

*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>Study Region</b>	South Coast Study Region
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<b>Project Title &amp; Number</b>	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"
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<b>PI name</b>	Daniel Pondella	<b>Co-PI name</b>	Jennifer Caselle, Jeremy Claisse
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<b>PI Contact Info</b>	<b>Co- PI Contact Info</b>
<i>(please list additional PIs and contact info in the "Project Personnel" section if necessary)</i>	

<b>Address</b>	Vantuna Research Group Moore Laboratory of Zoology 1600 Campus Road M-3 Los Angeles, CA 90041	<b>Address</b>	Caselle (UCSB Marine Science Institute), Claisse (Vantuna Research Group)
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**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*

This report described the significant progress we made during year 2. 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 2012 monitoring season in February of 2013. 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 2012 the VRG sampled 49 sites. These include: 11 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 9 related reference sites; Two sites within the Santa Barbara Island SMR, and 1 related reference site 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; 12 sites at San Clemente Island; and one site in the Begg Rock SMR and one proposed reference site at San Nicolas Island. The monitoring data from the 2012 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 over the coming year. However, we have completed processing and integrating data from the multiple proposed existing long-term datasets into a single long-term database. We have also written a detailed outline and begun analyses for a paper utilizing this dataset as a means to characterize baseline conditions in Southern California rocky reefs. We have also completed a Master taxonomic lookup table that contains taxonomic code information for the following surveys and survey programs: PISCO, Santa Barbara Coastal LTER, Vantuna Research group, CRANE, and Reef Check. This lookup table will greatly facilitate joint analysis by providing logical groupings of species and species groups across programs.

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

The major highlight of 2012 was getting adequate weather conditions to survey the Begg Rock SMR, the most distant and isolated MPA in the SCSR. The rocky pinnacle reef was characterized by extremely high benthic cover of invertebrates, primarily multiple species of anemone, large mussels, large sponges and large scallops. We also were able to successfully survey the fish, invertebrates, algae and benthic habitat characteristics of the kelp and shallow rock ecosystems in and around 16 of the MPAs in the South Coast Study Region.

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

There were no substantial challenges that had any effects on data collection during the 2012 field season.

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

Monitoring data from the 2012 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.

While data collection and data QA/QC has proceeded on schedule, a 1 year no-cost extension is requested due to delays in complementary data availability from other SCSR synergistic projects (data from multiple projects data will not be available due to their sampling and processing timetables until early 2014, and the particularly valuable EcoTrust socio-economic fisheries data is not likely going to be available until July 2014). We were informed of the delay at the Synergistic Projects PI Meeting this past spring and after discussions with the MPA Monitoring Enterprise, we think that moving forward it makes the most sense from an efficiency standpoint to delay proceeding with data analysis until we have access to all explanatory variables and complementary datasets. Therefore, we are requesting a 1 yr extension from the originally proposed timeline to complete the analyses and report generation for our project. The SCSR Synergistic Projects conference calls and workshops have been an extremely valuable process and discussions which have occurred to date have helped to improve the scope of the planned analyses that should be beneficial to all projects involved.

Therefore the revised timeline for our project now is:

Data synthesis and analysis relating to specific objectives 1-5 will be completed by December of 2014.

Development of monitoring recommendations (specific objective 4) will occur from October 2014 through January of 2015.

Final report writing will occur from October 2014 through March of 2015.

A formal No-Cost Extension request is also being submitted to Dr. James Eckman concurrent with this Annual Progress Report.

**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 Dana Michels Adrienne Mikovari Binh Vuong Ben Grime
<i>Additional VRG Project Staff</i>	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
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.

Two Occidental College undergraduate students and multiple VRG staff have edited video shot during the 2012 sampling season, which can be found on our Lab's YouTube Channel: <http://www.youtube.com/user/VRGMarineBio>