

WHOI SG

WOODS HOLE SEA GRANT
PROGRAM
2010 NSGO REVIEW

Mike Liffmann

WHOI Sea Grant program area ^{WHOI SG}

2



WHOI Program Management

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3

□ Management Team

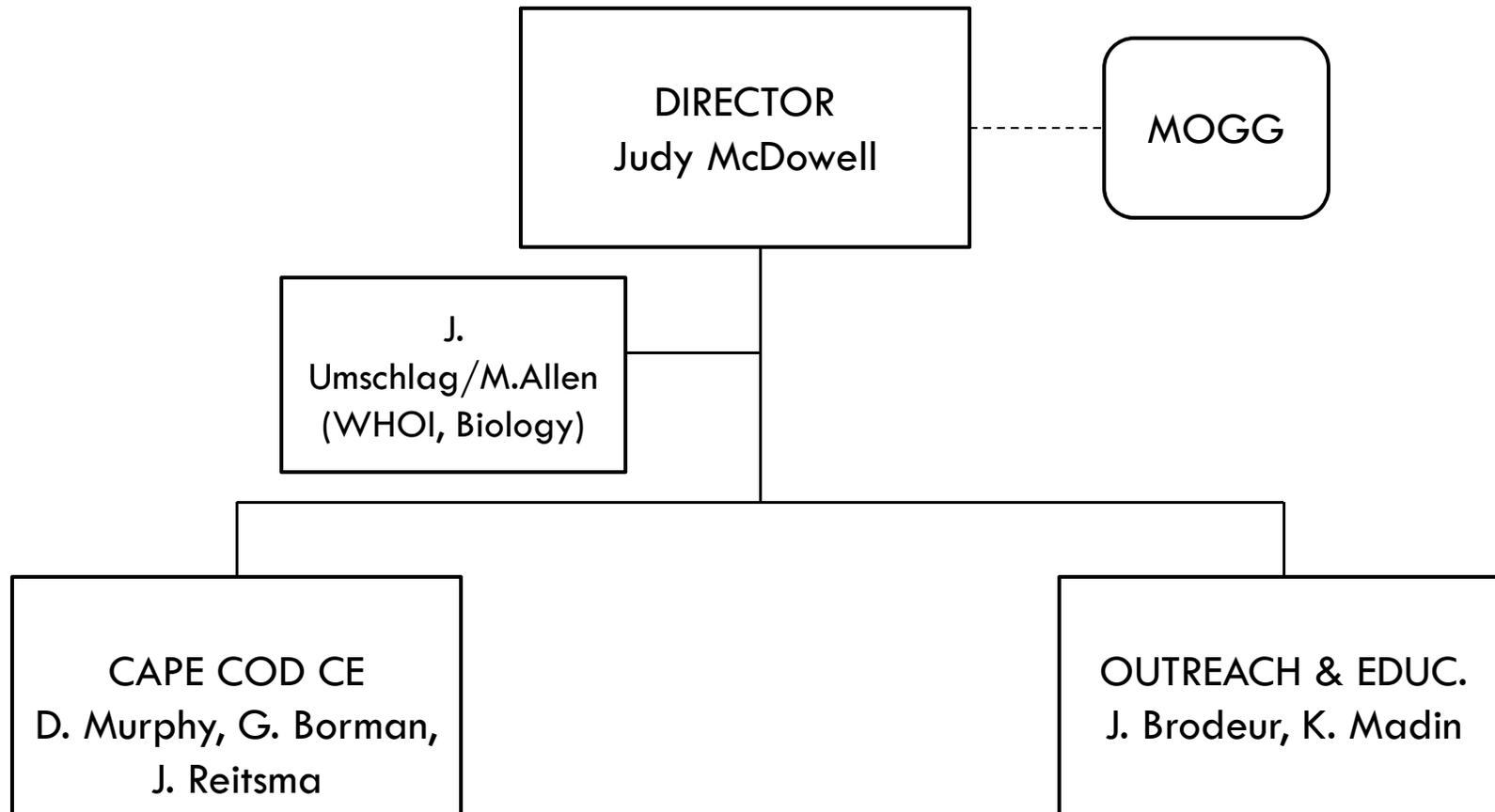
- Director, Judith E. McDowell, (0.25 FTE)
- Extension Leader, Diane Murphy, (1.0 FTE)*
- Communicator, Jeffrey Brodeur (1.0 FTE)
- Educator, Kate Madin (0.5 FTE)
- Coastal Processes Specialist, Greg Berman (1.0 FTE)*
- Marine Program Specialist, Josh Reitsma (1.0 FTE)*

* Sub-contract with Cape Cod Cooperative Extension

WHOI Organizational Chart

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4



WHOI Sea Grant Extension Program

5

- “...primarily directed toward applied research, technology demonstration projects and transfer and public outreach to...southeastern Massachusetts.”
- Guided by and progress monitored by MOGG
- Leader-Diane Murphy (Aquaculture specialist); also Joe Reitsma (Marine Program specialist) and Greg Berman (Coastal Processes specialist)
- WHOI subcontracts with Cape Cod CE for \$146K of \$161K annual extension budget

WHOI Advisory Board(s)

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6

- Marine Outreach Guidance Group (MOGG) serves as advisory committee
- Comprised of 19 individuals representing research, academia, industry, the public media, government agencies
- Role includes total program oversight.

MOGG membership

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7

- **William Burt**, Cape Cod Cooperative Extension
- **Jack Clarke**, Massachusetts Audubon Society
- **Andrew Cummings**, Wash-A-Shore Oyster Ranch
- **Shelley Dawicki**, NOAA/NMFS/NEFSC
- **Rich Delaney**, Provincetown Center for Coastal Studies
- **John Farrington**, Graduate Dean, UMASS-Dartmouth, SMAST
- **Mike Fogarty**, National Marine Fisheries Service, Research Scientist
- **Bob Kennedy**, Maria Mitchell Association
- **Ted Keon**, Chatham Coastal Resources Department
- **Jim Mahala**, Massachusetts Department of Environmental Protection
- **Steve McKenna**, Massachusetts Coastal Zone Management
- **Cheryl Miliken**, Falmouth High School Teacher
- **Monica Mullen**, Office of Senator Therese Murray, MA State Senate
- **Judith Pederson**, Massachusetts Institute of Technology Sea Grant Program
- **Heinz Proft**, Harwich Department of Natural Resources
- **Rob Thieler**, U.S. Geological Survey, Research Scientist
- **Mindy Todd**, Cape & Islands NPR, WCAI-WNAN
- **Megan Tyrrell**, Cape Cod National Seashore
- **Chris Weidman**, Waquoit Bay National Estuarine Research Reserve, Research Scientist

Institutional Setting

8

- The Woods Hole Sea Grant Program is located in the Biology Department (one of five) at the Woods Hole Oceanographic Institution.
- SG Director Judith (Judy) McDowell is also the current chair of the Biology Department.
- The program reports directly to WHOI's Executive Vice President and Director of Research, Dr. Laurence Madin.

WHOI Sea Grant Plan – Estimated

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4-yr Budget Allocation by Focus Area

National Focus Area	Focus Area from Program Strategic Plan	Estimated Level of Effort of Federal, Match and Leveraged (%)	Estimated Level of Effort of Federal and Match (\$)	Estimated Level of Effort of Leveraged (\$)
Safe & Sustainable Seafood Supply	Fish.&Aqua.	30	\$1.8M	\$2.4
Sustainable Coastal Development	Estu. & Coastal Processes	20	1.2M	600K
Healthy Coastal Ecosystems	Env. Techno.	20	1.2M	800K
Hazard Resiliency in Coastal Communities	Estu. & Coastal Processes	20	1.2M	600K
Other	Out. & Educ.	10	600K	600K
Total		100	\$6.0M	\$5.0M

Performance Measure/Outcome ^{WHOI SG}

Highlights

10

- Restoration programs for Bay scallops
- Enhancement of oyster settlement and shoreline protection
- Better management of shellfish resources
- Disease and water quality monitoring networks
- Mitigation plans for natural hazards and sea level rise

Major Partners

11

- Cape Cod Cooperative Extension—sub-contract
- MIT Sea Grant and other regional SG programs
- MA CZM, Waquoit Bay NERR
- Shellfish industry
- U.S. Geological Survey, Woods Hole Branch
- Massachusetts Association of Conservation Commissions

Network Activities – 2008/2009 WHOI SG

12

- Limited national participation – McDowell past member of SGA Executive Committee, National Media Relations Committee, and PAT Evaluation Committee
- Regional participation in research projects and close working relationship with MIT Sea Grant.

2010 RFP Process

13

- “Individuals or groups within the scientific community initiate the development of the research program.” (Omnibus Proposal, 2010-12)
- Priorities—fisheries & aquaculture, estuarine & coastal processes, marine policy, outreach and education
- 52 pre-proposals reviewed by five-person panel of technical and extension specialists; 23 recommended for further consideration; 3-5 external reviewers per evaluation
- Six-person Technical Review Panel recommended funding of 12 projects

Program Metrics – 2008/2009 Awards and Honors

14

- National Sea Grant Law Center, "Development of a Course to Enhance Understanding of Wetlands Protection Laws and Legal Authority of Coastal Conservation Commission in Massachusetts", collaboration with the Massachusetts Association of conservation Commissions, Judith McDowell, Principal Investigator.

- National Sea Grant Law Center, "Effectively Managing Coastal Floodplain Development: Using Case Studies on Cape Cod, Massachusetts, to Develop a National Model Floodplain Bylaw", Judith McDowell and James O'Connell, Principal Investigators.

2008/2009 Highlights of Metrics^{WHOI SG}

15

- Total 30 indiv; 4.77 FTEs SG and 2.50 FTEs match and non-SG
- # and amount of PD projects—5 and \$8K
- Leveraged funds—3 projects and ~\$2.4M
- 49 partnerships

2008/2009 Program Impacts (cont.)

- Woods Hole-Sea Grant helped develop a quantitative measure of shellfish habitat assessment and worked collaboratively with Cape Cod natural resource managers to demonstrate the utility of this tool in guiding management decisions. **Impact:** This assessment tool has been adopted by natural resource managers in 4 municipalities and demonstrations have been requested in three other towns.
- Woods Hole-Sea Grant researchers have developed molecular probes that differentiate and enumerate the species responsible for harmful algal blooms (HABs). The probes are used to rapidly characterize bloom conditions and the potential threat of toxin accumulation in shellfish stocks. **Impact:** The probes have been commercialized by Saigene, Inc., and were very effective in predicting extensive red tide conditions experienced off the New England coast.

2008/2009 Program Impacts (cont.)

17

- Woods Hole-Sea Grant has provided ongoing monitoring of shellfish diseases, including a coastal survey of the most common oyster diseases and the quahog disease QPX. Samples were collected from over eleven locations. **Impact:** Timely knowledge of the status of diseases allowed natural resource managers and shellfish farmers to increase harvest, helping avert financial losses in excess of \$50,000.
- Woods Hole-Sea Grant routinely provides technical analyses to local boards and commissions on a variety of projects proposed on or adjacent to coastal landforms before regulatory and planning decisions are made. **Impact:** Dozens of coastal dunes and coastal banks were proposed to be altered in ways that would have degraded their functions. Woods Hole Sea Grant's pre-consultation process ensures that the natural and beneficial functions of coastal landforms are sustained.

2008/2009 Program Impacts (con't)^{WHOI SG}

18

- Sea Grant worked with local natural resource managers to develop, install and maintain an innovative method of bay scallop restoration: fenced 'corrals' to serve as micro-spawning sanctuaries. **Impact:** Three towns deployed and continue to maintain these fenced areas, with over 10,000 bay scallops surviving to date.

Best Management Practices

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19

- ❑ Southeastern Massachusetts Shellfish Research Farm Network
- ❑ Integrated shellfish research and extension efforts
- ❑ Coastal Training Program, delivering management and information needs in collaboration with MA CZM and WBNERR
- ❑ Training Course for Conservation Commissioners with online resources
- ❑ Shellfish Aquaculture Course
- ❑ Coordinated RFPs with other SG programs in the Northeast to facilitate regional projects