



MPA Baseline Program

Annual Progress Report



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, Subject [Award Number, project number, PI, "Annual Report"].)

Project Information

Project Year: 2015/16 MLPA Region: North Coast Study Region

Project Title & Number: Citizen-scientist Monitoring of Rocky Reefs and Kelp Forests: Creating a Baseline for California's North Coast MPAs R/MPA-34

PI name: Jan Freiwald Co-PI name: Gregor Hodgson

PI Contact Info Co- PI Contact Info (please list additional PIs and contact info in the "Project Personnel" section if necessary)

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Project Goals & Objectives

Reef Check California's (RCCA) objectives for the NCSR baseline monitoring are:

- 1. Provide a quantitative baseline characterization of the rocky reef and kelp forest ecosystem features in and outside of MPAs in the NCSR.
2. Assess the condition of the rocky reef and kelp forest ecosystem feature by analyzing RCCA's dataset and auxiliary data in the context of the new MPAs.
3. Analytically explore the baseline characterizations for potential indicators of the state of the kelp forest ecosystem (i.e. ecosystem indicators) and make recommendations for long-term monitoring.
4. Build capacity for cost-effective long-term MPA monitoring through the continued involvement of community members in the monitoring of MPAs.
5. Expand existing public online data dissemination and illustration tool (NED) to inform managers, stakeholders, policymakers and the public about the status of the marine environment in the NCSR.

Summary of Project Activities Completed to Date

Overview of Project Year 2015 Activities, including progress towards meeting goals & objectives

Providing a baseline of the rocky reef and kelp forest ecosystem at the time of MPA implementation in the NCSR
RCCA began baseline monitoring in 2014 by expanding its existing network of sites in Mendocino County and conducted surveys of 7 sites in the NCSR in 2015. Therefore, we have two years of MPA baseline data collected and are currently entering and processing the data for analyses in 2016. A new site was added in Fort Bragg (Glass Beach) an area that is heavily fished by recreational fisherman; however weather conditions made it difficult to survey all proposed sites in 2015. We are planning to survey all established sites again in 2016. We will try to monitor the sites that were missed in 2015 early in the season so that results from these surveys can be included in the final report on the MPA baseline.

Provide pre-MPA implementation data and characterizations of potential indicators

RCCA's monitoring data from pre-existing sites from years prior to baseline monitoring project (2007-2013) are readily available and have been converted into a data format that is consistent with the data requirement in the other baseline monitoring regions in which RCCA has participated. Data analysis for this region is scheduled to commence in 2016.

Capacity building for cost-effective long-term MPA monitoring

In 2015, RCCA completed 17 certifications and 15 recertification classes throughout the state. We recertified or certified 300 divers. A program such as RCCA requires intensive training, therefore it is of critical importance to retain skilled volunteers and on average about 80% of the volunteers that conduct surveys return in the following year.

In the spring of 2015, RCCA completed the proposed three trainings in the NCSR. One public training was held in Fort Bragg by Reef Check California's north coast regional manager. A second training was taught at Humboldt State University and a recertification of previously trained divers was conducted in Fort Bragg. All divers that completed the public trainings participated in at least one survey in the NCSR. We trained a total of 29 new volunteers in the study region. Additionally, several of our long-term volunteers, that in the past have mostly surveyed in central California have found interest in coming to the NCSR and participate in surveys here. This successful recruitment and retention has led to a successful survey season and the new as well as seasoned volunteers will build the foundation for future long-term MPA monitoring in the study region. As the baseline monitoring is drawing to a close we have begun building partnerships with other organizations to maintain monitoring capacity and ensure that rocky reef and kelp forest monitoring will continue in this region past the baseline monitoring period as we have successfully done in every other region. Trainings and surveys for 2016 are already scheduled.

Expand public online data dissemination and illustration tool (NED)

All of RCCA's statewide data is available online through Reef Check's public online Global Reef Tracker (data.reefcheck.org). Data is available in interactive formats as soon as they are entered and proofed by RCCA staff. We are continuously updating this data display and delivery tool and adding new functionality beyond data visualization. New features include photo upload functions and ways for volunteers to track the number of surveys they have participated in.

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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

Highlights from the 2015 surveys are numerous. RCCA staff was able to add one new site in the NCSR and complete a successful community training following which all trainees participated in at least one survey. RCCA also made its presence known in the community by way of attending local events such as the Mendocino Crab Festival and World Champion Abalone Cook-Off and lecturing at local high schools about scientific scuba diving and RCCA research. Further, the regional manager became involved in the MPA Collaboration Implementation Project group for Mendocino as a co-chair of the collaborative and published several blog posts on the OceanSpaces website. In addition to MPA monitoring we entered into a partnership The Nature Conservancy (TNC) and a local Abalone Working Group. RCCA and TNC will continue to collaborate into 2016. This partnership is focused on collecting size information on red abalone with the goal of informing abalone fisheries management in this region. As this collaboration develops further, it will be an example how baseline projects create synergies that lead to local stakeholder involvement and ongoing data collection beyond MPA monitoring.

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).

Overall, 2015 was a successful survey season. Nevertheless, with a still small pool of volunteers available, it is difficult to reschedule surveys if they are canceled due to adverse ocean conditions. Due to these circumstances some of the proposed sites did not get surveyed in 2015. However, we have already scheduled a boat for several multi-day time periods to take volunteers diving early during the survey season in 2016. Therefore, we are confident that we will get to these sites in 2016.

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

Reef Check California's data from the NCSR has been entered into Reef Check's Nearshore Ecological Database (NED). Up-to-date data are available through RCCA's online database. Since we have submitted data for all other baseline monitoring regions we have processes and program code in place to report the data in the required formats. Metadata according to the Metadata standards will be developed in 2016.

Activities Planned for following Project Year 3 (if applicable) – *Please describe remaining work and approximate timelines for completing that work, including any anticipated budget variances necessary to complete the project.*

While the proposed two years of baseline monitoring are completed, RCCA will continue monitoring the current sites and add the additional proposed sites in 2016. Further, we will again train new citizen scientists and recertify previously trained volunteers. These trainings are already schedule for April and May.

As we have done in the other regions, we will continue to monitor reefs and kelp forests in the MPAs and associated references sites into the future beyond the baseline period. We will also continue our outreach efforts and hope to be instrumental in the further development of the Community Collaborative project in Mendocino County.

In 2016, we will analyze the baseline data and complete the final technical report according to the proposed timeline. All monitoring data will be described with the appropriate metadata standard and submitted to OceanSpaces.

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>Staff</i>	<i>Student Volunteers</i>	<i>Nature of Assistance</i>
<i>Regional Manager</i>	1		<i>Conduct trainings and monitoring etc.</i>

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

RCCA trains about 250-300 volunteer citizen scientists every year.

Additional PI contact info not listed on first page:

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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.

<i>Name of Organization or Individual</i>	<i>Sector (City, County, Fed, private, etc.)</i>	<i>Nature of cooperation (If financial, provide dollar amount.)</i>
<i>Humboldt State University</i>	<i>University</i>	<i>Trained divers, helped with RCCA surveys</i>
<i>California Department of Fish and Wildlife</i>	<i>State</i>	<i>Staff participated in training and surveys</i>
<i>Campbell Foundation for the Environment</i>	<i>Private Foundation</i>	<i>Funding for California program part of which was used for monitoring in NCSR</i>
<i>RLFF</i>	<i>Private Foundation</i>	<i>Funding for California program part of which was used for monitoring in NCSR</i>
<i>Mead Foundation</i>	<i>Private Foundation</i>	<i>Funding for in NCSR Regional Manager salary</i>
<i>Clif Bar Family Foundation</i>	<i>Private Foundation</i>	<i>Funding for California program part of which was used for monitoring in SCSR</i>

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.

RCCA 2015 Publications, Presentations & Outreach Events which included data or information on the NCSR baseline monitoring:

Conference Presentations

Involving the public in marine research: citizen scientist divers Monitor California's marine protected areas. Jan Freiwald. Citizen Science Conference 2015. San Jose, CA. Poster

Tapping into the public's skills – how citizen scientists become experts. Jan Freiwald. MBNMS Currents Symposium. Seaside, CA. Invited talk

Public presentation and outreach events North Coast

Ocean Night, Arcata

Mendocino High School Marine Biology Class –RCCA/ Scientific Diving presentation

Mendocino High School Environmental Biology Class –RCCA/ Scientific Diving presentation

North Coast Collaborative Meeting

North Coast Collaborative Team Leaders Meeting

Earth Day/Pints for Non-profit, Mad River Brewery -Arcata

Discover the Coast, Point Arena

Crab Festival, Fort Bragg

Press coverage

March 11th: K-Hum - Radio Interview about North Coast monitoring