

**CALIFORNIA COASTAL COMMISSION**

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**ENERGY, OCEAN RESOURCES, AND FEDERAL CONSISTENCY DIVISION REPORT****FOR THE****APRIL 15, 2010 MEETING OF THE CALIFORNIA COASTAL COMMISSION**

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**TO:** Commissioners and Interested Parties

**FROM:** Alison Dettmer, Deputy Director  
Energy, Ocean Resources & Federal Consistency

DE MINIMIS WAIVER		
APPLICANT	PROJECT	LOCATION
E-10-005-W California State University – Fullerton / Orange County Parks	Restore native Olympia oysters, <i>Ostrea lurida</i> , by creating and monitoring a series of small oyster beds within an area of upper Newport Bay.	Newport Bay, Orange County



## **NOTICE OF COASTAL DEVELOPMENT PERMIT** **DE MINIMIS WAIVER**

**DATE:** April 1, 2010

**PERMIT NO. E-10-005-W**

**TO:** Coastal Commissioners and Interested Parties

**SUBJECT:** Waiver of Coastal Development Permit Requirements

Based on the plans and information submitted by the applicant for the development described below, the Executive Director of the Coastal Commission hereby waives the requirements for a coastal development permit (CDP), pursuant to Section 30624.7 of the California Coastal Act.

<b>Applicants:</b>	Danielle Zacherl Department of Biological Science, Box 6850 Parks California State University Fullerton Fullerton, CA 92834-6850	Susan Brodeur Orange County 13042 Old Myford Road Irvine, CA 92602
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**Project Location:** Intertidal area within upper Newport Bay, near the intersection of Dover Dr. and Pacific Coast Highway in the City of Newport Beach, Orange County.

**Background and Project Description:** The small bivalve mollusc native to western North American and known as the Olympia oyster, *Ostrea lurida*, has declined in abundance due to historical exploitation and displacement by larger nonnative oysters. In recent years there has been a renewed interest in documenting and restoring its native populations in California. Olympia oysters have been documented within Newport Bay but the availability of suitable habitat is thought to present an impediment to the formation of a more robust population there.

To test this hypothesis and evaluate the effectiveness and potential impacts of several restoration techniques, the applicants propose to create and monitor a series of small oyster beds within an area of upper Newport Bay that historically supported similar habitat. Specifically, the proposed project is intended to test the effects of four different types of oyster beds – unconsolidated versus bagged shell at two thicknesses each – on natural recruitment, density, survivorship, and growth of native oysters. In addition, the proposed project would examine the effects of the shell bed habitat on biodiversity by sampling community structure of invertebrates and fish inside and outside the constructed oyster beds and designated control locations. Finally, prior to, during and after oyster bed installation the applicants will take basic measures of water quality including temperature, water clarity,



phytoplankton, dissolved oxygen and bacteria to determine whether or not the oyster beds affect water quality.

To carry out this research, the applicants propose to install approximately 8.4 cubic yards of dead oyster shell across twenty 2-meter by 2-meter plots in an intertidal portion of upper Newport Bay. The project site is characterized as a mudflat consisting of 44% mud and roughly 56% hard substrate in the form of unconsolidated gravel, shell, and small, medium and large boulders. The plots would be located within a 100-meter by 2-meter swath and each plot would be separated from adjacent plots by a 2-meter buffer. Five 2-meter by 2-meter control plots would also be designated within this area (shell material would not be placed on these plots, however). Shell material is proposed to be placed both loosely and in bags comprised of biodegradable jute netting and in total, approximately 80 square meters of intertidal mud flat would be covered with either 4-centimeters or 12-centimeters of shell material. Oyster shell would be installed by hand during low tide and would be brought to the site with a small boat. Small tiles attached to  $\frac{3}{4}$  -inch PVC pipe stakes will be installed within each of the 25 plots to allow fluctuations in larval oyster settlement to be measured.

Monitoring of the plots will evaluate the recruitment of native and non-native oysters and the diversity of epifaunal organisms and test for water quality. At the end of two years, a final report containing the results of these monitoring efforts will be submitted to Commission staff and staff of other relevant agencies (Army Corps of Engineers, National Marine Fisheries Service, Orange County Parks, and the Regional Water Quality Control Board). If, in consultation with the agencies named above, the applicants determine that the outcome of the project is contrary to its goal of increasing density of native oysters and native epifaunal biodiversity within the shell beds without enhancing the proportion of non-native oysters in the area or adversely affecting water quality, they will apply for and obtain a coastal development permit to remove the shell beds.

Un-intended outcomes that would necessitate removal include:

- (1) A decrease in native oyster density in experimental plots relative to control plots (indicating that native oysters are adversely affected by the habitat augmentation);
- (2) A decrease in the biodiversity of the native epifaunal community;
- (3) A decrease in water quality downstream of experimental plots relative to control plots; and/or
- (4) An increase in the ratio of non-native to native oysters in experimental plots relative to control plots (indicating that the non-natives are benefitting by the augmentation more than natives are benefitting).

If, after two years, the project goals are being met and no adverse impacts have been documented, the oyster beds would remain in place.

**Waiver Rationale:** For the following reasons, the proposed project will not have a significant adverse effect, either individually or cumulatively, on coastal resources, nor will it conflict with Chapter 3 policies of the Coastal Act:



- The project would likely provide a direct benefit to marine resources by augmenting the existing population of native oysters in Newport Bay, restoring a historic habitat that is no longer present, increasing scientific understanding of native oyster restoration techniques, and enhancing public understanding and stewardship of Newport Bay's native species.
- No adverse impacts to water quality are anticipated and water quality monitoring would be carried out before, during and after installation of the proposed project to evaluate potential effects on water clarity, dissolved oxygen, bacteria, phytoplankton and temperature, as required by the Regional Water Quality Control Board.
- During installation and monitoring activities, project applicants shall adhere to Best Management Practices developed in coordination with the Regional Water Quality Control Board to minimize sediment disturbance and erosion into the waters of Newport Bay.
- The project site is not located near a publicly accessible shoreline area and the proposed placement of shell material in the intertidal mudflat would not restrict or limit public access or use of the shoreline.
- All oyster shell proposed to be used in the project has been seasoned for a minimum of six months out of the water in a dry environment to eliminate any fouling organisms or invasive species that may have been present on the oyster shell while it was alive. Oyster shell would be obtained from an existing aquaculture operation in southern California, the Carlsbad Aquafarm.
- Monitoring would be carried out continuously for the proposed two year experimental period and results would be submitted to Commission staff and other relevant agencies for review. If project goals have not been met or adverse impacts are documented, the applicants would obtain necessary permits and remove the oyster beds.

**Important:** This waiver is not effective unless the project site has been posted and until the waiver has been reported to the Coastal Commission. This waiver is proposed to be reported to the Commission at the meeting of April 14-16, 2010 in Ventura, CA. If four or more Commissioners object to this waiver, a coastal development permit will be required.

Sincerely,

PETER M. DOUGLAS  
Executive Director

By: \_\_\_\_\_

ALISON DETTMER  
Deputy Director

