

Humboldt Bay Dunes Project

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Title: Physical Processes, Geomorphology and Management Options for the Coastal Sand Dunes of Humboldt Bay, Humboldt County, California

Client: Humboldt County Planning Department Eureka, California

Location: Humboldt County, California

Summary: Pacific Watershed Associates was retained to characterize the current and historic dune system along 21 miles of coastline bordering Humboldt Bay and recommend management options based on natural coastal processes and current and historic anthropogenic impacts

Project Details: This study was a resource investigation conducted to provide data and recommendations regarding the condition and effects of possible management and recreation strategies being considered for the coastal dune systems in the Humboldt Bay area. The coastal dune fields bordering the western margin of Humboldt Bay are one of the most extensive and least disturbed dune environments in California. Although the dunes are mostly intact and operating as they would under natural conditions, decades of residential development, recreational activities, and non-native plant invasion necessitate an evaluation of the historic and current conditions, this will lead to a better long term sustainable management plan, consistent with environmental preservation and county development plans.

Specifically, Pacific Watershed Associates was contracted to:

- Conduct a literature review and compile information on physical processes which control this and similar coastal dune systems
- Review local shoreline processes, and discuss their possible effects on coastal dune processes
- Map active and currently dormant coastal dune fields
- Identify and describe human-caused disturbances to the dune system and environment, and determine the relative susceptibility of various dune forms to accelerated erosion
- Outline methods for monitoring and quantifying future human disturbances on dune processes and forms
- Outline various management recommendations, strategies, and techniques which can be employed to limit unnecessary damage to the physical dune system resulting from future recreational activities