

February 15, 2009

National Academy of Sciences

Ocean Studies Board

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Project: Best Practices for Shellfish Mariculture and the Effects of Commercial Activities in Drake's Estero, Pt. Reyes National Seashore, California

Re: Comment on the first undertaking, Drakes Estero Report

Dear National Academy of Sciences Committee Members:

As you work to finalize the first report commissioned by the National Park Service, which focuses on mariculture activities in Drakes Estero/Point Reyes National Seashore, we write this letter to re-emphasize and restate the important context of the unique National Park Service and Wilderness standards that factor into your analysis and rationale.

As you know, the charge of the committee for the first report is to "...assess the scientific basis for the National Park Service (NPS) presentations and the report (including revisions), "Drake's Estero: A Sheltered Wilderness Estuary," on the ecological effects of the Drake's Bay Oyster Company operations on Drake's Estero, Pt. Reyes National Seashore in California." With this letter, our organizations wish to:

- 1) Make clear what we see as the key difference between this extremely important first report (stated above), and the second report, which the committee is charged to "...develop recommendations for best practices for shellfish mariculture to maintain ecosystem integrity."
- 2) Ensure the committee fully understands the unique National Park Service (NPS) and Wilderness laws and policies that impact the NPS rationale in decision making, and apply those guiding laws and policies into their conclusions
- 3) Ensure the committee understands that testimony, facts, figures, applications, and recommendations garnered/produced via undertaking the second report (which has already started while the first report is not completed) may not be applicable (specifically the applications and recommendations) to any aspect of Drakes Estero, and in fact may violate laws and policies if implemented in Drakes Estero, given the unique nature of a Drakes Estero being a designated wilderness area within an established national park.

For your understanding and consideration, we have attached a few key (not comprehensive) excerpts from the National Park Service Management Policies that guide management decisions. We expect that the committee will ensure that these Policies are front and center in the first report's introduction (for the sake of providing context to the reader) and in the analysis and conclusion (as these policies are a primary filter for decisions in parks).

The key difference between the first report and the second report is as follows. The first report is site specific and therefore has the context of National Park Service and Wilderness laws and policies, while the second report is not site specific and is not expected to have said context. What this means is that the analysis and conclusions put forth in the first report is to clearly show how management in the Estero by the National Park Service is, first and foremost, to ensure and promote natural systems due to said laws and policies. This focus on ensuring and promoting natural systems is not a precondition to any

analysis or conclusions that will be put forth in the second report, which has no ties to Drakes Estero or mariculture that is specific to a national park or designated wilderness area.

Regarding the specific questions the committee is charged with addressing (listed below), we have provided comments for the purposes of ensuring that the analysis you conduct takes into account the National Park Service and Wilderness laws and policies.

- 1) What is the body of scientific studies on the impact of the oyster farm on Drake's Estero, and what have they shown?

COMMENT: when analyzing studies on impacts of the oyster operation, please remember that the NPS is mandated to protect and preserve natural systems within designated wilderness areas. This means that to the extent that the NPS can, the NPS is to take steps to monitor, address, and remove sources of alterations of natural systems. For example, while a non-native oyster filtering water may be considered a benefit to the ecosystem in Chesapeake Bay, a non-native oyster filtering water in Drakes Estero is not considered a benefit to the ecosystem as it disrupts the natural ecosystem through, for example, feeding on phytoplankton and other nutrients that would otherwise support the natural food chain.

- 2) What effects can be directly demonstrated by research conducted in Drake's Estero itself?

COMMENT: Please see the comment on item #1. The effects must be in context of what the level of care is. The level of care, stewardship, and protection of natural systems is far greater in Drakes Estero than in Jamaica Bay, Chesapeake Bay, or other areas that are not within National Parks (protected through/guided by the 1916 Organic Act, 1978 Redwood Act, and management policies) and federally designated wilderness areas (protected through/guided by the 1964 Wilderness Act and the 1976 Point Reyes Wilderness Act). For example, one may argue that eelgrass that has been cut from oyster boat propellers is fertilizer for the estero, but again, because of the national park and wilderness policies and laws to ensure natural systems, this example would be considered a serious, negative impact to the natural ecosystem.

- 3) What effects can reasonably be inferred from research conducted in similar ecosystems?

COMMENT: As already stated, a similar ecosystem to judge effects must be one that is a designated wilderness area within a national park. Simply stated, the effects must be judged by the level of care prescribed for the area, not the practical impacts that do not take into account this level of care. We have provided two examples above to highlight and contrast how level of care applies to this matter.

- 4) What conclusions can be drawn from the body of scientific studies, and how do they compare with what the NPS presented to the public? Have these conclusions affected NPS decision making?

COMMENT: Without restating in full, please see the comments above on how the relevant laws and policies would impact the conclusions/decision making by the NPS for Drakes Estero, and how conclusions/decision making in non-designated wilderness areas within national parks may be different, yet valid given the differences in the level of care prescribed in each area.

- 5) What are the most important subjects for future research to better understand the ecological consequences of anthropogenic influences on the Estero, so as to inform NPS decision making?

COMMENT: Please see the comments above on management of anthropogenic influences on the Estero, and the already defined goals and objectives of NPS in managing for natural systems.

We understand that the committee has already received a briefing in national park and wilderness laws and policies, yet given the importance of these laws and policies on impacting the credibility and validity of the first report the committee puts forth, we hope this letter will reiterate and perhaps provide clarity into what we know to be the key filter that the NPS uses for judging impact, assessment, and decision making within Drakes Estero.

Please do not hesitate to contact us for any clarification regarding the contents of this letter. Our contact information is listed below. Thank you for the work you are doing on this important matter.

Sincerely,



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ATTACHMENT

NPS Management Policies (excerpts). ***Emphasis added represented by bold italics.***

4.1.5 Restoration of Natural Systems

The Service will reestablish natural functions and processes in parks unless otherwise directed by Congress. Landscapes disturbed by natural phenomena, such as landslides, earthquakes, floods, hurricanes, tornadoes, and fires, will be allowed to recover naturally unless manipulation is necessary to protect other park resources, developments, or employee and public safety. ***Impacts on natural systems resulting from human disturbances include the introduction of exotic species; the contamination of air, water, and soil; changes to hydrologic patterns and sediment transport; the acceleration of erosion and sedimentation; and the disruption of natural processes. The Service will seek to return such disturbed areas to the natural conditions and processes characteristic of the ecological zone in which the damaged resources are situated. The Service will use the best available technology, within***

available resources, to restore the biological and physical components of these systems, accelerating both their recovery and the recovery of landscape and biological community structure and function.

6.3.7 Natural Resources Management

"The National Park Service recognizes that wilderness is a composite resource with interrelated parts. Without natural resources, especially indigenous and endemic species, a wilderness experience would not be possible. Natural resources are critical, defining elements of the wilderness resource, but they need to be managed within the context of the whole ecosystem. Natural resource management plans will be integrated with and cross-reference wilderness management plans. Pursuing a series of independent component projects in wilderness, such as single-species management, will not necessarily accomplish the over-arching goal of wilderness management. Natural resources management in wilderness will include and be guided by a coordinated program of scientific inventory, monitoring, and research.

The principle of nondegradation will be applied to wilderness management, and each wilderness area's condition will be measured and assessed against its own unimpaired standard. Natural processes will be allowed, insofar as possible, to shape and control wilderness ecosystems. Management should seek to sustain the natural distribution, numbers, population composition, and interaction of indigenous species. Management intervention should only be undertaken to the extent necessary to correct past mistakes, the impacts of human use, and influences originating outside of wilderness boundaries."

6.3.4.3 Environmental Compliance

"Proposals having the potential to impact wilderness resources will be evaluated in accordance with NPS procedures for implementing the National Environmental Policy Act. Those procedures include the use of categorical exclusions, environmental assessments (EAs), or environmental impact statements (EISs). Administrative actions impacting wilderness must be addressed in either the environmental assessment or environmental impact statement accompanying the approved wilderness management plan or as a separate environmental compliance document.

Managers contemplating the use of aircraft or other motorized equipment or mechanical transportation within wilderness must consider impacts to the character, esthetics, and traditions of wilderness before considering the costs and efficiency of the equipment.

In evaluating environmental impacts, the National Park Service will take into account (1) wilderness characteristics and values, including the primeval character and influence of the wilderness; (2) the preservation of natural conditions (including the lack of man-made noise); and (3) assurances that there will be outstanding opportunities for solitude, that the public will be provided with a primitive and unconfined type of recreational experience, and that wilderness will be preserved and used in an unimpaired condition. Managers will be expected to appropriately address cultural resources management considerations in the development and review of environmental compliance documents impacting wilderness resources."

6.3.1 General Policy

"The National Park Service will take no action that would diminish the wilderness eligibility of an area possessing wilderness characteristics until the legislative process of wilderness designation has been completed. Until that time, management decisions will be made in expectation of eventual wilderness designation. ***This policy also applies to potential wilderness, requiring it to be managed as wilderness to the extent that existing nonconforming conditions allow.***"

"All management decisions affecting wilderness will further apply the concept of "minimum requirement" for the administration of the area regardless of wilderness category. The only exception is for areas that have been found eligible, but for which, after completion of a wilderness study, the Service has not proposed wilderness designation. However, those lands will still be managed to preserve their eligibility for designation."

...except as necessary to meet the minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area) ***there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.***

6.3.5 Minimum Requirement

All management decisions affecting wilderness must be consistent with a minimum requirement concept.... ***When determining minimum requirement, the potential disruption of wilderness character and resources will be considered before, and given significantly more weight than, economic efficiency and convenience. If a compromise of wilderness resource or character is unavoidable, only those actions that preserve wilderness character and/or have localized, short-term adverse impacts will be acceptable.***

6.4 Wilderness Use Management

"The National Park Service will encourage and facilitate those uses of wilderness that are in keeping with the definitions and purposes of wilderness and do not degrade wilderness resources and character. Appropriate restrictions may be imposed on any authorized activity in the interest of preserving wilderness character and resources or to ensure public safety. "

6.3.11.3 Waters in Wilderness

"In keeping with established jurisdictions and authorities, the Service will manage as wilderness all waters included within wilderness boundaries, and the lands beneath these waters (if owned by the United States)."

6.4.3.3 Use of Motorized Equipment

"Public use of motorized equipment or any form of mechanical transport will be prohibited in wilderness except as provided for in specific legislation. Operating a motor vehicle or possessing a bicycle in designated wilderness outside Alaska is prohibited (see NPS regulations in 36 CFR 4.30(d)(1)).

However, section 4(d)(1) of the Wilderness Act (16 USC 1133(d)(1)) authorizes the Secretary-where legislation designating the wilderness specifically makes this provision applicable-to allow the continuation of motorboat and aircraft use under certain circumstances in which those activities were established prior to wilderness designation. ***Section 4(d)(1) gives the Secretary the discretion to***

manage and regulate the activity in accordance with the Wilderness Act, the NPS Organic Act, and individual park enabling legislation. As authorized, the National Park Service will administer this use to be compatible with the purpose, character, and resource values of the particular wilderness area involved. The use of motorized equipment by the public in wilderness areas in Alaska is governed by applicable provisions of the Alaska National Interest Lands Conservation Act, NPS regulations in 36 CFR Part 13, and Department of the Interior regulations in 43 CFR Part 36. The specific conditions under which motorized equipment may be used by the public will be outlined in each park's wilderness management plan."