

SLO SEA

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SLOSEA Management Action Memo

TOPIC: Managing Visitor Access to Rocky Intertidal Areas

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Action Opportunity

Resource managers (California State Parks, California Department of Fish & Game, and California Coastal Commission) and county and local governments have an important opportunity to protect and manage rocky intertidal species in existing and newly acquired coastal areas. New scientific findings from SLOSEA provide important information that should be considered in decisions regarding visitor access levels for rocky intertidal areas.

Situation and Findings

Several newly acquired public properties on the Central Coast of California have relatively undisturbed rocky intertidal resources. These include Hearst, Sea West, Estero Bluffs, and the newly opened public access trail into the Diablo Canyon Power Plant reserve area. In addition, there are multiple areas (e.g., Hazard Reef, Corallina Cove) that have received moderate, but consistent, levels of visitation for multiple decades.

A recent two-year study in the Point Buchon Marine Reserve on Diablo Canyon property has demonstrated that high levels of access affect a number of intertidal algal (rock weeds) and invertebrate (limpets and chitons) species. Moderate levels of visitation affect fewer species and low levels of access had significant effects on a single algal species. The controlled experiment was designed as a Before-After-Control-Impact study and it is the first of its kind to use such an approach to investigate the effects of human access on intertidal areas. Under high levels of impact it is clear that the community shifts in terms of relative abundance of intertidal species. As part of the access study it was also demonstrated that the current number of visitors to rocky intertidal environments was similar to the "moderate" treatment levels reported above. These results provide important new information documenting clear impacts to the resources from high levels of public access. Ongoing monitoring at the research sites will address two remaining issues of critical importance to management: 1) What is the impact of chronic moderate and low levels of access on the rocky intertidal and, 2) what is the response of the intertidal community after the impact has been removed?

SLOSEA Involvement

This research was designed and conducted by SLOSEA in response to resource managers identifying a need for better information to guide their decisions regarding the appropriate balance between public access and resource protection on rocky shorelines. The SLOSEA team included scientists from Tenera Environmental and the Cal Poly Center for Coastal Marine Sciences.

Recommended Management Actions

The current management recommendation to State Parks is to not increase the current levels of access to the rocky intertidal areas currently open to the public. For new areas, State Parks should manage access to be equal to or lower than current levels seen at Montaña de Oro State Park, which was determined to be about 1 hour of foot traffic per meter of intertidal area per year (equivalent to the moderate-level of visitation in our experiment). An effective way to achieve the desired level of visitation is through management of the size and location of parking availability. SLOSEA also recommends the development of volunteer docents who might educate the public about protection of the resources through active partnerships with the Morro Bay Museum of Natural History docents and the Friends of the Elephant Seals.

Next Steps and Continuing Research

State Parks should incorporate the results into policy and management actions associated with coastal access and SLOSEA should simultaneously explore how to develop the results into a statewide recommendations. Further critical recommendations will be forthcoming based on the outcome of ongoing research on chronic, lower-level access and the resilience of the rocky intertidal community in our experimental plots. Additional management recommendations will follow at the conclusion of the ongoing experiments which may suggest the potential use of rotating closures of heavily accessed areas. These results should be communicated to the California Coastal Commission for their planning purposes as well.

SLOSEA Collaborative Partners

Cal Poly Center for Coastal Marine Sciences ~ California Bureau of Land Management ~ California Coastal Commission ~
California Coastal Conservancy ~ California Department of Fish & Game ~ California State Parks ~
Central Coast Regional Water Quality Control Board ~ Coastal San Luis Resource Conservation District ~
Los Osos Community Advisory Council ~ City of Morro Bay ~ Marine Interests Group of San Luis Obispo County ~
Monterey Bay National Marine Sanctuary ~ Morro Bay National Estuary Program ~ NOAA Fisheries Service ~ Port San Luis Harbor District