

CALIFORNIA WILDLIFE FOUNDATION
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CALIFORNIA WILDLIFE FOUNDATION

REQUEST FOR QUALIFICATIONS (RFQ)

April 27, 2012

Notice to Prospective Proposers

You are invited to review and respond to this Request for Qualifications (RFQ), entitled:

Spiny Lobster Fishery Management Plan: Management Strategy Evaluation

As part of the Spiny Lobster Fishery Management Plan (FMP) currently being developed by the California Department of Fish and Game (DFG), CWF is seeking the qualifications of contractors to design a Management Strategy Evaluation (MSE) modeling system to assess the consequences of a range of fishery management strategies and options.

Your Summary of Qualifications (SOQ) must have three sections: Transmittal letter discussing your interest and intent, your organization qualifications, and your scope-specific qualifications, process and methodology plan.

In submitting your proposal, you must comply with these instructions. Note that all agreements entered into with California Wildlife Foundation (CWF) will include by reference the agreement between CWF and California State Coastal Conservancy, authorizing the Spiny Lobster Fishery Management Plan.

If you do not have Internet access, a hard copy of this RFQ can be provided by contacting Amy Larson, CWF, whose contact information is listed below.

In the opinion of the California Wildlife Foundation this RFQ is complete and without need of explanation. However, if you have questions, or should you need any clarifying information, the contact person for the RFQ process, contracting and billing is:

Amy Larson
California Wildlife Foundation
428 13th Street, Suite 10A
Oakland, CA 94612
alarson@californiawildlifeoundation.org



If you should need any clarifying information for the Scopes of Work included in this RFQ, the contact person is:

Kristine Barsky
California Department of Fish and Game
2419 E. Harbor Blvd. #149
Ventura, CA 93001
kbarsky@dfg.ca.gov

Please note that no verbal information given will be binding upon CWF or the State of California unless such information is issued in writing as an official addendum.



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April 27, 2012

Spiny Lobster Fishery Management Plan: Management Strategy Evaluation

1. Background

The State Coastal Conservancy ("Conservancy"), on behalf of the Ocean Protection Council ("OPC") has entered into a grant agreement with the California Wildlife Foundation ("CWF") to assist the California Department of Fish and Game ("DFG") in the preparation of a fishery management plan ("FMP") for the California Spiny Lobster. The FMP shall be developed in accordance with the requirements of the Marine Life Management Act for submission by DFG to the Fish and Game Commission for approval.

CWF is seeking qualified contractors to carry out specific tasks related to the development of DFG's Spiny Lobster FMP.

2. Scope of Work

As part of the Spiny Lobster FMP currently being developed by the DFG, CWF is seeking the qualifications of contractors to partner with DFG scientists to develop a Management Strategy Evaluation (MSE) team to assess the consequences of a range of fishery management strategies and options. It is expected that frequent interaction, coordination and collaboration will be required between the team members during this contract.

2.a. Terms of Reference

2.a.1. Management Strategy Evaluation: DFG defines a complete Management Strategy Evaluation System as the evaluation of a set of alternative Management Procedures as defined in Bentley and Stokes (2011). Contract applicants should be familiar with this document which can be found on the CWF website.



A single management procedure details a 'collection of specifications, formulae, and rules mapping a pathway from fisheries data to fisheries management actions which will create a formal definition of what, and when, management actions are to be taken in response to changes in a fishery' (Bentley and Stokes, 2011).

In practical terms, the MSE framework mainly includes: (1) historical fishery-dependent, fishery-independent, and biological data; (2) a stock assessment model that determines the current stock biomass/abundance and fishing mortality; (3) a set of real-world candidates for management actions that are practical, enforceable, and can be simulated; (4) a set of performance measures that can be used to evaluate the effects of these management actions; (5) an operational model that forecasts the effects of the management actions on future population structure; (6) harvest control rules based on (2), (4), and (5) above.

In addition, the MSE addresses specific objectives decided upon by DFG, such as those which are outlined in Table 1 of Bentley and Stokes (2011). These objectives may be associated with performance statistics.

2.a.2. Historical data: The fishery-dependent, fishery-independent, and biological data to be used for this effort. Additional data or other scientific information may be considered for inclusion in the MSE at the discretion of DFG.

2.a.3. Stock Assessment: A stock assessment relies on the historical data and modeling to estimate key stock and fishery parameters such as stock abundance, recruitment, and fishing mortality. A stock assessment was recently completed by DFG and provides current estimates of the above parameters. However, the models explored during the assessment effort did not provide usable reference points using DFG datasets which are listed in the stock assessment: <http://www.dfg.ca.gov/marine/lobsterfmp/>. Development of an assessment model may be required as part of this MSE effort.

2.a.4. Management Actions: These are changes in the regulation of the fishery, deemed by DFG to be practical and enforceable. Actions may include, but are not restricted to, changes in legal size, fishing season, commercial effort, recreational bag limits, or the number of recreational hoop nets allowed to be used. A tentative list of actions is provided [here](#). However, during development of the MSE, the effects of some of these actions may be impossible to simulate and may therefore be excluded from analysis.



2.a.5. Reference Points: Represent target and limit reference points based on metrics such as fishing mortality, spawning potential, or stock biomass. These will be used to determine the status of the stock and fishery. The reference points will be used to evaluate the effectiveness of alternative management actions and are estimated by the operational models developed for the MSE.

2.a.6. Operational Model: This is a population dynamical model, utilizing lobster growth, mortality, survival, and recruitment rates, or a group of dynamical models that together consider these rates, that forecast changes in the lobster population based on alternative management actions.

2.a.7. Harvest Control Rules: These are triggers that specify what management actions to take based on the results of the MSE. The performance of these prospective rules is linked to reference points calculated from the operational model, results from the stock assessment, and management understanding of the allowable ranges of these reference points.

2.b. Processes:

The team comprised of DFG biologists and the contractor will conduct:

2.b.1. Stock Assessment Modeling: Develop, if feasible, a functional stock assessment model based on DFG-approved datasets.

2.b.2. Operational Model Development: Model(s) will be developed that use lobster population dynamics information and DFG datasets to estimate reference points for evaluating the results of changes in management actions.

2.b.3. Development of Harvest Control Rules: The team will determine appropriate limits on estimated reference points needed to trigger specific management actions. These control rules will be used to link results from the operational and stock assessment models to the best management action(s), and determine the magnitude of the action needed (e.g., how much of a change in legal size is needed, for instance)



2.b.4. Ensure reusability of the MSE: The team will work to create a software framework that easily allows subsequent execution of the MSE by DFG biologists, and using updates to the DFG databases, previous operational model results, and updated stock assessments.

2.c. Operation: MSE requires that the specified management actions be predefined and triggered as defined by the harvest control rules. The actions identified by the MSE are not modifiable at the time of MSE execution, and must be carried out as specified. It is understood that the effects of any given management action may not be immediately apparent and enough time, possibly multiple years, must be given to allow for this latency.

2.d. Timeline and Deliverables: The development of a software front-end to automate future runs of the MSE is not an explicit task or deliverable in the first year (see Task 2, year 2), but it is expected that Task 1 will identify how to integrate their deliverables into the front-end.

2012

Task 1. The team will outline the high-level design of the operational model ensuring that the model returns reference points appropriate for determining the effects of the management actions on the fishery and stock.

High-level design:

For each objective specify associated management procedure to be comprised of:

1. Candidate procedure(s) with:

1.1 Associated indicators or management statistic(s)

1.2 Models and necessary data

2. Actions to be provided by the Department will include:

2.1 Controls: actions that affect fishing activities

2.2 Monitoring: actions that change monitoring programs or the data collected

2.3 Analyses: actions that change how data is analyzed



Deliverable 1: High-level design of the operational model. These designs must be approved by the Department and OPC before proceeding to detailed design and implementation. **Task 1 and Deliverable 1 to be completed by November 2, 2012.**

2013

Task 2. The team will develop additional detail needed to implement and use the operational model. Implement the operational model. Front-end Integration information will be developed to allow execution of the operational model, as part of an MSE, in the future.

Detailed design:

Add in additional detail to High-Level Design:

1. Script/program/description for extracting data for each required model/simulation run. Description must include running time estimates for each model run needed for a complete MSE.
2. Rules and formulae for evaluating and selecting the chosen procedure from the available candidate procedures.
3. Input files and running instructions for each model run.

Deliverable 2: Detailed designs which, along with the high-level design will provide a complete description/user manual for use by the Department. These documents must reflect the operational model as agreed upon by the team, DFG, and OPC; and as delivered. **Deliverable 2 to be completed by April 5, 2013.**

Deliverable 3: The operational model. Demonstrate to the Department that the finished MSE functions as designed and is user friendly. Provide the Department with all scripts, input files, models, evaluation protocols required to run the finished and complete MSE system. Any software, outside of off-the-shelf programs, must be provided with source code and full code documentation including any compilation or execution scripts. **Task 2 and Deliverable 3 to be completed by May 3, 2013.**



Task 3. The team will define target and limit reference point levels for both fishing mortality (e.g., Fmsy or similar) and biomass (e.g., Bmsy or similar). These targets and limits will apply to the reference points estimated by the operational model.

Deliverable 4: Detailed description of harvest control rules identifying reference points, targets and limits, and associated management actions. **Task 3 and Deliverable 4 to be completed by April 5, 2013.**

Task 4. The team will develop harvest control rules that utilize the estimated, target, and limit reference points to identify any appropriate management actions, and magnitude of action, to implement.

Deliverable 5: A complete set of functioning harvest control rules fully integrated with any stock assessment, and the operation model. **Task 4 and Deliverable 5 to be completed by May 3, 2013.**

Task 5. The team will determine the need for, and feasibility of developing a new stock assessment model. If needed, the approach will be determined, implemented, and skill-checked. This model will be deliverable in time for the testing of the harvest control rules. Task 1 is a multi-year (2012/2013) effort.

Deliverable 6: Stock assessment model capable of determining the current stock biomass and fishing mortality of the California spiny lobster. **If executed, Task 5 and Deliverable 6 to be completed by May 3, 2013.**

3. Developing your Statement of Qualifications

Statements of Qualifications (SOQ) must be in the following format and contain the information listed below.

3.a Transmittal Letter – provide the following information:

- Brief background, scope and location of the firm(s) and the location of the office(s) where the work is to be performed (if the work is to be shared



- among other firms and offices in different locations, indicate where each office is located and what work is to be performed in each office);
- A summary description of the work to be performed by each sub-consultant (if any) for the project;
- Attach a memorandum from each sub-consultant, if any, signed by the principal of the sub-consultant firm;
- The person(s) authorized to act on behalf of your firm during the selection process and contract negotiations if any; and
- State when the proposed team is available to start.

3.b Personnel and Organization Qualifications and References:

- **Organization Chart/Resumes**– Provide a description of the principal personnel (resumes and curriculum vitae) and a description of all supporting personnel.
- **Qualifications and Experience**– Provide a summary of qualifications, including any previous experience with any successful and similar projects that demonstrate how you meet the minimum qualifications to perform the work.
- **References** -Complete Applicant References (see Reference from elsewhere in this RFQ), including names and phone numbers.

3.c Scope-specific Process and Methodology:

- **Scope-specific team and qualifications-** Provide an organization chart that will include the prime Consultant and any sub-Consultants for this specific project; show the proposed relationships between the project manager, key personnel, support staff, and other resources that are expected to participate in the project. Show which aspects of the work each person will be responsible for performing and the number of hours each will devote to the project. Changes in lead Consultant/sub-Consultant personnel will not be made during the contract period without prior written approval from DFG, OPC and CWF. Describe personnel qualifications that show expertise in the SOW. (Any personnel substituted will have similar skill sets.)
- **Process and methodology-**Provide a description of the manner in which you intend to conduct the Management Strategy Evaluation. Include a description of the firm's management process, project management, or assigned individuals and any sub-Consultant's management process, as well as possible approaches to analyzing the specific project.
- **Budget**
The budget amount allocated for the Scope of Work is \$89,000, to include contractor labor and expenses. CWF, with approval of OPC and DFG, reserves the right to amend this figure. Proposers are not required to submit a detailed budget with their SOQ. Proposers are encouraged to include a total



estimate. It is anticipated that that a detailed budget by subtask (including hours and rates for each person working on the project) will be drafted by the chosen contractor, to be approved by DFG and OPC, prior to work beginning. This time is billable.

4. Selection Process

Applicants with the necessary expertise and resources to perform the work described herein are asked to submit a Statement of Qualifications package. Those firms judged to be the best qualified to undertake the work, will be interviewed by the Department's selection committee. The contract will be negotiated with the best-qualified firm after interviews are conducted and the selection committee ranks the firms.

The criteria for selection include: the background, scope and location of the firm; relevant experience of the firm, project leadership and assigned individuals; education and other credentials (awards, recognition and references) of the project leadership and team members, the resources available to them, and their time devoted to the project.

Any contract to be awarded as a result of this Request for Qualifications will be awarded without discrimination based on race, color, religion, sex, or national origin. The firm finally selected must comply with all applicable laws, rules and regulations.

5. Addenda

Prior to the date set for submission of proposals, the Department may modify this RFQ by issuance of one or more Addenda that will be posted on the California Wildlife Foundation web site:

www.californiawildlifefoundation.org/opportunities

6. Withdrawal and Disposition of RFQs

It is CWF's policy not to solicit SOQs unless there is a bona fide intention to award a contract. However, CWF and the agencies reserve the right to withdraw this RFQ at any time, and to accept or reject any or all SOQs received as a result of this RFQ.

Upon contract award, all documents submitted in response to this RFQ will become the property of the State of California, and will be regarded as public records under the California Public Records Act (Government Code Section 6250 et seq.) and subject to review by the public. The State cannot prevent the disclosure of public documents. Do not disclose sensitive, confidential, or privileged information.

7. Timetable of Events



7.a. SOQ Due Date:

To be considered, submit original and three (3) copies of your Statement of Qualifications along with all required attachments by Friday, May 25, 2012 at 4:00 p.m. to the appropriate DFG contact and address.

Kristine Barsky
California Department of Fish and Game
2419 E. Harbor Blvd. #149
Ventura, CA 93001
kbarsky@dfg.ca.gov

The next business day, Tuesday, May 29, 2012, one copy must be delivered to:

Amy Larson
California Wildlife Foundation
428 13th Street, Suite 10A
Oakland, California 94612

Questions regarding the process for responding to this RFQ should be directed to Amy Larson (alarson@californiawildlifefoundation.org). Questions regarding information about specific sites and scientific requirements of this project should be directed to Kristine Barsky (kbarsky@dfg.ca.gov).

7.b. Interview Process

The Department's selection committee will evaluate each applicant's Statement of Qualifications. Those consultants judged to be the best qualified to undertake the work will be interviewed by DFG's selection committee. Telephone and/or in-person interviews will be conducted. Travel reimbursements **may** be considered for any final candidate(s) from out-of-state, pending agency approval. Applicants should expect to receive a letter from the California Wildlife Foundation within a few weeks following the proposal due date indicating whether or not their company was chosen for an interview.



8. REQUIRED DOCUMENT CHECKLIST

A complete Statement of Qualifications package will consist of the items identified below.

Submit three copies of your SOQ for each scope to the Department of Fish and Game Office listed above and one to the California Wildlife Foundation, also listed above in Section 7.a.

Place a check mark or "x" next to each item that you are submitting. For your solicitation to be considered responsive, all required documents must be included in your package. Include this checklist with your SOQ package.

Document	Document Name/Description
_____	Transmittal Letter
_____	Organization Chart/Resumes
_____	Qualifications and Experience Summary (Scope Specific)
_____	Process and Methodology Description
_____	Required Document Checklist
_____	Applicant References



9. APPLICANT REFERENCES

List below three references of similar types of services performed within the last five years. If three references cannot be provided, please explain why on an attached sheet of paper.

REFERENCE 1			
Name of Firm			
Street Address	City	State	Zip Code
Contact Person		Telephone Number	
Dates of Service		Value or Cost of Service	
Brief Description of Service Provided			
REFERENCE 2			
Name of Firm			
Street Address	City	State	Zip Code
Contact Person		Telephone Number	
Dates of Service		Value or Cost of Service	
Brief Description of Service Provided			
Section REFERENCE 3			
Name of Firm			
Street Address	City	State	Zip Code
Contact Person		Telephone Number	
Dates of Service		Value or Cost of Service	
Brief Description of Service Provided			

