

## VIMS Mission

- Conduct research in ocean and estuarine science
- Educate students and citizens
- Advise policy makers, industry and the public
- Houses the College of William and Mary's School of Marine Science (110 graduate students)
- One of the largest marine research and education centers in the United States



A photograph showing two white research boats docked at a pier. The boats have 'VIMS' written on their sides. The boat on the left has 'HELVEN' written on its hull.

### VIMS Campuses

- Main campus, Gloucester Point:**
  - Located at the mouth of the York River
  - ~42 Acres
  - 61 Buildings
  - 333,380 SF
- Field Laboratory, Wachapreague:**
  - Located on the seaside of the Eastern Shore
  - ~5 Acres
  - 22 Buildings
  - 24,249 SF
- Kauffman Aquaculture Center, Topping:**
  - Located on the Rappahannock River
  - 1 Building
  - 6,420 SF

## Organizational Structure

- Academic Departments**
  - Biological Sciences
  - Physical Sciences
  - Fisheries Science
  - Environmental and Aquatic Animal Health
- Research and Advisory Centers**
  - Aquaculture Genetics and Breeding Technology Center
  - Center for Coastal Resources Management
  - Marine Advisory Services
  - Chesapeake Bay National Estuarine Research Reserve
- Support Services**
  - Analytical Services
  - AAUS Dive Program
  - Information Technology
  - Communications
  - Finance & Sponsored Programs
  - Field Operations
  - Library
  - Development
  - Environmental Safety
  - Senior Administrative Offices:
    - Dean and Director
    - Academic Studies
    - Research and Advisory Services

**Approx. 500 Faculty, Staff, & Students**

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## Breadth of Research

- Faculty research expertise includes sub-disciplines from marine biology to marine physics
- Scale of projects ranges from global to molecular
- 350 projects funded largely by competitive federal grants and contracts



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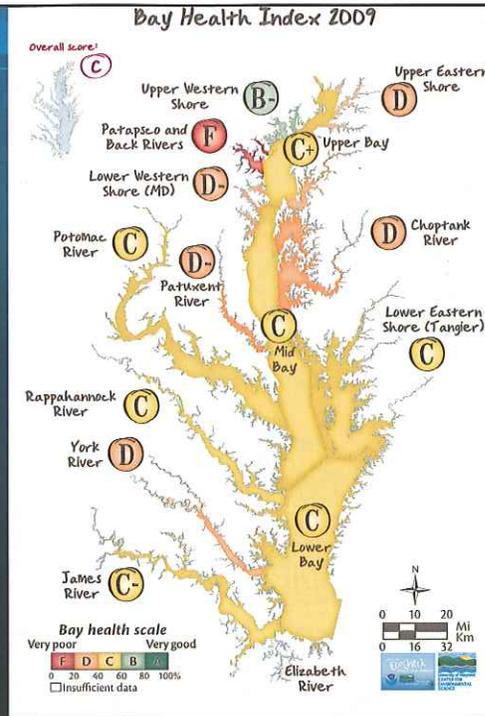
## Chesapeake Bay Restoration: Key Points



- Importance of land-based activities
- Multiple uses, multiple sources of stress
- Numerous jurisdictions, agencies, levels of governance
- Quantitative goals, persistence, and resources required
- Health of the Bay and economic vitality connected

## Health of the Chesapeake Bay

- State of the Bay (Chesapeake Bay Foundation) – Grade D
- Chesapeake EcoCheck (NOAA and University of Maryland) –Grade C
- Bay Barometer (Chesapeake Bay Program) –Grade 38%



## Economic Opportunities from VIMS Research

- Aquaculture Genetics and Breeding Technology
- Ocean Observing System Research
- Hydrologic and Watershed Modeling
- Chemical Bio-Sensor Development
- Algal Biofuel Research
- And many more...



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## VIMS-Industry Partnership

- Foster Relationships that combine science, engineering and communications Technology
- Serve as a clearinghouse for emerging collaborative opportunities
- Expedite application of new technology to practical problems
- Present focus on forms of alternative energy
- Linked to:
  - Office of Economic Development at W & M,
  - Center for Innovative Technology
  - Secretary of Commerce and Trade

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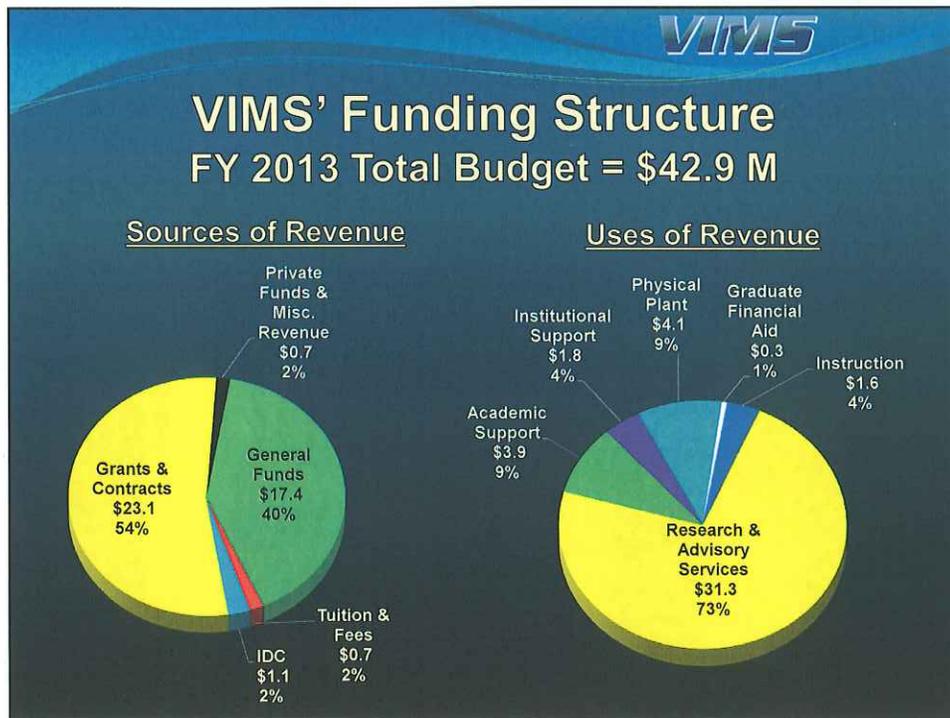
## Advisory Services: The Public Face of VIMS

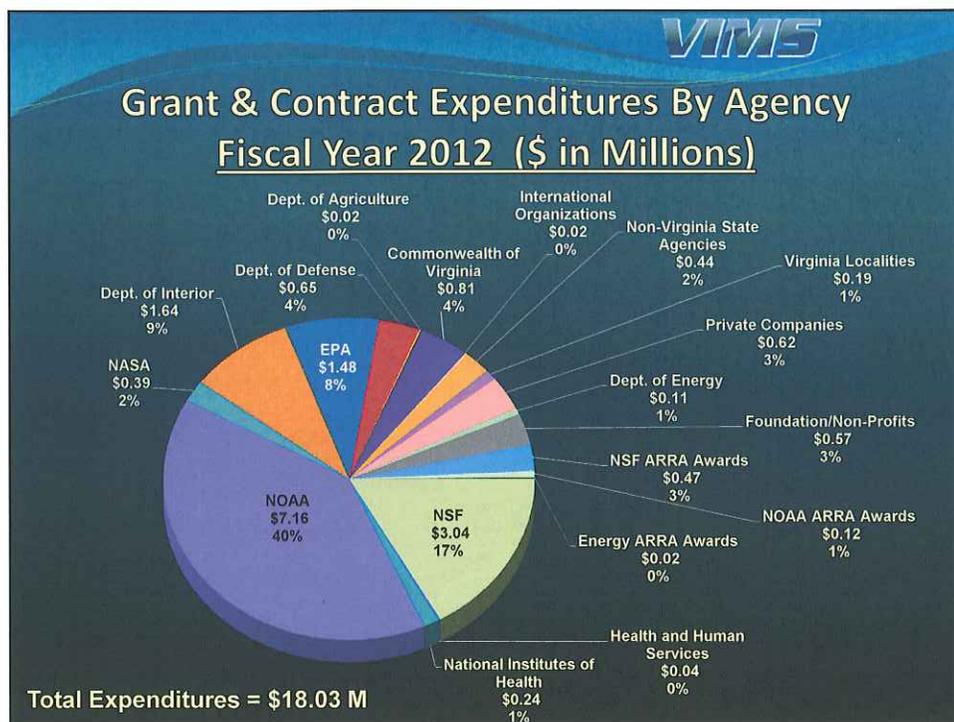
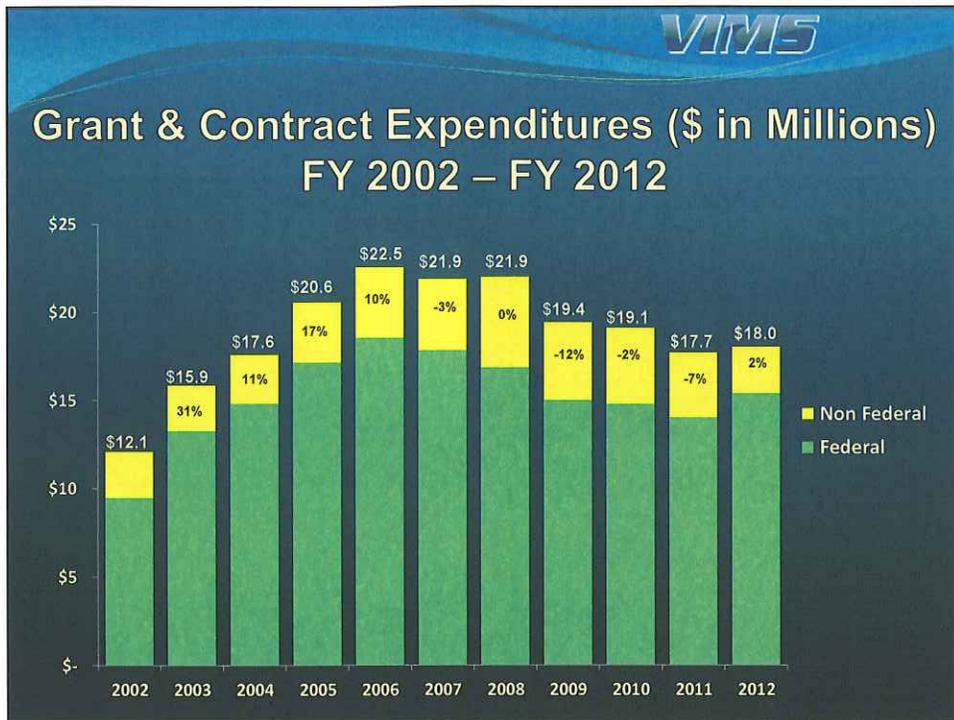
- Commonwealth's scientific advisor on natural resources
- Over 30 sections of VA Code require VIMS advisory service
- Advisor to General Assembly, State Agencies, Maritime Industries, and the Public



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# VIMS Finances





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## On The Road To Recovery...

- 8 New T&R Faculty FTEs
- \$8 M Research Vessel
- O&M Support for New Facilities
- Graduate Financial Aid
- Equipment Trust Funds
- Thank You!



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## Six-Year Plan: Academic, Finance & Enrollment/Degree Projections



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graph TD; A(TJ 21 Objectives) --> B[Six Year Plan]; C(VIMS' Strategic Plan) --> B; D(VIMS' Role in State System) --> B;
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The diagram illustrates the components of the Six Year Plan. It features a central box labeled "Six Year Plan". Three ovals at the top point towards this central box: "TJ 21 Objectives" on the left, "VIMS' Strategic Plan" on the right, and "VIMS' Role in State System" at the bottom. Arrows indicate the flow of information from these three sources into the central plan.

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## Six-Year Plan & TJ21 Objectives

- Establish Faculty Lines: \$520,000/\$580,000
- Enhance Information Technology Infrastructure: \$1.3M/\$535,000
- Establish a Stable and Centralized Funding Base for Fish Surveys: \$560,000/\$590,000
- Develop and Support New Management and Policy Approaches through the CCRM: \$315,000/\$370,000
- Improve Quality of Maintenance on Highly-Sophisticated Instrumentation: \$300,000/\$300,000
- Increase Graduate Finance Aid: \$500,000/\$500,000
- Continue Year-Round Usage of Facilities
- Expand Collaborations with W&M, HU, ODU and Create Others

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## Questions?

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# Education Overview

Virginia Institute of Marine Science  
School of Marine Science  
The College of William and Mary

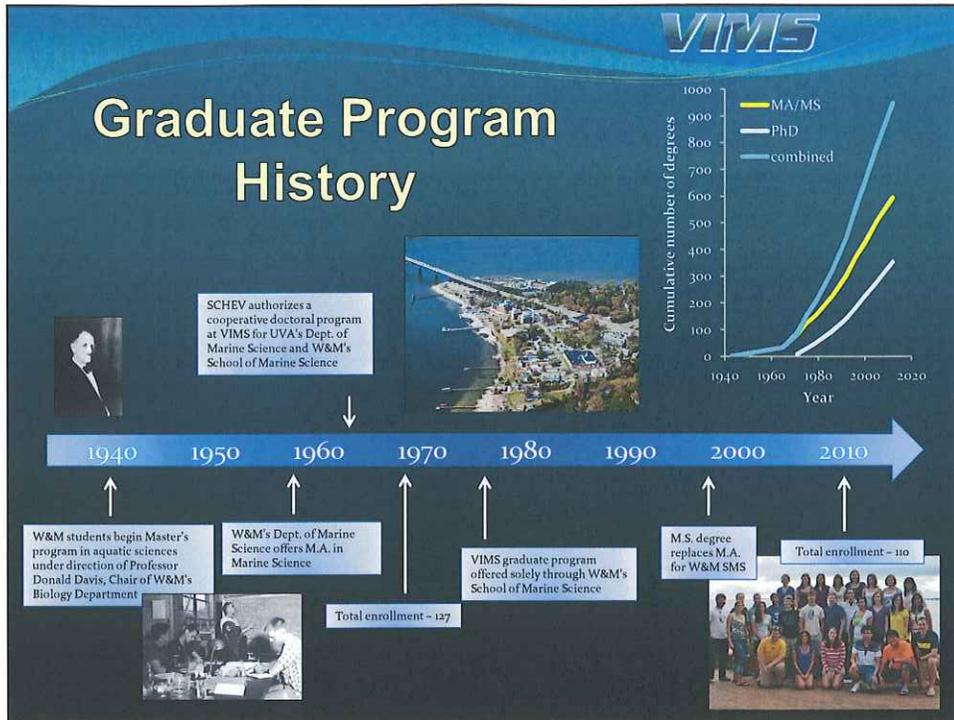
Linda Schaffner  
Associate Dean - Academic Studies  
AD-AS@vims.edu

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# Education, Training, Outreach

- Graduate
- Undergraduate
- K-12
- Stakeholders
- Public





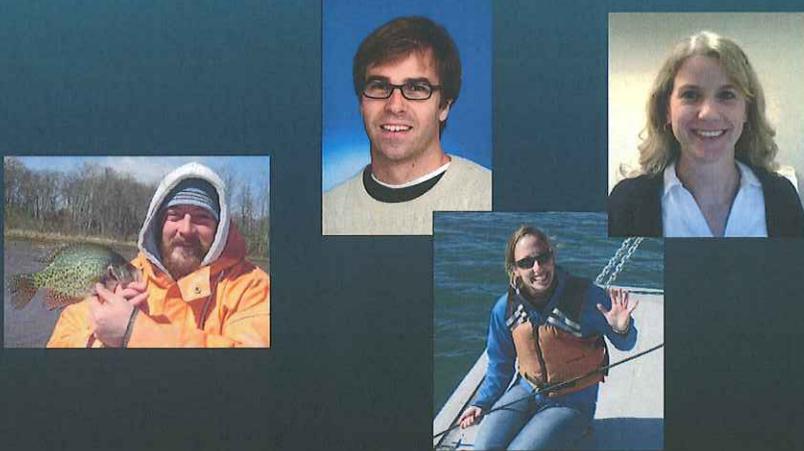
## School of Marine Science today

- ~ 110 full-time students
- 55/45 female/male (%)
- 55/45 MS/PhD (%)
- 15% international, primarily from China, but including Europe, Central and South America, SE Asia
- low representation of US racial and ethnic minorities (max of 5-6 %; but doing as well or better than many US marine science programs)

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## Our Alumni - the next wave



A collage of four photographs showcasing VIMS alumni. The top-left photo shows a man in a bright yellow raincoat and hood, smiling while holding a large fish. The top-middle photo is a headshot of a man with dark hair and glasses. The top-right photo is a headshot of a woman with blonde hair, wearing a white collared shirt and a black blazer. The bottom-center photo shows a woman in a blue jacket and sunglasses sitting on a boat, waving her hand.

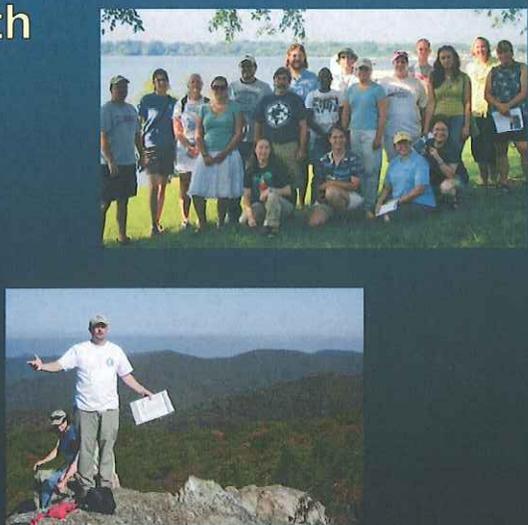
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## Patrick McGrath

Teacher, Chesapeake Bay  
Governor's School

Ph.D. Marine Science (2010)

Areas of specialization: fish  
ecology, marine  
science/secondary education



Two photographs are included. The top-right photo is a group photo of a field team consisting of about 15 people, some wearing blue shirts, posing on a grassy area near a body of water. The bottom-right photo shows Patrick McGrath standing on a rocky outcrop, holding a white folder or clipboard, with a scenic view of mountains in the background.

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## Kate Brodie

Oceanographer, US Army  
Corps of Engineers, Field  
Research Facility, Duck, NC

Ph.D. Marine Science (2010)

Areas of specialization: marine  
geology, coastal  
morphodynamics, Coastal  
LIDAR and Radar Imaging  
System (CLARIS)



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## Malcolm E. Scully

Assistant Professor, Dept. Of Ocean,  
Earth and Atmospheric Science, ODU

Ph.D. Marine Science (2005)

Areas of specialization: coastal and  
estuarine circulation, transport and  
fate of sediment

2010 NSF Faculty Early Development  
(CAREER) Award\*

(\*one of four CAREER awards to our alumni over  
the last 15 years)



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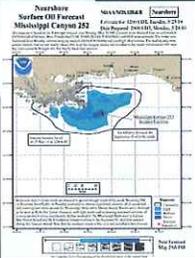
## Shelby E. Walker

Strategic Planning Team Lead,  
NOAA Office of Oceanic and  
Atmospheric Research (OAR);  
NOAA Science Lead, Gulf  
Coast Ecosystem Restoration  
Task Force

Ph.D. Marine Science (2003)

Areas of specialization:  
strategic planning, coastal and  
marine spatial planning, fate  
and transport of pollutants in  
coastal and estuarine systems



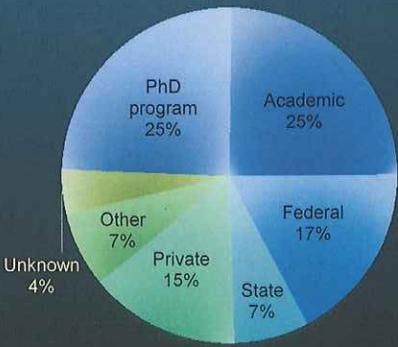


State	Number	Percentage
Alabama	1	1%
Arkansas	0	0%
California	0	0%
Colorado	0	0%
Connecticut	0	0%
Delaware	0	0%
Florida	1	1%
Georgia	0	0%
Idaho	0	0%
Illinois	0	0%
Indiana	0	0%
Iowa	0	0%
Kansas	0	0%
Kentucky	0	0%
Louisiana	1	1%
Maine	0	0%
Maryland	0	0%
Massachusetts	0	0%
Michigan	0	0%
Minnesota	0	0%
Mississippi	1	1%
Missouri	0	0%
Montana	0	0%
Nebraska	0	0%
Nevada	0	0%
New Hampshire	0	0%
New Jersey	0	0%
New Mexico	0	0%
New York	0	0%
North Carolina	1	1%
North Dakota	0	0%
Ohio	0	0%
Oklahoma	0	0%
Oregon	0	0%
Pennsylvania	0	0%
Rhode Island	0	0%
South Carolina	1	1%
South Dakota	0	0%
Tennessee	0	0%
Texas	1	1%
Utah	0	0%
Vermont	0	0%
Virginia	0	0%
Washington	0	0%
West Virginia	0	0%
Wisconsin	0	0%
Wyoming	0	0%
Unknown	1	1%
<b>Total</b>	<b>10</b>	<b>10%</b>

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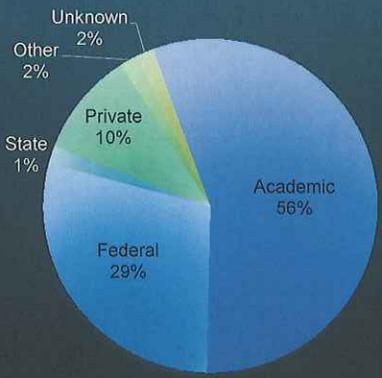
## 2005-2010 VIMS/SMS Alumni\*

**MS (n = 69)**



Category	Percentage
Academic	25%
PhD program	25%
Federal	17%
Private	15%
State	7%
Other	7%
Unknown	4%

**PhD (n = 59)**



Category	Percentage
Academic	56%
Federal	29%
Private	10%
Other	2%
Unknown	2%
State	1%

\* first job or next degree program

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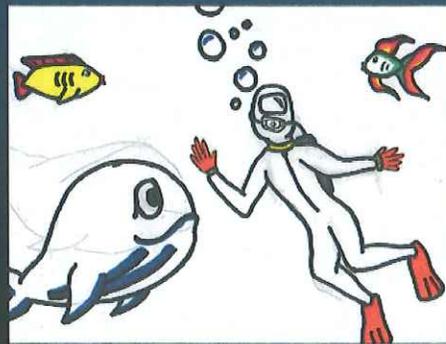
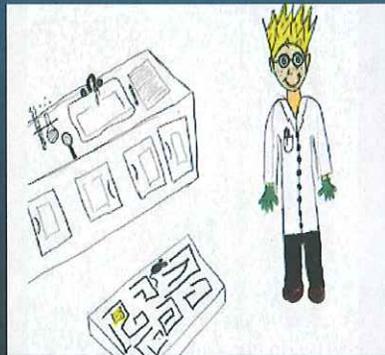
## PERFECT: GK-12

- Pairs our graduate students with regional STEM teachers
- Partner schools:
  - Booker T. Washington Middle School (Newport News)
  - Page Middle School (Gloucester County)
  - York High School (York County)
  - Chesapeake Bay Governor's School (Glenns/Tappahannock)
- Our students improve their communication and teaching skills while enriching STEM content and instruction for their K-12 partners



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## Changing perceptions



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## Undergraduate Curriculum and Minor in Marine Science

- Marine Science – a great way to draw talented students to STEM education and training
- Complements the strong disciplinary training of W&M basic science majors
- Minor is a collaborative effort between A&S and School of Marine Science




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## K-12 Education (examples)

- “Teach the Teachers”
- BRIDGE website: teacher-approved marine education resources, sponsored by NOAA Sea Grant and the National Marine Educators Association
- NSF’s GK-12
- Bay Watershed Education and Training (B-WET) Program reach over 4,000 students in local counties
- Summer Camps for Grades 1-8





**BRIDGE**  


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## Stakeholders (examples)

- **Marine Advisory Services** – commercial and recreational fisheries, sustainable fisheries, tourism (maritime festivals, coastal blueways), economic analysis
- **Center for Coastal Resources Management** – tidal shoreline management, living shorelines, recurrent flooding, beach and dune management
- **Coastal Training Program** – habitat restoration, water quality, sediment remediation





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## Public Education and Outreach - 2012

- On campus – 65 events – 4700 attendees
- Off campus – 48 events – 3725 attendees








## For more information:

- <http://www.vims.edu>
- <http://www.vims.edu/education/index.php>
- <http://www.vims.edu/public/index.php>
- [http://www.vims.edu/education/technical\\_training/index.php](http://www.vims.edu/education/technical_training/index.php)