

Principal Investigators - please use this form to submit your MPA Baseline Program project annual report, including an update on activities completed over the past year and those planned for the upcoming year. This information will be used by the MPA Baseline Program Management Team to track the progress of individual projects, and will be provided to all MPA Baseline Program PIs and co-PIs prior to the Annual PIs workshop to facilitate discussion of project integration. Please submit this form to California Sea Grant when complete ([sgreport@ucsd.edu](mailto:sgreport@ucsd.edu), Subject [Award Number, project number, PI, "Annual Report"].)

Project Information			
<b>Project Year</b>	2	<b>MLPA Region</b>	North Coast
<b>Project Title &amp; Number</b>	North Coast MPA Baseline Program: Socioeconomic/Human Dimensions Project, R/MPA-36A		
<b>PI name</b>	Steven C. Hackett	<b>Co-PI name</b>	Laurie Richmond
<b>PI Contact Info</b>	<i>(please list additional PIs and contact info in the "Project Personnel" section if necessary)</i>		
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## Project Goals & Objectives

The primary goals of this project are to collaborate with the California North Coast fishing community and California Department of Fish and Wildlife (CDFW) to:

1. Establish a baseline characterization of spatial fishing patterns and socioeconomic status for commercial fisheries and elements of CPFV operations in the North Coast region; and
2. Conduct an assessment of initial spatial and socioeconomic changes following MPA implementation;

To accomplish these goals, the objectives of this project are to:

1. Establish a Fisherman's Advisory Council (FAC) comprised of representatives from key fisheries and ports throughout the region to ensure fisherman collaboration throughout the project.
2. Collaborate with the CDFW to ensure existing commercial fishing landings data are fully utilized and appropriately analyzed to present historical trends and initial changes since MPA implementation. This is to assist in characterizing the California North Coast fishing community as a whole, as well as contrast historical activities inside and outside the MPAs, before and after their implementation.
3. Conduct interviews and focus groups with fishermen to collect detailed data on a) demographic characteristics; b) the social, political, and economic conditions of North Coast fishing communities; c) knowledge, attitudes, and perceptions related to MPAs; d) spatial use patterns; and e) economic characteristics for key commercial fisheries of the North Coast;
4. Utilize pre- and post-MPA data collected by Point 97 to conduct a baseline-and-change assessment of spatial and economic changes in key commercial fisheries and select CPFV port level fisheries since MPA implementation;
5. Through an integrated analysis of focus group/interview data and landings/logbook data, provide information on the direct and indirect effects of MPA establishment and other driving factors contributing to economic change (e.g., tracing changes in spatial activity, targeted fisheries, and landings; characterizing broader economic changes; effects of additional spatial fishing regulations; loss of port infrastructure) within key commercial fisheries in the North Coast.
6. Collaborate with the Fisherman Advisory Council to assess the feasibility and design a cost effective long-term monitoring solution in the form of an electronic monitoring tool.
7. Inform future monitoring efforts by developing recommendations of key metrics for long-term socioeconomic MPA monitoring.

## Summary of Project Activities Completed to Date

### Overview of Project Year 2 Activities, including progress towards meeting goals & objectives

This summary is drawn from the “Project Components/Tasks” milestone chart from our final project proposal.

As indicated in our milestone chart,

- The project team including representatives from our partners at Point 97/Ecotrust met with our Fisherman Advisory Council (FAC) on August 12<sup>th</sup> 2015 at the Woodley Island Marina office of the Humboldt Bay Harbor, Recreation, and Conservation District. At that meeting we provided a presentation of the summary results from our survey and focus group meetings from our field work in 2014. We also presented our draft “heat maps” (including spatial change) and took helpful input on those maps. We had a brief discussion of the online data viewing tool to be developed.
- The project team including partners at Point 97/Ecotrust were to begin analysis of commercial landings and logbook data in summer 2015. We were not able to begin analysis of commercial landings and logbook data in summer 2015 because CDFW was not able to provide us with final 2014 data until November 30<sup>th</sup> 2015. The project team including partners at Point 97/Ecotrust are now beginning analysis of commercial landings and logbook data.
- As noted in the first bullet point, draft spatial projects (“heat maps”) were completed as planned in the milestone chart, and these draft maps were reviewed with helpful “community review” input from our FAC in August 2015. Final spatial analysis and develop of spatial data products with associated metadata in accordance with OST’s metadata standards was completed in October 2015.
- As noted in the first bullet point, analysis of survey data, focus group data, and spatial change occurred in 2015, with helpful “community review” input from our FAC.
- Project partners at Point 97/Ecotrust sent out review maps to fishermen who participated in the survey interviews for community review.
- The project team has begun developing a draft report and data package as indicated in the milestone chart.
- The project team also scoped an additional project component to be added to our scope of work (pending Sea Grant approval via Ecotrust’s/Point 97 contract modification) to provide OST with an online fisheries data viewer to better present and explore commercial and CPFV landings and logbook data. This additional project component is to take place of the work that was planned to develop a commercial fisheries logbook mobile application that would serve both to submit fisheries data to CDFW as well as make it available for long term MPA monitoring. CDFW is currently developing an internal electronic logbook system that will not accept data from external application making the planned work no longer relevant in meeting the needs of both CDFW and OST.

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*Highlights from project progress so far, such as successes achieved, new collaborations or partnerships, or interesting stories from the past year that may be suitable for a blog post or other media venue*

Our Fisherman Advisory Council (FAC) meeting went well, and we received many helpful comments and ideas from our FAC members that will improve our final report components and data package.

We also have proposed and received preliminary approval to develop an online fisheries data viewer that will give researchers and the public access to query and explore commercial and CPFV landings and logbook data. This is an improvement from past MPA monitoring projects as this data was traditionally presented in a lengthy paper-based report making is less accessible and user friendly towards the general public.

*Description of any unforeseen events and substantial challenges, and resulting effects on project activities and progress. Please indicate any issues that may affect other PI's or require coordination with other Baseline partners (e.g., ME, DFG, Sea Grant).*

Point 97 (a spinoff from Ecotrust) underwent a reorganization in approximately November 2015, with the result that our project partners at Point 97 shifted back to working under the Ecotrust umbrella. MPA Program Manager Dr. Meyer was informed of this change and helped our partners work out contract changes with Sea Grant with no material effect on our work or our progress towards achieving our goals.

In summer 2015 we learned that CDFW determined that their electronic reporting system would not include the ability for external applications to submit data. Data can only be submitted by way of their web-based portal. Consequently piloting any external digital data collection system such as Digital Deck, which was a part of original proposal would no longer be useful as CDFW will not accept that data during the timeframe of this project. We instead proposed a change in scope for our project – to use the funds set aside for Digital Deck to instead support development of the online data viewing tool (that we discussed with the MPA Program Management Team and received a 'green light' to go forward). We received notice on 10/6/2015 that the change in scope (to use Digital Deck funds for the online data viewing tool) was approved by the MPA Program Management Team.

*Data status (i.e., paper/raw format or digitized; if digitized, what format?)*

There are four major data sets that were collected or compiled as part of this project.

The first is survey data gathered from fisherman interviews. This data was collected digitally and is housed in digital format as .json and.xls files. The data has undergone analysis and further analysis is anticipated to finalize our report.

The second data is from focus group conversations held in each of the five major ports of the region. Recordings and transcriptions are stored on protected servers at HSU. Focus group data was coded for key themes using the qualitative analysis software Atlas.ti. A summary of findings from the focus group conversations will be included in the final report.

The third data is spatial data gathered from fisherman interviews. This data was collected digitally and then later printed out and mailed to individual fishermen to verify their fishing area were correct. The spatial data were then modified in accordance with any changes individual fishermen requested. These individual spatial fishing data were then aggregated to create fishery-port and region maps there were reviewed with the project's Fisherman Advisory Council. These data are now finalized and exist a digital ArcGIS shapefiles and raster files and assembled into a geodatabase.

The fourth major database is commercial landings and CPFV logbook data received from CDFW under our NDA. These data are digital and house in an Access Database with Ecotrust staff under strict confidentiality protocols.

**Activities Planned for following Project Year \_\_ (if applicable)** – *Please describe remaining work and approximate timelines for completing that work, including any anticipated budget variances necessary to complete the project.*

We have one more meeting with our FAC scheduled for summer 2016 to provide a presentation of our draft final results and to take input.

We will continue analysis of commercial landings and logbook data (through 2014). As the final technical report is due October 14 2016, we will not be able to utilize any 2015 data (recall that we did not receive 2014 data until late November 2015, and so it is clear we will not have 2015 data from CDFW in time for the report deadline).

We will complete our final technical report and data package, including online data viewer.

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**Project Personnel** – Please indicate additional project personnel involved in your MPA baseline project, including students and volunteers, or additional PI contact information if necessary, as well as the nature of their assistance in the project project.

	<i>Students Supported</i>	<i>Student Volunteers</i>	<i>Nature of Assistance</i>
<i>K-12</i>			
<i>Undergraduate</i>			
<i>Masters</i>	<i>Lucia Ordoñez-Gauger</i>		<i>Analysis of survey and focus group data in 2015</i>
<i>PhD</i>			

*Number of other Volunteers not counted above and the nature of their assistance in the project:*

Terry Tillman, retired from CDFW, has agreed to volunteer on the project to assist with commercial landings and logbook data analysis.

*Additional PI contact info not listed on first page:*

Cheryl Chen, co-PI, under contract with Ecotrust (cheryl.ty.chen@gmail.com)

**Cooperating Organizations and Individuals** - Please list organizations or individuals (e.g., federal or state agencies, fishermen, etc.) that provided financial, technical or other assistance to your project since its inception, including a description of the nature of their assistance.

Name of Organization or Individual	Sector (City, County, Fed, private, etc.)	Nature of cooperation (If financial, provide dollar amount.)
CDFW	State	NDA, data provider. Provided disaggregated data

**Project Outputs and Materials:** Please provide any other project-relevant information, such as descriptions of attached materials, media coverage your project has received, presentations, publications, images etc.

**Presentations:**

Ordonez-Gauger, L., L. Richmond, S. Hackett, C. Chen. 2015. Assessing Fishermen’s Perceptions of the Ecology and Management of the California North Coast MPA Network. Association of American Geographers Annual Meeting March 2015, Chicago IL.

Ordonez-Gauger, L., L. Richmond, S. Hackett, C. Chen. 2015. Assessing Fishermen’s Perceptions of the Ecology and Management of the California North Coast MPA Network. Western Society of Naturalists Annual Meeting, November 2015, Sacramento, CA.

L. Richmond, S. Hackett, C. Chen, L. Ordonez-Gauger. 2015. Socioeconomic Dimensions of MPAs: Establishing a baseline and assessing intiral changes in California North Coast fisheries: Preliminary Results. North Coast Collaborative Forum, November 2015, Fortuna, CA.

**Media/Press:**

Humboldt Magazine article about HSU MPAs projects titled: Surveying the Sea: Ambitious Study Examines Marine Safe Havens Along the North Coast in the Spring 2015 issue. Co-PIs Steven Hackett and Laurie Richmond were interviewed for the article. A link can be found here: <http://magazine.humboldt.edu/spring15/surveying-the-sea/>