Fisheries grant enables jump in Virginia oyster production

Spat on shell boosts return for farmers

Purple Seafood exemplifies the trajectory of the oyster aquaculture industry in Virginia and the unique partnership between the seafood industry and the Marine Advisory Services (MAS) that has helped fuel that growth.

Thanks to MAS’ Fisheries Resource Grant Program (FRG), growers in Virginia have been exploring ways to expand the season, reduce labor costs, and improve profit.

The grant program, funded annually by the State of Virginia legislature since 1999, offers grants and technical assistance and over the last decade the program has funded nearly $900 thousand worth of projects related to oysters.

Rich Harding of Purple Seafood on the Little Wicomico River in Virginia’s Northern Neck area has been researching “spat on shell” (SOS) production with the support the MAS to improve harvest volumes.

“When we get an average set like this -- with highs like this one and lows maybe at 4 or 5 strike per shell,” Harding explains, “we’ll likely get a return of one and a half or two bushels of market oysters for every bushel of
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Executive Summary

The Virginia Fishery Resource Grant Program (VFRGP) enables members of Virginia's seafood industries to develop ideas to protect and enhance the Commonwealth's coastal and marine resources. Since its inception in 1999, the annually funded program has supported 115 projects, five of which were approved to start in 2015. These projects enable members of seafood industries to pursue ideas for increasing efficiency and sustainability that will benefit the entire industry, without personally bearing the cost and high risk. The VFRGP is coordinated by Virginia Institute of Marine Science, Marine Advisory Services, in partnership with Virginia Sea Grant Marine Extension Program, and operates with the aid of a VFRGP Advisory Board.

Background

Since its inception, the program has funded 115 individual one-or two-year proposals.

VFRGP was initiated by the Virginia Legislature (House Bill No. 1634) during the 1999 session to “protect and enhance the Commonwealth’s coastal fishery resource through the awarding of grants in four areas:”

1. New fisheries equipment or gear;
2. Environmental pilot studies on issues including water quality and fisheries habitat;
3. Aquaculture or Mariculture of marine-dependent species; and
4. Seafood technology.

To be eligible for consideration, VFRGP proposals must involve Virginians who are active participants in a seafood industry. Involving the seafood industry (1) makes use of the experience and ideas of those who work closely with the Commonwealth’s coastal and marine resources and (2) enables these individuals to develop and pursue improvements without personally bearing the cost and high risk to provide a shared industry benefit. Members of the seafood industry include those involved in commercial fishing activities related to coastal or offshore fishery resources, aquaculture/mariculture, or the processing or handling of fishery products.

Implementation

VFRGP is managed by an Advisory Board (See Appendix A). Funds are provided to Virginia Institute of Marine Science’s Marine Advisory Services (VIMS MAS). Availability of grant funds is advertised through press releases (See Appendix B) and a Request for Proposals (See Appendix C) that is distributed through developed list of industry members who have elected to receive updates about the VFRGP program as well as other channels. Proposals evaluated by members of the Advisory Board and outside reviewers, following the Principles of Operation (See Appendix D). At the end of each project, VFRGP receives a completion report. The results of those projects are used to produce informational and educational publications for distribution to industry. Additionally, project reports and results are presented at industry meetings and trade shows when appropriate. All programmatic reports are available on the VFRGP website, www.vims.edu/map/frg.

Program implementation is coordinated by Mr. Thomas Murray, Associate Director of VIMS MAS and Leader of the Virginia Sea Grant Marine Extension Program. Staff of VIMS MAS is responsible for day-to-day management of VFRGP. The day-to-day management requires a small portion of the appropriated funds to partially support salary and operating costs, as foreseen by the enabling legislation.

This implementation structure is in accordance with the legislation that established the VFRGP.

Program Activity and Improvement

VFRGP Advisory Board conducted a conference call during 2015 (due to meeting cancellation because of inclement weather). The meeting focused on the review of proposals submitted in response to public solicitations. Additionally, the Advisory Board meeting provided feedback and input with which to enhance overall program effectiveness. Improvements related to developing program informational materials, media exposure, and fishing industry outreach were implemented in 2015.

The Advisory Board again endorsed holding a series of public proposal development workshops at locations
throughout coastal Virginia so that all potential participants may learn about the VFRGP. Such public meetings are held between the issuance of the call for proposals and the proposal due date. Additionally, numerous individual meetings are held with industry to discuss the VFRGP and specific project ideas.

**Fiscal Summary Statement**

Funds appropriated by the Legislature for 2015 totaled $159,579 for VFRGP activity in FY 2015 proposal cycle.

Of the $159,579 available for new VFRGP project awards in FY 2015, five new projects were approved and initiated totaling $33,276. In addition to the FY 2016 appropriation of $159,579 prior year carryover funds bring the level of funding available to support the FY 2016 proposal cycle to $285,882.

Any funds remaining after the selection of new projects in the March, 2016 proposal review will be carried forward, as called for in the enabling legislation, for use in combination with year 2016 appropriated funds, to support new projects which will be submitted in response to a Request for Proposals that is to be released in summer/fall 2016.

**Summary of 2015 Funding Period**

As a result of public notifications and follow-up workshops, fishing industry members submitted a total of 9 complete VFRGP proposals. The proposal topics were quite diverse, and each project was subjected to three expert reviews from outside the state. Once the expert reviews were received, a project evaluation and selection meeting was held, and the Advisory Board selected five new projects for funding or for further development and negotiation.

**Projects Approved in 2015**

Funding: $2,486. Completed.

2015-02. “Phase II Protecting Juvenile Flounder from Becoming a Crab Pot By-catch.” Michael W. Joslin, Nansemond River Seafood. (Windsor, VA)
Funding: $6,745. Completed.

2015-05. “Mortality Reduction of Blue Crab (Callinectes sapidus) During Molting Stage of Soft Crab Production.” William W. Bailey. (Saxis, VA)
Funding: $11,392. Ongoing.

Funding: $3,653. Completed.

Funding: $9,000. Ongoing.
Previous Projects, 1999-2014

2014-01. “Protecting Juvenile Flounder from Becoming a Crab Pot By-Catch.”
Michael W. Joslin, Nansemond River Seafood. (Windsor, VA)
Funding: $6,000. Completed.

George E. Trice. (Poquoson, VA)
Funding: $14,774. Completed.

George Trice. (Poquoson, VA)
Funding: $21,348. Completed.

J.E. Headley. (Kinsale, VA).
Funding: $5,775. Completed.

Virginia Seafood Council. (Yorktown, VA)
Funding: $66,608. Completed.

Green Environments, LLC. (Portsmouth, VA)
Funding: $9,000. Completed.

Atlantic Red Crab Company. (Norfolk, VA)
Casey’s Seafood. (Newport News, VA)
Graham and Rollins, Inc. (Hampton, VA)
Funding: $33,900. Completed.

2013-01. “Laminated Oyster Tong Shafts.”
Philip N. Shahan. (Reedville, VA)
Funding: $15,000. Cancelled.

George Trice. (Poquoson, VA)
Funding: $19,706. Completed.

2013-09. “Electronic Harvest Reporting Training and Outreach.”
Ken Smith, Virginia Waterman’s Association. (Heathsville, VA)
Funding: $21,991. Completed.

Meade Amory, L.D. Amory Company, Inc. (Hampton, VA)
Funding: $15,000. Completed.

Andrew Myles Cockrell, Little Wicomico Oyster Company. (Heathsville, VA)
Funding: $10,750. Ongoing.

2014-01. “Extension of Spat on Shell Season.”
Shores & Ruark Seafood Company. (Urbanna, VA)
Duration: 03/2012-12/2012.
Funding: $11,000. Completed.

George E. Trice. (Poquoson, VA)
Duration: 03/2012-6/2012.
Funding: $35,015. Completed.

L.D. Amory Company, Inc. (Hampton, VA)
Duration: 06/2012-04/2013.
Funding: $15,000. Completed.
<table>
<thead>
<tr>
<th>Year</th>
<th>Project Description</th>
<th>Contractor</th>
<th>Location</th>
<th>Duration</th>
<th>Funding</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-08</td>
<td>“Reduction of Crab Mortality in Seed Cages.”</td>
<td>Purcell’s Seafood, Inc. (Burgess, VA)</td>
<td></td>
<td>04/2012-12/2012</td>
<td>$2,580. Completed</td>
<td></td>
</tr>
<tr>
<td>2012-11</td>
<td>“Feasibility of a Recirculating Aquaculture System for Early Larval Culture of <em>Crassostrea virginica</em>.”</td>
<td>Oyster Seed Holdings, Inc. (Grimstead, VA)</td>
<td></td>
<td>3/2012-12/2012</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>2010-08</td>
<td>“Analysis of Tie Downs on Gillnet CPUE, Selectivity, and Bycatch Composition.”</td>
<td>George Trice, Commercial Fisherman. (Poquoson, VA)</td>
<td></td>
<td>03/2010-05/2010</td>
<td>$29,026. Completed</td>
<td></td>
</tr>
</tbody>
</table>
Meade Amory, L.D. Amory Company. (Hampton, VA)
Duration: 07/2010-06/2011.
Funding: $37,000. Completed.

L.D. Amory Seafood Company. (Hampton, VA)
Funding: $74,640. Completed.

2009-07. “Characterization of By-catch in Virginia’s Spring Striped Bass and Analysis of Gear Alterations on CPUE and Bycatch Composition.”
George Earl Trice. (Poquoson, VA)
Duration: 03/2009-06/2009
Funding: $29,696. Completed.

A.J. Erskine, Cowart Seafood Corp. (Hampton, VA)
Funding: $13,401. Completed.

Richard B. Robins, Jr., Bernies Conchs. (Suffolk, VA)
Duration: 02/2009-06/2010.
Funding: $21,758. Completed.

2008-03. “Hedingless Pound Net.”
William Haynie. (Reedville, VA)
Duration: 03/2008-10/2009.
Funding: $19,459. Completed.

2008-04. “Commercialization Spat-on-Shell Production in Virginia.”
Thomas E. Kellum, Virginia Shellfish Growers Association. (Weems, VA)
Duration: 05/2008-05/2009.
Funding: $50,300. Completed.

Scott Troy Hainley. (Wake, VA)
Funding: $12,040. Completed.

George Earl Trice. (Poquoson, VA)
Duration: 03/2008-04/2009.
Funding: $49,329. Completed.

Frances Porter, Virginia Seafood Council. (Newport News, VA)
Funding: $26,530. Completed.

Meade Amory, L.D. Amory Seafood Company. (Hampton, VA)
Duration: 03/2008-02/2009.
Funding: $50,000. Completed.

Robert Weagley. (Providence Forge, VA)
Funding: $17,188. Completed.

Kenneth G. Smith, Virginia Waterman’s Association. (Heathsville, VA)
Duration: 05/2008-09/2009.
Funding: $4,055. Completed.

A.J. Erskine, Bevans Oyster Company & Cowart Seafood Corporation. (Kinsale, VA)
Duration: 03/2007-06/2012.
Funding: $19,000. Completed.

Frank James West. (Hayes, VA)
Funding: $12,146. Cancelled.

Robert Weagley. (Providence Forge, VA)
Funding: $13,916. Completed.
2007-04. “Characterization of Sturgeon and Other Regulatory Discards in Virginia’s Spring Striped Bass and Other Gillnet Fisheries.”
George Earl Trice. (Poquoson, VA)
Funding: $33,031. Completed.

Frances Porter, Virginia Seafood Council. (Newport News, VA)
Funding: $24,064. Completed.

Meade Amory, L.D. Amory Company. (Hampton, VA)
Funding: $57,000. Completed.

Ronald L. Jett, Smith Point Seafood. (Reedville, VA)
Funding: $40,500. Completed.

S. Stickler, Rappahannock Community College. (Warsaw, VA)
Funding: $6,700. Completed.

Casey’s Seafood, Inc. (Newport News, VA)
Funding: $17,732. Completed.

L. Haynie. (Reedville, VA)
Duration: 05/2006-05/2008.
Funding: $27,000. Completed.

Frances Porter, Virginia Seafood Council. (Newport News, VA)
Funding: $50,435. Completed.

2006-09. “Assessment of Sturgeon Bycatch, Bycatch Mortality and Other Regulatory Discard Mortality in Virginia Winter/Spring Gill Net Fisheries.” Year II.
Kelly Place. (Williamsburg, VA)
Funding: $52,039. Completed.

William Haynie. (Reedville, VA)
Funding: $19,995. Completed.

2005-03. “Feasibility Study on One-Year Grow-Out of Triploid Crassostrea ariakensis.”
Frances Porter, Virginia Seafood Council. (Newport News, VA)
Funding: $50,435. Completed.

Margaret Ransone. (Kinsale, VA)
Funding: $21,250. Completed.

Kelly Place. (Williamsburg, VA)

David C. Walker, FV Nelson Seafood. (Chincoteague, VA)
Funding: $8,300. Completed.

2004-03. “Intensive Culture of the Mudminnow (Fundulus heteroclitus) as Live Bait for Recreational Angling.”
Rudy Cashwell. (Eastville, VA)
Funding: $32,935. Terminated.

2004-07. “Sea Turtle Friendly Fish Trap.”
Emory Lewis, Jr. (Fleeton, VA)
Funding: $21,900. Completed.
Virginia Fishery Resource Grant Program

Wee Terry, Terry Brothers, Inc. (Willis Wharf, VA)
Funding: $30,380. Cancelled as a result of Tropical Storm Ernesto damage to facilities.

Matthew Bloxom. (Poquoson, VA)
Funding: $4,901. Completed.

2003-01. “Validation of IQF Freezing Process to Reduce Vibrio vulnificus to Non-detectable Levels in Raw Oysters.”
Ron Bevins & Lake Cowart. (Kinsale, VA)
Funding: $12,000. Completed.

2003-03. “Oyster Farming Cooperative Program.”
Shawn Stickler. (Wake, VA)
Funding: $24,500. Completed.

2003-06. “Identifying the Catch Efficiency and Incidental Marine Bird Entanglements Associated with Internally Floated and Weighted Lines on Gillnets.”
Millard Bryant. (Montross, VA)
Funding: $490. Not initiated at request of applicant.

Frances Porter & Tom Kellum. (Newport News, VA)
Funding: $57,976. Completed.

Frances Porter & Tom Kellum. (Newport News, VA)

2002-01. “By-catch and Discard Reduction Concerning Selectivity and Overall Design in the Black Sea Bass Trap Fishery.”
James E. Dawson. (Chincoteague, VA)
Funding: $16,100. Completed.

Curtis B. Jenkins. (Warsaw, VA)
Duration: 05/2002-12/2003.
Funding: $4,445. Completed.

Robert W. Shanley. (Cape Charles, VA)
Funding: $38,400. Completed.

2002-07. “Development of Grow Out Techniques Utilizing the Water Column in Growing a Non-Native Oyster (Crassostea ariakensis).”
Andy Drewer. (Saxis, VA)
Funding: $22,008. Completed.

2002-09. “Tenderizing Illex Squid So It Can Be Marketed as Food Rather Than Bait.”
Sam Daniels, Wanchese Fish Co. (Suffolk, VA)
Approved for funding but withdrawn at Applicant’s Request.

2002-20. “Growth Rate of Ariakensis Oysters in Different Environments.”
Richard Wade Harding, Purcell’s Seafood Inc. (Burgess, VA)
Funding: $10,854. Completed.

Johnny Graham, Graham & Rollins Inc. (Hampton, VA)
Funding: $29,770. Completed.

Gustavo Calvo, Sweet Amalia Oyster Farm. (Hayes, VA)
Funding: $4,650. Completed.

Willie Andrew Offield. (West Point, VA)
Funding: Not initiated.
Tripp Smith, Shores and Ruark Seafood Co. (Sharps, VA)
Funding: $34,810. Completed.

2002-29. “Modular Oil Absorbent Bilge Pump.”
Darryl Lilliston, Darryl Lilliston Seafood (Wachapreague, VA)
Funding: $13,117. Completed.

Lake Cowart, Cowart Seafood. (Lottsburg, VA)
Funding: $34,600. Completed.

Jeff Hammer. (Acomac, VA)
Funding: $18,575 Completed.

Wec Terry, Terry Brothers, Inc. (Willis Wharf, VA)
Funding: $17,919. Completed.

Stuart O’bier, O’bier Seafood. (Callao, VA)
Funding: $43,500. Completed.

W.S. Magann. (Chesapeake, VA)
Duration: 03/2001-05/2002.
Funding: $17,125. Completed.

2000-03. “Raising Spot (Leiostomus xanthurus) Commercially for Sale as Live Bait in the Commonwealth of Virginia.”
John Vigliotta. (Gloucester, VA)
Funding: $19,827. Completed.

2000-05. “Control of Mud Blister Formation in Oysters.”
Dennis Gryder. (Hampton, VA)
Funding: $1,338. Completed.

Christian Hager. (Hayes, VA)
Funding: $16,496. Completed.

Jack White. (New Point, VA)
Duration: 02/2001-12/2002.

2000-10. “Portable Anchor Trap Net Designed with Large Mesh to Harvest Cownose Rays.”
Douglas F. Jenkins, Sr. (Warsaw, VA)
Funding: $9,883. Completed.

Bradley M. Knight. (Saxis, VA)
Funding: $3,622. Cancelled, incomplete due to damage from Hurricane Isabel.

Timothy B. Daniels. (Newport News, VA)
Duration: 02/2001-12/2003.
Funding: $44,900. Completed.

Diana Gadwill. (Kinsale, VA)
Funding: $820. Completed.

1999-02. “Peeler Pot By-catch Reduction.”
B. Knight. (Saxis, VA)
Funding: $1,527. Completed.

W.S. Magann. (Chesapeake, VA)
Funding: $15,000. Completed
Ward Oyster Company. (Ware Neck, VA)
Duration: 02/2000-06/001.
Funding: $19,827. Completed.

C.H. Hager. (Hayes, VA)
Funding: $10,315. Completed.

R. Bloxom and J.T. Gardner. (Wachapreague, VA)
Funding: $12,700. Completed.

A.T. Leggett. (Wicomico, VA)
Funding: $21,851. Completed.

1999-24. “Feasibility of Using Croakers to Make Large Fillets or Fish Squares.”
Wanchese Fish Company. (Hampton, VA)
Funding: $19,500. Completed.

W. Cosby. (New Kent, VA)
Funding: $18,470. Completed.

L. Crewe. (Newport News, VA)
Funding: $7,400. Completed.

J. Hammer. (Accomac, VA)
Funding: $29,700. Completed.

1999-37. “Comparative Study of Oyster Seed from Northern and Southern Hatcheries.”
J.W. Merritt. (Chincoteague, VA)
Funding: $25,026. Completed.
Media Coverage


   Retrieved from: http://vaseagrant.vims.edu/developing-sustainable-red-crab-industry-virginia/


Quotes

“We biologists may think we know a lot about fish, but it’s the watermen out there who know where the fish are and what their habits are.”
   Albert Spells, USFWS

“The FRG is a great way for those in the seafood industry to try a new idea or new concept without committing a lot of time and effort to a research project.”
   Mike Oesterling,
   Shellfish Growers of Virginia

“There are other benefits to doing this work with the fishermen, the data are helpful with stock assessments.”
   Albert Spells, USFWS

“Thank you for the opportunity to craft this ‘poor man’s upweller’ - it will be such a help to the small grower.”
   Jennifer Palazzo, FRG 2015

“We changed from trying to stop the endangered listing to showing we could still fish and not catch these sturgeon.”
   George Trice, FRG 2013

“This opportunity has made me more proficient than I expected!”
   Jennifer Palazzo, FRG 2015
Appendices to the Annual Report of Activities 2015
Appendix A

Virginia Fishery Resource Grant Program
Advisory Board

**VFRGP Manager**
Tom Murray, Associate Director for Advisory Services  phone: 804-684-7190
Virginia Institute of Marine Science  fax: 804-684-7161
P.O. Box 1346  email: tjm@vims.edu
Gloucester Point, VA 23062

**For Virginia Sea Grant Program**
Dr. Troy Hartley, Sea Grant Director  phone: 804-684-7248
Virginia Institute of Marine Science  fax: 804-684-7269
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Gloucester Point, VA 23062

**For Virginia Marine Resources Commission**
Dr. James Wesson  phone: 757-247-2121
Virginia Marine Resources Commission  fax: 757-247-8101
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Newport News, VA 23607

**For Virginia Institute of Marine Science**
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for Research and Advisory Services  fax: 804-684-7097
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Eastville, VA 23347

**For the Watermen's Associations**
Marshall Cox  phone: 757-373-2990
6428 Rocky Lane  email: mrscox2711@earthlink.net
Cape Charles, VA 23310

Pete Nixon  phone: 804-466-8940
664 Ingleside Road  email: pdnixon1950@gmail.com
Norfolk, VA 23502
Sample VFRGP News Release

For More Information, Contact:
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Virginia Institute of Marine Science
Virginia Sea Grant Marine Advisory Program
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Gloucester Point, VA 23062
Phone (804) 684-7173
Fax (804) 684-7161
http://www.vims.edu/adv/frg/

NEWS RELEASE

December 1, 2015

MEETINGS FOR VIRGINIA WATERMEN TO LEARN ABOUT GRANTS AVAILABLE

The VIMS Advisory Services is accepting applications to compete for funding as part of the Virginia Fishery Resource Grant Program (VFRGP). The Virginia Legislature created the Fishery Resource Grant Program to “protect and enhance the Commonwealth’s coastal fishery resource through the awarding of grants.”

Basic to the program is the belief that people in the commercial fishing industry often have valid ideas to enhance and protect fisheries, but may lack the financial resources to experiment with innovations. The Fishery Resource Grant Program invests in such ideas generated by the fishing public through fair and competitive methods.

The legislation established four priority areas for funding as follows:

- **New Fisheries Equipment and Gear** - focus on the development of less environmentally destructive gear, by-catch reduction, and more effective ways to handle catch.

- **Environmental Pilot Studies** - focus on ways to restore damaged habitat, create new habitat, prevent habitat impairment, or reduce impact from fishing or aquaculture activities.

- **Aquaculture/Mariculture** - focus on ways to develop criteria and assessment for permits, increase return from investment in culture activities, or introduce new species to the existing aquaculture list to broaden participation in commercial aquaculture.

- **Seafood Technology and Utilization** - develop value-added products from existing production, the utilization of underused or new fishery resources, develop models for total quality system management programs, or increase returns in the seafood industry by improving packaging and handling.
**Eligibility** - To be eligible for funding under the Fishery Resource Grant Program, each proposal must substantially involve Virginians who are actively involved in a fishing industry (which is defined as persons involved in commercial activities relating to fishery resources, aquaculture/mariculture, or the processing or handling of fishery products).

Proposals submitted by persons not involved in a fishing industry must have 1) substantial involvement of Virginia fishers as defined above, and 2) include written endorsements from persons or organizations representing fishing industries supporting the project. The work can involve both inshore and offshore fisheries. All proposals submitted within the limits of the Guidelines for Submission will be accepted and reviewed for technical merit and the ability to address one or more of the specific priorities listed above.

**Proposal Submission** - To be considered for funding in this solicitation, a signed application must be postmarked no later than January 29, 2016. Mailed copies should be sent to: Tom Murray, VFRGP Manager, Marine Advisory Program, Virginia Institute of Marine Science, P.O. Box 1346, Gloucester Point, Virginia 23062. No applicant may submit more than 2 proposals for this cycle. Fax ed or electronic proposals will not be considered.

A series of workshops will be held to explain the grants program, including eligibility and funding priorities, how to complete the application form, and where to go for more help when developing a grant proposal package. The time and location of these workshops are listed below:

**Tuesday, December 8, 2015 from 6:00 to 8:00 pm**  
Classroom 150, Eastern Shore Community College  
29300 Lankford Highway  
Melfa, VA 23410

**Wednesday, December 9, 2015 from 6:00 to 8:00 pm**  
Director’s Conference Room, Watermen’s Hall, VIMS Campus  
1375 Greate Road  
Gloucester Point, VA 23062

The Request for Proposals and application forms are available on-line at: http://www.vims.edu/adv/frg. To request a copy of the application package contact Dianne Roberts at (804) 684-7173.

###
The Marine Advisory Program (MAP) at the Virginia Institute of Marine Science (VIMS) is accepting applications to compete for funding as part of the Virginia Fishery Resource Grant Program (VFRGP). The Virginia Legislature created the Fishery Resource Grant Program to “protect and enhance the Commonwealth’s coastal fishery resource through the awarding of grants” in four areas: 1) new marine fisheries equipment or gear; 2) environmental pilot studies on issues including water quality and fisheries habitat; 3) aquaculture or mariculture of marine-dependent species; and 4) seafood technology.

A basic principle of the VFRGP is that people in the industry often have valid ideas for enhancing and protecting fisheries, but they lack the financial resources to experiment with innovations. The VFRGP invests in ideas generated by the fishing public through fair and competitive methods.

The legislation established the four priority areas noted above. Specific priorities within the four topic areas have been approved by the VFRGP Advisory Board and are noted below. All proposals submitted within the limits of the Guidelines for Submission will be accepted and reviewed for technical merit and the ability to address one or more of the specific priorities listed.

**New Fisheries Equipment and Gear** – This priority area seeks proposals that focus on the development of less environmentally destructive gear, bycatch reduction, improvements in gear selectivity, more effective ways to handle catch and the development of information leading to fishery management plans for key species and groups.

**Environmental Pilot Studies** – This priority area seeks proposals that focus on ways to restore damaged habitat, create new habitat, prevent habitat impairment or reduce impact from fishing or aquaculture activities.

**Aquaculture/Mariculture** – This priority area seeks proposals that focus on ways to develop criteria and assessment for permits, increase return from investment in culture activities or introduce new species to the existing aquaculture list to broaden the participation in commercial aquaculture.

**Seafood Technology and Utilization** – This priority area seeks proposals that develop value-added products from existing production, the utilization of underused or new fishery resources, develop models for total quality system management programs or increase returns in the seafood industry by improving packaging and handling.
Eligibility

To be eligible for funding under the VFRGP, each proposal must substantially involve Virginians who are actively involved in a fishing industry (defined as persons involved in commercial activities relating to fishery resources, aquaculture/mariculture or the processing or handling fishery products). Proposals submitted by persons not involved in a fishing industry must have 1) substantial involvement of Virginia fishers as defined above and 2) written endorsements from persons or organizations representing fishing industries supporting the project.

Proposal Development

Competitive proposals are developed through discussions of ideas and partnering with interested groups and experts. Every applicant should consult with experts in the targeted priority area(s) and, where appropriate, develop a team of fishers and scientists to conduct the work. VIMS MAP specialists can help assemble a team. Non-fishers could improve chances of funding by collaborating with persons in a fishing industry for proposal development and design and by involving fishers in the execution of the study. VIMS MAP will be responsible for determining the eligibility of each proposal.

Application Forms

The application form at the end of this notice provides an outline for the proposal and additional pages should be used for providing information in the sections listed. Applicants should pay particular attention to items 12-17. These sections should describe the problem and rationale for proposing the research project (12), present the goals and objectives and the proposed work (13) and describe the work that is to be performed to meet the objectives (14). The next three sections should explain how the information gained from the work will help resolve the problem described (15), how the information developed will be transferred to others (16; please note that it is not enough to say the data will be given to VMRC or another agency) and who will be responsible for doing the work (17; letters confirming participation should be obtained from all cooperators).

A series of workshops will be held to explain the grant program, including eligibility and funding priorities, how to complete the application form and where to go for more help when developing a grant proposal package. The time and location of these workshops will be announced through press releases to the media and in selected newsletters. The workshop schedule is also included in this announcement.

Proposal Submission

To be considered for funding in this solicitation, a signed application must be delivered or postmarked no later than 5:00 pm, January 29, 2016. Mailed copies should be sent to: Tom Murray, VFRGP Manager; Marine Advisory Program, Virginia Institute of Marine Science, P.O. Box 1346, Gloucester Point, VA 23062. **No applicant may submit more than 2 proposals for this cycle.** Faxed or electronic proposals will not be accepted.

To ensure competitive project selections, VFRGP will subject all proposals to a series of reviews by a panel of experts from outside of Virginia. The VFRGP Advisory Board (see appended list of Advisory Board members) will also provide proposal evaluations to the selection process. VFRGP will make proposal selection decisions and funding agreements will generally be effective during the second calendar quarter of 2016.
Funding Priorities

The following list of potential research ideas has been reviewed and approved by the VFRGP Advisory Board and is provided as suggestions of the types of subjects that could be appropriate for proposals to the VFRGP. These are not intended as a complete listing of all possible projects; nor are the topics listed in order of importance. All proposals received by the submission deadline will receive equal treatment during the review process.

Potential research topics or issues include but are not limited to the following:

I. Inshore and Offshore Harvesting Sector Studies
   1. Reduce bycatch by technology development and education.
   2. Develop “environmentally friendly” gear.
   3. Develop more effective/efficient mechanisms for handling catch.
   4. Develop and evaluate mechanisms to release fish to increase their survival.
   5. Determine amounts of hook-and-release mortality for important recreational species.
   6. Increase efficiency/economic return of fishing.
   7. Develop bait and bait substitutes.
   9. Develop information leading to Fishery Management Plans for key species and groups.
  10. Develop new gear and/or improve current gear and/or document catch per unit effort (CPUE).
  11. Develop gear to improve selectivity of target species.

II. Environmental Pilot Studies
   1. Develop mechanisms to restore damaged habitat or create new habitat.
   2. Develop mechanisms to prevent habitat impairment.
   3. Reduce habitat impact from fishing activities.
   4. Develop recycling and collection programs for used fishing or aquaculture gear.
   5. Develop ways to monitor and evaluate habitat alterations or the impacts of aquaculture practices such as moving of seaside shellfish to the bayside.
   6. Determine environmental impact of fishing and processing activities.
   7. Assess effects of water quality and habitat alteration on fisheries production.

III. Aquaculture/Mariculture
   1. Increase return from investment in culture activities including the development of mechanical planting and harvesting technologies.
   2. Examine the potential for culture of new species and/or deep-water culture techniques for existing species such as clams and oysters.
   3. Determine environmental impacts of aquaculture operations.
   4. Improve the efficiency of growth, feeding and nutrition.
   5. Demonstrate the best husbandry practices for potential growers.
   6. Develop mechanisms for a network for technical monitoring of waters for levels of spat fall, food, predators, etc.
   7. Market research for aquaculture products.
   8. Develop parameters for apprentice program and training for career aquaculturists.
   9. Assess feasibility of augmenting commercially and recreationally important species through hatchery release.
  10. Assess regulations that impact aquaculture/mariculture such as submerged aquatic vegetation protection.
  11. Assess the potential of shellfish aquaculture to enhance wild populations.
  12. Provide the opportunity for watermen, including minorities, to diversify their businesses through aquaculture.
IV. **Seafood Technology particularly as it provides value added to the Commercial Blue Crab Fishery**
   1. Develop value-added products from existing or potential production.
   2. Increase returns in the seafood industry by improving packaging and handling.
   3. Develop models for total quality system management programs.
   4. Develop improvements in product quality.
   5. Develop mechanisms for reducing effluents and the environmental impacts.
   6. Develop alternative uses for processing byproducts.

**Contacts**

If you have an idea for a project, you may contact the following VIMS MAP specialists for assistance in writing your proposal or to request additional information. These people can also direct you to a research scientist who has expertise related to your project topic.

**VIMS MAP contacts include:**

- Tom Murray  804-684-7190  MAP Director, Marine Business
- Bob Fisher  804-684-7168  Commercial Fisheries/Seafood Technology
- Karen Hudson  804-684-7742  Commercial Shellfish Aquaculture Specialist
- Dan Sennett  804-684-7669  Finfish Aquaculture
- David Rudders  804-684-7531  Data Collection/Analysis

**Virginia Fishery Resource Grant Program - Application Workshops**

Two workshops will be held to explain the VFRGP, including eligibility and funding priorities, how to complete the application form and where to go for more help when developing a grant proposal package. The time and location of these workshops is listed below:

**Tuesday, December 8, 2015**
6:00 to 8:00 pm
Eastern Shore Community College
(Classroom 150)
29300 Lankford Highway
Melfa, VA 23410

**Wednesday, December 9, 2015**
6:00 to 8:00 pm
Virginia Institute of Marine Science
(Director’s Conference Room, Watermen’s Hall)
1375 Greate Road
Gloucester Point, VA 23062
Appendix

Virginia Fishery Resource Grant Program – Advisory Board

VFRGP Manager
Tom Murray, Associate Director for Advisory Services
Virginia Institute of Marine Science
P.O. Box 1346
Gloucester Point, VA 23062
phone: 804-684-7190
fax: 804-684-7161
e-mail: tjm@vims.edu

For Virginia Sea Grant Program
Dr. Troy Hartley, Sea Grant Director
Virginia Institute of Marine Science
P.O. Box 1346
Gloucester Point, VA 23062
phone: 804-684-7248
fax: 804-684-7269
e-mail: thartley@vims.edu

For Virginia Marine Resources Commission
Dr. James Wesson
Virginia Marine Resources Commission
2600 Washington Avenue, Third Floor
Newport News, VA 23607
phone: 757-247-2121
fax: 757-247-8101
e-mail: jwesson@mrc.state.va.us

For Virginia Institute of Marine Science
Dr. Mark Luckenbach, Associate Dean
for Research and Advisory Services
Virginia Institute of Marine Science
P.O. Box 1346
Gloucester Point, VA 23062
phone: 804-684-7108
fax: 804-684-7097
e-mail: luck@vims.edu

For the Aquaculture Industry
Mike Peirson
P.O. Box 222
Eastville, VA 23347
phone: 757-678-7999
e-mail: thepeirsons@yahoo.com

For the Watermen’s Associations
Marshall Cox
6428 Rocky Lane
Cape Charles, VA 23310
phone: 757-373-2990
e-mail: mrscox2711@earthlink.net

Pete Nixon
664 Ingleside Road
Norfolk, VA 23502
phone: 804-466-8940
e-mail: pdnixon1950@gmail.com
Virginia Fishery Resource Grant Program

Application

1. Project title: __________________________________________________________________________________

2. Name of applicant: _____________________________________________________________________________

3. Company (if applicable): _________________________________________________________________________

4. Telephone: ____________________________________________________________________________________

5. Address: ______________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

6. Priority addressed by project (see list): _____________________________________________________________

7. Fishing license/permit number(s): __________________________________________________________________

8. Social security or federal tax ID number: _____________________________________________________________

9. Funding requested: ______________________________________________________________________________

10. Project dates: beginning: __________________________ completion: ________________________________

11. Other project participant(s), affiliation, address and phone:

[Note: Use additional pages as needed to respond to the items below.]

12. Give a brief summary of the situation or problem to be addressed.
13. What is the purpose (objectives) of the project?

14. What work do you intend to do, and how do you plan to accomplish it?

15. Explain how the expected results will address the problem and/or enhance fishery resources.

16. Explain how the expected results will be made available to the fishing industry.

17. Briefly outline who will be responsible for each aspect of the work plan (attach letters from cooperators outlining their participation).

18. Briefly summarize the qualifications of each participant.
19. Provide project budget and cost justification.

<table>
<thead>
<tr>
<th>ITEM/CATEGORY</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Personnel Costs (time x unit cost)</td>
<td></td>
</tr>
<tr>
<td>b. Travel (trip or mileage x unit cost)</td>
<td></td>
</tr>
<tr>
<td>c. Supplies</td>
<td></td>
</tr>
<tr>
<td>d. Equipment (items more than $500)</td>
<td></td>
</tr>
<tr>
<td>e. Contractual Services (itemize)</td>
<td></td>
</tr>
<tr>
<td>f. Other Costs (itemize)</td>
<td></td>
</tr>
<tr>
<td>g. Total Project Costs</td>
<td></td>
</tr>
</tbody>
</table>

20. Provide budget item justification and/or explanations.

Applicant Signature: ____________________________ Date: ___________
Virginia Fishery Resource Grant Program

Application Guidelines

1. Provide a title that summarizes the project.

2. Give the full name of the applicant; it will be used to issue payments for the project.

3. Give the name of your company or corporation if applicable, or the institution of your employment. If self-employed, say so.

4. Applicant’s complete telephone number including area code.

5. Mailing address for correspondence and mailing payments, etc.

6. Which priority are you addressing? The attached listing gives this year’s priorities under the four-program areas: equipment/gear, environment, aquaculture, and seafood.

7. Give fishing license or permit number(s), if applicable.

8. Social security or federal ID number is required for grant payments.

9. Total amount of funding requested (see budget section).

10. Give the date that you plan to begin work and the date that we can expect a completion report.

11. List all other personnel involved in the project and their affiliation. This includes all those who have a major responsibility for some aspect of the work.

**Use additional pages as needed to fully answer items 12 through 18**

12. Describe the nature of the situation or problem that your proposed work will address.

13. What is the purpose of your proposed work?

14. **This section is very important!** Please explain how, where and when you will conduct each work task. Explain how tests will be run and how the data will be analyzed. Describe the tests you plan to conduct, the surveys you will make and/or plans for making something. Your methodology must withstand questions about its validity and/or potential to yield the results you need to solve the purpose of your work (described in number 13 above).

15. Describe how the outcome of your proposed work will help address the problem described in number 12 above.

16. Describe how you plan to get the results of your work to other members of the fishing industry for their use. It is not enough to just discover something. It must also be usable. If you are going to rely on someone else to extend the results, be sure to have an agreement and arrange to cover those expenses.
17. Who is going to be responsible for what? Each participant (including the applicant) must be responsible for some part of the work. You must have letters of endorsement from other participants to confirm their participation in the project. For example, if personnel from VIMS will conduct the statistical analysis, then an agreement letter from VIMS is required.

18. Give a brief statement describing the experience of each participant and the applicant that qualifies them to do the tasks outlined above.

19. Carefully compute the funds needed (rounded to the nearest dollar) for all of the work described in the proposal. Be sure to include any subcontractors (budget item e.) for lab work, consultants, extension, services, etc. The funding for these grants does not permit indirect costs (overhead). Be sure to check your budget total figure.

20. Please justify the budget figures. For example: “We will need a deckhand for 150 hours @ $7/hour,” or “We will need to design and build a trawl that requires $1,200 for materials,” etc.

- **Be sure to sign the application:** Applications without a dated signature will be rejected as incomplete.

- **Mail the signed original to:** Tom Murray, VFRGP Manager, Advisory Services, Virginia Institute of Marine Science, P.O. Box 1346, Gloucester Point, VA 23062.

- **Applications must be postmarked no later than January 29, 2016.** Applications may be delivered to the Advisory Services office in Gloucester Point only until 5:00 pm on January 29, 2016. **Late proposals will be returned to the applicant without being considered.**

- If you need assistance completing the grant application, a resource list is available from Mrs. Dianne Roberts (phone: 804-684-7173; email: droberts@vims.edu). This RFP and application form is available at this website: http://www.vims.edu/adv/frg.
Appendix D

VFRGP Principles of Operation

Authority: The Virginia Legislature ratified House Bill 1634 in 1999 providing funding to “protect and enhance the state’s coastal fishery resources through the awarding of grants.”

Administration: The program is administered by the Advisory Services Program at the Virginia Institute of Marine Science with input from an appointed Advisory Board. The Board, based upon rankings from reviews and consistent with priorities, will determine the grants to be awarded.

Priorities: The Advisory Board, with input from members of the fishing industry, develops priorities for each year in the following areas:

1. New fisheries equipment and gear;
2. Environmental pilot studies, including water quality and fisheries habitat;
3. Aquaculture/mariculture; and
4. Seafood technology.

Eligibility: Each proposal shall include substantial involvement of active Virginia persons involved in a fishing industry. The term “fishing industry” includes persons involved in commercial activities related to inshore and offshore fishery resources, aquaculture/mariculture, or handling of fishery products (i.e. seafood dealers and processors). A proposal generated by a person not involved in a fishing industry must have substantial involvement of Virginia fishermen (as defined above) as well as written endorsements from persons or organizations representing fishing industries in support of the project.

Technical Assistance: Following the establishment of priorities by the Advisory Board, VIMS Advisory Services shall hold workshops at coastal locations to solicit applications and to assist persons involved in fishing industries in writing proposals. A list of technical advisors will be available throughout the proposal writing process for assistance and participation.

Application: Applications must be completed based on the format provided for that purpose. Additional pages or supplemental materials (diagrams, photos, etc.) are acceptable if they better explain the project. Applications may include technical assistance as part of the project and funds may be budgeted to pay for this. Incomplete applications will not be accepted for consideration. Application forms listing information needed for a proposal are available from VIMS (see listing below for contact details).

Project Duration: Projects must reach conclusion within two years or less.

Geographic Distribution: To the extent practicable, grant funding will be distributed to applicants within Virginia counties that border the Atlantic Ocean or Chesapeake Bay and its tributaries to the extent of tidal influence.
Virginia Fishery Resource Grant Program

Review Procedures: An anonymous outside peer review will be conducted for all applications. At least one of the reviewers shall be a person involved in a fishing industry. Applications shall be confidential until after funding decisions are made.

Project quality will be assessed on the following criteria:

1. Addresses a priority,
2. Ability to protect or enhance fishery resources;
3. Organization of a work plan leading to conclusions,
4. Plan to extend findings to the fishing industry;
5. Availability of expertise and its application;
6. Familiarity and experience with the problem addressed;
7. Innovation of approach and/or potential findings;
8. Cost-effectiveness of implementation of results; and
9. Reasonableness of budget for work proposed.

Based upon panel reviews and Advisory Board input, proposals will be recommended to the Marine Science Consortium. The Consortium will make all final decisions on grants, including the level of funding for each project.

Restrictions: No member of the Fishery Resource Grant Program staff or the Advisory Board or members of his/her immediate family may benefit financially from a grant. If a grant recipient from a prior year has failed to perform a grant project to the satisfaction of the Consortium, the principal applicant may be denied funding for a new application.

Grant recipients shall provide quarterly progress reports to the VFRGP and shall submit invoices describing expenditures for each quarter. Twenty-five percent (25%) of the total grant award shall be awarded on the start date and certified upon verification of expenditures. The final 25% of the total grant award shall be held until the recipient has completed and submitted a satisfactory final written report. The remainder of the grant award shall be distributed upon approval of quarterly reports, verification of expenditures and receipt of an invoice.

Questions concerning the Virginia Fishery Resource Grant Program may be directed to the following:

Tom Murray, Associate Director Advisory Services
VIMS
P.O. Box 1346
Gloucester Point, VA 23062
Phone 804-684-7190
Fax 804-684-7161
E-mail: tjm@vims.edu
This is a report to the Governor and General Assembly of Virginia on Implementation of House Bill No. 1634 (February 6, 1999) - “The Fishery Resource Grant Fund.” Funds are administered by Virginia Institute of Marine Science Marine Advisory Services in partnership with Virginia Sea Grant.

February 2016
VIMS Marine Resource Report No. 2016-1

http://www.vims.edu/map/frg/docs_frg/MRR2016_1.pdf

Copies of this report are available from
Dianne Roberts
Virginia Institute of Marine Science
P.O. Box 1346
Gloucester Point, VA 23062
e-mail: droberts@vims.edu