United States Department of the Interior

NATIONAL PARK SERVICE
Point Reyes National Seashore
Point Reyes, California 94956

L1425

December 8, 2009

California Fish and Game Commission
1416 Ninth Street
Sacramento, California 95814

Re: Consent Item #15 for the December 9, 2009 Fish and Game Commission Meeting regarding expansion of Manila Clams to Drakes Estero Aquaculture Lease M-438-01.

Dear Commissioners:

Drakes Bay Oyster Company (DBOC) has proposed to expand the mariculture use in Drakes Estero Lease No. M-438-01 (the "Lease"), as reported on the Consent Calendar Agenda Item No. 15 for December10, 2009 for the meeting of the Fish and Game Commission. We do want to acknowledge that DBOC does have the right under our permit to "seek to conform and/or modify these leases with CDFG."

Point Reyes National Seashore, a unit of the National Park Service (NPS) has several concerns regarding Manila clam cultivation that is within the park's boundary. The NPS has not had the opportunity to fully discuss with DBOC or the California Department of Fish and Game (CDFG) the proposed expansion of mariculture by DBOC.

Our specific concerns follow:

- Changes in the current CDFG lease are subject to environmental review and analysis under the National Environmental Policy Act (NEPA), along with the California Environmental Quality Act (CEQA). We believe the expansion of the area from one acre to the entire lease of over 1,000 acres where manila clams can be cultivated is an important change to the current lease and requires environmental review. We also believe that consultation regarding this expansion is required with NOAA Fisheries, California Coastal Commission, Army Corps of Engineers, and the US Fish and Wildlife Service. We are concerned about the potential ecological risks that this species may bring to Drakes Estero and native species there. No risk analysis for this species to be introduced has been conducted.

- Potential expansion of Manila clams as an invasive species is a major concern. While Manila clams have been introduced and have spread in other estuaries of California, there is currently no evidence to our knowledge that they escaped or invaded Drakes or Limantour Esteros. The National Academy of Sciences noted in their report *Shellfish Mariculture in Drakes Estero* (NAS 2009) that "The oysters and clams cultured in Drakes Estero are nonnative species that have some risk of establishing self-sustaining populations (p 5)" and further noted that "continued culture of

nonnative oysters and clams poses some risk of their eventual naturalization in Drakes Estero and larval spread to other coastal lagoons, a risk that could be minimized but not entirely eliminated by culturing triploids (NRC, 2004a) (p 22)". Finally, they reported that "If the Manila clam successfully reproduces and establishes populations in Drakes Estero, it may compete with native infaunal suspension-feeding bivalves" (p 52).

- Before any expansion of the cultivation of this non-native species, a thorough survey should be conducted to confirm its absence or presence throughout the estero. Dr. James Carlton, a leading authority on invasive species, communicated to us by letter that "a survey of Drakes Estero to determine if the Manila clam *Venerupis philippinarum* is established there would be of interest." He noted that "As of 1979, I could find no published or museum records of the Manila clam in Drakes Estero. I may have overlooked previous records, however, and I also did not personally do any surveys there." National Park Service biologists have conducted informal surveys, and not seen this clam naturalized within Drakes Estero. A systematic survey would verify the presence or absence of this potentially invasive non-native species in Drakes Estero.

- Potential changes in the intensity of cultivation. The addition of bag culture for cultivating manila clams throughout the estero has the added concern of providing a substrate for the highly invasive non-native tunicate, *Didemnum* species A or *Didemnum* sp., which is already present in the estero attached to oyster racks, and more recently on natural habitat at Bull Point. The NAS in their report noted that "Any culture bags used to contain Manila clams would provide additional solid surfaces for epibionts (species that attach to other living organisms)" (p 52), and that "It is now a very evident epibiont covering a substantial fraction (up to about half, judging from the committee's observations made during its September 2008 visit) of subtidal surface space on shell surfaces of living Pacific oysters and on associated oyster-rearing gear in Drakes Estero" (p. 52). They noted that "Research on control of abundance and risk of spread of the invasive tunicate, *Didemnum vexillum*, is urgently needed, not just in Drakes Estero, but worldwide." (p 8). The potential to expand substrate material throughout the estero has the potential to expand the presence of this highly invasive species in Drakes Estero and to the adjacent Estero de Limantour (a newly designated state Marine Reserve) where it presently does not occur.

We request you postpone any action on this issue at this time and we appreciate your attention to these concerns.

Sincerely,

Don L. Neubacher
Superintendent