

**ANNOUNCEMENT FY 2013-14
FLORIDA AQUACULTURE REVIEW COUNCIL**

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**REQUEST
FOR
STATEMENTS OF INTEREST**

The Aquaculture Review Council, an advisory council to the Commissioner of Agriculture, is pleased to announce a request for Statements of Interest to perform applied aquaculture research and development projects during the State of Florida's 2013-14 fiscal year. This package contains all necessary information and instructions for preparation of a Statement of Interest.

Applicants must submit a Statement of Interest to the Department of Agriculture and Consumer Services, Division of Aquaculture, by 5:00 PM local time on Friday, January 13, 2012. Documents may be submitted via hand delivery, courier, mail, fax, or as an email attachment in a portable document format (.pdf).

Statements of Interest will be evaluated by the Council and selected investigators invited to submit full proposals in early February 2012. Funding for projects selected by the Council is contingent upon a legislative appropriation for Council projects.

The Aquaculture Review Council is focused on stimulating the growth and development of aquaculture in Florida. The aquaculture project review process is designed to create a partnership between the public sector (universities, non-profits, State and Federal agencies) and the private sector to jointly address aquaculture community priorities and transfer project results directly to the farmer.

Eligibility

Applicants can be private sector or state, local or federal government organizations. Investigators outside the state of Florida are eligible, but the project MUST be directly applicable to the priorities listed in the announcement. When feasible, project should be conducted in Florida. Current and on-going research projects will not be considered by the Council. Only specific projects focused on a listed priority, with definitive measurable objectives and endpoints, will be considered.

Submission

A full and complete application consisting of a Statement of Interest, cover page, and budget must be submitted. Statements of Interest from prior years will not be considered unless resubmitted. Late or incomplete applications will not be accepted. Applicants that miss the deadline will be notified by telephone or email. Proposals must be received by 5:00 PM local time on January 13, 2012. Applications must be sent to:

Aquaculture Statement of Interest
Division of Aquaculture
1203 Governor's Square Boulevard, Ste 501
Tallahassee, FL 32301-2961
Telephone: 850-488-5471
Fax: 850-410-0893
Email: Paul.Zajicek@FreshfromFlorida.com

Research and Development Priorities

Statements of Interest are requested to conduct short-term applied research that will address the following priorities. Questions concerning these priorities should be directed to Council members (see page 7).

Research

Species Production

Complete the research necessary to commercialize the following species.

- Freshwater and marine ornamental fish and invertebrate species.
- Hard clam (*Mercenaria mercenaria*) stock improvement, sunray venus (*Macrocallista nimbosa*), blood ark (*Anadara ovalis*), and eastern oyster (*Crassostrea virginica*).
- Production and technical characteristics of the Atlantic sturgeon (*Acipenser oxyrinchus*).
- Production and technical characteristics of the white shrimp (*Litopenaeus setiferus*) for food or bait market.
- Identify and test methods to improve growth rates in the latter half of the shrimp grow-out cycle in pond production systems.
- Species listed in priority order:
 - Marine food fish: 1) redfish (*Sciaenops ocellatus*), 2) cobia (*Rachycentron canadum*) and southern flounder (*Paralichthys lethostigma*) 3) pompano (*Trachinotus carolinus*).
 - Freshwater food fish: 1) sturgeon 2) hybrid striped bass.
 - Sport fish: 1) redfish 2) spotted seatrout (*Cynoscion nebulosus*) 3) snook (*Centropomus undecimalis*).
 - Bait fish: 1) Pinfish (*Lagodon rhomboides*) 2) goggle-eye (*Selar crumenophthalmus*) 3) killifish (*Fundulus spp.*).

Nutrition

- Develop and test specialized diets to improve ornamental fish health, survival, and growth.
- Develop and test specialty freshwater tropical ornamental fish feeds to enhance species coloration or to maintain fish health.
- Complete ecological studies of marine ornamental diet data in the wild in an effort to understand the importance of zooplankton diversity and create commercially applicable live feed protocols.
- Complete nutrition studies to overcome a second bottleneck in marine ornamental fish larval survival that occurs a week to a few days prior to and during metamorphosis.
- Develop and test algae-based fish feeds.

Broodstock

- Marine ornamental fish: Identify social/environmental cues necessary to initiate and complete natural reproduction and oocyte maturation in captivity to produce viable larvae. Where appropriate, induced spawning technologies should also be investigated.

Animal Health

- Identify ornamental species emerging diseases (i.e., viruses) – diagnosis and treatments.
- Identify and describe new biosecurity protocols for on-farm implementation that include cost estimates and a handbook to guide on-farm implementation.

Technology

- Develop and test intensified ornamental fish production through improved pond aeration systems.
- Develop and test intensified ornamental fish production through improved recirculating system water quality management techniques (i.e. monitoring).

- Develop and test intensified ornamental fish production by reducing recirculating system operational costs.
- Analyze the environmental effects of rearing tank design (i.e., shape, light, turbidity, currents, filtration) upon marine ornamental fish feeding, mortality and survival.
- Investigate and analyze the manipulation and control of microbial communities in marine ornamental fish hatcheries and larval rearing systems that will be beneficial to newly hatched and developing larvae.
- Develop and test closed system culture techniques for the aquatic plant *Egeria densa*.
- Implement and analyze new technology to economically and efficiently determine phytoplankton (e.g. chlorophyll concentrations) levels at shellfish aquaculture lease areas.
- Implement, analyze and compare and contrast various technologies (e.g., radar, cameras) for efficacy, efficiency, and cost-effectiveness in shellfish aquaculture lease surveillance and security.
- Eliminate or control off-flavor within food fish grown in intensive, recirculating production systems.
- Develop and test instrumentation to quantify larval densities in tank production systems.
- Develop and test economically competitive alternative energy to pump or heat water (e.g., solar).
- Develop and test practical and economically feasible energy storage (e.g., electrical).
- Create technologies for estimating mortality rates during shrimp grow out in pond production systems.

On-Farm or Off-Farm Environmental Interaction

- Publish critical reviews of current literature that discusses ecological, economic, and human health risks of tropical ornamental species. Place risks associated with ornamental fish into a realistic, science-based context.
- Develop and test risk assessment methods that are capable of not only distinguishing high risk tropical ornamental species but also low risk species.
- Research and publish physiological tolerances of tropical ornamental fish; these data will inform risk assessments (e.g., lack of cold tolerance in the vast majority of ornamental species).
- Research and publish analysis concerning the ability of fish communities already in the environment to prevent or reduce the probability of establishment of ornamental fish; these data will inform risk assessments (e.g., predators preventing recruitment or directly eliminating introduced ornamental fish).
- Develop and test a conceptual model describing the steps an ornamental species must go through from introduction to establishment to illustrate that establishment is actually a difficult process and rarely succeeds; current invasion models do not emphasize either the probabilistic nature of invasion or the difficulty of success.
- Research and publish the escape probabilities of non-native fish held in aquaculture facilities; evaluate compliance with aquaculture BMPs; determine where and how fish might escape and estimate the probabilities; sample the immediate surroundings of farms to determine escape; sample nearby waters for the presence of non-native fish.
- Place the ornamental fish escapement issue (probability of escape and the fate of escapees) into a realistic, science-based context rather than accept the unrealistic, high probabilities (or certainty) of escape currently in the literature.
- Establish a research and extension database related to shellfish ecology and the environmental benefits of shellfish aquaculture, such as nutrient removal and filtration capacities.
- Test and compare/contrast techniques and/or methods to control or monitor pest/predator/fouling of shellfish farming gear or products.
- Test and improve survival of post-larval shrimp during the acclimation process from high salinity hatchery waters to low salinity waters used in pond production systems.

- Determine the most important water quality parameters (i.e., mineral composition) for shrimp growth and survival in the low salinity water used in pond production systems.

Economic

- Compile and analyze Florida aquaculture production statistics and economic impacts.
- Analyze and produce an alligator farming production and maintenance economic analysis.
- Analyze and produce a sturgeon meat products production and market economic analysis.
- Compare and contrast the cost of production between pond, cage, recirculation systems and hybrid systems.

Timeframe

Projects must be completed within the State of Florida fiscal year: July 1, 2013 to June 31, 2014. However, a no-cost extension may be granted upon Department approval.

An option for applicants that envision a multi-year effort is to propose a Phase I and Phase II project (i.e., a two year duration project). Applicants must clearly describe and delineate Phase I and Phase II objectives in their Statement of Interest. Include descriptions of Phase I and Phase II summary reports and demonstrations of completed objectives. Review and approval of funding for Phase I of a project is not a guarantee of approval and funding for Phase II. Phase II projects will be reviewed in the same manner as all other project submittals in the year in which it is submitted.

Statements of Interest Evaluation

The Aquaculture Review Council will evaluate Statements of Interest. The Council is composed of a cross-section of aquatic farmers, a commercial fisherman and the Chair of the Aquaculture Interagency Coordinating Council. The Council acts as an advisory body to the Commissioner of Agriculture. The Council will examine Statements of Interest for:

- Applicability to Florida aquaculture and practicality of implementation in aquaculture business practices.
- Principle investigator and co-investigator prior-knowledge and subject matter experience.
- Farmer involvement and on-farm implementation.
- Post-project farmer outreach and education, technology transfer, hands-on workshop, and/or production or technical demonstration.
- Project management and budget.
- Matching funds/cost share: cash, matching funds, funds from other granting sources, personnel time, expendables, and equipment. Facilities and contributions from private sector farms may be identified as a cost share.

Applicants that produce a Statements of Interest that is reviewed favorably by the Council will be asked to generate fully detailed proposals for a second review by the Council. During the full project proposal evaluation, applicants may be asked to attend the Council meeting to present an in-person summary of their proposed project.

Funding and Administration

The source of funding for approved projects is a State of Florida annual appropriation approved by the Legislature and Governor.

Full proposals will be evaluated by the Council and those proposals that are favorably reviewed will be recommended to the Commissioner of Agriculture for inclusion in the Florida Department of Agriculture and Consumer Services' annual budget request. Investigators are encouraged to create legislative support for the package proposals included in the budget request.

Project funds, if appropriated, will be administered by the Florida Department of Agriculture and Consumer Services. Note that Florida Statute mandates public-private partnerships, when appropriate, and a return of a percentage of the profit/revenue generated by projects for funding future projects.

The Council encourages the identification of matching or cost share contributions to complete a project. Applicants that can identify a match or cost share are encouraged to do so and provide a description of that contribution in the budget narrative.

Statement of Interest Format and Contents

Applicants must identify the research or development priorities being addressed and provide sufficient detail for the Council to evaluate how those priorities will be solved. At a minimum, the applicant should include clear objectives, specific approaches to achieving those objectives (including methods), expected outcomes, and the means to transfer those outcomes to Florida aquaculturists in addition to a project final report. Historically, the Council has shown a preference for extension-style publications, workshops, and hands-on demonstrations as the means to transfer project results.

Applicants are encouraged to contact the Council member representing the industry sector that will be a beneficiary of the proposal's results. Letters of recommendation from Florida aquaculturists that possess an Aquaculture Certificate of Registration are recommended.

Applicants must organize their submittal as described in this announcement. Adhere to the following format. Each content item must be addressed and the cover page and budget table completed.

Statement of Interest Format and Content

- I. Cover Page (see page 8).
- II. Project Description (one page limit, excluding references) to include:
 - A. Description of specific research and development priorities to be resolved by the project.
 - B. Approaches/Methods.
 - C. Information/Technology Transfer.
- III. Prior, Current, and Proposed Work (one page limit).

Applicants must submit a list of projects of similar size, scope, and relevance to the proposed project that the applicant has undertaken in the past five years or proposals submitted to another entity for funding. Include project titles, principal investigators and co-investigators, total amounts awarded, project periods, and brief (1-3 sentence) descriptions. If the proposed project is similar to a previously funded activity(ies), applicants are to briefly discuss how the previous project(s) and the current proposal differ and explain how the current proposal will build on the work that was previously done. If the applicant cannot clearly distinguish between activities in the current proposal and the difference from work previously funded, the proposal will be deemed ineligible for funding.
- IV. Resumes/Qualifications of Key Personnel (one page per investigator).
- V. Budget

- Budget table (see page 9).
- Budget narrative (one-page) with sufficient detail to enable reviewers to evaluate the appropriateness of the funding and the value of the match or cost share.

VI. Letters of Recommendation

AQUACULTURE REVIEW COUNCIL MEMBERS

Alligators

Allen Register
Gatorama
Post Office Box 248
Palmdale, FL 33944-0248
Phone: 863-675-0623
E-mail: allen@gatorama.com

Food Fish

Gene Evans
Evans Farms
1195 East Washington Ave.
Pierson, FL 32180
Phone: 386-749-0392
E-mail: geneevans@mpinet.net

Aquatic Plants

Pierre LePochat
WaterScapes Aquatic Plant Nursery
PO Box 1826
Seffner, FL 33583-1827
Phone: 813-986-2503
E-mail: info@waterscapesnursery.com.

Shellfish

Daniel Solano
Cedar Key Aquaculture Farms, Inc.
11227 E. Riverview Road
Riverview, Florida 33569
Phone: 888-252-6735

Aquaculture Industry Member At-Large

Barry Hurt
Placida Gold Aquafarms, LLC
PO Box 3386
Placida, FL 33946
Phone: 863-604-1891
E-mail: bhurt@tampabay.rr.com.

Tropical Fish

Art Rawlins
Rawlings Tropical Fish
3402 Kent Path Court
Lithia, Florida 33547
Phone: 813-737-3418

Aquaculture Interagency Coordinating Council

Leslie Palmer
FL Dept. of Agriculture & Consumer Services
Division of Aquaculture
1203 Governor's Square Boulevard, 5th Floor
Tallahassee, Florida 32301
Phone: 850-488-5471
E-mail: Leslie.Palmer@freshfromflorida.com

State Agricultural Advisory Council

Marty Tanner
Aquatica Tropicals, Inc.
6611 Hayter Drive
Lakeland, Florida 33813
Phone: 863-660-3391
E-mail: jmtanner@gte.net

Commercial Fishing

Heath Davis
Davis Seafood
P.O. Box 502
Cedar Key, Florida 32625-0502
Phone: 352-543-5450
E-mail: hdavis@drummondbank.com

Florida Aquaculture Project
Statement of Interest – 2013-14

Cover Page

Title of Proposed Project:

Principal Investigator(s) (name and title):

Name, Address, Telephone, Fax, and Email of Submitting Organization:

Cooperating Investigators (name, title and organization)

Project Abstract (200 words or less):

Total Project Cost: _____
State of Florida Cost: _____

Florida Aquaculture Project – 2013-14

Budget

	# people	Months of effort	State of Florida funds	Matching / Cost Share
1. Salaries				
Project Manager				
Principal Investigator				
Technician				
Clerical				
Total Salaries				

2. Other Personnel Services (OPS)				
Consultants				
Other (specify)				
Total OPS				

3. Fringe Benefits*				
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4. Capital Outlay (OCO)				
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5. Expenses				
Supplies				
Office (copier, phone, postage, etc.)				
Other (specify)				

Total Direct Costs (add 1 through 5)		
Total Indirect Costs*		
Total Matching Funds [#]		
Total Amount of Request		

* Describe formula: _____

[#] Source of matching funds:

**Indirect costs are limited to 5% of total direct cost, excluding any matching funds.
Travel and/or Per Diem are not allowed expenditures**

Note: Florida Statute mandates public-private partnerships, when appropriate, and a return of a percentage of the funds generated by projects for funding future projects.