

ESTUARY NEWS

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PUBLIC WORKS

Do's and Dont's of Dredging around Eelgrass

A new federal policy seeks to protect California's eelgrass meadows from the scoops and hoses of dredgers and other subtidal disturbances. The vulnerability of eelgrass (*Zostera marina*) to human activities like dredging prompted the National Oceanic and Atmospheric Administration's Fisheries Service (NMFS) to release a California Eelgrass Mitigation Policy in December 2011. The overall goal is no net loss of eelgrass habitat. The agency held public meetings on the draft policy in Eureka, Oakland, and Long Beach this June.

Eelgrass is one of San Francisco Bay's keystone organisms, sequester-

ing carbon and providing food, shelter, and spawning grounds for a host of species, from tiny isopods to ducks and geese. The draft policy builds on successful restoration programs in Southern California. To minimize impacts, NMFS is recommending a ten-meter buffer zone around eelgrass beds. If damage is unavoidable, the draft proposes different initial compensatory mitigation ratio targets for each of four coastal regions. For the Bay, 3.01 square meters of new eelgrass habitat would have to be created for each square meter damaged. Ratios for other regions include 4.82 to 1 (from the Bay to the Oregon border) and 1.2 to 1 (from the Bay to Point Conception.) Statewide, the ultimate target is 1.2 to 1. "The higher initial ratios are insurance," explains NMFS' Korie Schaeffer.

The policy also suggests that transplants for restoration purposes be taken from similar donor sites. Locally, these would be carefully evaluated because of the highly variable genetic composition of the

Bay's eelgrass beds. According to San Francisco State University biologist and eelgrass expert Katharyn Boyer, "Using more than one donor at a restoration or mitigation site is prudent to enhance genetic diversity and promote resilient restored beds." Indeed planting and seeding for the Bay's Living Shorelines Project in San Rafael and Hayward embraces this principle. Boyer supports the higher local mitigation ratio because there's still a lot to be learned about how to restore eelgrass in the Bay.

At the Oakland meeting, sponsored by the Bay Planning Coalition, the draft policy drew fire from port and marina operators who felt it would interfere with maintenance dredging, expand the accepted definition of an eelgrass bed, and require use of an excessively complex mitigation formula. The agency will address such concerns in its final report. JE

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