



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: 9/1/2011 – 9/1/2012 Study Region: South Coast Study Region

Project Title & Number: R/MPA-27A - MPA South Coast Baseline Program "South Coast kelp and shallow rock ecosystems: baseline data collection and long-term trends using historical data"

PI name: Daniel Pondella Co-PI name: [empty]

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

Address: Vantuna Research Group, Moore Laboratory of Zoology, 1600 Campus Road M-3, Los Angeles, CA 90041

Email: pondella@oxy.edu

Phone: 323-259-2955

Project Goals & Objectives

The overall goal of the proposed study is to describe the ecological conditions of kelp and shallow rock ecosystems inside and outside of MPAs in the South Coast Study Region (SCSR) and to utilize these baseline surveys together with historical data to measure changes in conditions over both short and long time scales. The specific objectives of the proposed surveys and analyses are to: (1) produce a quantitative baseline characterization of the structure of kelp and shallow rock ecosystems in all MPAs in the SCSR, (2) provide quantitative comparisons inside and outside of MPAs, (3) develop easily interpretable ecosystem indicators for assessing the health and status of this ecosystem, (4) inform future monitoring methods while optimizing integration of existing long-term data sets with future monitoring data, and (5) integrate data from the proposed baseline survey with existing long-term data to describe the current trajectory of ecosystem trends.

**Summary of Project Activities Completed to Date**

*Overview of Project Year 2011-2012 Activities, including progress towards meeting goals & objectives*

We are currently on track to achieve the overall goal of the proposed study and have made significant progress this year. Related to *specific objectives* 1 and 2 described above, the Vantuna Research Group is responsible for surveying the kelp and shallow rock ecosystems in the southern part of the South Coast Study Region and we successfully completed our 2011 monitoring season in Jan of 2012. Note that our partner PISCO (co-PI Jenn Caselle) is surveying the northern part of the study region and will provide a separate progress report. Following the proposed protocols, in 2011 we sampled 35 sites. These include: 10 sites in 9 MPAs along the mainland (Point Vicente SMCA, Abalone Cove SMCA, Crystal Cove SMCA, Laguna Beach SMR, Dana Point SMCA, Swami's SMCA, Matlahuayl SMR, South La Jolla SMR, Cabrillo SMR) and 7 related reference sites; Two sites within the Santa Barbara Island SMR, and 2 related reference sites at Santa Barbara Island; Six sites in 5 MPAs at Catalina Island (Arrow Point to Lion Head Point SMCA, Blue Cavern SMCA, Long Point SMR, Lover's Cove SMCA, Farnsworth Onshore SMCA) and 6 related reference sites at Catalina; and two proposed reference sites at San Clemente Island. The monitoring data from the 2011 field season has been entered, put through our quality assurance/control process and is now integrated into our long-term database. *Specific objectives* 3 and 4 described above will be addressed largely once the monitoring in 2011 and 2012 has been completed. However, we have completed processing and integrating data from the multiple proposed existing long-term datasets into a single long-term database. This completes the work related to *specific objective* 5 that was proposed to occur in the first year of the project. Sampling for the 2012 season is now underway, and we are on track to complete it as proposed.

*Highlights from project progress so far, such as successes achieved or interesting stories from the past year*

We have successfully surveyed the fish, invertebrates, algae and benthic habitat characteristics of the kelp and shallow rock ecosystems in and around 15 of the MPAs in the South Coast Study Region.

*Description of any unforeseen events and substantial challenges, and resulting effect on data collection*

Due to weather conditions, we were unable to sample the sites located furthest from the mainland, Begg Rock SMR and the proposed reference sites at San Nicolas Island, during the 2011 sampling season. However, we do plan to sample these sites during the 2012 sampling season. Additionally, we were not able to access the two sites located in the military safety zone exclusions at San Clemente Island on days when weather would have permitted sampling. However, more extensive sampling is now funded and underway at San Clemente Island for the 2012 and 2013 seasons which include sampling in the military safety zone exclusions.

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

Monitoring data from the 2011 sampling season has been entered, put through our quality assurance/control process and integrated into our long-term database. Additionally, data from the multiple proposed existing long-term datasets has been processed and integrated into the single long-term database which is now ready for analysis.

**Activities Planned for following Project Year 2012-2013 (if applicable) – Please describe remaining work and approximate timelines for completing that work, including any anticipated budget variances necessary to complete the project.**

Our 2012 sampling season is underway and should be completed by Jan 2013. Data entry, quality assurance/control, and EML Data/Metadata Documentation should be completed by the end of April 2013. Data synthesis and analysis relating to *specific objectives* 1-5 is underway and should be completed by November of 2013. Development of monitoring recommendations (*specific objective* 4) will occur from October 2013 through January of 2014. Finally, final report writing will occur from October 2013 through March of 2014.

There are no anticipated budget variances at this time.

**Project Personnel – Please indicate additional project personnel involved in your MPA baseline project, including students and volunteers, or additional PI contact information if necessary.**

	<i>Students Supported</i>	<i>Student Volunteers</i>
<i>Occidental Undergraduate Students</i>	Anthony Fredericks Morgan Winston Ryan Stokes	
<i>Additional VRG Project Staff</i>	Jeremy Claisse Jonathan Williams Laurel Fink Chelsea Williams	

**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.)
Sanitation Districts of Los Angeles County (LACSD): Bill Power Bill Furlong Chase McDonald Terra Duvall	County	Participated in surveys (in kind match \$28,500)
NOAA's Montrose Settlements Restoration Program (MSRP): Dave Witting	Federal	Participated in surveys (in kind match \$22,563, funding with SMBRF)
Santa Monica Bay Restoration Foundation (SMBRF): Tom Ford Lia Protopapadakis	Non-Governmental Organization	Participated in surveys

**Additional Information** – Please provide any other project-relevant information, such as descriptions of attached materials, media coverage your project has received, etc.

An Occidental College undergraduate student has edited video shot during the 2011 sampling season, which can be found on our Lab's YouTube Channel: <http://www.youtube.com/user/VRGMarineBio>