretion of the Under Secretary, acting for the Secretary of Commerce pursuant to Section 1122 (15) of the Act. At least once each year, the Secretary shall publish a notice in the *Federal Register* soliciting nominations for membership on the Board.

The Board shall select one voting member to serve as the Chairperson and another voting member to serve as the Vice Chairperson. The Vice Chairperson shall act as Chairperson in the absence or incapacity of the Chairperson. Voting members of the Board shall receive compensation at a rate established by the Secretary, not to exceed the maximum daily rate payable under section 5376 of title 5, United States Code, when actually engaged in the performance of duties for the Board, and shall be reimbursed for actual and reasonable expenses incurred in the performance of such duties. Voting members will be subject to ethical standards applicable to special government employees.

11. Subcommittees. NOAA may establish such subcommittees, task forces, and work groups consisting of Board members and/or outside experts as may be necessary. Chairs of subcommittees, task forces or work groups shall be selected by and serve at the discretion of the Board. All subcommittee work must be forwarded to the full Board for actual deliberation. Only the Board may advise NOAA.

12. Recordkeeping. Records of the Board, formally and informally established subcommittees, or other subgroups of the Board, shall be handled in accordance with General Records Schedule 26, Item 2 or other approved agency records disposition schedule. These records shall be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

13. Duration/Termination. This charter will terminate two years from the date of its filing with the appropriate U.S. Senate and House of Representatives Oversight Committees unless earlier terminated or renewed by proper authority. As required by Section 5(h)(4) of the Act, the Secretary shall consult the Committee with regard to termination or extension of the Committee.

End of Briefing Book

