

Project Summary Form

Project Title: Northeast Aquaculture Extension Network

Project Status/Duration **New:** Yes **Continued:** No

Project Period: 24 months

Project Coordinator:

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Project Objective(s)

1. To foster interaction, communication and collaboration among aquaculture stakeholders in the Northeast region of the U.S.
2. To develop two industry workshop series and three hands-on training opportunities for producers
3. To develop twenty technical publications of regional importance to producers
4. To develop three multi-media tutorials to educate producers and other stakeholders about aquaculture
5. To provide sponsorship funds for meetings of regional importance to producers
6. To organize one professional development opportunity for extension professionals and other individuals that serve in an outreach capacity
7. To evaluate the effectiveness of the resources and tools produced by the Northeast Aquaculture Extension Network

Specific Priority in Solicitation to Which Project Responds: Stand Alone Submission to NRAC Board of Directors/TIAC

Keywords: aquaculture, extension, outreach, education, Northeast Aquaculture Extension Network

Summary of Work:

The Northeast Aquaculture Extension Network (NAEN) is an assemblage of extension professionals from Land and Sea Grant Institutions, state and private universities, and outreach associations throughout the Northeast region of the U.S. The Network has an extensive working history with the U.S. Department of Agriculture Cooperative State Research Education and Extension Service (USDA CSREES) Northeastern Regional Aquaculture Center (NRAC), and has just recently revitalized the Network with a new work plan and new members from Maine to West Virginia.

The goal of the project put forth by the Northeast Aquaculture Extension Network (NAEN) is to produce and deliver accurate and credible science-based aquaculture information, educational materials and outreach activities to stakeholders in a manner that is efficient and effective. The primary audience we serve is practicing and new aquaculturists as well as prospective producers, wholesalers and retailers, state and regional industry associations, resource managers, elected and appointed officials, and extension professionals who work in areas related to aquatic animal and plant production.

Our vision is that the information and products developed by the NAEN will result in improved stakeholder knowledge and increased public awareness of the social, economic and environmental importance of commercial aquaculture in the Northeast U.S., and will facilitate NRAC’s goal to increase both the value and volume of commercial freshwater and marine aquaculture products.

Project Funding

	<u>Year 1</u>		<u>Year 2</u>		<u>Total</u>	
NRAC	\$ 154,293	(51%)	\$145,651	(49%)	\$299,944	(100%)
Match	\$	%	\$	%	\$	%
Total	\$ 154,293	(51%)	\$145,651	(49%)	\$299,944	(100%)

**Fall 2007 Proposal to the Northeastern Regional Aquaculture Center (NRAC) for USDA
Cooperative State Research, Education and Extension Funding**

Section 1.1

Proposal Code (See cover letter): none

Project Title: Northeast Aquaculture Extension Network

Total Funding Requested from NRAC: \$299,944 **Total Match:** \$

Project Duration (total): 24 Months

Preferred Start Date (circle/list): July 1, 2008

States with Participants in Project (circle/list):

CT DE ME MD MA NH NJ NY PA RI VT

Project Coordinator (Lead Principal Investigator) (one name only)

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Project Coordinator's Signature:

Date:

University Approving Official:

Date:

Section 1.2

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Cooperating, Non-funded Participants

Section 2.1 Objectives

The Northeast Aquaculture Extension Network (NAEN) is an assemblage of Extension professionals from Land and Sea Grant Institutions, state and private universities, and outreach associations throughout the Northeast region of the U.S. The NAEN has an extensive working history with the U.S. Department of Agriculture Cooperative State Research Education and Extension Service (USDA CSREES) Northeastern Regional Aquaculture Center (NRAC), and has just recently revitalized the NAEN with a new work plan and new members from Maine to West Virginia.

The goal of the project put forth by the Northeast Aquaculture Extension Network is to produce and deliver accurate and credible science-based aquaculture information, educational materials and outreach activities to stakeholders in a manner that is efficient and effective. The primary audience we serve is practicing, new and prospective producers, as well as wholesalers and retailers, state and regional industry associations, resource managers, elected and appointed officials, educators, students and Extension professionals who work in areas related to aquatic animal and plant production.

Our vision is that the information and products developed by the NAEN will result in improved stakeholder knowledge and increased public awareness of the social, economic and environmental importance of commercial aquaculture in the Northeast U.S., and will facilitate NRAC's goal to increase both the value and volume of commercial freshwater and marine aquaculture products.

Current project objectives for 2008-2010 are:

1. To foster interaction, communication and collaboration among aquaculture stakeholders in the Northeast region of the U.S.
2. To develop two industry workshop series and three hands-on training opportunities for producers
3. To develop twenty technical publications of regional importance to producers
4. To develop three multi-media tutorials to educate producers and other NRAC stakeholders about aquaculture
5. To provide sponsorship funds for meetings of regional importance to producers
6. To organize one professional development opportunity for Extension professionals and other individuals that serve in an outreach capacity
7. To evaluate the effectiveness of the resources and tools produced by the Northeast Aquaculture Extension Network

Section 2.2 Justification

As aquaculture businesses in the Northeast U.S. strive to create local niche markets or compete in the global market, it is imperative that the industry increases the value and volume of their products. The need has never been greater for the industry to learn and employ up-to-the-minute developments on new species to culture and/or advances in farm management practices. Outreach education, in the form of print and Web publications, multi-media resources, and educational opportunities such as technology transfer workshops and hands-on training seminars, offer the opportunity to keep the industry innovative and competitive.

Effective outreach is essential and must be more readily available to the industry, and a strong communication network is necessary to provide this outreach and to foster interaction, communication and collaboration among aquaculture stakeholders. The Northeast Aquaculture Extension Network, comprised of aquaculture Extension professionals and others who serve in an outreach capacity, from Maine to West Virginia, administrative support staff from the University of Connecticut (UConn), and leadership staff from the Northeastern Regional Aquaculture Center, is well poised to serve in this role. Extension professionals have individual outreach responsibilities within their respective states, but have

taken on the responsibility of collaborating with NAEN colleagues to provide clear, consistent, factual and science-based information on issues of regional importance.

The NAEN gathers annually at face-to-face meetings, and communicates via conference calls and email during the interim. Each year, a work plan is assembled which includes the development of educational products and learning opportunities for practicing, new and prospective aquaculturists. Many of these educational resources are also made available to and utilized by other stakeholders including students, teachers, researchers, policy-makers, and elected and appointed officials. The NAEN work plans are driven by identifying stakeholder needs and emerging issues of importance to the Northeast region.

In 2007, the NAEN, in cooperation with the Center for Survey Research and Analysis (CSRA) at the University of Connecticut, conducted an assessment of the outreach needs of the region's aquaculture industry. The purpose of the assessment was to gather opinions about information needs related to production, marketing, the regulatory process, and business development. The survey was mailed to all licensed aquaculture producers (n=1507) in the NRAC region (Maine to West Virginia). Of those surveyed, a total of 326 producers (22%) responded between July and September of 2007. The responses came from producers of finfish (48%), molluscan shellfish (45%), miscellaneous invertebrates (3%), plants or algae (2%), and other (i.e. reptiles, amphibians) (2%). An uneven distribution of responses among various states in the region skewed the data; however, the results suggest that there are several areas of common need and opportunity.

A key finding of the study was that less than 20% of aquaculture producers are very satisfied with the aquaculture information available to them in their respective states. Information related to the regulatory process is critical or important (90%) to all producers. Next in importance is the availability of production information (82%), followed by information on business development (63%) and marketing (60%) (CSRA 2007). The findings suggest that improvements can be made related to type of and accessibility to information. One-on-one consultations and group workshops are listed as preferred sources of information for new and practicing producers, while prospective producers may seek print publications and Internet resources prior to engaging in hands-on activities.

The NAEN developed this proposal using the survey results as justification for both the work plan and budget. Our plan of work will be directed by the Project Coordinator, and implemented by several teams: Administration, Workshop, Publications, Multi-Media, Professional Development and Assessment, whose members, roles and responsibilities are identified in association with each project objective listed in Section 2.4. These teams will take an integrated approach to planning, conducting, and evaluating the educational products and learning opportunities proposed by the Northeast Aquaculture Extension Network.

It is NRAC's mission to "facilitate regional stakeholder communications—linking industry and government representatives to university scientists and educators—guiding and stimulating regional research and outreach initiatives" (NRAC 2001). NRAC is well suited to be the region's leader in growing the aquaculture industry; however, it does not have the staff (numbers, available) to develop and deliver outreach information or to offer learning opportunities. The Northeast region does benefit from a broad network of aquaculture Extension professionals and other outreach specialists who collectively have far-reaching influence over a broad range of stakeholders. It is this Northeast Aquaculture Extension Network that will ensure continuity of communication among Extension, NRAC and its users, and the production of high-quality outreach products and programs that benefit the entire region.

Section 2.3 Related Activities and Other Work

The NAEN began its new plan of work following NRAC's move from the University of Massachusetts to the University of Maryland. The current plan of work is funded through the spring of 2008 and will result in the availability of several new educational products. Six (6) fact sheets are under development and include the following topics: Aquaculture Risk Management, Environmental Impacts of Shellfish Culture, Lipids in Molluscan Shellfish Broodstock Conditioning, Aquaculture Species in the Northeast (revision), Aquaculture Systems in the Northeast (revision), and Business Planning for Aquaculture (revision). A series of twelve (12) aquaculture situation and outlook reports have been developed for each state in the NRAC region. These publications will be made available at <http://www.nrac.umd.edu> in the fall of 2007:

- Barnaby, R. (2007). New Hampshire Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-106-2007.
- Buttner, J.K., Burt, W., Walton, W.C., Wilbur, B.M., Hollingsworth, C., Murphy, D. (2007). Massachusetts Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-103-2007.
- Faulds, A. (2007). Pennsylvania Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-109-2007.
- Flimlin, G.E., Myers, J. (2007). New Jersey Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-107-2007.
- Getchis, T.S., Pomeroy, R.S. (2007). Connecticut Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-101-2007.
- Homziak, J. (2007). Vermont Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-112-2007.
- McIntosh, D., Ewart, J. (2007). Delaware Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-102-2007.
- Morse, D., Pietrak, M. (2007). Maine Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-105-2007.
- Rice, M.A., Leavitt, D., Alves, D. (2007). Rhode Island Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-110-2007.
- Rivara, G., Timmons, M. (2007). New York Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-108-2007.
- Semmens, K., Miller, D.J., Kiser, R. (2007). West Virginia Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-112-2007.
- Webster, D., Takacs, J., Rippen, T.E., Lazur, A., Terlizzi, D. (2007). Maryland Aquaculture Situation and Outlook Report 2007. USDA CSREES Northeastern Regional Aquaculture Center. NRAC-104-2007.

The NAEN has also developed an Educational Resources Web Page <http://www.nrac.umd.edu/Contacts/Resources.cfm> for producers, and an NAEN Web Page <http://www.nrac.umd.edu/Contacts/Projects.cfm> targeted to Extension professionals and those who serve in an outreach capacity.

The NAEN is developing a manuscript for the *Journal of Extension*, which will describe the results of outreach needs assessment of the Northeast's aquaculture industry. The NAEN recently submitted abstracts for poster presentations at upcoming meetings of the U.S. Aquaculture Society (February 2008) and the Milford Aquaculture Seminar (February 2008).

The NAEN, through its current award, is sponsoring several meetings of regional importance including the Farmed Fish Health Workshop, the Milford Aquaculture Seminar, the Cornell Recirculating Aquaculture Short Course, the East Coast Commercial Fishermen's and Aquaculture Trade Exposition, and an industry session at the Annual Meeting of the National Shellfisheries Association. The NAEN also provided professional development funds for one Extension professional to attend the Cornell Short Course.

Section 2.3.2 Literature Cited

Center for Survey Research & Analysis (CSRA). (2007). Aquaculture Producer Informational Needs Survey. Connecticut Sea Grant. 30pp.

Northeastern Regional Aquaculture Center (NRAC). (2001). A Strategic Plan for the Northeastern Regional Aquaculture Center 2001-2011. USDA-CSREES-NRAC. University of Massachusetts, Dartmouth, MA. 14pp.

Section 2.4 Proposed Methods and Activities

Section 2.4.1 Administration (Objective 1)

The main objective of the Administrative Team is to foster interaction, communication and collaboration among aquaculture stakeholders in the Northeast region. These stakeholders include the Extension professionals and others that serve in an outreach capacity, NRAC, and its users. The Project Coordinator is responsible for overseeing the planning, developing, evaluating, and reporting of all project efforts. The Coordinator facilitates the exchange of information and ideas within the NAEN, and report on how the needs and issues of individual state industry members relates to other states throughout the region. The Administrative Team achieves its objective through the following activities:

1A) Meetings of the Northeast Aquaculture Extension Network

The Project Coordinator will organize annual face-to-face meetings, and conference call meetings for the NAEN, industry advisors and NRAC staff will be invited to attend an organizational meeting in each project year, as well as several conference calls in the interim. At each meeting, the Project Coordinator will review project objectives, methodology, and status of product development, while Team leader will provide an overview of the implementation plan and progress for their respective objectives. During follow-up organizational meetings, the Project Coordinator will be responsible for tracking progress and milestones that will be incorporated into semi-annual progress and final completion reports, and for posting meeting minutes to the NAEN Web page: <http://www.nrac.umd.edu/Contacts/Projects.cfm>. These meetings also serve as a forum for addressing issues of emerging importance to the region. The Annual Meeting for the 2008-2009-project year will be held December 2008, in conjunction with the Northeast Aquaculture Conference & Exposition, in Portland, Maine. The meeting will be a two-day event, which includes an organizational meeting for the project and a professional development workshop for individuals that serve in an aquaculture outreach capacity in the Northeast region. The Annual Meeting for the 2009-2010-project year will be held at the Hampton Inn in Warwick, Rhode Island (date to be determined).

1B) NRAC Stakeholder Input

The Project Coordinator will be responsible for acquiring and integrating stakeholder input into NAEN activities. The NAEN acts as a sounding board for potential outreach activities including industry workshops, professional development opportunities for outreach professionals, and the production of print publications and multi-media educational resources. Results from industry needs assessments and industry advisors will steer direction of the final project. The Project Coordinator will invite a minimum of two industry representatives to participate as advisors to this project. The industry advisors will be

asked to join in the annual and organizational meetings to advise the NAEN on outreach activities of particular relevance to their industry segments and the region as a whole.

The Project Coordinator will develop a poster presentation which will describe the goals and objectives of the NAEN and also market the educational products and learning opportunities offered by the NAEN. This poster will be presenting along with comment/feedback cards at meetings of regional importance to the aquaculture industry. Feedback will be summarized, and used along with formal needs assessments, to provide justification for future projects.

1C) *Northeast Aquaculture Extension Network List Serve*

The Project Coordinator will maintain the NAEN list serve, hosted by the University of Connecticut. The list serve is currently populated by project participants, as well as other individuals serving in an outreach capacity, and is updated on a regular basis. The list serve facilitates timely and equitable exchange of technical information among extension professionals. The list serve is also communication channel for the NAEN to discuss project work plans, and to track progress on the development of educational products and learning opportunities.

1D) *Northeast Aquaculture Extension Network Web Page*

The Web Communications Liaison will maintain the NAEN Web page <http://www.nrac.umd.edu/Contacts/Projects.cfm>, which is housed within the NRAC Web site. This resource is targeted towards Extension professionals and individuals who serve in an outreach capacity, but is accessible to anyone who visits the NRAC Web site. The NAEN Web page currently contains information and links related to professional development, funding opportunities, the *Journal of Extension*, program impact and assessment articles and other similar resources which provide useful information and assist regional extension personnel with their individual program development. The Web page will be expanded to serve as a clearinghouse for all project related information such as meeting minutes, assessment and evaluation results, and progress and completion reports for this project.

1E) *Industry Contact Lists*

The Project Coordinator will maintain contact lists of licensed aquaculture producers and industry associations throughout the Northeast. Contact information will be solicited from State Aquaculture Coordinators and/or State Permitting Authorities. These lists will be used for distribution of outreach products, to advertise educational opportunities, and for evaluation of these resources, and will be shared with NRAC staff.

The Administrative Team includes: Tessa Getchis (Project Coordinator), John Ewart (Web Communications Liaison), and an administrative assistant (Karen Massaro) and fiscal officer (Michelle Flagge) from the University of Connecticut Sea Grant Program.

Section 2.4.2 Educational Workshops and Hands-On Training Opportunities (Objective 2)

The Workshop Team will be responsible for developing educational workshops and hands-on training opportunities for producers. These workshops will focus on areas related to aquaculture production, business development, and/or marketing, as these are the areas of greatest interest according to the outreach needs survey.

2A) *Educational Workshops*

The Workshop Team will develop, present and assess three educational workshop series on topics prioritized by industry and presented by specialists in the Northeast or, if necessary, from outside the

region. The series will consist of two workshops each for a total of six workshops, to be held at various locations throughout the region.

The NAEN has developed a list of potential workshop topics based on interest from constituents in their respective states and recent industry surveys. These topics include: 1) Aquaculture Biosecurity; 2) Marketing Strategies for Aquaculturists; 3) Fish Meal Replacement Options; 4) Commodity Crop Insurance and Adjusted Gross Revenue-Lite; 5) Predation on Molluscan Shellfish; 6) Biofouling in Molluscan Shellfish Aquaculture Operations; and 6) Environmental Impacts of Molluscan Shellfish Aquaculture. The topics listed here and any emerging topics that may arise prior to the funding of this proposal will be narrowed down to three. The Workshop Team will be responsible for selecting the final topics areas, developing workshop format, selecting presenters, developing registration and education materials, and conducting the activity. A timeline is located at the end of this proposal (See Section 2.5) Depending on the topic and audience, the workshops may be stand-alone or held concurrent with other important industry meetings (Figure 1).

The NAEN was made aware of another proposal submitted to NRAC that proposes to develop a workshop series on Aquaculture Biosecurity. If that proposal is funded, the NAEN would replace that topic with one of the other topics of industry priority noted above. The NAEN would also be willing to support that project (if funded) by providing mailing lists and/or advertising through the NAEN contact lists.

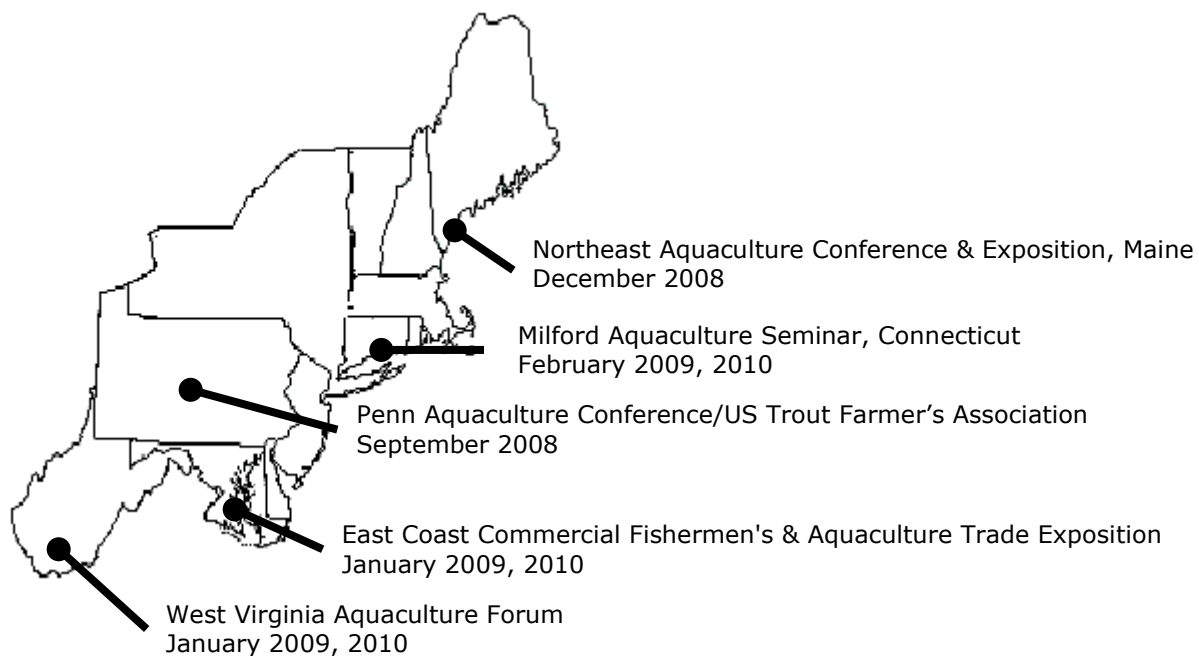


Figure 1. Locations and dates of some important aquaculture meetings in the Northeast which will be used to host industry workshops.

2B) *Hands-On Training Opportunities*

The Workshop Team will host three educational opportunities such as field trips, which will include hands-on training on novel aquaculture operations in each of the following areas: freshwater finfish, molluscan shellfish, and a third topic which will include either hydroponics or offshore aquaculture. The latter is dependent upon match funding for ship time that has been requested as part of a separate

solicitation. This funding has been requested from the National Oceanic and Atmospheric Administration to allow 15 participants (industry) to travel to the Offshore Aquaculture Demonstration Project off the coast of New Hampshire.

The Team will be responsible for selecting the final host operations, developing hands-on training format, developing registration and education materials and conducting the actual activity. The NAEN is querying members of state and regional aquaculture associations as part of its current proposal to select aquaculture facilities which will host the trainings. These educational opportunities will be geared towards individuals who are seriously considering development of new operations or expansion of existing operations in the specific topic areas to be covered. However, the impact of these hands-on opportunities will reach beyond those selected to participate, as NAEN will mandate that participants develop a poster and/or oral presentation on the experience for delivery at the appropriate regional meeting.

Two hands-on training opportunities will be hosted in 2008-2009 and one in 2009-2010. An electronic workshop package will be assembled following the event including: workshop summaries, Power Point Presentations, and video clips (when applicable). These resources will be archived on the NRAC Educational Resources Web Site, and may be incorporated in future Multi-Media Tutorials (see Section 2.4.4).

The Workshop Team will coordinate with the Web Communications Liaison and Project Coordinator to advertise the industry workshops and hands-on training opportunities via the NRAC Educational Resources Web page (see Section 2.4.4a), and through postal mail and email. The Assessment Team will coordinate with the Workshop Team to evaluate the success of the educational workshops and hands-on training opportunities (See Section 2.4.7 a). The Workshop Team includes Joe Buttner (coordinator), Mike Pietrak, Tom Rippen, and Dana Morse.

Section 2.4.3 Publications (Objective 3)

The Publications Team will develop technical publications of regional importance to the aquaculture industry. These publications will focus on areas related to aquaculture production, business development, and/or marketing, as these are the areas of greatest interest according to the outreach needs survey.

3A) NRAC Fact Sheet Series

The Publications Team will develop twenty technical publications (ten per year) on emerging issues of importance based on an informal survey of industry, outreach specialists and other key stakeholders within the region. These will include the generation of several new products and revision of existing publications. The following topic areas have been identified as having regional importance: 1) Marketing Strategies for Aquaculturists; 2) Aquaculture Seafood Safety and Health Issues; 3) Viral Hemorrhagic Septicemia; 4) Razor Clam: Biology and Life History; 5) Razor Clam: Culture Methods; 6) Surf Clam: Biology and Life History; 7) Surf Clam: Culture Methods; 8) Soft Shell Clam: Biology and Life History; 9) Soft Shell Clam: Culture Methods; 10) Juvenile Oyster Disease; 11) Triploidy in Molluscan Shellfish; 12) Water Quality in Aquaculture (revision); 13) Molluscan Shellfish Production Techniques in the Northeast (revision); 14) MSX (revision); and 15) Dermo (revision). A small number (3-4) of fact sheets will also be derived from recently funded NRAC research projects.

The Publications Team will be responsible for selecting the final 20 topic areas for fact sheets, identifying authors for each topic, and developing timetables for document production. The NAEN recognizes that some of the topic areas identified by industry are covered in publications developed

outside of the region. In this case, NRAC publications will either be modified to address how the topic area is related to the Northeast region's aquaculture industry, or if the identified topic area is relevant but does not warrant a new NRAC publication, the NAEN will provide a link to that publication on the NRAC Educational Resource Web page.

Author stipends will be paid based upon an expected workload of fifty (50) hours of work in generating each NRAC publication. This is the standard for authors of Southern Regional Aquaculture Publications (SRAC) publications. Authorship includes production of text, generation of basic artwork, and taking of photographs to illustrate the text. Authors will produce their work according to an agreed upon schedule and deliver the product to the Publications Team Leader for peer review, before final revision and submission of the document. Stipends for the production of publications will only be made upon submission of the final document with associated graphics, and provided the document is assessed to be within the standards set by other Regional Aquaculture Centers (RACs) for production of publications. These written standards will be made available to authors. The Publications Team Leader will coordinate with the University of Connecticut Sea Grant Communications Director to carry out editing, graphic design, layout and printing of the fact sheets.

Regional Aquaculture Center publications have a reputation for providing useful and accurate, research-based information on a variety of topics. The NRAC suite of extension publications can and should represent the knowledge and experience of the aquaculture specialists in the region. Professional quality publications require generation of graphics suitable for the topic and photographs that represent and enhance the text. All RAC publications are formatted so that they retain a common appearance and contain top-quality graphics.

The Assessment Team will coordinate with the Publications Team to evaluate the outreach products developed (See Section 2.4.7 c). The Publications Team includes Donald Webster, Gregg Rivara, Bob Pomeroy, Michael A. Rice, Tessa Getchis and the University of Connecticut Sea Grant Communications Director (Margaret Van Patten).

Section 2.4.4 Multi-Media Resources (Objective 4)

The Multi-Media Team is responsible for the development of innovative Internet resources to educate practicing, new and prospective producers and interested stakeholders about aquaculture. The following products will be developed:

4A) Educational Resources Web Page

The Team will enhance the NRAC Educational Resources Web Page <http://www.nrac.umd.edu/Contacts/Resources.cfm>, currently under development within the main NRAC main Web site. The Resource Web page will be used for disseminating educational information related to the project which includes: fact sheets and other technical publications, multi-media tutorials (see Section 2.4.4b), advertisements for industry workshops and hands-on training opportunities, and other events and information targeted for practicing, new and prospective producers. This Web-based resource is an integral component of the Network's outreach capabilities.

According to our recent survey, information related to the regulatory process is critical or important (90%) to all producers. As such, the Web Communications Liaison will post information about the regulatory process for marine and freshwater aquaculture operations throughout the Northeast, including state permitting guidelines, and links to State Aquaculture Coordinators' Websites. The NAEN recognizes that not all states within the region have a formal aquaculture permitting guidelines, and as such, the extension professionals representing those states have agreed to work with their State

Aquaculture Coordinator to provide a brief summary of the permitting process for the Extension Resources Web page. The Web Communications Liaison will be responsible for collecting this information from the extension professionals and posting it to the NRAC Educational Resources Web page.

4B) *Multi-Media Tutorials*

The Multi-Media Team will be responsible for developing three multi-media “tutorials” which will be housed on the NRAC Educational Resources Web Page. These tutorials will offer end-users both passive and active modes of learning through a variety of multi-media products including the ability to view PowerPoint presentations, download fact sheets (PDF format), watch short information video clips, and take online responsive quizzes on a variety of different topics related to aquaculture, all package into a “tutorial-like” format. This site will allow individuals to not just learn about topics, but also test their understanding of materials presented via integrated quizzes.

Specifically for this project, the Team will focus on three tutorials that will be useful for individuals seeking general information on aquaculture. These topics include: 1) Getting Started in Aquaculture; 2) Aquaculture Systems; and 3) Aquaculture Species. The NRAC fact sheets associated with these topic areas are currently being revised as part of the 2006-2007 Network project, and will be used within the tutorials.

Materials to populate the sites will be collected from or developed by the NAEN, and edited by the Multi-Media Team. The Team will be working with an Information Technologies specialist at the University of Maryland to develop a new web-based application specific for our project that will create educational resource pages through the use of project specific templates. Unlike other products used for Web page development, this application will be a secure and have a proprietary content and community management system for our project only. The templates will be an intuitive and self-manageable system which will allow for the continued creation of education resource pages by the Network without the need for IT technical assistance after the initial development.

The Assessment Team will coordinate with the Multi-Media Team to ensure that all outreach products and educational opportunities are evaluated and reported (see Section 2.4.7d). The Multi-media Team includes Jackie Takacs, George E. Flimlin and John Ewart (Web Communications Liaison).

Section 2.4.5 Conference Sponsorship (Objective 5)

NRAC has a history of providing sponsorship funds for meetings of regional importance to the aquaculture industry. These funds will be used to pay speaker fees, reimburse speaker travel and/or pay for the publication of abstracts and meeting reprints. The NAEN has targeted funding for several meetings identified by the industry which serve as valuable educational venues including:

- 5A) Farmed Fish Health Management Conference
- 5B) Milford Aquaculture Seminar
- 5C) Northeast Aquaculture Conference & Exposition
- 5D) East Coast Commercial Fishermen's and Aquaculture Trade Exposition
- 5E) Pennsylvania Aquaculture Conference
- 5F) Cornell Recirculating Workshop

A formal “Sponsorship Agreement” was developed as part of the 2006-2007 NAEN project. There are specific requirements that are associated with meeting sponsorships including agreement that an NAEN

informational flyer will be included in meeting announcements and/or a poster could be presented at the meeting at no charge to NRAC.

Section 2.4.6 Professional Development (Objective 6)

The Professional Development Team will be responsible for organizing a professional development opportunity for the Northeast Aquaculture Extension Network, other professionals that serve in an outreach capacity, and those who produce, distribute or sell product to consumers.

6A) Professional Development Workshop

The Professional Development Team will organize a professional development workshop entitled, “Creating a Balance: Understanding the Benefits and Risks of Seafood Consumption.” This is a topic of high priority among the aquaculture industry, researchers, extension professionals, educators, and ultimately for consumers. Existing and potential consumers of locally grown aquaculture products need to know where to get them, have access to the products, understand the nature of the products (health benefits, unique flavors/textures, seasonal trends, traditions, contaminants, etc.), and how to use and/or prepare them.

The USDA and other health groups advise people to eat more fish to live longer, and to have healthier lives. However, at the same time, the risks of seafood consumption are often presented by the media resulting in consumer misunderstanding due to mixed messages. As a result, the U.S. Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) issued a joint health advisory. Taking both the benefits and risks into consideration, the agencies recommended that at-risk groups such as women of childbearing age, pregnant women, nursing mothers, and young children avoid fish high in mercury and consume up to 2, 6-oz servings of low-mercury fish per week. However, research studies have shown that this may be adding to confusion due to the mixed messages.

Currently, over 80% of the seafood Americans consume is imported, and at least 40% of those imports are farmed seafood. Domestic aquaculture can be an effective option to reduce dependence on seafood imports, provide jobs for economically depressed communities, and increase regional food supply and security. However, it is up to those who produce, distribute or sell product, or those who are in contact with consumers (outreach professionals) to provide a clear, consistent, science-based message to consumers.

In 2006 an Internet survey was conducted that included 1,062 adults representative of the U.S. population based on age, gender, income, ethnicity, and geographic location (survey results presented at the National Fisheries Institute 2007 Seafood in Perspective Conference, Orlando, FL). Respondents were asked questions regarding seafood consumption frequency, awareness and knowledge of the mercury advisory, sources of information about seafood and preferred formats, knowledge of seafood handling practices, and barriers to seafood consumption. The survey found that while only 20 percent of Americans meet the USDA recommendation of two servings of seafood each week, 45% eat seafood at least once each week. Although the advisory encourages at-risk groups to eat low-mercury fish twice a week, only 18% of women of childbearing age eat seafood two or more times per week.

An informal survey of Extension professionals in the Northeast showed that there was a large variation in the type and source of information provided to seafood consumers, and that a professional development opportunity was warranted.

The Professional Development Team will build upon curriculum and resources already developed through other RACs: 1) Frequently Asked Questions about Seafood Safety (Laura Tiu, North Central

RAC); and 2) Links to seafood information websites (Gary Fornshell, Western RAC); and will be responsible for identifying speakers from another USDA CSREES project (*Benefits and Risks of Seafood Consumption: Outreach Education for Healthcare Providers and Practitioners*). The Professional Development Team Leader (Doris Hicks) has also developed and taught several Train-the-Trainer /professional development type programs for a variety of food and nutrition educators throughout the country (Seafood Sense Workshop for Food and Nutrition Educators). Potential speakers include: 1) Doris Hicks, University of Delaware; 2) Thomas Rippen, University of Maryland Extension Service; 3) Gary Fornshell, University of Idaho; 4) Jennifer Wilmes, National Fisheries Institute; 5) Lori Pivarnik, University of Rhode Island; and 6) Ken Gall, Cornell University.

The Professional Development Workshop will coincide with the Annual Meeting of the Northeast Aquaculture Extension Network in December of 2008 (two days preceding NACE).

6B) *Train-the-Trainer Professional Development Workshop*

The Professional Development Team will organize two professional development workshops in which Extension Professionals train other stakeholders including producers, seafood retailers, distributors, researchers and resources managers about the benefits and risks of seafood consumption, so that they can pass this information along to their customers and/or constituents (i.e. the consumers). Once the extension professionals from the Northeast Aquaculture Extension Network are trained they will be able to help with the following two workshops. These workshop will be held in different locations throughout the regional to provide for easy access for as many different types of producers and audiences as possible.

The Train-the-Trainer Professional Development Workshops will be held during the second year of the project, and will be held at two separate locations within the northeast region. The goal of workshops is to help attendees answer the following questions for their operation and customers:

- ❑ "When reports appear in the media with mixed messages about seafood how can I better ...?"
- ❑ "Do we need to provide point of purchase (POP) materials on seafood safety for our customers, if yes, what works best?"
- ❑ "What is the best way to train our employees so that they can best answer customer questions about seafood consumption?"

The Assessment Team will coordinate with the Professional Development Team to evaluate the educational opportunities offered (see Section 2.4.7b). The Professional Development Team includes Doris Hicks, Tessa Getchis, Mike Pietrak, Tom Rippen, and Dana Morse.

Section 2.4.7 Assessment (Objective 7)

The Assessment Team will be responsible for evaluating the effectiveness of the outreach products and educational resources produced through this effort. The team will prepare assessment tools for specific resources (publications, tutorials), activities (professional development, industry workshops and hands-on training opportunities). Impacts arising from resource and activity development will provide justification for future proposals and projects. Evaluations will provide the Network with insight into successes and areas for improvement, and how to allocate outreach funds in the future. The Team will rely heavily on the expertise of resource economist Robert Johnston, who is an expert in survey development and program assessment.

7A) *Northeast Aquaculture Extension Network - Value to Participants*

The Assessment Team will evaluate the benefits, strengths and weakness of the NAEN to its participants. An assessment will be conducted every two years by email. Network members will be asked questions such as:

- "How valuable is the NAEN to you?"
- "Have you utilized resources available through the network such as the NAEN Web page or list serve?"
- "Have you benefited from resources that the NAEN has to offer?"
- "Have you developed a new collaboration, project with people within the NAEN that you wouldn't have otherwise?"
- "Has your participation in the NAEN benefited your state's extension program?"
- "How could the NAEN be improved?"

7B) Educational Workshops, Hands-On Training Opportunities, Professional Development

The Assessment Team will evaluate the use and relevance of each of the Educational Workshops. A pre- and post- paper survey and/or structure exit interview will be conducted on site by the team. The Team will conduct follow-up phone calls to randomly selected participants six months after the event to inquire into the transfer of information and technology in the current practices of the producers.

7C) Publications

The Assessment Team will evaluate use and relevance of NRAC publications. Internet counters will be used to enumerate web page hits and PDF downloads. A web-based survey will be developed as a pop-up window which will ask users to answer two to three questions regarding use and value of publications. This tool will be developed in cooperation with the Web Liaison and the Information Technology Specialist at the University of Maryland.

A short survey tool will be developed to either include with mailed publications or sent as a follow-up to judge the usefulness and opinions of the recipient about publications for use in reviewing and modifying future operations.

7D) Multi-Media Tutorials

The Multi-Media Tutorials will be pre-tested by the NAEN prior to posting them to the NRAC Educational Resources Web page. The Assessment Team will assess usage and value of the multi-media products developed in this effort. Web counters will be used to enumerate web page hits and PDF downloads. A web-based survey will be developed as a pop-up window which will ask users to answer two to three questions regarding use and value of the tutorials. The Team will also work with the Web Liaison to track and summarize the results of the quizzes integrated into the multi-media tutorials.

7E) Aquaculture Producer Informational Needs Survey

The most recent NRAC Aquaculture Producer Needs Survey was conducted by Internet and Postal Mail in the summer of 2007. This needs assessment will be conducted on a regular basis (5 years), and is scheduled to be conducted in 2012. The Assessment Team's goal is to increase the response rate by 20% during the next assessment.

The next assessment will also include an evaluation of the Northeast Aquaculture Extension Network. We will also solicit feedback from researchers, extension professionals outside the NRAC region, educators, students, regulators, elected and appointed officials, and other interested stakeholders using feedback cards at meetings where the Network's products are showcased.

The assessment team consists of Tessa Getchis, Ann Faulds, Doris Hicks, Dennis McIntosh, and Michael A. Rice, and a survey development and assessment specialist from the University of Connecticut (Robert Johnston).

Section 2.5 Project Schedule

Timeline for Major Milestones	J 0 8	A 0 8	S 0 8	O 0 8	N 0 8	D 0 8	J 0 9	F 0 9	M 0 9	A 0 9	M 0 9	J 0 9	J 0 9	A 0 9	S 0 9	O 0 9	N 0 9	D 0 9	J 1 0	F 1 0	M 1 0	A 1 0	M 1 0	J 1 0	
Administration																									
Organizational Mtg (Conf Call)	x																								
Annual Mtg (NACE 08)						x																			
Organizational Mtg (Conf Call)										x															
Annual Mtg (Warwick, RI)																		x							
Organizational Mtg (Conf Call)																								x	
NAEN Poster/Comment Cards	x	x	x																						
Industry Workshops/Training																									
Finalize Topics & Speakers	x	x	x																						
Conduct Workshop Series 1*					x			x																	
Conduct Workshop Series 2*										x								x	x		x				
Conduct Training Series*						x			x										x						
Publications																									
Solicit Authors for Publications	x	x	x											x	x	x									
Publication Drafts Received				x	x	x	x									x	x	x	x						
Publication Reviews Received							x	x	x	x	x								x	x	x	x	x		
Publications Complete*											x														x
Multi-Media Tutorials																									
Application development/testing	x	x	x	x	x																				
Solicit/Edit Education Materials	x	x	x	x	x	x	x																		
Tutorial Development+ Pre-test*										x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Conference Sponsorships																									
							x		x																
Professional Development																									
Prepare materials/speaker for professional development	x	x	x	x	x	x																			
Conduct Prof Dev 1*							x																		
Conduct Prof Dev 2, 3* (TBD)																									

x = in progress; * = assessment/evaluation conducted

Section 2.6 Anticipated Products/Outcome

NAEN products will include:

- Twenty technical publications
- Three web tutorials
- Three industry workshops and three hands-on training opportunities (materials and evaluations)
- Three professional development workshops (materials and evaluation)

NAEN outcomes will include:

- Increased educational opportunities for industry and aquaculture Extension professionals and other stakeholders including wholesalers and retailers, state and regional industry associations, resource managers, elected and appointed officials, educators, students

- Enhanced communication and collaboration within Northeast Aquaculture Extension Network

Section 2.7 Supporting Facilities

The University of Connecticut will be the administrative home for this project. The Connecticut Sea Grant College Program office will provide the facilities needed to coordinate and conduct the administrative activities related to this project.

Section 3.1 Budget (Schedules A Form and Section J Worksheet - optional)
(see attached)

UNITED STATES DEPARTMENT OF AGRICULTURE
COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

OMB Approved 0524-0039
Expires 03/31/2004

BUDGET (Year 1)

ORGANIZATION AND ADDRESS University of Connecticut				USDA AWARD NO.			
PROJECT DIRECTOR(S) Tessa Getchis				DURATION PROPOSED MONTHS: 1-12 of 24 Funds Requested by Proposer	DURATION PROPOSED MONTHS: 1-12 of 24 Funds Approved by CSREES (If different)	Non-Federal Proposed Cost-Sharing/ Matching Funds (If required)	Non-federal Cost-Sharing/Matching Funds Approved by CSREES (If Different)
A. Salaries and Wages		CSREES-FUNDED WORK MONTHS		14,934			
		Calendar	Academic				
1. No. Of Senior Personnel							
a. <u>1</u> (Co)-PD(s).....		3					
b. _____ Senior Associates.....							
2. No. of Other Personnel (Non-Faculty)							
a. _____ Research Associates/Postdoctorates.....							
b. <u>2</u> Other Professionals.....		1		0.25	8,189		
c. <u>2</u> Paraprofessionals.....					2,736		
d. _____ Graduate Students.....							
e. _____ Prebaccalaureate Students.....							
f. _____ Secretarial-Clerical.....							
g. _____ Technical, Shop and Other.....							
Total Salaries and Wages →				25,859			
B. Fringe Benefits (If charged as Direct Costs)				10,433			
C. Total Salaries, Wages, and Fringe Benefits (A plus B) →				36,292			
D. Nonexpendable Equipment (Attach supporting data. List items and dollar amounts for each item.)							
E. Materials and Supplies				2,300			
F. Travel				10,000			
G. Publication Costs/Page Charges				1,750			
H. Computer (ADPE) Costs							
I. Student Assistance/Support (Scholarships/fellowships, stipends/tuition, cost of education, etc. Attach list of items and dollar amounts for each item.)							
J. All Other Direct Costs (In budget narrative, list items and dollar amounts, and provide supporting data for each item.)				103,951			
K. Total Direct Costs (C through J) →				154,293			
L. F&A/Indirect Costs (If applicable, specify rate(s) and base(s) for on/off campus activity. Where both are involved, identify itemized costs included in on/off campus bases.)				Not allowed			
M. Total Direct and F&A/Indirect Costs (J plus K) →				154,293			
N. Other..... →							
O. Total Amount of This Request →				154,293			
P. Carryover -- (If Applicable)Federal Funds: \$		Non-Federal funds: \$		Total \$			
Q. Cost-Sharing/Matching (Breakdown of total amounts shown on line O)							
Cash (both Applicant and Third Party) →							
- Non Cash Contributions (both Applicant and Third Party)							
NAME AND TITLE (Type or print)				SIGNATURE (required for revised budget only)		DATE	
Project Director Tessa Getchis, Extension Educator							
Authorized Organizational Representative Carol Welt, Ph.D., Executive Director & Assistant Vice Provost for Research							
Signature (for optional use)							

UNITED STATES DEPARTMENT OF AGRICULTURE
COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

OMB Approved 0524-0039
Expires 03/31/2004

BUDGET (Year 2)

ORGANIZATION AND ADDRESS University of Connecticut				USDA AWARD NO.				
PROJECT DIRECTOR(S) Tessa Getchis				DURATION PROPOSED MONTHS: 13-24 of 24 Funds Requested by Proposer	DURATION PROPOSED MONTHS: 13-24 of 24 Funds Approved by CSREES (If different)	Non-Federal Proposed Cost-Sharing/Matching Funds (If required)	Non-federal Cost-Sharing/Matching Funds Approved by CSREES (If Different)	
A. Salaries and Wages		CSREES-FUNDED WORK MONTHS		15,645				
		Calendar	Academic					Summer
1. No. Of Senior Personnel				8,481				
a. <u> 1 </u> (Co)-PD(s).....		3						
b. <u> </u> Senior Associates.....								
2. No. of Other Personnel (Non-Faculty)				2,872				
a. <u> </u> Research Associates/Postdoctorates								
b. <u> 2 </u> Other Professionals.....		1						0.25
c. <u> 2 </u> Paraprofessionals.....								
d. <u> </u> Graduate Students.....								
e. <u> </u> Prebaccalaureate Students.....								
f. <u> </u> Secretarial-Clerical								
g. <u> </u> Technical, Shop and Other.....								
Total Salaries and Wages →				26,998				
B. Fringe Benefits (If charged as Direct Costs)				10,837				
C. Total Salaries, Wages, and Fringe Benefits (A plus B) →				37,835				
D. Nonexpendable Equipment (Attach supporting data. List items and dollar amounts for each item.)								
E. Materials and Supplies				1,000				
F. Travel				10,000				
G. Publication Costs/Page Charges				1,750				
H. Computer (ADPE) Costs								
I. Student Assistance/Support (Scholarships/fellowships, stipends/tuition, cost of education, etc. Attach list of items and dollar amounts for each item.)								
J. All Other Direct Costs (In budget narrative, list items and dollar amounts, and provide supporting data for each item.)				95,066				
K. Total Direct Costs (C through I) →				145,651				
L. F&A/Indirect Costs (If applicable, specify rate(s) and base(s) for on/off campus activity. Where both are involved, identify itemized costs included in on/off campus bases.)				Not allowed				
M. Total Direct and F&A/Indirect Costs (J plus K) →				145,651				
N. Other →								
O. Total Amount of This Request →				145,651				
P. Carryover -- (If Applicable)Federal Funds: \$			Non-Federal funds: \$			Total \$		
Q. Cost-Sharing/Matching (Breakdown of total amounts shown on line O)								
Cash (both Applicant and Third Party) →								
- Non Cash Contributions (both Applicant and Third Party)								
NAME AND TITLE (Type or print) Tessa Getchis, Extension Educator				SIGNATURE (required for revised budget only)		DATE		
Project Director Tessa Getchis, Extension Educator								
Authorized Organizational Representative Carol Welt, Ph.D., Executive Director & Assistant Vice Provost for Research								
Signature (for optional use)								

UNITED STATES DEPARTMENT OF AGRICULTURE
COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

OMB Approved 0524-0039
Expires 03/31/2004

BUDGET (Total)

ORGANIZATION AND ADDRESS University of Connecticut				USDA AWARD NO.			
PROJECT DIRECTOR(S) Tessa Getchis				DURATION PROPOSED MONTHS: 1-24 of 24 Funds Requested by Proposer	DURATION PROPOSED MONTHS: 1-24 of 24 Funds Approved by CSREES (If different)	Non-Federal Proposed Cost-Sharing/ Matching Funds (If required)	Non-federal Cost-Sharing/Matching Funds Approved by CSREES (If Different)
A. Salaries and Wages	CSREES-FUNDED WORK MONTHS			30,579			
1. No. Of Senior Personnel	Calendar	Academic	Summer				
a. <u> 1 </u> (Co)-PD(s).....	6						
b. <u> </u> Senior Associates.....							
2. No. of Other Personnel (Non-Faculty)							
a. <u> </u> Research Associates/Postdoctorates.....							
b. <u> 2 </u> Other Professionals.....	2		0.5	16,670			
c. <u> 2 </u> Paraprofessionals.....				5,608			
d. <u> </u> Graduate Students.....							
e. <u> </u> Prebaccalaureate Students.....							
f. <u> </u> Secretarial-Clerical.....							
g. <u> </u> Technical, Shop and Other.....							
Total Salaries and Wages →				52,857			
B. Fringe Benefits (If charged as Direct Costs)				21,270			
C. Total Salaries, Wages, and Fringe Benefits (A plus B) →				74,127			
D. Nonexpendable Equipment (Attach supporting data. List items and dollar amounts for each item.)							
E. Materials and Supplies				3,300			
F. Travel				20,000			
G. Publication Costs/Page Charges				3,500			
H. Computer (ADPE) Costs							
I. Student Assistance/Support (Scholarships/fellowships, stipends/tuition, cost of education, etc. Attach list of items and dollar amounts for each item.)							
J. All Other Direct Costs (In budget narrative, list items and dollar amounts, and provide supporting data for each item.)				199,017			
K. Total Direct Costs (C through J) →				299,944			
L. F&A/Indirect Costs (If applicable, specify rate(s) and base(s) for on/off campus activity. Where both are involved, identify itemized costs included in on/off campus bases.)				Not allowed			
M. Total Direct and F&A/Indirect Costs (J plus K) →				299,944			
N. Other →							
O. Total Amount of This Request →				299,944			
P. Carryover -- (If Applicable)Federal Funds: \$				Non-Federal funds: \$		Total \$	
Q. Cost-Sharing/Matching (Breakdown of total amounts shown on line O)							
Cash (both Applicant and Third Party) →							
- Non Cash Contributions (both Applicant and Third Party)							
NAME AND TITLE (Type or print)				SIGNATURE (required for revised budget only)			DATE
Project Director Tessa Getchis, Extension Educator							
Authorized Organizational Representative Carol Welt, Ph.D., Executive Director & Assistant Vice Provost for Research 23							
Signature (for optional use)							

Section 3.2.1 Budget Justification University of Connecticut

A. Total Salaries and Wages: \$52,857

A1a. Senior Personnel: \$30,579 (+fringe \$9,882)

Tessa Getchis is requesting 3.0 months of salary (25%) per year which includes \$14,934 plus 31.6% fringe of \$4,719, for a total of \$19,653 (year 1), and \$15,645 plus 33% fringe of \$5,163, for a total of \$20,808 (year 2). Year two includes an expected 5% increase in salary. Tessa Getchis will be responsible for: a) overall fiscal management of the project, b) overseeing the processing of subcontract agreements to cooperating institutions and reimbursements for travel associated with the project, c) convening all organizational meetings for the network, d) reporting on project development and milestones via progress and final reports, and presentations at industry meetings, and e) timely product development and for overall project assessment, including the evaluation of all products and activities developed through the project.

A2b. Other Professionals: \$16,670 (+fringe \$8,031)

Margaret Van Patten is requesting 1 month of salary (8.3%) per year which includes \$5,892 plus 61.6% fringe of \$3,629, for a total of \$9,521 (year 1), and \$6,069 plus 58.2% fringe of \$3,532, for a total of \$9,601 (year 2). The grand total is \$11,961. Year two includes an expected 3% increase in salary. Margaret Van Patten will be responsible for: a) graphics, editing and layout of ten publications per year. This is estimated by the University of Connecticut as requiring approximately fourteen (14) hours of work for each publication. The cost for these have been estimated at \$800 for a four (4) page fact sheet, \$1,000 for a six (6) page version, and \$1,200 for an eight (8) page publication. As an average, the ten (10) publications each year would then require an average of \$1,000 per publication for these charges, resulting in a budget request for approximately \$10,000 per year for each of the two (2) years of project duration.

Robert Johnston is requesting 0.25 month of summer salary per year (2%) which includes \$2,297 plus 17.4% fringe of \$400, for a total of \$2,697 (year 1), and \$2,412 plus 19.5% fringe of \$470, for a total of \$2,882 (year 2). The grand total is \$4,709. Year two includes an expected 5% increase in salary. Robert Johnston is a resource economist who specializes in survey design and assessment. Dr. Johnston will be responsible for: a) assisting the assessment team in developing questions for workshop evaluations, personal interviews, and other associated assessment tools.

A2c. Paraprofessionals: \$5,608 (+fringe \$3,357)

Michelle Flagge is requesting 0.25 month of salary per year (2%) which includes \$1,471 plus 61.6% fringe of \$906, for a total of \$2,377 (year 1), and \$1,544 plus 58.2% fringe of \$899, for a total of \$2,443 (year 2). The grand total is \$3,015. Year two includes an expected 5% increase in salary. Michelle Flagge will be responsible for: a) processing subcontract agreements with cooperating institutions, and b) assisting the project coordinator with tracking all purchases, payments, and reimbursements associated with the project.

Karen Massaro is requesting 0.25 month of salary per year (2%) which includes \$1,265 plus 61.6% fringe of \$779, for a total of \$2,044 (year 1), and \$1,328 plus 58.2% fringe of \$773, for a total of \$2,101 (year 2). The grand total is \$2,592. Year two includes an expected 5% increase in salary. Karen Massaro will be responsible for: a) payments and reimbursements associated with publications, industry workshops, professional development and travel, and b) assisting with providing logistical support for organizational meetings.

B. Total Fringe Benefits: \$21,270

(see explanation above)

C. Total Salaries, Wages and Fringe Benefits: \$74,127

E. Materials and Supplies \$3,300

Funds are requested for supplies. An amount of \$1,000 per year, for a total of \$2,000 is requested to facilitate communication among the project coordinator and team coordinators and network participants. Requested funds are for ink cartridges, envelopes and paper. An amount of \$300 is requested (year 1) to purchase envelopes and paper for advertising of professional development workshops. An amount of \$1000 is requested (year 1) for envelopes and paper for advertising of industry workshops and hands-on training opportunities.

F. Travel: \$20,000

Funds are requested to support travel necessary to convene an organization meeting with project participants. An amount of \$2,000 per year is requested to reserve meeting space and provide lunch for project participants. An amount of \$8,000 is requested to allow project participants to travel annual organizational meetings. This request includes reimbursement for lodging (\$3000) [\$150/night x 20 participants]; airfare (\$2,000) [\$200/flight x 10 participants]; mileage (\$1,500) [\$0.50/mile for an average of 200 miles/participant; 15 participants require mileage reimbursement]; meal expenses (\$1,500) [\$50/day x 1.5 days x 20 participants require meal reimbursement]. This request is based on the previous year's annual meeting costs in at the Hampton Inn in Warwick, Rhode Island

G. Publication Costs \$3,500

Funds are requested for publication costs. An amount of \$1,750 is requested to duplicate 10 fact sheets per year for each of two years. The cost of printing 350 copies of a fact sheet at the University of Connecticut Document Production Center is estimated at \$175.

H. Computer Costs

I. Student Assistance/Support

J. All Other Direct Costs: \$199,017

Telephone Communication: \$1,000

Funds are requested to support five conference calls with project participants per year at a cost of @ \$200 per call.

Postage: \$3,715

Funds in the amount of \$100 (year 1) and \$115 (year 2) for a total of \$215 are requested for correspondence among project participants. An amount of \$500 (year 1) and \$1,000 (year 2) for a total of \$1,500 is requested to purchase postage for advertising of professional development workshops. An amount of \$1,000 (year 1) and \$1,000 (year 2) for a total of \$2,000 is requested for purchasing postage for advertising of industry workshops and hands-on training opportunities.

Photocopy: \$5,200

An amount of \$400 (year 1) and \$800 (year 2) for a total of \$1,200 is requested to purchase photocopies for advertising of professional development workshops, as well as for the production of participant handouts. An amount of \$2,000 (year 1) and \$2,000 (year 2) for a total of \$4,000 is requested for purchasing photocopies for advertising of industry workshops and hands-on training opportunities, as well as for the production of participant handouts.

Author stipends: \$40,000

UCONN requests funding in the amount of \$20,000 to pay for author stipends associated with the development of twenty (20) NRAC fact sheets. Approximately 10 fact sheets will be published per year @ \$2,000 per publication. Author stipends are based upon an expected workload of fifty (50) hours of work in generating each publication at an estimated hourly rate of \$40. This will include: generating draft manuscript text; production of charts, diagrams, and other graphics; photography connected with publication; forwarding manuscript to publications team chairman for distribution for review; responding to peer reviews in creating final manuscript; production of final manuscript with accompanying graphics for transmittal to final editing, layout, and production.

Authors will produce their work according to an agreed upon schedule and deliver copy to the Publications Team Leader for peer review, before final revision and submission of the document. Stipends for the production of publications will only be made upon submission of the final document, with associated graphics, to the team leader and are within the standards set by other RACs for production of publications.

Professional Development Costs: \$9,000

Funds are requested to host two professional development workshops at a cost of \$4,500 each. An amount of \$750 is requested for speaker stipends for four individuals at each workshop. An amount of \$1,500 is requested for general workshop costs which may include room rental costs and miscellaneous aquaculture field supplies. These costs will vary based on topic and location, but will not exceed the budgeted amount. In the case that meals are provided, workshop fees will be collected to recover this cost.

Industry Workshop Costs: \$21,600

Funds are requested to host six industry workshops at a cost of \$3,600 each. An amount of \$750 is requested for speaker stipends for each workshop. An amount of \$1,500 is requested for speaker travel for each workshop. Travel reimbursement may include costs such as lodging, airfare, mileage, and meal expenses. An amount of \$1,350 is requested for workshop costs which includes room rental costs, meals (workshop fees will not be collected for meal expenses) and aquaculture field supplies. These costs will vary based on topic and location, but will not exceed the budgeted amount. In the case that meals are provided, workshop fees will be collected to recover this cost.

Industry Hands-on Training Costs: \$7,200

Funds are requested to host three hands-on training opportunities for industry at a cost of \$2,400 each. An amount of \$500 is requested for speaker stipends for each workshop. An amount of \$1,900 is requested for workshop costs, which includes room rental, transportation, meals (workshop fees will not be collected for meal expenses), lodging, and aquaculture field supplies. These costs will vary based on topic and location, but will not exceed the budgeted amount. In the case that meals are provided, workshop fees will be collected to recover this cost.

Conference Sponsorships: \$16,500

Funds are requested to sponsor the following meetings:

- Milford Aquaculture Seminar (\$1,500 per year)
- Northeast Aquaculture Conference & Exposition (\$5,000 in year 1)
- Farmed Fish Health Workshop (\$1,000 in year 1, \$1,500 in year 2)
- Mid-Atlantic Aquaculture Conference or Meeting (\$1,000 in year 1, \$1,500 in year 2)
- Pennsylvania Aquaculture Conference (\$1000 per year)
- Cornell Recirculating Workshop (\$750 per year)

These funds will be used to cover the costs of renting the venue and advertising the meeting to aquaculture producers.

Section 3.2.2 University of Maryland*: \$45,796**

	<u>Yr 1</u>	<u>Yr 2</u>	<u>Total</u>
Don Webster, Salary (1 month)	5,139	5,396	10,535
Don Webster, Fringe (30%;30%)	1,542	1,619	3,161
Communication & Supplies	1,000	1,000	2,000
Subtotal (Webster)	7,681	8,015	15,696
Jackie Takacs, Salary (10 days)	1,600	1,680	3,280.
Jackie Takacs, Fringe (25%;25%)	400	420	820
IT Services & Support	20,000	5,000	25,000
Communication & Supplies	500	500	1,000
Subtotal (Takacs)	22,500	7,600	30,100
Total	\$30,181	\$15,615	\$45,796

Don Webster is requesting one month of salary per year which includes \$5,139 plus 30% fringe of \$1,541, for a total of \$6,680 (year 1), and \$5,396 plus 30% fringe of \$1,618, for a total of \$7,014 (year 2). Year two includes an expected 5% increase in salary. Don Webster will: a) coordinate the REP team for this area of the project; b) providing ongoing group communications for guidance on production of extension fact sheets and other publications targeted at industry; c) generate and maintain list of extension fact sheets requiring production during each of the two years duration of the project; d) solicit authors for writing publications; e) track progress of publications during writing; f) develop listing of peers for review of publications; g) monitor production, reviews, graphics, layout, and editing for publications through production and provide NRAC with copies according to current procedures and requirements including both print copies and electronic versions; h) provide ongoing liaison with NRAC REP team leaders as part of the project; i) provide required reports to UConn and USDA.

Jackie Takacs is requesting ten days of salary per year which includes \$1,600 plus 25% fringe of \$400, for a total of \$2,000 (year 1), and \$1,680 plus 25% fringe of \$420, for a total of \$2,100. Year two includes an expected 5% increase in salary. Jackie Takacs will: a) coordinate and organize educational materials provided by extension colleagues and collaborate with UMD IT Services to incorporate them into web-based educational tutorials for the NRAC website.

Don Webster is requesting a total of \$1,000 per year, for a total of \$2000. Webster will hold quarterly conference calls estimated at 1.5 hours each. Six hours of multi-state conference calling is estimated at \$200; copy charges for reproduction of documents and team communications will be \$300; printer supplies and paper \$200; postage for mailing of review documents between authors, reviewers, and team leader is estimate at \$100; computer charges for technical support will be \$200.

Jackie Takacs is requesting a total of \$500 per year, for a total of \$1,000 to support conference calls (\$200) and cost of office supplies such as paper (\$150) and printer cartridges (\$150). IT Service costs, using UMD IT specialists, are requested in the amount of \$20,000 in year one and \$5,000 in year two, for a total of \$25,000. IT service costs (year 1) will support the development of a user-friendly educational web interface that offers passive and active learning environments for end-users and site-editing controls for administrators. IT support costs (year 2) will be used to expand and maintain the educational web resource webpages. Associated costs will cover the contracting of an IT specialist for

10 weeks (400 hours) in year 1 for site development and 2.5 weeks (100 hours) in year 2 for site maintenance at a rate of \$50/hour.

*****This is not a subcontract, but rather will be channeled through the University of Maryland as an internal account number.**

Section 3.2.3 Subcontract for University of Delaware: \$27,887

	<u>Yr 1</u>	<u>Yr 2</u>	<u>Total</u>
John Ewart, Salary (1 month)	6,465	6,740	13,205
John Ewart, fringe (34%;34%)	2,198	2,292	4,490
Communication & Supplies	500	500	1,000
Subtotal	9,163	9,532	18,695
Doris Hicks, salary (0.5 month)	2,993	3,120	6,113
Doris Hicks, fringe (34%;34%)	1,018	1,061	2,079
Communication & Supplies	500	500	1,000
Subtotal	4,511	4,681	9,192
Total	\$13,674	\$14,213	\$27,887

John Ewart is requesting one month of salary per year which includes \$6,465 plus 34% fringe of \$2,198, for a total of \$8,663 (year 1), and \$6,740 plus 34% fringe of \$2,292, for a total of \$9,032 (year 2). Year two includes an expected 5% increase in salary. John Ewart will: a) post and disseminate information related to the other components of the regional extension project including NRAC fact sheets and other NRAC publications, web-based educational tutorials, workshop materials and announcements, research project overviews, and b) work with the Project Coordinator to update the NRAC Extension Web page with information and links related to professional development, funding opportunities, the *Journal of Extension*, program impact and assessment articles and other similar resources to share useful information and assist regional extension personnel with their individual professional and program development.

John Ewart is requesting a total of \$500 per year, for a total of \$1,000 to support conference calls (\$200) and cost of office supplies such as paper (\$150) and printer cartridges (\$150)

Doris Hicks is requesting 0.5 month of salary per year which includes \$2,993 plus 34% fringe of \$1,018, for a total of \$4,011 (year 1), and \$3,120 plus 34% fringe of \$1,061, for a total of \$4,181. Year two includes an expected 5% increase in salary. Doris Hicks will: a) coordinate the proposed series professional development workshops on the benefits and risks of seafood consumption which includes identifying presenters and locations for each workshop, developing registration and workshop materials, and hosting the workshops.

Doris Hicks is requesting a total of \$500 per year, for a total of \$1,000 to support conference calls (\$200) and cost of office supplies such as paper (\$150) and printer cartridges (\$150)

Section 3.2.4 Subcontract for Salem State College: \$10,057

	<u>Yr 1</u>	<u>Yr 2</u>	<u>Total</u>
Joseph Buttner, Salary (0.6 month)	3,000	3,150	6,150
Joseph Buttner, Fringe (31%;31%)	930	977	1,907
Student	500	500	1,000

Communication & Supplies	500	500	1,000
Total	4,930	5,127	10,057

Joseph Buttner is requesting 0.6 month of salary per year which includes \$3,000 plus 31% fringe of \$930, for a total of \$3,930 (year 1), and \$3,150 plus 31% fringe of \$976, for a total of \$4126 (year 2). Year two includes an expected 5% increase in salary. Joseph Buttner will: a) coordinate the proposed series of industry workshops and hands-on training opportunities which includes soliciting workshop topics, identifying presenters and locations for each workshop, developing registration and workshop materials, and assisting in hosting the activities.

Student support for one student is requested in the amount of \$500 per year (50 hours @\$10/hour) for a total of \$1,000.

Joseph Buttner is requesting a total of \$500 per year, for a total of \$1,000 to support conference calls (\$200) and cost of office supplies such as paper (\$150) and printer cartridges (\$150)

Section 3.2.5 Subcontract for Rutgers University: \$5,099

	<u>Yr 1</u>	<u>Yr 2</u>	<u>Total</u>
Gef Flimlin, Salary (4 days)	1,500	1,575	3,075
Gef Flimlin, Fringe (33.3%;33.3%)	500	524	1,024
Communication & Supplies	500	500	1,000
Total	2,500	2,599	5,099

Gef Flimlin is requesting four days of salary per year which includes \$1,500 plus 33% fringe of \$499, for a total of \$1,999 (year 1), and \$1,575 plus 33% fringe of \$524, for a total of \$2,099. Year two includes an expected 5% increase in salary. Gef Flimlin will: a) assist Jackie Takacs (University of Maryland) in coordinating and organizing educational materials provided by extension colleagues, and collaborate with UMD IT Services to incorporate them into web-based educational tutorials for the NRAC website.

Gef Flimlin is requesting a total of \$500 per year, for a total of \$1,000 to support conference calls (\$200) and cost of office supplies such as paper (\$150) and printer cartridges (\$150).

Section 3.2.6 Subcontract for Delaware State University: \$2,048

	<u>Yr 1</u>	<u>Yr 2</u>	<u>Total</u>
Dennis McIntosh, Salary (5 days)	740	777	1,517
Dennis McIntosh, Fringe (35%; 35%)	259	272	531
Subtotal	999	1,049	2,048

Dennis McIntosh is requesting 5 days of salary per year which includes \$740 plus 35% fringe of \$259, for a total of \$999 (year 1), and \$777 plus 31% fringe of \$272, for a total of \$1,049 (year 2). Year two includes an expected 5% increase in salary. Dennis McIntosh will: a) assist in evaluating the activities and products developed in the project including publications, web-based tutorials, industry workshops and hands-on training activities, and web-based tutorials.

Section 3.2.7 Subcontract for The Pennsylvania State University: \$2035

	<u>Yr 1</u>	<u>Yr 2</u>	<u>Total</u>
Ann Faulds, Salary (1.3, 1.3% year)	795	823	1,618
Ann Faulds, Fringe (25.8%; 25.8%)	205	212	417
Total	1,000	1,035	2,035

Ann Faulds is requesting 1.3% of salary per year with the University approved inflation factor of 3.5% applied for the second year. Fringe benefits are computed using the rates of 25.8% applicable to Category I Salaries, 15.7% applicable to Category II Graduate Assistants, 8.2% applicable to Category III Salaries and Wages and 0.4% applicable to Category IV Student Wages for the current fiscal year - July 1, 2007 through June 30, 2008. If this proposal is funded, the rates quoted above shall, at the time of funding, be subject to adjustment for any period subsequent to June 30, 2008, if superseding Government approved rates have been established. The fringe benefit rates are negotiated and approved by the Office of Naval Research, Penn State's cognizant federal agency. Ann Faulds will assist in evaluating the activities and products developed in the project, including publications, web-based tutorials, industry workshops and hands-on training activities.

Section 3.2.8 Subcontract for University of Rhode Island: \$1880

University of Rhode Island	<u>Yr 1</u>	<u>Yr 2</u>	<u>Total</u>
Mike Rice, Salary (10% of summer salary)	917	963	1,880
Mike Rice, Fringe (0 for summer salary)	summer salary	summer salary	summer salary
Subtotal	917	963	1,880

Mike Rice is requesting 10% of summer salary per year which includes \$917 (year 1), and \$963 (year 2). Year two includes an expected 5% increase in salary. There is no fringe associated with summer salary. Mike Rice will: a) assist in evaluating the activities and products developed in the project including publications, web-based tutorials, industry workshops and hands-on training activities, and web-based tutorials.

Section 3.3 Current and Pending Support

Section 4.1 Letters of Intent

Section 4.2 Conflict of Interest Disclosure Letter

Section 4.3 Conflict of Interest List

Section 5.1 Resumes

Section 5.2 Support Materials

Section 5.3 List of Potential Reviewers

Fenna Haynes, New England Board of Higher Education

Laura Tiu, The Ohio State University Cooperative Extension

Fred Conte, University of California Davis Cooperative Extension