COMMITTEE STAFF SUMMARY FOR NOVEMBER 15, 2016

6C. MLMA MASTER PLAN

Today's Item **Information ☒** **Direction ☐**

Receive DFW update on progress in efforts to review and amend the current FGC-adopted master plan for fisheries pursuant to the Marine Life Management Act (MLMA).

Summary of Previous/Future Actions

- Received overview of plan and timeline — Nov 4, 2015; MRC, Ventura
- Update on progress — Mar 21, 2016; MRC, Los Alamitos
- Update on progress — Jul 21, 2016; MRC, Petaluma
- **Today's update on progress** — **Nov 15, 2016; MRC, Los Alamitos**

Background

In 2001, FGC adopted a master plan for fisheries developed by DFW with input from stakeholders pursuant to the MLMA. A DFW effort to amend the master plan is currently underway, to broaden the policy scope of the document and facilitate moving more fisheries under active management and fishery management plans, as envisioned in the MLMA (See Exhibit 1 for more background). A master plan amendment is significant and substantial enough that DFW's Marine Region has elevated its priority to one of five strategic work plan objectives.

In Nov 2015, Mar 2016, and Jul 2016, DFW provided MRC with an overview and updates on the MLMA master plan amendment process, expected timeline for completion, and initial details on the draft framework. Since then, DFW has developed additional information resources to engage the public, including creation of new a DFW Master Plan amendment webpage, updated public information documents, and plans for more stakeholder engagement (exhibits 2-4). Today DFW will provide a verbal update on the status of the master plan amendment process.

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

1. Staff Summary from Mar 2016 MRC meeting – for reference purposes only
2. Overview of Draft Amended Framework of MLMA-based Management, updated Oct 2016
3. MLMA Master Plan Amendment Process: Information Gathering Projects, Oct 2016
4. Link: "Updating the MLMA Master Plan" webpage (www.wildlife.ca.gov/Conservation/Marine/MLMA/Master-Plan)

Committee Direction/Recommendation (N/A)

COMMITTEE STAFF SUMMARY FOR MARCH 21, 2016

6. MLMA MASTER PLAN

Today's Item **Information ☒** **Direction ☐**

Receive DFW update on progress in efforts to review and amend the current FGC-adopted master plan for fisheries pursuant to the Marine Life Management Act (MLMA).

Summary of Previous/Future Actions

- Received overview of plan and timeline — Nov 4, 2015; MRC, Ventura
- **Today's update on progress** — Mar 21, 2016; MRC, Los Alamitos

Background

The MLMA, enacted in 1998, directs DFW and FGC to manage state fisheries sustainably through an ecosystem-based approach (§ 7050 et seq., Fish and Game Code). To help achieve its goals, the MLMA calls for developing a master plan that specifies the process and resources needed to prepare, adopt and implement fishery management plans (FMPs) for fisheries managed by the state (§ 7073, Fish and Game Code). The master plan is intended to help focus management effort on the highest priority species and to describe the specific tools and approaches to be applied in achieving the goals of the MLMA.

The current Master Plan was developed by DFW with input from stakeholders and adopted by FGC in 2001 (see https://www.wildlife.ca.gov/Conservation/Marine/Master-Plan). Since then, priorities have evolved and new issues have arisen. New tools and approaches have become available that have the potential to significantly improve fisheries management. Given that the MLMA calls for the master plan to be periodically reviewed and amended, these new tools and approaches can be incorporated into an amended master plan with the potential to broaden the policy scope of the document and facilitate moving more fisheries under active management and FMPs, as envisioned in the MLMA. A master plan amendment is significant and substantial enough that DFW's Marine Region has elevated its priority to one of five strategic work plan objectives (Exhibit 1).

In Nov 2015, DFW provided an overview of the background, scope, and proposed approach to amend the MLMA master plan for fisheries (exhibits 2-4). Today, DFW will provide an update on progress made in support of the current information-gathering stage.

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

1. DFW Marine Region Strategic Work Plan - Summary, dated Oct 21, 2015
2. Master Plan for Fisheries Top Ten Frequently Asked Questions, dated Oct 22, 2015
3. DFW Draft Proposed Approach to Amend the Marine Life Management Act Master Plan, dated Oct 22, 2015
4. Draft Ongoing and Proposed Analyses Supporting the Development and Implementation of an Amended Master Plan for Fisheries, dated Oct 22, 2015

Committee Direction/Recommendation (N/A)

Overview of a Draft Amended Framework for MLMA-based Management

October 2016

The Marine Life Management Act (MLMA) is the guiding statute for ocean fisheries management in California. Enacted in 1999, this progressive law moved the state towards ecosystem-based management of its marine resources. This overview details some of the challenges with the current management approach, and the opportunity that revising the MLMA's work plan, the Master Plan for Fisheries, offers. It lays out a draft framework for prioritizing and scaling the intensity of management to the risks and potential benefits for each fishery, enabling more strategic allocation of limited funds and staff capacity to the fisheries that are in greatest need of management intervention. It also describes how this approach can be used to bring all fisheries in California up to a standardized level of management consistent with the MLMA. It is intended to serve as a road map, linking various information gathering projects that are underway together into a cohesive strategy and vision for the Master Plan amendment.

Before the MLMA, ocean fisheries were managed through adjustments in legislation or in regulation adopted by the Fish and Game Commission (Commission) as problems became evident. However, the MLMA called for comprehensive, proactive management of the state's ocean fisheries to achieve a set of common objectives and to meet certain standards. Since passage of the MLMA, implementation has focused largely on targeted rulemakings and on the preparation of fishery management plans (FMPs) for a few fisheries, often in response to legislative action. Controversy and complexity in these fisheries increased the intensity of FMP efforts and the demands on the California Department of Fish and Wildlife's (the Department) capacity. As a result, most of the state's fisheries have not fully benefited from the provisions of the MLMA.

The draft "Amended Framework for MLMA-based Management" proposed here addresses three needs: I) a process for prioritizing future management actions both among and within fisheries; II) a process for scaling those management actions to reflect the needs, risks, and values of each fishery together with the Department's capacity; and III) a means of conveying up-to-date fisheries information in a way that's easy for stakeholders, researchers, and the public to navigate and digest. This framework is depicted on Page 5. Projects on climate change, partnerships, stakeholder engagement, and peer review are underway and are anticipate to apply across the framework as appropriate. It is important to note that all components of the framework are still being developed and tested for relevance and feasibility and will be the focus of workshops and other discussions with stakeholders.

I. Prioritization Component

The prioritization component is intended to assess the need for management action in individual fisheries in a transparent and consistent fashion by conducting three types of analyses. Besides grouping fisheries as high, medium, or low need for management action, these analyses can also identify high priority actions that can be taken to improve management. These three analyses can be distilled into the following questions: 1) where are there risks?; 2) how well is current management addressing those risks?; and 3) where would confronting those unaddressed risks have the most biological, economic, social, or administrative benefit?

Analysis 1. Risk Assessment

Under the draft prioritization section of the framework, all fisheries go through a risk assessment to identify and evaluate any ecological and/or biological risks posed by fishing. This assessment is composed of two assessments: a Productivity Susceptibility Analysis (PSA), which assesses the risks to a particular stock, and an Ecological Risk Assessment (ERA), which assesses the risk a fishery poses to the ecosystem. California Ocean Science Trust (OST) is currently conducting a PSA on 45 of the state's most significant fisheries in terms of commercial value

and recreational participation. OST will also be adapting an ERA framework for California and applying it to five fisheries as an initial pilot.

The draft prioritization section of the framework would use the results of the Risk Assessment to classify fisheries as being of low, medium, or high concern. Those fisheries classified as medium or high-risk move on to the next steps of the prioritization framework, while those classified as posing a low risk are not an initial priority for additional management.

Analysis 2. Assessing Management Effectiveness - MLMA-based Assessment

The next analysis evaluates a fishery's level of consistency with the MLMA. The first step in this analysis is an assessment of the degree to which management is consistent with the full range of the MLMA's objectives. The second step is a specific assessment of the degree to which risks identified in the Risk Assessment are being addressed by current management. The Center for Ocean Solutions is currently developing the draft MLMA-based assessment framework. If the Department determines the tool is effective, those fisheries that are classified as having low or medium consistency with the MLMA, particularly in relation to the risk areas identified in the Risk Assessment step, would be candidates for additional analysis described below. Those fisheries where management is determined to have high consistency with the MLMA require no additional management actions, although triggers for reconsidering this assessment might be identified.

Analysis 3. Economic Value/Opportunity

All of the fisheries that have achieved this stage of analysis have been deemed to pose medium to high ecological and/or biological risks, and may have related deficiencies in terms of consistency with the MLMA. As a result, these fisheries will likely require additional management actions to address these risks and improve consistency with the MLMA. The last step in the prioritization framework assesses the relative tradeoffs to socio-economic impacts from more active management. Approaches to conducting such an analysis are being discussed, however relevant data are relatively limited.

Prioritization results

Under the draft prioritization section of the framework, fisheries would be categorized into three classes of concern, high, medium, and low. Generally, fisheries classified as high priorities for management would be the first to be considered for management action. In the absence of extenuating circumstances, additional management action, beyond preparation of the Enhanced Status Report described below, would be deferred on fisheries classified as medium or low priority.

II. Management Scaling Component

The fisheries that fall under the scope of the MLMA range widely in complexity, biological characteristics, number of participants, geographic extent, availability of data, management need, and other factors. The process described below is intended to incorporate this variability in the range of approaches to applying MLMA-based management, from expanded and better structured Status Reports to traditional, resource intensive FMPs. The draft management scaling component of the framework seeks to match the scope and intensity of management effort with the needs and complexity of a given fishery.

Defining the Management Continuum

Fisheries vary significantly regarding the appropriate level of management effort. For example, a small single sector fishery with low ecological and/or biological risk, that is largely consistent with the MLMA, and for which expected benefits from additional management are likely to be low may justify a lower level of response. Alternately, a large-scale, multi-sector fishery with conservation concerns and a high degree of controversy will likely demand a more intensive

effort. This may lead to implementation of the MLMA taking place along a continuum ranging from a basic level represented by an Enhanced Status Report, to an intensive, complex FMP process.

Low – Enhanced Status Report Alone

All fisheries would be the subject of an Enhanced Status Report. Building off current Status Reports, Enhanced Status Reports would be structured around the requirements of the MLMA itself, helping to ensure that included information is relevant to management under the MLMA. These reports would have sections on the history and socio-economics of the fishery, the biology and status of target stocks, ecosystem aspects of the fishery, past and current conservation measures, essential fisheries information (EFI), and monitoring. This revised format would ensure a basic standard of MLMA-based management is applied across all fisheries in a consistent and transparent fashion. It would summarize all of the available EFI for each fishery, and make it readily apparent what is not available. This structure is envisioned to assist the Department in planning both short and long-term research activities and inform external parties about research opportunities that may benefit management. Enhanced Status Reports can serve as a repository of information documenting the consistency of a fishery's management with the MLMA and the results of the analyses described above. They can also serve as sources of information for future analyses and FMP development.

Medium low - Status Reports Plus Focused Rulemakings

A second group of fisheries may need relatively simple adjustments in management to address specific risks or concerns identified in the prioritization analyses. These might include a modification to an existing regulation, or the creation of a new one, where the available science is sufficient to warrant the change and there is broad stakeholder support behind the change. Any rulemakings made in this context should be relatively non-controversial, easily enforceable, and applied to the entire fishery with relative ease. An Enhanced Status Report plus a tailored rulemaking to address relatively simple issues may be an effective combination for many lower risk fisheries. Similar to the revised approach to Enhanced Status Report, the content of these limited rulemakings could more explicitly track with the areas of concern identified in the MLMA.

Medium high to high - Scaled Fishery Management Plans

In cases where the degree of management change, fishery complexity, controversy, and information needs are high, an FMP may be required. The MLMA specifies what information must be included in an FMP, but does not specifically describe the process required to achieve that outcome. Rather than considering FMPs as having a process recipe in which there is a list of requirements to be checked off, it may be helpful to view the FMP as a graduated process, with increasing levels of intensity as required.

The resource demands on the Department and Commission may be reduced through several means, including process design, partnerships, and efficient stakeholder engagement, among other things. For example, creating Enhanced Status Reports early can help the Department to flag missing EFI in fisheries that have been prioritized for additional management action in the medium term.

Identifying where along the continuum of management a fishery belongs depends on, 1) the degree of management change required to address risk and improve MLMA consistency, 2) the complexity of the fishery and, 3) the type and amount of information needed. The level of management change has two essential components, the impact on the fleet from the anticipated changes, and the administrative difficulty for managers to implement them. A change in decision-making framework or from input to output based controls may constitute a major change. Examples of minor changes in the degree of management might include a modification to the gear used to prosecute the fishery. In addition to the anticipated degree of management change, the level of complexity of the fishery will influence the intensity of the public process as

well as the scope and scale of the resulting management document. Complexity criteria include the number of gear types, sector use and allocation, geographic distribution, and number of participants. Another key factor in determining the need for an FMP is whether existing statutes might conflict with the necessary changes to the fishery. By adopting an FMP, any conflicting statutes can be rendered inoperative for that particular fishery, allowing a great deal of management flexibility.

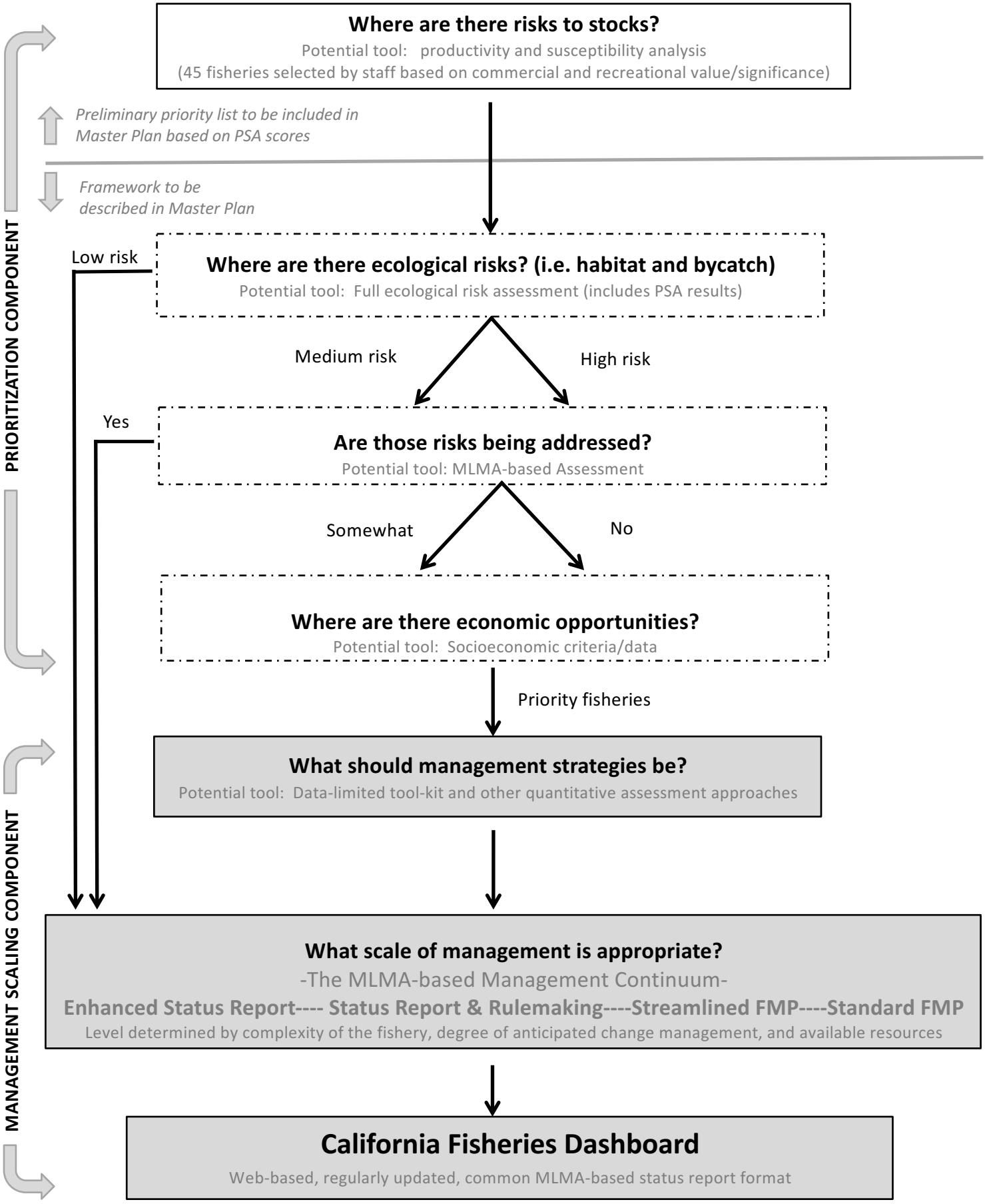
While the first component of the framework is designed to help focus limited Department capacity on fisheries of greatest concern, this management scaling component is intended to match the level of management effort and resources to the characteristics and needs of a given fishery. In many ways this provides an explicit framework around what is an intuitive approach and seeks to identify important criteria for managers and stakeholders to consider when scaling management efforts.

III. ***The Web-based Fishery Dashboard***

The information gathered throughout the prioritization and management processes could be housed and regularly updated on a web-based dashboard. The dashboard would be a user interface that organizes and presents information from status reports in a way that is easy to understand at a glance. At its core would be a front page where users could choose among the state's fisheries and learn basic information, with more details nested within specific categories. The tabbed page format would be common to all fisheries, and would break the information from each Enhanced Status Report into its major component parts, including tabs for "at-a-glance", "natural history", "the fishery", "ecosystem considerations", "management issues", and "research and monitoring". While substantial time and cost will be required upfront to develop the dashboard and its underlying database, once established it should be designed to be relatively simple to maintain and update. The web-based dashboard is envisioned to help promote transparency in fisheries management, foster public engagement, and focus academic research on areas of management relevance.

DRAFT- Amended Framework for MLMA-based Management

Development and implementation of this framework is contingent upon sufficient resources and capacity
Projects on climate change, partnerships, stakeholder engagement, and peer review apply across the framework



Marine Life Management Act Master Plan Amendment Process Overview: Information Gathering Projects

October 2016

The California Department of Fish and Wildlife (CDFW) is preparing to amend the Marine Life Management Act (MLMA) Master Plan. To help inform this process, CDFW is overseeing a number of Information Gathering Projects to consider new tools for updating California's state-managed fisheries management framework. These projects are being conducted in cooperation with a number of investigators and researchers from outside CDFW. With input from stakeholders, CDFW will review and consider the tools and products from each project before formal consideration for inclusion in the amended Master Plan.

A brief summary of each project is listed below, along with links to available resources. A summary of project descriptions was previously shared with the Marine Resources Committee in November 2015 (http://www.fgc.ca.gov/meetings/2015/Nov/Exhibits/TS7_MarineLifeManagementAct.pdf). The list below has been updated and streamlined from that summary document. For more information about the MLMA Master Plan Amendment Process, visit https://www.wildlife.ca.gov/Conservation/Marine/MLMA/Master-Plan or contact MLMA@wildlife.ca.gov.

Approach to MLMA-based Management
CDFW Lead: Paul Reilly
Contractor: Fathom Consulting

A proposed framework will be developed based on the objectives of the MLMA, which may serve to help focus CDFW's management efforts on fisheries with the greatest management need. This framework will organize the results from the Information Gathering Projects' products and recommendations into a comprehensive management system that is designed to fully implement the principles of the MLMA. Development of the framework will also consider lessons learned from existing Fisheries Management Plans (FMPs) and the 2010 document, *Lessons Learned from California's Marine Life Management Act* (http://www.fgc.ca.gov/public/reports/FinalMLMALessonsLearnedReport051810.pdf).

Productivity and Susceptibility Analysis (PSA) & Ecological Risk Assessment (ERA)
CDFW Lead: Paul Reilly
Contractor: California Ocean Science Trust

Existing scientific tools are being explored as a systematic way to determine the biological risk posed to fishery resources due to key factors. Key factors considered in the analyses include the effects of fishing on target and non-target species and habitat and other ecosystem characteristics. Results from this type of analysis may help prioritize fisheries for FMP development, for prioritizing management actions in individual fisheries, and inform plans for future data collection and monitoring activities. Based on the results of a productivity and susceptibility analysis (PSA) of 45 commercial and recreational fisheries, several frameworks will be tested on five fisheries (to-be-determined) to evaluate which tool(s) show the greatest potential in evaluating and addressing the ecological aspects of each fishery.

MLMA-based Assessment Framework
CDFW Lead: Tom Mason
Contractor: Center for Ocean Solutions

A tool is being developed and tested to help assess the management of individual fisheries against the provisions of the MLMA. The results from analyzing California's fisheries are intended to inform the setting of priorities among fisheries for management attention, and can aid in identifying priority research and management actions in individual fisheries.

Socioeconomic Value and Opportunity
CDFW Leads: Debbie Aseltine-Neilson & Ryan Bartling
Contractor: California Sea Grant

This project will identify needs and opportunities for analyzing and assembling socioeconomic and human dimension information to guide fishery management efforts consistent with the MLMA. This information can help inform management decisions to reduce community and socioeconomic impacts and prioritize data collection efforts.

California Fisheries Data Limited Tool-kit
CDFW Leads: Pete Kalvass & Chuck Valle
Contactor: Natural Resources Defense Council, University of British Columbia

A new software tool is being customized and tested for California fisheries using Management Strategy Evaluation (MSE) to simultaneously compare the performance of a number of stock-assessment approaches for data-limited fisheries. An MSE is a simulation of a real world fishery that tests alternative management strategies against a set of performance criteria under realistic conditions of variability and uncertainty. Using four test fisheries, the software will test and identify appropriate options for stock assessment and management approaches for these fisheries, and prioritize data collection efforts. Additional information can be found at http://www.datalimitedtoolkit.org/.

Streamlined Fishery Management
CDFW Lead: Ian Taniguchi
Contractor: Fathom Consulting

This project seeks to provide guidance on how to scale the individual management efforts for each fishery based on the size and complexity of that fishery. The goal is to develop options for a cost-effective, flexible, and streamlined approach to meeting the goals of the MLMA through an MLMA-based management continuum that ranges from enhanced status reports to FMPs.

Status of the Fisheries Reports and Web-based Dashboard
CDFW Lead: Tom Mason
Contractor: Fathom Consulting

A regularly updated, user-friendly, web-based "California Fishery Dashboard" is being considered as part of the Master Plan Amendment to serve as a library for fisheries information in California. Status of the Fisheries Reports will be transformed from a static paper or digital document to a dynamic website structure. The dashboard would be available to the public, fisheries managers, scientists, and others to learn about the state of knowledge about a fishery, management issues and current research needs.

Climate Change and Fisheries
CDFW Lead: Debbie Aseltine-Neilson
Contractor: California Ocean Science Trust

This project, which will draw upon the expertise of the Ocean Protection Council's Science Advisory Team, will consider the issue of climate change in the sustainable management of California fisheries, provide an evaluation of the effects of changing climate and ocean chemistry on fisheries (including social, ecological and governance dimensions), and explore ways of building resilience to buffer against potential effects. Opportunities for new or expanded fisheries resulting from climate change may also be explored.

Bycatch
CDFW/FGC Lead: Elizabeth Pope
Contractor: N/A
A working group composed of state agencies, fishermen and non-governmental organizations has been convened by the Fish and Game Commission (Commission) to review bycatch and associated issues in California's fisheries. It is anticipated that the working group will help inform the amendments to the Master Plan through their review of bycatch language and definitions and/or action items within the scope of Commission authority.

Data Review
CDFW Lead: Kirsten Ramey
Contractors: MRAG Americas and Kate Wing Consulting

In the first two phases of this project, CDFW's current data collection activities were inventoried and their use and relevance to management evaluated. The third phase will produce recommendations for adapting CDFW's fishery dependent data collection activities to more closely meet management needs. This last phase will also produce recommendations for improving fishery data collection efforts that leverage existing monitoring programs while also considering trade-offs between costs, coverage, timeframes for implementation, and potential strategies and partners.

Fisheries Partnerships
CDFW Leads: Elizabeth Pope & Ian Taniguchi
Contractor: The Nature Conservancy

A report will outline the opportunities, benefits, and limitations that partnerships between CDFW and fishery stakeholders can play in securing effective and efficient fisheries management. The project will also explore necessary elements of effective partnerships and the requirements for collaboration on different types of fisheries management activities.

Stakeholder Engagement Toolkit
CDFW Leads: Toby Carpenter & Elizabeth Pope
Contractors: Center for Ocean Solutions, Kearns & West

This project will survey best practices regarding engagement of stakeholders in fisheries management in California and beyond. The goal is to develop tools to help managers foster targeted and meaningful stakeholder involvement in fisheries management by assembling information on a range of stakeholder engagement methods, including costs, necessary expertise, benefits, and challenges.

Peer Review
CDFW Lead: Pete Kalvass
Contractors: Ocean Science Trust

Utilizing lessons learned from previous peer reviews under the MLMA (e.g., FMP processes) as well as from best practices of other agencies and scientific organizations, this project will develop recommendations to help inform CDFW's approach to peer review for FMPs. The upcoming red abalone and herring FMPs may be utilized as pilot cases.