



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**

**Project Year** 2012-2013 **MLPA Region** South Coast

**Project Title & Number** RMPA-24C Sandy Beach Ecosystems: Baseline Characterization and Evaluation of Monitoring Metrics along the South Coast of California

**PI name** Julie Bursek **Co-PI name**

**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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Ocean Science Education Building 514  
Santa Barbara, CA 93106-6155 **Address**

**Email** Julie.Bursek@noaa.gov **Email**

**Phone** 805-893-6422 **Phone**

**Project Goals & Objectives**

Deliverables include conducting (4) LiMPETS sand beach monitoring field surveys; identifying and adding some ancillary physical beach measurements to LiMPETS protocols, detecting and quantifying recruitment pulses in sand crabs and developing efficient size measuring approaches for young of the year crabs.

## Summary of Project Activities Completed to Date

### *Overview of Project Year \_2\_ Activities, including progress towards meeting goals & objectives*

Field teams using both LiMPETS and MARINE protocols visited a sand beach site within the Campus Point MPA on four dates between June and August 2013. At least three 10m transects were sampled by an experienced field team for both methods (LiMPETS vs 'modified' LiMPETS) on each date. Additional field help was provided by teachers from the LiMPETS network and local volunteers. One sampling date included a group of fourteen k12 STEM teachers. These sampling dates provided information on the need for protocol refinement, and also served to introduce and train teachers to the LiMPETS methods.

We performed these trials to answer the questions: How do data collected with the LiMPETS protocol compare to estimates of sand crab abundance and size used by other monitoring groups? Does the LiMPETS method adequately capture the vertical distribution of crabs?

The difference in total sand crabs caught and the estimated abundance per meter of beach adjusted for core spacing of 1 or 2 meters was found to be quite large with more than an order of magnitude difference in mean numbers per transect and adjusted abundance estimates. Several suggested modifications to the LiMPETS protocol are being tested.

*MPA Baseline Program Annual Report*

*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*

*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).*

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

Data is in excel file format.

**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.*

We plan to continue to define and incorporate minor changes in LiMPETS protocols as identified by the field tests. We also will schedule at least 2 additional monitoring field trips with network teachers. Planning continues for the teacher workshop and symposium is tentatively scheduled for late winter/early spring at UCSB.

**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>PhD</i>			

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

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

Jessie Altstatt – Professional Scientist contracted to conduct analysis and synthesis of LiMPETS data

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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.

Name of Organization or Individual	Sector (City, County, Fed, private, etc.)	Nature of cooperation (If financial, provide dollar amount.)
<i>Jenny Dugan, Marine Science Institute, UC Santa Barbara</i>	<i>University</i>	<i>We coordinated data collection and analysis with Jenny Dugan and her lab students</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.

N/A