

VIRGINIA SEA GRANT SITE VISIT REPORT 8/10/2010

[CONTENTS](#) ([click to go there](#))

Transmittal letter

Virginia Sea Grant SRT Report

Site Visit Agenda

Briefing Book

Metrics from Annual Report



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Sea Grant College Program
1315 East-West Highway
Silver Spring, Maryland 20910

August 9, 2010

Dr Troy Hartley
Director, Virginia Sea Grant
VA Institute of Marine Science
Gloucester Pt., VA 23062

Dear Dr Hartley:

On behalf of the Site Review Team (SRT) for the Virginia Sea Grant Program, I am pleased to transmit to you the enclosed SRT report. The report documents the SRT's findings and recommendations on program management and organization, stakeholder engagement, and collaborative network activities from our site visit on July 7 and 8, 2010. In accordance with our site review policy, this report does not assign a grade or score to your program.

Our policy states that as the program director, you have the opportunity to prepare a response to the SRT report. Both the SRT report and your response will become part of the Program File in the National Sea Grant Office. I encourage you to keep our office informed of any activities that are undertaken to strengthen your program.

I wanted also to offer my thanks and to express the gratitude of the Site Review Team for the effort you and your staff put forth to make this review productive and most enjoyable. In addition, we also want to express our thanks to the university officials, administrators, staff, researchers and the program's stakeholders who ensured that our review was comprehensive and enjoyable.

Sincerely,

Dorn Carlson
Federal Program Officer,
Virginia Sea Grant

Enclosure

Cc: Dr. Leon Cammen, Director, National Sea Grant College Program
Ms. Sami Grimes, Director of Planning and Evaluation, National Sea Grant Office

SITE REVIEW TEAM

Review of the Sea Grant College Program July 7-8, 2010



Chair, Federal Program Officer

8/10/2010

Date



Co-chair, Sea Grant Advisory Board Member

8/10/2010

Date



I. INTRODUCTION

The Site Review of the Virginia Sea Grant Program took place from July 7 to July 8, 2010.

Members of the Site Review Team (SRT) were:

Dorn Carlson (chair, Federal Program Officer) National Sea Grant Office	Michael Orbach (cochair, Sea Grant Advisory Board) Nicholas School of the Environment, Duke University
Barry Costa-Pierce Director Rhode Island Sea Grant College	Jimmy Johnson Eastern Regional Field Officer NC Dept of Environment and Natural Resources
Sami Grimes (observer) Planning and Evaluation Director National Sea Grant Office	Carl Richards Director EPA Health and Environmental Effects Research Lab

Prior to the beginning of the SRT visit, and in conformance with National Sea Grant College Program guidelines, Virginia Sea Grant issued a public notice of the upcoming SRT visit and invited interested parties to send written comments to the SRT Chair. The public notice was displayed prominently on Virginia Sea Grant's website and sent to the Program's overall email list, which has a distribution of approximately 150 names. The SRT Chair received four letters in response to the public notice, from Virginia Department of Game and Inland Fisheries, The Coastal Society, the Maryland Sea Grant College, and The Coastal States Organization. All were uniformly positive about the high quality and energy that characterized their interactions with Virginia Sea Grant.

The SRT visit took place at Virginia Sea Grant's host organization, the Virginia Institute of Marine Science (VIMS), Gloucester Point, Virginia, except for an evening reception at the parent institution of VIMS, the College of William and Mary in Williamsburg, VA. The Site Visit was divided into three main parts, mirroring the three broad issue areas that are the purview of this review. The first day was devoted to a half day of presentations and discussions about the Organization and Management of the Program, and then a half day on Stakeholder Engagement. These two parts were separated by a lunch at the River's Inn and lunchtime discussion with Chef Hans Schadler, a partner in the Virginia Sea Grant Chefs' Seafood Symposium project. On the evening of the first day the SRT attended a reception that was well attended by officers from VIMS, William & Mary, and partner institutions, as well as stakeholders and an elected official (Virginia First District Congressman Rob Whitman).

The morning of the second day was devoted to presentations and discussions on Virginia Sea Grant's Collaborative Network Activities. The Site Visit ended in the

afternoon with a debrief of the Virginia Sea Grant management team, followed by a debrief for John Wells, Dean of VIMS, Jane Lopez, VIMS Director of the Office of Sponsored Programs, and (by phone) Dick Zimmerman, Chair of the Old Dominion University Department of Ocean, Earth and Atmospheric Sciences, Cynthia Jones, Director of the Old Dominion University Center for Quantitative Fisheries Ecology, and Kristina Hill of the University of Virginia. During the debriefs, the SRT reported satisfaction with the management, engagement, and collaboration activities of the Program, and outlined the findings, recommendations, and suggestions anticipated to appear in this Site Visit report.

The hosting of the SRT visit was conducted in a highly efficient, effective and open manner, and the team had ready access to materials and people whenever they were needed. The Team would like to thank Dr. Hartley and his management team for what was clearly a well-thought out and conscientious effort to provide us with everything we needed for a successful review.

This report is divided into sections describing the SRT's review of Virginia Sea Grant in the areas of Organization and Management of the Program; Stakeholder Engagement; and Collaborative Network activities, and concludes with the SRT's overall findings, recommendations, and suggestions. In accordance with National Sea Grant site review policy, the SRT visit does not produce any score or grade of the Program.

II. ORGANIZING AND MANAGING THE PROGRAM

Virginia Sea Grant's most recent previous scheduled site review, a "Performance Assessment Team" (PAT) review conducted in 2004, took place when the Program's host entity was a consortium of four Virginia academic institutions--VIMS, Old Dominion University, University of Virginia, and Virginia Polytechnic Institute and State University. The Virginia Sea Grant Program was decertified in 2006 and a new Virginia Sea Grant Institutional Program was established in 2007, with VIMS as the host institution, and the other former Consortium members having a dues-paying "partner" status (which is still being precisely defined).

Leadership – Since their reestablishment the Program has accomplished a Director transition and new Program initiation. The new Director has been in place since 2008, and has had a significant hand in this successful transition period and in the construction of the new Program. The new Director has brought pertinent expertise and experience, and has injected new ideas, management techniques and energy into the Program. Significant turnover of senior staff has occurred since the PAT review, and the Director has aggressively recruited highly respected and experienced individuals from within and outside of the Program to serve on his management team. His management style appears to be very appropriate to achieve the Program's goals and objectives.

Organization – The new Program is organized significantly different from the old Program. The location of the head office has changed (from UVA in Charlottesville to

VIMS in Gloucester Point). Three new advisory entities have been formed, the Policy Oversight Committee, the Research and Education Advisory Committee (REAC), and the Outside Advisory Committee. The advisory and oversight structure appears to be robust and well-appointed, although some of the members of these committees are still to be appointed, and some duties of the committees, particularly the REAC, are still being defined.

The SRT noted that in some ways the REAC resembled a conventional Sea Grant advisory committee, expected to advise the Director on research and education issues central to achieving the Sea Grant Program's mission, with membership based on expertise and placement designed to maximize the quality of the advice. In other ways it resembled a board of investors, where membership was based on whether the institution had bought into the partnership, and who the board was advising. The extent to which that advice was intended to protect the investment of the members' institutions, was less clear. While these two roles are not necessarily incompatible, the SRT noted the value of a more precise definition of all parties' expectations for the REAC.

Programmed Team Approach – Following the recommendations of the 2004 PAT review and other previous reviews, the Communications function of the Program has been reorganized and relocated from three separate institutions to the head office location at VIMS. The increased communications with Virginia Tech is a good example of the effectiveness of the realignment.

The SRT found strong evidence that there is a new emphasis on using time-tested methods combined with modern social science to develop effective networks. This evidence was apparent throughout the Program's functions in research, education, extension, and communications. Virginia Sea Grant management and staff clearly have focused their thinking on developing an improved network in all of these areas, including the integration of communications among research, education and extension.

The strategic planning process, also the subject of recommendations from previous outside reviews, was initiated under the new Director and appears to have been much more robust, participatory and thorough than previous processes. The resulting Strategic Plan was quite accessible, and included a process for ensuring that it remained a "living document". Virginia Sea Grant's Plan and its process for creating and maintaining it are commendable, and a noteworthy practice for the rest of the Sea Grant network.

Institutional Support – The Directorship and Communications functions of Virginia Sea Grant are now centralized at VIMS. Where support structures and distribution of support responsibilities of the previous Virginia Sea Grant Program continue to make sense for the current Program, they have been retained. The SRT had questions about the relationships of Virginia Sea Grant to VIMS, the partner institutions, and other marine science or related institutions in the state, which the new Program is still in the

process of determining, with the active participation of VIMS and the partner institutions.

The Program has reinvigorated networking activities within the Commonwealth, but the SRT noted that more work remains to better integrate all four of the institutions comprising the partner institutions in Program development and execution. The SRT encourages the Program to continue its efforts to maximize the potential for interactions with other institutions in the Commonwealth as well.

The previous PAT review and other outside reviews had commented on communications problems occurring between the members of the Consortium, reducing the effectiveness of the Sea Grant Program. The SRT observed a much improved level of communication and sense of common purpose between the Program and the partner institutions during the site visit.

The SRT noted that the reporting structure of the Marine Advisory Service (MAS) arm of Virginia Sea Grant did not include a direct report from the head of MAS to the Sea Grant Director. While this arrangement is not unique among Sea Grant Programs, the typical Program has a more clearly codified reporting structure between the head of MAS and the Director.

III. STAKEHOLDER ENGAGEMENT

The Virginia Sea Grant Program is broad-based, with a focus on four strong thematic areas, identified by Virginia Sea Grant's Strategic Plan as: Safe and Sustainable Seafood, Healthy Coastal and Ocean Ecosystems, Sustainable and Resilient Coastal Communities, and Coastal and Ocean Literacy. Between each of these focus areas, there appears to be a substantial amount of overlap and integration. In each of these areas, the SRT felt there was significant opportunity for individual stakeholders to be involved and ample opportunity for their voices to be heard.

Extension/Advisory Services – As stated above, there appears to be adequate and specific opportunities for external advice. Mirroring the Program's efforts to reinvigorate its internal networks, several stakeholders provided examples of activities that indicated the development of a more effective external networks, in both the presentations to the SRT and in more informal settings.

The SRT was intrigued by new approaches the Program was utilizing to assess the effectiveness of network and communications within various Program elements. The tools presented may offer good insights to adaptive management of network activities into the future and represent fresh thinking by Virginia Sea Grant management that the rest of the Sea Grant Network could benefit from.

Stakeholders are encouraged to participate through a number of advisory panels specific to topics of interest. These advisory panels are staffed by extension personnel

with expertise in each of the areas of interest. Several advisory panels were noted during the review including advisory panels for the Clean Marinas Program, the commercial fishing industry, Virginia's Fishery Resource Grant Program and the Oyster Gardening Program. These panels were used to identify research and educational needs and they were also helpful in disseminating the results of conducted research.

Relevance – Over the course of the afternoon devoted to “Stakeholder Engagement,” relevance was a word that was repeated on several occasions regarding the work of Virginia Sea Grant. The SRT heard statements like, “Virginia Sea Grant is the center of excellence for working waterfronts and public access,” and “Research projects are able to be used to make management decisions.” At least four times during discussions with stakeholders, variations were heard on the statements "my business (or my program) would not exist today if it were not for Virginia Sea Grant", or even "the state scallop industry would not be a success today if it were not for Virginia Sea Grant". Specific areas of relevance noted during the sight review included; HACCP, food security, sustainability, the scallop industry, and the area of coastal planning and marine spatial planning policies.

Relationships – From all indications, the relationship of the Virginia Sea Grant Program with its constituents is strong. The relationship between Virginia Tech and the seafood processing industry continues to be a very strong part of the Virginia Sea Grant Program. The number of Knauss Fellowship recipients from various universities within the state also indicates a strong relationship between the different universities in Virginia. Education, through the Ocean Literacy component of the program, was impressive and the benefits of that program were well noted by the two panelists who participated in the review.

The SRT was particularly impressed with the planning initiative coming out of Matthews County that was described by Lewis Lawrence of Virginia's Middle Peninsula Planning District Commission. This project was the development of a comprehensive plan for the regional economic and environmental integration of aquaculture at the county level that integrated science not only into policy, but into economic development. This innovative approach to crossing the land/sea interface was particularly notable.

The results of these efforts are impressive examples of Virginia Sea Grant's ability to “seize the moment” and be able to provide capacity to the initiative. It was obvious to the SRT that the Program's ability to provide quick policy solutions, as well as its ability to provide a small amount of funding until more significant funds became available, were tremendously important to the success and future of this endeavor, and that the lessons learned here could be of use elsewhere.

IV. Collaborative Network Activities

Sea Grant Network – The SRT was impressed by the strong involvement of the Program in regional Sea Grant programming. Joint programs had been undertaken with North

Carolina Sea Grant and Maryland Sea Grant in the past few years in extension and education programs. Virginia Sea Grant took part in a recent Mid-Atlantic regional Sea Grant Association meeting and the Virginia Director was instrumental in reinvigorating a Director's group of that association. The SRT noted that Virginia Sea Grant utilized the experience of regional Sea Grant staff to help train and mentor new staff members recently hired into their Program. This is an excellent means to introduce staff to the workings of Sea Grant and develop a strong regional presence.

The SRT felt that there was much to be learned from regional Sea Grant partners, but Virginia Sea Grant also had much to offer to other Programs in all of their program areas. Two current Sea Grant Directors present for the site visit in different roles both commented on the fresh thinking that the Virginia Director is already bringing to the Sea Grant Network. The SRT believed that the GK-12 program that Virginia Sea Grant lead in Virginia was an excellent example of networking among University and K-12 institutions utilizing federal monies to develop and implement an educational program. The SRT believes that this example may be a model for this effort that could be expanded to a national scale to seek a more stable funding base for the program.

NOAA and other Federal/External Programs – The SRT saw strong evidence of extensive successful development of networking with NOAA and other external programs. There were several examples presented in which the Program had worked jointly with various NOAA programs to strategically plan and implement both outreach and research programs. Virginia Sea Grant effectively utilized leveraged funding to increase the capacity of the Program as well as the partner entities. The SRT appreciated the work that went into creating the successful programs that were present to the SRT and encouraged the Program to continue the efforts necessary to develop creative partnerships and can lead to new and exciting initiatives for several participating partners.

The SRT noted several interesting opportunities which might be further explored by the Program. Virginia may wish to broaden their interactions with USFWS research and education programs in the region. The Albemarle-Pamlico National Estuary Program in the southeastern portion of the Commonwealth may also offer a potential opportunity. The rich array of expertise in education, extension, and research may find willing partners in that region of the Commonwealth. The SRT felt that there was continued opportunity to engage with USDA in aquaculture and seafood programs. Virginia Sea Grant and their partners are well known expert in many facets of this area and could build more extensive bridges between these programs.

One of the strongest positive impressions had with regard to networking, as also noted above, came from the presentations and discussion surrounding the Matthews County project. The concept of integration of science and policy across the land/sea boundary as illustrated in this project could be an opportunity for Virginia to lead the Sea Grant Network in development of a national program in that area.

V. Findings, Recommendations, and Suggestions

Findings – As a result of the site visit, the SRT finds:

- The Virginia Sea Grant Program has successfully accomplished a new Program initiation, reorganization of its host relationship, and transition to a new Director and other senior staff, while successfully retaining historic but still relevant partnerships and initiatives. Despite its recent transitions, the Program remains an intellectual and practical leader for the state in marine science.
- Institutional support seems strong and some past issues with inter-institutional engagement have been resolved.
- The Strategic Planning process is much improved. It is broad-based, participatory, and attentive to the “living” nature of process/document. As a result, the issues taken on by the Program are relevant on the local, state, regional scale.
- There is a more robust structure and use of advisory bodies. This process is not yet complete.
- The Program has successfully addressed significant issues from the previous PAT review and other external reviews involving strategic planning, governance and effective use of advisory and oversight bodies. Other issues from these previous reviews have also been addressed, including communication consolidation, and improved branding.
- The Program continues to provide strong advisory service and education programs which appear well used and well respected by the stakeholder community.
- There is good stakeholder and network involvement in the planning and execution of the Program.

Recommendations – The SRT provides the following recommendations. Please report back to your Federal Program Officer on how these recommendations are addressed.

- The charter that the Program is working on should be in as final a draft form as possible for inclusion in College Status application. The charter should clarify Program structure, goals and objectives, institutional partner relationships, roles and membership principles of the advisory and oversight bodies, and should address how transparency and inclusion of the Program will be maintained.
- Consider the pros and cons of having a direct reporting relationship of the head of MAS to the Sea Grant Director.

- To address possible perceptions of Conflict of Interest, consider not allowing sitting REAC members to be Principle Investigators on active Sea Grant projects.

Suggestions – The SRT offers the following suggestions for the Program's consideration. No response to these suggestions is required.

- Consider how to optimize the structure of state contributions to the Program, for example,

Whether the Director's and Assistant Director's salaries should continue to be partially made up of soft "leveraged" funds,

Creative approaches to institutionalizing financial support from partner institutions, and

Whether there is opportunity for direct state appropriations.

- Continue to address diversity issues throughout the Program (partners, staff, researchers, outreach and education).
- Consider whether the purpose of the REAC might be furthered by including other members beyond the partner institutions, perhaps as rotating positions, specific people with specific expertise, ex-officio memberships, or representatives from non-academic institutions with whom the Program has a strong working relationship.
- Consider developing a set of "partnership principles" (in the broader sense of partnership than just the four partner institutions). The Program could avail itself of the experiences of the Sea Grant network in this matter.

Virginia Sea Grant Program Site Review Team Visit
 July 7-8, 2010

AGENDA

SRT Hotel:

Williamsburg Hospitality House
 415 Richmond Rd.
 Williamsburg, VA 23185

757-229-4020

Meeting location:

Virginia Institute of Marine Science
 Rt. 1208 Greate Road
 Gloucester Point, VA 23062

Troy Hartley' cell: 804-832-7463

Wednesday, July 7th

8:30—9:00am	Brief Tour of VASG facilities at the Virginia Institute of Marine Science
9:00—9:30am Andrews Hall Conf Room 326	Introduction to VASG Program Site Review Team Visit <ul style="list-style-type: none"> • Troy Hartley, VASG Director • John Wells, Director and Dean, Virginia Institute of Marine Science • Dorn Carlson, NSGO Program Officer
9:30—10:45am Andrews Hall Conf Room 326	Program Management and Organization: Leadership, Programmed Team Approach, and Support Lead and moderator: Troy Hartley Attendance: Management Team, Partner Institution Representatives. <ul style="list-style-type: none"> • Organization—overview <ul style="list-style-type: none"> ○ Institutional Relationships—new governance structure ○ Budget/financial—support ○ Communication—VASG brand and identity
10:45—11:00am	BREAK
11:00—12noon	Program Management and Organization: Leadership, Programmed Team Approach, and Support (Cont.) Lead and moderator: Troy Hartley <ul style="list-style-type: none"> • Strategic Planning—broad-based, stakeholder-driven • Research—responsive RFPs, transparency. <ul style="list-style-type: none"> ○ Science RFP ○ Coastal community climate adaptation RFP ○ Collaborative fisheries research RFP • Fellowships
12noon–1:30pm LUNCH	River's Inn. Includes discussion with Chef Hans Schadler.
1:30—1:45pm	SRT mini-debrief with VASG management team

1:45—2:45pm VIMS Location Andrews Hall Conf Room 326	<p>Stakeholder Engagement: Extension, Relevance, and Relationships Lead and moderator: Tom Murray</p> <p>Attendance: Management Team, External Advisory Committee</p> <ul style="list-style-type: none"> • Safe & Sustainable Seafood panel <ul style="list-style-type: none"> ○ Rick Robins, Chesapeake Bay Packing, Mid-Atlantic Fisheries Management Council ○ Clarke Morton, Mid-Atlantic Aquatic Technology ○ AJ Erskine, Bevans-Cowart Seafood, Virginia Seafood Council
2:45—3:00pm	BREAK
3:00—5:15pm	<p>Stakeholder Engagement: Extension, Relevance, and Relationships (cont) Lead and moderator: Tom Murray</p> <ul style="list-style-type: none"> • Coastal Community Development panel <ul style="list-style-type: none"> ○ Ryck Lydecker, BOATUS ○ Don McCann, Tranquil Waters Marine Surveying Marine trades ○ Lewie Lawrence, Middle Peninsula Planning District Commission • Ocean Literacy panel <ul style="list-style-type: none"> ○ Dr. Iris Anderson, Dean of Graduate Students, VIMS, School of Marine Science, The College of William & Mary. ○ Ms. Judith Gwartney-Green, Page Middle School, VA
6:30pm Wren Building William & Mary	<p>Virginia Sea Grant SRT Reception: University Administrators, Advisors, and Stakeholders</p>

Thursday, July 8th

8:00—9:45am Andrews 326	<p>Site Review Team working session: re-cap Day 1 and prepare for Day 2</p>
10:00am—12:30pm Andrews Conf Room 326	<p>Network Activities: Collaboration Lead and Moderator: Susan Park</p> <p>Attendance: Management Team; Key Partners</p> <ul style="list-style-type: none"> • Functioning as a Network (Troy Hartley) • National level leadership, planning, and cooperative activities • Regional level leadership, planning, and cooperative activities • Panelists: <ul style="list-style-type: none"> ○ Jon Kramer, Maryland Sea Grant ○ Steve Cadrin, NOAA National Marine Fisheries Service ○ Paula Jasinski, NOAA Chesapeake Bay Office
12:45-3:00pm Dean's Conf Room	<p>Site Team Working Lunch and Session: Report Drafting</p>
3:00-4:00pm Dean's Conf Room	<p>VASG Management Team Exit Interview</p>
4:00-4:30pm Dean's Conf Room	<p>University Administration Exit Interview</p>

Virginia Sea Grant

*Planning, Implementation,
& Evaluation Site Review*

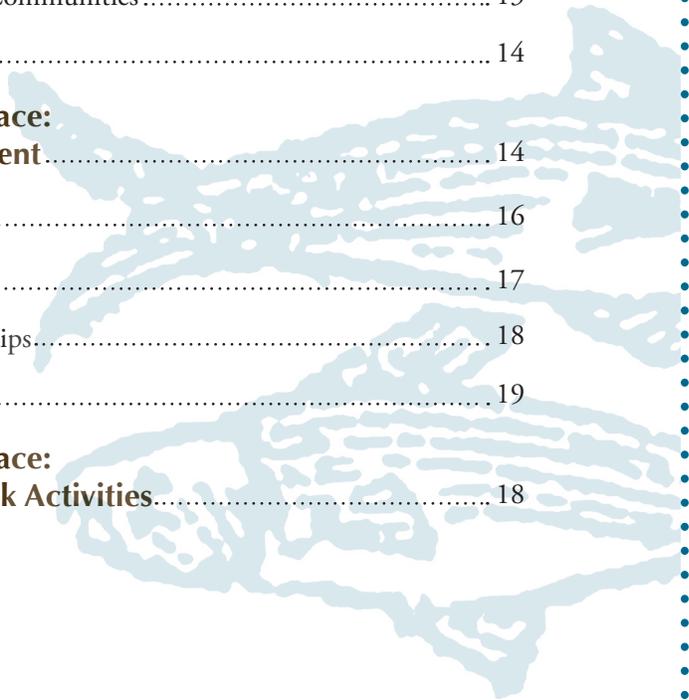
July 7-8, 2010
Virginia Institute of Marine Science
Gloucester Point, VA



**Sea Grant**
Virginia

Contents

Introduction	1
Program Management & Organization	2
Org Chart.....	2
Advisory Boards and Input.....	3
Staff and Effort Levels.....	4
Strategic Planning	5
Recruiting Talent	5
Research and Fellowships.....	6
Regional and National Projects.....	7
Funding	8
Summary Table and Note-taking Space: Program Management and Organization	10
Stakeholder Engagement	12
Safe and Sustainable Seafood.....	12
Sustainable and Resilient Coastal Communities.....	13
Coastal and Ocean Literacy.....	14
Summary Table and Note-taking Space: Stakeholder Engagement	14
Collaborative Network Activities	16
Staff Leadership Roles.....	17
Public and Private Sector Partnerships.....	18
NOAA Partnerships.....	19
Summary Table and Note-taking Space: Collaborative Network Activities	18



Introduction to Virginia Sea Grant

Virginia is the twelfth most populous state in the U.S. with nearly 8 million people. While more than 60% of those citizens live within the coastal zone, only 29% of Virginia's land area and 28% of its state legislative districts lie within this zone. The coastal zone's economic contribution is also significant. The combined economic impact of Virginia's commercial and recreational fisheries exceeds \$1 billion annually. Beyond its iconic blue crab and oyster fisheries, Virginia's hard clam aquaculture is the top producer in the nation (\$28M) and its scallop fleet lands about \$66M annually, amounting to half the total commercial fishing revenue for the Commonwealth. Virginia is home to rural, urban, and suburban coastal communities. The port in southeastern Virginia supports nearly 200,000 jobs, almost \$700 million in local taxes, and about \$5 billion in payroll revenues.

In this context, Virginia Sea Grant (VASG) is a small program by National Sea Grant standards with a base federal budget of \$1.3M per year.

Where we've been and where we are going

The past few years have been a time of transition for Virginia Sea Grant (VASG). Following the 2004 Performance Assessment Team (PAT) and 2005 Topical Assessment Team (TAT) review processes, the program was relegated to institutional status. In 2007, after an open competition, the Virginia Institute of Marine Science (VIMS) at the College of William & Mary was chosen as the institutional home for Virginia's Sea Grant program. At the same time, VASG reaffirmed its long-standing partnerships with the other primary research institutions in the state: Old Dominion University (ODU), the University of Virginia (UVA), and Virginia Polytechnic Institute & State University (Virginia Tech).

VASG has now made a transition to new leadership and continued its re-organization. Dr. William Rickards retired in December 2006, and the VASG Associate Director for extension, Dr. William Dupaul served as interim director until September 2008 when Dr. Troy Hartley joined VASG as its new Director. Dr. Dupaul retired in December 2008, and Mr. Tom Murray was promoted to Extension Leader in January of 2009. Assistant Director for Research Ms. Lee Larkin retired in June 2009 and Dr. Susan Park became VASG's Assistant Director for Research in January 2010.

VASG formed an External Advisory Committee in May 2008, consolidated its communication capacity into a new Communication Center with new staff at VIMS in 2009, and rejuvenated its VIMS-Virginia Tech extension partnership. In fall of 2009, we concluded a comprehensive four-year strategic and implementation planning process that engaged a broad range of stakeholders in a meaningful and productive way. Through these transitions, VASG is striving toward the organizational objectives listed to the right.

The VASG Site Review Team (SRT) briefing book focuses on the performance of VASG since 2007 and reflects our progress, activities, and strategies for achieving these program management, stakeholder engagement, and collaborative network objectives. The SRT visit comes at an opportune time in VASG's transition. We have addressed many of the organizational issues that troubled the program in the past, but as we move forward toward regaining college status, we will benefit from the SRT's input. We hope you enjoy your visit!

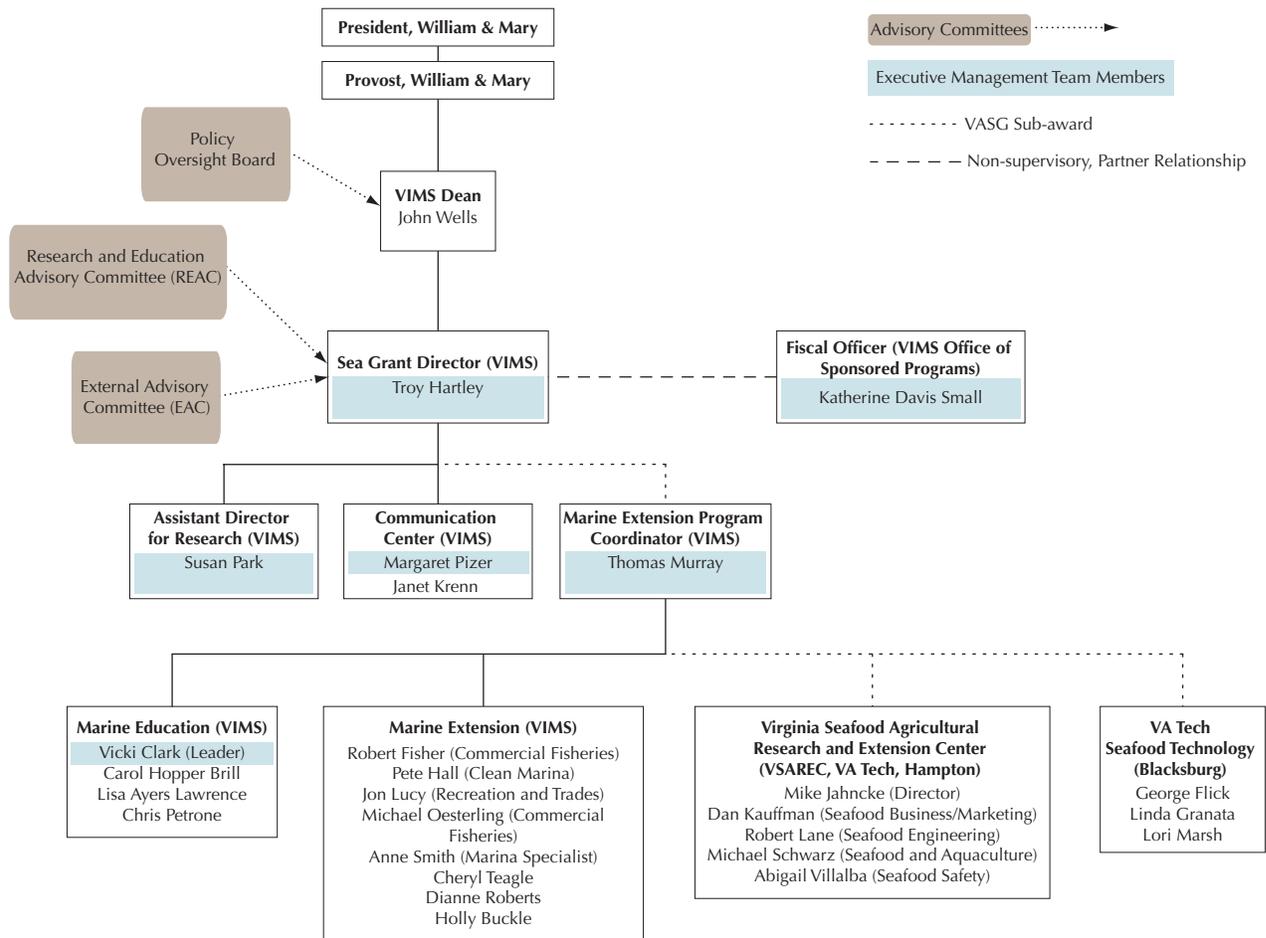
VASG 2010 Organizational Objectives

- Cultivate and engage active University administrators for leadership and guidance.
- Ensure broad-based advisory committee input to maintain highest relevancy and strategic positioning.
- Foster ongoing, stakeholder-driven strategic planning and deliberation.
- Administer a state-of-the-art, open, transparent, and rigorous competitive research funding program.
- Build on-going program monitoring and reporting capacity to enable reflective, adaptive program management.
- Establish a VASG identity and brand.
- Integrate into VIMS and William & Mary.

Program Management & Organization

Charter and Leadership

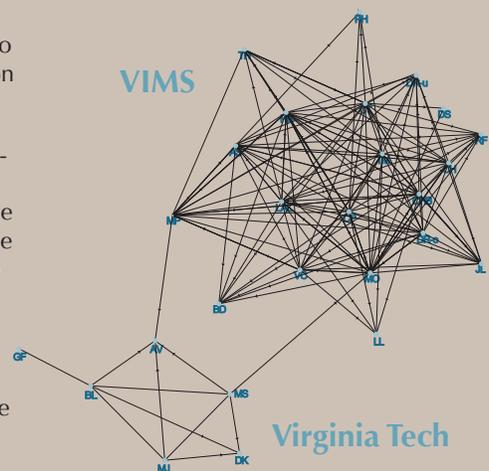
Executive Management Team (EMT). The EMT meets monthly and conducts operational management and oversight functions (e.g., reviews Project Development fund requests, coordinates program activities, addresses personnel matters, etc.).



Intra-program Communication: VASG regularly conducts network analyses to monitor its operations and assess the extent of communication and integration across our organizational units and areas of expertise.

An early 2009 review of communication between VASG-connected staff indicates that staff are sharing information and crossing disciplinary and institutional boundaries easily and quickly. All twenty-six staff are represented in the weekly communication frequency network map to the right. The map is dense (32%), reflecting a high degree of interaction among all staff, including those funded by sub-awards with Virginia Tech. High density may reflect a sense of group identity and the potential for group cohesion.

The low weighted average path length, 2.1, illustrates that information can flow easily and quickly across the entire network—on average no one is more than 2.1 links away from anyone else. Information is generally considered inaccessible to individuals who are more than 3 links away.



Advisory Boards and Input

The VASG Director and the Dean and Director of VIMS are developing a formal charter to advance a cohesive VASG program and define roles and responsibilities for each of the partner institutions and advisory panels. VASG welcomes SRT thoughts and input on effective models for a charter and strategies for nurturing and engendering enthusiastic engagement of university administrators.

Policy Oversight Board (POB). The POB is chaired by the VIMS Dean and Director and oversees program governance, including concurrence on program structure, policy, and procedures. Members are being strategically identified and cultivated to ensure that the POB will be engaged and enthusiastic. We will populate the POB by fall 2010 and convene them at least once a year in conjunction with the Annual Project Participants' Symposium.

Research and Education Advisory Committee (REAC). The REAC is active in regular operations of VASG, including strategic planning, programmatic policy development, and recruitment. The REAC is composed of two representatives from each of VASG's partner institutions and meets three to four times per year, including a winter meeting at the Annual Project Participants' Symposium.

External Advisory Committee (EAC). The EAC provides stakeholder input on the strategic planning process, the research proposal review process, and on Commonwealth-wide trends and needs. The EAC is a diverse group of end-users including representatives from state agencies, the education community, coastal planning and management, the private sector, and NGOs. The EAC meets twice a year in joint sessions with the REAC.

Project Participants' Symposium. Held for the first time in January, 2010, this event facilitates integration across research, extension, and education, encourages strategic reflection among advisors, and increases VASG visibility to Virginia's leaders. The symposium brought together VASG's funded researchers, students, staff, and advisory committee members for presentations on research and extension activities. Leading resource managers and participants discussed emerging issues in Virginia and the region, and reflected upon VASG's strategic plan and priorities. The accompanying evening seafood reception, co-sponsored with the Virginia Seafood Council, drew university administrators and leaders from the Commonwealth's executive and legislative branches, as well as NGO staff and leaders. It provided further awareness-building, networking, and integration opportunities among staff, advisors, stakeholders, and Commonwealth leaders. The annual Project Participants' Symposium is a crucial element of VASG's regular, broad-based advisory input, stakeholder-driven strategic deliberations, and the brand identity of VASG.

2010 REAC Members

Virginia Tech	Michael Jahnce (Director, VA Cooperative Extension's Agricultural Research and Extension Center)
	Saied Mostaghimi (Director, VA Agricultural Experiment Station)
University of Virginia	David Smith (Associate Chair, Dept. of Environmental Sciences)
	Kristina Hill (Director, Landscape Architecture Program)
Old Dominion University	Richard Zimmerman (Chair, Dept. of Ocean, Earth, and Atmospheric Sciences)
	Cynthia Jones (Director, Center for Quantitative Fisheries Ecology)
Virginia Institute of Marine Science	John Wells (Director and Dean, School of Marine Science)
	Roger Mann (Director, Research and Advisory Services)

2010 EAC Members

James C. Adams (Capital Programs Director, VA Dept. of Game and Inland Fisheries)
Russel W. Baxter (Deputy Director, VA Dept. of Conservation and Recreation)
T. Robins Buck (Project Manager, VA Dept. of Agriculture and Consumer Services)
Kevin D. Goff (Former Teacher, Chesapeake Bay Governor's School)
Lewis L. Lawrence (Director of Regional Planning, Middle Peninsula Planning District Commission)
Ryck Lydecker (Asst. VP for Government Affairs, Boat Owners Association of the U.S.)
Heather L. W. Mantz (Director of Environmental Affairs, VA Port Authority)
Laura B. McKay (Manager, VA Coastal Zone Management Program)
David Nobles (President, Coastal Conservation of VA, Deltaville Chapter)
Michael Peirson (President and General Manager, Cherrystone Aqua-Farms)
Frances W. Porter (Executive Director, VA Seafood Council)
Rick Robins (Export Sales Manager, Chesapeake Bay Packing LLC)
Sarah E. Schoedinger (Education Policy Analyst, NOAA Office of Education)
Jack Travelstead (Chief, VA Marine Resources Commission Fisheries Management Division)

Staff and Effort Levels

The table below shows the distribution of VASG staff effort, including the breakdown of funding support between federal Sea Grant funds, match funds from the Commonwealth, and a wide array of leveraged funds, which include support from federal, state, and local government, foundations, private sector, non-profits, and other funding not used for match.

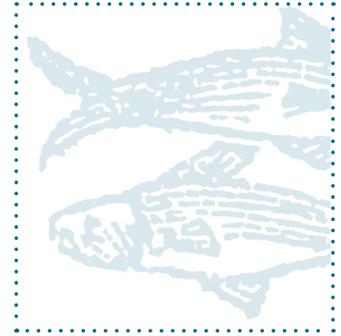
VASG Organizational Units		Time on SG-mission relevant activities	SG Funds	Match Funds	Leveraged Funds
 VIMS	 Virginia Tech				
Research & Administration	Troy Hartley, Director	100%	50%	29%	21%
	Susan Park, Assistant Director	100%	75%	8%	17%
	Katherine Davis Small, Fiscal Officer	10%	10%	--	--
	Tracy Geoffroy, Admin Asst	50%	50%	--	--
Marine Extension & Education	Tom Murray, Extension Leader	100%	48%	23%	29%
	Vicki Clark, Education Coordinator	100%	94%	--	6%
	Cheryl Teagle, Business Manager	100%	--	25%	75%
	Holly Buckle, Admin Asst	63%	63%	--	--
	Diane Roberts, Program Support Technician	100%	92%	--	8%
	Robert Fisher, Commercial Fisheries Specialist	100%	83%	--	17%
	Christian Hager, Fisheries Bycatch Specialist	100%	54%	--	46%
	Mike Oesterling, Commercial Fisheries Specialist	100%	--	25%	75%
	Jon Lucy, Marine Recreation Specialist	100%	--	25%	75%
	Ann Smith, Marina Specialist	100%	2%	--	98%
	Carol Hopper Brill, Educator	100%	4%	38%	58%
	Lisa Ayers Lawrence, Educator	100%	67%	--	33%
	Chris Petrone, Educator	100%	58%	--	42%
	Michael Jahncke, Director VSAREC	100%	--	5%	95%
	Helen Crocker, Food Quality & Safety Specialist	100%	100%	--	--
	Daniel Kauffman, Seafood Specialist	100%	--	4%	96%
	Robert Lane, Seafood Specialist	100%	--	5%	95%
	Michael Schwarz, Seafood Specialist	100%	--	5%	95%
	Abigail Villalba, Food Safety Specialist	100%	--	5%	95%
	George Flick Jr., Seafood Technologist	100%	--	8%	92%
Linda Granata, Seafood Technologist	100%	25%	--	75%	
Lori Marsh, Seafood Research Associate	100%	25%	--	75%	
Comm. Center	Margaret Pizer, Communicator	100%	92%	--	8%
	Janet Krenn, Communicator	100%	92%	--	8%

Communication Center

VASG has rejuvenated its communication capacity through the establishment of a Communication Center. Located at VIMS, the center supports VASG researchers, extension specialists, educators, and administrators with traditional communications products and has begun to develop innovative strategies. Current Communication Center initiatives include:

- VASG branding—defining a unique and recognizable graphic identity to advance a new VASG brand distinct from our institutional homes and partners.
- Comprehensive web re-design—designing a site that incorporates the new brand and is friendly, searchable, makes program information transparent and available, and uses audio and video.

- Data and document management—overseeing a data and document management workgroup to upgrade our electronic data management system to advance transparency, searchability, documentation of impacts, and regional compatibility of data management.
- Impact reporting—developing new ways to tell VASG’s story and illustrate impacts through one-pagers based on *Marine Resource Bulletin* articles, podcasts, interviews, and video testimonials.



Strategic Planning

VASG initiated its strategic planning process in the spring of 2008, with the involvement of the incoming Director and representatives from the National Sea Grant Office, NOAA, and VIMS. Elizabeth “Bitsy” Waters, who facilitated the development of the national Sea Grant strategic plan, facilitated the critical initial stages of the strategic planning process in Virginia. Upon the arrival of the new Director in September 2008, VASG launched a stakeholder-driven strategic planning process, featuring:

- Five workgroups charged with identifying strategic priorities for topical focus areas, composed of staff, past or current research principal investigators, external advisors, partner institution advisors, and stakeholders.
- Blog dedicated to the development of the strategic plan, containing a calendar of meetings and activities, updates on progress, opportunities to provide comments, links to existing plans and resources, and workgroup-specific web pages.
- Electronic tools (e.g., blog, wiki, survey monkey, etc.) to enhance workgroup reach and engagement and let them target specific stakeholder audiences with the most appropriate and effective outreach tools.
- Listening sessions for stakeholder feedback, initiated in the fall of 2008 and continuing in coordination with workgroup activities throughout the winter and spring 2009.

In total, nearly 100 meetings involving thousands of individuals were part of the planning process. Thus, thousands of face-to-face conversations plus hundreds of electronic communication events contributed to robust stakeholder engagement. The outcome of the strategic planning process preserved VASG’s commitment to alignment with national and regional priorities, while addressing the Commonwealth’s specific coastal and ocean challenges in four focus areas: (1) Safe and Sustainable Seafood; (2) Healthy Coastal and Ocean Ecosystems; (3) Coastal and Ocean Literacy; and (4) Sustainable and Resilient Coastal Communities.

Please see the attached 2010-14 VASG Strategic Plan and Implementation Plan for more details.

Recruiting Talent

Research and Fellowships

Coastal and Marine Science RFP. In 2007, VASG maintained administrative responsibilities for a few research awards selected under the previous organizational structure headquartered at UVA. In 2008, VASG administered a two-year RFP. A one-year RFP was issued in 2010 in order to return VA (along with Maryland and Delaware) to the consistent nation-wide RFP cycle.

The highest priority items from the strategic plan became the funding priorities in the 2010 RFP. In response to researcher feedback during the planning process and to assess the demand for and potential impact of VASG funding, we provided three funding options for investigators: (1) large research

awards up to \$120,000; (2) small seed research awards up to \$40,000; and (3) student-only, VASG Graduate Fellows.

The 2010 RFP was distributed electronically to hundreds of scientists and officials, including university administrators, faculty, external advisory committee members, and state and federal resource managers.

VASG asked EAC members and key stakeholders to use the criteria circulated with the RFP to determine a relevancy score for each pre-proposal. Individuals participating on pre-proposals or affiliated with the organization of a submitter were not invited to fill out the relevancy survey.

To minimize any real or perceived conflict of interest, VASG held a peer review panel out of state. The panel was composed of eight university-based scientists, government scientists, and resource managers. Guided by the criteria described in the RFP, the panel discussed pre-proposals and provided a consensus ranked list of encouraged and discouraged pre-proposals for VASG management team consideration.

2008 Research awards

Deborah A. Bronk (VIMS) and Margaret Mulholland (ODU) "Bioavailability of effluent organic nitrogen in Virginia coastal waters."

Eric Hilton and John Olney (VIMS) "Dynamics of ichthyoplankton ingress from the coastal ocean into Delaware and Chesapeake Bays."

Michael Jahncke and Kumar Mallikarjunan (Virginia Tech) "Thermal inactivation study for *Salmonella spp.* and *Vibrio parahaemolyticus* in seafood."

Howard Kator, Kimberly Reece, Corinne Audemard, and Martha Rhodes (VIMS) "Uptake and elimination of norovirus, FRNA coliphage and *Escherichia coli* from relayed hard clams (*Mercenaria mercenaria*) and oysters (*Crassostrea virginica*) naturally-contaminated in Hampton Roads, Virginia."

Roger Mann, Carl Hershner, and Marcia Berman (VIMS) "Climate change impacts in Virginia: Assembling natural resource data records as tools to assess continuing trends."

John McConaugha (ODU) "New reproductive norm for the blue crab: Male and female contributions."

Zhiyou Wen (Virginia Tech) "Producing eicosapentaenoic acid (EPA)-rich fungal biomass for use as fish oil replacement in aquaculture."

Coastal and Marine Science RFP

	2008 (2YR)	2010 (1YR)
Pre-proposals	34	43 (26.5% increase)
Institutions	7	7
New Investigators	14	20
Full Proposals	13	21
Institutions	5	5
New Investigators	4	9
Regional Proposals	3	n/a
Funded Projects	8	TBD
Institutions	3	TBD
New Investigators	1	TBD

Coastal Community Adaptation Fund. The strategic plan includes a high priority objective to "develop and expand use of best management practices and advance design and planning for climate change adaptation in targeted coastal industries and communities." VASG has converted a portion of its NSGO Coastal Community Development block grant into competitive funding aimed at linking student-faculty technical assistance teams from academic institutions (e.g., planners, architects, engineers, and other design and planning professionals) with extension staff and Virginia coastal community co-principal investigators from public or private sectors to address climate adaptation planning and design. The RFP was designed based on successful EPA and HUD programs that integrate technical assistance into professional graduate curricula in practicum and capstone courses. VASG enhanced this RFP with the supplemental Coastal Communities Climate Change Adaptation Initiative (CCCCAI) funding from NSGO. In its inaugural year, VASG funded three projects, two of which build directly upon climate adaptation projects initiated with VA CZM funding.

Coastal Community Adaptation RFP

	2010
Proposals	3
Institutions and Partners	7
New Investigators	8
Funded Projects	3

Collaborative Fisheries Research Fellows. VASG's new strategic plan aims to "advance the development of bycatch-reduction devices, conservation engineering, and sustainable fishing practices in commercial and recreational fishing and the use of collaborative research to promote sustainable fishing practices." VASG has entered a new partnership with two NOAA Fisheries' Science Centers (NE and SE), the University of Massachusetts-Dartmouth, and the Northeast Consortium at the University

of New Hampshire to fund collaborative fisheries research graduate fellowships and practicum research projects in bycatch reduction and conservation engineering.

Sea Grant–NOAA Fisheries Population Dynamics Fellowships. Virginia candidates have competed extremely well for the Sea Grant–NOAA Fisheries Population Dynamics Fellowships. Virginia has secured 14% of all the fellowships awarded since 2000, tied with California and behind only Washington for the most in the nation.

Knauss Fellowships. VASG has 54 Knauss alumni through 2009—third nationally behind Washington (63) and California (61), and ahead of Rhode Island (53) and North Carolina (52). In 2010, VASG’s five finalists tied California for the most in the country.

Visiting scholar seminar series & VIMS marine policy sub-concentration. VASG co-sponsors a regular visiting policy scholar series with VIMS Graduate School of Marine Science and the William & Mary’s Thomas Jefferson Public Policy Program. Seminars are web-cast and archived on the VASG web-site and are a for-credit component of a new marine policy sub-concentration for VIMS graduate students.

VASG legal internship program with William & Mary Law School. In 2009 and 2010, VASG hosted legal interns to assess jurisdictional ramifications of the Chesapeake Bay Executive Order and the regulatory landscape underlying a VA Coastal Zone Management program-funded pilot in marine spatial planning.

Communications and Policy Internships. VASG offers a Science Communication Internship and two Coastal & Marine Policy Internships. VASG and MDSG jointly obtained external funding for two coastal and marine policy interns to conduct regulatory landscape and governance network analysis of a Chesapeake Bay EBFM pilot. We received 57 applications from 14 U.S. states and 3 countries.

Regional and National Projects

VASG participates and leads in several regional and national projects, including for example:

- **Mid-Atlantic Extension Program Meeting and Directors’ Retreat.** Every 15-months, extension program leaders and staff hold a 1.5-day information exchange and coordinating meetings. VASG has taken a lead role in meeting organization for the past two meetings. At the April 2010 meeting, VASG sponsored the first Mid-Atlantic Sea Grant Directors’ Retreat on regionalism.
- **Mid-Atlantic Regional Research Plan.** Delaware Sea Grant has the lead in the development of a Mid-Atlantic Regional Research Plan. VASG participates on the steering committee, has gathered and shared information regarding research capacity, priorities, and gaps, and will be hosting a workshop in the Commonwealth in 2010/2011.
- **Chesapeake Bay Ecosystem-Based Fisheries Management (EBFM) Pilot, Socioeconomic Quantitative Ecosystem Team (QET).** This EPA-funded and NOAA Chesapeake Bay Office supported pilot is led by Maryland Sea Grant. VASG is on the Socioeconomic QET, and with MDSG has obtained National Sea Grant Law Center funding for an EBFM governance network study.
- **COSEE NOW.** As a project partner for Centers for Ocean Sciences Education Excellence Networked Ocean World (COSEE NOW), VASG facilitates networking and collaboration between educators and scientists nation-wide via an online ocean science community focused on integrating ocean observing system information into classroom, informal, and general public education.

Additional national projects are discussed in the Collaborative Network Activities section.

Collaborative Fisheries Fellowship

	2010
Inquiries	30
States Represented	16
Countries Represented	6
Applicants	12
States Represented	5
Countries Represented	5
Funded Fellows	5
States Represented	4
Countries Represented	1

Knauss Fellowships

	2007	2008	2009	2010
Applicants	4	6	3	7
Finalists	4	4	2	5
Fellows	3	4	1	TBD

Funding

Distribution of VASG Base Funds

	2007 ^a	2008 ^a	2009	2010	TOTAL
Research	\$465,547	\$465,722	\$456,229	\$432,454	\$1,819,952
Match ^b	\$265,559	\$264,942	\$246,429	\$227,212	\$1,004,142
% of VASG Base	36%	35%	34%	32%	
Extension & Education	\$570,000	\$570,000	\$489,018	\$489,018	\$2,118,036
Match ^b	\$418,141	\$418,141	\$244,640	\$253,043	\$1,333,965
% of VASG Base	44%	43%	37%	37%	
Communication	101,069	\$101,069	\$104,903	\$135,049	\$442,090
Match ^b	\$0	\$0	\$53,135	\$57,211	\$110,346
% of VASG Base	8%	8%	8%	10%	
Program Development	\$42,374	\$80,909	\$38,000	\$30,000	\$191,283
Match ^b	\$0	\$0	\$0	\$20,400	\$20,400
% of VASG Base	3%	6%	3%	2%	
Administration	\$119,000	\$119,000	\$246,850	\$248,479	\$733,329
Match ^b	\$59,500	\$68,011	\$142,781	\$107,781	\$378,073
% of VASG Base	9%	9%	18%	19%	
All Program Areas	\$1,297,990	\$1,336,700	\$1,335,000	\$1,335,000	\$5,304,690
All Match ^b	\$743,200	\$751,094	\$686,985	\$665,647	\$2,846,926
All Programs + All Match	\$2,041,190	\$2,087,794	\$2,021,985	\$2,000,647	\$8,181,616

a. The 2007 and 2008 budgets were transitional, converting the final two years of the previous 4-year omnibus award to the new institutional home at VIMS.

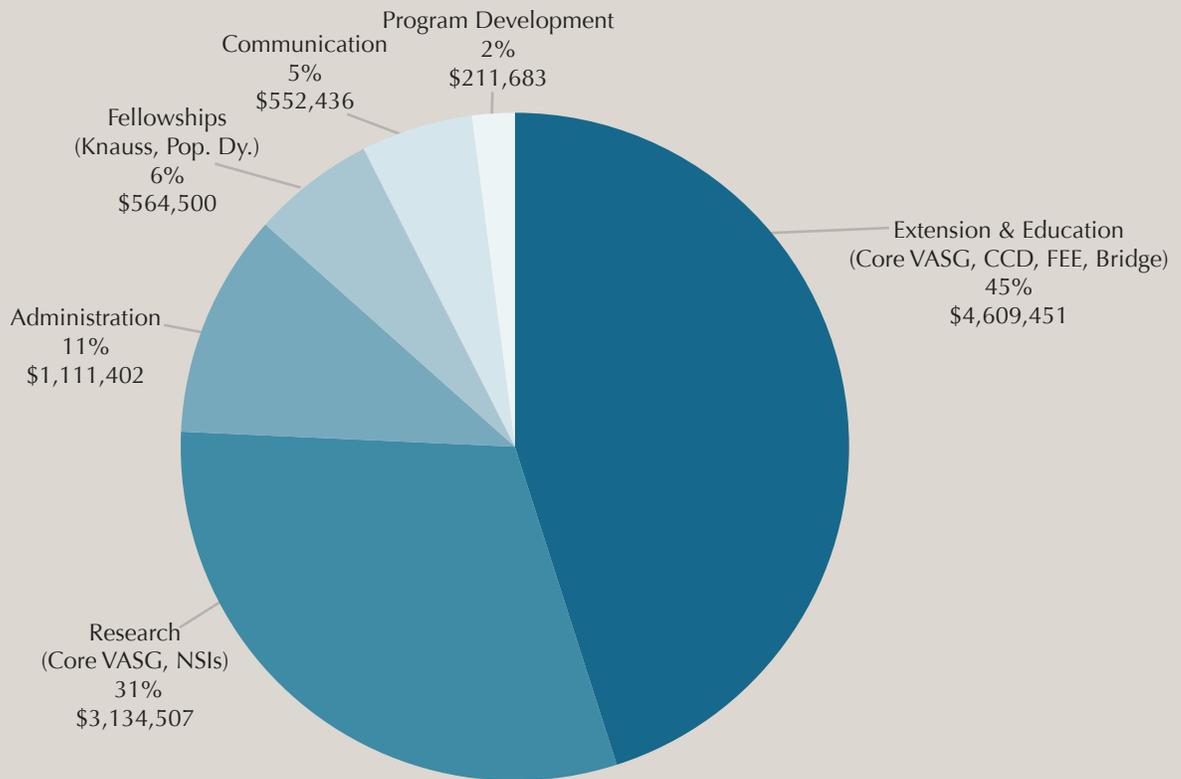
b. Match arises from different sources, but principally salary support from the Commonwealth, \$18,000/year dues paid by the partner institutions, or waiver of indirect funds.

Additional National Sea Grant Program Support

	2007	2008	2009	2010 ^c	TOTAL
Research (NSIs)	\$631,812	\$361,650	\$11,000	\$42,531	\$310,413
Extension (FEE, CCD, Bridge)	\$334,526	\$370,800	\$301,235	\$297,489	\$1,157,450
Fellowships (Knauss, Pop. Dy.)	\$162,500	\$204,000	\$77,000	\$121,000	\$608,031
TOTAL	\$1,128,838	\$936,450	\$389,235	\$461,020	\$2,075,894

NSI=National Strategic Investment
 FEE=Fisheries Extension Enhancement
 CCD=Coastal Community Development
 Pop. Dy.=Population Dynamics

State and National Sea Grant Funding in Virginia: 2007-2010



Leveraged Funding

Leverage Source	2007	2008	2009	2010 ^c	TOTAL
NOAA	\$907,988	\$358,634	\$1,102,194	\$0	\$2,368,816
Other Federal	\$258,447	\$331,172	\$80,144	\$31,018	\$700,781
State	\$416,865	\$347,795	\$216,896	\$63,075	\$1,044,631
Local/Other	\$21,500	\$252,415	\$7,000	\$0	\$280,915
TOTAL	\$1,604,800	\$1,290,016	\$1,406,234	\$94,093	\$4,395,143

This table is limited to leveraged support that flows through VIMS, and is thus an underestimate. Leveraged support comes from multiple sources and can vary in its objectives and extent of direct alignment with specific Sea Grant strategic priorities. For example, some leveraged support may be salary dollars from the Commonwealth that are not needed for federal Sea Grant match, whereas others might be salary from grants, other federal agencies, foundations, etc., in support of specific projects.

c. Because the 2010 budget year has not ended, leverage and national support numbers for this year are incomplete.

Summary and Feedback: Program Management & Organization

Challenges & Organizational Goals	Progress & Future Direction
<p>PAT/TAT Feedback: Governance structure and institutional commitment and ownership.</p> <ul style="list-style-type: none"> • Cultivate and engage active university administrators for leadership and guidance. • Integrate VASG into VIMS and the College of William & Mary 	<p>Cultivating prospective VASG oversight board members from partner institutions.</p> <p>Exploring options for a comprehensive partnership charter.</p> <p>New organizational structure, including refined commitment to a VIMS/Virginia Tech Sea Grant Extension program, and new VASG Research & Administration Office at VIMS.</p> <p>Expanding role and visibility of VASG at VIMS and The College of William & Mary.</p>
<p>PAT/TAT Feedback: Open, transparent, and rigorous competitive process.</p> <ul style="list-style-type: none"> • Administer a state-of-the-art, open, transparent and rigorous competitive research funding program. 	<p>Reformed and updated the RFP process to increase transparency.</p> <p>New competitive funding opportunities in response to strategic plan.</p>
<p>PAT/TAT Feedback: Interaction with potential political supporters in Commonwealth.</p> <ul style="list-style-type: none"> • Establish a VASG identity and brand in the Commonwealth of Virginia. 	<p>Designing and launching new VASG brand imagery.</p> <p>Reaching out to key agency and elected officials, for example through Annual Project Participants Symposium and Seafood Reception in Richmond.</p>
<p>PAT/TAT FEEDBACK: Track outputs, outcomes and impacts.</p> <ul style="list-style-type: none"> • Build on-going program monitoring and reporting capacity to enable reflective, adaptive program management. 	<p>Initiating web re-design and construction of electronic document management system.</p> <p>Established a central Communication Center that serves entire VASG program, located at VIMS. Seeking creative funding models for communication.</p>

SRT Comments & Advice

Stakeholder Engagement

Safe and Sustainable Seafood

VASG extension is administered through two sub-awards—one to VIMS Marine Advisory Services and a second to Virginia Tech's Seafood Agricultural Seafood Research & Extension Center (VSAREC) in Hampton, VA. Tom Murray, Extension Program Leader in the VIMS Marine Advisory Services unit provides overall coordination of extension programming, and while the two programs collaborate often, each has their own areas of expertise. VASG extension at VIMS has strengths in commercial and recreational fisheries, shellfish aquaculture, coastal and ocean literacy, and sustainable coastal community development. VASG extension at VSAREC has strengths in seafood safety processes and technologies, finfish aquaculture, and coastal and marine resource economics and development.



Master Oyster Gardener Program. VASG Extension began training backyard oyster growers in 1998, and the program has been shared with MD and NC.

VASG extension provides services ranging from field research on new gear design to implementation of culture technology for innovative aquaculture productivity. The VASG extension sponsors activities in the areas of by-catch, gear technology, protected species, ecology, catch and release and fish tagging. VASG extension also focuses on supplying information on diverse topics in aquaculture including production technology, species of choice, water quality, and marketing potential. VASG extension maintains leadership roles in committees and panels of state, regional and federal management agencies.

Extension programming is initiated in response to the VASG strategic plan, as well as periodic needs assessments with industry stakeholders. These programs are multi-dimensional, leveraging expertise and resources from state and regional sources, as well as international university research and extension programs, government, nonprofit, and private sectors. A few examples include:

Consumer Information. Creating educational materials and programs to provide information on fishery and aquaculture product sustainability at the wholesale and retail levels in conjunction with Virginia Marine Products Board (VMPB), Virginia Marine Resource Commission (VMRC), Mid-Atlantic Fishery Management Council (MAFMC), and Food Marketing Institute (FMI).

Cooperative Research. VASG administers the Virginia Fisheries Resource Grant (FRG) program, with nearly \$200K/year to conduct new fisheries equipment and gear development, environmental pilot studies, aquaculture/mariculture activities, and seafood technology and utilization projects.

Live Fish Market. Over the past several years VASG has assisted Mid Atlantic Aquatic Technologies (MAAT) in facility and production system design, personnel training, development of live flounder holding technologies, and production of spot for live baitfish markets. MAAT now sells live flounder into DC markets, and spot baitfish throughout the mid-Atlantic from Virginia to New York. Additional VASG value-added programs focus on developing new markets for live sales of tilapia, and cobia, and development of new packaging for the crab processing industry with Blue Ridge Aquaculture, Casey Seafood, Graham and Rollins, University of Maryland Eastern Shore, Casey Seafood, Inc., O'bier Seafood, and others.

Business Development. Based upon marine larviculture production technologies developed with VASG, East Coast Ornamentals (ECO) was incorporated in Hampton, VA in 2007. With ongoing assistance, ECO has since expanded into the production and sale of almost a dozen different finfish species. In another example, VASG assisted a local company (Graham and Rollins, Inc.) develop refrigerated crab cakes for sale on the QVC home shopping network.

Biosecurity. VASG provides science-based research and extension programs for the industry and consumers on how to control and eliminate pathogens such as *Listeria monocytogenes*, *Salmonella*, *Vibrio spp.* in seafood, while maintaining high quality. We are identifying and validating low cost, practical post harvest processes to eliminate *Vibrio vulnificus* in raw oysters.

Multi-lingual HACCP Training. VASG supplies industry and consumer HACCP workshops, and workshops on Good Manufacturing Practices (GMPs), cleaning and sanitation practices, good employee and consumer hygiene practices. These trainings are provided in both English and Spanish and have assisted numerous seafood processing companies (e.g. J.H. Miles, Little River Seafood, Keyser Brothers, Inc., Omega Protein, etc.).

Sustainable Aquaculture. Our Environmental Sustainability programs focus on providing training on Good Aquaculture Practices (GAQPs) for the Virginia Aquafarmers Network, which is a cooperative for small aquaculture producers. VASG is also working with other aquaculture producers to reduce effluent discharges from their operations by helping them incorporate recirculation technology.

Sustainable and Resilient Coastal Communities

VASG conducts applied research for local governments, facilitates access to financial capital for coastal industries and communities, and conducts economic evaluations to inform decision-making by local governments and a wide range of coastal industries such as commercial and recreational fishing and boating, tourism, aquaculture development and coastal infrastructure.

Virginia Shellfish Aquaculture Crop Survey. Virginia's annual aquaculture crop surveys have provided timely information about the shellfish aquaculture industry and emphasized the importance of that industry and the resources it depends on. For example, crop survey data have shown that in recent years, following the lead of the hard clam industry, there has been a significant transition to intensive aquaculture of native oysters. In 2008, hard clam aquaculturalists total revenue was approximately \$27M.

Community-based Ecotourism. Community and Economic Viability programs focus on community development programs for Tangier Island, which is a small community in the Chesapeake Bay. In partnership with Virginia Cooperative Extension, VASG is helping them to develop a community based ecotourism program.



Virginia Clean Marina. Shown here presenting Clean marina status at Quantico Marina, the Virginia Clean Marina Program currently includes 65 marina facilities.



National Ocean Science Bowl (NOSB). In partnership with Old Dominion University, VASG sponsors and organizes the Blue Crab Bowl, Virginia’s state competition in the NOSB program.

Coastal and Ocean Literacy

Since its beginnings in the early 1980s, VASG’s education program has evolved from a provider of coastal field experiences for classroom students and teachers into a multifaceted ocean sciences education program serving a variety of audiences. The program’s focus is on bridging the gap between researchers and educators, with an emphasis on using multiple partnerships and internet technology to maximize impact and engage target audiences.

Bridge Project. The Bridge Project, created by VASG educators has been making ocean science education resources and scientific data accessible to classroom teachers and other educators since 1998. This is accomplished through the Bridge website (www.marine-edu.org/bridge), which serves as a peer-reviewed clearinghouse of free, online information and teaching resources; through the Bridge’s “Scuttlebutt” email discussion list, which facilitates interactions and resource-sharing among an active online community of over 2,000 educators and scientists, and through multiple project partnerships among VASG educators, NOAA Office of Education, the National Marine Educators Association, National Science

Summary and Feedback: Stakeholder Engagement

Challenges & Organizational Goals	Progress & Future Direction
<p>PAT/TAT Feedback: Broadly based strategic planning.</p> <ul style="list-style-type: none"> Foster ongoing, stakeholder-driven strategic planning and deliberation. 	<p>Conducted stakeholder-driven strategic planning. Launched 2010-14 Strategic Plan in January 2010 at Annual Project Participants’ Symposium.</p> <p>Annual strategic planning discussions among partner institutions and external advisors will be held at Annual Project Participants’ Symposium.</p>
<p>PAT/TAT Feedback: Appoint a broad based user advisory group.</p> <ul style="list-style-type: none"> Ensure broad-based advisory committee input to ensure highest relevancy and strategic positioning. 	<p>Appointed External Advisory Committee (EAC) May 2008. Meet twice/year, jointly with partner institutions representatives.</p>

Foundation COSEE projects, the Sea Grant Education Network, National Ocean Sciences Bowl, and others.

Teacher Training. VASG designs and conduct professional development workshops and courses on ocean science topics throughout the year, including webinars, field workshops, and face-to-face classes and workshops. VASG reaches hundreds of educators annually through workshops and presentations at state, regional and national professional education conferences.

NSF GK-12. VASG offers seminars on “Communicating Ocean Science” for VIMS staff, scientists, and graduate students. Since 2009, we have taught an annual science education methods course for the graduate students in the NSF GK-12 project.

Culinary Education. VASG conducts an annual professional development event for chefs and culinary students, the Chefs’ Seafood Symposium. A new collaborative project between VASG’s extension units at VIMS and Virginia Tech includes education for the seafood industry on value-added products and marketing oysters using taste profiling.

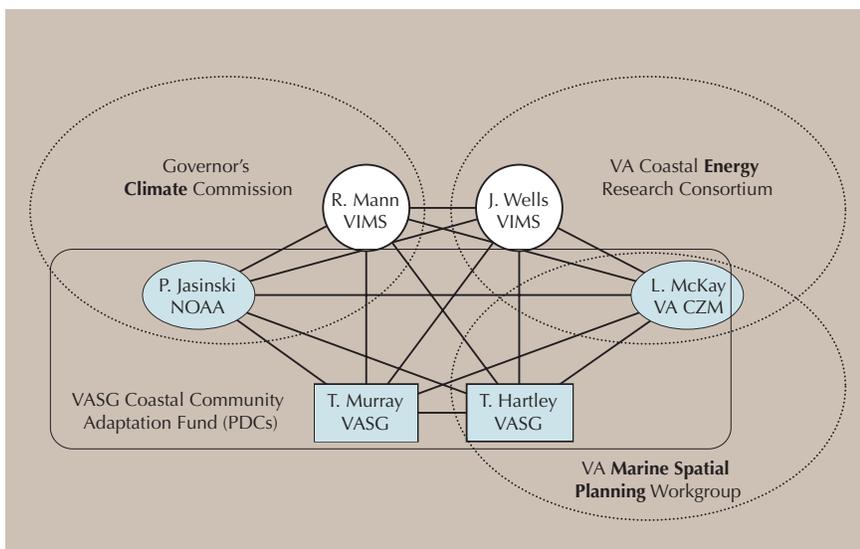


Chefs’ Seafood Symposium. This annual event educates culinary students about seafood sustainability, science, and safety.

SRT Comments & Advice

Collaborative Network Activities

VASG functions as a collaborative network, and as a result produces an influence multiplier effect. For example, VASG staff sit on numerous advisory boards with individuals from local, state, and federal government, private and non-profit sectors, and other key stakeholders and decision makers. This participation places VASG in the midst of, or within a few communication links of, the critical the critical coastal and marine resource science and management decisions made in the Commonwealth.



The map above reflects a weekly to monthly communication frequency among six individuals, the first five of whom are co-located at VIMS:

- Paula Jasinski, NOAA Chesapeake Bay Office Coastal Policy Coordinator
- Roger Mann, VIMS Director of Research and Advisory Services
- John Wells, VIMS Dean and Director
- Troy Hartley, VASG Director
- Tom Murray, VASG Extension Leader
- Laura McKay, VA Coastal Zone Management Program Manager (located in Richmond at the VA Department of Environmental Quality)

Both Wells and Mann serve on the VASG Research & Education Advisory Committee (REAC), and McKay serves on the VASG External Advisory Committee (EAC). Hartley reports to Wells, and Murray reports to Mann.

Considering the specific advisory boards, workgroups, and activities shown in blue, a richer picture emerges. Jasinski and Mann were members of the Governor's Climate Commission, drafting Virginia's policy statement and recommendations for climate mitigation and adaptation. Jasinski was the NOAA CBO lead on the climate strategies for the NOAA plan responding to President Obama's Executive Order on the Chesapeake Bay. Wells and McKay are board members of the Virginia Coastal Energy Research Consortium (VCERC), the state's leading research consortium for off-shore wind and renewable energy. McKay chairs a marine spatial planning workgroup for Virginia, and along with other CZM directors in NY, NJ, DE, and MD, is supporting the development of the Mid-Atlantic Regional Council on the Oceans (MARCO). Hartley is on the VA marine spatial planning workgroup, and along with Murray and Jasinski, serves on the VA CZM advisory panel. Coastal and marine spatial planning is an element of NOAA CBO's report in response to President Obama's Executive Order on the Chesapeake Bay.

The simple network map example below illustrates the link between a very few members of the VASG core network and several critical emerging issues—climate change, alternative energy, and marine spatial planning.

Informed by this collaborative network, VASG has developed its new climate adaptation program, the competitive Coastal Community Adaptation RFP. The announcement included an oversight review team with McKay, Jasinski, Murray, and Hartley, along with proposal peer reviewers from Virginia Municipal League, USEPA Office of Sustainable Development, and a HUD-funded Community Outreach Partnership Center. This competitive funding opportunity encouraged projects to build upon the climate change adaptation funding provided by VA CZM. The program was used to obtain enhanced climate adaptation funding through the NSGO's Coastal Community Climate Adaptation Initiative. In this example, VASG's collaborative network enabled its investment of competitive funding to leverage existing expertise and leading climate decision-makers in the Commonwealth and generate synergistic benefits from VA CZM funding.

The map to the left is a simplified illustration of the VASG collaborative network. Additional links to climate, energy, and coastal and marine spatial planning exist through VASG's other institutional partners, Old Dominion University, University of Virginia, and Virginia Tech. Still further links exist

related to other topical areas, such as aquaculture, fisheries, habitat restoration, and literacy. In fact, a complete VASG network reflecting the core VASG strengths (fisheries, aquaculture, literacy, coastal community development) would be far larger, with greater densities—more people and more links among them. The list of staff leadership roles on the facing page gives a sense of some of the additional links that would be shown in such a map.

VASG's experienced staff members are also serving substantial leadership roles in regional and national-level efforts, thus further enabling the diffusion and adoption of VASG's expertise beyond our state borders and multiplying their impact nationwide:

National Focus Teams, Program Networks, and Service. VASG staff serve on two Sea Grant National Focus Teams (three staff, counting recently retired Bill Dupaul)—Safe, Sustainable Seafood Supply (SSSS) and Sustainable Coastal Community Development (SCCD). In other words, VASG makes up 12% of SSSS and 7% of the SCCD. VASG chaired the National Sea Grant Education Network in 2009, and twice served on the NSGO Social Science Program Officer search committee.

Working Waterfronts and Public Access. National leadership in the area of water access and working waterfront protection has been provided by Tom Murray. VASG was responsible for convening the first national symposium on water access in 2007. Building upon that success, VASG is providing additional leadership in developing the 2010 Working Waterfronts Symposium in Maine. Similarly, Murray was responsible for conducting a regional Sea Grant economics workshop where ten university-based economists worked with stakeholders and the Army Corps of Engineers to develop methods for a regional economic evaluation of the Atlantic Intra-coastal Waterway.

Sample of Current Staff Leadership Roles

Fisheries & Aquaculture

- American Fisheries Society, Governing Board member, President Socioeconomic Section
- Australia Released Fish Survival Program, Australia Fisheries Research Development Corp. Advisory Committee
- EPA/NOAA Chesapeake Bay Ecosystem-Based Fisheries Management, Socioeconomic Quantitative Ecosystem Team
- Heat Penetration through the Institute for Thermal Processing Specialists, Committee Member
- International Initiative for Sustainable and Biosecure Aquafarming, Founding Board Member
- International Journal of Recirculating Aquaculture, Editorial Board
- Atlantic States Marine Fisheries Commission, Interstate Tagging Committee
- National Marine Fisheries Service (NMFS), National Seafood Inspection Program (NSIP), HACCP Trainer
- Norfolk Festevents, Harborfest Water Events Committee
- Organic Aquaculture Institute, Board Member
- Seafood HACCP Alliance, Steering Committee Member
- Seafood Sciences Technology Society of the Americas, Executive Committee
- Southern Region Aquaculture Center, Publications Steering Committee, Technical/Extension Committee
- United States Aquaculture Society, President Elect
- Virginia Department of Agriculture and Consumer Services, Virginia Aquaculture Advisory Board, Vice-Chair, Technical Committee
- Virginia Aquaculture Association, Board
- Virginia Marine Resources Commission (VMRC), Aquaculture Management Advisory Committee
- VMRC, Virginia Saltwater Fishing Tournament Committee
- Watermen's Museum, Watermen's Heritage Celebration Committee
- World Aquaculture Society, Board of Directors
- World Food Logistics Organization (WFLO/IARW), Scientific Advisor

Coastal Community Development

- Virginia Department of Health, Boating Infrastructure Grants Advisory Board
- CBNERRS, Cooperative Training Program Advisory Board
- Citizens Advisory Committee, Rappahannock Community College
- USDA, Tidewater Conservation and Development Board
- VA CZM, Virginia Coastal Policy Team, Marine Spatial Planning Workgroup
- VIMS-Industry Partnership
- Virginia Department of Emergency Management, Education & Outreach Committee
- Virginia Governor's Maritime Skills Training Taskforce

Coastal and Ocean Literacy

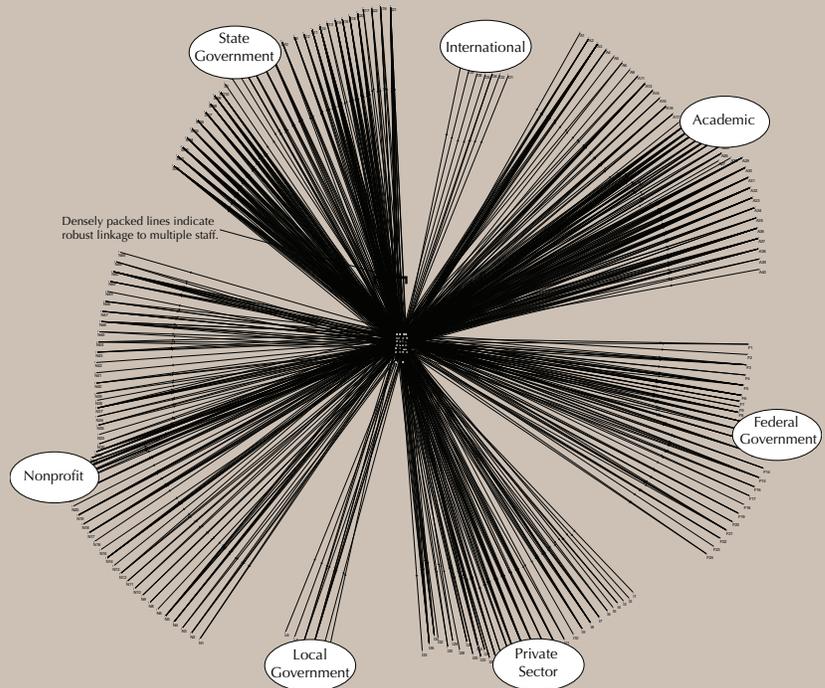
- College of William & Mary, Science, Technology, Engineering and Mathematics (STEM) Education Committee, Noyce Teacher Scholarship-Teaching for a Competitive Tomorrow Advisory Board
- Consortium for Ocean Leadership National Ocean Sciences Bowl, Technical Advisory Panel Member, Chief Rules Judge, Virginia Regional Competition (Blue Crab Bowl) Organizer
- Current, The Journal of Marine Education, Editorial Board
- Mid-Atlantic Coastal Ocean Observing Regional Association (MACOORA) Education and Public Outreach Workgroup member
- Mid-Atlantic Marine Education Association, VA Representative, President-Elect, President, Past-President, Grants Committee & Mentoring Committee Chair
- National Marine Educators Association, Past-President, President, President-Elect, Board Member, Webmaster, Publications Committee, Awards Committee Co-Chair, By-Laws Committee Chair, Newsletter Editor
- National Science Teachers Association, The Science Teacher, Publication Review Panelist
- NOAA Office of Education "Designing Education Projects" Advisory Board
- VA Cooperative Extension Leadership Council
- VIMS Professional and Professional Faculty Interim Council member
- Virginia Resource Use Education Council (VRUEC), VIMS representative

Other Public, Private and Non-Profit Sector Partnerships

Looking collectively at VASG’s partners, the reach and strength of the Sea Grant model is reflected in the network map below. VASG staff are positioned in the center of the cluster with lines connecting to the 210 partners staff worked with in 2008. The partners represent:

- 55 NGOs—associations, foundations, non-profits
- 40 academic institutions (universities, other state SG programs, etc.)
- 35 private sector partners
- 24 federal government entities
- 22 state government entities
- 6 local government entities
- 10 international organizations

VASG bridges public, private, non-profit and the university communities through its partnership activities. The weighted average path length (2.2) for this map is low for such a large network, illustrating that information can flow easily and quickly across these stakeholder groups. Further, the network qualitatively demonstrates multiple staff links to individual partners, meaning that many partners work with more than one individual VASG staff member. This can be seen in the areas of densely overlapping lines and makes the network less vulnerable to fracturing or losing individual partners with staff turnover or retirements.



Summary and Feedback: Collaborative Network Activities

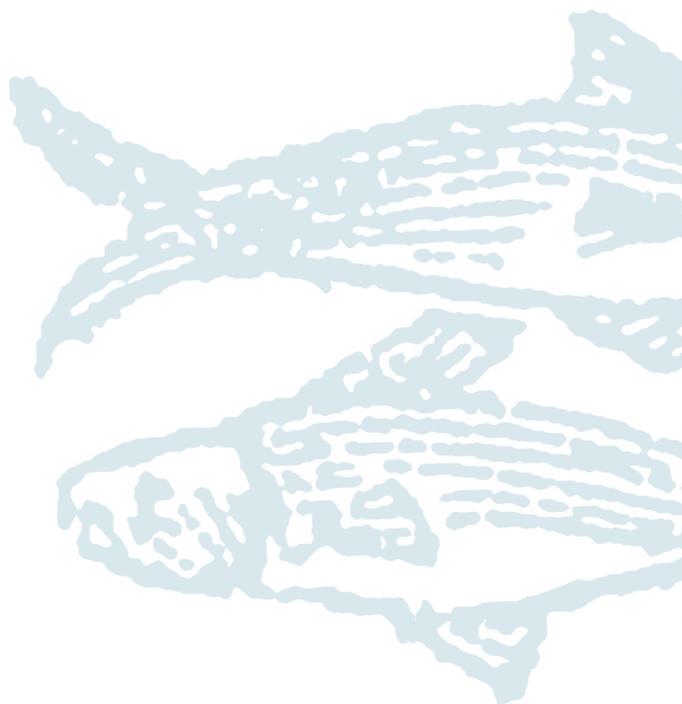
Challenges & Organizational Goals	Progress & Future Direction
<ul style="list-style-type: none"> • Measuring and illustrating VASG’s leveraged impact through national leadership and expertise. 	<p>Experimenting with network analysis and integrating into progress reporting and data management.</p>

NOAA Partnerships

- NOAA National Marine Fisheries Service, Northeast Fisheries Science Center staff are co-developing and implementing the Collaborative Fisheries Research Fellowship pilot. The Southeast Fisheries Science Center is providing funding and the scientific research practicum in support of one of the Fellows.
- NOAA National Ocean Service (NOS) was a partner and co-sponsor of the Working Waterfronts Symposia in 2007 and 2010.
- NOAA Chesapeake Bay Office (CBO) funding through their environmental literacy program (B-WET), research support on cooperative cownose ray and sturgeon research, facilitation of an oyster restoration coordinating group with VASG staff, and CBO staff collaboration on VASG Coastal Community Adaptation funding.
- NOAA National Weather Service partner on coastal storm surge modeling workshop with local communities and VIMS scientists.
- NOAA Chesapeake Bay National Estuarine Research Reserve (CBNERRS) periodically co-sponsor workshops with VASG educators.
- Other NOAA Sea Grant Programs collaborate with VASG regularly. For example, there are 15 co-sponsoring state Sea Grant programs funding the 2010 Working Waterfronts Symposium and 12 co-sponsoring the VASG-NHSG catch share workshop proposal.
- The Virginia Coastal Zone Management Program (VA CZM), one of NOAA's other state programs in Virginia, frequently partners with VASG. For example, we co-sponsored a coastal multi-use conflict management project, work together on dredging management plan development, and VA CZM participants on VASG's Clean Marina advisory committee.

SRT Comments & Advice

Thanks!



**Virginia Sea Grant
Annual Report 2009
Source: NIMS**

VIRGINIA

Project #: R/CM-28

Theme: FISHERIES

Updated: 9/16/2008 3:05:23 PM

Title: Larval recruitment and stock assessment

Statement: This regional study enhances our knowledge of processes supporting connectivity between shelf areas and estuaries, documenting spatial patterns and temporal scales of larval influx events, and evaluating the degree of concordance between two major estuaries in the Middle Atlantic Bight. The research will provide information in support of Atlantic States Marine Fisheries Commission and state efforts to document spatiotemporal dynamics in menhaden, croaker and eel recruitment. Our work may address an important present ecosystem-based management question regarding the cause of recent recruitment failures in young Atlantic menhaden in Chesapeake Bay. Stock assessments show that recent age-0 menhaden abundance has declined in the Chesapeake Bay and increased in more northerly nursery habitats (mid-Atlantic and New England) (ASAMFC 2004b). A recent ASMFC workshop concluded that one potential cause of the negative trend in abundance of age-0 menhaden in Chesapeake Bay is a negative trend in larval recruitment from offshore spawning areas (ASMFC 2004a). Other potential factors listed were loss of essential nursery habitat and low survival of age-0 fish in the bay. Thus far, our larval ingress sampling suggests lower larval recruitment in Chesapeake Bay in comparison to Delaware Bay. One possible explanation for this observation is variability in location and intensity of spawning. Additional sampling will establish whether the presence of multiple ingress pulses and higher densities of larval menhaden in Delaware Bay than in Chesapeake Bay is consistent across years, and modeling will help identify potential influences of transport processes and sources of larvae. These data will have direct application to upcoming stock assessments of Atlantic menhaden since they address the causes of low productivity in Chesapeake Bay.

Project #: R/OD-05-06

Theme: AQUACULTURE

Updated: 9/28/2008 12:27:13 PM

Title: Commercial application of top performing oysters

Statement: The results obtained about the genotype by environment interactions have been applied directly to the oyster aquaculture industry in the state of Virginia and the Bevans company are growing oysters based on our recommendations. A new line comprised from the top performing animals in the York River has been developed. This line is currently being tested and will be used in commercial oyster

-
- Project #: **R/A-36**
- Theme: **AQUACULTURE**
- Updated: **9/28/2008 2:26:26 PM**
- Title: **Virginia Sea Grant investigates transmission of oyster herpes virus**
- Statement: **The results of the horizontal transmission experiments conducted here indicate that there is risk of transmission of OsHV to among bivalve species, including local Cheseapeake Bay bivalves (Crassostrea virginica and Mercenaria mercenaria) should they come in contact with OsHV-infected animals.**
- Project #: **R/CF-46**
- Theme: **FISHERIES**
- Updated: **9/28/2008 3:57:10 PM**
- Title: **Virginia Sea Grant develops a better way to approach summer flounder quotas**
- Statement: **The study indicates that revenue to fishermen could have been increased an average of more than \$3 million a year, in real terms, since the inception of quotas with improved seasonal allocation. Staff members of the Virginia Marine Resource Commission have expressed interest in using the study as an aid in talking with fishermen about how to allocate the quota and then for assisting them final quota allocations.**
- Project #: **R/A-37**
- Theme: **AQUACULTURE**
- Updated: **9/29/2008 11:35:14 AM**
- Title: **Virginia Sea Grant describes important oyster parasites**
- Statement: **The description of *B. perspora*, possible because of Virginia Sea Grant support of *O. equestris* sample collections, fundamentally changes the way we view the basic biology of one of the most ecologically and economically important groups of oyster parasites. This is a significant contribution to haplosporidian parasitology and to oyster health management worldwide.**

-
- Project #:** R/CF-45
- Theme:** FISHERIES
- Updated:** 9/29/2008 3:29:57 PM
- Title:** Virginia Sea Grant develops insight into the role of disease-related mortality in Striped Bass
- Statement:** Controversy has arisen in the Atlantic States Marine Fisheries Commission's Striped Bass Committee about the impact of the disease on striped bass populations. In particular, the assessment method known as virtual population analysis or VPA proceeds on the assumption that natural mortality rate (mortality due to all causes other than fishing) is known. Analysis of tagging data by members of the Striped Bass Tagging Subcommittee has indicated that natural mortality rate has risen since the late 1990s. Our Sea Grant project to estimate disease-related mortality has generated considerable interest and the State of Maryland is now conducting a parallel study to determine the spatial aspects of the disease impacts.
- Project #:** R/CF-45
- Theme:** FISHERIES
- Updated:** 9/29/2008 3:37:45 PM
- Title:** Virginia Sea Grant study reveals that the time scale of mycobacteriosis impacts is several years
- Statement:** The study has revealed that the time scale of the disease impacts is several years and that fish that are obviously infected (showing hemorrhagic skin lesions) may still be a year or more away from succumbing to the disease. Hence, fishery assessment and management models for predictive purposes must consider disease impacts over a long time scale.
- Project #:** E/NMFS-03-01
- Theme:** FISHERIES
- Updated:** 9/29/2008 4:06:35 PM
- Title:** Virginia Sea Grant mortality estimators currently in use
- Statement:** This research has provided new research tools for stock assessment scientists in the form of new mortality estimators based on observations of mean length over time and based on observations of catch rates over time. The estimators require minimal data and minimal assumptions. They are now being used by scientists at the National Marine Fisheries Service Miami and Woods Hole Laboratories as well as in the Caribbean Regional Fisheries Mechanism. Mortality estimators are being used for the assessment of monkfish (goosefish), five species of skates, and sea scallops

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- Project #: **E/BRIDGE-2007/8**
- Theme: **MARINE AND AQUATIC SCIENCE LITERACY**
- Updated: **10/4/2008 4:23:56 PM**
- Title: **Sea Grant's Bridge project provides materials and information to teachers nationwide**
- Statement: **Visitation statistics and feedback from users confirm that educators visit the Bridge to obtain information and materials at the rate of about 33,000 visits each month. Especially noteworthy is the Bridge's support of National Science Education Standards through correlations posted with each DATA (Bridge classroom activities) enabling teachers nation-wide to choose among effective, standards-based marine education activities for their classrooms.**
- Project #: **E/BRIDGE-2007/8**
- Theme: **MARINE AND AQUATIC SCIENCE LITERACY**
- Updated: **10/4/2008 4:31:17 PM**
- Title: **Sea Grant's Bridge project supports nation-wide involvement and communication among researchers and user groups**
- Statement: **Researchers collaborate on Bridge DATAs, contribute to Scuttlebutt, and assist with content review of Bridge sites, reaching national audiences with these efforts. The ocean education community makes almost daily use of Scuttlebutt, enabling many agencies, organizations and individuals to communicate widely and effectively.**
- Project #: **R/OD-05-06**
- Theme: **BIOTECHNOLOGY**
- Updated: **10/5/2008 2:31:49 PM**
- Title: **Virginia Sea Grant develops new line of top-performing oysters**
- Statement: **The results obtained have been applied directly to the oyster aquaculture industry in the state of Virginia and the Bevans company is growing oysters based on our recommendations. A new line comprised from the top performing animals in the York River has been developed. This line is currently being tested and will be used in commercial oyster culture.**

Project #:	A/CCD-2007/8
Theme:	COASTAL COMMUNITIES AND ECONOMIES
Updated:	10/8/2008 10:10:44 AM
Title:	Virginia Sea Grant provide sturgeon and striped bass management information
Statement:	Information provided by experimental fishing and by-catch projects has provided critical management information to state, regional and federal managers on sturgeon, striped bass and other regulatory discards.
Project #:	A/CCD-2007/8
Theme:	COASTAL COMMUNITIES AND ECONOMIES
Updated:	10/8/2008 10:11:36 AM
Title:	Virginia Sea Grant develops alternative Cownose Ray fishery and market products
Statement:	Cownose Ray fishery and product development projects have furthered the understanding of the species for management purposes and have lead to development of alternative fishery and market products.
Project #:	A/CCD-2007/8
Theme:	COASTAL COMMUNITIES AND ECONOMIES
Updated:	10/8/2008 10:27:40 AM
Title:	Virginia Sea Grant Water Access workshop contributes (HR3223) to CZM Act
Statement:	The Water Access initiative culminated in federal legislation. A bill entitled "Working Waterfronts Preservation Act" (HR3223) was introduced to amend the CZMA to focus on retention of critical working waterfront throughout the U.S.

Project #: **A/EP/FEE-07**

Theme: **FISHERIES**

Updated: **10/10/2008 11:26:10 AM**

Title: **The Virginia Marine Resources Commission applies new, improved mesh size regulations to Virginia's striped bass fishery**

Statement: **Bycatch information collected on the striped bass gill net fishery was used by the state to improve the management of that fishery. Much of this information played a crucial role when creating new regulations governing mesh sizes and size specific fish slots when the striped bass ITQ system was recently overhauled. Under previous regulations the choice of mesh was left largely up to the fisher, which resulted in excess discard mortality of sub-marketable fishes. The one tag one fish bases of the previous ITQ also discouraged fishers from retaining smaller fish that are now retained because the number of tags that can be used on large fish is now limited.**



Metrics Details

VIRGINIA Sea Grant 2008

FTEs

FTEs	# of Individuals	# FTEs Funded by SG	# FTEs Funded by Non-SG
Administrative	2	1.00	1.00
Communications	2	2.00	0.00
Extension	28	9.99	2.26
Education	7	1.18	0.05
Research	48	6.77	2.75
Sub Total:	87	20.94	6.06
Total # of FTEs:	27.00		

Management Team Members

Team Member	Position	FTE Devoted to SG
William D. DuPaul	Director	1.000
Frances Lee Larkin	Asst. Director	1.000
Troy W. Hartley	Director	1.000
Total:	3	3.000



Metrics Details

VIRGINIA Sea Grant 2008

Program Development Projects

Project Title	PI	Federal Funds	Matching Funds
Microalgal Cultures on Eastern Short	Ryan Carnegie	\$6,615.00	\$0.00
Intro to VA Coastal Ecosystems: A Field Workshop for Educators	Vicki Clark	\$3,477.00	\$0.00
Special Concern Teacher Workshop: Submerged Aquatic Veg.	Lisa Lawrence	\$2,307.00	\$0.00
11th Annual Blue Crab Bowl - VA Sea Grant Support	Carol Hopper-Brill	\$1,722.00	\$0.00
Sub Total:	4	\$14,121.00	\$0.00
Total Federal and Matching Funds:		\$14,121.00	

VIRGINIA Sea Grant 2008

Partnerships

Federal	Regional	Local & St.	NGOs	Internat.	Indus/Bus.	Academic	SG Pgms.	Other
		VMRC						
		Saltwater						
		Fishing License						
		Program Funds						
		Virginia						
		Saltwater						
		Fishing						
		Tournament						
		Program						
		Virginia Marine						
		Resources						
		Commission						
		Virginia Junior						
		Academy of						
		Science						
		Virginia Game						
		Fish Tagging						
		Program						
		Virginia Farm						
		Bureau						
		Virginia						
		Estuarine &						
		Coastal						
		Observing						
		System						
		(VECOS)						
		Virginia Earth						
		Science						
		Consortium						
		Virginia						
		Department of						
		Shellfish						
		Sanitation						



Metrics Details

VIRGINIA Sea Grant 2008

Partnerships

Federal	Regional	Local & St.	NGOs	Internat.	Indus/Bus.	Academic	SG Pgms.	Other
		Virginia Department of Education, Governor's School						
		Virginia Department of Conservation & Recreation				Woods Hole Oceanographic Institution, Jim Yoder, Ari Daniel Shapiro		
		Virginia Department of Agriculture & Consumer Services	Watermen's Museum					
		Virginia Coastal Program				Virginia Institute of Marine Science, College of William & Mary		
		Virginia Aquaculture Network (VAN)	West Virginia Salmon and Trout			VIMS Volunteer Coordinator, Development Office		
		Virginia Academy of Science (VAS)	Virginia Seafood Council		York Haven Marina	VIMS Molluscan Ecology Program, Dr. Juliana Harding and Dr. Roger Mann		
USDOC/EDA		Town of Yorktown, Virginia	Virginia Beach Billfish Foundation		Virginia Shrimp Farms	Rutgers University School of Environmental and Biological Sciences, Rebecca Jordan Word Craft, Chris Parsons		
		Virginia Department of Game & Inland Fisheries	SOBA		Virginia Cobia Farms	Rutgers University Institute of Marine and Coastal Sciences, Tim Zimmerman		
U.S. Coast Guard		Town of Cape Charles, Virginia	Trust for Public Lands		Smith Point Seafood	Rutgers University School of Communication, Information and Library Studies, Corinne Dalelio		
U. S. Food and Drug Administration		Rudee Inlet Fishing Center			Trans Atlantic Diesels, Inc	VIMS Department of Physical Sciences		



Metrics Details

VIRGINIA Sea Grant 2008

Partnerships

Federal	Regional	Local & St.	NGOs	Internat.	Indus/Bus.	Academic	SG Pgms.	Other
U. S. Department of Agriculture		Northern Neck Planning District Commission	Rotary Club- Newport News		Riverwalk Restaurant	Steve McInich, Virginia Commonwealth University		
Sara Cameron, U.S. Army Corp of Engineers		County of Northampton, Virginia			River's Inn Restaurant	Rutgers University Graduate School of Education, Ravit Golan Duncan		
NOAA Office of Education			National Marine Manufacturers Associations		Other fishermen	Rutgers University Coastal Ocean Observation Lab (COOL), Janice McDonnell, Sage		
NOAA National Ocean Service-Office of Coastal Surveys		RBFF	National Fisheries Institute		MRRA	Rutgers University Coastal Ocean Observation Lab (COOL), Janice Mc Donnell	Sea Grant Law Center	
NOAA Marine Protected Areas, Phyllis Dermer		City of Newport News, Virginia Parks & Recreation	National Science Teachers Association, Jean May Brett and Beth Jewell		Novozymes, Inc.	OEAS, Old Dominion University		
NOAA Chesapeake Bay Program		Norfolk Fire Department-Harbor Fire Protection Unit	Ocean Research Interactive Observatory Networks (ORION) National Marine Educators Association (NMEA) & associated chapters		Phillips Energy, Inc. McGann Towing, Inc.	Paul Richardson, VIMS Mr. John Maxwell, J. Sargeant Reynolds Community College Matt Balazik, Virginia Commonwealth University Marine Advanced Technology Education (MATE) Center, Deidre Sullivan, Jill Zande Lindsey North, William and Mary		



Metrics Details

VIRGINIA Sea Grant 2008

Partnerships

Federal	Regional	Local & St.	NGOs	Internat.	Indus/Bus.	Academic	SG Pgms.	Other
						Lichtenwalner, Scott Glenn, Josh Kohut, Oscar Schofield, Igor Heifetz		
						Liberty Science Center, Jeff Osowski, Michael Womack, Katie Gardner		
NOAA		County of Middlesex, Virginia			L. D. Amory & Co Seafood	Jennifer Cudney, East Carolina University		
						Jack Musick, VIMS		
					James Douglass	J. Emmett Duffy, VIMS		
			Hong Kong Productivity Council		Jordan's Marine Service	Hermitage Technical Center		
		Matt Fisher, Delaware Department of Natural Resources			Jimmy Moore	Greg Garmen, Virginia Commonwealth University		
Jay Lazar, NOAA		Middle Peninsula Planning District Commission	Mid-Atlantic Coastal Ocean Observing Regional Association (MACOORA)		Kellum Seafood	Emory University School of Public Health		
		County of Mathews, Virginia	Gloucester Ruritans		George Trice	Eastern Shore Laboratory, VIMS		
						Dr. Rochelle Seitz, VIMS		
						Dr. Roger Mann, VIMS		
		Eastern Shore of Virginia Chamber of Commerce	Foodbank of the Eastern Shore		F.W. Siebert, Inc.	Digital Library for Earth System Education (DLESE), Mary Marlino		
		Virginia Department of Conservation and Recreation			Dare Marina	Dewayne Fox, DSU		



Metrics Details

VIRGINIA Sea Grant 2008

Partnerships

Federal	Regional	Local & St.	NGOs	Internat.	Indus/Bus.	Academic	SG Pgms.	Other
					CSO	COSEE-NOW, Rutgers University, Woods Hole Oceanographic Institute, and Liberty Science Center		
			Coastal Conservation Association of Virginia		Crofton Diving Co.	COSEE-California, Lawrence Hall of Science, University of California Berkeley		
		City of Virginia Beach, Virginia - Rudee Inlet Fishing Center						
		City of Virginia Beach, Virginia						
		City of Poquoson, Virginia						
		City of Norfolk, Virginia - Festevents Office						
		City of Norfolk, Virginia	Chuck Frederickson, James River Association (riverkeeper)		Cowart Seafood	Chesapeake Bay Observing System (CBOS), Old Dominion University, Liz Smith		
Consortium for Ocean Leadership, NOSB, Sue Cook		City of Hampton, Virginia	Chesapeake Bay Restoration Fund		Cook's Seafood	Chesapeake Bay National Estuarine Research Reserve in Virginia (CBNERR-VA), Sarah McGuire & Willy Reay		
					Colonial Virginia Bank			
					Chesapeake Bank			
					Cherrystone AquaFarms			
					Chef Harry Brockwell, VP, Western Region of the American Culinary Federation			
					Carter Machinery Co.			



Metrics Details

VIRGINIA Sea Grant 2008

Partnerships

Federal	Regional	Local & St.	NGOs	Internat.	Indus/Bus.	Academic	SG Pgms.	Other
		Brian Richardson, Maryland Dept. of Natural Resources	Boat US		Bobby Weagley			
					Blue Ridge Aquaculture			
					Bill Hudgins Pontiac-GMC			
					Bill Forrest Seafood			
					Bevan's Oyster Company			
					Bay Shore Marina			
					Bass Pro Shops			
Chuck Dickerson , Kevin Reine, Doug Clarke; ERDC		Boys and Girls Club of Mathews	Association of Food and Drug Officials		Back River Market			
					Aquaculture and Marine Resources			
U. S. Army Corps of Engineers		Boys and Girls Club of Gloucester			A Cut Above Insulation, Inc.	Christopher Newport University	North Carolina Sea Grant	
Albert Spells, U.S. Fish and Wildlife Service	Atlantic States Marine Fisheries Commission	County of Accomack, Virginia	Beacon Institute for Rivers and Estuaries, Liesl Hotaling		A and S Feed & Fishing Supplies	Chesterfield Technical Center	Andy Lazur, Maryland Sea Grant	
						University of New Hampshire, Northeast Consortium		
							Delaware Sea Grant	
						University of Virginia		
						Old Dominion University		
						Virginia Tech		
Total:	15	1	40	22	0	38	41	4
Total Partners:	161							



Metrics Details

VIRGINIA Sea Grant 2008

Leveraged Funds

Project	Source	Amount
COSEE	National Science Foundation	\$102,000.00
Virginia Clean Marina Program - Development and Outreach	NOAA	\$30,000.00
Working Waterways and Waterfronts Symposium Support	NOAA	\$5,000.00
An Assessment of Sea Scallop Abundance and Distribution in Selected Closed Areas: Georges Bank Area I and II, Nantucket Lightship and Elephant Trunk	NOAA	\$113,866.00
CBIBS Inside and Out: Utilizing the Chesapeake Bay Interpretive Buoy System In and Out of the Classroom	NOAA	\$115,374.00
Calibrating Industry Scallop Surveys With NOAA Vessel Platforms	NOAA	\$74,639.00
A Proposal to Collect Biological Samples to Supplement Current Cownose Ray Biological Assessment Efforts	US Army Corps of Engineers	\$25,447.00
Life history, trophic ecology and prey handling by cownose rays from Chesapeake Bay.	NOAA	\$125,591.00
Management Initiatives for Shellfish Aquaculture - Development of an Environmental Code of Practice and Best Management Practices for Virginia - Year 2	NOAA	\$14,444.00
COSEE NOW at VIMS	National Science Foundation	\$70,000.00
Virginia Clean Marina Program Development and Outreach - 2007-2008	NOAA	\$30,000.00
Testing of gear modification for blue crab traps	National Fish and Wildlife Foundation	\$28,642.00
Conference Development and Co-Hosting of the 26th International Submerged Lands Management Conference	Virginia Marine Resources Commission	\$6,250.00
Oceanography Field Workshops for "Developing Highly Qualified Earth Science Teachers" Program	Virginia Department of Education	\$21,284.00
11th Annual Blue Crab Bowl: Virginia's Regional Competition of the National Ocean Sciences Bowl 2008	Consortium for Ocean Leadership	\$7,500.00
Virginia Game Fish Tagging Program Year 14 (2008)	Virginia Marine Resources Commission	\$53,503.00
Building a Network of Regionally-Based Collaborative Research and Conservation Engineering Programs	NOAA	\$137,737.00
Sea Grant Mid-Atlantic Research Planning	NOAA	\$5,000.00
Total:	18	\$966,277.00



Metrics Details

VIRGINIA Sea Grant 2008

Awards / Honors



Metrics Details

Sea Grant

New Businesses Added

Business Type	Number Added	Description
Total:		



Metrics Details

Publications

Category	# of Publications
Technical Reports	10
Proceedings, Symposia	3
Brochures, Fact Sheets, Posters, etc.	0
Books, Monographs	0
Peer-reviewed Journal Articles, Book Chapters	61
Videos, CDs, DVDs, MP3s	1
Maps, Charts, Atlases	0
Handbooks, Manuals, Guides	0
Electronic Publications	2
Theses, Dissertations	0
Newsletters, Periodicals	3
Program Reports	11
Bibliographies, Directories	0
Media Placements	5
Miscellaneous Documents	0
Total:	146



Metrics Details

VIRGINIA Sea Grant 2008

K16				
Professional Development for Educators	Elementary School	Middle School	High School	
Number of Professional Development Sessions	9	8	10	
Number of Attendees at Professional Dev. Sessions	194	203	346	
Number of Students Reached through Educators	2475	1775	2711	
Number of Curricula Developed	1	1	8	
Courses for College Credit	Total Courses			
Number of Courses Taught for College Credit	0			
Number of Students/Participants	0			
Advisory (state standards, national standards)				
Number of Consultations	524			
Professional Development for Educators				
# of Attendees at Professional Development Sessions	118			
Programs for Children and Families				
Number of Camps, Programs, Activities, Clubs, etc.	11			
Number of Attendees	1262			
Number of Class Trips	0			



Metrics Details

VIRGINIA Sea Grant 2008

Students Supported

Category	# of New Students	# of Continuing Students	# of Degrees Awarded
Knauss Fellowship	0	0	0
Industry Fellowship	0	0	0
NMFS/SG Fellowship	0	1	0
State Fellowship	0	0	0
SG Supported MS/MA Graduate Students	0	3	0
SG Supported PhD Grad. Students	0	0	0
SG Supported Undergrad. Students	0	0	0
Other	0	0	0
Total:	0	4	0

Extension

Category	Number
Number of SG-sponsored/organized meetings, workshops and conferences	22
Number of attendees in SG meetings/workshops	304789
Number of Radio Interviews	0
Number of TV appearances	0
Number of Public Presentations	0
Number of attendees at presentations	3078
Number of volunteer hours	710

Research Metrics

Core Proposals	# of Proposals	# of Institutions Involved	# of Home Institutions
Pre-Proposals Submitted	34	7	23
Full Proposals Submitted	13	4	8
Proposals Funded	7	3	4
NSI Competitions			
Pre-Proposals Submitted	0	0	0
Full Proposals Submitted	0	0	0
Proposals Funded	0	0	0

VIRGINIA Sea Grant 2008

Recruiting Talent



Metrics Details

Core Project Statistics	Projects	PIs & Co-PIs	Institutions	Regional/Multi-Program
From Previous Award Year	6	19	3	0
New Talent	0	0	0	0
NSI Statistics				
From Previous Award Year	3	6	2	0
New Talent	0	0	0	0