



CA Department of Fish & Wildlife - Marine Region Sea Grant Fellow Opportunity #1 Invertebrate Management Program

Host Location

Marine Region - CA Department of Fish & Wildlife
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Los Alamitos, CA. 90720

Supervisors and Point of Contact for Prospective Fellows and Finalists

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Position Description

The California Department of Fish and Wildlife (CDFW) is a state trustee agency that maintains native fish, wildlife, plant species and natural communities for their intrinsic and ecological value and their benefits to people. This includes the diversified use of fish and wildlife for recreational, commercial, scientific and educational uses.

The Marine Region of the CDFW in conjunction with the California Fish and Game Commission manages and regulates the use of marine species and habitats within the coastal waters of the state. The Marine Life Management Act (MLMA) guides CDFW in the conservation and sustainable use of California's living marine resources. The MLMA states that Fishery Management Plans (FMPs) "shall form the primary basis for managing California's sport and commercial marine fisheries." The underlying tenant and a key component to sustainably managing fisheries is the ability to adaptively manage based on the most current information available. Two FMPs are currently in different stages of development, the Red Abalone FMP and California Spiny Lobster FMP. In 2016, CDFW plans to start the process of updating the 2001 MLMA Master Plan, which will guide the development of future FMPs.

CDFW is now in the process of transitioning current abalone fishery management from the Abalone Recovery and Management Plan (ARMP) to a fishery management plan under MLMA for the northern California red abalone fishery. The purpose of this transition from the ARMP to an MLMA FMP is to achieve the long term ARMP management goals while bringing the management framework into full compliance with the policies and goals of the MLMA.

The Lobster FMP is in the later stages of development as it was developed through a stakeholder public process from 2012-2014 and recently underwent a scientific peer-review process. The draft FMP will be delivered to the Fish and Game Commission in December 2015, which will start the Fish and Game Commission's regulatory process to adopt and implement the Lobster FMP.

The FMP development process may vary from fishery to fishery but in general it entails the following:

- Holding pre-scoping meetings with constituents to develop framework and direction for implementing a new management approach under an FMP
- Identifying existing natural history and population dynamics information
- Identifying fishery information (both recreational and commercial)
- Analyzing habitat information including ways to minimize any adverse effects
- Developing fishery research protocols
- Developing measures for conservation and management of the fishery
- Developing harvest control rule(s) to ensure the continued sustainability of the resource and its fishery
- Holding public input meetings to gather comment on a draft FMP document
- Review of the science framework for the long term management strategy
- Completing final adjustments to the FMP
- Guiding the FMP through its adoption by the Fish and Game Commission

The Sea Grant fellow will assist CDFW staff with the Abalone and Lobster FMP development processes. Assisting CDFW staff with these FMPs will provide the fellow with experience related to both early and late stages of the FMP development process. The fellow may assist in the Abalone FMP public process design and implementation; preparation for and participation in public meetings; compiling public meeting outcomes; and incorporating required amendments in the FMP document. For the Lobster FMP, the fellow will assist staff with guiding the Lobster FMP through the Fish and Game Commission adoption and regulatory process.

Additionally, the fellow may have an opportunity to assist CDFW staff and outside contractors with updating CDFW's *MLMA Master Plan: A Guide for the Development of Fishery Management Plans*. The fellow may also assist program staff in ongoing abalone and lobster management duties which include report card return data entry and analysis; assistance in running statistical models designed to evaluate the status of the fishery; and assisting with abalone recovery tasks. The fellow might also prepare reports or PowerPoint presentations for CDFW staff and the Fish and Game Commission. The abalone and lobster FMP projects have email notification list and webpages on the CDFW website. If the fellow has experience or interest in public outreach there are opportunities to contribute in this area.

Through this fellowship the fellow will gain experience in what information is required to develop fishery management plans (which are always multi-year projects with lot of parts), and gain insight into state marine fishery management policy, as well as interact with fishermen, fishery scientists, managers, the general public, and decision makers involved with state marine fishery management.